

Emotional states, crime and violence : a schema therapy approach to the understanding and treatment of forensic patients with personality disorders

Citation for published version (APA):

Keulen-de Vos, M. E. (2013). *Emotional states, crime and violence : a schema therapy approach to the understanding and treatment of forensic patients with personality disorders*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20130425mk>

Document status and date:

Published: 01/01/2013

DOI:

[10.26481/dis.20130425mk](https://doi.org/10.26481/dis.20130425mk)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
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Emotional states, crime and violence

*A Schema Therapy approach to the understanding and treatment
of forensic patients with personality disorders*

Emotional states, crime and violence

A Schema Therapy approach to the understanding and treatment of forensic patients with personality disorders

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Cover design by FPC de Rooyse Wissel – Graphics department & Datawyse | Universitaire Pers Maastricht
Production: Datawyse | Universitaire Pers Maastricht

ISBN: 978 94 6159 206 4

Keywords: forensic treatment, schema therapy, schema modes, personality disorders, experiential techniques.

Emotional states, crime and violence

*A Schema Therapy approach to the understanding and treatment
of forensic patients with personality disorders*

Proefschrift

ter verkrijging van de graad van doctor aan de Universiteit Maastricht,
op gezag van de Rector Magnificus, Prof. dr. L.L.G. Soete,
volgens het besluit van het College van Decanen, in het openbaar te verdedigen
op donderdag 25 april 2013 om 14.00 uur

door

Maria Elisabeth Keulen-de Vos



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Prof. dr. H. Nijman (Radboud Universiteit Nijmegen)

Dr. Jeffrey Roelofs

Voor papa

"Every crime is a window onto the offender's internal world"

Philip Pollock (2006)

List of publications

This thesis is based on the following papers:

Broek, E. van den, Keulen-de Vos, M.E., & Bernstein, D.P. (2011). Arts therapies and Schema Focused therapy: A pilot study. *The Arts in Psychotherapy*, 38, 325-332. (Chapter 8).

Keulen-de Vos, M.E., Bernstein, D.P., & Arntz, A. Schema Therapy for offenders with aggressive personality disorders. In: R.C. Tafrate & D. Mitchell (Ed.), *Forensic CBT: A Practitioner's Guide*. In press. (Chapter 1).

Keulen-de Vos, M.E., Bernstein, D.P., Clark, L.A., Arntz, A., Lucker, T., & de Spa, E. (2011). Patient versus informant reports of personality disorders in forensic patients. *Journal of Forensic Psychiatry and Psychology*, 22(1), 52-71. (Chapter 4).

Keulen-de Vos, M.E., Bernstein, D.P., Clark, L.A., de Vogel, V., Bogaerts, S., Slaats, M., & Arntz, A. Validation of the schema mode concept in forensic PD patients. In preparation. (Chapter 6).

Keulen-de Vos, M.E., Bernstein, D.P., & Duggan, C. Treatment of cluster B personality disordered offenders: Which treatments might be most effective for which problems in which patients under which circumstances? Part I – Treatment alternatives. Submitted. (Chapter 2).

Keulen-de Vos, M.E., Bernstein, D.P. & Duggan, C. Treatment of cluster B personality disordered offenders: Which treatments might be most effective for which problems in which patients under which circumstances? Part II – Applying a decision-making algorithm to select treatments. Submitted. (Chapter 3).

Keulen-de Vos, M.E., Bernstein, D.P., Vanstipelen, S., de Vogel, V., Lucker, T., Slaats, M., Hartkoorn, M., & Arntz, A. Emotional states and criminal and violent behavior of forensic cluster B PD patients. Submitted. (Chapter 5).

Keulen-de Vos, M.E., Van den Broek, E.P.A., Bernstein, D.P., Vallentin, R., & Arntz, A. Evoking emotional states in personality disordered offenders: an experimental pilot study of drama therapy techniques. Submitted. (Chapter 7).

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General Introduction

The most common mental illnesses in forensic settings are psychotic disorders, paraphilias, substance related disorders, and personality disorders. Approximately fifty to ninety percent of the institutionalized offenders are diagnosed with a cluster B personality disorder (PD). There are four cluster B PDs: Antisocial, Borderline, Narcissistic and Histrionic PD. The traditional way of defining cluster B PDs is to define them according to dramatic personality *traits*, such as a lack of empathy or lack of normal range of emotions, affective instability, inappropriate displays of anger, or a lack of remorse (APA, 2001). An alternative perspective is to define cluster B PDs according to emotional disturbances or *states* that temporarily dominate a person's way of feeling and thinking (Young, Klosko, & Weishaar, 2003). These emotional states do not only have an influence on an offender's interpersonal style, but also on the criminal or violent acts that they have committed. For example, some crimes or institutional transgressions are characterized by a display of excessive anger or rage, while other crimes or transgressions are more likely characterized as premeditated and cold. Emotional states in these types of offenders typically fluctuate over time; these patients rapidly switch from one (extreme) emotional state to another or they remain stuck in a particular emotional state.

A novel forensic treatment that specifically addresses these emotional states is Schema Therapy. Schema Therapy conceptualizes these fluctuating emotional states as 'schema modes', or moment-to-moment emotional states that dominate a person's emotions, cognitions and behavior. In this dissertation, different aspects of the construct validation of the schema mode concept and ST techniques in forensic patients with psychopathy, Antisocial-, Borderline, and Narcissistic PDs will be assessed. This is important, because, for maximum effect, forensic treatment should be based on validated principles.

In this introductory chapter, the investigated personality disorders are briefly presented. Next, Schema Therapy, the concept of schema modes and experiential techniques are introduced. Finally, the specific aims and outline of this dissertation are given.

Personality Disorders

Antisocial PD (ASPD), as defined in the DSM-IV, is manifested through unlawful behavior, impulsivity, aggressiveness as exemplified by frequent physical fights, and indifference towards others or a lack of remorse. These features originate from early childhood or adolescence and continue in adulthood (APA, 2001). Approximately forty to sixty percent of offenders are diagnosed with an ASPD (Blackburn, Logan, Donnelly, & Renwick, 2003; Fazel & Danesh, 2002; Lindsay, et al., 2006; Moran, 1999). Psychopathy can be defined as a more severe subtype of ASPD. Psychopathic individuals present severe emotional deficits, such as a lack of an emotional range and empathy, a manipulative interpersonal style that goes hand in hand with superficial charm, and behavioral deficits such as criminal versatility and aggression (Hare, 2003). Prevalence rates for psychopa-

thy in forensic settings typically range between seven to twenty-five percent (Coid, et al., 2009; Hare, 2003; Hildebrand, Hesper, Spreen, & Nijman, 2005), or approximately 20 percent to 30 percent of offenders with Antisocial PD. Borderline PD is marked by persistent unstable interpersonal relationships, affective instability, impulsivity and an unstable sense of self (APA, 2001). The percentages of offenders who are diagnosed with a BPD typically range from ten to thirteen percent (Blackburn, et al., 2003; Fazel & Danesh, 2002; Lindsay, et al., 2006; Moran, 1999). Finally, Narcissistic PD is characterized by an excessive preoccupation with gaining success and power, lack of empathy, and an elevated sense of self-worth or entitlement (APA, 2001). The prevalence rate of NPD in forensic settings typically ranges from two to eighteen percent (Blackburn, et al., 2003; Fazel & Danesh, 2002; Lindsay, et al., 2006; Moran, 1999).

Schema Therapy

Schema Therapy (ST; Rafaeli, Bernstein, & Young, 2011; Young, Klosko, & Weishaar, 2003) combines different elements from various therapeutic approaches. For example, certain techniques are derived from cognitive-behavioral traditions, whereas other techniques are psychoanalytically oriented or originate from experiential therapies. The pillars of the original Schema Therapy approach are early maladaptive schemas and dysfunctional coping styles. Early maladaptive schemas are cognitive structures that contain self-defeating themes about oneself, others and the environment, that originate from adverse childhood experiences and early temperament. The activation of these maladaptive schemas causes strong and painful emotions. ST defines three dysfunctional coping styles that are typically used to deal with these emotions: passively giving in to a schema (i.e., schema surrender), avoiding situations that trigger a certain schema (i.e., schema avoidance), and doing the opposite of a schema (i.e., schema overcompensation). This original theoretical framework proved to be inadequate for working with patients with cluster B PDs because of the vast number of schemas and coping styles that these patients typically display and their rapid switches between emotional states. Therefore, a more compact theoretical framework for cluster B PD patients was developed by Young and colleagues (2003). They defined a third pillar: schema modes. ‘Schema modes’ is a state-like concept that combines early maladaptive schemas and dysfunctional coping styles. Therefore schema modes represent emotions as well as a person’s cognitions and behavior at a particular point in time. Young and colleagues (2003) originally distinguished 11 schema modes; over time, others have proposed and reported evidence for additional modes (e.g., Bamelis, Renner, Heidkamp, & Arntz, 2011; Bernstein, Arntz, & de Vos, 2007; Lobbestael, van Vreeswijk, & Arntz, 2008).

ST hypothesizes that patients with certain PDs experience specific schema modes although they often lack the ability to deliberately control these emotional states because of their relatively unintegrated sense of self (Rafaeli, et al, 2011; Young, et al, 2003). It

thus hypothesizes that different PDs are characterized by different combinations of modes (schema mode model). For example, the schema mode model for BPD states that this disorder can be understood as a constellation of five specific modes. The Vulnerable Child mode represents the underlying feelings of abandonment and history of abuse. The Angry and Impulsive child modes refer to a patient's uncontrolled expression of anger and impulsive behavior. BPD patients also often show behavior that is defined as the Punitive Parent mode, involving self-directed punishment. Finally, the Detached Protector mode represents a borderline patient's feelings of emptiness and detachment. Although there is a lack of consensus for the schema mode model for ASPD, this disorder is often considered to consist of the same modes that characterized BPD, and a sixth mode that refers to aggression and threats (Bully and Attack mode). These schema mode sequences are very different than that of NPD patients. The core features of NPD are conceptualized as the combination of Self-Aggrandizer mode (i.e., sense of self-importance), Lonely Child mode (i.e., underlying feelings of loneliness), Detached Self-Soother (i.e., addictive behavior), and the Enraged Child (i.e., feelings of anger, lack of control of aggressive behavior).

In Schema Therapy, experiential techniques are used in order to bring schema modes into active awareness and overcome emotional distance. Typical experiential techniques are role-play, imagery and chair-work. Role-play involves re-enactment of original situations from the past or the present, or made-up situations. After the initial role-play, role reversal and rescripting is initiated (Kellogg, 2004; Landy, 2000). During rescripting, the therapist alters painful elements in the scenes that are relived, so that associated thoughts, feelings and behaviours are modified and change is facilitated (Rush, Grunert, Mendelsohn, & Smucker, 2000; Smucker & Niederee, 1995). In chair-work, the patient switches between chairs and is invited to have dialogues between different parts or emotions of the self. These 'conversations' can also take place between the patient and, for examples, a significant other (Kellogg, 2004; Paivio & Greenberg, 1995). Imagery is a technique in which the therapist asks the patient to visualize an upsetting childhood memory or traumatic image of their past. Patients are invited to explore their emotions and later on to intervene in the scene with new, healthier responses (Rafaeli, et al., 2011; Smucker & Boos, 2005). Thus far, there is little empirical evidence that substantiates the effectiveness of experiential techniques, although there is a growing evidence that visual representations of events trigger more emotions than verbal representations do (Arntz & Weertman, 1999; Holmes & Mathews, 2005; Holmes, Mathews, Dalglish, & Mackintosh, 2006).

There have been three clinical trials supporting Schema Therapy as an evidenced based treatment for patients with a Borderline PD. First, the three year multi-center randomized clinical trial by Giesen-Bloo and colleagues (2006) examined the effectiveness of ST versus Transference Focused Therapy (TFP; Yeomans, Clarkin, & Kernberg, 2002) in eighty-six (86) outpatients who were diagnosed with a BPD. The results indicated that patients who received ST, showed substantial improvements in their symptoms (i.e., self-

harm, affective instability) over the course of treatment, compared to patients who had received TFP. These improvements were sustained over one year follow-up. BPD symptoms were assessed with the Borderline Personality Severity Index (BPDSI; Arntz, van den Hoorn, Cornelis, Verheul, van den Bosch, & de Bie, 2003) (Giesen-Bloo, et al., 2006). Second, the multi-center implementation study of Nadort and colleagues (2009) showed similar findings. In their study, sixty-two (62) BPD patients were randomly allocated to either two years of ST with or without additional telephone support. Analyses showed that after 1.5 years, 42% of the patients who had received regular ST (without phone support) had recovered from BPD and that there was no added value of telephone support. BPD symptoms were assessed with the Structured Clinical Interview for DSM-IV Axis II disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) and the BPDSI (Arntz, et al., 2003) (Nadort, et al., 2009). Finally, the randomized clinical trial of Farrell, Shaw and Webber (2009) examined the effectiveness of Schema Group-Therapy in thirty-two (32) outpatients diagnosed with BPD. Patients were randomly assigned to either ST group therapy in combination with individual Treatment As Usual (ST-TAU condition) or to standalone TAU (TAU condition). These treatment condition consisted of 16 patients each. The findings showed significant reductions in BPD features in ST-TAU patients. In fact, 94% of the patients who were assigned to the ST-TAU condition no longer met the diagnostic criteria for BPD compared to 16% of the patients in the TAU condition (Farrell, et al., 2009). BPD was assessed using the Borderline Syndrome Index (BSI; Conte, Plutchik, Karasu, & Jerrett, 1980) and the Diagnostic Interview for Borderline Personality Disorders-Revised (DIB-R; Zanarini, Gunderson, Frankenburg, & Chauncey, 1990).

There are several studies that provide further support for the validity of Schema Therapy's schema mode concept in non-forensic patients. For example, research has shown that BPD patients scored higher on vulnerable child, impulsive child, detached protector and punitive parent mode, compared to cluster C PD patients and healthy controls (Arntz, Klokman, & Sieswerda, 2005; Lobbestael, Arntz, & Sieswerda, 2005; Lobbestael, et al., 2008). Others have provided empirical evidence for the schema mode model for NPD by showing that these patients indeed rate higher on enraged child, self-aggrandizer and detached self-soother mode compared to cluster C PD patients and non-patient controls (Bamelis, et al., 2011).

The increasing body of empirical evidence for Schema Therapy and its schema mode concept in non-forensic patients, inspired Bernstein and colleagues (2007) to introduce ST to the forensic field. They expanded the schema mode model by defining and conceptualizing particular states that are common in personality disordered offender but not in regular psychiatric PD patients. For example, issues like violence, addiction and manipulation are a common part of an offender's interpersonal style, but are relatively uncommon in non-forensic PD patients. Bernstein and colleagues (2007) have conceptualized five specific forensic modes that are associated with risk for crime and violence. These modes refer to 1) an emotional state of controlled anger or hostility to keep others at a

distance (angry protector mode); 2) a state of cold, planned and ruthless aggression to eliminate a threat (predator mode); 3) conning and manipulation to achieve a specific goal (conning and manipulative mode); 4) a state in which an individual attempts to exercise extreme control in response to a (perceived) threat (obsessive-compulsive overcontroller mode); and 5) a state in which a patient shows paranoid behavior in response to a (perceived) threat (paranoid overcontroller mode).

Although ST is increasingly used in forensic settings, there have only been limited attempts to validate the schema mode concept and ST techniques in forensic settings or to test the effectiveness of ST in forensic populations. For example, Lobbestael, and colleagues (2005) have reported that antisocial patients (n=16) scored significantly higher on the vulnerable child, angry child, detached protector, punitive parent, and bully and attack mode than healthy controls (n=16) do. So far, two randomized clinical trials examining the effectiveness of ST in forensic populations have been carried out. First, the study by Tarrier and colleagues (2010) randomly allocated sixty-three (63) PD offenders to either two-year ST+TAU or TAU. The results showed that there were no significant differences between the two treatment conditions with regard to recidivism risk and personality symptoms as measured with the Historical, Clinical and Risk management schema (HCR-20; Webster, Douglas, Eaves, & Hart, 1997) and SCID-II (First, et al, 1997) (Tarrier, et al, 2010). However, the methodological problems with this study were so severe that it is very difficult to draw any conclusions from its results. For example, the ST therapists in this study failed to achieve adequate competency to provide ST, even by the end of the two year study; the drop-out rates were very high; and there was poor statistical power. Moreover, the ST provided in the study was not based on schema modes, nor was the therapy model adapted for forensic patients. The second study is being carried out by Bernstein and colleagues (in press). In this clinical trial, 102 ASPD, BPD, NPD and Paranoid PD offenders are randomly allocated to either three-year ST or TAU, and periodically assessed in terms of their recidivism risk, personality symptoms, schema modes and institutional transgressions. Preliminary results from the first 30 patients who completed treatment, show that ST patients showed a greater reduction in recidivism risk and lower attrition rates. Furthermore, ST patients entered the resocialization phase of treatment more quickly than TAU patients did (Bernstein et al, in press). As these findings are preliminary and not yet statistically significant, the conclusions that can be drawn are still tentative. Future research regarding the effectiveness of Schema Therapy, its techniques and the validity of the schema mode concept in forensic PD patients is warranted.

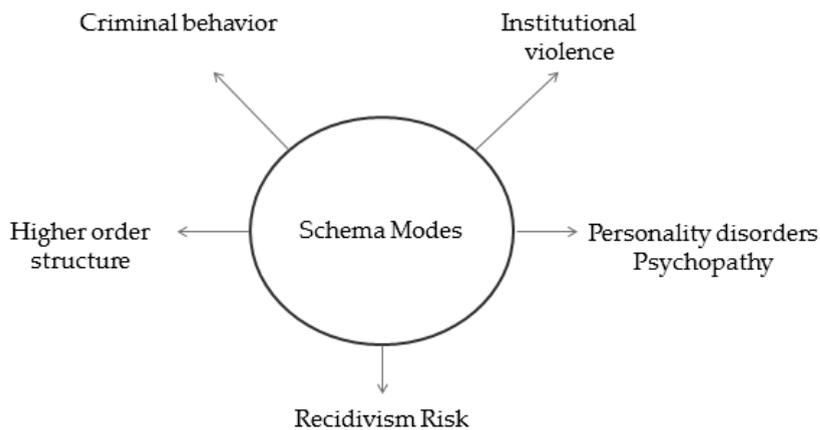
Thesis Aims and Outline

This thesis attempts to situate ST in the forensic field by systematically reviewing treatments that are currently used for forensic patients with cluster B PDs, and examining their evidence base. Moreover, an algorithm that treatment providers can use to select

from among available treatments for this population, despite the limited evidence that is available regarding their effectiveness, is proposed. A related aspect is personality assessment in forensic settings. Personality assessment can improve psychological services for criminal offenders by playing a key role in determining appropriate treatment interventions. However, assessment of forensic patients is neither simple nor straightforward. For example, the reliability and validity of these assessments is often hampered by social desirable responding. This thesis tested a newly developed instrument to assess PDs in forensic settings; it examines whether patient and informant in forensic settings differ in how they view PD symptoms and whether this view changes over time.

Despite the growing importance of ST in the forensic field, there is as yet limited support for the theoretical model underlying it. This dissertation is directed especially at testing some of the main hypotheses concerned schema modes in forensic patients with cluster B PDs. More specifically, it comprehensively tests the construct validity of the schema mode concept in forensic PD patients by examining a network of relationships between schema modes and other variables (see Figure 1).

Figure 1. Network of schema mode relationships in offenders.



First, according to forensic ST's theoretical framework, criminal and violent behavior can be explicated by an unfolding sequence of schema modes (Bernstein, et al., 2007). However, this hypothesis has not been tested as yet. Therefore, this thesis examined how schema modes relate to criminal behavior and institutional violence in forensic cluster B PD patients. Second, ST's theoretical framework hypothesizes that different PDs are characterized by different combinations of modes (schema mode model). This framework has been empirically validated in non-forensic cluster B PD patients. However, so far, few studies have focused on the validity of the schema mode model in forensic patients. Forensic and general psychiatric patients may be dissimilar in the schema modes that they display; therefore this thesis examines which modes are central to ASPD, BPD,

NPD and psychopathy in *forensic* patients and whether a higher-order structure is of explanatory value in distinguishing among modes. Third, this dissertation examined how schema modes relate to recidivism risk in forensic cluster B PD patients because these disorders are the most prevalent in forensic settings and are associated with higher risk of violence and recidivism than other forensic patients. Also, ST theory claims that violent behavior can be conceptualized as particular schema modes.

Finally, this dissertation examines the validity of experiential techniques or therapeutic techniques that focus on subjective experiences, feelings and expression of emotions. ST makes prominent use of experiential techniques to bring emotions into active awareness and overcome emotional distance. Another promising method that incorporates experiential techniques similar to ST, is Arts therapies (i.e., drama, music, arts therapy). Both therapies are frequently used in forensic settings; however, there is little empirical evidence that substantiates the effectiveness of experiential techniques in PD offenders. This thesis examines whether vulnerability and anger, two basic emotions that forensic patients have difficulty managing, could be deliberately evoked in forensic cluster B PD patients using Arts therapy techniques. Furthermore, this thesis determined the effectiveness of ST and Arts therapy at evoking emotional states in general.

Taken together, this thesis provides some of the first evidence for the schema mode concept in PD offenders and a key ST technique by using a broad range of methods, including an innovative method for assessing schema modes and personality disorders and an experimental protocol for evoking schema modes. Overall, this thesis aimed to answer the question to what extent Schema Therapy contributes to the understanding and treatment of forensic PD patients.

The following research questions will be addressed; they are grouped into three clusters:

Part I – Forensic treatment and assessment

1. Which treatments are currently used for forensic cluster B PD patients and what is their evidence base?
2. Which forensic treatments might be most effective for which individual patients with cluster B PDs, with which specific problems, and under which set of circumstances?
3. Do patients and informants in forensic settings differ in how they view PD symptoms, and does this view change over time?

Part II – Schema modes

4. How do schema modes relate to criminal behavior and institutional violence in forensic cluster B PD patients?
5. Which modes are central in ASPD, BPD, NPD and psychopathy in forensic patients?

6. How do schema modes relate to recidivism risk in forensic cluster B PD patients?

Part III – Schema Therapy techniques

7. Can vulnerability and anger be deliberately evoked in forensic cluster B PD patients using experiential techniques?
8. What is the effectiveness of Schema Therapy and Arts therapies in evoking emotional states?

This dissertation manuscript contains eight studies and is organized into three parts.

Part I contains three theoretical articles that focus on forensic treatment and one empirical article that focuses on personality assessment in forensic settings. *Chapter 1* provides a detailed description of Schema Therapy, its rationale, the forensic adaptation and guidelines for clinical practice. *Chapters 2* reviews the existing treatment options for cluster B PD offenders and considers the empirical support for these treatments. By discussing various treatment approaches, the differences and similarities between ST and other approaches become apparent. Overall, this chapter situates Schema Therapy in the forensic field. In *Chapter 3*, a decision-making algorithm is presented to help guide treatment providers in making more informed and considered decisions about which treatments to choose for which patients under which circumstances. This algorithm is based on the evidence presented in chapter 2 and rational or theoretical considerations. In *Chapter 4*, an innovative instrument to assess personality disorder pathology in offender populations is presented: the forensic adaptation of the Schedule for Nonadaptive and Adaptive Personality (SNAP-F). The SNAP-F contains four personality disorder scales (i.e., ASPD, BPD, NPD and Paranoid PD) and three temperament scales (i.e., negative and positive temperament, disinhibition). The SNAP-F is administered in a sample of twenty-four (24) patients and three informants per patient (e.g., therapists) to establish whether patients and informants differ in how they view PDs symptoms. Furthermore, the SNAP-F was administered over the course of treatment to examine whether patient and informant views change over time.

Part II consists of two empirical studies that focus on the construct validation of the schema modes concept in forensic patients with a cluster B PD. *Chapter 5* presents a study on how schema modes relate to criminal behavior and institutional violence in forensic cluster B PD patients. An innovative method for assessing schema modes is presented: the Mode Observation Scale (MOS). The MOS consists of 18 schema modes that are rated on a 5-point Likert scale. For this study, schema modes are retrospectively rated in a sample of ninety-five (95) offenders. Institutional violence is rated from daily records within several forensic settings. In *Chapter 6*, a study on the relationship between schema modes and personality disorders and psychopathy in eighty-eight (88) offenders is presented. This study specifically focused on patients with psychopathy, ASPD, BPD and NPD. Furthermore, the extent to which schema modes relate to recidivism risk in these patients is examined.

Part III consists of two empirical studies that focus on the validation of Schema Therapy techniques; it specifically focuses on experiential techniques – a technique that is also incorporated in Arts therapies. In *Chapters 7*, an experimental study into the ability to deliberately evoke vulnerability and anger in nine (9) forensic cluster B PD patients is presented. These emotions are basic emotions that forensic patients have difficulty managing; as a result, these emotions often trigger acts of violence. Vulnerability and anger are evoked through a five-session therapy protocol that is carried out by a drama therapist. Schema modes are assessed with the MOS. *Chapter 8* examines the effectiveness of Schema Therapy and Arts therapy (e.g., drama, music, art therapy) at evoking schema modes in ten (10) forensic patients with a cluster B PD. This study especially focuses on their ability to evoke vulnerability. Patients are randomly allocated to either ST or TAU; all patients receive both psychotherapy as well as Arts therapy. Schema modes are assessed with the MOS.

Finally, *Chapters 9* provides a summary chapter in which the findings of the aforementioned studies are summarized and critically discussed. Also a Dutch summary of this thesis is provided.

PART I

Forensic Treatment and Assessment

CHAPTER 1

Schema Therapy for offenders with personality disorders

Keulen-de Vos, M.E., Bernstein, D.P., & Arntz, A. Schema Therapy for aggressive offenders with personality disorders. In: R.C. Tafrate & D. Mitchell (Ed.), *Forensic CBT: A Practitioner's Guide*. In press.

Interest in forensic treatment has increased considerably in recent years as evidenced by a growing literature on treatments for sex offenders and domestic violence offenders (e.g., Marshall & Serran, 2001; Murphy & Ting, 2010). However, the treatment of personality disordered (PD) offenders is an area in need of far greater attention. Personality disorders are highly prevalent in criminal offender populations, and are associated with increased risk of violence and recidivism (Blackburn, Logan, Donnelly, & Renwick, 2003; Leistico, Salekin, DeCoster, & Rogers, 2008). This population is traditionally considered difficult to treat. In this chapter, we describe recent developments in the application of Schema Therapy (ST; Young, Klosko, & Weishaar, 2003) to forensic patients with PDs. ST differs from other cognitive-behavioral treatments for forensic patients in several important respects. First, unlike most other cognitive-behavioral treatments, ST was specifically developed as a treatment for PDs. It is an integrative form of therapy that combines standard cognitive-behavioral interventions with other approaches that are not traditionally used in cognitive-behavior therapy, but are often necessary in working with patients with PDs. These include: (1) a focus on the therapy relationship to address the difficulties of these patients in forming secure attachments, (2) an emphasis on re-processing childhood traumas, which are highly prevalent in this population, and (3) the use of experiential techniques that focus on emotions to remediate the affective difficulties of these patients.

Unlike other cognitive-behavioral approaches for patients with anger and aggression problems, which are often shorter-term therapies, ST is a medium- to long-term form of psychotherapy which can last for 2 to 3 years or even longer in patients with aggressive PDs, such as Antisocial, Narcissistic, or Borderline PD. While ST for forensic patients can be administered in therapeutic groups (Beckley & Gordon, unpublished; Farrell, Shaw & Webber, 2009; Van Vreeswijk & Broersen, 2006), it is usually delivered individually, or as a combination of individual and group therapy. In keeping with the risk, need, and responsivity principles (Andrews & Bonta, 2003), longer-term therapies are justified if they can ameliorate the risk factors for violence and recidivism in otherwise difficult-to-treat patients, such as those with PDs. In fact, such longer-term treatments may prove to be cost-effective, despite their higher costs, if they can reduce rates of incarceration and recidivism. Preliminary findings in the first 30 patients to complete an ongoing randomized clinical trial of forensic inpatients with cluster B PDs in The Netherlands supports this contention: patients who received 3 years of ST showed greater improvement in recidivism risk, and were more likely and quicker to receive permission to enter and advance through the resocialization process that can lead to release from detention, than patients receiving usual forensic treatment (Bernstein, et al., in press). Further, the full cost of delivering ST for 3 years was fully recouped by reducing patients' length of stay in the institution by just 2 months (Bernstein, 2011). Although these findings were not yet statistically significant in this small initial sample, they suggest that the costs of delivering ST may be justified by its success in lowering recidivism risk.

In this chapter, we describe the rationale for ST, present our forensic adaptation of ST, and provide guidelines for clinical practice. The forensic ST model focuses on emotional states, known as *schema modes*, which are seen as risk factors for violence and crime. When triggered, schema modes increase the probability of aggressive, impulsive, or other antisocial behavior. By targeting these factors, schema therapists aim to reduce the patient's risk for violence and future antisocial behavior. In our experience, and based on the preliminary results of our research, therapists can indeed learn to recognize and intervene with schema modes and work more effectively with these challenging patients.

Schema Therapy Conceptual Model

Early Maladaptive Schemas and Maladaptive Coping Responses

The ST theoretical model is based on the following core concepts: *early maladaptive schemas*, *maladaptive coping responses*, and *schema modes* (Rafaeli, Bernstein, & Young, 2011; Young, et al., 2003). Early maladaptive schemas are self-defeating themes or patterns about oneself and one's personal relationships; they refer to maladaptive cognitive structures representing the self, others, and the environment, and relations between them. Early maladaptive schemas are trait-like, enduring entities or patterns that originate from adverse childhood experiences and early temperament; they guide people's perceptions and behavior and evolve over the course of a lifetime. Over time, they become more resistant to change and give rise to negative automatic thoughts and subjective distress. For example, early maladaptive schemas such as abandonment, social isolation, defectiveness, and mistrust/abuse can evoke emotions such as fear, sadness and anger (Bernstein, Arntz, & de Vos, 2007; Jovev & Jackson, 2004). Young identified 18 early maladaptive schemas which are described in Table 1. These schemas can be grouped into five domains which are connected with certain basic childhood needs (also listed in Table 1). For example, if the need for attachment (which Young and colleagues (2003) posit to be one of 5 universal emotional needs in childhood) goes unmet to a significant degree, the result may be the development of early maladaptive schemas in the domain of "disconnection and rejection."

When early maladaptive schemas are triggered, they can give rise to strong emotions. Young and colleagues (2003) hypothesized that one can cope with the activation of such schemas in three ways: schema surrender, schema avoidance and schema overcompensation. Schema surrender means giving in to a schema in a passive, helpless, dependent, or submissive way. For example, someone with a dependence/incompetence schema may choose partners whom they perceive to be more competent than they are, on whom they rely in a "child-like" way. Schema avoidance means avoiding people or situations that might trigger a particular schema. For example, some may avoid getting involved in intimate relationships because of a profound fear or being abandoned. Finally, schema overcompensation means doing the opposite of a schema. For example,

someone with a defectiveness/shame schema might behave in a denigrating way towards others, which helps them feel superior and offset feelings of inferiority.

Table 1. *Schema Domains and Early Maladaptive Schemas*

<i>Disconnection and Rejection</i>		
1	Abandonment/Instability	The expectation that one will inevitably be abandoned.
2	Mistrust/Abuse	The expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage.
3	Emotional Deprivation	The expectation that others won't meet one's need for a normal degree of emotional nurturance, empathy, and protection.
4	Defectiveness/Shame	The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects.
5	Social Isolation/Alienation	The feeling that one is always an outsider, different and alienated from other people.
<i>Impaired Autonomy and Performance</i>		
6	Dependence/Incompetence	Expectation that one can't handle everyday responsibilities without considerable help from others.
7	Vulnerability to Harm or Illness	Exaggerated fear that imminent catastrophe will strike at any time and that one cannot prevent it.
8	Enmeshment/Undeveloped Self	Excessive emotional involvement and closeness with others at the expense of full individuation or normal social development.
9	Failure	The belief that one has failed, or will inevitably fail, or is fundamentally inadequate in areas of achievement.
<i>Impaired Limits</i>		
10	Entitlement/Grandiosity	The belief that one is superior to others, entitled to special rights and privileges, or not bound by normal rules of social reciprocity.
11	Insufficient Self-Control/Self-Discipline	Pervasive difficulty or refusal to exercise self-control and frustration tolerance to achieve goals.
<i>Other-Directedness</i>		
12	Subjugation	Excessive surrendering of control to others because one feels coerced, to avoid anger, retaliation, or abandonment.
13	Self-Sacrifice	Excessive focus on voluntarily meeting the needs of others at the expense of one's own gratification.
14	Approval-Seeking/Recognition-Seeking	Excessive emphasis on gaining approval, recognition, or attention from other people.
<i>Over-vigilance and Inhibition</i>		
15	Negativity/Pessimism	A pervasive, lifelong focus on the negative aspects of life (e.g., pain, death, loss) while minimizing the positive or optimistic aspects.
16	Emotional Inhibition	The excessive inhibition of spontaneous action, feeling, or communication.
17	Unrelenting Standards / Hyper criticalness	The belief that one must strive to meet very high internalized standards of behavior and performance.
18	Punitiveness	The belief that people should be harshly punished for making mistakes.

Note: Adapted from Young, Klosko, & Weishaar, 2003.

Schema Modes

The combination of early maladaptive schemas and maladaptive coping responses constituted the original ST conceptual model, as elaborated by Young and colleagues (2003). While this model proved useful for working with most PD patients, it was inadequate for patients with more aggressive PDs. These patients often have so many early maladaptive schemas that discussing them all in therapy was unmanageable. Moreover, patients with severe PDs, such as Borderline and Narcissistic PD, often switch or flip rapidly from one extreme emotional state to another, making it difficult for therapists to keep track of them. Young (2003) introduced the concept of schema modes to help therapists monitor and work with these fluctuating states. Schema modes are defined as moment-to-moment emotional states that temporarily dominate a person's thinking, feeling, and behavior. Compared to the maladaptive schemas, which are trait-like, schema modes are state-like entities. These emotional states can either be functional or maladaptive (Young, et al, 2003). We all experience a range of emotional states. However, in people with severe PDs, these states tend to be more extreme and often involve dysfunctional forms of coping. Also, in these patients, schema modes are largely dissociated from one another: When a patient is in a particular mode, he is quite unaware of other modes. PD patients have little control over their emotional states; therefore, they rapidly switch between emotional states.

Young and colleagues (2003) distinguish 11 schema modes that cover five mode domains; others have proposed and reported evidence for additional modes (Bamelis, Renner, Heidkamp, & Arntz, 2011; Bernstein, et al., 2007; Lobbestael, van Vreeswijk, & Arntz, 2008). A complete list of modes and mode domains are listed in Table 2. *Child* schema modes involve thinking, feeling, and acting in a child-like manner; they represent emotional reactions, such as fear, sadness, loss, anger, frustration, and loneliness, which are fundamental and universal in children. *Avoidant Coping* schema modes involve attempts to block out painful emotions, and avoid people and situations which trigger them. The *Over Compensatory Coping* schema modes involve "turning the tables" on other people, and doing the opposite of schemas to compensate for themes such as shame, loneliness, and vulnerability. The *Surrendering Coping* schema modes reflect the opposite, the tendency to submit to others in a passive, helpless, or dependent way. The *Maladaptive Parent* schema modes relate to self-directed punishment or criticism, or self-directed pressure to perform, respectively, and reflect internalized dysfunctional behavior of the parent (or other caregivers) directed towards the child. Finally, the *Healthy* schema modes express healthy, balanced, self-reflection and feelings of pleasure, spontaneous playfulness, and joy, respectively (Rafaeli, et al., 2011; Young, et al., 2003).

Not all schema modes are relevant for each patient. According to ST, distinctive schema mode configurations or combinations of modes are believed to be markers of specific personality disorder pathology. For example, Borderline PD (BPD) is hypothesized to be centered around four dominant schema modes: (1) *Abused /Abandoned Child* mode, marked by feelings of abandonment or abuse, (2) *Angry/Impulsive Child* mode,

characterized by uncontrolled anger or rage in response to perceived abandonment or maltreatment and rebellious impulsive need satisfaction, (3) *Punitive/Critical Parent* mode, marked by self-punitive behavior, and (4) *Detached Protector* mode, which includes feelings of detachment (Arntz & van Genderen, 2009; Young, et al., 2003).

Related to the focus of the present chapter, the schema modes relevant for Narcissistic PD (NPD) and Antisocial PD are described. NPD is hypothesized to be centered around four modes: (1) *Self-Aggrandizer* mode, which includes the themes of grandiosity, entitlement and self-importance, (2) *Lonely/Inferior Child* mode, that includes feelings of loneliness or emptiness or inferiority, (3) *Detached Self-Soother* mode, which leads to coping by self-soothing behavior such as drug and alcohol use, and (4) *Enraged Child* mode, expressing rage often towards the person who triggered these poorly tolerated feelings (Behary, 2008; Bamelis, et al., 2011; Young & Flanagan, 1998).

Bernstein and colleagues (2007) hypothesized that antisocial and especially psychopathic offenders make prominent use of several *forensic schema modes*, as well as other modes involving overcompensation (e.g., *Self-Aggrandizer* and *Bully and Attack* modes). For example, psychopaths' crimes often include: (1) *Predator* mode, which involves cold and ruthless aggression, (2) *Conning and Manipulative mode*, marked by deceit, and (3) *Bully and Attack* mode, which involves aggression to assert dominance. These modes are believed to have been developed during childhood under conditions of extreme threats and humiliation (Jaffee, Caspi, Moffitt, & Taylor, 2004; Poythress, Skeem, & Lilienfeld, 2006) and they serve as a shield to protect corresponding feelings of vulnerability, anger, and frustration (Bernstein, et al., 2007). Recent research supports the contention that specific configurations of modes characterize different PDs (Bamelis, et al., 2011; Lobbetael, et al., 2008).

Table 2. *Schema Modes*

	<i>Child Modes</i>	<i>Involve feeling, thinking, and acting in a "child-like" manner</i>
1.	Abandoned/Abused Child	Feels vulnerable, overwhelmed with painful feelings, such as anxiety, depression, grief, or shame/humiliation.
2.	Angry Child	Feels and expresses anger in an excessive way in response to perceived or real mistreatment, abandonment, humiliation, or frustration; often feels a sense of being treated unjustly; acts like a child throwing a temper tantrum.
3.	Enraged Child	Feels and acts enraged for similar reasons as Angry Child, but loses control over aggression and attacks and destroys objects and humans. Patients often report as if they went into a dissociative state ("everything went black").
4.	Impulsive Child	Acts impulsively to get needs met. Can be motivated by rebelliousness against maltreatment or against internalized parental modes.
5.	Undisciplined Child	Acts like a spoiled child who "wants what he wants when he wants it", and doesn't want to do anything he dislikes. Can't tolerate the frustration of limits and discipline.

6. Lonely Child	Feels lonely and empty, as if no one can understand him, sooth or comfort him, or make contact with him.
<i>Dysfunctional Coping Modes</i>	
7. Detached Protector	Uses emotional detachment to protect one from painful feelings; is unaware of his feelings, feels “nothing,” appears emotional distant, flat, or robotic; avoids getting close to other people.
8. Detached Self-Soother/Self-Stimulator	Uses repetitive, “addictive,” or compulsive behaviors, or self-stimulating behaviors to calm and sooth oneself; uses pleasurable or exciting sensations to distance oneself from painful feelings.
9. Compliant Surrenderer	Gives in to real or perceived demands or expectations of other people in an anxious attempt to avoid pain or to get one’s needs met; anxiously surrenders to the demands of others who are perceived as more powerful than oneself.
10. Angry Protector	Uses a “wall of anger” to protect oneself from others who are perceived as threatening; keeps others at a safe distance through displays of anger; anger is more controlled than in Angry Child mode.
<i>Maladaptive Parent Modes</i>	
11. Punitive, Critical Parent	Internalized, critical or punishing parent voice; directs harsh criticism towards the self; induces feelings of shame or guilt
12. Demanding Parent	Directs impossibly high demands toward the self; pushes the self to do more, achieve more, never be satisfied with oneself.
<i>Over-Compensatory Modes</i>	
13. Self-Aggrandizer	Feels superior, special, or powerful; looks down on others; sees the world in terms of “top dog” and “bottom dog;” shows off or acts in a self-important, self-aggrandizing manner; concerned about appearances rather than feelings or real contact with others.
14. Bully and Attack	Uses threats, intimidation, aggression, or coercion to get what he wants, including retaliating against others, or asserting ones dominant position; feels a sense of sadistic pleasure in attacking others.
15. Conning and Manipulative	Cons, lies, or manipulates in a manner designed to achieve a specific goal, which either involves victimizing others or escaping punishment.
16. Predator	Focuses on eliminating a threat, rival, obstacle, or enemy in a cold, ruthless, and calculating manner.
17. Obsessive compulsive Over-Controller	The Obsessive type (sometimes called “Perfectionistic Overcontroller”) attempts to protect oneself from a perceived or real threat by focusing attention, ruminating, exercising extreme control, and using s order, repetition, or rituals.
18. Paranoid Overcontroller	Attempts to protect oneself from a perceived or real threat by focusing attention, ruminating, and exercising extreme control. The Paranoid type attempts to locate and uncover a hidden (perceived) threat.

Schema Therapy – Forensic Adaptation

There are several important adaptations to treatment that may be required when working with forensic patients. First, issues like violence and deception are far more prominent in forensic patients as compared to those in general psychiatric settings (Bernstein, et al., 2007). Therapists may easily feel frightened by the potential for violence. Second, the circumstances and settings in which forensic patients are treated present special challenges which are not often seen in general psychiatry. Forensic patients are sentenced to treatment, which means that their admission is involuntary in nature. This can affect motivation and compliance with treatment, and can set up a dynamic of opposition and mistrust (Sainsbury, Krishnan, & Evans, 2004). It can also affect the therapist's motivation for providing treatment. Therapists may feel frustrated by a patient's lack of progress, or become suspicious of their motives. These issues may affect the therapeutic alliance, an aspect that has a significant influence on therapy outcome (Marshall & Seran, 2004; Ross, Polaschek, & Ward, 2008). Third, offenders have relatively limited choices regarding their treatment team; moreover, the team is also responsible for safety of the patient and his surroundings (McCann, Ball & Ivanoff, 2000). This may complicate patients' interactions with staff members. For example, too much attention to risk and safety issues can undermine and possibly preclude effective treatment (Norton & McGauley, 2000), while too little attention can also create problems.

For these reasons, we found it necessary to adapt ST to forensic settings. First, we expanded the schema mode model by adding modes that are prevalent in forensic patients, but seldom seen in general psychiatric settings. Moreover, we conceptualized these "forensic" modes as psychological risk factors for crime and violence. When these modes are triggered, they increase the probability of aggressive, impulsive, or other anti-social behavior. Thus, forensic ST focuses on ameliorating the psychological risk factors that, when triggered, can lead to criminal or violent recidivism.

As listed in Table 2, we added five schema modes to Young's original mode model: the Angry Protector, Conning and Manipulative, Predator, and two Over-Controller modes (*Obsessive* and *Paranoid* subtypes). As an exercise, see if you can match these forensic schema modes in Box 1 to case examples presented in Box 2¹.

¹ Answers for matching forensic schema modes to case examples
a = 3; b = 1; c = 4; d = 2

Forensic Schema Modes

- a) The Angry Protector mode is an emotional state of controlled anger or hostility, a “wall of anger” which serves to keep people at a safe distance.
- b) The Predator mode is state of cold, ruthless aggression; the focus is on eliminating a threat, obstacle, or enemy, which is carried out in a callous, unfeeling and often unplanned manner.
- c) Conning and Manipulative mode is a state involving conning, lying and manipulating others in order to achieve a specific goal, such as escaping punishment or victimizing others for some type of gain (e.g., material, sexual).
- d) The Over-Controller mode involves excessive control and a focusing of attention on a real or perceived threat or danger. In the Obsessive-Compulsive subtype, also called the Perfectionistic Overcontroller, the patient attempts to exercise control through the use of order and repetition. In the Paranoid subtype, the patient attempts to seek out and therefore control a source of danger or humiliation, usually by locating and uncovering a hidden (perceived) threat.

Case Examples

1. Mike discovered another man in his bed with his girlfriend. The man escaped from the house, but the girlfriend stayed behind. Mike had known for a while that his girlfriend was unfaithful to him. He confronted her, but she denied it. A cold rage took over him. He decided to kill her as retaliation for her infidelity.
2. Stephen was abused by his father when he was a child. He always keeps close track of everyone, and trusts no one except his mother. He refuses to do things he cannot control. In Schema Therapy, he refused to do imagery practices, stating that he didn't want to close his eyes.
3. Kevin sexually offended against a child, and was sentenced to treatment in a Dutch forensic hospital (“TBS clinic”). He learned that his unsupervised leave was denied, because the ‘leave committee’ found it unclear whether he still had sexual fantasies about children. When his psychotherapist brought up this topic, Kevin became very irritated. He said that it was obvious that no one believed him, and refused to discuss the topic further.
4. Bill was sentenced for raping his girlfriend multiple times. During psychotherapy he fell in love with his female therapist. He repeatedly tried to tempt her to step out of her therapist-role by asking her direct, personal questions: if she's in love with him, too, if she has kids, which types of men she likes, and so forth. When the therapist told him that she is not in love with him but respects him as a person, he twisted this information and tried to use it against her by telling the nursing staff that she was in love with him and that they had a romantic relationship.

Clinical Practice

ST integrates techniques from various approaches, such as cognitive, behavioral, psychodynamic and emotion-focused therapies. The initial phase of therapy is focused on assessment, education and building a therapeutic relationship between patient and therapist. This phase concludes in an individual case conceptualization which is used as a guideline for treatment.

Assessment and Case Conceptualization

The therapist evaluates the patient's suitability for ST. Although ST was originally developed for PD patients and patients with other longstanding problems, psychiatric comorbidity with Axis I disorders and coinciding psychotropic medication are not an exclusionary criterion for ST. However, there are some co-morbid conditions that may be a contraindication for ST, such as low intelligence (IQ < 80), neurological impairments, autistic spectrum disorders and certain psychotic disorders. The presence of such conditions may require modifications in standard ST techniques (e.g., avoiding using emotion-focused techniques in patients who are vulnerable to psychotic decompensation), or may suggest that other forms of therapy are indicated rather than ST.

We do not consider high levels of psychopathic traits as an exclusionary criterion for ST. Although it is commonly believed that psychopathic patients are untreatable, or that treatment actually makes them worse, there is little empirical support for this view (D'Silva, Duggan, & McCarthy, 2004). Recent studies suggest that some psychopathic patients may benefit from psychotherapy (Chakhssi, de Ruiter, & Bernstein, 2010; Skeem, Monahan, & Mulvey, 2002), a position that is consistent with our own clinical experiences, as well as the preliminary findings of our research (Bernstein, 2011). Psychopathic patients do require attention to issues such as dominance, manipulation, and deception, which can arise in the therapy relationship; some adjustments in the therapist's technique are therefore necessary. Nevertheless, our experiences working with these patients lead us to be optimistic that some may be helped by treatment, a view that also needs to be tempered with realism about the challenges posed by these patients.

As with all CBT-oriented treatments, careful diagnosis and assessment are an essential prerequisite for ST. The therapist begins with an initial evaluation and assesses the patient's presenting problems and goals for therapy by taking a life history and gathering information from multiple sources, including administering questionnaires, reviewing the available records, and observing the patient's behavior and emotional states. The therapist explains the ST model and schema mode language, and asks the patient to fill out certain questionnaires, such as the *Schema Mode Inventory* (SMI; Young, et al., 2007) and the *Young Schema Questionnaire* (YSQ; Young & Brown, 2003).

Because responses to these self-report questionnaires are often limited by a lack of patient insight (Keulen-de Vos, Bernstein, Clark, Arntz, Lucker, & de Spa, 2011; Lobbestael, Arntz, Löbbeckes, & Cima, 2009), the therapist also uses experiential techniques,

such as imagery, to trigger schema modes. The therapist observes the patient's schemas and coping responses as they manifest themselves in the therapy sessions. Available records are then used to identify dysfunctional life patterns, using the ST conceptual model to link them to presenting problems. Relevant schema modes are identified and conceptualized in an individual case conceptualization form. These formulations are the initial focus of the treatment (Rafaeli, et al., 2011; Young, et al., 2003). Case conceptualizations not only guide therapeutic interventions, they are also helpful in educating patients about their problems. Furthermore, case conceptualizations are not static, but can change as the treatment progresses. For example, new information and insights may call for re-adjustments of the initial case conceptualization.

The case conceptualization is based primarily on schema modes, rather than early maladaptive schemas, because they reflect the combinations of certain early maladaptive schemas and maladaptive coping responses. Also, forensic patients often have so many early maladaptive schemas that discussing them all would be unmanageable. It is important to use a conceptual framework that is relatively clear, simple, and consistent. In forensic patients, schema modes serve this purpose because they describe problematic emotional states and behaviors in a manner that is straightforward, is easy for patients to understand, and gives therapists clear targets for interventions. Early maladaptive schemas and coping responses may also be examined, but are secondary to schema modes in working with forensic patients.

The case conceptualization, which is individualized for each patient, is usually represented visually, in the form of a diagram. This is illustrated in Figures 1a and 1b, for a hypothetical psychopathic patient, and a narcissistic patient, respectively. The maladaptive coping modes are shown in the middle and left side of the figure, while the maladaptive child and parent modes are presented on the right side. The adaptive modes are shown above the dashed line. This visual representation makes the patient's modes easier to grasp for both therapist and patient. A simplified version is often shared with patients, and can be kept on hand during sessions, so it can be referred to when needed.

In forensic ST, the explication of the patient's crimes are an important part of the case conceptualization process (Bernstein, de Jonge, & Jonkers, 2011). In fact, a clear understanding of the patient's criminal behaviors are a prerequisite for forensic treatment. 'Crime scenarios,' that is, the events leading up to and culminating in criminal or violent behaviors can often be reconstructed in terms of an unfolding sequence of schema modes (Bernstein, et al., 2007, 2011). The case conceptualization aims to clarify these sequences: What kinds of violent behavior were displayed, what triggered them, what emotions and cognitions accompanied them, what were the motivations behind them, and what were their consequences? These factors are conceptualized as schema modes; the amelioration of these modes, with the goal of reducing the risk of future offending, becomes a central goal of the therapy. During the case conceptualization phase, the therapist makes prominent use of patient records in reconstructing these sequences, and the role that modes

play in them, because patients may be reluctant to share certain information (e.g., details about crimes, abuse histories) in this early phase of therapy.

Figure 1a: Example Case Conceptualization in a psychopathic patient

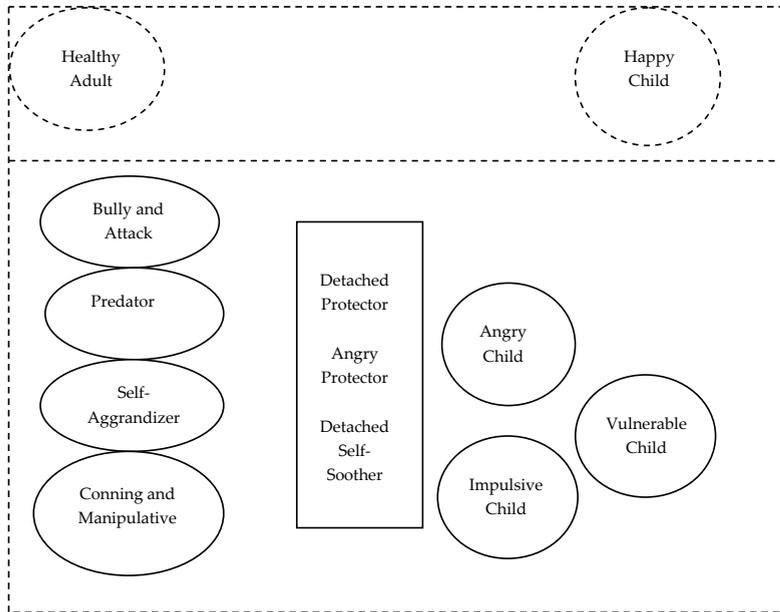


Figure 1b: Example Case Conceptualization in a narcissistic patient



Note. Overcompensating modes on the left (in the ovals), avoidant coping modes in the middle (in the rectangle), and child and parent modes on the right (in the circles), healthy modes, if applicable, in the dashed lines.

Treatment Strategies

Cognitive and behavioral techniques. Schema modes reflect underlying early maladaptive schemas, maladaptive coping responses and emotional states. Therefore, ST aims to produce change at different levels: problematic schemas need to be disputed, painful emotions to be worked through, and problematic behavior to be altered, whereas new, healthier patterns of thinking, feelings, and behaving are to be reinforced. ST uses a variety of interventions to achieve change. Cognitive interventions are used to modify patient's ways of thinking and educate patients about their unmet needs, schemas, and maladaptive coping responses (Kellog & Young, 2006). As long as patients believe strongly in the legitimacy of certain schemas, change cannot occur. Together, patient and therapist gather evidence of pros and cons of certain schemas and coping responses. Therapists typically use cognitive techniques such as flashcards and schema diaries to increase awareness of schemas. For example, flashcards contain concise statements summarizing the evidence against the patient's schemas (Young, et al., 2003). By using cognitive strategies, patients learn that, at least on an intellectual level, their underlying schemas are distorted and learn to view themselves and others in more balanced, realistic ways. Behavioral techniques are used to help patients practice new behaviors and gain confidence in consolidating behavioral change. Schema therapists can incorporate a variety of standard cognitive-behavioral techniques into their work, such as exposure, anger management, assertiveness training and relaxation.

Experiential techniques. While traditional cognitive-behavioral techniques can play an important role in working with forensic patients, our experience suggests that they are not, in themselves, sufficient, to produce deeper or more lasting change in many forensic patients with PDs. Many of these patients are highly detached from their emotions (Murphy & Vess, 2003). Cognitive therapy methods are predicated on the idea that changing thoughts leads to changes in emotions. However, detachment from emotions can render these techniques ineffective. Research suggests that "hot" cognitions – that is, cognitions that are accompanied by emotional arousal – are easier to change than "cold" ones (David & Szentagotai, 2006, Holmes & Mathews, 2005). Thus, simply talking about emotions, when this is done in a highly intellectualized or emotionally distant way, is usually insufficient to produce emotional change. ST makes prominent use of experiential techniques in order to bring emotions into active awareness and overcome emotional distance (Leahy, 2007; Mennin & Farach, 2007; Warwar, Links, Greenberg, & Bergmans, 2008). In fact, experiential, or emotion-focused, techniques are one of the hallmarks of ST, which distinguish it from more traditional cognitive-behavioral therapy approaches. Thus, while cognitive interventions lay the groundwork for awareness and insight in unhealthy schemas and modes, experiential techniques aim to consolidate this aware-

ness on a deeper, emotional level. Moreover, forensic ST places even greater emphasis on emotion-focused techniques than is usually the case with non-forensic patients, because forensic patients are so highly detached.

Two experiential techniques in ST that are commonly used are chair-work and imagery re-scripting. In chair-work, the patient switches between chairs and is invited to have dialogues between different parts of the self (Kellogg, 2004; Paivio & Greenberg, 1995). The patient sits in one chair when he plays a certain mode and switches chairs when a different mode is addressed or becomes active. Chair-work, which was borrowed by ST from Gestalt Therapy and Drama Therapy, makes patients' schema modes more tangible, helping them to "feel" the mode that they are playing. The therapist can enact real scenes from the past or present, or make up scenes, "re-script" scenes to make them turn out differently, and have the patient use role playing to practice healthier attitudes and coping responses.

Imagery re-scripting is a technique in which the therapist asks the patient to visualize an upsetting childhood memory or traumatic image from the past or present. The patient explores key images that are related to unmet early developmental needs, such as the need for closeness and connection, protection, the validation of feelings, and so forth. Next, the therapist intervenes in the upsetting memories by re-scripting or changing the course of the original situation. A positive atmosphere is created in which the emotional needs of the patient are met in a healthy way, instead of being ignored or violated. As a result, the patient feels safer and more in control of the situation, and the underlying schemas that have been triggered via the imagery can begin to heal, as his early emotional wounds are re-processed. The patient also begins to understand the links between the past and his present situation, which he can feel in a vivid and immediate way (Arntz, 2011; Rafaeli, et al., 2011; Smucker & Boos, 2005). Box 3 contains a clinical example of this technique.

A Case Example Involving the Use of Imagery and Rescripting

Paul, a highly psychopathic patient, had refused to do imagery exercises for the first two years of his therapy. Finally, he agreed to do so. He closed his eyes, and brought an image to mind of having been sadistically beaten by his father, a common occurrence in his household growing up. This time, however, when he was 14 years old he "turned the tables" on his father, taking him by surprise and savagely beating him. This imagery exercise represented a turning point in the therapy, helping the patient to make emotional contact with the side of him that lived in terror of his father (Abused Child mode), and to recognize that he had learned to over-compensate for his fear by taking the upper hand, which usually involved aggressing against others before they could do the same to him (Bully and Attack mode).

In subsequent imagery sessions, the patient and therapist revisited these episodes,

with the therapist "rescripting" the scene to protect the child and confront the abuser. In these sessions, the therapist asked the patient's permission to "enter" the image to provide for the child's needs, such as safety, comfort, and validation. In one instance, the patient and therapist arranged to have the police come to take the father away and lock him up, where he couldn't hurt the child anymore. In another session, the patient vented his anger at the father, with his therapist's support. Over a series of 5 of these sessions, spread over a period of several weeks, the patient gained greater freedom from the terrorizing image of his father, which he had carried with him his whole life. He reported feeling calmer, safer, and being less emotionally triggered in situations where he had previously responded with aggression.

Therapeutic Style

The basic therapeutic style in ST is known as limited reparenting, because the therapist provides for some of the patients' early unmet developmental needs, within reasonable limits and boundaries. Limited reparenting means that the therapist acts like a "good enough" parent for the patient; he provides some of what the patient missed, in appropriate ways. For example, the therapist might provide warmth, empathy, recognition and validation of emotions, or empathic confrontation and limit setting, depending on the patient's unmet emotional needs. This therapeutic style is another feature that sets ST apart from other CBT-oriented therapies.

Limited reparenting is truly at the heart of ST. It is a defining feature of the therapy because it is incorporated into how the therapist interacts with the patient, as well as the way interventions and techniques are applied. For example, when imagery exercises involve a patient being abused as a child, the therapist uses rescripting to protect the child, to meet the need for safety that had been unfulfilled in the patient's childhood.

For limited reparenting to succeed, the therapist needs to be able to reach the patient's vulnerable side. However, forensic patients are often difficult to reach emotionally. Many of them have been exposed to violence, or have been abandoned or abused, and therefore have never experienced interpersonal relationships based on reciprocal trust and validation. These patients typically come across in therapy sessions as hostile, mistrustful and detached. It takes time for the patient to develop a trusting relationship with the therapist; it is not at all uncommon for it to take a year or more for these patients to form an attachment to the therapist. In addition to being patient and persistent, the therapist needs to be flexible, because basic emotional needs may differ from patient to patient, and may vary within a given patient from one session to another.

Empathic Confrontation and Limit Setting

In order to access the patient's vulnerable side, the therapist needs to empathically confront, and at times, set limits on, the patient's maladaptive coping modes, which block access to it. In empathic confrontation, the therapist starts by acknowledging and validating the patient's maladaptive coping modes; he calls the patient's attention to the modes ("I wonder which side of you this is?") and explores the functions that they serve in an accepting and non-judgmental manner. The therapist then gently points out the maladaptive consequences of the modes, and thus stresses the necessity for change (Young, et al., 2003). Sometimes, the therapist can use role-play and role-reversal as additional tools to help the patient to recognize the modes and understand their functions.

In limit setting, the therapist enforces limits on the patient's maladaptive modes in a clear, firm, and consequential, but non-punitive, manner. Rather than setting limits by making reference to impersonal rules ("Clinic policy states that patients can't be late for sessions"), the therapist does so in a personal way, using self-disclosure where appropriate ("I notice that I'm getting frustrated with your coming late so often. I want to work with you, but not in this way"). Limit setting is used whenever the patient engages in behavior that is destructive to himself or other people, is disrespectful or transgresses boundaries, or undermines the therapy (e.g., by coming repeatedly late to sessions or missing appointments). This empathic and morally neutral approach to confronting and setting limits is especially important, because forensic patients often experience confrontation and limits as punitive, arbitrary, or unfair. In our experience, the vast majority of forensic patients respond well to these interventions, when the therapist is clear and firm, but also compassionate. Box 4 provides a clinical example of the use of limited reparenting, empathic confrontation, and limit setting.

Case Example Involving Use of Limited Reparenting, Empathic confrontation, and Limit Setting

Brian, an antisocial patient, was distant, hostile, and mistrustful throughout the first 6 months of the therapy. His therapist tried to remain interested, warm, and attentive, but became discouraged by the lack of progress. Eventually, she confronted him, but in an empathic way, stating that she understood the reasons for his mistrust, but that she was becoming discouraged by it. She said that she couldn't go further with him unless he was willing to take some risks to open up with her. The therapist's use of limit setting, done in a firm but caring way that also involved appropriate self-disclosure of feelings, was effective. The patient, while initially surprised, agreed to share more openly with her. Their relationship grew warmer and more comfortable, though he remained quite guarded at times. Over time, the therapists' warmth, availability, and consistency, as well as her willingness to confront the patient in a direct but non-judgmental way, helped to counteract the patient's mistrust. Eventually, he

learned to rely on her for help and advice in handling difficult situations. He received permission to go on leave, and while his adaptation to life outside the institution was not easy, he continued to rely on her for periodic advice and support where needed.

Treatment Motivation

In the forensic field, motivation for treatment is often considered a necessary prerequisite for starting treatment. However, forensic patients' motivation and readiness to engage in therapy is typically low (Sainsbury, et al., 2004). In these cases, patients may be given short-term interventions, such as motivational interventions, to prepare them for more intensive forms of therapy. Patients who don't respond to these kinds of interventions, or who repeatedly resist efforts to engage them, are often considered "untreatable," and denied further treatment.

ST views treatment motivation as dynamic and fluctuating, rather than static and unchangeable. Furthermore, ST conceptualizes motivation and engagement in terms of schema modes that block therapeutic progress. By working with modes, ST seeks to enhance patients' motivation, a process that may be necessary over the entire course of the therapy. Various modes may interfere with patients' ability to engage in treatment. For example, the Detached Protector ("I have no feelings"), Self-Aggrandizer ("I don't have any problems"), and Paranoid Overcontroller ("I don't trust anyone") modes can block patients' motivation. The goal is to work with these different schema modes so that the patient is gradually invited to switch into modes that are more productive, such as the Vulnerable Child and Healthy Adult modes, in which patients are more in touch with their underlying feelings.

Pitfalls and Recommendations

Limits and Boundaries

Schema Therapy requires that therapists are willing to be accessible and emotionally available to their patients, and to foster an attachment relationship with them. Furthermore, because ST is a moderate to long-term treatment, therapists must be prepared for a longer-term commitment. A common pitfall for therapists is that they are too distant or cool towards the patients, or overly critical when a patient doesn't improve quickly enough (Arntz & van Genderen, 2009; Young, et al., 2003). On the other hand, some therapists have "loose" boundaries, and self-disclose or engage in other inappropriate behavior. An important modus operandi in ST should be that the therapist strikes a balance between being too close or too distant, thus having "permeable boundaries" – that is, boundaries that are firm but flexible enough to provide closeness within appropriate limits.

This pitfall is closely related to another one, namely difficulties with limit setting. Therapists need to set appropriate limits on patients' destructive and self-destructive behaviors (Arntz & van Genderen, 2009; Young, et al., 2003). However, some therapists are reluctant to set limits out of fear of provoking a negative reaction; thus, they allow self-defeating, devaluing, or aggressive behavior to go on for too long. Other therapists may set too firm limits because they are too overwhelmed by the intensity of their patient's emotions or too afraid of their intimidating behavior (Young, et al., 2003). Again, it is very important that therapists learn to set limits in a timely and firm, but non-punitive manner.

Forensic patients pose specific challenges for their therapists that are less often seen outside of the forensic field. For example, many narcissistic offenders have a strong Self-Aggrandizer mode, in which they behave in a devaluing and arrogant manner towards their therapists. Other offenders attempt to manipulate or deceive their therapists. For example, some forensic PD patients deliberately withhold information or respond in a socially desirable manner and present an unduly positive image of themselves; others may malingering (i.e., fake) symptoms (Keulen-de Vos, et al., 2011). The schema mode model provides a means for therapists to recognize and intervene effectively when patients engage in these and other challenging behaviors.

Requirements for Therapists

ST is a complex form of therapy that requires specialized training and supervision. This is especially so in the forensic field, where patients are so challenging. We recommend that therapists have 3 years of prior psychotherapy experience before they attempt to master ST (Bernstein, et al., 2007). Therapists should seek training in ST through a program that is accredited by the International Society for Schema Therapy (ISST). These programs have requirements including several training days with a standardized curriculum, supervision by certified schema therapists, and competency ratings by independent experts. Even after receiving certification, we recommend that therapists working with forensic patients continue to receive supervision or peer-supervision on their cases. In our experience, the ongoing support and feedback one receives in supervision is critical to achieving success in the face of the ongoing challenges that these patients present.

In the forensic field, quality assurance in the delivery of treatment is essential. Even more than in most other areas of mental health practice, a lack of adherence to the principles and practices of evidence-supported treatments can have serious consequences, when patients relapse to crime and violence. The investment in training therapists to work effectively in the forensic field is one that is likely to be repaid in the benefits it yields, not only in terms of improving the lives of patients, but in reducing the damage to lives and property, and the enormous financial costs of incarceration related to antisocial behavior.

CHAPTER 2

A review of treatment of cluster B personality disordered offenders

Keulen-de Vos, M.E., Bernstein, D.P., & Duggan, C. Treatment of cluster B personality disordered offenders: Which treatments might be most effective for which problems in which patients under which circumstances? Part I. Treatment alternatives. (submitted).

Abstract

In a classic article about psychological treatments, Paul (1967) raised the question, “*What treatment, by whom, is most effective for this individual, with that specific problem, and under which set of circumstances.*” In this article, we will review and discuss available treatment options for a highly challenging group of forensic patients: those with cluster B personality disorders. This group of patients often show poor treatment outcomes, and are at high risk or recidivism. Recently, however, new treatments developed both within and outside of the forensic field raise the possibility of improved outcomes for this challenging population. This article serves as a prelude for a companion article, in which we apply a decision-making algorithm to the results of our review to provide some tentative answers to Paul’s famous question for forensic patients with cluster B PDs.

Introduction

“What treatment, by whom, is most effective for this individual, with that specific problem, and under which set of circumstances?” In a classic article on research in psychotherapy, Paul (1967) stated that all outcome research should be directed towards this question. Since then, numerous outcome studies on the effectiveness of therapeutic interventions in axis I and II disordered patients have been published (e.g., Benish, Imel, & Wampold, 2008; Bisson, et al., 2007; Jakobsen, Hansen, Simonsen, Simonsen, & Gluud, 2012). Research has also been conducted on therapeutic change, therapeutic alliance, and different types of therapeutic environments such as community-based, out-patients and in-patient treatment facilities (e.g., Barnicot, et al., 2012; Olver & Wong, 2009). As a result, promising treatment approaches have been developed and tested for axis I and II disordered patients in general psychiatric settings. Consequently, we now know better, which treatment approaches are most effective in which problems in which patients in general settings. Even among patients with personality disorders, which have long been considered some of the most challenging patients to treat, there is increasing evidence for the effectiveness of certain therapeutic approaches. For example, Dialectical Behavior Therapy (DBT; Linehan, 1993) has demonstrated effectiveness in Borderline PD (BPD) patients in reducing suicide attempts, depression, hostility, self injuries and anger (e.g., Linehan, 2010; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Van den Bosch, Koeter, Stijnen, Verheul, & Van den Brink, 2005). There is also good empirical evidence for the effectiveness of Schema Therapy (ST; Young, Klosko, & Weishaar, 2003) and Mentalization Based Therapy (Bateman & Fonagy, 2004) in improving borderline symptoms and global functioning over the course of treatment (Giesen-Bloo, et al., 2006; Nadort, et al., 2009).

Interest in the treatment of forensic patients has also increased enormously over the past 20 years, as is evidenced, for example, by a growing literature on treatments for sex offenders, domestic violence offenders, and offenders with co-morbid substance abuse and dependence (e.g., Isherwood & Brooke, 2001; Lösel & Schmucker, 2005; Marshall & Serran, 2001; Murphy & Ting, 2010). On the other hand, research on the treatment of personality disorders in forensic settings is still in its infancy. Although some promising new approaches have been introduced to treat this challenging population (Bernstein, Arntz, & de Vos, 2007; Gordon & Wong, 2000), there is still scant empirical data about the effectiveness of treatments for personality disordered patients in forensic settings. The treatment of personality disordered offenders is an area in need of far greater attention, as this population is associated with severe behavioral problems and has traditionally been considered highly difficult to treat and expensive to manage. Personality disorders are the single largest diagnostic group in most correctional settings (de Ruiter & Greeven, 2000; Hildebrand & de Ruiter, 2004; Singleton, Meltzer, & Gatward, 1998). Studies indicate that fifty to ninety percent of offenders in most correctional settings have personality disorders (Blackburn, Logan, Donnelly, & Renwick, 2003; Lindsay et al.,

2006; Timmerman & Emmelkamp, 2001). The cluster B PDs are the most prevalent personality disorders in most secure settings, and are often the most problematic. The most prevalent axis II diagnosis among offenders is Antisocial personality disorder (ASPD; 40 to 60%), followed by Borderline (BPD; 10 to 13%) and/or Narcissistic (NPD; 2-18%) PD (Blackburn, et al., 2003; Fazel & Danesh, 2002; Lindsay et al., 2006; Moran, 1999). Offenders with cluster B personality disorders pose an increased risk of recidivism and violent recidivism compared to other offenders (Leistico, Salekin, DeCoster, & Rogers, 2008). For example, studies show that forensic PD patients were more likely to re-offend after release from a secure hospital, than patients with axis I psychiatric diagnoses such as schizophrenia (Coid, Hickey, & Yang, 2007; Jamieson & Taylor, 2004). The high risk of recidivism in psychopathic offenders is well documented: about 2-4 times greater than that of other offenders within a period of 1 to 3 years after institutional release (Hemp-hill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996). However, the risk of recidivism is also increased for other offenders with cluster B personality disorders. For example, in one study, Antisocial and Borderline PD offenders, and especially the comorbidity of both ASPD and BPD, showed an increased risk for criminal offences within a year after discharge from a psychiatric hospital, compared to patients with no PDs (Gandhi, Tyrer, Evans, McGee, Lamont, & Harrison-Read, 2001). Personality disorders are also responsible for a disproportionate amount of aggressive incidents within forensic settings. For example, a recent study showed that Borderline and Antisocial PDs were predictors for repetitive physical aggressive incidents in forensic settings (Langton, Hogue, Daffern, Mannion, & Howells, 2011).

Crime and violence have an enormous impact on society in terms of damage to persons and property, the effect on the quality of life of victims and their families, as well as the costs of prosecuting offenders and detaining them for prolonged periods of time. Providing treatments that could reduce the length of stay in forensic institution, reduce violence inside institutions, and help to reintegrate offenders within the community, should therefore be a major societal priority. Treating offenders with cluster B PDs should result in a significant net savings, even taking into account the costs of delivering treatments, given the substantial economic impact of criminal and violent behavior in these patients (Foster & Jones, 2006; Sheldon, Howells, & Patel, 2010). A recent economic analysis found that even a 10% reduction in the rate of re-offending would save US states many billions of dollars per year, given the expansion of the US prison population over the past 30 years, and the high rate of re-offending – often as high as 70% to 80% - among detainees released from prison (Pew Center on the States, 2011). Given their high prevalence rates and high risk for re-offending, offenders with cluster B PDs should be a special focus of attempts to reduce recidivism.

In this first article, we review the treatment options for cluster B PD offenders, and consider the, albeit limited, empirical support for them. In the second, companion article, we apply a decision-making algorithm systematically, drawing possible conclusions to help guide treatment providers in making more informed and considered decisions

about which treatments to choose for which patients and problems under which circumstances.

Method

Relevant computer databases including PsycINFO and PubMed were searched using key terms relating to treatment of cluster B personality disorders in forensic patients (e.g., forensic, treatment, cluster B, personality disorders, offenders). We used these key terms alone and in combination (e.g., forensic AND treatment) . We supplemented these searches by reviewing the reference lists of publications on this topic. We included studies that met the following criteria: 1) Treatments had to be directed towards one or more specific cluster B personality disorders, or be directed at a specific issue that is highly salient for cluster B personality disorders in offenders (e.g., reducing violence). And 2) Treatments also had to have at least some, albeit often preliminary, evidence of effectiveness, either in forensic populations or related populations (e.g., addicted patients), to be included in the review. Because so few of these treatments have been tested by randomized clinical trials within forensic populations, we did not make this a requirement for inclusion. We are interested in providing some guidelines in an area where evidence-based treatments are only in the early stages of development, so we wanted to be sure to include treatments that may be promising, even if the evidence supporting them is currently limited. Thus, we also included studies that have received some support from open trials or trials using matched control groups. We grouped treatments into 3 categories: treatment programs for criminal offenders, such as violence reduction programs; psychotherapies; and other/miscellaneous. An overview of the studies that have been included in this review, are presented in table 1.

Review of the literature on available treatments for forensic cluster B PD patients

Forensic treatment focuses on psychopathology and the causes of crime; the ultimate goal, of course, is the reduction of risk for violent and criminal behavior. The treatment of choice for cluster B PD offenders is usually psychotherapy, either in an individual or group format, or in a specific program design (e.g., programs for sex offenders, partner abuse). Most treatment approaches vary in their emphasis between a cognitive-behavioral and interpersonal or psychodynamic perspective (Kraus & Reynolds, 2001). Secure settings also often provide various kinds of Arts therapy (e.g., drama-, music- or arts therapy) as an adjunct, or alternative, to traditional verbal forms of psychotherapy. In addition to these treatments, psychopharmacological treatment is also often used in cluster B PD patients, either as a stand-alone treatment or in combination with psychological interventions. There is considerable evidence from meta-analyses of clinical trials

in non-forensic patients that pharmacological treatments of various kinds can produce improvements in personality disorders, especially with regard to aggression and impulsivity (Kliem, Kröger, & Kosfelder, 2010; Leichsenring & Rabung, 2008; Perry, Banon, & Ianni, 1999). The mostly widely used in cluster B PD patients are SSRIs and antipsychotics. In sex offenders, libido inhibiting medications play a vital role (Giltay & Gooren, 2009; Lösel & Schmucker, 2005), although their effectiveness is limited by the patient's compliance with taking the medications (Conroy, 2006). As the focus of this article is on psychological treatment of offenders with cluster B PDs, a comprehensive literature review on psychopharmacological treatments is beyond the scope of this paper.

Specific programs

Violence Reduction Program - A treatment program often used in violent offenders is the Violence Reduction Program ([VRP]; Gordon & Wong, 2000). The VRP is based on the 'what works' principles (Andrews & Bonta, 2003) and the model of change for addicted patients (Prochaska, DiClemente, & Norcross, 1992). It uses cognitive-behavioral approaches social learning principles and motivational interviewing techniques to circumvent relapse. The length of the program is 6 to 8 months. The program is delivered in a group format, but can also be offered on an individual basis, for example when patients are cognitively compromised. VRP consists of three phases; phase 1 focuses on gaining insight in past patterns of violence; phase 2 is oriented towards skill acquisition; phase 3 focuses on relapse prevention. The overall aim of VRP is to reduce both the frequency and intensity of violent incidents.

Recently, the effectiveness of the VRP approach has been examined in four studies (Fylan & Clarke, 2006; Di Placido, Simon, Witte, Gu, & Wong, 2006; Wong, Witte, Gordon, Wu, & Lewis, 2006; Wong, Vander Veen, Leis, Parrish, Gu, Liber, & Middleton, 2005). Three of these have direct relevance for our review.

In the study by Di Placido and colleagues (2006), the effectiveness of forensic patients with primary diagnoses of substance abuse disorder and Antisocial PD was investigated. Gang membership (i.e., non-gang members versus gang members) and treatment completion (i.e., treatment completers and non-completers) were compared, using a two by two design. There were four groups involved in this study: treated gang members, untreated gang members, treated non-gang members, untreated non-gang members. Each group consisted of 40 patients each. Reductions in violent reconvictions after discharge and institutional misconduct were considered outcomes of effective treatment. Results showed that treated gang members and treated non-gang members had a significant lower incidence of recidivism than untreated gang members and untreated non-gang members. Untreated gang-members had higher rates of both major and minor institutional offences than treated gang members, untreated gang members and untreated non-gang members (Di Placido, et al., 2006). However, no effect sizes were reported, so that the magnitude of these findings are difficult to gauge. The findings suggest that treat-

ment focused on violence reduction can reduce both institutional incidents and violent recidivism.

Wong and colleagues (2006) examined the VRP program in a sample of offenders with high levels of psychopathy (PCL-R > 26; Hare, 1991) (Wong, et al., 2006). In this study, thirty-four (34) psychopathic offenders admitted at a super-maximum institution who participated in the VRP program, were matched to thirty-four (34) psychopaths who did not participate in this program. Results showed that there were no differences between the groups with regard to speed and frequency of re-offending (Wong, et al., 2006). There was, however, a difference in seriousness of re-offending. Psychopaths who completed the VRP program had significant less serious crimes when they re-offended than those who did not participate in the program. No effect sizes were reported (Wong, et al., 2006).

In a different outcome study, the effectiveness of the VRP approach was examined in a sample of primarily cluster B PD offenders who were admitted at a maximum secure hospital (Wong, et al., 2005). Thirty-one (31) patients were treated according to the VRP program. Over 80% of the patients were successfully transferred to a lower-security facility. Also, results showed a significant reduction in institutional violent incidents after treatment completion. Effect size for pre- and post treatment incident rates was $d = -.92$ (Wong, et al., 2005).

Aggression Replacement Training – Another commonly used program for offenders is Aggression Replacement Training ([ART]; Goldstein, Glick, & Gibbs, 1998). It has been developed originally for aggressive or violent forensic adolescent offenders but is also used in adults. ART is typically offered to patients with an Antisocial PD (ASPD) and consists of three modules: skills acquisition, impulse and anger control and moral reasoning development. It has theoretical basis in learning theory and consists of cognitive-behavioral interventions. ART is a 30-session program and is delivered in a group format; each group consists of 8 to 10 participants (Goldstein, et al., 1998). The overall aim of ART is to reduce the occurrence of aggressive incidents (Hatcher, Paler, McGuire, Hounsoume, Bilby, & Hollin, 2008).

There is a broad literature on the effectiveness of ART in juvenile offenders (e.g., Goldstein & Glick, 1994a, 1994b; Nugent Bruley & Allen, 1999). These studies typically show beneficial effects on anger and social skills. For example, a randomized study by Goldstein & Glick (1994a) examined the effectiveness of ART in 84 juvenile youths admitted in a community center. Participants were randomly assigned to three conditions: ART for adolescents and family; adolescents alone; and no treatment. Results showed significant improvements in social skills, and reductions in anger levels and acting-out behavior for the two ART conditions (Goldstein & Glick, 1994a). Similar results were obtained in a study by Goldstein and Glick (1994b) which examined the empirical value of ART in gang members. Participants were randomly assigned to either a ART condition or a non-ART control condition (Goldstein & Glick, 1994b).

There is still scant empirical data on the effectiveness of ART in adult offender samples. A study by Hornsveld (2005) examined the effectiveness of aggression control therapy, which is based on ART, in a sample of 109 inpatient and 44 outpatient adult offenders diagnosed with an Antisocial PD. Both inpatient and outpatients showed a significant reductions in hostility and aggressive behavior as measured by the Novaco Anger Scale (NAS; Novaco, 1994), and Aggression Questionnaire (Buss & Perry, 1992) No improvements in pro-social behavior was observed (Hornsveld, 2005). Effect sizes ranged from $-.63$ to $.06$. These findings were replicated in a study by Hornsveld, Nijman and Kraaimaat (2008). This study consisted of 92 outpatient and 89 inpatient offenders with a primary diagnoses of antisocial PD. Although all patients showed lower levels of aggression after treatment, effect sizes were very small (ranging from $d = -.27$ to $.10$). All data pertained to self-report only.

Systems Training for Emotional Predictability and Problem Solving. The STEPP program, or Systems Training for Emotional Predictability and Problem Solving is often used for offenders suffering from BPD. This program combines cognitive behavior elements and skills training, and has been developed specifically for BPD. The STEPP program views BPD as a disorder that is characterized by a defect in an individual's internal ability to regulate emotional intensity. As a result, BPD patients are periodically overwhelmed by abnormally intense emotions (Blum, Pfohl, St. John, Monahan, & Black 2002). The STEPP program is a 20-week manual-based group treatment which is primarily aimed at the acquisition of specific emotion and behavior management skills.

There is some empirical evidence for the effectiveness of the STEPP program. A randomized clinical trial by Blum and colleagues (2008) showed that STEPP in combination with TAU was superior to TAU alone in a sample of 124 BPD outpatients. Patients receiving STEPP and TAU showed greater improvements in impulsivity, negative affect, mood and global functioning. Attrition rates, however, were relatively high (Blum, et al., 2008). These findings are similar to results of a RCT by Bos, van Wel, Appelo and Verbraak (2010). Seventy-nine (79) BPD outpatients were randomly allocated to either STEPP or TAU. Patients assigned to STEPP showed a significant reduction in general psychiatric and BPD specific symptoms that TAU patients. STEPP was not superior to TAU with regard to impulsive behavior (Bos, et al., 2010). However, patients in both conditions approved and could be labelled as recovered.

We are aware of only one study on the effectiveness of the STEPP program in forensic PD offenders. In a uncontrolled trial, STEPP was examined in twelve (12) BPD female offenders. After twenty weeks, patients showed improvements in BPD related symptoms, negative affect and depression. Effect sizes were moderate to large (Black, Blum, Eichinger, McCormick, Allen, & Sieleni, 2008).

DBT - Substance Abuse program. The DBT-Substance Abuse (DBT-S; Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois, 1999; Dimeff, Rizvi, Brown, & Linehan, 2000) program consists of standard DBT techniques that are supplemented with a number of components, such as the use of a dialectical stance on abstinence of drug abuse, a specific

order of treatment targets and skills that relevant to addicted patients. Key objective of DBT-S is to eliminate substance related disorders and to increase behavioral control (Di-meiff, et al, 2000). There is some evidence for the effectiveness of DBT-S in non-forensic patients. In a uncontrolled trial the effectiveness of DBT-S was compared to TAU in sample of twenty-eight Borderline PD patients with a co-morbid drug dependency (Linehan, et al., 1999). Treatment lasted for 12 months. Results showed that patients assigned to DBT-S showed a greater decrease in substance use and showed less attrition rates than patients assigned to TAU. As far as we know, there is no empirical validity for the effectiveness of DBT-S in forensic populations.

Dual-Focused Schema Therapy. The Dual-Focused Schema Therapy (DFST; Ball, 1998) consists of a 24 week program that consists of two stages. First, traditional relapse prevention techniques are integrated with psycho education about maladaptive schemas and dysfunctional coping styles that are believed to trigger PD pathology and addictive behavior. Second, the therapist focuses on changing these schemas and coping styles with standard ST techniques (Ball, 1998). There is some evidence for the effectiveness of DFST in non-forensic patients. In a randomized pilot, DFST was compared to '12 Step Facilitation Therapy' (12FT; Nowinski, Baker & Carroll, 2002) (Ball, 2007). 12FT is a drug program aimed at facilitation abstinence from alcohol and drugs. In a sample of 30 patients who were diagnosed with a PD and a methadone addiction were randomized to either DFST or 12FT. Patients receiving DFST demonstrated more rapid decreases in the frequency of their methadone intake than patients assigned to 12FT condition (Ball, 2007). There is as yet no evidence for the effectiveness of DFST in forensic populations.

Eye Movement Desensitization and Reprocessing. Eye Movement Desensitization and Reprocessing (EMDR; Shapiro, 1995, 2001) is applied both in general psychiatric settings as in the forensic field. The objective of EMDR is to desensitize and reprocess dysfunctionally stored memories, as a result posttraumatic stress symptomatology is reduced (Shapiro, 1995, 2001). EMDR consists of eight phases in which the patient is asked to focus on painful memories and the emotions and thoughts that accompany these memories. Memories are desensitized by dual-attention stimulation (e.g., lateral eye movement or alternate hand-tapping) (Gunter & Bodner, 2009).

In several randomized clinical trials, the effectiveness of EMDR in non-forensic PTSD patients has been demonstrated (e.g., Bisson, Ehlers, Matthews, Pillang, Richards, & Turner, 2007; Van Etten & Taylor, 1998; Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Seidler & Wagner, 2006). EMDR is also practiced in forensic settings, however the number of adequate studies is still limited.

We are aware of only one study investigation the effectiveness of EMDR in forensic PTSD patients. In a study by Ricci, Clayton & Shapiro (2006) the effectiveness of EMDR as a supplementary treatment to standard CBT treatment was examined in a sample of ten sex offenders who had reported a history of childhood sexual abuse. EMDR was compared to two control groups that consisted of regular CBT treatment. Trauma symp-

tomatology, such as depression, tension and irritability, and sexual arousal was assessed (Ricci, et al., 2006). Results showed a decrease in sexual cognitions and arousal decreased after EMDR. However, this study has several shortcomings, for example the small sample size and the lack of randomization in treatment conditions.

Psychotherapy: stand-alone approaches

Cognitive-Behavioral Therapy. Many forensic hospitals offer Cognitive-Behavioral Therapy (CBT; Beck, Freeman, David, et al., 2004) as their customary type of treatment. At the core of CBT is the concept of dysfunctional cognitions or schemas, behavior and emotions (Beck, et al., 2004). Negative, biased or dysfunctional cognitions are the cornerstone of dysfunctional behavior, limited impulse control or inadequate problem solving. CBT aims to increase the ability to think about problems from different perspectives by challenging dysfunctional cognitions.

CBT is one of the most extensively researched forms of psychotherapy. There is ample empirical evidence that CBT treatment is effective for a number of DSM-IV axis I disorders (APA, 1994), such as depression, anxiety disorders, eating and substance abuse disorders (e.g., Butler, Chapman, Forman, & Beck, 2006). However, there have been relatively few clinical trials on true CBT for PDs in general.

Limited research has focused on the effectiveness of CBT in secure settings. This is surprising given that it is often recommended as the treatment of choice for forensic PD patients. We are aware of only one study in forensic cluster B PD patients. In a study by Timmerman & Emmelkamp (2005), the effectiveness of CBT treatment is examined in a sample of 39 forensic cluster B PD patients in The Netherlands. Outcome was defined by oppositional behavior / pro-social behavior, skills, hostility, social awareness and self confidence, and psychological complaints. Results showed that, as a group, the patients improved significantly over time with regard to their personality traits, psychopathology and oppositional behavior. However, several limitations should be taken into account. First, this was an uncontrolled study, which limits its validity. Second, the sample size was relatively small, which was compounded by the significant number of patients who dropped-out from the study. Third, the effect sizes were rather small which compromises the generalizability of the findings. Finally, and most importantly, only a minority of patients showed reliable change on the outcome measures which questions the true efficacy of CBT in forensic cluster B PD patients.

Dialectical Behavior Therapy. Many secure hospitals offer Dialectical Behavior Therapy (DBT; Linehan, 1993), a specific form of CBT treatment. DBT has been developed specifically for (para)suicidal Borderline PD patients (BPD), but is also often used in forensic BPD patients. The theoretical model of DBT defines BPD as a disorder in several regulation processes, such as behavior, cognitions, interpersonal relations and affect. It uses standard cognitive-behavioral techniques and focuses predominantly on skill development. Although DBT is often referred to as a form of CBT, the emphasis is much more on behavior modification than on changing cognitions. Primary targets are the de-

crease therapy of quality of life interfering behavior, and increase of behavioral skills and self esteem. Whether in general psychiatry or in forensic psychiatry, all DBT consists of individual sessions in combination with group therapy. A major aspect of DBT group therapy is the acquisition and strengthening of skills considered relevant to the particular problems experienced. Usually, skills training is focused on four types of skills: mindfulness, interpersonal effectiveness, emotion modulation and distress tolerance. Mindfulness can be defined as an enhanced attention and awareness in the present moment (Heppner, et al., 2008). DBT group therapy is usually carried out by someone other than the individual therapist. Overall aim of DBT in forensic settings is to reduce the risk of recidivism and achieve acceptance- and change strategies.

DBT is without a doubt the treatment with the most empirical support for reducing self-harm behaviors in non-forensic Borderline PD patients, a finding that has been replicated in 6 studies (Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Koons, et al., 2001; Linehan, et al., 2006, 1999; McMMain, et al., 2009; van den Bosch, et al., 2005). Although it should be noted that other approaches have also evidence of reducing self-directed aggression in Borderline PD, including Schema Therapy (Young, et al., 2003), Mentalization Based Therapy (Bateman & Fonagy, 2004), and intensive psychiatric management (McMMain, et al., 2009; APA, 2001), DBT should be regarded as a frontline treatment for Borderline PD patients in non-forensic patients where suicidal and parasuicidal behavior is a major concern.

DBT has demonstrated effectiveness in non-forensic Borderline PD patients in reducing suicide attempts, depression, hostility, self injuries and anger (e.g., Linehan, 2010; Linehan, et al., 1991; Van den Bosch, et al., 2005). For instance, in a randomized clinical trial by Linehan and colleagues (1999), the effectiveness of DBT was investigated in a sample of 28 female BPD patients who were also diagnosed with a co-morbid drug dependency disorder. Patients were randomly assigned to either one-year DBT or TAU. The results showed a significant increase in drug abstinence and decrease in (para)suicidal behaviors and anger among DBT patients compared to the TAU patients. Effect sizes were not available (Linehan, et al., 1999). These results are consistent with that of Verheul, van den Brink and Hartgers (2003). They conducted a RCT in fifty-eight (58) BPD female patients. Patients were either assigned to one year of DBT or TAU. DBT patients showed greater reductions in suicidal and self-damaging behaviors compared to patients who had received TAU. Also drop-out rates were significantly in favour of DBT. Effect sizes were not provided (Verheul, et al., 2003). Another example is a study by Bohus and colleagues (2004). In their study, 31 patients were assigned to 3-months of DBT treatment, while 15 patients received TAU. Results showed significant improvements for DBT patients (d 's range from .12 to 1.21) compared to the TAU patients (d 's range from .01 to .15) with regard to general psychopathology (e.g., depression, anxiety) and self-injurious behavior (Bohus, et al., 2004).

Dialectic Behavior Therapy – Corrections Modified (DBT-CM). In general psychiatric settings, patients enrolled in DBT trials are usually female, suffer from BPD, and enter

treatment voluntarily. This is in contrast to most secure hospitals, where patients are usually male, are sentenced to treatment involuntary, and are diagnosed with BPD and/or ASPD. Given these differences, standard DBT has been adapted to make it more applicable to forensic patients (Berzins & Trestman, 2004; McCann, Ball, & Ivanoff, 2000). The modification consists of the addition of a theoretical model for ASPD patients. Consistent with BPD, this model considers ASPD as a disorder which is the result of an invalidating environment. A harsh parenting style and inconsistent or lack of discipline leads to emotional insensitivity (Berzins & Trestman, 2004; McCann et al., 2000). In the corrections modified version of DBT, an 'Emotion Regulation' module has been added to address the emotional insensitivity of particularly ASPD offenders. The primary goals are of this module to increase emotional attachment and empathy towards others, and to decrease destructive behavior (Berzins & Trestman, 2004; McCann, et al., 2000). A second alteration to standard DBT is the addition of a 'Crime Review' module during which offenders explore why, how and under which circumstances they committed their crimes. They also develop a relapse prevention plan that includes standard DBT skills (McCann et al., 2000). The remainder of the manual and modules remain similar to that of standard DBT.

Recently, the effectiveness of the DBT-Corrections modified version has been examined in two studies. In a study by Shelton, Sampl, Kesten, Zhang and Trestman (2009), sixty-three (63) patients with a history of impulsive and aggressive behavior were treated according to DBT-CM. Participants received 16 weeks of DBT treatment, followed by randomly assignment to either DBT follow-up or TAU case management (Shelton, et al., 2009). The results showed that patients who received DBT-CM treatment and DBT-CM follow-up, achieved significant reductions in aggressive behavior and improvements in affect and coping compared to patients who did not received DBT-CM follow-up. Unfortunately, no effect-sizes were reported (Shelton, et al., 2009). In another study, the effectiveness of 16 weeks of DBT-CM was investigated in a sample of thirty-eight (38) male adolescent offenders with impulsive behavioral problems (Shelton, Kesten, Zhang, & Trestman, 2011). Twelve patients dropped-out of the study. The participants who had completed the program showed significant reductions in aggressive behavior and institutional incidents. Again, no effect-sizes were reported (Shelton, et al., 2011).

We are aware of only 3 studies examining the effectiveness of standard DBT in forensic PD patients. In a study by Evershed, Tennant, Boomer, Rees, Barkham & Watson (2003), DBT was compared to TAU in forensic BPD patients. Eight (8) patients received DBT over the course of 18 months. Nine (9) patients were offered 18 months of individual TAU focusing on offending, anger management, substance use and motivational work. Primary outcome measure was the frequency and seriousness of violence-related behavior as measures of institutional aggression with an hostility, and anger related instruments. Results showed that DBT was more effective in reducing the seriousness of violence-related behavior and self-report anger and hostility than TAU. Effect sizes for

DBT ranged from -.05 (state anger) to -.80 (increase in anger control), and ranged from .19 (anger control) to -1.13 (increase in state anger) for the TAU condition (Evershed, et al., 2003). There are several limitation that need to be considered. First, no adherence check for DBT was carried out. Second, the level of therapist-contact in both treatment conditions was not the same. DBT patients saw their therapists more often than TAU patients did. Third, patients were not randomly assigned to the treatment.

In a study by Rosenfeld and colleagues (2007), 29 PD offenders with a history of stalking offences received 6 months of DBT treatment. Before completing treatment, more than half of the sample ($n=15$) dropped out of the study. When comparing completers to drop-outs, results showed that these patients were significantly less likely to re-offend with another stalking offence compared to those who dropped out of the study. Results regarding the effect of therapy could not be obtained. The high percentage of drop-outs and lack of a random assignment to a control or comparison group, are limitations of this study.

In a third study, Low, Jones, Duggan, Power & McLeod (2001) examined the effectiveness of DBT in forensic female BPD patients ($n=10$) who displayed deliberate self-harming behavior. They received 12 months of DBT treatment and were assessed at several time points and at 6 months follow-up. Results showed that DBT was effective in reducing deliberate self-harming behavior during treatment and during 6 months follow-up. Effect sizes ranged from $d = -1.30$ (suicide ideation) and $d = 1.54$ (survival beliefs and coping) (Low et al., 2001). These findings are suggestive and not conclusive because of the small sample size and lack of control group. However, these effect sizes are comparable to those in BPD patients in non-forensic settings (e.g., Linehan, et al., 1999). This might suggest that DBT is equally effective for non-forensic and forensic patients.

Thus, despite some encouraging findings in studies with small samples, there is still little evidence about the effectiveness of DBT for reducing self- or other-directed aggression in forensic patients with Borderline PD, or with other cluster B PD diagnoses.

Schema Therapy. A recently introduced psychotherapy in forensic settings is Schema Therapy ([ST]; Rafaëli, Bernstein, & Young, 2011; Young, et al., 2003). ST is an integrative psychotherapy that blends elements of cognitive, behavioral, psychodynamic object relations, and humanistic/experiential approaches (Young, et al., 2003). The key concepts in ST are early maladaptive schemas, (dysfunctional) coping styles and schema modes. Early maladaptive schemas are repeating, self-defeating themes about oneself and one's personal relationships that arise in childhood and adolescence as a result of adverse life experiences (e.g., abuse and neglect) and the child's own innate temperament. Coping styles refer to the maladaptive ways of dealing with the activations of these schemas. Schema modes are moment-to-moment emotional states and coping responses that dominate a person's thoughts, feelings and behavior (Young, et al., 2003). According to ST, specific combinations of schema modes are believed to be unique markers of personality disorder pathology (schema mode model) (Bamelis, Renner, Heidkamp, & Arntz, 2011; Lobbestael, Arntz, & Sieswerda, 2005; Lobbestael, van Vreeswijk, & Arntz, 2008).

Recently ST has been adapted for forensic settings (Bernstein, et al., 2007). The number of schema modes has been expanded to include new schema modes that appear to be common in forensic patients. The goals of ST for forensic PD patients are to enhance the patient's motivation and engagement in therapy; break through the patient's emotional detachment to access more vulnerable emotions and form a genuine emotional bond with the therapist; reprocess traumatic experiences; reduce the severity of dysfunctional forms of coping, particularly those that represent risks for recidivism; and enhance healthy forms of coping (Bernstein, et al., 2007; Bernstein, Keulen-de Vos, Jonkers, de Jonge, & Arntz, 2012). ST is often given individually, but sometimes also in groups (Beckley & Gordon, unpublished; Farrell, Shaw & Webber, 2009; Van Vreeswijk & Broersen, 2006), although group ST for forensic patients is usually given in combination with individual ST.

Three clinical trials have confirmed the effectiveness of ST for non-forensic patients with Borderline PD (Farrell, et al., 2009; Giesen-Bloo, et al., 2006; Nadort, et al., 2009). These studies show that ST reduces a broad range of psychopathology in Borderline PD patients, including self-harm symptoms, but also other areas of dysfunction, such as identity disturbance and affective and interpersonal instability. We are aware of 2 studies investigating the effectiveness of ST in forensic PD patients. The first study is that of Tarrier and colleagues who examined the effectiveness of ST in combination with TAU in Ashworth Hospital, a high secure hospital in the United Kingdom (Tarrier, Dolan, Doyle, Dunn, Shaw & Blackburn, 2010). Sixty-three (63) forensic PD patients were randomly assigned to either two years of ST plus TAU or TAU alone. There were no significant difference between the two treatment conditions in recidivism risk, schemas, personality and interpersonal style, although the fact that the ST plus TAU patients had similar outcomes to the TAU only group, despite receiving fewer psychological services, could argue that ST plus TAU was more cost-effective than TAU alone. Unfortunately, there were a number of serious methodological problems with this study, including a very high drop out rate that prevented about half of the sample from receiving an adequate "dose" of treatment; the provision of once per week ST, rather than the recommended frequency of twice per week for severe PDs; the failure of the 3 ST therapists to achieve acceptable levels of competency in the practice of ST, even by the end of the two year treatment trial; poor statistical power; a higher number of psychological services given to the TAU group than to the SFT plus TAU group; and a therapy model that was not based on more recent developments in ST for forensic patients (e.g., Bernstein et al., 2007). The methodological problems with this study make it impossible to draw conclusions from its results.

In the second study, ST is being compared to TAU in forensic cluster B PD patients in a multi-centre RCT at 8 Dutch forensic hospitals ("TBS clinics"). Patients are randomly assigned to either 3 years of ST or TAU. The forensic adaptation of ST by Bernstein and colleagues (2007) is used as the basis for treatment. Approximately 30 ST therapists and 30 TAU therapists are delivering the treatment. ST therapists are given extensive training

and supervision and must achieve international standards for competency in ST, based on independent ratings of therapy tapes with “practice” patients, before they can deliver therapy for the study.

One hundred two patients have already been enrolled in the study, with a projected final sample size of 114 patients. The main outcome variables, which are assessed at 6 month intervals for the duration of the 3 year study, are recidivism risk, as assessed by standardized risk assessment measures; personality disorder symptoms; violent and other incidents during institutionalization; and actual recidivism. A 3 year follow up study is also planned. Because enrolment began in 2007, complete 3 year results are already available in the first cohort of 30 patients (Bernstein, 2011; Bernstein, et al., in press). Although these results are not yet statistically significant, the results so far suggest that ST is outperforming TAU in several important respects: ST patients showed greater reductions in recidivism risk; were more likely to receive permission to enter the resocialization phase of treatment; and received supervised and unsupervised leave more rapidly (a mean of 100 to 200 days earlier) than the TAU patients (Bernstein, 2011; Bernstein, et al., in press). Moreover, the advantage in risk reduction for ST appeared to be particularly large in more psychopathic patients (PCL-R score \geq 25). These results are still preliminary and need to be confirmed in the entire sample. The treatment study will be completed by the end of 2014, and the follow up study by 2017. This study appears to be the most adequately conceived and conducted RCT in forensic patients with cluster B PDs, and should yield important evidence about the effectiveness of intensive psychotherapy for reducing risk and PD symptoms in this population.

Mentalization-Based Treatment. Several secure hospitals offer Mentalization-Based Treatment ([MBT]; Bateman & Fonagy, 2004). MBT is a form of psychodynamic psychotherapy that focuses on mental states such as needs, feelings and beliefs that influence behavior (Bateman & Fonagy, 2004). The foundation of MBT is mentalization, which can be defined as the ability to perceive and interpret your own behavior and that of others as meaningful and intentional, based on a person’s own mental states. In other words, the ability to recognize your own and others’ mental states. This ability to mentalize is learned in early childhood through interactions between the child and the caregiver. If these interactions are disrupted, development of mentalization is interrupted and consequently personality disorders arise (Bateman & Fonagy, 2004). MBT has originally been developed for Borderline (non-forensic) PD patients, but has also been adapted for Anti-social PD patients. MBT views BPD as a disorder in attachment that has resulted in a mentalization deficit (Bateman & Fonagy, 2006). The major goals of MBT are better behavior control, increased affect regulation, more intimate relationships and the ability to pursue life goals. This is believed to be accomplished through increasing the patient’s capacity for mentalization. Thus, the overall aim of the therapy is not developing insight, but recovery of mentalization. MBT is offered in individual and group sessions. Usually, patients are seen twice a week, but sessions alternate between individual and group therapy (Bateman & Fonagy, 2004).

MBT has shown to be effective in non-forensic patients with Borderline PD. In a RCT by Bateman & Fonagy (1999) thirty eight (38) partially hospitalized Borderline PD patients were randomly assigned to either 18 months of MBT or standard psychiatric care. Outcome was deemed effective if reduction in psychiatric symptoms, decrease in self destructive and suicidal behavior and improvement in social and interpersonal function occurred. Effect sizes for the MBT group ranged from $d = -.57$ (global severity) to $d = -2.11$ (anxiety), whereas the effect sizes for the control group were small, ranging from $d = .04$ (depression) to $d = 0.29$ (anxiety). Results indicate that MBT patients showed significant improvement the above mentioned measures. However, the sample size was relatively small which makes it difficult to generalize the findings. Bateman and Fonagy (2009) recently replicated these findings. In a randomized controlled trial, the effectiveness of MBT was compared to structured clinical management (SCM) with regard to suicidal and self-harming behavior in a sample of 134 outpatients diagnosed with a borderline PD (Bateman & Fonagy, 2009). Seventy-one (71) patients were randomly assigned to 18 months of MBT and sixty-three (63) patients to 18 months of SCM. The results indicated that, although both treatment conditions showed significant improvements, patients assigned to MBT showed a greater rate of improvement in suicidal behavior and steeper decline in self-harming behavior than patients assigned to SCM (Bateman & Fonagy, 2009).

We are unaware of any completed trials on MBT in forensic PD patients. Recently, a pilot of MBT is being started in a secure unit of a UK hospital (G. Adshead, personal communication, October 14, 2010). Their approach is to consider how and whether improved mentalization might lead to a more coherent narrative of offending. There are no results available yet. Also, a trial of MBT for adolescents in a forensic service in Geneva is getting started (M. Humphrey, personal communication, November 4, 2010).

Cognitive Analytic Therapy. Another integrative approach often used in forensic settings in the United Kingdom, is Cognitive Analytic Therapy ([CAT]; Ryle, 1995; Ryle & Kerr, 2002). CAT is cognitive in that it makes full use of a patient's ability to think about himself, his feelings and behavior. It is analytic because it originated from psychoanalytic object relations and attachment theory (Bateman, Ryle, Fonagy, & Kerr, 2007). CAT aims to understand and ameliorate chronic and self limiting patterns of emotional expression or inhibition. The therapy uses a three-folded method for change, addressing new insight, new experiences and new behavior. Especially new insight is the main focus and considered the most powerful tool for creating change. Patients need to become aware of their negative life patterns in order to reformulate them. Few clinical trials exist with regard to the effectiveness of CAT. In a recent study, CAT is compared to good clinical care in adolescent (non-forensic) Borderline PD patients (Chanen, et al., 2008). Eighty-six patients were randomly assigned to the treatment conditions, which both consist of 24 weekly sessions. Results showed that both therapies were equally effective in reducing psychopathology and parasuicidal behavior, with CAT showing some evidence of a more rapid onset of reduction. However, these results must be considered in light of

the major limitation that the therapists in the study delivered both intervention. We are not aware of any studies on the effectiveness of CAT in forensic settings. As Pollock, Stowell-Smith & Göpfert (2006) state in their book on CAT in offenders, “CAT is an innovative, unproven approach” (preface, pp. xvii).

Miscellaneous

“Criminal Script Analyses” – Prior to the start of treatment, offenders often have to undergo a cognitive-behavioral program first that focuses on all aspects related to the crimes that they have committed. These pre-treatment offender programs usually explore a number of things: 1) why a particular patient committed a crime at a particular point in time, 2) how and under which circumstances the patient committed this crime, and 3) why the patient chose this particular victim. Taken together, this information provides a script of the criminal act that has been committed. Problem behavior is being described, precipitating events and vulnerabilities are analyzed. These programs have a motivational approach and aim to enhance a patient’s readiness for treatment and change. Also a patient will have to take responsibility for his actions before treatment can actually start. As a result, a ‘dynamic crime theory’ is formulated that provides treatment targets for that particular patient. Examples of offender programs are the Sex Offender Treatment and Evaluation Project (SOTEP; Marques, Wideranders, Day, Nelson, & van Ommeren, 2005) in the United States and the Rockwood Preparatory Program (Marshall, Marshall, Fernandez, Malcolm, & Moulden, 2008) in Canada.

Empirical evidence on the effectiveness of such offender programs is mixed. The SOTEP program showed that there were no significant differences in re-offending between the treatment and control group, while the Rockwood Preparatory Program was effective in enhancing motivation in a sample of sex offenders and reducing the risk for re-offending (Marques, et al., 2005; Marshall, et al., 2008). A study by Van Beek (1999) indicated that a criminal script analyses program was effective in increasing insight and accepting responsibility in a sample of twenty (20) sex offenders. However, these differences were not observed in a subtype of antisocial offenders (van Beek, 1999). More research is needed before we can conclude that pre-treatment offender programs are effective.

Arts Therapies. Secure settings often provide various kinds of non-verbal therapy as an adjunct, or alternative, to traditional verbal forms of psychotherapy. Drama, art, music, movement and dance therapies are non-verbal therapies that are increasingly used in forensic settings as an adjunct, or alternative, to traditional verbal forms of psychotherapy. All types of non-verbal therapies use experiential techniques to help patients access and reprocess emotions; they evoke feelings and explore interpersonal interactions using artistic media (Malchiodi, 2003).

Although frequently used in forensic patients, there is little data on the effectiveness of non-verbal therapies in these populations. However, recently, a pilot study comparing Arts Therapies to more standard “verbal” forms of psychotherapy, including both ST

and other forms of forensic psychotherapy (TAU) has been conducted (Van den Broek, Keulen-de Vos, & Bernstein, 2011). Ten male forensic cluster B PD patients were randomized to either ST or TAU. All patients received both verbal psychotherapy and non-verbal (i.e., Arts therapy) therapy sessions. In non-verbal therapy sessions, patients showed significantly more healthy emotional states than in verbal psychotherapy sessions. Patients receiving Schema Therapy (ST), in both verbal and non-verbal forms, showed twice as much emotional vulnerability as patients receiving TAU (Van den Broek, et al., 2011). These findings, though preliminary, suggest that Arts Therapies, as well as ST in both verbal and non-verbal forms, may be effective at eliciting emotional states in forensic PD patients, a population that is often difficult to reach emotionally.

In a single group study by Blacker, Watson & Beech (2008), sixty-two offenders who were convicted for violent offences were treated with drama therapy based program. Drama-therapy techniques were employed in combination with cognitive behavioral, anger management techniques. The program consisted of nine days that were structured in three 3-day blocks with two sessions per day. The first block focused on aggressive and violent behavior, block 2 on issues such as power and control, and block 3 was focused on exploring alternative behaviors. After treatment, significant reductions in self-reported anger were found. However, the interpretation of this finding is hampered by the limitation that only one outcome measure was tested. Also, the reductions in anger were based only on a self-report. Finally, the design of the study makes it impossible to establish whether the findings are attributable to the specific drama therapy intervention or to other factors.

Motivational Interviewing. Generally forensic patients are admitted to forensic hospitals involuntarily. Consequently offenders are often difficult to engage in treatment (Evershed, et al., 2003). Motivation, however, is considered an important prerequisite to successful treatment (Wallace & Newman, 2004). An often used intervention to encourage forensic PD patients to commit to treatment is Motivational Interviewing (MI; Miller & Rollnick, 1991). MI is a client-centred intervention that helps patients to explore and resolve their ambivalence towards treatment. MI is a short-term intervention, usually consisting of a few sessions. It encourages the patient to take responsibility for treatment and tries to enhance their intrinsic motivation for change (Miller & Rollnick, 1991). Given how many forensic patients have motivational issues, MI could prove to be an important component of forensic treatment, if it can be shown to increase motivation in these patients. MI was originally developed for the addiction field.

There is a considerable body of literature showing that MI is effective in patients with addictions (e.g., Berman, Forsberg, Källmén, & Hermansson, 2010; Carroll, et al., 2006). McMurrin (2009) recently reviewed thirteen studies that focused on MI in forensic patients. Ten studies focused on substance misuse, and nine studies were specifically addressed at offence related behavior (e.g., Easton, Swan, & Sinha, 2000; Miles, Duthiel, Welsby, & Haider, 2007; Kistenmacher, 2000; Lincourt, Kuettel, & Bombardier, 2002). The review by McMurrin (2009) indicated that MI is effective in enhancing treatment en-

gagement and motivation to change, and reducing offending behavior, with effect sizes ranging from .22 to 1.40. For example, in the study by Miles and colleagues (2007), motivational interviewing, education and relapse prevention appeared to be effective in a sample of offenders diagnosed with a substance abuse disorder. Twelve percent of the patients ($n=5$) were also diagnosed with a personality disorder. Research conducted by Kistenmacher (2000) examined the effectiveness of MI compared to Treatment As Usual (TAU). Thirty-three (33) offenders with a crime history of domestic violence were randomly assigned to either two sessions of MI or two sessions of TAU. The MI group showed improvement in taking responsibility for their crimes and improvement in their stages of change. There were no significant group differences with regard to violence.

Table 1. *Review studies on the treatment of forensic cluster B PD patients.*

Study	Sample	Comparison	Time in treatment	Outcome measures	Results
DiPlacido et al, 2006	N=160 ASPD patients	VRP	8 months	Violent reconvictions and institutional misconduct	significant lower incidence of recidivism, less violent crimes and less institutional incidents
Wong et al., 2005	N=31 violent offenders	VRP	8 months	Institutional offences, reintegration in low/medium security hospital	Less offences, 80% reintegrated in lower security hospitals
Wong et al., 2006	N=68 psychopathic offenders	VRP vs. No Treatment	8 months	Recidivism severity	treatment less violent pattern of re-offense, no difference in number of re-offenses
Hornsveld, 2005	N=153 ASPD offenders	ART	15 weeks	Hostility, aggressive behavior, pro-social behavior	significant reductions in hostility and aggressive behavior, no improvements in pro-social behavior
Hornsveld et al., 2008	N=181 ASPD patients	ART vs. Waiting list vs. Control group	15 weeks	Hostility, aggressive behavior	ACT diminished aggressive behavior but did not change socially competent behavior
Black et al., 2008	N=12 female BPD offenders	STEPP	20 weeks	BPD symptoms	Improvement in BPD symptoms, reduction in depression.
Timmerman & Emmelkamp, 2005	N=39 cluster B PD patients	CBT	2.5 years	risk of re-offending	Improvement on group level. Little reliable change individual patients.
Evershed et al, 2003	N=17 BPD patients	DBT vs. TAU	1.5 years	Seriousness of incidents	DBT outperforms TAU
Rosenfeld et al, 2007	N=29 PD offenders	DBT	6 months	Re-offending	Significant reduction in re-offending com
Low et al., 2001	N=10 BPD female offenders	DBT	1 year	Deliberate self-harm	Significant reduction in deliberate self-harm, maintained over 6 months follow-up.

Table 1. (continued).

Study	Sample	Comparison	Time in treatment	Outcome measures	Results
Bateman & Fonagy (2009)	N = 134 BPD patients	MBT vs. SCM	18 months	Suicide attempts, self-harming behavior, hospitalization	Substantial improvements in MBT and SCM. Greater improvements in MBT.
Tarrier et al., 2010	N=63 PD patients	ST+TAU vs. TAU	2 years	Personality, Mental state, Risk Schemas Interpersonal style	No significant treatment effects between groups.
Bernstein, 2010	N=75 cluster B	ST vs. TAU	3 years	PD symptoms, Recidivism risk	ST: less drop-out lower recidivism risk, greater reduction ASPD symptoms
Keulen-de Vos et al., 2010	PD patients (projected final N = 100-110)				
Marques et al., 2005	N=704 sex offenders	SOTEP	2 years	Re-offence rates	There were no significant differences in re-offending between the treatment and control group
Marshall et al., 2008	N=188 sex offenders	Rockwood Prevention Program vs. No Rockwood Program	6 to 8 weeks	Re-offending, Level of security	Program is effective in enhancing motivation in a sample of sex offenders and reducing the risk for re-offending
Van den Broek et al., 2011	N=10 PD patients	ST vs. TAU	1 to 1.5 years	Schema modes	ST non verbal therapy: more vulnerability and less detachment
Blacker et al., 2008	N=62 violent offenders	Drama therapy based + CBT	9 days	Anger	Significant reduction in anger.
Miles et al., 2007	N=43 offenders	MI	24 weeks	Therapy engagement No substance use	74% of patients were drug-free, motivation had changed
Kirstenmacher, 2000	N=33 violent offenders	MI vs. TAU	2 sessions	Motivation	No difference between the MI and control group

Discussion

As is apparent from this literature review, there is still limited evidence for the effectiveness of treatment for cluster B PD offenders, though more and more therapies and programs are available for these patients. The evidence is limited for a number of reasons. First, available studies are often methodologically poor; for example studies often have small sample sizes (i.e., underpowered), lack randomized control groups, and lack longer-term follow ups. Second, research papers report varied outcome measures, making it difficult to make comparisons among treatments. Some of the reported outcome measures in forensic research are recidivism, time to arrest, drop-out rates, adverse behavior (e.g. violent incidents) and substance abuse (Cure, Chua, Duggan & Adams, 2005). On the other hand, studies rarely assess changes in PD symptoms, despite the (largely unproven) assumption that reductions in PD symptoms should result in reductions in risk. Some studies rely primarily on self-report measures of outcome, while others include observer-based or other more objective measures. Self-report measures, of course, are susceptible to well-know response biases in forensic and PD patients (Cima, 2003; Ganellen, 2007; Keulen-de Vos, Bernstein, Clark, Arntz, Lucker, & de Spa, 2011). The lack of consensus about outcome variables and measures, as well as other methodological shortcomings, makes it difficult to make comparisons across studies and limits the ability to effectively evaluate forensic services. Therefore, it is far too premature to make strong statements about the effectiveness of specific treatments. In particular, the fact that there have been practically no adequately conceived or conducted RCTs of specific therapies or programs for offenders with PDs (though see Bernstein, 2011, for an important exception), makes it difficult to draw conclusions about them. Although some specific treatments for cluster B PDs have shown evidence of effectiveness in RCTs conducted in non-forensic populations, such as DBT, MBT, and ST (Bateman & Fonagy, 2009; Giesen-Bloo, et al., 2006; Linehan, et al., 2006), we cannot infer that these treatments will be similarly effective in forensic patients. Thus, despite some preliminary evidence of effectiveness from open trials and other studies in forensic populations, our ability to draw firm conclusions is limited. However, the evidence from these trials - while a necessary condition for good clinical practice - is not sufficient in itself as the clinician still has to weight up this evidence and apply it to a particular individual case.

On the other hand, the number of promising treatment alternatives for forensic patients with PDs is greater than ever before. First, specific programs, such as the Violence Reduction Program (Gordon & Wong, 2000) have been developed for targeting violent behavior and criminogenic cognitions. These programs may improve the outcomes for challenging cluster B PD offender populations. Second, there is much more evidence for PD treatment in general. For example, our ideas about PDs have evolved. Longitudinal studies of non-forensic PD patients show that PDs are more changeable than previously believed. Over time, many PD patients no longer meet sufficient criteria to be diagnosed as PDs, suggesting that remission occurs in some or even many cases (Clark, 2005;

Lilienfeld, 2005). As a result, there is now a new generation of treatments that have been developed for PDs, many of which have shown evidence of efficacy in general psychiatric settings (e.g., Bateman & Fonagy, 1999; Clarkin, et al., 2007; Giesen-Bloo, et al, 2006; Linehan, et al., 2006). The success of these treatments with non-forensic PD patients raises the possibility and instill the hope that some of these treatments, when adapted and revised to offender samples, may prove effective for this population. Schema Therapy is a good example of a treatment approaches specifically adapted for cluster B PD offenders that holds great promise for the future (Bernstein, et al., 2007). However, a critical note is also warranted. An unresolved, vital, issue in PD treatment is whether treatment should be aimed at changing traits or at changing the PD itself. For example, one could focus on disorder as a whole, or on ameliorating a specific trait, such as impulsivity and anger, rather than focusing on a disorder that might include it as one of several traits that define it. This issue should be extensively addressed in the next years to come. We will also discuss this in greater length in the accompanying article.

In the accompanying article, we use the evidence gleaned from the above review of treatment alternatives for forensic cluster B PD patients, and apply our algorithm to it, to provide some tentative answers to Paul's (1967) famous question. Despite the limited evidence base, we attempt to provide treatment professionals with some guidance in making rationally- and empirically-guided choices in the treatments that they offer for this challenging population.

CHAPTER 3

Selecting treatment for cluster B personality disordered offenders

Keulen-de Vos, M.E., Bernstein, D.P., & Duggan, C. Treatment of cluster B personality disordered offenders: Which treatments might be most effective for which problems in which patients under which circumstances? Part II. Applying a decision-making algorithm to select treatments. (submitted).

Abstract

Although a number of promising treatment alternatives for cluster B PD offenders exist, the evidence supporting the effectiveness of these treatments in forensic populations is still quite limited, and treatment providers are left with little guidance about which of these treatments to select for which patients and for which problems. In this article, we use evidence collected from our review of treatment alternatives for forensic cluster B PD patients and applied this evidence to a decision-making algorithm that we created to provide some tentative answers to Paul's (1967) famous question of "*What* treatment, by *whom*, is most effective for *this* individual, with *that* specific problem, and under *which* set of circumstances." We offer guidelines that might help treatment providers make more informed choices about matching treatments to forensic cluster B PD and psychopathic patients and their problems.

Introduction

In the first article in this two-part series (Keulen-de Vos, Bernstein, & Duggan, submitted), we reviewed the existing treatment alternatives for cluster B PD patients. Our review indicated that, while a number of promising alternatives exist, the evidence supporting the effectiveness of these treatments in forensic populations is quite limited. Nevertheless, on the basis of the limited evidence, as well as rational considerations, in this second article, we propose a decision-making algorithm designed to address the cardinal question for a clinician when faced with a forensic patient with cluster B personality disorders (PD), namely: “*What treatment, by whom, might be most effective for this individual, with that specific problem, and under which set of circumstances?*” (Paul 1967). Here, we will provide some tentative answers to the question of which treatments *might* be effective in treating cluster B PD offenders by addressing the subcomponents in Paul’s (1967) question (see figure 1 and table 1).

Figure 1. *Decision making algorithm*

1. *Which problems under which circumstances?* Aggression that poses immediate and severe danger to self or others
2. *Which problems under which circumstances?* Behavior management problems that do not pose an immediate or severe danger to self or others (e.g., non-compliance with rules or treatment regimens, boundary violations of other patients or staff members, substance abuse, etc.)
3. *Which problems under which circumstances?* Low or absent motivation for engaging in treatment
4. *Which problems in which patients?* Which Cluster B personality disorders and comorbid psychiatric disorders?
5. *Which problems in which patients?* Which dynamic risks and strengths?
6. *Under which circumstances?* Which treatment settings, legal sentences, resources, and barriers to access?
7. *In which patients?* Gender and culture

We believe that this exercise is worth doing, despite the limitations of the existing evidence. Treatment providers are still in the position of having to make choices based on the allocation of limited resources, as to which treatments are most effective for which patients under which circumstances. Also, the evidence from clinical trials, while a necessary condition for good clinical practice, is not sufficient in itself, as the clinician still has to weight up this evidence and apply it to a particular individual case. However, up to now, clinicians have had little guidance in making these decisions. Our algorithm provides a means for systematically thinking through these decisions. We readily admit

that different professionals may reach different conclusions when applying this algorithm. However, we believe that the *process* of applying the algorithm is still worthwhile, in that it focuses one's thinking on relevant issues, helping to clarify distinctions between treatment options, and thereby enabling treatment providers to place their decisions on a more solid conceptual footing.

While it is a truism in the psychotherapy literature that common factors, such as the therapist's warmth and empathy, explain a large proportion of variance in treatment outcomes (Ackerman & Hilsenroth, 2003; Hersoug, Høglend, Havik, von der Lippe, & Monsen, 2009; Martin, Garske, & Davis, 2000), these considerations may too often lead to a "one-size fits all" approach to treatment, where all patients are funneled through the same programs, or even worse, a scatter-shot approach, in which patients are assigned to treatments on an ad hoc basis. While common factors, such as the therapy relationship, are also important in the forensic field, the intransigence of the pathology in these patients also likely requires specific interventions to ameliorate their various problems. The successful development of specific cognitive-behavioral interventions for otherwise treatment-resistant problems, such as obsessive-compulsive disorder and panic disorder with agoraphobia (Clark, 2004; Mitte, 2005; Randsky, Shafran, Coughtrey, & Rachman, 2010; Rathgeb-Fuetsch, Kempter, Feil, Pollmächer, & Schuld, 2011), supports the idea that not all treatments are likely to be equally effective, when the pathology in question is severe. Thus, it is our hope that the systematic application of our algorithm will help to focus treatment providers on the interaction between patient, problem, setting, and therapist variables, and make more considered decisions in their choice of interventions for forensic patients with PDs.

Method

We used the evidence collected from our review of treatment alternatives for forensic cluster B PD patients (Keulen-de Vos, Bernstein, & Duggan, submitted) and applied this evidence to a decision-making algorithm to provide some tentative answers to Paul's (1967) famous question. For each subcomponent of the algorithm, we consider two related questions: What is the nature of the problem? And, what treatment options are available? First, we addressed which treatments might be effective for aggression that poses immediate and severe danger to self and others; behavior management problems that do not pose an immediate or severe danger; and low or absent motivation for engaging in treatment. Second, we reviewed treatment alternatives for the specific cluster B PDs -- Antisocial, Borderline, and Narcissistic PDs -- and for the comorbid psychiatric disorders that often co-occur with them. Third, we addressed treatment options for specific risk factors and strengths. Next, we discussed treatment alternatives for specific circumstances, such as type of facilities and degrees of security (e.g., low, medium, high).

Finally, we addressed treatment alternatives for patients with specific cultural and ethnic backgrounds. These questions and answers are summarized in table 1.

Table 1. *Decision making algorithm applied to generate treatment alternatives*

Questions	Tentative answers	
<i>Which problems under which circumstances?</i>		
	<u>Nature of the problem</u>	<u>Treatment options</u>
Aggression that poses immediate danger	Reactive aggression	Pharmacology, approaches that focus on emotion regulation (e.g., DBT)
	Instrumental aggression	Operant conditioning
Aggression that does not pose immediate danger	Affective, cognitive and/or behavioral problems	Pharmacology, Short-term CBT, Short-term structured programs (e.g., VRP, ART)
Low motivation for engaging in treatment	Affective, cognitive and/or behavioral problems	Motivational Interviewing, Arts Therapies
<i>Which problems in which patients?</i>		
Cluster B PD and comorbid psychiatric disorders	ASPD with psychopathy:	ST, DBT, VRP, ART
	- primary psychopathy	VRP, ART
	- secondary psychopathy	ST, MBT
	BPD	ST, MBT, DBT, STEPP
	NPD	
	- primary narcissists	ST
	- secondary narcissists	ST, MBT, DBT
Axis Comorbidity		
- PTSD	EMDR, CBT	
- Addiction	DF-ST, DBT-Substance, Standard addiction treatment	
Dynamic risks and strengths	Lack insight, poor skills, ability to form relationships	Incorporated in ST, MBT, DBT, STEPP
Gender and culture	To what extend do gender and culture play a role	Consider gender and culture in terms of patient/therapist match. Consider gender and culture specific attitudes and behavior. Embed treatment in their cultural contexts (e.g., involve community members in treatment)
<i>Which problems under which circumstances?</i>		
Treatment settings, legal settings, resources	Inpatient vs. outpatient, forensic, hospital vs. prison, coercion, shortage personnel, barriers to access	Adjust treatment approach to setting. Take into account perceived coercion in delivering treatments. Optimize resources, (e.g., provide training for evidenced based treatment)

Note. DBT= Dialectical Behavior Therapy, ST=Schema Therapy, MBT=Mentalization Based Treatment, VRP=Violence Reduction Program, ART=Aggression Replacement Training, STEPP= Systems Training for Emotional Predictability and Problem Solving, DF-ST=Dual-Focus Schema Therapy, CBT=Cognitive Behavior Therapy, EMDR= Eye Movement Desensitization and Reprocessing, ASPD=Antisocial Personality Disorders, BPD=Borderline Personality Disorder, NPD=Narcissistic Personality Disorder.

Results

Which problems under which circumstances: Aggression that poses immediate or short-term danger to self and others

Nature of the problem. Aggression and violence are common in forensic psychiatric settings, including both closed settings such as prisons and inpatient clinics (i.e., institutional violence), as well as outpatient, ambulant settings (Gilbert & Daffern, 2011; Langton, Hogue, Daffern, Mannion, & Howells, 2011; McDermott, Edens, Quanbeck, Bussen, & Scott, 2008; Young, Justice, & Erdberg, 2006). This behavior consists of self-injurious behavior (i.e., self-directed aggression) or behavior that is directed towards others. As one of the most important priorities in forensic settings is to assure the safety of patients and staff, as well as other potential victims of violence, it is paramount to establish the nature and type of aggression, and determine how to prevent it.

Typically, two types of aggression can be distinguished when analyzing acute violent behavior: reactive versus instrumental aggression. Reactive or hostile aggression is defined as violence that is triggered in response to frustration, provocation and threats or emotional pain (Blackburn, 1993; Bushman & Anderson, 2001; Cornell et al., 1996; Daffern & Howells, 2009; Fontaine, 2007). Reactive aggression can be directed either to self or to others. Self-directed aggression, behavior such as cutting and burning, is often a response to underlying chronic feelings of emptiness, overwhelming negative emotions, or isolation. These symptoms are often an indication of a Borderline PD (APA, 1994; Látalová & Praško, 2010). Thus affective lability can be an important mediator in self-harming behavior (Gratz, 2003; Sampson, Mukherjee, Ukoumunne, Mullan, & Bullock, 2004; Stanley, Gameraff, Michaelson, & Mann, 2001). Anger, behavioral dyscontrol and impulsiveness are characteristic moderators for other-directed, reactive aggression (Cornell et al, 1996; Daffern & Howells, 2009). For example, offenders often respond aggressively because they are unable to inhibit their impulses (Barrett, 1994). These factors may have a biological or neurological component, such as serotonergic abnormalities or inadequate cortical inhibition or frontal lobe dysfunction (Blair, Mitchell, & Blair, 2005; Dolan, Anderson, & Deakin, 2001). The aforementioned characteristics of reactive aggression are core traits in Borderline and Antisocial PD, and are also hallmarks of secondary psychopaths (Gilbert & Daffern, 2011; Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003).

A second type of aggression that can cause immediate danger to self and others is instrumental aggression. The primary goal of instrumental aggression is to obtain a particular goal (e.g., money, sex, power), for which violence or harm is just a means to an end (Cornell, et al, 1996; Daffern & Howells, 2007). Thus instrumental violence is purposeful, planned and goal-directed. This type of behavior is often displayed by offenders who are diagnosed with a Narcissistic PD – a disorder marked by grandiosity, entitlement and manipulation (APA, 1994; Reidy, Zeichner, Foster, & Martinez, 2008) – and by

primary psychopaths (Cooke, 2010; Hare & Neumann, 2009). In contrast to secondary psychopaths, primary psychopaths are typically characterized by emotional deficits, deception and predatory or opportunistic aggression (Cooke, 2010; Schoenleber, Sadeh, & Verona, 2011; Skeem, et al., 2003; Walsh & Kosson, 2008; Woodworth & Porter, 2002).

Treatment options. A critical factor in dealing with aggression that poses an immediate danger to self or others is that interventions are delivered quickly and effectively. When neurobiological factors, such as serotonin and dopamine deficits play an important role in reactive aggression, pharmacology may be the appropriate type of treatment (Krakowski, 2003; Reif, et al., 2007; Virkkunen, De Jong, Bartko, Goodwin, & Linnoila, 1989). Frequently used pharmacological interventions are selective serotonin reuptake inhibitors (SSRI's) or mood stabilizers, and low doses of antipsychotic medication (Bellino, Paradiso, & Bogetto, 2008; Butler, et al., 2010; Pattij & Vanderschuren, 2008; Silva et al., 2010). There is empirical evidence for effectiveness of these interventions. For example, in a study by Coccaro and Kavoussi (1997), SSRI's (fluoxetine) proved to be favourable to placebo in a sample of forty (40) personality disordered patients with a prominent history of impulsive and aggressive behavior. The results showed a significant reduction in aggressive behavior for the fluoxetine group when compared to the placebo group (Coccaro & Kavoussi, 1997). These results were replicated by Butler and colleagues (2010) who conducted an open trial to examine the effectiveness of a SSRI (setraline) in a sample of twenty (20) impulsive and violent offenders. Patients showed significant improvements with regard to impulsiveness, aggression, anger and irritability (Butler, et al., 2010). One month after completion of the trial, effect sized ranged from $d = -2.07$ (verbal aggression) to $d = -1.44$ (anger); effect sized after three months ranged from $d = -2.94$ (impulsivity) to $d = -1.91$ (irritability) (Butler et al., 2010). In another, randomized, double-blind clinical trial by Hollander and colleagues (2003), the effectiveness of mood stabilizers on aggression is examined in a sample of 233 cluster B PD out-patients. The patients received either divalproex (Depakote®) or a matching placebo. The results showed a significant treatment difference favoring divalproex over placebo with regard to overall aggression. There was a trend for other-directed aggression, but not for self-directed aggression (Hollander, et al., 2003). In a double blind study by Nickel and colleagues (2006), fifty-two (52) Borderline PD patients were randomly assigned to either an antipsychotic drug (aripiprazole) or a placebo. The results showed a significant decrease in both self- and other-directed aggression and increase in anger control in the aripiprazole group compared to the placebo group (Nickel, et al., 2006).

Aggression that poses an immediate danger can also originate from non-biological factors, such as affective deficits and cognitive distortions. These factors are often related to a patient's personality pathology. When this is the case, there needs to be a shift in emphasis to treating the cognitions, affects, and behaviors that are involved, instead of, or in addition to, using pharmacological interventions. In case of self-harm in patients with affective lability, such as often seen in patients with Borderline personality disorder, Dialectical Behavior Therapy (DBT; Linehan, 1993) should be considered a frontline

treatment. Several studies have shown that DBT reduces suicidal, self-harm and impulsive behavior (e.g., Feldman, Harley, Kerrigan, Jacobo, & Fava, 2009; Harley, Baity, Blais, & Jacobo, 2007; Low, Jones, Duggan, Power, & MacLeod, 2001). We should note, however, that although DBT is a proven treatment for self-directed aggression in non-forensic patients, the evidence in forensic populations is still quite limited. Moreover, there are other treatment alternatives, when self-harm is at issue, including Schema Therapy (ST), Mentalization Based Therapy (MBT), and intensive psychiatric management, which also have some evidence of effectiveness in non-forensic Borderline PD patients (Bateman & Fonagy, 2009; Giesen-Bloo, et al., 2006; McMains, et al., 2009), with effect sizes that appear to be comparable to those of DBT. Nevertheless, given DBT's consistent track record over the past 20 years, it will likely be the treatment of choice in many forensic Borderline PD patients where suicidal and parasuicidal behavior are major concerns. Programs that incorporate DBT-like elements, and focus intensively on reducing affective lability, such as the STEPPS (Blum, Pfohl, St. John, Monahan, & Black, 2002) and CMHIP programs, may also prove beneficial for forensic Borderline PD patients where self-harm behaviors are salient.

On the other hand, there is as yet too limited evidence to determine whether DBT is effective at reducing other-directed aggression. In patients where affective lability is a major driver of other-directed aggression, there is some theoretical basis for thinking that DBT may prove effective in these cases. However, other approaches may also prove effective at reducing other-directed, reactive aggression, perhaps via other mechanisms. For example, there is some evidence supporting the effectiveness of aggression reduction programs based on cognitive-behavioral principles, such as the Violence Reduction Program (VRP; Gordon & Wong, 2000), and Aggression Replacement Therapy (ART; Goldstein, Glick, & Gibbs, 1998a). Reactive aggression often involves the misinterpretation of interpersonal interactions or intentions due to cognitive distortions and/or mentalization deficits, coupled with poor impulse and anger control regulation. Treatments that aim to correct cognitive distortions (e.g., CBT or Schema Therapy (ST)), enhance mentalization abilities (e.g., Mentalization Based Therapy), and teach better impulse regulation and coping skills (e.g., DBT, CBT, ST), may help some forensic cluster B PD patients where reactive aggression is an immediate, salient issue.

While there are several plausible alternatives for the treatment of reactive aggression, there are fewer alternatives available for instrumental aggression. As noted above, several aggression reduction programs have reported some preliminary evidence of effectiveness. However, it is not clear whether these effects extend to patients with instrumental aggression, or primarily pertain to those with reactive aggression. Of note is the study by Wong, Witte, Gordon, Gu and Lewis (2006) reporting reductions in violence for psychopathic patients using the Violence Reduction Program (Gordon & Wong, 2000). Although psychopathic patients often exhibit both reactive and instrumental aggression, the latter is one of the hallmarks of so-called 'primary psychopaths,' whose aggression is typically cold, calculated, and goal-directed. Unfortunately, no effect sizes were reported

for this study, either in the sample as a whole, or for primary versus secondary psychopaths (Wong, et al., 2006). Nevertheless, VRP appears to be a promising approach that may reduce instrumental aggression in some psychopathic patients.

In general, the effectiveness of aggression-focused treatments, like VRP and ARP, is likely to be highly dependent on the motivation of patients (see below). One of the difficulties in reducing instrumental aggression in primary psychopaths is that these patients tend to be more responsive to rewards than to punishments (Blair, Morton, Leonard, & Blair, 2006; Fowles & Dindo, 2006; Newman, Patterson, Howland, & Nichols, 1990). As a result, their instrumental aggression may not be attenuated by its negative consequences, and conversely, may be positively reinforced when aggression leads to the attainment of desired goals. For these reasons, primary psychopaths may not be motivated to desist in their instrumental aggression, unless there are clear rewards for doing so. Thus, an appropriate treatment approach for instrumental aggression might be operant conditioning or contingency management where attention is paid to the reinforcing consequences of behavior. The primary aim of operant conditioning is that the patient learns to link certain situations or behaviors to their favorable or unfavorable consequences (Catania & Harnad, 1988; Swenson, Witterholt, & Bohus, 2007; Vollmer & Hackenberg, 2001). The use of operant conditioning appears to be particularly salient for offenders in institutional settings (e.g., prisons, inpatient forensic hospitals), where staff have considerable control over the institutional environment, enabling them to deliver reinforcements selectively. The skillful use of contingency management may result in reductions in institutional violence, including instrumental aggression (Ellis, 1993; Marlowe & Wong, 2008). On the other hand, it is unlikely that an operant approach will continue to yield reductions in instrumental aggression when patients leave these settings, and the ability to contingently manage their behavior is lost. Thus, operant approaches are likely to yield the most favorable results for instrument aggressions in situations where staff have considerable control over the reinforcement contingencies in the patient's environment. Another possibility would be to ameliorate the underlying emotional deficits in primary psychopaths. Although it is often assumed that the traits underlying primary psychopaths' instrumental aggression cannot be altered, there is, in fact, little evidence from clinical trials bearing on this issue (D'Silva, Duggan, McCarthy, 2004). These issues are discussed in the section where we discuss treatments for specific PDs, where we consider alternatives for treating psychopathic patients.

Which problems under which circumstances: behavior management problems that do not pose an immediate or severe danger to self or others.

Nature of the problem. Examples of other behavior management problems in forensic PD patients are non-compliance with rules or treatment regimens, verbal aggression, substance abuse, transgressing boundaries (e.g., inappropriate intimate relationships between patients or between patients and staff members) (Grevatt, Thomas-Peter, &

Hughes, 2004; McDermott, et al., 2008; Wong, et al., 2005). Though these behaviors do not pose an immediate or severe danger to self or others, they may be disruptive and hamper the initiation or progress of therapy. Thus, it is important to establish the nature and origins of behavior management problems.

Behavior management problems can consist of three separate but overlapping components. First, an affective component may contribute to behavioral management problems. For example, some PD offenders are impaired in the ability to process emotional and social stimuli. They lack the ability to recognize emotions (Blair, et al., 2006), lack the mentalization skills or theory of mind to understand the emotions of others (Dolan & Fullam, 2004), or have deficits in empathy, guilt, shame, or other moral emotions (Cima, Tonnaer, & Lobbestael, 2007; Harenski, Harenski, Shane, & Kiehl, 2010). Some offenders may be affectively labile or highly emotionally reactive (Cima, et al., 2007; Kirsch & Becker, 2007; McDougall, Venables, & Rogers, 1991; Ward & Nee, 2009). Second, a cognitive component may be the basis of behavior management problems. For example, many PD offenders have distorted schemas or cognitions that are centered around themes like mistrust or entitlement, while others may have pro-criminal or predatory attitudes. These attitudes affect the patient's interpersonal style (Mandrachia & Morgan, 2010; McNiel, Eisner, & Binder, 2003; Rafaeli, Bernstein, & Young, 2011; Simourd & Olver, 2002). As a result of these cognitive biases, patients may misinterpret social situations. Finally, behavioral components, such as impulsiveness, poor frustration tolerance, and poor social or problem solving skills may play a role in patients' transgressing boundaries and not following rules (Chakhssi, de Ruiter, & Bernstein, 2010a; McMurrin, Blair, & Egan, 2002; Nezu, Nezu, Dudek, Peacock, & Stoll, 2005; Trestman, Eucker, & Müller-Isberner, 2007). For example, a lack of social or problem solving skills can lead to inadequate coping in stressful or conflictual situations. While biological or temperamental factors may play a role in the development of some of these difficulties, a related factor may be the patient's upbringing. Many forensic patients were not raised in circumstances where they had the opportunity to learn how to read social cues properly and know how to respond to them (Chung & Steinberg, 2006). For example, harsh and erratic parental discipline or a lack of discipline at all is often associated with social problems in adulthood (Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998; Maniglio, 2011; Palmer & Gough, 2010; Pettit, Laird, Dodge, Bates, & Criss, 2001). These children lacked the opportunity to learn to resolve conflicts constructively, and instead learned to use aggression as a coping strategy.

Treatment options. There are several options when treating behavioral management problems that do not pose immediate danger to self and others. When behavioral problems are primarily affective in nature, several interventions might be suitable. If behavioral problems are characterized by uncontrollable or disproportionate aggressive displays as a result of affective lability, DBT would be a natural choice, because it is specifically aimed at preventing self-harm, or other damaging behaviors by increasing emotional control or regulation. Mindfulness, which is a target skill of DBT, might also be

helpful because it enhances (emotional) awareness in the present moment. Recent research has shown that ST, which includes emotion-focused techniques to reduce affective intensity, is also effective in reducing affectively lability (Giesen-Bloo, et al, 2006). When patients show aggressive behavior because they have difficulties recognizing and processing social cues, MBT and ST might be suitable. MBT enables the patient to develop mentalization skills, which, in turn, could help him to better understand social cues, whereas ST focuses on helping patients to recognize their own emotional states, and how they are triggered in social interactions.

If cognitive components, such as distorted schemas, are at the basis of behavior management problems behavior, standard CBT might be helpful because this concept is the guiding principle behind cognitive therapy. It helps to identify and challenge cognitive distortions. ST might also be suitable because it integrates various cognitive, behavioral, and experiential techniques to restructure patients' cognitive distortions (Rafaeli, et al., 2011; Young, Klosko, & Weishaar, 2003). Similarly, MBT could help patients appraise the mental states of others more accurately, and thus reduce schematic distortion.

Behavior that transgresses rules or boundaries as a result of behavioral deficits calls for limit setting as a response, in addition to helping patients to develop adaptive and socially appropriate forms of behavior. Contingency management, or operant conditioning, is the classic way to improve behavioral problems. It views defiant behavior as the result of past and present environmental circumstances. In contingency management, specific behavior is positively or negatively reinforced. However, these interventions are usually easier to administer in inpatient than in outpatient forensic settings, because there is greater control over reinforcement contingencies in inpatient settings.

When the treatment settings limits the use of reinforcement contingencies, or if patients are more likely to benefit from more structured approaches, standard CBT-oriented therapy might be the treatment of choice. For example, short-term CBT-oriented structured programs, such as ART, VRP and the STEPP program, are highly structured and are aimed at skills acquisition such as specific behavior management skills. ART and the VRP program are specifically developed for violent offenders and aim to reduce the occurrence and frequency or intensity of violent behavior management problems (Hatcher, et al., 2008; Gordon & Wong, 2000).

Alternatively, some patients are more like to benefit from a more focused and intensive treatment, such as DBT. DBT might be suitable because it utilizes limit setting and as therapeutic tool and focuses on inadequate forms of coping. DBT focuses on replacing ineffective coping skills (e.g., self-harm) with adaptive skills, such as emotion modulation and distress tolerance (Linehan, 1993). For example, one recent study showed that the skills component of DBT was an important mediator of therapeutic effectiveness in borderline PD patients (Neacsu, Rizvi, & Linehan, 2010). If a patient's personality pathology prevents him from engaging in the aforementioned structured program, an alternative like ST seems to be promising. ST aims to reduce a patient's reliance on maladaptive forms of coping, and promote healthier coping behaviors. ST uses the therapeutic

tic relationship and behavioral techniques to help patients practice new behaviors and consolidate behavioral changes (Rafaeli, et al., 2011; Young, et al., 2003).

Which problems under which circumstances: lack of motivation to engage in therapy

Nature of the problem. Many PD patients, especially in the forensic context, are considered unmotivated. This is not surprising, as forensic patients are sentenced to psychiatric treatment by court of law, which means that their admission and treatment is involuntary in nature (Sainsbury, Krishnan, & Evans, 2004; Scheffer, 1996). High attrition rates or low cooperation with treatment providers is a major issue in the treatment of forensic PD patients and are often considered risk factors for recidivism (McMurran & Theodosi, 2007; Sheldon, Howells, & Patel, 2010). Therefore it is important to assess or establish why a patient lacks motivation to engage and stay in treatment.

A framework that is closely connected to readiness for treatment is provided by Prochaska, DiClemente and Norcross (1992), who introduced five stages of motivations for change. The first stage is 'precontemplation,' a stage in which a patient have not begun to consider changing. Stage two is 'contemplation,' a phase during which a patient acknowledges his problematic behavior and recognizes the need for change. Contemplation is followed by the 'preparation' stage, during which a patient truly intends to change his behavior and consequently takes an initial step to achieve this. The fourth stage is 'action,' because a patient takes concrete steps towards change. The final stage is 'maintenance', which occurs when the accomplished change is consolidated (Prochaska, et al., 1992).

Studies suggest that Prochaska and DiClemente's stages of change are a predictor of behavior change (Velicer & Prochaska 2008), especially in addiction samples (Wiloughby & Edens, 1996). Research also suggests that there is, for example, a relationship between the contemplation stage and premature termination of treatment (e.g., Derisley & Reynolds, 2000; Smith, Subich, & Kalodner, 1995). Although this framework has been highly influential, it has also been criticized. For example, significant proportions of individuals are unassignable to the recognized stages, and patients often do not move through the stages proposed by Prochaska & DiClemente in the order that they originally suggested (e.g., West, 2005; Whitelaw, Baldwin, Bunton, & Flynn, 2000).

Another framework that might be useful in understanding motivation of forensic patients is provided by Drieschner (2005), who posits that treatment motivation depends on a number of factors. First, motivation depends on a patient's acknowledgement of problem behavior and the recognition that change is therefore necessary. Second, motivation is likely to be higher when patients experience distress as a result of their problems. A third factor is perceived legal pressure, in other words, whether a patient fears that a lack of treatment engagement may result in legal sanctions. When this pressure is perceived as high, treatment motivation is likely to be enhanced. Fourth, motivation depends on the perceived suitability of the therapy and therapist. Patients' satisfaction with the therapist is closely related to the patient-therapist therapeutic relationship or "work-

,ing alliance" (Hersoug et al., 2001; Sexton, Hembre, Kvarme, 1996). Another factor is outcome expectancy. When patients expect to benefit from treatment, motivation for treatment will be enhanced (Drieschner, 2005; Drieschner & Verschuur, 2010). Drieschner's framework has been supported in two studies with forensic outpatients, which showed evidence for the validity of the aforementioned determinants with regard to treatment motivation (e.g., Drieschner & Boomsma, 2008a; 2008b).

Treatment options. There are two preparatory therapeutic approaches that might be helpful in increasing motivation and readiness for therapy. As forensic patients are sentenced to involuntary treatment, patients are often not yet contemplating change: they are in the 'precontemplation phase' (Prochaska, et al., 1992). Motivational Interviewing (MI; Miller & Rollnick, 1991) is a short-term intervention that is informed by the stages of change as defined by Prochaska and DiClemente (1992). MI aims to help a patient to acknowledge his problematic behavior and recognize the need for change, and consequently aims to increase a patient's readiness for change (McMurran & Ward, 2010). Drieschner's (2005) framework can make an important contribution to MI, because it focuses on the specific factors that present obstacles to motivation. This means that forensic therapists might focus their efforts on the specific areas that are causing the patient to be unmotivated, and helping the patient to consider the advantages versus disadvantages of changing with respect to those specific factors. For example, if a patient does not perceive that there will be legal consequences of not taking part in therapy, the MI therapist might discuss the advantages and disadvantages of participating in therapy from a legal point of view. MI has proven to be effective for addicted patients, but there is also some evidence of success in forensic patients (McMurran, 2009). Therefore MI should be regarded as the front-line treatment for offenders who have difficulty engaging in treatment.

According to Drieschner (2005), suitability of the therapy/therapist, distress and outcome expectancy are examples of important factors in treatment motivation. However, some forensic PD patients do not view verbal therapy as suitable for their problems, or lack distress. For example, they may feel that they do not have any problems, or feel uncomfortable dealing with their feelings or problems in a verbal way. Other patients lack access to their underlying emotions, because they are emotionally detached. Therefore, they do not seem ready to engage in treatment (Day, 2009). According to Prochaska & DiClemente (1992), they are either in the 'precontemplation' or 'contemplation' phase. In these instances, Arts Therapies, such as music, dance, drama, or movement therapy (Hekking & Fellingner, 2011; Johnson, 1991; Reed, 2002), might be suitable to alleviate obstacles for therapy engagement. These therapies provide a medium (e.g., music, art) via which the patient and therapist interact. For example, playing music together may feel interpersonally more comfortable than relating to a therapist by discussing problems verbally. Thus, some patients may find Arts Therapies more suitable, less threatening, and more pleasurable than speaking with a therapist. These factors may help the patient to form a more satisfactory alliance with his therapist and increases his willingness to

engage in treatment. In addition, Arts Therapies may facilitate emotional processing by using techniques that elicit affect, and may therefore help to break through a patient's levels of detachment (Blacker, Watson, & Beech, 2008; Malchiodi, 2003). As a result, a patient's level of distress about his crimes and other problems may increase over the course of treatment, which is a source of motivation for change (Drieschner, 2005).

There is increased recognition that motivation is a dynamic, rather than a static, concept (Chanut, Brown, & Dongier, 2005; Schlezinger, 2004). Change can fluctuate over time because patients may exhibit a degree of ambivalence towards change (Koeter, van den Brink, & Lehert, 2010; Tierney & McCabe, 2001; Walitzer, Dermen, & Connors, 1999). Therefore, motivation may be an issue throughout therapy. For this reason, forensic therapists should consider the fluctuations in motivation over the course of treatment, and use interventions to enhance it whenever this is necessary. For example, research has indicated that MI sessions during treatment can circumvent early drop-out (e.g., Swanson, Pantalon, & Cohen, 1999; Walitzer et al. 1999). MI might be useful as an addition treatment to stabilize a patient's commitment for therapy when the treatment appears to be stuck, especially if the therapist can identify the specific factors involved (e.g., Drieschner, 2005).

It should be noted, however, that the kinds of factors that interfere with motivation over the course of treatment may be intrinsic to a patient's personality pathology. For example, patients with PDs may fail to recognize that they have a problem or feel little distress about it. While MI helps to increase patients' problem recognition, the benefits of this approach may be limited, if the underlying PD is not addressed. Thus, while MI or Arts Therapies might be alternatives in patients who are otherwise unwilling or unable to engage in therapy, the treatment of the PD itself may be necessary to address motivational issues that otherwise limit the extent to which patients can participate meaningfully in therapy. Thus, viewing motivation as a recurring issue over the course of therapy suggests that motivation-enhancing techniques should be incorporated into longer-term treatments for forensic PD patients.

Which problems in which patients: which PDs and comorbid psychiatric disorders

Nature of the problem: Antisocial PD. Antisocial PD is the most prevalent PD in forensic settings, sometimes constituting as many as 80% of incarcerated offenders (Blackburn, Logan, Donnelly, & Renwick, 2003; Hill, 2003). Many of these patients also have comorbid axis I disorders, such as drug and alcohol abuse and dependence, attention deficit disorder, depression, post-traumatic stress disorder, and paraphilias (Blackburn, et al., 2003; D'Silva & Ferriter, 2003; Spitzer, Dudeck, Liss, Orlob, Gillner, Freyberger, 2001). ASPD patients therefore represent a heterogeneous group, which can be classified according to various dimensions. We begin by making the broad distinction between ASPD patients with and without significant levels of psychopathic traits, which is usually operationalized by a cut-off score on the Psychopathy Checklist-Revised (PCL-R) of 25 or 30, with the latter defining a more extreme group (Hare, 1998; Kosson, Lorenz &

Newman, 2006; Poythress, et al, 2010; Rogstad & Rogers, 2008). Non-psychopathic ASPD patients usually display reactive aggression, poor impulse control, and are frequently diagnosed with a co-morbid substance use disorders (Black, Gunter, Loveless, Allen, & Sieleni, 2010; Crocker, et al., 2005; Gilbert & Daffern, 2011; Messina, Wish, & Nemes, 1999). In contrast, psychopathic ASPD patients are typically characterized by emotional deficits, deception and predatory or opportunistic aggression, although some of these patients can also be impulsive (Cooke, 2010; Hare & Neumann, 2009; Mokros, Osterheider, Hucker, & Nitschke, 2011). Further distinctions can be made within the psychopathic group. *Primary psychopaths* are typically characterized by core emotional deficits such as lack of empathy and remorse and emotional under-arousal that are thought to stem from hereditary abnormalities; *secondary psychopaths*, on the other hand, are believed to reflect environmental causes, such as the effects of child abuse and neglect (Cooke, 2010; Schoenleber, et al., 2011; Skeem, et al., 2003; Walsh & Kosson, 2008; Woodworth & Porter, 2002). While psychopathic patients in general have been considered difficult or even impossible to treat, increasing evidence suggests that some of these patients can indeed benefit from treatment, although this remains a controversial notion (D'Silva et al., 2004; Skeem, Monahan, & Mulvey, 2002).

Treatment options. Cognitive-behavior therapy (CBT) usually focuses on ameliorating cognitive distortions, anger and impulsivity problems, and social skills deficits in these patients, as well as addressing axis I comorbidities, such as addictive disorders, that are risk factors for recidivism. There is some evidence that these approaches, when delivered individually or as part of structured treatment programs (Gibbon, et al., 2010), can benefit some patients with an Antisocial PD. However, a major limitation of these studies is the lack of randomized clinical trials and long-term follow-ups (Duggan, 2008). While open trials and trials using matched control groups suggest that CBT approaches reduce aggression and associated problems during incarceration (Davidson, et al., 2009, Timmerman & Emmelkamp, 2006), we simply don't know the extent to which they yield longer-term benefits. Among the advantages of CBT approaches are that they are relatively easy to deliver, time-limited, and focus on risk factors that have an empirically demonstrated relationship to recidivism. The CBT model is one that is familiar to many clinicians and has proven successful in the treatment of many axis I disorders.

On the other hand, CBT approaches are usually predicated on the motivation of the patient and his ability to engage in treatment – a precondition that is often missing in forensic patients (see above). Moreover, there is relatively little evidence that CBT yields more than modest effects in PD patients in either forensic or non-forensic settings (Gibbon, et al., 2010; Timmerman & Emmelkamp, 2006). One reason for this is that standard CBT may not go far enough in addressing the core personality features that define PDs, such as attachment difficulties, identity disturbances, emotional over-reactivity or under-reactivity, impulsivity, maladaptive schemas, and maladaptive forms of coping. While longitudinal studies suggest that the behavioral manifestations of PDs fluctuate over time (e.g., reductions in self-harm behaviors in BPD patients), evidence indicates that the

personality features that constitute the core of PDs are typically more stable (Lilienfeld, 2005; Skodol, et al., 2005; Zanarini, et al., 2005), and thus may require a more intensive type of treatment.

Over the past 20 years, considerable progress has been made in developing treatments for BPD, such as Dialectical Behavior Therapy (DBT; Linehan, 1993), Mentalization Based Therapy (MBT; Bateman & Fonagy, 2006), and Schema Therapy (ST; Young, et al., 2003) (see below). Although each of these treatments conceptualizes the core features of BPD differently – affective lability in DBT, attachment problems and mentalization deficits in MBT, and attachment problems and maladaptive schemas and emotional states in ST – the intensive focus on ameliorating these disturbances has yielded positive results in randomized clinical trials (Bateman & Fonagy, 2009; Giesen-Bloo, et al., 2006; Van den Bosch, Koeter, Stijnen, Verheul, & Van den Brink, 2005). Comparable approaches may be needed to ameliorate the core personality features that define Antisocial PD, if greater and more lasting changes in these patients are to be achieved.

A related question is whether some Antisocial PD patients, such as those who are psychopathic, can be treated at all, or to put it differently, what approach should be taken in light of their apparently intractable difficulties. Some authors have suggested that therapeutic approaches are best aimed at teaching psychopathic offenders to make more effective life choices, and learning to better control their behavior so that risk for institutional violence and violent recidivism can be reduced (Hare & Neumann, 2009; Wong, et al., 2005). Examples of such approaches are the VRP (Gordon & Wong, 2000) and ART (Goldstein, Glick, & Gibbs, 1998) programs. These approaches may be effective for psychopathic patients who are motivated to change their behavior, in order to alleviate its negative consequences in their own lives. This may be the most that can be expected, given the intractability of the pathology in question. Others view psychopathy as a heterogeneous disorder that consists of some expressions that are amendable to change. For example, there is evidence supporting the distinction between primary and secondary psychopathy, and that many psychopathic patients suffer from attachment difficulties (Fonagy, et al., 1997; Frodi, Dernevik, Sepa, Philipson, & Bragesjö, 2001; van IJzendoorn et al., 1997; Timmerman & Emmelkamp, 2006). Some of these patients, such as those with secondary psychopathy, may be amenable to treatments that address these core emotional deficits (Poythress & Skeem, 2006; Skeem, et al., 2003), although, at this time, there is very little empirical evidence bearing on the question of which psychopathic patients might be capable of more fundamental change. In fact, although primary psychopaths are often considered to be incapable of making fundamental changes, this remains an unproven assumption.

Of the extant treatments for PDs, ST is the only one, to our knowledge, that has been specifically adapted for forensic patients with cluster B PDs (Bernstein, Arntz, & de Vos, 2007) and is now being tested in a randomized clinical trial to determine its effectiveness (Bernstein, Nijman, Karos, Keulen-de Vos, de Vogel, & Lucker, 2012). In the forensic adaptation of ST, antisocial and aggressive behavior is explained in terms of “schema

modes," emotional states that temporarily dominate a person's thoughts, feelings, and behavior (Bernstein, et al., 2007). Preliminary evidence from the first 30 patients to complete the 3-year clinical trial suggests that ST reduces recidivism risk and facilitates reintegration into the community, compared to usual forensic treatment. These gains were particularly pronounced in the ST patients with higher levels of psychopathy. Although definitive results await the completion of the full clinical trial, including a 3-year follow-up, these findings represent a promising development in the treatment of antisocial and psychopathic offenders.

Attempts are also being made to introduce other treatments for PDs, such as DBT and MBT, into forensic settings; however, little evidence regarding the effectiveness of DBT has been reported (Evershed, Tennant, Boomer, Rees, Barkham & Watson, 2003; Rosenfeld, et al., 2007), and none regarding the effectiveness of MBT in forensic populations. While randomized clinical trials with long-term follow-ups are expensive and time consuming, such studies will be required to determine whether these treatments can ameliorate the core defining features of Antisocial PD, and if these treatments lead to lasting reductions in antisocial behavior.

Finally, given the extensive comorbidity between ASPD and substance use disorders, combining addiction treatment with treatment for ASPD will be necessary for many of these patients. There is substantial evidence that drug and alcohol use are major risk factors for relapse to antisocial and aggressive behavior (e.g., Fishbein, 2003; Giancola, Godlaski, & Roth, 2011). Thus, management of drug and alcohol problems usually plays an essential role in forensic treatment (McMurran, 2009). Reviewing the vast literature on addiction treatments is beyond the scope of this article. It is worth noting, however, that attempts have been made to develop integrated approaches to treating addictions in ASPD patients. For example, a short-term, structured dual-focus form of ST (Ball, 1998) has been developed and tested with some evidence of effectiveness in addicted patients with PDs. However, effect sizes for this program were only moderate (Ball, Maccarelli, LaPaglia, & Ostrowski, 2011), and one study found no differences between the effectiveness of this program and a control treatment (Ball, 2007). Similarly, a form of DBT has been developed for addicted patients (Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois, 1999; Dimeff, Rizvi, Brown, & Linehan, 2000), although to our knowledge, no evidence regarding its effectiveness has been reported. In light of the extent to which PDs and addictions are intertwined, further efforts to develop and test integrated approaches to these disorders appear to be warranted.

Nature of the problem: Borderline PD. BPD is one of the most prevalent PDs in forensic settings, after Antisocial PD. The highest priority in treating BPD patients, in both general psychiatric and forensic settings, is usually to reduce the extent of their self-harm behavior (Gray, et al., 2003). However, BPD patients in forensic settings often pose additional problems, such as a propensity for reactive aggression, when they feel threatened or anticipate abandonment (Látalová & Praško, 2010). In addition, BPD patients suffer from instability in multiple areas, including identity, affect, and interpersonal relation-

ships. Further complicating matters, BPD patients in forensic settings may have other comorbid conditions, such as Antisocial PD, depression, PTSD, and substance use disorders. Moreover, in contrast to general psychiatric settings, where BPD patients are predominantly female, both female and male BPD patients are often seen in forensic settings, with many of these patients, especially the male ones, having a comorbid Antisocial PD or antisocial traits.

Treatment options. As noted above, DBT should be regarded as the front-line treatment for BPD patients where the risk for self-harm behavior is paramount, given its track record of consistent replication in clinical trials over the past 20 years (van den Bosch, et al., 2005; Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Koons, et al., 2001; Linehan, et al., 2006, 1999; McMain, et al., 2009). However, we have also noted that other treatments, including MBT, ST, and intensive psychiatric management, have shown comparable levels of effectiveness in reducing self-harm to those seen in studies of DBT, though with fewer replication studies (Bateman & Fonagy, 2009; Giesen-Bloo, et al., 2006; Nadort, et al., 2009). Moreover, there is little reported evidence regarding the effectiveness of any of these treatments in forensic BPD patients. Whether these treatments reduce self-harm in forensic BPD patients, or can reduce associated problems, such as reactive aggression, is largely unknown.

Despite the paucity of clinical trials in forensic BPD patients, DBT still appears to be the treatment of choice for reducing self-harm, particularly when patients are female, affective lability is prominent, and treatment is not complicated by antisocial behavior, which may interfere with patients following treatment regimes. On the other hand, alternatives such as MBT and ST might be considered when attachment issues are prominent, mentalization deficits are central (in the case of MBT), or when DBT fails to produce results. Moreover, ST appears to be suitable for the large subgroup of forensic patients with comorbid ASPD and BPD, who make prominent use of aggression and other antisocial behaviors as coping responses, when they feel threatened, abandoned, or frustrated (Bernstein, et al., 2007). ST focuses on these maladaptive coping responses, as well as the underlying schemas that trigger them, and has shown good preliminary evidence of effectiveness in Cluster B PD patients (Bernstein, 2011). The STEPPS program, which incorporates DBT as well as ST concepts, is sometimes used in forensic settings for BPD patients, although it is usually recommended as an ancillary treatment in combination with individual therapy, rather than as a stand-alone treatment (Blum, et al., 2002). The STEPPS program has good evidence for effectiveness in non-forensic BPD patients (Blum, et al., 2008; Bos, van Wel, Appelo, & Verbraak, 2010); however, its effectiveness in forensic BPD patients has not been reported.

Finally, given the prevalence of trauma and comorbid PTSD in BPD patients (Spitzer, et al., 2001), trauma-focused treatment may be indicated when these issues are salient. Treatments such as EMDR and other forms of imaginary exposure have shown evidence for reducing the intensity of PTSD symptoms in BPD patients (e.g., Bisson, Ehlers, Matthews, Pillang, Richards, & Turner, 2007; Van Etten & Taylor, 1998; Ironson, Freund,

Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Seidler & Wagner, 2006). ST, which incorporates a form of imaginary exposure known as “imaginary re-scripting” for traumatic memories, has also been proven to be effective in non-forensic BPD patients (Farell, Shaw, & Webber, 2009; Giesen-Bloo, et al., 2009; Nadort, et al., 2009). However, its effectiveness as a treatment for PTSD symptoms per se is only now being investigated (M. Rijkeboer, personal communication, June 4, 2010).

A well-validated PTSD treatment, such as EMDR, might be used as a front-line alternative in BPD patients who are suffering from prominent comorbid PTSD symptoms; after reducing these symptoms, the other features of BPD could be addressed, using other approaches. One intriguing question is whether reducing PTSD symptoms might also produce reductions in antisocial and aggressive behaviors that represent coping responses in some of these patients. The association between PTSD and symptoms such as anger and aggression has long been documented, for example, in combat veterans (Hawkins, Malte, Imel, Saxon, & Kivlahan, 2012; Kearney, McDermott, Malte, Martinez, & Simpson, 2012). Thus, reducing the intensity of traumatic memories in BPD patients might help to reduce aggression in these patients, especially when combined with learning more adaptive forms of coping. The same considerations apply to other forensic patients, such as those with ASPD, who suffer from comorbid trauma-related symptoms, and might also benefit from trauma-focused treatments. These issues warrant study in forensic populations.

Nature of the problem: Narcissistic PD. NPD is the third most prevalent PD in most forensic settings (Blackburn, et al., 2003; Fazel & Danesh, 2002). In the literature, a distinction is often made between grandiose or overt narcissism and vulnerable or covert narcissism (e.g., Cooper, 2000; Miller, Campbell, & Widiger, 2010). Patients with overt narcissism typically come across as grandiose, dominant and aggressive because they want to enhance their self-esteem. Vulnerable narcissists show defensive grandiosity as an armor for underlying feelings of inadequacy and inferiority (Behary, 2008; Miller & Campbell, 2010; Miller, et al., 2010; Rose, 2002; Wink, 1991). These painful feelings can often be linked to childhood abuse or neglect and intrusive parenting styles (Horton, Bleau, & Drwecki, 2006; Otway & Vignoles, 2006). Narcissistic PD is less researched than Antisocial or Borderline PDs. However, Miller and Campbell (2010), Baumeister, Bushman, and Campbell, (2000), and others have done pioneering research on trait narcissism that is quite relevant for many Narcissistic PD patients. This research supports the distinction between healthy self-esteem and narcissism. For example, healthy or normal narcissism may be associated with healthy assertiveness, self-respect, and respect for others, whereas unhealthy narcissism is associated with more maladaptive traits such as dominance, self-centeredness, exploitativeness, and lack of empathy (Schoenleber, et al., 2011; Wink, 1991).

There is very little empirical literature on narcissism in forensic populations. However, anecdotal evidence suggests that these patients’ tendency to dominate and demean their therapists provokes counter-transference reactions that make them difficult to treat.

Moreover, there is little research concerning the role of narcissism in offending behavior, although the high prevalence of these traits in offender populations is suggestive of a relationship. To our knowledge, there is no empirical data on the role of narcissistic traits in offending behavior. However, anecdotal evidence suggests that a sense of entitlement, disregard for rules and norms, exploitativeness, the need for dominance, and lack of empathy for victims, may contribute to law breaking and aggression in these patients.

Treatment options. Although NPD is often treated by psychodynamic psychotherapies (Ronningstam, 1998), there are no empirically validated treatments for NPD. We are aware of only one treatment approach, ST, which is used in forensic settings and defines a specific model for Narcissistic PD offenders. ST defines NPD as a disorder in which four emotional states or “schema” modes are dominant (Young, et al., 2003). Most of the time, narcissistic patients come across as self-confident, bold and arrogant. In this ‘Self-Aggrandizer’ mode, patients feels superior and entitled (Young & Flanagan, 1998). This emotional state serves as an overcompensation to avoid underlying feelings of vulnerability, loneliness and inadequacy (‘Lonely Child’ mode) (Miller & Campbell, 2010; Rafaeli, et al., 2011). In the ST model, narcissistic individuals may also use other maladaptive coping styles to escape these painful feelings. Examples are self-soothing behavior, such as drug and alcohol abuse, and verbal and/or physical aggressive conduct (‘Detached Self-Soother’ mode) (Barry, Frick, & Killian, 2003; Schoenleber, et al, 2011). ST aims to access these underlying feelings of loneliness and vulnerability in secondary narcissists by challenging the emotional states of grandiosity, so that the individual can accept his true emotional needs (Behary, 2008; Young & Flanagan, 1998). In primary narcissists, ST typically addresses dominant or aggressive behavior by setting limits (Rafaeli, et al., 2011). There is, as yet, no empirical evidence for the effectiveness of the ST model for NPD, although it is currently being tested in the aforementioned clinical trial on the effectiveness of ST in offenders with cluster B PDs (Bernstein, 2011).

Other treatments for PDs that have been reviewed here might be adaptable for offenders with Narcissistic PD. For example, MBT might help ameliorate mentalization deficits in some narcissistic offenders, leading to greater empathy for victims. DBT, on the other hand, might be helpful when narcissists are highly reactive to emotional ‘injuries.’ Although the emotional reactivity in narcissistic patients is different than that in Borderline PD patients, stemming more from rage over narcissistic wounds than from biologically-based emotional lability, DBT might still be effective in teaching emotion regulation skills to these patients. These considerations, however, are only speculative; clinical studies would need to confirm the suitability of these approaches to offenders with Narcissistic PD.

Which problems in which patients: which dynamic risks and strengths

Nature of the problem. When reviewing the nature and presence of cluster B PDs and possible co-morbid axis I disorders, the clinician must also have a clear understanding of a patient’s specific risks and strengths (Roth & Fonagy, 2005), so that treatment can be

tailored to particular dynamic risk and protective factors. Risk assessment instruments typically assess and evaluate factors that are potentially linked to criminal conduct and pro-social behavior (Simourd, 2004; Simourd & Olver, 2002). These factors include personality and behavioral factors, such as the patient's social and coping skills, ability to form relationships, level of substance abuse, and adherence to rules, and environmental and circumstantial factors, such as the patient's financial situation and social networks. For example, specific views or beliefs of the patient might be related to a risk for violence. Patients with pro-criminal attitudes may think it is acceptable to use violence and may justify antisocial behavior or promote a criminal lifestyle (Mandrachia & Morgan, 2010; McNeil et al., 2003; Simourd & Olver, 2002). In contrast, pro-social attitudes correspond with healthy coping and a forthright and honest interpersonal style. However, not all patients with the same disorder may have similar problems and strengths. Risk assessment instruments establish which specific factors are particularly important for a particular patient. Knowledge about these factors is vital for clinical purposes because they inform about the patient's clinical status and potentially serve as targets for correctional treatment (Bonta, 2002; Lindsay, et al., 2004). Many risks and strengths are dynamic, in that they can change over the course of time (Douglas & Skeem, 2005). For example, they may fluctuate on a week-by-week or day-to-day basis. Hence, risks and strengths may be prioritized differently at different points during treatment. Dynamic risk assessment instruments can help to detect these changes. Examples of widely used dynamic risk assessment instruments are the Short-Term Assessment for Risk and Treatability (START; Webster, Martin, Brink, Nicholls, & Middleton, 2004), the Historical Clinical Risk-Management-20 (HCR-20; Webster, Douglas, Eaves, & Hart, 1997), the Level of Service Inventory- Revised (LSI-R; Andrews & Bonta, 1995), the Violence Risk Scale (Wong & Gordon, 1999) and the Structured Assessment of Protective Factors for Violence Risk (SAPROF; de Vogel, de Ruiter, Bouman, & de Vries-Robbé, 2009).

Treatment options. Risk assessment can help to tailor treatment approaches to the patient's specific dynamic risks and strengths. Risk assessment procedures seem particularly congruent with CBT approaches, in that they focus attention on the specific problematic cognitions, affects, and behaviors that require attention, and have empirically demonstrated relationships to recidivism. Cognitive therapies, for example, can target criminogenic cognitions; skills trainings can be used to ameliorate poor social or coping skills; substance abuse modules can be offered to patients with addictive behaviors; affect regulation training, such as that given in DBT (Linehan, 1993) and STEPP (Blum, et al., 2002) can be used to address problems of impulsivity or affective lability; and so forth. Other interventions, such as social work, family therapy, or couples therapy interventions would be suitable to address employing and housing issues, or family and partner relationship issues, that represent environmental risks for reoffending. Thus, dynamic risk assessments can lead to more individualized treatment approaches, which can be adjusted as risks and strengths vary over time. For example, in the initial phases of treatment, factors that affect patients' motivation for and engagement in therapy can

be targeted, whereas in later stages, factors related to relapse and recidivism become more salient.

One potential disadvantage of the risk assessment approach is that it may fail to consider that dynamic risks and strengths need to be embedded in a view of the “whole person,” which is informed by theory and knowledge about the PDs in question. Contemporary theories tend to view personality as dynamic, adaptive, and wholistic systems, and to view behavior and behavior disorders within this wholistic framework (Block, 1995; Livesley, 2008; McAdams, 1992). In contrast, at its worst, risk assessment approaches can lead to an implicit model of offenders as representing a loose agglomeration of risk and protective factors, rather than as a unified whole. This tendency flows from the empirically-driven way in which risk assessment instruments were developed. The items selected for these instruments were based on research showing an empirical relationship between these factors and offending behavior (Douglas, Ogloff, & Hart, 2003). The strength of this method is that it produces instruments that can validly predict re-offending. The weakness is that the factors are not viewed within a unified theoretical framework that has heuristic value for treatment providers.

Recently developed approaches for PDs, such as DBT, MBT, and ST, all have heuristic theoretical models of PDs through which therapists can comprehend the patient’s behavior, and which inform their choice of interventions. For example, DBT is based on an etiological model of BPD as stemming from biologically based emotional lability and an invalidating family environment (Linehan, 1993); MBT on mentalization deficits resulting from attachment difficulties (Bateman & Fonagy, 2004); and ST on early maladaptive schemas, maladaptive coping, and schema modes, caused by the child’s innate temperament and adverse life experiences (Rafaeli, et al., 2011; Young, et al., 2003). These heuristic models were not developed through empirical research, but from clinical experience and theory building.

Research indicates that therapy is most effective when it incorporates a consistent theoretical framework, which provides the rationale for particular interventions (Duggan, 2008; Wong, Gordon, & Gu, 2007). The use of a consistent theoretical model to comprehend the patient’s problems and guide the choice of interventions may explain some of the effectiveness of these therapies for PDs in clinical practice. However, there has been little attempt to link these heuristic models to empirical knowledge about offenders’ dynamic risks and strengths.

Efforts to integrate heuristic models with risk assessment approaches could enhance treatment effectiveness, by viewing risks and strengths from the perspective of the person as a unified whole (Block, 1995; Livesley, 2008; McAdams, 1992). One example of this, based on ST, is the proposal to view the patient’s risk for criminal and violent behavior in terms of “schema modes,” fluctuating emotional states that appear to play a role in the sequence of events leading to and culminating in offenses (Bernstein, et al., 2007). By making schema modes the target of treatment interventions, ST aims to reduce the risk of re-offending. Thus, the patient’s risk factors are understood within the ST

theoretical framework, providing a heuristic that guides interventions. More efforts along these lines could lead to greater integration of risk assessment procedures with a clinical and theoretical understanding of PD pathology and its treatment.

Under which circumstances: settings, legal sentence and resources

Nature of the problem. Selecting treatments also depends on a variety of circumstantial issues. First, the context in which treatment takes place may play a role. For example, secure forensic hospitals are unique environments and different from, for example, general psychiatric hospitals. General psychiatric patients typically report levels of distress and seek treatment themselves, whereas forensic patients are treated involuntarily and show low levels of distress (Sainsbury, et al., 2004; Scheffer, 1996). In addition, offenders have relatively limited choices regarding their treatment team and the fellow patients they spend their time with, and have limited space to which they have access (Gadon, Johnstone, & Cooke, 2006). In addition, the treatment staff is not only responsible for treatment, but also for safety of the patient and his surroundings (McCann, et al., 2000). Thus, the relationships between patients and staff are usually complex (Gadon, et al, 2006). An additional factor is the treatment philosophy across different types of forensic settings. Forensic hospitals are predominantly aimed at reducing recidivism risk by mean of treating psychopathology, whereas prison environments serve to detain and punish criminals. The type of facility, for example inpatient, outpatient, or ambulant settings, and the degree of security that is applied (e.g., low secure, medium secure or high secure) also influences which treatment is most applicable and appropriate. For example, in an outpatient secure setting, the level of care is lower than in an inpatient setting and calls for more self-discipline on the part of the patient. Usually, patients who are transferred to such a facility are already at the final stages of their treatment, and therefore often require less intensive treatment and supervision.

A second issue related to the setting is (perceived) coercion. Because of the involuntary nature of their admission in secure hospitals, patients may perceive their treatment as coercive. Coercive treatment can arouse strong negative feelings. Patients may feel constraint on their freedom and violated in their feelings of autonomy and individual dignity, which may result in irritable and defensive aggressive behavior (Monahan, et al, 1995; Petrila, 2004; Wertheimer, 1993). Forensic patients with cluster B PDs often exhibit externalizing behavior (Rydén-Lodi, Burk, Stattin, & af Klinteberg, 2008; Sevecke, Lehmkuhl, & Krischer, 2009). They are usually dominant and hostile in interpersonal relationships, and are more likely to show institutional violations than other forensic patients (Daffern, Duggan, Huband & Thomas, 2010). Forced treatment may exacerbate this tendency, leading to negativistic, oppositional behavior. Patients' perception of coercion may consequently impair therapeutic relationships and hinder treatment (Hiday, Swartz, Swanson, & Wagner, 1997; Levi, Nussbaum, & Rich, 2010; Veltkamp, Nijman, Stolker, Frigge, Dries, & Bowers, 2008).

The availability of resources and specialized, trained professions is a third important factor to take into account. Working with forensic PD patients calls for specific skills and requires specialized training. The more staff is educated with regard to recent and relevant findings from forensic clinical trials, the more likely it is to challenge therapists' pessimistic views about the possibility to change in forensic PD patients. However, the empirical evidence, while it is a necessary condition for good clinical practice, is not sufficient in itself, as the clinician still has to weigh this evidence and apply it to a particular individual case. Training is also important because it increases the therapists' self-confidence, competence, and optimism, which in turn instills hope in forensic patients. This, in turn, promotes the process of change, because the therapist's and patient's shared optimism fosters the therapeutic alliance.

Treatment options. In order to make informed treatment decisions, circumstantial factors, such as the setting of treatment and perceive coercion, should also be taken into account. Thus, for example, treatment must be adjusted to the setting in which it is delivered. For example, offenders who are admitted to an inpatient forensic facility are usually in the early stages of treatment and require more intensive and varied treatment than outpatients usually do. The complexities of delivering more intensive treatments, as well as those posed by the forensic setting itself, suggest a greater need for multi-disciplinary coordination. Thus, in secure inpatient settings, steps should be taken to facilitate the smooth and cohesive functioning of the interdisciplinary team. Outpatient facilities, on the other hand, need a more intensive focus on retaining patients in treatment. These facilitates are more dependent on the patients' intrinsic motivation and self-discipline and also must incorporate policies with regard to retaining patients. For example, outpatient settings need to balance strictness with flexibility to provide the security and boundaries that patients need (e.g., policies prohibiting aggressive behavior in the facility, urine toxicology for illicit drug use, with consequences for repeated violations), while at the same time providing the compassion necessary to deal with rule violations in a manner that encourages patients to remain engaged in treatment (e.g., outreach to patients who fail to show up for appointments, opportunities to re-engage in treatment following relapses).

When assigning patients to treatments, attention must also be paid to the level of perceived coercion that the patient may experience, because this can hamper or influence compliance with treatment. Mandated treatment may be beneficial, because without coercion, they would never receive an adequate "dose" of treatment to produce a therapeutic effect. Over time, the patient's motivation may shift from external to internal. However, coercion may also be counter-productive, if the patient's negativistic reaction prevents him from productively engaging in treatment. In these instances, patients may benefit from preparatory therapeutic interventions, such as MI and Arts therapies, that are aimed to increase readiness for change and motivation (see above). Treatment providers must consider when coercion is beneficial or not, and balance these considerations in deciding when to require patients to comply with therapeutic procedures. In general,

patients should be given opportunities to exercise freedom and autonomy where possible, while still providing the limits and structure needed to promote compliance. Over time, the consistent provision of limits, with consequences for transgressions applied in a fair and proportional manner, combined with a sensitivity and respect for the patient's need for autonomy, is likely to produce the most beneficial results.

Treatment managers must also optimize their resources when matching therapists to patients and allocate resources to educating staff. Thus, considerations of cost, and cost-effectiveness, play a role in deciding which treatments to use. In general, outpatient treatments are less expensive than inpatient ones, because inpatient settings have higher "hotel" costs (e.g., room and board, security staff, facilities maintenance), and lower staff to patient ratios (Barrett & Byford, 2007; Dauwalder, & Ciompi, 1995; Netten & Gurtis, 2002; World Health Organization, 2003). Interventions delivered in group formats are usually less costly than those given individually, but are not necessarily more cost-effectively, if they are less therapeutically efficacious. Thus, managers need to provide the most effective procedures possible given the constraints on their resources. This task requires familiarity with the literature on effectiveness and cost-effectiveness of forensic treatments, as well as deftness in managing budgets.

Finally, according to Andrews and colleagues (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Andrews & Bonta, 2003), for maximum effect, treatment to reduce re-offending should be based on the 'what works' principles. These principles are based on the risk, need, and responsivity (RNR) triad. The risk principle states that patients who are at high risk should receive a higher intensity of treatment than patients who are at low risk. Thus the intensity of treatment should match the patients' level of risk. The need principle assumes that treatment should be targeted at needs that are related to criminal behavior. In other words, the focus of treatment is reducing criminal behavior. The responsivity principle states how the treatment should be offered. Treatment must be responsive to patient's characteristics and personal circumstances.

The answers to these questions may vary depending on the settings involved, as well as degree of perceived coercion. Certain treatments may be optimally administered in secure settings, until the patient's level of risk can be lowered sufficient to begin re-introduction into the community. Other treatments may be more optimally provided in outpatient settings, where the patient has the opportunity to practice skills when faced with the challenges of everyday life. Thus, the intensity of the treatment may need to be matched to the settings involved, the nature of the patient's problems, and his needs during different phases of treatment.

In which patients: gender and culture

Nature of the problem. Issues like gender, and a patient's cultural and ethnic background, are important when deciding which treatments are appropriate for which offenders. For instance, personality pathology may present differently in female and male offenders, even if they have the same PD diagnosis (Salekin, Rogers, Ustad, & Sewell,

1998). For example, BPD symptoms in men are typically expressed via externalizing behavior (e.g., substance abuse, other-directed aggression), while females tend to exhibit internalizing pathology (e.g., self-harming behavior, depression) (McCormick, et al., 2007; Tadic, et al, 2009). Similarly, both male and female psychopathic offenders may exhibit conning and manipulative traits (Cale & Lilienfeld, 2002); however, where males usually display more explicit conning behavior, females tend to manipulate in more subtle ways (e.g., flirtation) (McKeown, 2010). Differences in psychopathic manifestations are also apparent in the fact that psychopathic female offenders usually show more promiscuous behavior and less juvenile delinquency, whereas male psychopathic offenders usually exhibit callous-unemotional traits and have more extensive histories of criminal behavior and conduct disorder (Grann, 2000; McKeown, 2010). These gender-related expressions of psychopathology may lead to misdiagnosis or under-diagnosis of certain PDs, when the prototypical expression of these disorders is associated with female (e.g., Borderline PD) or male (e.g., Antisocial PD) gender.

Cultural factors such as implicit norms and values, attitudes, and beliefs may also influence symptom presentation and determine whether certain social behaviors are considered appropriate (Kirmayer, Rousseau, & Lashley, 2007). What is seen as just and 'normal' in one culture, may be seen as degrading or 'abnormal' in other cultures. For example, in traditional patriarchal cultures, violence towards women, or to defend the family's honor (i.e., "revenge killings"), may be considered acceptable under certain circumstances (Flood & Pease, 2009). Thus, culturally sanctioned violence may complicate efforts to treat violent offenders, and make it difficult in some cases to distinguish personality pathology from internalized cultural attitudes. Habits, traditions and religious rituals are part of an individual's cultural heritage that may also complicate treatment. For example, cultural and language differences may lead to misunderstanding, conflict, or discomfort between therapist and patient.

Treatment options. Treatment decisions must include a comprehensive understanding of gender and culture issues in a particular offender. Therapy should be systematically embedded in cultural contexts, for example, by involving family members, clergy, and community members. In some cultures, therapy may be regarded as only for "crazy" people, or as signifying weakness. Cultural 'informants' can help treatment providers to better understand the patient's cultural referents, while also helping to allay the patient's concerns about entering into therapy. Also, emotions, attitudes or thoughts, and behavior need to be understood in terms of gender and culture. For example, male patients may have more difficulties in expressing emotions than female patients. The lack of emotional expression may therefore have a cultural instead of pathological origin and should be addressed as such. Also, different male offenders may have different cultural beliefs towards, for example, violence, women and authority. Respect for these cultural differences needs to be balanced by respect for the laws under which patients are sentenced, even when these laws are alien to them. Many patients can come to accept that certain behaviors are considered wrong in a particular society, and learn to

adapt their behavior accordingly, even if they don't necessary hold these views themselves. Finally, it goes without saying that equal access to treatments must be provided, regardless of gender, race, religion, or sexual orientation. Providers should be aware of the various ways in which these or other factors might create barriers to accessing the treatments that patients need.

Conclusion

In this article we have reviewed which treatments are available for which cluster B PD offenders. It became apparent that Paul's (1967) quote "*What treatment, by whom, is most effective for this individual, with that specific problem, and under which set of circumstances*" is still very relevant after fifty years of its publication. Evidence for the effectiveness of treatment for cluster B PD offenders is still scarce. Therefore it is premature to make definite recommendations with regard to which treatment is most effective in which patients. In this paper, we have tried to help clinicians think about their practical problems of selecting treatments in a systematic way. We have provided an algorithm that might help treatment providers make more informed decisions in treating forensic PD patients. If we know better what *might* work for whom, under which circumstances, when and where, the effectiveness and cost-effectiveness of forensic treatment may be improved.

CHAPTER 4

Assessing personality disorders in forensic patients

Keulen-de Vos, M.E., Bernstein, D.P., Clark, L.A., Arntz, A., Lucker, T.P.C., & de Spa, E. (2011). Patient versus informant reports of personality disorders in forensic patients. *Journal of Forensic Psychiatry and Psychology*, 22(1), 52-71.

Abstract

Forensic assessment of personality disorders (PDs) is often hampered by patients' invalid self-reports. A less frequently used alternative in forensic settings is basing PD diagnoses on information provided by knowledgeable informants. Our research examined whether patients and informants in forensic settings differ in how they view PD symptoms, and whether that changes over time. For the purpose of our study, we adapted the informant version of the Schedule for Nonadaptive and Adaptive Personality-2nd Edition (SNAP-2) for forensic settings. Twenty-four male forensic inpatients with DSM-IV PDs were assessed with the informant SNAP-FI (completed by three treatment providers per patient) and a self-report version, the SNAP-FP. The SNAP-FI and SNAP-FP scales showed acceptable to excellent reliability. Across all time points, the SNAP-FI revealed more PD pathology than did the SNAP-FP. These initial findings support the value of informant reports in PD assessment in forensic settings.

Introduction

Personality disorder (PD) is the most common form of psychopathology in forensic settings (de Ruiter & Greeven, 2000; Hildebrand & de Ruiter, 2004). Fifty to ninety percent of incarcerated offenders have DSM-IV PDs (American Psychiatric Association [APA], 1994), with the cluster B PDs (e.g., Antisocial, Borderline, and Narcissistic PDs) typically the most prevalent (Hildebrand & de Ruiter, 2004; Leue, Borchard, & Hoyer, 2004). Many self-reports and diagnostic interviews used in general psychiatry have been introduced to the forensic field. They are presumed to measure not only the extent of personality pathology, but also to help identify risk and protective factors that explain criminal behavior (Brand & Diks, 2001). Personality assessment can also improve psychological services for criminal offenders, by playing a key role in determining appropriate treatment interventions (Hollin, 2001; McKeeman & Erickson, 1997; Trull, 1993). Examples of these PD instruments are the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Semi-Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I; First, Gibbon, Spitzer, & Williams, 1997), the Structured Interview for DSM Personality-IV (SIDP-IV; Pfohl, Blum, & Zimmerman, 1995) and the International Personality Disorder Examination (IPDE; Loranger, 1999). Even though PD instruments are used often in the forensic field, less attention is paid to the validity of the assessment of personality pathology in forensic psychiatric settings. Assessment of forensic patients is neither simple nor straightforward. First, some forensic patients deliberately withhold important information (e.g., about certain crimes they have committed) if they think it will have negative consequences for their treatment or legal disposition (Ganellen, 2007). Second, many forensic patients try to make a positive impression on others (i.e., socially desirable responding), or may have an unduly positive image of themselves (e.g., Haywood, Grossman, & Hardy, 1993; Sieswerda, Arntz, & Wolfis, 2005). Also, conversely, forensic patients may malingering symptoms, for example, to excuse themselves from blame or responsibility (Cima, 2003). Thus, assessment procedures for forensic PD patients must take these difficulties into account.

Several strategies have been used to attempt to overcome these difficulties. Self-report inventories such as the MMPI-2 (Butcher, et al., 1989) include validity scales to detect response biases that may invalidate self-reports (Clark & Harrison, 2001). Despite their limitations, self-reports are particularly useful in the assessment of subjective emotional states (Lilienfeld & Fowler, 2007), and can play an important role in forensic assessment (Brand & Diks, 2001). Another approach is supplementing diagnostic interviews with information from patients' files (Nieberding, Moore, & Dematatis, 2002). For example, Hare's psychopathy checklist interview-revised (PCL-R; Hare, 1991) can be completed validly only when file information is also available (because of psychopaths' tendency to dissimulate). Both of these methods can improve the validity of PD diagnoses in forensic settings, but they are still dependent on information provided by the patient. A less frequently used alternative in forensic settings is basing PD diagnoses on

information provided by knowledgeable informants. There is some evidence that information obtained from informants may improve the validity of PD diagnoses in general, over and above information provided by individuals themselves (Klonsky, Oltmanns, & Turkheimer, 2002; Oltmanns & Turkheimer, 2006). Some studies suggest that informants tend to report more PD pathology in patients, compared to patient self-reports (Zimmerman, 1994). On the other hand, some literature suggests that individuals report more accurately on their own internalizing psychopathology (e.g., emotions and cognitions), and that informants report more accurately about the externalizing pathology (e.g., interpersonal and behavioral aspects) of the patient (Bradley, Hilsenroth, Guarnaccia, & Westen, 2007; Oltmanns & Turkheimer, 2006). Of course, the value of informant data depends on the nature and closeness of the patient–informant relationship (Oltmanns & Turkheimer, 2006), as well as patients’ and informants’ degree of insight and accuracy in recognizing PD pathology (Zimmerman, 1994). Thus, many issues regarding informant versus patient assessment of PDs remains unsolved. Still, these findings suggest that informant data may prove to be useful in assessing PDs in forensic patients, either in combination with, or in preference to, information provided by the patient.

We are aware of only two studies using informants’ reports to assess PDs or related concepts in forensic settings. Allard & Grann (2000) examined whether forensic inpatient and informant perspectives on personality disorders differed. Both inpatients from a high security forensic hospital and nursing staff informants completed the DIP-Q (DSM-IV and ICD-10 Personality Questionnaire; Ottosson et al., 1995). Results showed low agreement between informants and patients for most of the DSM-IV PDs, with the best agreement for cluster B PDs. Informants generally rated the patients as exhibiting more personality pathology than the patients did themselves. In the second study, Lobbestael, Arntz, Löbbses, & Cima (2009) compared patients’ and therapists’ reports of patients’ schema modes, emotional states that are conceptualized as central to PD pathology in Young’s Schema Therapy (ST; Young, Klosko, & Weishaar, 2003). Forensic inpatients and their therapists completed a short version of the Schema Mode Inventory (SMI; Young et al., 2007). Forensic PD patients reported fewer maladaptive schema modes and more healthy modes compared to their therapists’ ratings of them (Lobbestael, et al., 2009). These studies support the idea that knowledgeable informants – treatment providers who have regular contact with the patient – report more PD pathology than do forensic patients themselves.

One unanswered question, however, is whether discrepancies between patient and informant perspectives change over time in forensic treatment. If forensic treatment is successful, patients and informants might be expected to develop converging views of the patient’s pathology. For example, patients might gain greater insight into their PDs, and be more willing to acknowledge their interpersonal difficulties. Thus, patients’ views might become more similar to those of their therapists. On the other hand, if patients’ and informants’ views fail to converge, it could mean that patients continue to be

biased toward under-reporting their PD pathology, or that informants have a persistent bias toward overestimating the patient's pathology.

This article reports preliminary results on research examining whether patients and informants in forensic settings differ in how they view PD symptoms, and whether these views change over time. We hypothesize that knowledgeable informants – in this case, treatment providers who have regular contact with patients over an extended period of time in forensic inpatient settings – will report higher levels of maladaptive personality traits in their patients, compared to the patients themselves, who are given a self-report version of the same instrument. To address these issues, we used patient and informant versions of the Schedule for Nonadaptive and Adaptive Personality– 2 (Clark, Simms, Wu, & Casillas, in press), which assesses a broad range of pathological personality traits as well as the DSM-IV PDs. The study design enabled us to compare patients' and informants' reports of maladaptive personality traits over 18 months of inpatient forensic psychotherapy. Thus, we were able to determine whether there were discrepancies between informants and patients in levels of reported maladaptive personality traits, but also whether these discrepancies changed over time.

Method

Setting

The study was conducted at three forensic psychiatric inpatient facilities ('TBS hospitals') in The Netherlands: Forensic Psychiatric Centers 'de Rooyse Wissel', 'Van der Hoeven Kliniek' and 'Oostvaarderskliniek'. Under Dutch criminal law, patients can be admitted involuntarily to TBS¹ clinics if their crimes are judged to have been caused at least partly by (a) mental disorder(s). The average length of stay in TBS clinics is 8.5 years (Brand & van Gemmert, 2009), during which time patients engage in a multi-modal treatment regimen including therapy, vocational training, and other services. When TBS patients are deemed to pose an acceptably low risk of recidivism, they are gradually reintroduced into the community (Hildebrand & de Ruiters, 2004). The most prevalent mental disorders in TBS settings are PDs, psychotic disorders, sexual disorders (e.g., paraphilias), and mental retardation.

Sample

The sample consisted of 24 male patients with cluster B PDs who were participating in a Dutch multicenter randomized clinical trial (RCT) on the effectiveness of Schema Therapy (ST; Bernstein, Arntz, & de Vos, 2007) versus treatment as usual (TAU). The study was approved by the Medical Ethical Committee of Maastricht University Hospital, The Netherlands. Patients participating in the study gave informed consent for all study procedures. Patient enrollment began in 2007. Patients were randomly assigned to receive 3 years of either twice a week SFT or once per week TAU. Because TBS treatment is mul-

timodal, the patients in the study continued to receive other usual psychological and rehabilitative services, such as group therapy, creative Arts therapies (e.g., art, music, drama, or movement therapy), and educational or vocational training. The patients were assessed at baseline and repeatedly at 6-month intervals over the 3-year course of treatment. To determine whether patients and informant reports in a forensic PD sample differed from each other, and whether these differences changed over the course of forensic treatment, we selected the first 24 patients enrolled in the study who had completed 18 months of therapy. Out of the potential sample of 100–120 patients participating in the randomized clinical trial, 33 patients had completed the first 18 months of treatment, inclusive of the first 4 time points. For our study, we selected patients who had informant ratings at all four time points ($N = 24$). If informant ratings were missing at one of the time points, the patient was excluded from our analyses. Some informant data was missing because informants were unable to fill out the questionnaires at the designated time points. Fifteen of the 24 patients were randomly assigned to the ST condition, and 9 to the TAU condition. We analyzed the data from the ST and TAU conditions together, rather than separately, because the resulting groups would have been too small for valid comparisons.

Inclusion criteria for the clinical trial were the presence of a DSM-IV-TR (APA, 1994) Antisocial, Borderline, Narcissistic, or Paranoid PD. These PDs are typically the most prevalent in forensic settings. Exclusion criteria were (a) the presence of current psychotic symptoms, (b) schizophrenia or bipolar disorder, (c) current drug or alcohol dependence (but not abuse), (d) low intelligence (i.e., Full Scale IQ < 80), (e) serious neurological impairment (e.g., dementia), (f) an autistic spectrum disorder (e.g., autism, Asperger's disorder) and (g) paedophilia, exclusive type (i.e., a fixated sexual preference for children). Some mental states (e.g., current drug or alcohol dependence, current psychotic symptoms) present too severe an impediment to successful treatment for personality disorders because of the effects on treatment outcome (e.g., Krampe et al., 2006). Other disorders or mental states (e.g., fixated paedophilia, low IQ) were excluded because they require specific treatment that we felt was beyond the scope of the randomized clinical trial. For the purposes of this trial, we wanted to keep our study group as homogeneous as possible.

The mean age of the sample at baseline was 37.6 (SD = 8.6) years. Mean age at time of first conviction was 20.1 (SD = 6.9) years. The average length of stay in the particular TBS clinic was 25.7 months (SD = 9.2). Regarding conviction crimes, 16.6% of patients were convicted for murder or attempted murder, 29.2% for manslaughter or attempted manslaughter, 20.9% for sexual offences, 12.5% for assault, 12.6% for property crimes, and 8.3% for arson.

Among the axis I disorders, substance-related disorders were the most prevalent (87.5%; $n = 1$), followed by mood disorders (25%; $n = 6$), paraphilias (12.5%; $n = 3$), and anxiety disorders (12.5%; $n = 3$). In terms of axis II disorders, 87.5% ($n = 21$) were diagnosed with Antisocial PD, 33.3% ($n = 8$) with Borderline PD, and 20.8% ($n = 5$) with Nar-

cissistic PD. Ten patients (41.7%) had more than one PD diagnosis: six patients were diagnosed with both Antisocial and Borderline PD and four with Antisocial and Narcissistic PD. Patients' Wechsler Adult Intelligence Scale-III, (WAISIII; Wechsler, 1997) mean full scale IQ was 95.3 (SD = 12.9). The WAIS-II scores were retrieved from the patients' existing diagnostic files. The mean Psychopathy Checklist-Revised (PCL-R; Hare, 1991) score in this sample was 25.4 (SD = 6.8); about half of the sample (54.4%; n = 13) had scores indicative of psychopathy, using a cut-off of ≥ 25 .

Measures

At baseline assessment, patients were diagnosed for DSM-IV axis I disorders with the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) and for axis II disorders with the Structured Interview for DSM Personality-IV (SIDPIV; Pfohl, et al., 1995). Diagnostic assessments were conducted by psychologists or research assistants with extensive training in these instruments. The SCID-I and SIPD-IV have been translated and validated in Dutch samples. Both have demonstrated good reliability and validity in numerous studies (Damen, De Jong, & Van der Kroft, 2004; Skre, Onstad, Torgersen, & Kringlen, 1991; Torgersen et al., 2008). In a subsample of 9 patients, the inter-rater reliabilities, for the main four PD diagnoses in our study, based on the SIDP-IV, were ICCs = .86 for Antisocial PD, .55 for Borderline PD, .80 for Narcissistic PD, and .84 for Paranoid PD². Only ICCs for these PDs were calculated as they are the main PDs investigated in our study. In a subsample of five patients, we examined the inter-rater reliability of the SCID-I diagnoses for Axis I disorders. Percent agreement between raters was perfect (100% agreement) for all six diagnoses assessed, except for substance abuse/dependence and paraphilias, which had 80% agreement.

To assess personality pathology further, we adapted the Schedule for Nonadaptive and Adaptive Personality-Patient and Informant versions (SNAP-2 and SNAP-CRV). The SNAP (Clark, 1993; and its revision, SNAP-2, Clark et al., in press) is a self-report measure assessing personality characteristics from the normal through abnormal range. It contains 15 trait and temperament scales, 10 DSM-IV PD diagnostic scales, and 7 validity scales. The SNAP trait and temperament scales have demonstrated good reliability and validity in student, community, and patient samples, with a median internal consistency reliability (Cronbach's α) of .81 (range = .76-.92), and retest median reliabilities of .87 (range = .75-.90; median interval = 7 weeks, range = 1 week to 4 1/3 months) in an adult community sample, and of .70 in two patient samples treated over 3-6 months (Clark, et al., in press). The SNAP-2 PD scales are slightly less, but still acceptably, internally consistent (median alpha in a patient and adult community samples were .78 and .77, respectively; range = .65-.87). Median retest reliabilities were .85 in the community sample and .64 over 6 months of treatment for recurrent depression. The instrument also shows convergent validity with other self-report and interview-based measures of personality and personality pathology (see Clark, et al., in press).

Clark and colleagues also developed an informant-based version of the SNAP (SNAP-CRV; Ready, Clark, Watson, & Westerhouse, 2000), which consists of the same items as the SNAP, but phrased from an informant's viewpoint. Internal consistency reliabilities (Cronbach's α) for the scales ranged from .81 to .92 (mean α = .87; Ready, et al., 2000). In a sample of parents, friends, and spouses as informants, the agreement levels ranged from .27 to .62 (mean r = .47; Ready, et al., 2000).

In collaboration with L.A. Clark, the author of the original instrument, we adapted the SNAP-2 and SNAP-CRV for use in our Dutch forensic sample because some items of the original instruments were not applicable to forensic patients. Our goal was to create instruments that are also sensitive to changes in PD traits and could be administered repeatedly (i.e., every 6 months) over the course of treatment. To reduce administration time, we used only the PD diagnostic scales corresponding to the 4 PDs that were the main focus of our study: Antisocial, Borderline, Narcissistic, and Paranoid PDs. We dropped the childhood items from the Antisocial PD scale, because we were interested in measuring only current (i.e., past 6 months) personality characteristics. For broader coverage of personality domains beyond the four PD scales, we also included items from the SNAP-2 and SNAP-CRV's abbreviated scales for negative temperament (10 items), positive temperament (10 items), and disinhibition (24 items) (Cutrona, et al., 2005).

Negative temperament is a dimension representing individual differences in the extent to which a person experiences the world as threatening, problematic, and distressing. Individuals who score high on this scale are prone to frequent and intense episodes of negative emotions such as anxiety, depression, anger, or guilt. It is strongly correlated (median r = .73) with the Five Factor Model (FFM) dimension of neuroticism (Clark, et al., in press). *Positive temperament* is a dimension representing individual differences in the extent to which a person experiences positive moods, which are accompanied by higher level of activity and alertness as well as feelings of optimism, interest, and enthusiasm. It is moderately correlated (median r = .50) with the FFM dimension of extraversion (Clark, et al., in press). *Disinhibition* is a dimension that reflects broad individual differences in the tendency to behave in an undercontrolled (vs. overcontrolled) manner. The high end of disinhibition includes a rejection of conventional restraints on behavior (both social customs and laws) and a fearless seeking out of sensational, 'high risk' experiences. In contrast, lack of disinhibition (i.e., conscientiousness or constraint) is associated with timidity and avoidance of new or stimulating experiences, and with strongly conscientious and conventional behavior patterns (Clark, et al., in press). The disinhibition dimension correlates moderately (negatively) with FFM conscientiousness (median r = 7.52).

We screened the selected items to ensure that they were applicable to inpatient forensic settings. We modified eight items on the Antisocial or Borderline PD scales to take into account the context in which the patients reside. For example, the Antisocial PD item 'The way I behave often gets me into trouble on the job, at home or at school' was

not suitable, as our patients are not able to go home or to school. Thus we modified it to 'My behavior gets me into trouble.'

For the purpose of our study, we respectively named the adapted instruments 'SNAP-forensic patient version' (SNAP-FP) and 'SNAP forensic informant version' (SNAP-FI). Both instruments now consisted of 139 items. To make the instruments more sensitive to change in personality traits, we replaced the original dichotomous scoring system with a 5-point Likert-type scale: 1 = never true, 2 = rarely true, 3 = sometimes true, 4 = often true and 5 = very often true. Once the development of the SNAP-FP and SNAP-FI was completed, the instruments were independently translated into Dutch by a native Dutch speaker who is fluent in English, and translated back into English by two translators working together: a native English speaker who is fluent in Dutch and a native Dutch speaker who is fluent in English. The translations on a few items that were difficult to translate were discussed with the author to be sure that the intended focus of each item was captured accurately. A few discrepancies in the Dutch translation of the SNAP-FP and SNAP-FI were noted and corrected.

The instructions for the SNAP-FP and SNAP-FI asked patients and informants, respectively, to rate patients' personality traits over the past 6 months. To facilitate informants' recall of recent important events concerning the patient, we added an introductory section to the SNAP-FI that summarized this information. Prior to administering the SNAP-FI, research assistants reviewed patients' dossiers and extracted information about significant events that had occurred in the past 6 months, such as incidents of verbal or non-verbal aggression, prosocial behaviors such as cooperation with work or therapy regimens, visits with significant others (e.g., family members), and changes in medication or therapy. The research assistant summarized this information in the introductory section of the SNAP-FI, and reviewed it with the informant, who then proceeded to complete the SNAP-FI.

Procedure

At baseline assessment, prior to being assigned to the ST or control group ('treatment as usual'), patients were assessed with the SCID-I and SIDP-IV interview, and administered a number of other interviews and questionnaires. The SNAP-FP and SNAP-FI were administered as part of this baseline assessment and at 6-month intervals. Administration of the SNAPFP and SNAP-FI took approximately 30 minutes each. For the analyses reported here, we used data from the first 18 months of treatment. We administered both SNAP-F versions on baseline (T0), 6 months (T2), 12 months (T3), and 18 months (T4).

For each patient in the study, we chose 3 informants, all of whom had regularly ongoing contact with the patient and frequent opportunity to observe the patients' behavior in different contexts (e.g., individual or group therapy sessions, on the ward interacting with other patients and staff members). The informants also were routinely aware of information about the patients gathered by the treatment team, through written notes in patient files and regular reports in team meetings. Each patient's primary psycho-

therapist served as one of the three informants. The other two informants were either a Arts therapist (e.g., drama therapist), psychiatric nurse (frequently one who served as the patient's 'coach'), or the 'treatment coordinator', the head of the treatment unit on which the patient resided. The raters completed their measures independently from each other. However, they were often members of the same treatment teams and had access to the same dossier information on the patients that included reports from all staff members involved in their treatment. Staff members contributed ratings to multiple patients.

We chose to combine informant ratings for two reasons. First, combining ratings increases their reliability, even when the inter-rater agreement between raters is only modest (Nunnally & Bernstein, 1994). Second, we reasoned that combining ratings would produce more valid composite scores, as each rater contributed his own perspective on the patients, by virtue of differences in professional background, roles in the treatment team, etc. Furthermore, the numbers of specific types of raters (i.e., psychiatric nurses, psychotherapists, non-verbal therapists, and treatment coordinators) ranged from N = 15 (psychotherapists) to 7 (psychiatric nurses). These numbers were too small to make meaningful comparisons between different types of raters, or between types of raters and patients.

Statistical analyses

The level of absolute agreement between patients and informants and agreement among the informants was assessed with reliability analyses using the intraclass correlation coefficient (ICC; Shrout & Fleiss, 1979) with a twoway random-effects model because the informants were not the same for every patient. To test for significant differences in mean scores between the patients and the informants, we used a repeated-measure ANOVA to test for changes over time. Tests were conducted to make sure that assumptions for one-way ANOVA were met. We also calculated the effect size with Cohen's d. All data were analyzed with the Statistical Package for the Social Sciences (SPSS, 2005), version 13.0.

Results

Reliability of SNAP-FP and SNAP-FI scales

As aggregated ratings are more reliable than single ratings (Nunnally & Bernstein, 1994), we aggregated all the informant ratings. Table 1 presents the internal consistency reliabilities (Cronbach's alpha) and inter-rater agreement at baseline for the SNAP-FP and SNAP-FI. The alpha values for both versions ranged from acceptable to excellent. Most SNAP-FP and SNAP-FI scales had an alpha above .80. Patient scales ranged from .79 to .83, while informant scales ranged from .80 to .92. For agreement among informants, the median ICC was .28 with a range of .05 to .31; the median ICC between patients and in-

formants was .27 with a range of .04 to .34. The alpha values and ICCs for the other time points were comparable.

Table 1. Reliabilities for the SNAP-FI and SNAP-FP Scales at baseline

Scale (# of items)	<u>Agreement (ICCs)</u>		<u>Cronbach's Alpha</u>	
	Inf.-Inf.	Pt.-Inf.	Patients	Inf.
<i>Personality Disorder Scales</i>				
Antisocial PD (25)	.28*	.28	.81	.88
Borderline PD (27)	.31*	.34*	.83	.86
Narcissistic PD (24)	.13	.12	.82	.80
Paranoid PD (23)	.05	-.04	.79	.81
PD scale median	.21	.20	.82	.84
<i>Temperament Scales</i>				
Negative Temperament (10)	.45**	.27*	.79	.87
Positive Temperament (12)	.40**	.26	.80	.92
Disinhibition (24)	.27	.38**	.82	.88
Temperament median	.40	.27	.80	.88
Grand Median	.28	.27	.81	.87

Note. ICC = Intra-class coefficient. N=24. Inf.-Inf. = Informant-Informant. Pt.-Inf. = Patient-Informant. * $p < .05$, ** $p < .01$

The intercorrelations among the SNAP-FI PD scales were high, ranging from .54 to .79 (Mdn = .68) (Table 2). Similarly, the SNAP-FP PD scales were strongly intercorrelated, ranging from .46 to .78 (Mdn = .70). Intercorrelations among the SNAP-FP and SNAP-FI temperament scales ranged from -.09 to .54 (Mdn = .33) (Table 2).

Differences between SNAP-FP and SNAP-FI scales over time

Table 3 presents the mean SNAP scores of patients and informants over the four time points and Table 4 the results of the repeated-measures analysis Figures 1 and 2 illustrate the mean scores for the SNAP PD and temperament scales, respectively. For all scales except Positive Temperament and Disinhibition, both the patients' and informants' scores declined significantly ($p < .05$) over the 18 months of therapy (lower scores mean less reported personality pathology except for Positive Temperament). There was no change in Positive Temperament and Disinhibition scores over time. There also were several main effects for patient versus informant SNAP scores. Informants rated the patients as exhibiting more personality pathology than the patients did themselves for Borderline, Narcissistic, and Paranoid PD, and for Negative Temperament and Disinhibition, and the difference for antisocial PD, was at a trend level ($p = .07$). The only scale on which patients and informants did not differ was Positive Temperament. There were no

significant three-way interactions, indicating that the differences between patients' and informants' reports of PD pathology did not vary over time.

We calculated the Cohen's *d* effect sizes for the differences between patient and informant reports at each of the time points (Table 3). For nearly all of the scales, with the exception of Positive Temperament, moderate to very large differences were found between patient and informant reports. The effect sizes ranged from $d = 0.46$ to 0.76 for Antisocial PD; $d = 0.83$ to 1.39 for Borderline PD; $d = 1.32$ to 1.63 for Narcissistic PD; $d = 1.30$ to 1.48 for Paranoid PD; $d = 0.92$ to 1.30 for Negative Temperament; $d = 0.04$ to -0.52 for Positive Temperament; $d = 0.75$ to 0.89 for Disinhibition. Cohen (1977) considered effect sizes of .20 to .50 small, .50 to .80 medium, and $d = 0.80$ or greater to be large.

Discussion

As predicted, forensic patients and knowledgeable informants – treatment providers such as therapists, psychiatric nurses, and treatment coordinators who had regular contact with the patients – differed in their reports of the patients' personality pathology. With the exception of Positive Temperament, patients consistently reported less personality pathology than did the informants. The magnitude of these differences was often quite large. Thus, forensic patients and informants have substantially different views regarding the patients' pathological personality traits. Moreover, these differences did not change over the first 18 months of psychotherapy, but differences remained despite the fact that both patients and informants reported diminishing levels of pathological personality traits over time. In other words, the reports of both patients and informants indicated significant improvements in patients' PD traits, but this did not result in a convergence of views between patients and informants. Informants continued to observe more personality pathology in their patients than did the patients themselves.

These results cannot, in and of themselves, determine whether forensic patients are under-reporting their personality pathology, or whether treatment providers are over-estimating the extent of pathology in their patients. However, these findings are consistent with a considerable literature suggesting that forensic patients often minimize their psychopathology (Hillbrand, 1995; Jelicic, Merckelbach, & Cima, 2003). Patients may fear the consequences of admitting to problems, and thus attempt to manipulate others' impressions of them (Jelicic et al., 2003). The tendency to minimize psychopathology may be reinforced by the forensic setting itself (Sainsbury, Krishnan, & Evans, 2004). All of these factors may contribute to the relatively lower reporting of PD-relevant items by forensic patients themselves, in contrast to the ratings of treatment providers who know them well and are trained to recognize psychopathology. On the other hand, it is conceivable that some treatment providers may be biased toward seeing more pathology in their patients than actually exists. Thus, the fact that these patients have criminal backgrounds, or are incarcerated, may lead some treatment providers to assume that their

behavior is more pathological than is actually the case. This may lead to a self-fulfilling prophecy ('the Rosenthal effect', Rosenthal, 1994; Rosenthal & Jacobson, 1968). To resolve these questions, we would need to compare patients' and informants' reports with independent measures of personality pathology that are less susceptible to test biases. For example, it would be helpful to examine external correlates of daily behaviors by independent observers. Future studies could also incorporate validity scales, such as measures of socially desirable responding (Paulhus, 1986), to determine the extent that forensic patients' response biases affect their self-reported personality pathology.

Table 2. *Correlations of SNAP-PP and SNAP-FI scales*

	Antisocial PD	Borderline PD	Narcissistic PD	Paranoid PD	Negative Temp.	Positive Temp.	Disinhibition
Antisocial PD	-	.73**	.79**	.62*	.19	.43	.73*
Borderline PD	.78**	-	.75**	.54*	.68**	.26	.54*
Narcissistic PD	.55**	.74**	-	.63**	.30	.52*	.47
Paranoid PD	.74**	.65**	.46*	-	.28	.19	.53*
Negative Temperament	.21	.45*	.35	.28	-	.11	.30
Positive Temperament	-.38	-.09	.12	-.33	.24	-	.15
Disinhibition	.74**	.53**	.25	.56**	-.10	-.51*	-

Note. $N = 24$. Correlations among patients are shown in the lower diagonal (shown in bold), correlations among informants in the upper diagonal. * $p < .05$, ** $p < .01$

Table 3. Mean SNAP scores of Patients and Informants over the course of treatment

	Baseline			6months			12 months			18 months		
	M	Sd	d	M	Sd	d	M	Sd	d	M	Sd	d
Antisocial PD												
patients	2.30	.45		2.09	.54		2.07	.48		2.00	.45	
informants	2.48	.33	.46	2.46	.44	.76	2.43	.51	.73	2.34	.49	.72
Borderline PD												
patients	2.21	.45		2.00	.43		2.00	.45		1.90	.45	
informants	2.64	.37	1.05	2.55	.36	1.39	2.45	.50	.95	2.28	.46	.83
Narcissistic PD												
patients	2.13	.41		2.03	.57		1.96	.48		1.87	.47	
informants	2.74	.34	1.63	2.67	.36	1.38	2.54	.38	1.35	2.48	.46	1.32
Paranoid PD												
patients	2.49	.48		2.30	.64		2.32	.49		2.16	.55	
informants	3.12	.37	1.48	3.10	.39	1.55	2.96	.47	1.33	2.85	.51	1.30
Negative Temperament												
patients	2.60	.43		2.48	.44		2.53	.42		1.82	.58	
informants	3.10	.37	1.25	2.96	.32	1.26	2.95	.52	.92	2.58	.59	1.30
Positive Temperament												
patients	2.96	.54		3.20	.67		3.09	.63		3.07	.66	
informants	2.98	.49	.04	2.89	.52	-.52	3.00	.65	-.14	2.91	.62	-.25
Disinhibition												
patients	2.31	.44		2.26	.42		2.21	.38		2.27	.33	
informants	2.61	.32	.79	2.64	.47	.85	2.61	.52	.89	2.60	.55	.75

Note. N=24. *d* = Cohen's *d* effect sizes for the differences between patient and informant reports at each of the 4 time points

Table 4. Repeated Measures Results for SNAP-P and SNAP-I scores

SNAP scales	Patient vs. Informant			Time			Time x Patient vs. Informant		
	F	df	p	F	df	p	F	df	p
Personality Scales									
Antisocial PD	4.79	1	.07	3.16	1	.07	1.64	3	.21
Borderline PD	2.16	1	.02	3.07	1	.02	0.07	3	.32
Narcissistic PD	3.95	1	.02	3.35	1	.02	0.04	3	.65
Paranoid PD	11.23	1	.01	3.25	1	.01	0.09	3	.50
Temperament Scales									
Negative Temperament	10.28	1	.02	3.70	1	.02	0.26	3	.12
Positive Temperament	1.07	1	.34	1.67	1	.34	2.29	3	.11
Disinhibition	7.85	1	.03	1.12	1	.33	1.17	3	.35

Note. N=24.

Also noteworthy among our findings was that patients' and informants' reports showed low agreement with each other. This is consistent with previous reports showing moderate to low agreement between patients and knowledgeable informants regarding patients' pathological traits (Bernstein, et al., 1997; Klonsky, et al., 2002; Zimmerman, 1994). However, there were also generally low levels of agreement among the different informants. Informant-based differences may reflect the different opportunities that treatment providers have to observe and interact with patients, as well as differences in their backgrounds and training (Spain, Eaton, & Funder, 2000). For example, because of their oversight and coordinating functions, treatment coordinators may be in the best position to integrate information about the patient from multiple sources. On the other hand, they may have less intimate knowledge of patients than verbal or Arts therapists, who have regular contact with patients in therapy sessions. Non-verbal therapists, through their use of non-verbal, experiential media (e.g., drama, music, art, movement), may evoke somewhat different behaviors and emotional states than verbal therapists. Psychiatric nurses have the most opportunity to interact with patients and observe their interactions with others on a daily basis. Thus, the low agreement among informants could be due to the fact that each contributes complementary and largely non-overlapping information about the patient. In this case, combining the reports of multiple informants as we did should result in more reliable and valid composite ratings.

Furthermore, it should be noted that the degree of agreement between informants varied among the SNAP-F scales. Given that average inter-rater reliabilities can be considered analogous to average inter-item correlations (i.e., the mean correlations among items on a scale) based on the Spearman-Brown formula (Nunnally & Bernstein, 1994), the number of raters (analogous to items in a scale) required to achieve an ICC of .80 (equivalent to Cronbach's α of .80) are the following: Antisocial PD, 9 raters, Borderline PD, 10 raters, Narcissistic PD, 27 raters, Paranoid PD, 76 raters, Disinhibition, 11 raters, Negative Temperament, 5 raters, and Positive Temperament, 6 raters. For self-report scales, it is widely accepted that about 5 to 10 items should be sufficient for adequate reliability (Nunnally & Bernstein, 1994). Thus, if we consider average inter-rater reliabilities analogous to the average inter-correlations of items in a scale, the number of raters needed to achieve reliability of $\alpha = .80$ was quite good for Negative Temperament and Positive Temperament, adequate for Antisocial PD, Borderline PD and Disinhibition, and poor to very poor for Narcissistic and Paranoid PD. These findings are consistent with previous literature suggesting that informants may be more accurate in evaluating externalizing pathology than internalizing pathology (Bradley, et al., 2007; Oltmanns & Turkheimer, 2006). Thus, Narcissistic and especially Paranoid PDs traits may be more covert – that is, have more to do with internal thoughts and feelings, and less with overt behavior – and therefore less readily discernable to observers than are the traits of Antisocial and Borderline PD, as well as Positive and Negative temperament.

The findings of the current study should be considered in light of several limitations. This study was an initial investigation of patient versus informant reports in forensic

settings. It was based on a small sample, and requires replication in larger samples. Also, whether informant reports generalize to outpatient forensic settings is unknown. Another limitation was that we only used staff members as informants. Results might have differed had we used other types of informants (e.g., family members, friends). Further, we need to establish the validity of informant reports in forensic settings, and specifically of our modified version of the SNAP-I. In a future study, we will investigate the incremental validity of informant ratings, over and above patient ratings, in predicting treatment outcomes. Informant ratings need to show incremental validity, because they are more time consuming to collect, compared to patient self-reports, especially when multiple informants are used, as in the present study.

Our findings suggest that informant reports reveal more personality pathology than those of forensic patients, and that these differences persist over time in forensic treatment.

Acknowledgments

Thanks are due to Nelleke van Ruth, Ellen de Jonge and Annette Löbbes for their help in collecting the data. We would also like to thank Dr. Joost de Vos and Mr. James Benson for their help in (back)translating the adapted SNAP version. We are grateful for the collaboration of the direction board, staff and patients of forensic psychiatric centres 'de Rooyse Wissel', location Venray; the 'Oostvaarderskliniek' in Almere; the 'Van der Hoeven Kliniek' in Utrecht, all in The Netherlands. We also thank the other participating sites in the clinical SFT trial: the 'Kijvelanden' in Poortugaal, 'Veldzicht' in Balkbrug, 'Mesdagkliniek' in Groningen and Forensic Psychiatric Clinic Assen, all in The Netherlands. The authors gratefully acknowledge the support of the Dutch Ministry of Justice, the 'Expertisecentrum Forensische Psychiatrie' [Forensic Expertise Centre], and Maastricht University's Faculty of Psychology and Neuroscience.

Notes

1. Ter beschikking stelling' (TBS) can be translated as 'disposal to be treated on behalf of the state'.
2. SIDP-IV dimension scores were used. Hence, although no patient met the criteria for Paranoid PD, ICC could be calculated.

Figure 1. SNAP-F personality scores over the course of treatment

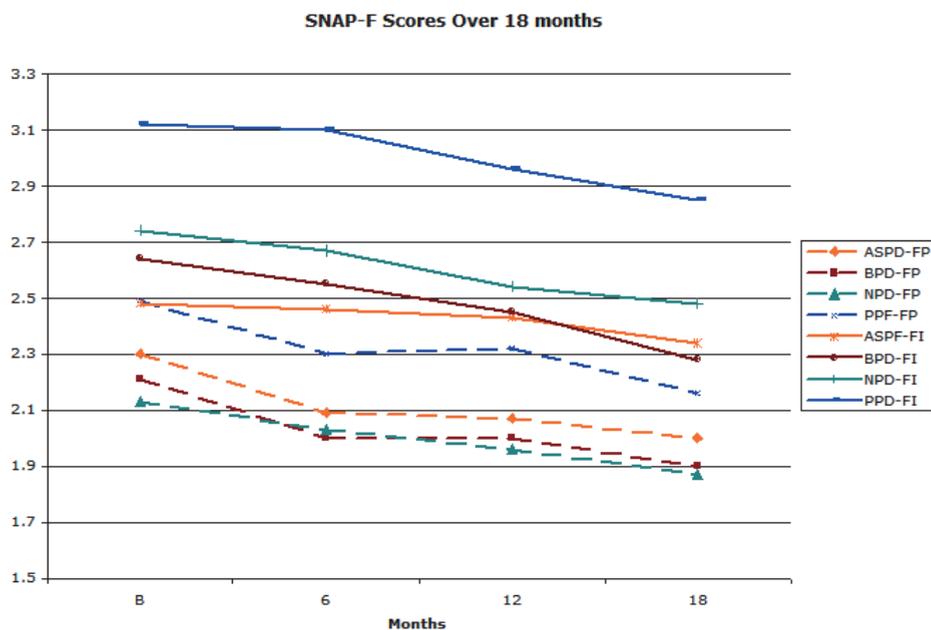
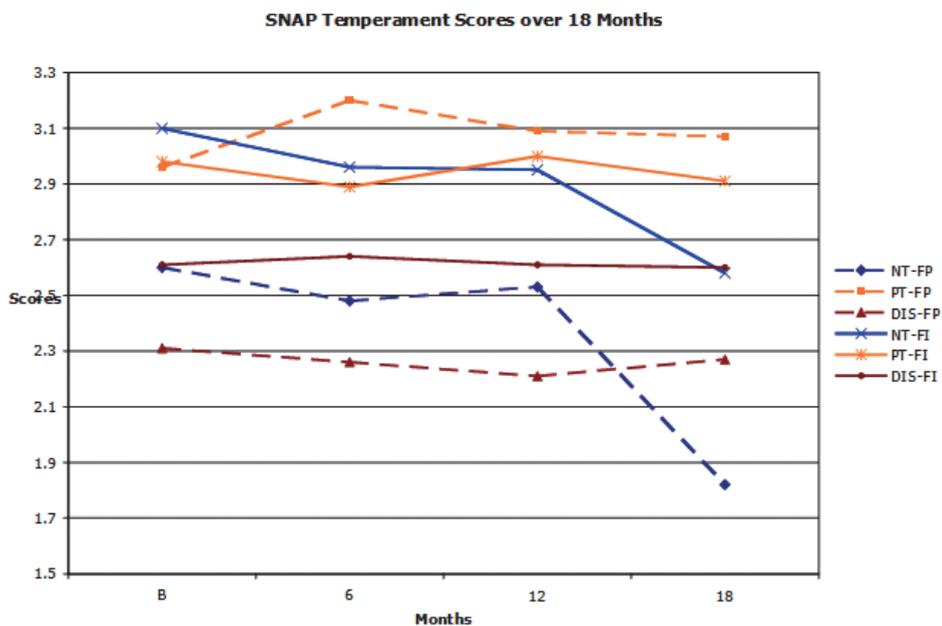


Figure 2. SNAP Temperament scores over the course of treatment



PART II

Schema Modes

CHAPTER 5

Emotional states in criminal and violent behavior of forensic cluster B personality disordered patients

Keulen-de Vos, M.E., Bernstein, D.P., Vanstipelen, S., de Vogel, V., Lucker, T.P.C., Slaats, M., Hartkoorn, M., & Arntz, A. Emotional states in the criminal and violent behavior of forensic cluster B PD patients: a retrospective and prospective study. Submitted.

Abstract

In this study, we examined whether schema modes, a central concept in Schema Therapy, play a role in criminal behavior and institutional violence. Schema modes are defined as fluctuating emotional states that combine thoughts, feelings, and behaviors. We assessed schema modes from descriptions of patients' crimes in a sample of ninety-five hospitalized cluster B personality disordered offenders. Schema modes during the events leading up to a crime and the crime itself were rated by the Mode Observation Scale, which we modified for retrospective assessment. Institutional violence and other incidents were coded from daily hospital reports. Our findings show that criminal behavior is often preceded by feelings of shame, abuse or abandonment, loneliness, and states of intoxication. Criminal behavior itself is characterized by states of impulsivity and anger and the use of overcompensatory strategies involving threats, intimidation and aggression. Schema modes involving bullying and manipulation were positively correlated with the interpersonal facet of psychopathy on the Psychopathy Checklist-Revised; modes involving vulnerable emotions were negatively correlated with the affective facet of psychopathy. Schema modes that occurred before and during patients' crimes predicted later institutional transgressions to a moderate degree. Our findings suggest that schema modes have value in explaining the motivations behind criminal and violent behavior, and provide some support for the theoretical model on which Schema Therapy for offenders with personality disorders is based.

Introduction

Personality disorders (PDs) are highly prevalent in institutional settings, with prevalences typically ranging from fifty to ninety percent (Blackburn, Logan, Donnelly, & Renwick, 2003; Leue, Borchard & Hoyer, 2004; Timmerman & Emmelkamp, 2001). Approximately 20% to 30% of these offenders have co-morbid diagnoses of psychopathy, with core features such as a grandiose and deceitful interpersonal style, emotional deficits and antisocial behavior (Hare, 2003). Although there is a well established link between PD traits and violence in general (e.g., Cooke, 2010; Fountoulakis, Leucht, & Kaprinis, 2008; Nestor, 2002), PD *offenders* are associated with an even increased risk for institutional violence and re-offending compared to other offenders (e.g., offenders with psychotic disorders) (Hiscoke, Långström, Ottosson & Grann, 2003; Leistico, Salekin, DeCoster, & Rogers, 2008). For example, a recent study showed that Borderline and Antisocial PDs were predictors for repetitive physical aggressive incidents in forensic settings (Langton, Hogue, Daffern, Mannion, & Howells, 2011). In addition, studies show that forensic PD patients are more likely to re-offend after release from a secure hospital than patients with axis I diagnoses (Coid, Hickey, & Yang, 2007; Jamieson & Taylor, 2004). The risk of recidivism in psychopathic offenders is particularly high; they pose a 2-4 times greater risk for re-offending after discharge than other offenders (Hemphill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996). Thus, the need to reduce recidivism in offenders with PD is great.

The overall aim of forensic treatment is to reduce the risk for recidivism and thus to protect society against violent and criminal behavior (e.g., De Ruiter & Hildebrand, 2007; Maden, Williams, Wong, & Leis, 2004; Van Marle, 2002). A relatively new treatment approach to reducing risk in PD offenders is Schema Therapy (ST; Rafaeli, Bernstein, & Young, 2011; Young, Klosko, & Weishaar, 2003). ST has been specifically developed for PD patients and integrates cognitive, psychodynamic and experiential techniques. A key feature of ST is moment-to-moment emotional states, known as 'schema modes', which dominate a person's thinking, feeling and behavior (Young, et al., 2003). Schema modes can be divided into four different categories. Child modes refer to emotions such as loneliness, anger and feelings of abandonment that are expressed in a child-like manner. Maladaptive coping modes involve dysfunctional attempts at coping with painful feelings, using strategies involving avoidance, submission, or over-compensation. Maladaptive parent modes involve excessive self-directed criticism or demands, and reflect internalized dysfunctional behavior of the parent (or other caregivers) directed towards the child. Finally, healthy modes involve healthy self-reflection and the experience of joyful, playful emotions (Rafaeli, et al., 2011; Young, et al., 2003). According to ST, personality pathology derives from specific combinations of schema modes, a contention that is supported by recent research (Bamelis, Renner, Heidkamp, & Arntz, 2011; Lobbestael, van Vreeswijk, & Arntz, 2008). For instance, Borderline PD is characterized by four dominant emotional states: feelings of abandonment and abuse (Vulnerable Child

mode); uncontrolled anger or rage in response to perceived maltreatment (Angry/Impulsive Child mode); self-harming and punitive behavior (Punitive Parent mode); and feelings of detachment (Detached Protector mode) (Arntz & van Genderen, 2009; Young, et al., 2003).

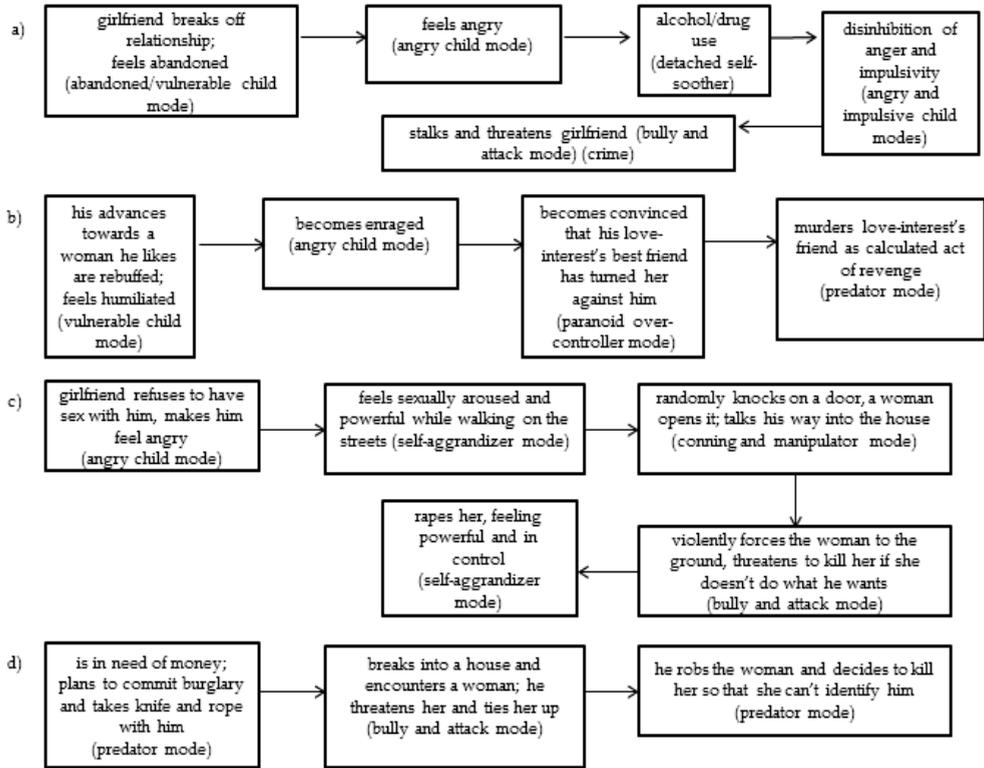
Table 1. Schema mode descriptions and their connection with criminal and violent behavior.

Schema Modes	
<i>Child Modes</i>	
	<i>Involve feeling, thinking, and acting in a “child-like” manner</i>
Vulnerable Child	Feels vulnerable, overwhelmed with painful feelings (e.g. shame, humiliation).
Angry Child	Feels and expresses anger in response to perceived or real abandonment, or humiliation.
Impulsive Child	Acts impulsively to get needs met.
Lonely Child	Feels lonely and empty.
<i>Avoidant/Coping Modes</i>	
	<i>Involve attempts to protect oneself from pain</i>
Detached Self-Soother	Uses repetitive, addictive, or compulsive behaviors to calm and sooth oneself
<i>Overcompensatory Modes</i>	
	<i>Involve extreme attempts to compensate for feelings of shame, loneliness, or vulnerability</i>
Self-Aggrandizer	Feels superior, looks down on others; acts in a self-important manner.
Bully and Attack	Uses threats, intimidation, aggression, or coercion to get what he wants.
Conning and Manipulative	Cons, lies, or manipulates in a manner designed to achieve a specific goal.
Predator	Focuses on eliminating a threat/rival in a cold, ruthless, and calculating manner.
Over-Controller	Attempts to protect oneself from a perceived or real threat by focusing attention, ruminating, or exercising extreme control.

In order to make ST applicable to forensic PD patients, the original list of schema modes was expanded with five specific ‘forensic’ emotional states that refer to deception, predatory behavior, intimidation and aggression (Bernstein, Arntz, & de Vos, 2007; Keulen-de Vos, Bernstein, & Arntz, in press). The Angry Protector mode is an emotional state of controlled anger or hostility, a “wall of anger” which serves to keep people at a safe distance. Predator mode refers to a state of cold, ruthless and premeditated aggression in which the individual focuses on callously eliminating a threat, rival, or obstacle. Conning and Manipulative mode is a state involving conning, lying and manipulating others in order to achieve a specific goal. The Paranoid Overcontroller mode involves attempts to uncover a hidden (perceived) threat (Bernstein, et al., 2007; Keulen-de Vos, et al., in press). A complete list of the schema modes used in this study is presented in Table 1. According to forensic ST’s theoretical framework, the events leading up to and culminating in the commission of criminal and violent behavior can often be explicated by an un-

folding sequence of schema modes (Bernstein, et al., 2007). For example, these sequences can be triggered by painful feelings (e.g., shame, abandonment), frustration, anger, or impulsivity. In other cases, they may involve deliberation and planning, for example, to obtain a desired goal. Once initiated, these patterns can take on a “life of their own,” as further modes are triggered, for example, attempts to quell painful feelings through drug or alcohol use, or over-compensatory attempts to cope with emotions, such as bullying, manipulating, or using predatory aggression. Four flow charts showing how schema modes can lead from trigger to violence and crime are presented in Figure 1.

Figure 1. Flow chart examples of how schema modes can lead from trigger to violence/crime.



This study is a first test of the validity of ST-theory with regard to the crimes committed by forensic PD patients, including psychopathic offenders. The aims of this study were to 1) compare schema modes observed in the events leading up to the crime and those observed during the crime, based on retrospective ratings of modes (Mode Observation Scale, MOS; Bernstein, de Vos, & van den Broek, 2009) from crime descriptions in patients' charts; 2) examine the relationship between these mode ratings and the facets of psychopathy, based on the Psychopathy Checklist-Revised (PCL-R; Hare, 2003); and 3) examine the relationship between schema modes, rated retrospectively from descriptions of patients' crimes, and institutional violence, assessed prospectively using an incident classification system (Hildebrand, de Ruiter, & Nijman, 2005). Thus, we investigated several aspects of the construct validity of schema modes in forensic PD patients, including their role in the sequence of events leading up to and culminating in criminal and violent behavior; relationship to psychopathy facets; and ability to predict future violence and other institutional incidents. We hypothesized that there will be more intense child modes (i.e., Vulnerable, Lonely, Angry, and Impulsive Child modes) and self-soothing behavior (i.e., Detached Self-Soother mode) in the period leading up to the crime than during the crime, and more overcompensatory modes (i.e., Self-Aggrandizer, Bully and Attack, Paranoid Over-controller, Conning and Manipulative, and Predator modes) during the crime than before the crime. This hypothesis is based on the ST-model which postulates that criminal and violent behavior often represents maladaptive attempts to cope with painful or unpleasant feelings (Bernstein, et al., 2007), and is in line with previous research that has shown that negative emotions can ignite aggression (Ronel, 2011; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). Next, we hypothesized positive correlations between overcompensatory schema modes rated during crimes and the interpersonal facet of psychopathy on the PCL-R, because these constructs tap into similar interpersonal characteristics, such as self-aggrandizement, deceit, and manipulation (Hare, 2003). We also hypothesized that child modes rated in the period leading up to the crime would be positively correlated with the antisocial lifestyle and antisocial behavior facets of psychopathy, consistent with our view that these modes play a prominent role in triggering criminal and aggressive behavior. Finally, with regard to institutional incidents, we hypothesized that both child and overcompensatory modes rated during the events leading up to the crime and during the crime itself would predict institutional incidents at the beginning of treatment. This hypothesis is based on the idea that schema modes represent risk factors for future antisocial behavior (Bernstein, et al., 2007), and is consistent with research indicating that prior criminal behavior and emotional deficits are predictors of institutional misconduct (Bonta, Law, & Hanson, 1998; Gendreau, Goggin, & Law, 1997; Gray, et al., 2003).

Method

Setting

The study was conducted at seven forensic psychiatric inpatient facilities ('TBS' hospitals') in The Netherlands: Forensic Psychiatric Centers 'de Rooyse Wissel' (facilities located in Maastricht and Venray), 'Van der Hoeven Kliniek', 'Oostvaarderskliniek', 'Veldzicht', 'Mesdag', 'FPK Assen' and 'de Kijvelanden'. Under Dutch criminal law, patients can be admitted involuntarily to forensic hospitals if the accountability for their crimes is judged to be diminished because they suffer from (a) mental disorder(s). The average length of stay in TBS hospitals is 8 to 9 years (Brand & van Gemmert, 2009), during which patients engage in a multi-modal treatment regimen including psychotherapy, vocational training, and other services. The most common forms of psychopathology in TBS hospitals in The Netherlands are PDs, psychotic disorders, substance abuse disorders, paraphilias, and mental retardation (Emmerik, 2001; Hildebrand & de Ruiter, 2004; Timmerman & Emmelkamp, 2001).

Sample

The sample consisted of 95 male offenders who were participating in a Dutch multicenter randomized clinical trial (RCT) on the effectiveness of Schema Therapy (ST; Bernstein, et al., 2007) versus treatment as usual (TAU) in forensic inpatients with Antisocial, Borderline, Narcissistic, or Paranoid PDs (Bernstein, Nijman, Karos, Keulen-de Vos, de Vogel, & Lucker, 2012). Patients gave informed written consent for all study procedures, and were randomly assigned to receive 3 years of either twice a week ST or once per week TAU. The patients in the study continued to receive other psychological and rehabilitative services, such as creative Arts therapies (e.g., drama therapy), and educational or vocational training. Patients were assessed at baseline and every consecutive 6-months over the 3-year course of treatment.

Inclusion criteria for the randomized clinical trial were the presence of a *DSM-IV-TR* (American Psychiatric Association, 2001) Antisocial, Borderline, Narcissistic, or Paranoid PD, or PD NOS with a minimum of 5 cluster B traits. Patients with (a) the presence of current psychotic symptoms, (b) schizophrenia or bipolar disorder, (c) current drug or alcohol dependence (but not abuse), (d) low intelligence (i.e., Full Scale IQ < 80), (e) serious neurological impairment (e.g., dementia), (f) an autistic spectrum disorder (e.g., autism, Asperger's disorder), or (g) paedophilia, exclusive type (i.e., a fixated sexual preference for children), were excluded from the study because, they require specialized treatment that was beyond the scope of the RCT.

The mean age of the sample at the time of enrolment was 38.5 years (SD=9.8). Mean age at the time of first conviction was 20.7 years (SD=7.3). The average length of stay in a particular forensic psychiatric hospital was 27.6 months (SD=17.2). Regarding the type of crime committed, 37 patients (38%) were convicted for (attempted) murder or (at-

tempted) manslaughter, 27 patients (28.6%) for sexual offences, 27 patients (28.5%) for (attempted) aggravated assault, theft and property crimes, and 3 patients (3.2%) for arson.

Among DSM-IV-TR axis I disorders (APA, 2001), substance related disorders were the most prevalent (74.7%, $n=71$), followed by mood disorders (17.9%, $n=17$), anxiety disorders (15.8%; $n=15$), paraphilias (13.7%; $n=13$), pathological gambling (10.5%; $n=10$), and ADHD (7.4%; $n=7$). Among DSM-IV-TR axis II disorders (APA, 2001), 57.9% ($n=55$) of the patients were diagnosed with an Antisocial PD, 17.9% ($n=17$) with a Borderline PD, 21.1% ($n=21$) with a Narcissistic PD, 1.1% ($n=1$) with a Paranoid PD, and 21.1% ($n=21$) with a PD-NOS with a minimum of 5 cluster B PD traits. Twenty-five patients (26.3%) were diagnosed with more than one PD: nine patients were diagnosed with both Antisocial and Borderline PD, eleven with Antisocial and Narcissistic PD, two with Borderline and Narcissistic PD, two with Antisocial, Borderline, and Narcissistic PD, and one with Narcissistic and Paranoid PD. Average psychopathy score in this sample, as measured with the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), was 24.3 ($SD = 6.7$); about half of the sample (47.4%) had scores indicative of psychopathy when using a cut-off of ≥ 25 . Fifteen patients (16.1%) had PCL-R scores of 30 or higher. Patients' mean full scale IQ, as measured with the Wechsler Adult Intelligence Scale-III (WAIS-III; Wechsler, 1997), was 92.8 ($SD = 10.9$).

Measures

Diagnostic assessments for axis I and axis II disorders were conducted using the Dutch versions of the *Structured Clinical Interview for DSM Axis I Disorders* (SCID-I; First, Gibbon, Spitzer, Williams and Benjamin, 1997) and *Structured Interview for DSM-IV Personality Disorders* (SIDP-IV; Pfohl, Blum, & Zimmerman, 1995). Both instruments are widely used internationally, and have demonstrated to have good psychometric properties in numerous studies (e.g., Damen, De Jong, & Van der Kroft, 2004; Skre, Onstad, Torgersen, & Kringlen, 1991; Torgersen, et al., 2008). In a sub-sample of 23 patients, the inter-rater reliabilities for the SIDP-IV main diagnoses in our study, were ICCs = .73 for Antisocial PD, .75 for Borderline PD, .92 for Narcissistic PD and .80 for Paranoid PD. With regard to the SCID-I, there was perfect agreement (100% agreement) in a sub-sample of 14 patients for all diagnoses, except for mood disorders and pathological gambling which reached 84% agreement.

MOS. The Mode Observation Scale (MOS; Bernstein, et al., 2009) is an observational instrument that assesses the intensity of schema modes. The MOS is typically used in clinical situations, such as individual or group therapy sessions. Ratings can pertain to entire situations or sessions, or to parts of it, for example the last five minutes. The MOS consists of 18 schema modes that are rated on a 5-point Likert scale (1=absent; 5=extremely intense). Schema mode domain scores can be calculated by taking the mean of corresponding schema modes within each domain. The MOS has been specifically developed for forensic patients, and has shown good inter-rater reliability in a number of

studies when rating videotapes of therapy sessions. In a recent study, the inter-rater agreement (intra-class correlation coefficient, ICC) for schema mode domains for average raters ranged from .65 to .86 (median = .76) (Van den Broek, Keulen-de Vos, & Bernstein, 2011). These findings have been replicated in another study, where the ICC for average raters ranged from .40 to .99 (median = .96) for schema mode domains, and from .04 to .99 (median = .85) for the individual schema modes (Keulen-de Vos, Bernstein, van den Broek, Arntz, & Valentin, submitted).

The descriptions in the MOS manual reflect typical behaviors, emotions and verbal expressions of particular modes that can be observed in therapeutic situations (e.g., therapy sessions). For the purpose of this study, we adapted the MOS manual by including typical examples of how modes might be reflected in criminal behavior, as observed in the descriptions of patients' crimes that are found in their charts. For example, for Self-Aggrandizer mode, we added 'patient describes his crime as an act of asserting dominance towards others' and 'patient comes across as superior' before or during his crimes. In another example, for Predator mode, we added 'patient describes core feelings of hatred', 'patient describes that crime was planned in advance,' and 'aggression comes across as cold and ruthless,' to the descriptions in the MOS manual. The descriptions of patient's crimes that were found in their charts typically included statements given by the patient as well as police reports that included victims' and witnesses' statements. This enabled us to make inferences about modes based on their subjective aspects (e.g., patients' reflections on their own emotional states) and objective ones (e.g., accounts from victims and others who observed the patient).

When patients committed more than one crime, we made separate mode ratings for each crime. This was the case for thirteen patients (13.7%) in our sample. Typically, these crimes were almost identical in terms of type of crime (e.g., robbery, rape, murder) and in terms of which modes were scored. For example, the events leading up to both crimes were rated with the same mode score. This was the case for all thirteen patients, therefore, we averaged the ratings of the different crimes.

For reliability purposes, records of twenty-six (26) were rated by two raters; all other sixty-nine (69) files were rated by a single rater. The ratings of charts that were rated by two raters were averaged for the analyses in this study. In the sub-sample of 26 patients, the single-rater inter-rater agreement for the schema modes during the events leading up to the crime ranged from .54 to .91 (median=.74) for the child modes and from .26 to .97 (median=.90) for the overcompensatory schema modes. The intra-class coefficient (ICC) for the schema modes rated during the crimes ranged from .83 to .94 (median=.83) for the child modes and .78 to .85 (median=.81) for the overcompensatory modes. The inter-rater reliabilities for the individual modes are presented in Table 2.

PCL-R. The Psychopathy Checklist-Revised (PCL-R; Hare, 2003) is an instrument that diagnoses patient's levels of psychopathy based on a semi structured interview and file review (e.g. collateral information). The PCL-R consists of 20 items that are rated on a 3-point Lickert scale (0=item does not apply, 1= item applies to a certain degree, 2=item

definitively applies). The total score can range from 0 to 40. This instrument yields either a two (Harpur, Hakstian, & Hare, 1988), three (Cooke & Michie, 2001) or four factor (Hare, 2003; Vitacco, Neumann, & Jackson, 2005) structure that shows which specific areas of functioning are impaired. In our study, we have chosen the four-factor model in which Factor 1 refers to interpersonal characteristics (e.g., superficial charm, grandiose sense of self), Factor 2 to affective features (e.g., lack of empathy, shallow affect), Factor 3 to lifestyle characteristics (e.g., impulsivity, irresponsibility) and Factor 4 to antisocial behavior (e.g., lack of behavioral control in adulthood and childhood) (Hare, 2003; Vitacco, et al., 2005). International research has shown that the PCL-R is a reliable and valid instrument (e.g., Bodholdt, Richards, & Gacono, 2000; Hare, Clark, Grann, & Thornton, 2000; Hildebrand, de Ruiter, de Vogel, & van der Wolf, 2002; Wong & Hare, 2005). In a sub-sample of eighty-three ($n = 83$) patients, the intra-class correlation coefficient for average raters of the PCL-R total score in our study was .92 (factor 1 = .82; factor 2 = .80; factor 3 = .89; factor 4 = .91). Ratings were also internally consistent (Cronbach's alpha for the PCL-R total score = .80).

Incidents. Information on institutional violence was obtained from clinical data, such as daily bulletins and incident reports that were present at a particular hospital. We used an institutional violence scheme based on the scheme used by Hildebrand and colleagues (2004), and de Vogel (2005) to assign transgressions to four different categories: verbal abuse, verbal threat, physical violence, and violation of hospital rules. Recent research has shown excellent inter-rater agreement in a sample of a hundred incidents (observed agreement = 92%; Hildebrand, et al, 2004). In our study, the data was based on clinical data, therefore no inter-rater agreement information was available.

Procedure

Approval for the RCT was obtained by the Medical Ethical Committee of Maastricht University Hospital, The Netherlands. The study presented in this paper was also approved by the Ethical Committee of Maastricht University's Faculty of Psychology and Neuroscience, The Netherlands. At baseline assessment, prior to being assigned to one of the treatment conditions, patients were assessed with the SCID-I, SIDP-IV and PCL-R interview, and administered a number of other interviews and questionnaires. For the analyses reported here, we used the PCL-R from the baseline assessments. Institutional violence was rated at the start of treatment and the six months prior to the start of treatment. At that time, patients were admitted in the designated forensic hospital for approximately 28 months. In total, 95 institutional incidents were rated.

The PCL-R interview was conducted by psychologists or research assistants with extensive training in this instrument. For the analyses in this study, the PCL-R consensus scores were used. Daily hospital bulletins were coded for institutional incidents by research assistants assigned to the RCT at the different sites.

For this study, we used criminal files of 95 patients who were enrolled in the RCT to extract the events and emotional states that lead up to the crime, and descriptions of the

crime itself. RCT research assistants were asked to extract the aforementioned information. The raters (M.K and S.V.) were blind to any identifying and diagnostic information. The descriptions of the crime and events leading up to the crime were rated with the MOS. Also, the descriptions were rated on a 3-point scale (1=poor; 2=moderate; 3=excellent) with regard to quality of the information. With regard to the events leading up to the crime, 77.9% of the cases were rated as containing excellent information, 20% as moderate and 2.1% as poor. The descriptions of the criminal acts itself, 78.9% were rated excellent, 16.8% as moderate and 4.2% as poor.

Prior to the study we have pilot tested whether it was feasible to assess schema modes based on descriptions of criminal behavior and events leading up to this behavior. Criminal records of ten (10) non-RCT patients were blindly rated with the MOS by two researchers (M.K and S.V.). A research assistant at one of the sites in our study provided this information anonymously. Inter-rater reliability analyses for the schema modes of the events leading up to the crime showed good intra-class coefficients (ICC) for average raters with ICC's ranging from .26 to .97 (median= .88). With regard to schema modes during criminal behavior, ICC ranged from .89 to .99 (median= .95).

Statistical Analyses

For the analyses reported here, we only used the mode ratings that referred to the individual and domain ratings for the child modes, Detached Self-Soother and the overcompensatory modes, because ST theory predicts that these modes are typically activated in forensic PD patients during criminal acts. In addition, we wanted to limit the number of comparisons. We did examine the prevalence of the other modes rated by the MOS (e.g., internalized parent modes, healthy modes). There were very few instances of these modes appearing in the descriptions of the events leading up to the crime and the descriptions of the crimes itself. For example, most modes were rated as 'absent', with exception of the Detached Protector mode in the events leading up to the crime which was rated in five (5.3%) instances. The level of absolute agreement between raters was assessed with reliability analyses using the intra-class correlation coefficient (ICC; Shrout, & Fleiss, 1979) with a two-way mixed-effects model because the raters were the same for every patient. To test for significant differences in schema mode scores between 'events leading up to the crime' and the crime, we used paired samples *t*-tests with a two-tailed alpha of .05. We corrected our alpha for multiple comparisons according to the FDR (false discovery rate) correction for 22 tests (11 emotions x 2 situations), using a p-value of $p < .0136$ (see Narum, 2006, pp. 787). Statistical analyses examining the skewness and kurtosis of our sample showed non-normal distribution for several schema modes. The relationship between schema modes and psychopathy were therefore examined using Spearman correlations. The predictive value of schema modes on institutional violence was examined using multivariate linear regression analyses, with various schema modes as independent variables and the total number of different incident types as dependent variable (e.g., total number of verbal aggression, verbal threat, physical violence, viola-

tion of hospital rules, total number of incidents). These regression analyses were repeated for both the schema modes that related to the events leading up to the crimes and the crime-related schema modes. All data were analyzed with the Statistical Package for the Social Sciences (SPSS, 2009), version 17.0.

Results

Differences in schema modes

Table 2 presents the mean scores, standard deviations, the percentage of patients who showed evidence of schema modes (i.e., scores of 2 or higher) and comparisons of means for the MOS for both events leading up to the crime and criminal behavior. Consistent with our hypothesis, paired samples *t*-tests showed patients experienced significantly greater Vulnerable Child mode prior to the crime ($M=2.98$, $SE=.14$) than when committing the crime ($M=1.00$, $SE=.00$, $t(94)=13.98$, $p<.01$, $r=.82$). Patients also experienced significantly more intense Lonely Child mode in the events leading up to the crime ($M=1.36$, $SE=.10$) than during the criminal act ($M=1.02$, $SE=.02$, $t(94)=3.30$, $p=.005$, $r=.32$). In contrast, patients did experience significantly more Angry Child mode during the criminal acts ($M=2.02$, $SE=.14$) than prior to it ($M=1.03$, $SE=.11$, $t(94)=-2.79$, $p=.006$, $r=.27$). Also patients experienced more Impulsive Child modes during their criminal acts ($M=1.76$, $SE=.12$) than the events preceding it ($M= 1.11$, $SE=.04$, $t(94)=-4.92$, $p<.01$, $r=.46$). Overall, the child domain mode score was significantly greater in the events leading up to the crime ($M=1.80$, $SE=.05$), than during the criminal acts ($M=1.45$, $SE=.05$, $t(94)=4.72$, $p<.01$, $r=.45$). As expected, patients experienced more Detached Self-Soother mode in the events leading up to the crime ($M=2.97$, $SE=.16$), than during the criminal acts ($M=2.23$, $SE=.16$, $t(94)=5.02$, $p<.01$, $r=.46$).

Consistent with our hypotheses patients experienced greater overcompensatory schema modes when committing their crimes than in the events preceding this behavior, however only for two specific overcompensatory schema modes. Particularly, patients showed more Bully and Attack mode during the crimes ($M=2.50$, $SE=.14$) than in the events leading up to the crimes ($M=1.05$, $SE=.03$, $t(94)=-9.91$, $p<.01$, $r=.71$). Similar findings were found with regard to Predator mode. More predatory behavior was expressed during criminal behavior ($M=1.36$, $SE=.08$) than in the events leading up to the crimes ($M=1.03$, $SE=.02$, $t(94)=-3.94$, $p<.01$, $r=.37$). There were no significant differences with regard to Self-Aggrandizer, and Conning and Manipulative mode. In contrast to our hypothesis, patients experienced more Paranoid Overcontroller mode in the events leading up to the crime ($M=1.29$, $SE=.07$) than during their crimes ($M=1.07$, $SE=.04$, $t(94)=3.56$, $p<.01$, $r=.35$). Overall, the overcompensatory domain mode score was significantly greater during the criminal acts ($M=1.54$, $SE=.04$), than during the events preceding this behavior ($M=1.20$, $SE=.03$, $t(94)=-7.73$, $p<.01$, $r=.62$).

Schema modes and psychopathy

Table 3 presents the Spearman correlations between schema modes rated in the events leading up to the crime and during the crime, and the PCL-R factors. There were different patterns of correlations for the relationships between schema modes and psychopathy facets in the events leading up to crimes and during the crimes. With regard to the events leading up to the crime, the vulnerable child mode was negatively related to the PCL-R total score and factor 1 and 2; the Detached Self-Soother mode was positively related with factors 3 and 4; the Self-Aggrandizer mode was negatively related with the PCL-R total score; and the Bully & Attack and Conning & Manipulative modes were positively related to factor 1. In contrast, during the crime, the Impulsive Child mode was inversely correlated with factor 1; the Detached Self-Soother mode was positively related to factor 3; the Self-Aggrandizer mode was positively correlated with the PCL-R total score, whereas Conning & Manipulative mode was positively related to facet 1 and inversely related to factor 4.

Table 2. *Sample descriptives and comparisons.*

Schema Modes	Events leading up to the crime				Crime				Paired Samples t-test		
	%	M	SD	ICC	%	M	SD	ICC	t	df	p
Child Domain	88.4	1.79	.52	.70	57.9	1.44	.52	.69	4.72	94	<.01
Vulnerable Child	74.8	2.98	1.39	.76	0.0	1.00	.00	.83	13.97	94	<.01
Angry Child	33.8	1.63	1.03	.74	40.2	2.01	1.39	.81	-2.79	94	<.01
Impulsive Child	6.3	1.11	.42	.54	25.8	1.76	1.15	.94	-4.92	94	<.01
Lonely Child	14.8	1.36	.97	.91	1.1	1.02	.21	^a	3.07	94	<.01
Detached Self-Soother	68.5	2.97	1.54	.91	41.3	2.23	1.60	.82	5.02	94	<.01
Overcompensatory Domain	44.2	1.20	.28	.86	82.1	1.54	.36	.84	-7.73	94	<.01
Self-Aggrandizer	20.0	1.39	.89	.90	19.0	1.40	.90	.78	-.10	94	.92
Bully and Attack	3.3	1.05	.30	^a	62.3	2.50	1.35	.85	-9.91	94	<.01
Conning and Manipulative	13.7	1.24	.74	.94	17.0	1.38	.98	.78	-1.85	94	.07
Predator	2.2	1.03	.23	.26	20.1	1.36	.79	.84	-3.94	94	<.01
Paranoid Overcontroller	18.0	1.29	.71	.97	3.2	1.07	.42	^a	3.56	94	<.01

Note. N=95. ^a = no variance. % = percentage of patients who showed any evidence of modes; that is scores of 2 or higher. ICC = intra-class coefficient.

Table 3. Spearman correlations between schema modes and psychopathy.

		Events leading up to the crime											
		CD	VC	AC	IC	LC	DSS	OCD	SA	BA	CM	P	OC
Psychopathy													
PCL-R Total score		-.21[†]	-.22[*]	-.21[†]	.11	-.02	.22[†]	-.28[*]	-.23[*]	.13	-.06	-.09	-.16
PCL-R Factor 1: Interpersonal		-.12	-.24[*]	-.06	.08	.12	-.13	-.01	-.11	.26[*]	.26[*]	-.16	-.06
PCL-R Factor 2: Affective		-.24[*]	-.38^{**}	-.05	.02	-.08	.03	-.10	-.13	.16	.04	.08	-.01
PCL-R Factor 3: Lifestyle		.06	.07	-.01	.16	.12	.32^{**}	-.19	-.10	.02	-.12	.01	-.13
PCL-R Factor 4: Antisocial		-.13	-.09	-.10	.07	-.03	.29[*]	-.22[†]	-.19	.07	-.19	-.07	-.01
Crimes													
Psychopathy													
PCL-R Total score		-.04	^a	-.02	-.10	.07	.17	-.00	-.26[*]	.21[†]	-.03	.16	-.18
PCL-R Factor 1: Interpersonal		-.24[*]	^a	-.10	-.26[*]	-.07	-.08	.11	-.09	.04	.36^{**}	.01	-.19
PCL-R Factor 2: Affective		-.02	^a	.05	-.07	.02	.02	-.04	-.09	.01	.13	.06	-.17
PCL-R Factor 3: Lifestyle		.07	^a	.05	.02	.11	.30[*]	-.02	-.21	.19	-.06	.07	-.08
PCL-R Factor 4: Antisocial		.07	^a	.05	.01	.15	.20	-.05	-.20	.16	-.28[*]	.17	-.04

Note. N= 83. PCL-R consensus scores were missing in 12 patients. ^a = no variance. PCL-R=Psychopathy Checklist-Revised. CD=Child Domain; VC=Vulnerable Child; AC=Angry Child; IC=Impulsive Child; LC=Lonely Child; OCD=Overcompensatory Domain; DSS=Detached Self-Soother; SA=Self-Aggrandizer; BA=Bully and Attack; CM=Comming and Manipulative; P=Predator; OC=Paranoid Overcontroller. [†] = .06 < p < .08, * p < .05, **p < .01.

Schema modes and institutional incidents

Finally, we examined the relationship between modes, assessed retrospectively from descriptions of the events leading up to the crimes and patients' crimes, and incidents assessed prospectively during their institutional stay. We performed five multivariate linear regressions for the events leading up to the crime and the crimes itself, alternating verbal aggression, verbal threat, physical violence, violation of hospital rules and total number of incidents as dependent variables, and the individual child-, overcompensatory modes and Detached Self-Soother mode as predictor variables.

With regard to the schema modes rated in the events leading up to the crime, the results showed that the Vulnerable Child and Angry Child mode were significant predictors, explaining 16% of the variance (r^2 unadjusted) in physical violence [$F(4, 68) = 3.19, p = .02$]. The child mode domain score was a significant predictor, explaining 5% of the variance (r^2 unadjusted) in violation of hospital rules [$F(1, 71) = 4.02, p = .05$] and 7% of the variance (r^2 unadjusted) in total number of incidents [$F(1, 71) = 4.97, p = .03$].

Analyses of the schema modes rated in criminal behavior revealed that detached self-soother mode was a significant predictor, explaining 6% of the variance (r^2 unadjusted) in violation of hospital rules [$F(1, 71) = 4.45, p = .04$]. The child mode domain was a significant predictor, explaining 7% (r^2 unadjusted) of the variance in violation of hospital rules [$F(1, 71) = 5.22, p = .03$] and 6% (r^2 unadjusted) of the total number of incidents [$F(1, 71) = 4.19, p = .04$]. The overcompensatory mode domain score was a significant predictor, explaining 6% of the variance in physical violence [$F(1, 71) = 4.17, p = .04$]. Other predictors for the various kinds of institutional violence were non-significant.

Discussion

Our findings are largely consistent with Schema Therapy's theoretical model, as applied to forensic patients, which hypothesizes that schema modes play a role in the events leading up and culminating in crimes and acts of violence (Bernstein, et al., 2007; Keulen-de Vos, et al., in press). With regard to our first hypothesis, we found that, as predicted, more child modes were evident in the events leading up to the crime, and more overcompensatory modes in the events during the crime itself. In particular, the Vulnerable and Lonely Child modes and the Detached Self-Soother mode were more apparent in the events leading up to criminal behavior than during the crime itself, whereas Bully and Attack and Predator modes were more present during the crimes than during the events leading up to the crimes. Thus, although we can't confirm a causal relationship from these retrospective data, it does appear that vulnerable feelings, such as shame or abandonment, and loneliness, often played a role in triggering crimes, a view that is consistent with the literature on reactive aggression (e.g., Fontaine, 2007; Miller & Lynam, 2006; Vitacco, et al., 2009). Furthermore, it appeared that as events leading up to crimes progressed, patients' emotional states were characterized by escalating levels of anger and

impulsivity, culminating in states of “hot” aggression (Bully and Attack mode) and “cold” predatory aggression (Predator mode) during the crimes themselves. Moreover, this escalation appeared to be fuelled by drug and alcohol use (Detached Self-Soother mode), which began in the period leading up to the crime and often continued, though at somewhat diminished levels, during the crime. This progression from painful, inner-directed emotions (Vulnerable and Lonely Child modes) to states involve anger, impulsivity, and aggression is consistent with our model that views aggression as often serving an overcompensatory function (Bernstein, et al., 2007; Keulen-de Vos, et al., in press). According to this view, states involving aggression compensate for other, contrary emotional states, such as those involving feelings of weakness, fear, humiliation, or helplessness. When someone switches into an aggressive schema mode, it dominates his thoughts, feelings, and behavior, to the exclusion of other, contrary emotions (Bernstein, et al., 2007; Keulen-de Vos, et al., in press). Consistent with this model, high levels of vulnerable emotions were observed in the period leading up to crimes, but *not at all* during the commission of crimes, when more aggressive modes predominated. Similarly, the observation that more Detached Self-Soother mode was present in the events leading up to crimes than during the crime itself is consistent with our view that drug and alcohol use often represent an ineffective means of coping with painful emotions which serve to further disinhibit aggression (Bernstein, et al., 2007; Kersten, 2012; Keulen-de Vos, et al, in press).

Our hypothesis that the other overcompensatory modes (i.e., Self-Aggrandizer, Conning and Manipulative, and Paranoid Overcontroller modes) would be more present during than before crimes, were not confirmed by these data. In fact, the Paranoid Overcontroller mode was more apparent in the events leading up the crime than during the crime. There appears to be a typical sequence of events involving the Paranoid Overcontroller mode, as illustrated in Figure 1b. The sequence starts when patients experience vulnerable emotions (e.g., shame, abandonment), but rapidly flip into a state of anger and resentment (Angry child mode), and then into a paranoid state (Paranoid Overcontroller mode), where the patient focuses attention on the person whom he concludes is to blame for his injuries (“I’m hurt, so someone must be responsible for it”). Once the patient determines the target for his anger, he typically flips into an aggressive mode, such as bully and attack or predator mode, in which he carries out the crime. Thus, the Paranoid Overcontroller belongs to the sequence of events leading up to the crime, but not to commission of the crime itself. This sequence may help to clarify previous findings about the way in which mistrust and paranoid ideation are linked to violence (e.g., Appelbaum, Robbins & Monahan, 2000; Tremblay & Dozois, 2009).

Our findings partially confirmed the hypothesis that the overcompensatory modes in the events leading up to the crimes are related to the interpersonal facet of psychopathy. The Bully and Attack mode and the Conning and Manipulative mode showed significant positive correlations with this facet, whereas the other three overcompensatory modes (i.e., Predator, Paranoid Overcontroller and Self-Aggrandizer) did not. Furthermore, our

hypothesis was not confirmed that the angry and impulsive child modes rated during the events leading up to the crimes would be correlated with the lifestyle and antisocial facets of psychopathy.

In the literature, a distinction is frequently made between reactive and instrumental aggression (e.g., Fontaine, 2007; Miller & Lynam, 2006; Vitacco, et al., 2009). Typically, reactive aggression arises in response to provocation, frustration, whereas instrumental aggression is premeditated and unemotional (Stanford, et al., 2003; Vitacco, et al., 2009). Previous research has shown that psychopathic offenders typically display more instrumental or proactive aggressive behavior than non-psychopathic offenders (e.g., Cima & Raine, 2009; Cornell, et al., 1996; Reidy, Shelly-Tremblay, & Lilienfeld, 2011; Woodworth & Porter, 2002). Perhaps in some cases, the psychopaths in our sample were not triggered by frustrations or other emotions, but instead used their aggression instrumentally. Consistent with this view, the Vulnerable Child mode rated during the events leading up to the crime was negatively related with the PCL-R total score and with the affective and interpersonal facets of psychopathy. This is in line with the literature that often describes the typical psychopath as emotionally detached or fearless (e.g., Blair, Mitchell, & Blair, 2006; Patrick, 1998; Steuerwald & Kosson, 2000; Stillman & Baumeister, 2010). These findings underscore the need for individualized assessment and treatment in Schema Therapy for offenders, as different modes reflect different motives behind criminality and aggression.

Our study showed that child and overcompensatory schema modes predicted institutional violence to a moderate degree. First, feelings of vulnerability and anger (Vulnerable and Angry Child modes) experienced in the events leading up to criminal behavior were predictive for the degree of physically aggressive behavior. Second, the overall score for the overcompensatory modes (overcompensatory domain score) scored during criminal behavior was a significant predictor for physical violence. A possible explanation for the predictive value of the Vulnerable Child mode, is that painful feelings, such as vulnerability, ignite violent behavior (Scheff, 2011; Stuewig, et al., 2010). The finding with regard to Angry Child mode is in concordance with studies showing that previous anger or aggression is an indicator for institutional violence (e.g., McDermott, Quanbeck, Busse, Yastro, Scott, 2008; Vitacco, et al., 2009). For example, a study by Doyle & Dolan (2006) showed that anger, as measured by the Novaco Aggression Scale (NAS; Novaco, 1994), was a predictor for physical aggression in a sample of a hundred mentally disordered offenders. In addition, there may be similarities between the context of the events leading up to criminal behavior and the institutional context. For example, anger and frustration may be triggered as a result of the rules that are imposed upon offenders by staff members, which might, in turn, lead to a (perceived) inability to control a patient's behavior and elicit feelings of frustration in staff (Daffern, Howells, & Ogloff, 2007). If a patient has displayed overcompensatory behavior during his crime, this may reflect a patient's main 'modus operandi' to cope with frustration. If this is the case, it's no surprise that this behavior is a predictor for physical institutional violence.

The findings of the current study should be considered in light of certain limitations. First, our study has a retrospective design; it is based on file review. We had no direct access to a patient's emotional states during the events leading up to the crime and the criminal act. However, results might have differed if we had used other measures to assess emotional states before and during crimes, such as self-reports or interviews with patients. Second, the quality of the information on which the ratings are based varied to a certain extent, which could have led to measurement error. On the other hand, we judged the quality of the information on which the ratings were based to be moderate to excellent for all but a small number of cases. Third, no inter-rater agreement information was available for the incident ratings, because these were based on clinical data which were not checked for reliability. In the future, multiple kinds of instruments (e.g., file review, self-reports, interview) should be used to evaluate patients' emotional states. Finally, although these findings are consistent with our conjectures about the relationships between modes and crime, we can make no definite inferences regarding causality from these retrospective data. On the other hand, the fact that schema modes, assessed retrospectively from patients' charts, were associated with facet scores on the PCL-R, a well-validated lifetime assessment of psychopathy, and with prospective ratings of institutional incidents, supports the validity of the schema mode ratings in this study.

This study was the first to assess schema modes in criminal behavior in forensic cluster B PD patients. The findings support Schema Therapy's forensic framework that emotional triggers are often the precipitant for violent and criminal behavior and that this behavior can be explicated by an unfolding sequence of schema modes. It also suggests that vulnerable emotions may play a lesser role in the crimes of some patients with more of the affective and interpersonal features of psychopathy, whose crimes may more reflect instrumental motives. These findings have important implications for forensic clinical practice. From a clinical perspective, this study leads to a better, more nuanced and substantiated understanding of which maladaptive emotional states play a prominent role in criminal behavior and institutional incidents. Knowledge about schema modes in offenders can enhance or influence existing treatment approaches or programs, including, of course, Schema Therapy. For example, the link between criminal behavior and schema modes might be incorporated in specific offender programs which aim to clarify a patient's pattern of criminal offending. In forensic Schema Therapy, ameliorating maladaptive schema modes is one of the main goals of treatment, with the aim of reducing the patient's risk of recidivism. This study helps to substantiate the link between schema modes and criminal behavior, providing support for this treatment approach. In future studies, including a multicenter randomized clinical trial of Schema Therapy for forensic patients that is currently in progress in The Netherlands (Bernstein, et al., 2012), we will test the hypothesis that reducing maladaptive schema modes leads to diminished risk of recidivism for this challenging group of patients.

Acknowledgements

Thanks are due to Stella Daamen and Eva de Spa for her help in collecting the anonymous case descriptions for our (pilot) study. We are grateful for the collaboration of the direction board, staff and of patients of forensic psychiatric centres 'de Rooyse Wissel', locations Venray and Maastricht; the 'Van der Hoeven Kliniek' in Utrecht; the Oostvaarderskliniek' in Almere; 'Veldzicht' in Balkbrug, 'Mesdagkliniek' in Groningen, 'FPK Assen' in Assen, and the 'Kijvelanden' in Poortugaal, all in the Netherlands. The authors gratefully acknowledge the support of the Dutch Ministry of Justice, the 'Expertisecentrum Forensische Psychiatrie' [Forensic Expertise Centre], and Maastricht University's Faculty of Psychology and Neuroscience.

CHAPTER 6

Schema mode conceptualizations in forensic cluster B PD patients

Keulen-de Vos, M.E., Bernstein, D.P., Clark, L.A., de Vogel, V., Bogaerts, S., Slaats, M., & Arntz, A. Validation of the schema mode concept in forensic PD patients. (In preparation).

Abstract

A core element of Schema Therapy (ST) is 'schema modes' or fluctuating emotional states. ST assumes that specific personality pathology consists of specific combinations of maladaptive schema modes. There is confirmatory evidence for the modes hypothesized to be central to Borderline and Narcissistic PD non-forensic patients. In this study, we tested three aspects of the construct validity of schema modes in cluster B PDs offenders: the factorial validity of schema modes, and the relationship between schema modes, personality disorders, and violence risk. Our sample consisted of 70 offenders who were diagnosed with either an Antisocial, Borderline, or Narcissistic PD. Schema modes were assessed with the Schema Mode Inventory (SMI), personality disorders with the Schedule for Nonadaptive and Adaptive Personality (SNAP), and violence risk with the Historical, Clinical and Risk management scheme (HCR-20). When controlling for the two other PDs, three schema mode factors distinguished ASPD as a disorder involving both low scores on internalizing and high scores on externalizing modes, and BPD as involving high scores on internalizing modes. Furthermore, the externalizing emotional states were a significant predictor for violence risk inside the hospital. The hypothesized mode models were supported for all 3 PDs, with a few notable exceptions. The findings support the construct validity of schema modes in a forensic sample.

Introduction

Emotional disturbances or rapid emotional shifts are central to many personality disorders. For example, Borderline PD (BPD) is characterized by rapid and dramatic shifts in emotions, whereas Antisocial PD (ASPD) is characterized by feelings of frustration and psychopathy by a lack of emotions (e.g., American Psychiatric Association, 2001; Hare, 2003). Recently, a relative novel treatment approach for personality disordered patients has been developed to understand patients with PDs who often switch rapidly from one extreme emotional state to another or remain stuck in an emotional state to the exclusion of other ones.

Schema Therapy (ST; Rafaeli, Bernstein, & Young, 2011; Young, Klosko, & Weishaar, 2003) is an integrative therapy; it blends elements of different therapeutic approaches, including cognitive, behavioral, psychoanalytic and experiential strategies. ST defines emotional disturbances or rapid emotional shifts as 'schema modes' or state-like entities that refer to specific combinations of maladaptive cognitions and coping styles that temporarily controls a person's cognitions, emotions and behavior (Young, et al., 2003). See appendix A for definitions of the different schema modes.

Not all schema modes are relevant for each individual. According to ST-theory, PD patients are marked by distinctive combinations of maladaptive schema modes of which they have little control. Young and colleagues (2003) defined schema mode models for BPD and NPD. The schema mode model for BPD postulates that borderline patients are primarily characterized by four dominant schema modes: 1) feelings of abandonment and abuse (Vulnerable Child mode); 2) uncontrolled anger and impulsivity as a response to feelings of maltreatment (Angry and Impulsive Child mode); 3) self-punitive behavior (Punitive Parent mode); and 4) feelings of emptiness and detachment (Detached Protector mode) (Arntz & van Genderen, 2009; Young, et al., 2003). The schema mode model for NPD defines narcissistic patients by four modes: 1) a sense of self-importance and grandiosity (Self-Aggrandizer); 2) feelings of loneliness (Lonely Child); 3) self-soothing behavior, for example using drugs and alcohol (Detached Self-Soother); and 4) rage (Enraged Child) (Rafaeli, et al., 2011; Young, et al., 2003). There is not yet consensus about the schema modes that define ASPD. Some authors suggest that ASPD is characterized by the afore mentioned BPD modes and a fifth mode called Bully and Attack, which refers to aggression and threats to assert dominance (Lobbestael, Vreeswijk, & Arntz, 2007).

There is already some validation of the schema mode concept in non-forensic patients. For example, a study by Arntz, Klokman and Sieswerda (2005) investigated whether the schema mode model for BPD was indeed specific for 18 BPD out-patients. The results indicated that BPD patients scored significantly higher on the four basic BPD modes compared to cluster C PD patients and healthy controls (Arntz, et al., 2005). This finding was replicated by Lobbestael, Arntz and Sieswerda (2005) in a sample of 16 BPD subjects, although the BPD patients in their study also displayed some characteristics of

Bully and Attack mode. Another study in 489 subjects has shown that BPD was characterized by the proposed schema mode model for BPD and a number of other modes such as Detached Self-Soother and the Compliant Surrenderer mode (Lobbestael, van Vreeswijk, & Arntz, 2008). Bamelis, Renner, Heidkamp, and Arntz (2011) provided empirical evidence for the mode model for NPD. In a study of 323 outpatients, NPD appeared to be characterized by higher scores on Enraged Child, Self-Aggrandizer and Detached Self-Soother mode, compared to cluster C patients and non-patient controls (Bamelis, et al., 2011). Lobbestael and colleagues (2005) have reported that antisocial inpatients (n=16) scored significantly higher on the Vulnerable Child, Angry Child, Detached Protector, Punitive Parent, and Bully and Attack mode than healthy controls (n=16).

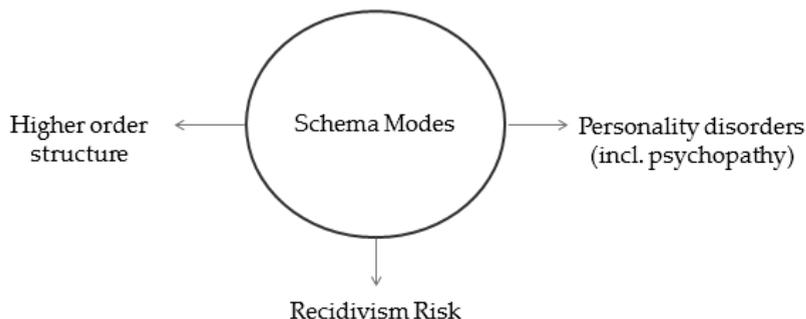
Recently, ST has been introduced to and adapted for *forensic* patients with PDs. In forensic PD patients, ST specifically focuses on those schema modes that are seen as risk factors for aggressive, impulsive, and criminal behavior. Bernstein and colleagues have added five 'forensic' modes that refer to deception, predatory behavior, intimidation and aggression, behaviors often seen in forensic PD patients (Bernstein, Arntz, & de Vos, 2007; Bernstein, Keulen-de Vos, Jonkers, de Jonge & Arntz, 2012). They suggest that anti-social and especially psychopathic offenders make prominent use of these forensic schema modes. For example, psychopathy is proposed to be primarily characterized by cold and ruthless aggression (Predator mode), deceit and manipulation (Conning and Manipulative mode), and aggression to assert dominance (Bully and Attack mode). These modes are believed to have been developed during childhood under conditions of extreme threats and humiliation (Jaffee, Caspi, Moffitt, & Taylor, 2004; Poythress, Skeem, & Lilienfeld, 2006) and serve as a shield to protect corresponding feelings of vulnerability, anger, and frustration (Bernstein, et al., 2007).

Although ST is increasingly used in forensic settings, so far, there have only been limited attempts to validate the schema mode concept in forensic settings. For example, we are aware of only one study that examined the schema mode model in forensic PD patients. Lobbestael and colleagues (2008) conducted a study on schema modes in forensic patients; out of their 489 subjects, 45 patients were admitted in a forensic psychiatric hospital. They found that BPD patients were indeed characterized by the aforementioned schema mode model (Lobbestael, et al., 2008). However, due to the relatively small proportion, the generalizability to forensic patients is limited. Because schema modes are one of the theoretical pillars on which ST is based, and the primary target when working with offenders with cluster B PDs, further research on the schema mode concept is urgently needed.

In this study, we tested the construct validity of the schema mode concept by looking at the hypothesized network of relationships with other variables (Embretson, 1983). This is in line with Campbell and Fiske's (1959) supposition that inferences about a construct can be made by observing other behaviors or constructs. Three aspects of construct validity were examined. First, we examined the factorial validity of schema modes, that is, whether a higher order factor structure of schema modes was of explanatory value in

distinguishing among modes, and whether these factors showed different correlations with the PDs that we measured. Second, the relationship between schema modes, personality disorders and psychopathy is examined. Specifically, we tested the hypothesis that different mode models distinguish offenders with ASPD, BPD, NPD, and psychopathy. In this study, we hypothesized that ASPD was characterized by Vulnerable, Angry and Impulsive child, Detached Protector, Detached Self-Soother and all of the overcompensatory modes (i.e., Self-Aggrandizer, Bully and Attack, Overcontroller mode). We expected BPD to be characterized by Vulnerable Child, Angry and Impulsive Child, Detached Protector, Detached Self-Soother, and Bully and Attack mode. We expected NPD to be related to Self-Aggrandizer, Lonely Child, Detached Self-Soother and Enraged Child. With regard to psychopathy, we expected that 1) overcompensatory modes were correlated positively with the interpersonal facet; 2) the Happy Child mode was negatively correlated with the affective facet; 3) the Angry and Impulsive Child modes were positively correlated with the lifestyle and antisocial facets; 4) the Bully and Attack mode was positively correlated with the antisocial facet; and 5) the Healthy Adult mode was negatively correlated with the lifestyle and antisocial facets. See appendix A for an overview of which schema modes are hypothesized to play a role in which PD. Third, we examined the relationship between schema modes and recidivism risk because forensic PD patients are the most prevalent in forensic settings and are associated with higher risk of violence and recidivism than other forensic patients (Blackburn, Logan, Donnelly & Renwick, 2003; Coid, Hickey, & Yang, 2007; Langton, Hogue, Daffern, Mannion, & Howells, 2011; Lindsay, et al., 2006). See Figure 1 for a graphic illustration of the hypothesized network of schema mode relationships. Personality pathology was assessed with both a self-report and observer-report instrument (Schedule for Nonadaptive and Adaptive Personality; SNAP, Clark, 1993). Schema modes were assessed with the Schema Mode Inventory (SMI; Young, et al., 2007) and violence risk with the Historical, Clinical and Risk management schema (HCR-20; Webster, Douglas, Eaves, & Hart, 1997).

Figure 1. Network of schema mode relationships.



Method

Setting

This study was conducted at seven forensic hospitals in The Netherlands: Forensic Psychiatric Centres de Rooyse Wissel (locations Venray & Maastricht), Van der Hoeven Kliniek, Oostvaarderskliniek, De Kijvelanden, Veldzicht, Mesdagkliniek and Assen. By Dutch criminal law, patients can be admitted involuntarily to forensic hospitals if the accountability for their crimes is judged to be diminished because they suffer from (a) mental disorder(s). The most prevalent mental disorders in secure settings in The Netherlands are psychotic disorders, paraphelias, substance related disorders, and personality disorders (Hildebrand & de Ruiter, 2004; Isherwood & Brooke, 2001; Timmerman & Emmelkamp, 2001). Every one to two years the criminal court decides whether treatment should be prolonged or terminated, depending on the risk for re-offending as described in an advice of the hospital by an independent committee of experts. In The Netherlands, the average length of stay in forensic hospitals is approximately 8 to 9 years (Brand & Van Gemmert, 2009).

Sample

The sample consisted of 88 male offenders who participated in a multi centre randomized clinical trial (RCT) on the effectiveness of Schema Therapy versus treatment as usual (TAU), which is defined as the customary treatment at a particular facility. Patients gave informed consent for participating in the study, and were randomly assigned to either three years of ST or TAU. Because forensic patients typically engage in multi-modal treatment regimen, they still also received other psychological or rehabilitative services in addition to the assigned treatment condition.

Patients who were diagnosed with an Antisocial, Borderline, Narcissistic, Paranoid PD or PD Not-Otherwise-Specified (PD NOS) with a minimum of 5 cluster B PD traits, were included in the study. Exclusion criteria were (a) the presence of current psychotic symptoms, (b) schizophrenia or bipolar disorder, (c) current drug or alcohol dependence (but not abuse), (d) low intelligence (i.e., Full Scale IQ < 80), (e) serious neurological impairment (e.g., dementia), (f) an autistic spectrum disorder (e.g., autism, Asperger's disorder), and (g) paedophilia (i.e., a fixated sexual preference for children). These mental states were chosen as exclusion criteria because they impede PD treatment or require specific treatment that was beyond the scope of this RCT (e.g., Krampe, et al., 2006). For the purpose of this RCT, we wanted to keep our sample as homogeneous as possible.

The mean age of the sample at the time of enrolment was 38 years (SD=9.8). Mean age at the time of first conviction was 20.5 years (SD=7.0). The average length of stay in a particular forensic psychiatric hospital was 24.9 months (SD=12.8). Regarding the type of crime committed, 8 patients (9.1%) were convicted for (attempted) murder and 22 (25%) for (attempted) manslaughter, 24 patients (27.2%) for sexual offences, 2 patients (2.3%)

for property crimes, 24 patients (27.2%) for (attempted) aggravated assault, and 3 patients (3.4%) for arson.

Among DSM-IV-TR axis I disorders (APA, 2001), as measured with the SCID-I (First, Gibbon, Spitzer, Williams, & Benjamin, 1997), substance related disorders were the most prevalent (80.7%, $n=71$), followed by mood disorders (18.2%, $n=16$), anxiety disorders (14.8%, $n=13$), paraphilias (12.5%, $n=11$), pathological gambling (10.2%, $n=9$), and ADHD (6.8%, $n=6$). Seven patients (8.0%) were diagnosed with an obsessive-compulsive disorder. Thirty-two patients (36.4%) had more than one axis I disorder.

Among DSM-IV-TR axis II (APA, 2001), as measured with the SIDP-IV (Pfohl, Blum & Zimmerman, 1995), 61.4% ($n=54$) of the patients were diagnosed with an Antisocial PD, 19.3% ($n=17$) with a Borderline PD, and 22.7% ($n=20$) with a Narcissistic PD. One patient (1.1%) was classified with a Paranoid PD. Seventeen patients (19.3%) were diagnosed with a PD-NOS with a minimum of 5 cluster B PD traits. Twenty-six patients (29.5%) were diagnosed with more than one PD: nine patients were diagnosed with both Antisocial and Borderline PD, thirteen with Antisocial and Narcissistic PD, two with Borderline and Narcissistic PD, one with Antisocial, Narcissistic and Paranoid PD, and two with antisocial, borderline, and narcissistic PD. Average psychopathy score in this sample, as measured with the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), was 24.6 ($SD = 6.5$); forty-six patients (51.9%) had scores indicative of psychopathy when using a cut-off of ≥ 26 . Patients' mean full scale IQ, as measured with the Wechsler Adult Intelligence Scale-III (WAIS-III; Wechsler, 1997), was 92.9 ($SD = 11.0$).

Measures

The Dutch versions of the *SCID-I* (First, et al., 1997) and *SIDP-IV* (Pfohl, et al., 1995) were used to assess Axis I and II disorders. This instrument is widely used internationally, including in The Netherlands, and has demonstrated good psychometric properties in numerous studies (e.g. Damen, de Jong, & Van der Kroft, 2004; Skre, Onstad, Torgersen, & Kringlen, 1991; Torgersen, et al., 2008). The inter-rater reliability for the *SCID-I* diagnoses in our study in a sub-sample of 14 patients showed that percent agreement between raters was perfect (100% agreement) for all diagnoses assessed, except for mood disorders and pathological gambling which had 84% agreement. In a sub-sample of 23 patients, the inter-rater reliabilities for the *SIDP-IV* main diagnoses in our study, were ICCs = .73 for Antisocial PD, .75 for Borderline PD, .92 for Narcissistic PD, .80 for Paranoid PD and .80 for PD-NOS.

SNAP. The Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993; SNAP-CRV; Ready, Clark, Watson, & Westerhouse, 2000) is a self- and observer-report instrument that assesses personality characteristics. The SNAP consists of 15 trait scales, 10 PD scales and 7 validity scales and consists of 375 dichotomous items. Both the patient and informant version of the SNAP have demonstrated good reliability in patient samples with internal consistencies ranging from .76 to .92 and inter-rater reliabilities ranging from .75 to .90 (Clark, Simms, Wu, & Cassilas, in press). The SNAP has not been

originally developed for forensic patients. In collaboration with L.A. Clark, the author of the original SNAP, we have adapted both the patient and informant versions of the SNAP to make it applicable for forensic patients. We only used the PD scales that were the main focus of our study, and the subscales for negative and positive temperament and disinhibition. Next, we replaced the true/false scoring algorithm with a 5 point Likert-scale (1= never true; 5=very often true) to make the instrument more sensitive for assessing change over time. For a detailed description of the adaptation see Keulen-de Vos, Bernstein, Clark, Arntz, Lucker & de Spa (2011). For our study, we administered the informant version to three staff members who knew the patients well. These staff members were typically the patient's primary psychotherapists, other therapists like Arts therapists (e.g., drama, arts, music therapists), psychiatric ward nurses or the ward's treatment coordinators. The forensic versions of the SNAP showed good reliabilities with internal consistencies of the patient scales ranging from .79 - .83, whereas the informant scales showed Cronbach's alphas ranging from .81 to .92. The inter-rater reliabilities between the patient and information report were low to moderate (Keulen-de Vos, et al., 2011).

We created a composite score consisting of the mean score of the patient and informant SNAP subscales. The study by Keulen-de Vos and colleagues (2011) has shown that the informant SNAP scores revealed more PD pathology than the self-report SNAP in a sample of forensic patients. This is consistent with previous research that the validity of self-reports in offenders is often hampered because they tend to under-report psychopathology or malingering their symptoms (e.g., Cima, 2003; Ganellen, 2007; Sieswerda, Arntz, & Wolfis, 2005). At the same time, informants may be more accurate in evaluating externalizing pathology or ego-syntonic traits, whereas patients may be more accurate in evaluating internalizing pathology (Bradley, Hilsenroth, Guarnaccia, & Westen, 2007; Oltmanns & Turkheimer, 2006). Therefore, in our current study, we have chosen to combine the informant and patient scores to produce more valid composite scores which would not be unduly affected by patient's response bias but still include both patient and informant perspectives. The inter-rater reliabilities between the patient and information report were low to moderate with ICCs for average raters ranging from .12 to .40.

PCL-R. The Psychopathy Checklist-Revised (PCL-R; Hare, 2003) assesses a patient's levels of psychopathy based on 20 items that are rated on a 3-point Likert scale (0=item does not apply, 1= item applies to a certain degree, 2=item definitively applies). The total score ranges from 0 to 40. The items of the PCL-R can be divided into either two (Harpur, Hakstian, & Hare, 1988), three (Cooke & Michie, 2001) or four factors (Hare, 2003; Vitacco, Neumann, & Jackson, 2005). In our study, we have chosen the four-factor model; factor 1 refers to interpersonal characteristics (e.g., grandiose sense of self), facet 2 to affective features (e.g., lack of empathy), factor 3 to lifestyle characteristics (e.g., impulsivity) and factor 4 to antisocial behavior (e.g., lack of behavior control in adulthood) (Hare, 2003; Vitacco, et al., 2005).

The psychometric properties of the PCL-R have been well-established in several studies (e.g., Bodholdt, Richards, & Gacono, 2000; Hare, Clark, Grann, & Thornton, 2000; Hildebrand, de Ruiter, de Vogel, & van der Wolf, 2002). In a sub-sample of thirty-seven ($n = 37$) patients, the intra-class correlation coefficient for average raters of the PCL-R total score in our study was .95 (Factor 1 = .82; Factor 2 = .77; Factor 3 = .89; Factor 4 = .93). Ratings were also internally consistent (Cronbach's alpha for the PCL-R total score = .80). The ratings were conducted by research assistants and members of the diagnostic team.

HCR-20. The Historical, Clinical and Risk management schema (HCR-20; Webster, et al., 1997) is one of the most widely used structured professional judgment guidelines for the assessment of risk for future violence in adult offenders. It contains 20 items that are related to risk factors in the past, present and future. The items are divided across three subscales: historical-, clinical- and risk management scale. Each item is rated on a 3-point Likert scale ranging from 0 (absent) to 2 (definitely present). These items guide the rater to arrive at a final risk judgement (low, moderate, high), although a total score can also be calculated (Webster, et al., 1997). For the purpose of our study, the raters were asked to provide a final risk judgement for two types of situations: 1) the risk of future violence within the hospital ('risk judgement inside hospital'); and 2) the risk of future violence if the 'TBS'-order would be terminated immediately ('risk judgement outside hospital').

The HCR-20 has demonstrated excellent psychometric properties in multiple samples (e.g., Belfrage, And & Strand, 2000; Dolan & Khawaja, 2004; Douglas, Ogloff & Hart, 2003; Douglas & Reeves, 2010; De Vogel, 2005). In a sub-sample of sixteen ($n=16$) patients, the intra-class correlation coefficient for average raters of the HCR-20 risk judgement within the hospital was .81. There was perfect agreement for ratings of violence risk level outside of the hospital (ICC = 1.0). The ratings were conducted by trained research assistants.

SMI. The Schema Mode Inventory – short version (SMI; Young, et al., 2007) is a self-report questionnaire developed to assess the frequency of schema modes. The SMI short version contains 124 items that are associated with 16 schema modes; all items are rated on a 6-point Likert scale (1=never; 6=always). An average schema mode score can be calculated by dividing the scale sum score by the number of items that refer to a particular schema mode. In a recent study, the SMI short version has proven to be a reliable and valid instrument (Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010). For example, internal consistency for the subscales were good to excellent, with Cronbach's alpha ranging from .76 to .96. Also, convergent and divergent validity was supported (Lobbestael, et al., 2010).

With permission of J. Lobbestael, the first author of the short version of the SMI, we have adapted the instrument for the purpose of our RCT. Our goal was to create a shorter version of the instrument so that the administration time would reduce. The authors of the SMI-R kindly provided us with the output of a factor analysis that they had conducted. We selected the five items that loaded highest per schema mode; after factor

analysis, our adapted SMI consisted of 80 items instead of 124. Internal consistency for the subscales in our study were good to excellent, with Cronbach's alpha ranging from .69 to .90.

BIDR. The Balanced Inventory of Social Desirable Responding (BIDR; Paulhus, 1991) is a self-report questionnaire developed to assess social desirability. It contains 40 items that are rated on a 7-point Likert scale (1=not true; 7=very true) and that are divided into two scales: self-deception and impression management. Self-deception refers to an unconscious process to deny deviant thoughts and feeling so that one is favourably portrayed. Impression Management refers to the tendency to deliberately use inflated self-descriptions so that one is perceived favourably by others (Paulhus, 1991). These subscales are counterbalanced, thus consist of an equal number of positively and negatively keyed items (Li & Bagger, 2007; Paulhus, 1991). The BIDR is one of the most widely used instruments on social desirable responding. It has proven to be a valid and reliability instrument in various samples including forensic samples, with reliability coefficients ranging from .70 to .86. In terms of validity, the BIDR has been strongly associated with similar instruments (e.g., MMPI-2 Lie scale; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) (e.g., Cervellione, Lee & Bonanno, 2009; Lanyon & Carle, 2007; Li & Bagger, 2007).

Procedure

Approval for the RCT study was obtained by the Medical Ethical Committee of Maastricht University Hospital, The Netherlands. All patients are assessed at baseline, three and six months after the start of treatment, and thereafter every six months over the course of three years. The SCID-I, SIDP-IV, PCL-R and HCR-20 were conducted by psychologists or research assistants with extensive training in these instruments. This is a cross-sectional study; for the analyses reported here, we selected the first 88 patients enrolled in the study who had completed the baseline assessments of the SMI and SNAP, and of whom we had complete SCID-I, SIDP-IV, PCL-R and HCR-20 data. We did not make a distinction between the two treatment conditions (ST vs. TAU).

Statistical Analyses

We chose not to analyse schema mode models for paranoid personality disorder (PPD) and PD-NOS because of the small sample size of these disorders (e.g., 1 PPD patient and 17 PD-NOS patients). The level of absolute agreement between raters was assessed with reliability analyses using the intra-class correlation coefficient (ICC; Shrout & Fleiss, 1979), with a two-way random-effects model because the raters were not the same for every patient.

Because of the known tendency of forensic patients to have responses biases like socially desirable responding and malingering, we decided to investigate response biases as a preparatory and first step to analyzing the data. We conducted Pearson correlations

between the BIDR scales and the SMI total (i.e., the mean of the SMI scale scores), the SNAP-P total (i.e., the mean of the SNAP-P scale scores), and the SNAP-I total scores (i.e., the mean of the SNAP-I scale scores). Results revealed a significant relationship between the SMI total score and Impression management ($r=-.48$ with $p < .01$) and the total score of the BIDR ($r=-.45$ with $p < .01$) in a sub-sample of fifty ($n=50$) patients. We only had BIDR scores in 50 patients, because the BIDR was added later to the test battery, as a result, some patients did not receive it. There were no significant relationships between the SNAP-P total score and the BIDR scales whereas the SNAP-I total score revealed a negative relationship with Self-Deception ($r=-.35$ with $p < .05$). Results also revealed non-significant relationships between the BIDR and the SNAP overall composite score between patients and informants.

Based on these results, we decided to trim the data 10% to reduce tendencies to over-report and under-report pathology. Trimming is an unbiased procedure, in that it discards the top and bottom $x\%$ of the distribution (Keselman, Othman, Wilcox, & Fradette, 2004; Wilcox, 1998). Consequently, our sample size reduced to seventy ($n=70$) patients. We decided to use the SNAP-total composite score (i.e., mean of the SNAP-P and SNAP-I scores) for our further analyses so that both patient and informant scores were equally weighted, providing equal representation of patient and informant perspectives. Previous studies have shown that there are usually low levels of agreement between patient and informant based PD diagnoses, even in non-forensic samples (e.g., Allard & Grann, 2000; Lobbestael, Arntz, Löbbses, & Cima, 2009). Thus, combining the two should lead to more valid estimates of PD pathology.

Statistical analyses examining the skewness and kurtosis showed that our sample was normally distributed. To test for significant correlations between schema mode scores and PD pathology, we corrected our alpha for multiple comparisons according to the FDR (false discovery rate) correction for 42 tests (14 modes \times 3 PDs), using a p-value of $p < .01156$. Our tests for significant correlations between schema mode scores and violence risk, we corrected for 28 tests (14 modes \times 2 HCR-20 scores), using a p-value of $p < .01273$. With regard to our analyses for psychopathy, we used a p-value of $p < .01020$ (14 modes \times 5 PCL-R scores) (see Narum, 2006, pp. 787). Next, the relationship between schema modes and personality disorders were examined using Pearson correlations and linear regression analyses. Also, a factor analysis was carried out on all schema modes to test whether variables were inter-related. We used a varimax rotation to interpret the results (Field, 2005; Stevens, 1986). Finally, we tested which factors were related to and predictive for which personality disorders using Pearson correlations and linear regression analyses. All data was analyzed with the Statistical Package for the Social Sciences (SPSS, 2011), version 20.0.

Results

Schema modes and personality disorders

Table 1 displays the correlations between the SNAP personality disorder scale scores, HCR-20 recidivism risk judgments and schema modes. Consistent with our hypotheses, Angry Child, Impulsive Child, Detached Protector, Self-Aggrandizer, and Bully and Attack mode was significantly and positively correlated with Antisocial PD. However, contrary to our hypotheses, Vulnerable child mode was not significantly related to ASPD. Also consistent with our hypotheses, Borderline PD was significantly and positively related to Angry Child, Impulsive Child, Detached Protector, and Bully and Attack modes. However, BPD was also significantly and positively correlated with Compliant Surrenderer, Demanding Parent, Self-Aggrandizer, and Overcontroller modes. In contrast to our hypotheses, Vulnerable Child mode was not significantly related to BPD. Finally, in concordance to our expectation, Narcissistic PD was positively related to Detached Self-Soother and Self-Aggrandizer mode, though at a trend level of significance ($p=.013$ and $p=.012$, respectively). There was no significant relationship between NPD and Angry and Lonely child mode. Pearson correlations showed that, contrary to our hypotheses, none of the overcompensatory modes (i.e., Self-Aggrandizer, Bully and Attack, Overcontroller mode) were significantly related to the interpersonal facet of psychopathy. Also, Bully and Attack mode was unrelated to the antisocial facet. Consistent with our hypothesis, Impulsive child mode was significantly related to both the lifestyle ($r=.49$ with $p<.01$) and antisocial facet ($r=.34$ with $p<.01$) of psychopathy. However, the Angry Child mode was unrelated to these PCL-R facets. In contrast to our hypotheses, Happy Child mode was unrelated to the affective facet of psychopathy; the Healthy Adult mode relationship with the lifestyle and antisocial facet was also non-significant. Inconsistent to our hypothesis, none of the schema modes were related to the HCR-20 risk judgments within and outside the hospital.

Next, we performed linear regressions alternating ASPD, BPD and NPD as the dependent variable. The independent variables were the mode variables that had significant Pearson correlations with the specific PD diagnoses. Furthermore, when a SNAP PD scale was entered as dependent variable, the other two PD scales were entered as covariates. With regard to ASPD, the results showed that, when controlling for BPD and NPD, the combination of schema modes was a significant predictor for the Antisocial PD, explaining 57% (r^2 unadjusted) of the variance [$F(7, 40) = 7.76, p < .01$]. Impulsive Child mode was the only significant individual predictor ($\beta=.40, t=2.33, p = .025$). The contribution to the explained variance in BPD, when controlling for ASPD and NPD, was 66% (r^2 unadjusted) [$F(10, 35) = 6.80, p < .01$]. Demanding Parent mode was the only significant individual predictor ($\beta=.40, t=2.56, p = .015$). The schema modes explained 24% (r^2 unadjusted) of the variance in NPD [$F(4, 45) = 3.46, p = .015$], when controlling for ASPD and BPD. The individual modes did not reach significance in BPD and NPD.

Table 1. Correlations between personality disorders, violence risk and schema modes.

	VC	AC ¹	IC ²	LC	DP	DSS	CS	PP	DPa	SA	BA	OC	HA	HC
SMI														
Personality disorders														
SNAP Antisocial PD	-.08	.51**	.63**	-.11	.47**	.18	.18	-.21	.13	.43**	.49**	.32	-.01	-.31
SNAP Borderline PD	.31	.46**	.57**	.31	.56**	.30	.49*	-.00	.49*	.42**	.41**	.36*	-.01	-.26
SNAP Narcissistic PD	.06	.25	.14	.19	.32	.35+	.18	.20	.18	.36+	.27	.27	.04	-.14
Psychopathy														
PCL-R total score	-.24	.14	.26	-.14	.23	-.08	-.06	-.28	-.04	.13	.27	.10	-.07	-.29
PCL-R factor 1: interpersonal	-.22	.05	-.09	.10	.04	-.22	-.15	.05	-.08	-.04	.13	-.10	-.04	-.20
PCL-R factor 2: affective	-.22	.08	-.04	-.22	.25	-.09	-.10	-.12	-.13	.19	.02	.21	-.06	-.20
PCL-R factor 3: lifestyle	.01	.20	.49**	.11	.33+	.14	.16	-.13	.12	.16	.23	.22	-.06	-.15
PCL-R factor 4: antisocial	-.09	.07	.34**	.02	.18	.01	-.00	-.17	.06	.11	.15	.18	-.04	-.22
Recidivism Risk														
HCR-20 judgement inside hospital	-.06	.18	.20	-.01	.00	-.09	.00	-.04	-.06	.09	.16	.11	-.15	-.14
HCR-20 judgement outside hospital	.10	.05	.08	.05	-.12	-.06	-.01	-.01	.07	.02	.04	.12	-.05	-.08

N=70. VC=Vulnerable Child; AC=Angry Child; IC=Impulsive Child; LC=Lonely Child; DP=Detached Protector; DSS=Detached Self-Soother; CS=Compliant Surrenderer; AP=Angry Protector; CP=Complaining Protector; DPa=Demanding Parent; SA=Self-Aggrandizer; BA=Bully and Attack; CM=Conning and Manipulative; P=Predator; OC=Overcontroller; HA=Healthy Adult; HC=Happy Child. ¹= consists of average between Angry and Enraged child; ²= consists of average between Impulsive and Undisciplined Child. **p ≤ .01; * p ≤ .01156; † = .01156 < p < .02.

Table 2. Schema mode factor scores

Factors	Factor Loadings
<i>Factor 1 – Internalize (eigenvalue= 4.4; % variance=29.4, α =.88)</i>	
Vulnerable Child	.88
Lonely Child	.87
Compliant Surrenderer	.71
Detached Protector	.56
Detached Self-Soother	.74
Punitive Parent	.84
Demanding Parent	.71
<i>Factor 2 – Externalize (eigenvalue= 4.2; % variance=27.9; α = .88)</i>	
Angry Child	.83
Impulsive Child	.86
Self-Aggrandizer	.75
Bully and Attack	.89
Overcontroller	.69
<i>Factor 3 – Healthy (eigenvalue= 2.8; % variance=18.7; α = .78)</i>	
Happy Child	.96
Healthy Adult	.82

N=70. ¹= consists of average between Angry and Enraged child; ²= consists of average between Impulsive and Undisciplined Child. α = Cronbach's alpha.

Schema mode domains and personality disorders

An exploratory factor analyses was conducted using the principal components method with varimax rotation. Using the Kaiser (1960) criterion, the analyses yielded 3 components or factors with eigenvalues greater than 1, accounting for 76.1% of the total variance. The first component accounted for 29.4%, whereas components 2 and 3 accounted for 27.9% and 18.7%, respectively. Table 2 displays the factors, corresponding variables and factor loadings. Factor 1 consists of 7 items that refer to feelings of vulnerability, loneliness, internalized self-criticism and other attempts to suppress these painful feelings. Highest loading were for Vulnerable Child (.88), Lonely Child (.87) and Punitive Parent modes (.84). The weakest loading was for Detached Protector mode (.56). We labelled this factor as the *Internalizing Factor*. Factor 2 comprises 5 items that seems to address anger, impulsivity and overcompensatory behavior to cope with painful feelings. Highest loadings were for Angry Child (.83), Impulsive Child (.86) and Bully and Attack mode (.89); the weakest loading was for the Overcontroller mode (.69). We labelled this factor as the *Externalizing Factor*. Finally, factor 3 was labelled as the *Healthy Factor* because it consisted of 2 items that referred to healthy self-reflection and self-expression. The loadings for Happy Child and Healthy Adult modes were .96 and .82, respectively.

We conducted Pearson correlations between the SMI factor scores and the SNAP PD scales to examine their relationships with each other. Antisocial PD and Borderline PD

were significantly correlated with the Externalizing SMI factor ($r=.68$ and $r=.60$, both $p<.01$, respectively). The Internalizing SMI factor was related to BPD at a trend level of significance ($r=.34$, $p=.02$). There were no significant correlations between the SMI factors and NPD, nor between the SMI Healthy factor and the SNAP PD scales. With regard to psychopathy, the PCL-R lifestyle facet was positively correlated with the Externalizing SMI factor. The relationship between the PCL-R total score and the Externalizing SMI factor was at a trend level of significance ($p=.02$). There were no significant correlations between the other PCL-R facets or total score and the Internalizing and Healthy SMI factors.

Table 3. Correlations between schema mode factor and personality disorders.

	SMI		
	Factor 1 Internalize	Factor 2 Externalize	Factor 3 Healthy
Personality Disorder			
SNAP Antisocial PD	-.06	.68**	-.21
SNAP Borderline PD	.34†	.60**	-.13
SNAP Narcissistic PD	.23	.29	.02
Psychopathy			
PCL-R total score	-.22	.32†	-.25
PCL-R factor 1: interpersonal	-.10	.01	-.15
PCL-R factor 2: affective	-.26	.18	-.19
PCL-R factor 3: lifestyle	.10	.39**	-.20
PCL-R factor 4: antisocial	-.03	.24	-.14
Recidivism Risk			
HCR-20 judgment inside hospital	-.07	.17	-.21
HCR-20 judgment outside hospital	-.01	.04	-.07

Note. $N=70$. ** $p<.01$; * $p \leq .01156$; † $.01156 < p < .02$.

Pearson correlations that were conducted to examine the relationship between the SMI factor scores and the HCR-20 risk judgments within and outside the hospital, showed that there were no significant correlations between schema mode factors and violence risk estimates.

Next, we performed linear regression analyses to determine whether the three SMI factors were predictive for the three SNAP PD scales and the two HCR-20 risk judgments (within and outside hospital). When a SNAP PD scale was entered as independent variable, the other two PD scales were entered as covariates. Five simultaneous regressions were performed alternating ASPD, BPD, NPD, HCR-20 risk judgments within and outside the hospital as dependent variable and the SMI factor scores as predictors. We hy-

pothesized that ASPD would be predicted by the Externalizing factor, BPD by both the Internalizing and Externalizing factor and NPD by the Externalizing factor. In addition, we hypothesized that the HCR-20 risk judgments would be predicted by the Externalizing factor. Results are displayed in Table 4. With regard to Antisocial PD, when controlling for BPD and NPD, the results showed that low scores on the Internalizing ($\beta=-.34$, $t=-3.63$, $p <.01$) factor, high scores on the Externalizing ($\beta=.38$, $t=3.19$, $p <.01$) factor and low scores on Healthy SMI factor ($\beta=-.19$, $t=-2.18$, $p = .04$) were significant predictors for the ASPD, explaining 71% (r^2 unadjusted) of the variance [$F(5, 40) = 19.3$, $p < .01$]. High scores on the Internalizing ($\beta=.39$, $t=3.61$, $p < .01$) factor were a significant predictor for Borderline PD when controlling for ASPD and NPD, explaining .61% (r^2 unadjusted) of the variance [$F(5, 40) = 12.6$, $p < .01$]. With regard to NPD, analyses showed that, when controlling for ASPD and BPD, the combination of the three SMI factors explained 21% (r^2 unadjusted) of the variance, which was non-significant [$F(5, 40) = 2.15$, $p = .08$]. The Externalizing ($\beta=.30$, $t=2.37$, $p = .02$) SMI factor was a significant predictors for the HCR-20 risk judgments for violence risk within the hospital, explaining 16% (r^2 unadjusted) of the variance [$F(3, 53) = 3.39$, $p = .02$]. With regard to the HCR-20 risk judgments for violence risk outside the hospital, thus if the TBS-order would be terminated immediately, analyses showed that the three SMI factors explained 2% (r^2 unadjusted) of the variance, which was non-significant [$F(3, 52) = .27$, $p = .85$].

Table 4. Summary of linear regression for variables predicting personality disorders

a. Antisocial PD

	B	SE B	β
<i>Step 1</i>			
Borderline PD	.77	.14	.62**
Narcissistic PD	.22	.14	.19
<i>Step 2</i>			
Borderline PD	.60	.14	.48**
Narcissistic PD	.23	.11	.19*
Internalizing Factor	-.06	.04	-.34**
Externalizing Factor	.25	.04	.38**
Healthy Factor	-.08	.04	-.19*

Note. $R^2=.48$ for Step 1. $\Delta R^2=.22$ for Step 2. * $p <.05$, ** $p <.01$

b. Borderline PD

	B	SE B	β
<i>Step 1</i>			
Antisocial PD	.52	.10	.65**
Narcissistic PD	.04	.11	.04
<i>Step 2</i>			
Borderline PD	.50	.12	.63**
Narcissistic PD	-.08	.10	-.08
Internalizing Factor	.11	.04	.39**
Externalizing Factor	.04	.03	.15
Healthy Factor	.01	.03	.05

Note. $R^2=.44$ for Step 1. $\Delta R^2=.16$ for Step 2. * $p < .05$, ** $p < .01$

c. Narcissistic PD

	B	SE B	β
<i>Step 1</i>			
Antisocial PD	.27	.16	.31
Borderline PD	.06	.20	.06
<i>Step 2</i>			
Antisocial PD	.44	.21	.52*
Borderline PD	-.18	.24	-.17
Internalizing Factor	.11	.05	.33
Externalizing Factor	-.00	.06	-.01
Healthy Factor	.04	.04	.14

Note. $R^2=.13$ for Step 1. $\Delta R^2=.08$ for Step 2. * $p < .05$, ** $p < .01$

d. HCR-20 judgment inside hospital

	B	SE B	β
Constant	.77	.09	
Internalizing Factor	-.09	.08	-.13
Externalizing Factor	.20	.09	.30*
Healthy Factor	-.16	.08	-.25

Note. $R^2=.16$. * $p < .05$, ** $p < .01$

e. HCR-20 judgment outside hospital

	B	SE B	B
Constant	1.84	.06	
Internalizing Factor	.03	.06	.06
Externalizing Factor	.04	.06	.09
Healthy Factor	.02	.06	.06

Note. $R^2=.02$. * $p < .05$, ** $p < .01$

Discussion

Our study examined the construct validity of the schema mode concept in an offender sample with cluster B PDs. The findings revealed the existence of a three-factor higher-order structure of schema modes; schema modes can be categorized into an Internalizing, Externalizing and Healthy domain. Our study found that the hypothesized schema mode models were supported for ASPD, BPD and NPD, with a few notable exceptions. ASPD was characterized by Angry Child, Impulsive Child, Detached Protector, Self-Aggrandizer, and Bully and Attack mode. Although the lifestyle and antisocial features of psychopathy were correlated with Impulsive Child mode, this disorder was not characterized by overcompensation modes (i.e., Self-Aggrandizer, Bully and Attack). In the literature, a distinction between impulsive and predatory violence in psychopaths has been made (e.g., Cima, Tonnaer, & Lobbestael, 2007; Declercq, Willemsen, Audenaert, & Verhaege, 2012; McEllistrem, 2004). Perhaps the findings of our study suggest that our sample consisted of primarily impulsive psychopaths. BPD patients scores significantly higher on Angry Child, Impulsive Child, Detached Protector, and Bully and Attack modes. NPD was positively related to Detached Self-Soother and Self-Aggrandizer mode. The results of the factor analyses show a distinction between ASPD as a disorder involving low internalizing and high externalizing emotional states, and BPD as involving high internalizing states. In general, the findings support the mode models that are being used to guide ST for forensic cluster B PD patients.

There are a number of striking differences between the schema mode models between cluster B PD patients in forensic and non-forensic settings. First, the schema mode model for BPD used in non-forensic settings includes the presence of Punitive Parent mode. However, in our study, Punitive Parent mode was found not to correlate with BPD. A possible explanation is, that while BPD diagnoses are very common in forensic and general psychiatric settings; forensic patients with BPD often have co-morbid antisocial traits and often display externalized or other-directed aggression while non-forensic BPD patients usually display self-directed behavior (e.g., self-mutilation) (Keulen-de Vos, Bernstein, & Duggan, submitted). Second, vulnerable child mode was not correlated to ASPD, also lonely child was not associated with NPD. We hypothesized that both ASPD and NPD offenders make prominent use of overcompensation. According to ST theory, patients who overcompensate would not be aware of their vulnerable or lonely emotions, although such emotions might become susceptible to awareness when these modes are triggered under certain circumstances. Perhaps these vulnerable emotional states are not triggered when using a self-report to assess schema modes. For example, forensic patients may be more prone to impression management or other forms of social desirable response styles than non-forensic patients (Haywood, Grossman, & Hardy, 1993; Keulen-de Vos, et al., 2011). Research has shown that vulnerable emotions do seem to be involved in triggering criminal behavior in forensic patients with a cluster B personality disorders. For example, a study by Keulen-de Vos and colleagues investigated

whether schema modes play a role in criminal behavior (Keulen-de Vos, et al., submitted). Descriptions of patients' crimes and the events leading up to the crime were rated for schema modes in a sample of ninety-five (95) hospitalized cluster B PD offenders. The results showed that Vulnerable- and Lonely Child modes and the Detached Self-Soother mode were more apparent in the events leading up to criminal behavior than during the crime itself; whereas overcompensatory modes, especially Bully & Attack and Predator mode, were more present during the crimes itself than during the events leading up to the crimes (Keulen-de Vos, et al., submitted). These findings are also in line with the literature that shows that painful emotions can ignite violent behavior and aggression (Scheff, 2011; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010; Tangney, Stuewig, & Mashek, 2007). Another study showed that Vulnerable Child mode could be deliberately induced using an experimental protocol that was carried out by a drama therapist (Keulen-de Vos, Van den Broek, Bernstein, Vallentin, & Arntz, submitted). The protocol consisted of three experiential techniques, thus interventions aimed to bring emotions into active awareness, and two non-intervention sessions. The results indicate that patients showed significantly more vulnerability within all three experiential intervention sessions after the induction compared to baseline levels of vulnerability (Keulen-de Vos, van den Broek, et al., submitted). These studies show that under usual circumstances forensic PD patients might not be aware of vulnerable or lonely emotions, while under special circumstances they may become aware of them.

Our findings partly confirmed the hypothesis that schema modes were related to violence risk judgments. The individual schema modes were unrelated to recidivism risk, whereas the Externalizing SMI factor was predictive for higher judgments of violence risk inside the hospital. The latter is not surprising because the HCR-20 items that guide the rater to estimate the overall level of risk include items such as previous acting-out behavior and impulsiveness displayed within the hospital (Webster, et al., 1997). These items may be similar to the schema modes that comprise the Externalizing SMI factor (i.e., impulsive child).

The findings of this study should be considered in light of several limitations. First, the SNAP was administered to both patients and informants, whereas the SMI was administered to patients only. Patients may underreport their maladaptive emotional states. For examples, research has shown that forensic PD patients typically report fewer maladaptive schema modes and more healthy modes compared to their therapists' ratings of them (Lobbestael, et al., 2009). Second, our sample size is relatively small, and the majority of the patients were diagnosed with an Antisocial PD. Also some patients had several co-morbid PD diagnoses. This may hamper the generalizability of our findings. Third, both schema modes and personality pathology were (in part) based on self-report. Fourth, the relationship between schema modes, personality pathology and violence risk was examined using a cross-sectional design. Future studies with a longitudinal design are necessary to make definite statements about the predictive value of schema modes in personality disorders, and the value of schema modes in predicting violence risk.

This study was one of the first to examine three aspects of the construct validity of the schema mode concept in a forensic population. The findings suggest that there is higher-order structure with regard to schema modes as assessed with the SMI, and suggests that these factors distinguish between PDs. Our study also support the specific schema mode configurations for offenders with cluster B PDs, although there were a few notable exceptions. Finally, there appeared to be predictive relationship between Externalizing schema modes and recidivism risk. These findings have important theoretical and clinical implications. From a theoretical perspective, the findings contributed to the empirical evidence for one of Schema Therapy's most central theoretical frameworks in forensic settings. From a clinical perspective, this study contributes to a more accurate framework and understanding of an offender's PD pathology because it alerts therapists for those modes that are specific for different PDs. A better understanding of mode conceptualizations in an offender's personality pathology can set the stage for adjusting specific interventions for specific PDs. The study also raised questions about the accurateness of a self-report methodology. When working with these patients, therapists should still be alert for underlying vulnerable emotions that cause a patient to overcompensate these feelings. The findings may inspire therapists to deliberate trigger underlying vulnerable emotions and challenge patients' maladaptive coping styles.

Acknowledgements

Thanks are due to Ellen de Jonge, Merel van Vliet, Antoine Sint-Fiet, Eva de Spa, Marloes Hartkoorn, Annette Löbbs and Lotte de Geus for their help in collecting the data. We also thank Lieke Nentjes for kindly providing some of the BIDR data. We are grateful for the collaboration of the direction board, staff and patients of forensic psychiatric centres 'de Rooyse Wissel', locations Venray and Maastricht; the 'Oostvaarderskliniek' in Almere; the 'Van der Hoeven Kliniek' in Utrecht, 'Kijvelanden' in Poortugaal, 'Veldzicht' in Balkbrug, 'Mesdagkliniek' in Groningen, and 'FPK Assen' in Assen, all in The Netherlands. The authors gratefully acknowledge the support of the Dutch Ministry of Justice, the 'Expertisecentrum Forensische Psychiatrie' [Forensic Expertise Centre], and Maastricht University's Faculty of Psychology and Neuroscience.

Appendix A. *SMI schema modes and hypothesized corresponding PD.*

<i>Child Modes</i>		<i>Involve feeling, thinking, and acting in a “child-like” manner</i>	<i>Personality Disorder</i>
1.	Abandoned/Abused Child	Feels vulnerable, overwhelmed with painful feelings, such as anxiety, depression, grief, or shame/humiliation.	Antisocial PD Borderline PD
2.	Angry Child	Feels and expresses anger in an excessive way in response to perceived or real mistreatment, abandonment, humiliation, or frustration.	Antisocial PD Borderline PD Psychopathy
3.	Enraged Child	Feels and acts enraged for similar reasons as Angry Child, but loses control over aggression and attacks and destroys objects and humans.	Narcissistic PD
4.	Impulsive Child	Acts impulsively to get needs met, can be motivated by rebelliousness against maltreatment.	Antisocial PD Borderline PD Psychopathy
5.	Undisciplined Child	Acts like a spoiled child who “wants what he wants when he wants it”.	
6.	Lonely Child	Feels lonely and empty, as if no one can understand him, soothe or comfort him, or make contact with him.	Narcissistic PD
<i>Dysfunctional Coping Modes</i>		<i>Involve attempts to protect the self from pain through maladaptive forms of coping</i>	<i>Personality Disorder</i>
7.	Detached Protector	Uses emotional detachment to protect one from painful feelings; is unaware of his feelings, feels “nothing,” appears emotional distant, flat, or robotic; avoids getting close to other people	Antisocial PD Borderline PD
8.	Detached Self-Soother	Uses repetitive, “addictive,” or compulsive behaviors, or self-stimulating behaviors to calm and soothe oneself.	Narcissistic PD
9.	Compliant Surrenderer	Gives in to the real or perceived demands or expectations of other people in an anxious attempt to avoid pain or to get one’s needs met.	
<i>Maladaptive Parent Modes</i>		<i>Involve internalized dysfunctional parent “voices”</i>	<i>Personality Disorder</i>
10.	Punitive, Critical Parent	Internalized, critical or punishing parent voice; directs harsh criticism towards the self; induces feelings of shame or guilt	Antisocial PD Borderline PD

11. Demanding Parent	Directs impossibly high demands toward the self; pushes the self to do more, achieve more, never be satisfied with oneself.	
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<i>Over-Compensatory Modes</i>	<i>Involve extreme attempts to compensate for feelings of shame, loneliness, or vulnerability</i>	<i>Personality Disorder</i>
<hr/>		
12. Self-Aggrandizer Mode	Feels superior, special, or powerful; looks down on others; shows off or acts in a self-important, self-aggrandizing manner; concerned about appearances rather than feelings or real contact with others	Narcissistic PD Psychopathy
13. Bully and Attack Mode	Uses threats, intimidation, aggression, or coercion to get what he wants, including retaliating against others, or asserting ones dominant position; feels a sense of sadistic pleasure in attacking others	Antisocial PD Psychopathy
14. Over-Controller Mode	Aims to protect oneself from a perceived or real threat by focusing attention, ruminating, exercising extreme control, and using order, repetition, or rituals.	
<hr/>		
<i>Healthy Modes</i>	<i>involve healthy forms of emotional expression and adaptation</i>	
<hr/>		
15. Happy Child Mode	acts in a playful and spontaneous manner; experiences genuine pleasure in people or activities	
16. Healthy Adult Mode	reflects on himself and his situation in a balanced, realistic manner, is aware of his needs and feelings.	
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PART III

Schema Therapy Techniques

CHAPTER 7

Evoking schema modes in personality disordered offenders

Keulen-de Vos, M.E., van den Broek, E.P.A., Bernstein, D.P., Vallentin, R., & Arntz, A.
Evoking emotional states in personality disordered offenders: an experimental pilot
study of experiential drama therapy techniques. (Submitted).

Abstract

Emotional deficits are regularly associated with personality disordered (PD) offenders and the crimes that they have committed. A new focus in forensic treatment is the use of experiential techniques: techniques that have a strong focus on eliciting emotions. However, there is little empirical evidence on the effectiveness of experiential techniques in forensic PD patients. In our pilot study, we examined whether three experiential interventions in drama therapy are effective in evoking vulnerability and anger in nine cluster B PD offenders, that is, patients with DSM-IV Antisocial, Borderline, or Narcissistic PDs (APA, 1994). We used a 5 session protocol that consisted of an introduction session, a general experiential session, specific vulnerability-induction and anger-induction sessions, and a wrap-up session. Emotions were assessed using the Mode Observation Scale. Patients showed significantly more vulnerability within all three experiential intervention sessions, comparing peak mood after the experiential induction to baseline mood. In contrast, patients did not show more anger after the anger-induction procedure, or in the other two experiential sessions. Our findings, though preliminary, suggest that drama therapy methods can be effective in inducing vulnerable emotional states in forensic PD patients, a group that is often difficult to reach emotionally. We discuss the implications of these findings for clinical practice.

Introduction

Emotional disturbances are salient features among personality disorders (PD) (American Psychiatric Association, 1994; Kring & Bachorowski, 1999). PD diagnoses are very prevalent in offender populations where prevalence estimates range from moderate to high (Blackburn, Logan, Donnelly, & Renwick, 2003; Leue, Borchard & Hoyer, 2004; de Ruiter & Greeven, 2000). Emotional deficits are regularly associated with forensic PD patients and the crimes that they have committed (Day, 2009; Jolliffe & Farrington, 2004). For example, some crimes are characterized by a display of excessive anger or rage, while other crimes are more likely a result of a lack or over-control of emotions. The expression and experience of emotions may fluctuate over time; therefore the level of risk due to emotional deficits may also change over time (Douglas & Skeem, 2005; Howells, 2009). Given the risk posed by emotional disturbances, addressing these deficits should be an essential component of forensic treatment.

Therapeutic techniques that focus on subjective experiences, feelings and expression of emotions are called “experiential techniques.” These techniques aim to bring emotions into active awareness so that emotional disturbances can be addressed (Leahy, 2007; Mennin & Farach, 2007; Warwar, Links, Greenberg, & Bergmans, 2008). Typical experiential techniques are role-play, imagery and chair-work. Role-play involves re-enactment of original situations from the past or the present, or made-up situations. After the initial role-play, role reversal and rescripting is initiated (Kellogg, 2004; Landy, 2000). During rescripting, the therapist alters painful elements in the scenes that are relived, so that associated thoughts, feelings and behaviors are modified and change is facilitated (Rush, Grunert, Mendelsohn, & Smucker, 2000; Smucker & Niederee, 1995). In chair-work, the patient switches between chairs and is invited to have dialogues between different parts or emotions of the self. These ‘conversations’ can also take place between the patient and, for examples, a significant other (Kellogg, 2004; Paivio & Greenberg, 1995). Imagery is a technique in which the therapist asks the patient to visualize an upsetting childhood memory or traumatic image of their past. Patients are invited to explore their emotions and later on to intervene in the scene with new, healthier responses. Imagery aims to better understand emotions, and how they are related to current triggers (Rafaeli, Bernstein, Young, 2011; Smucker & Boos, 2005).

Techniques that focus on emotional states and its experience have a long history; they originate from Rogerian, existential and Gestalt traditions (Mennin & Farach, 2007; Greenberg, Watson, & Lietaer, 1998). Today, there is a renewed interest in experiential techniques (sometimes also referred to as “emotion focused” techniques). For example, according to Emotion-Focused Therapy ([EFT]; Greenberg, 2002), emotions are intertwined with our basic needs, and create the blueprint of how we see ourselves and the world (Greenberg & Berger, 2001; Pos & Greenberg, 2012). This blueprint can turn maladaptive when needs are frustrated and strong affect is ignored or suppressed. The aim of EFT is to reflect on emotional experiences and increase emotional awareness and regu-

lation. Thus, emotions are both the target and the agent for change (Greenberg, 2006; Greenberg & Pascual-Leone, 2006). Several other forms of psychotherapy also target mental states, including aspects of emotional experience, including Cognitive Analytic Therapy ([CAT]; Ryle, 1995; Ryle & Kerr, 2002), Metacognitive Interpersonal Therapy ([MIT]; Dimaggio, Semerari, Carcione, Nicolo, & Procacci, 2007), and Mentalization Based Treatment ([MBT]; Bateman & Fonagy, 2004). Arts therapies represent another important therapeutic approach that uses experiential techniques to work with emotions. Arts therapies refer to music, drama, art and dance and movement therapies (e.g., Carr, et al., 2012). These therapies are experience based; they use experiential techniques to help patients access and reprocess emotions. They evoke feelings and explore interpersonal interactions using artistic media (Malchiodi, 2003). In this study we especially focus on drama therapy. Drama therapy uses different elements and techniques that originate from theatre such as masks, puppets, role-play, and improvisations. These methods are based on the belief that direct experience, rather than talking about experiences, will enable the patient to re-experience inner feelings and thoughts (Landy, 2000). Also, play gives the opportunity to experiment, to find out more about a patient's inner feelings and thoughts (Johnson, 1991).

There is little empirical evidence that substantiates the effectiveness of experiential techniques, although there is a growing body of literature on imagery. Research has shown that visual representations of events trigger more emotions than verbal representations do (Arntz & Weertman, 1999; Holmes & Mathews, 2005; Holmes, Mathews, Dalgleish, & Mackintosh, 2006; Holmes, Mathews, Mackintosh, & Dalgleish, 2008). In a pilot study, van den Broek, Keulen-de Vos and Bernstein (2011) examined whether Arts therapies are more effective in evoking emotional states than standard psychotherapies in 10 male forensic cluster B PD patients. Patients were randomized to either Schema Therapy (ST; Young, Klosko, & Weishaar, 2003) or 'Treatment As Usual' (TAU), and also received equivalent Arts therapy sessions. Patients showed significantly more healthy emotional states (e.g., spontaneous joy and pleasure, attentive self-reflection) in Arts therapy sessions than in their psychotherapy sessions. Also, patients receiving ST, in both psychotherapy and arts therapy, showed twice as much emotional vulnerability as patients receiving TAU (Van den Broek, et al., 2011). These findings, though preliminary, suggest that arts therapies in general, as well as ST in both psychotherapy and arts therapy, may be effective at eliciting emotions in forensic PD patients. However, this study did not examine the effectiveness of any specific Arts therapy techniques at evoking emotional states.

Our study examined whether vulnerability and anger could be deliberately evoked in forensic cluster B PD patients using an experimental protocol that consisted of experiential techniques carried out by drama therapists. We aimed to evoke two specific emotional states: vulnerable emotions (e.g., sadness and fear), and anger. We chose these two states because they play an important role in reactive aggression, for example, in cases where offenders stalk or attack their partners in response to feelings such shame, mis-

trust, or abandonment (Bernstein, Arntz, & de Vos, 2007). Also, vulnerability and anger are basic emotions that forensic patients have difficulty managing. For example, our research suggests that vulnerability and anger are often triggers for acts of violence, which can be seen as a maladaptive means of coping with these emotional states (Keulen-de Vos, Bernstein, & Arntz, in press). PD offenders often remain emotionally detached or avoidant in standard verbal psychotherapy sessions, making it difficult to reach them emotionally. Research has shown the cognitive schemas are most susceptible to modification when patients' schemas are activated ("hot cognitions") (David & Szentagotai, 2006). When patients remain emotionally distant or detached, it therefore makes it difficult to modify the cognitive distortions that are involved in their offenses. Drama therapy interventions activate patients emotionally, triggering their schemas, so that therapists can more easily modify them. These types of interventions are being increasingly used in forensic settings with PD offenders, although these interventions have not previously been studied using experimental paradigms.

We operationalized emotional states in terms of 'schema modes'. Schema modes are a central concepts in Schema Therapy (ST; Rafaeli, et al., 2011; Young, et al., 2003), an integrative form of therapy developed specifically for PD patients, which incorporates experiential techniques similar to those in drama therapy (Blokland-Vos, Günther, & van Mook, 2003; Griffith, 2003; Weertman, 2008). ST defines schema modes as emotional states that dominate a person's thinking, feeling and behavior at a given moment in time. According to ST theory, there are 4 types of schema modes: Child Modes, Maladaptive Coping Modes, Dysfunctional Parent Modes, and Healthy Modes. Child Modes (e.g., Vulnerable Child mode, Angry Child mode) involve the direct experience of primary, negative emotions, such as sadness, fear, or shame. Maladaptive Coping Modes (e.g., Detached Protector Mode) involve the use of dysfunctional forms of coping with emotion (e.g., avoiding emotions). Parent Modes (e.g., Punitive Parent Mode) involve self-directed criticism or demands. Healthy Modes (e.g., Healthy Adult Mode, Happy Child Mode) involve healthy self-reflection and the experience of joyful, playful emotions.

We chose to assess schema modes because the mode concept includes the specific emotional states we wished to induce in this study via drama therapy, namely emotional vulnerability (Vulnerable Child Mode) and anger (Angry Child Mode). Vulnerable Child Mode is an emotional state in which one feels vulnerable or overwhelmed with painful feelings, such as anxiety, grief, or humiliation. Angry Child Mode is a state in which one feels and expresses anger in an uncontrolled manner in response to perceived or real mistreatment or frustration (Rafaeli, et al, 2011; Young, et al, 2003).

The aim of the study was a very specific one: to determine whether particular drama therapy techniques are capable of eliciting vulnerable emotions and anger, respectively, in forensic cluster B PD patients. Although our previous research (van den Broek, et al., 2011) and anecdotal evidence from drama therapists suggests that this might be the case, no previous study has examined the ability of drama therapy techniques to evoke emotions in forensic patients. Thus, demonstrating that certain experiential drama therapy

techniques can evoke emotions is a first step towards validating these approaches for use in forensic populations. We used a five session experimental protocol that consisted of an introduction session, three experimental sessions and a 'wrap-up' session. The experimental interventions were ones that are frequently used by drama therapists and were adapted by one of us (E.P.A.B.), a senior drama therapist, for use in this protocol. We hypothesized that the vulnerability-eliciting intervention would evoke more vulnerable emotions (Vulnerable Child mode), comparing ratings made before and after the induction was initiated. We also hypothesized that the anger-eliciting intervention would evoke more anger (Angry Child mode), comparing ratings before and after the induction was initiated. All sessions were videotaped and rated with the Mode Observational Scale (MOS; Bernstein, de Vos, & van den Broek, 2009), an instrument we have developed and used in our previous study (van den Broek, et al., 2011) to rate schema modes.

Method

Setting

This study was conducted at Forensic Psychiatric Centre 'de Rooyse Wissel' (dRW), a maximum secure hospital in The Netherlands. This hospital provides treatment for mentally disordered offenders who are sentenced under the punitive measure '*Ter Beschikking Stelling*' [TBS: disposal to be treated on behalf of the state]. Under Dutch criminal law, offenders can be sentenced to involuntary treatment if their accountability for their crimes is judged to be diminished because of a mental disorder. Most common mental illnesses in secure settings are psychotic disorders, paraphilias, substance related disorders, and personality disorders (Hildebrand & de Ruiters, 2004; Isherwood & Brooke, 2001; Timmerman & Emmelkamp, 2001). In The Netherlands, on average, the length of stay in forensic hospitals is 8 to 9 years (Brand & Van Gemmert, 2009), during which the patients engage in a multi-modal treatment.

Sample

The sample consisted of 9 male offenders who were admitted at de Rooyse Wissel. The study was approved by the ethical committee of Maastricht University's Faculty of Psychology and Neuroscience, and the dRW's internal research committee. Patients gave informed consent for participating in the study. Patients who were diagnosed with a cluster B PD were included in the study. Exclusion of the study occurred when patients met the following criteria: (a) the presence of current psychotic symptoms, (b) schizophrenia or bipolar disorder, (c) current drug or alcohol dependence (but not abuse), (d) low intelligence (i.e., Full Scale IQ < 80), (e) serious neurological impairment (e.g., dementia), and (f) an autistic spectrum disorder (e.g., autism, Asperger's disorder). There were no exclusionary criteria with regard to psychiatric medications or other medications. With regard to psychiatric medications, two patients (22.2%) were prescribed the

anti-depressive medications Effexor® and Citalopram®; a third patient was prescribed the detoxification medication (Naltrexone®) because of chronic alcohol dependency. Four patients (44.4%) were prescribed somatic medications for either hypertension (Enalapril®), headaches (Paracetamol®), or asthma (Salbutamol®).

Table 1 displays the descriptive information of our sample. The mean age of the sample at time of enrolment was 38.2 years ($SD=7.6$). The average length of stay in dRW at the time of the study was 24.4 months ($SD = 8.7$). Regarding the type of crime committed, 4 patients (44.4%) were convicted for (attempted) murder or manslaughter, 1 (11.1%) for bodily harm, and 4 (44.4%) for sexual offences. No patients were convicted for property crimes or arson. Patients' mean total IQ score, as measured with the Wechsler Adult Intelligence Scale–III (WAIS-III; Wechsler, 1997), was 103.1 ($SD = 9.6$).

Among DSM-IV axis I disorders (APA, 1994), the two primary diagnoses were substance use related disorders (77.8%, $n=7$) and paraphilic disorders (44.4%, $n=4$). Just one patient was classified with a mood disorder (11.1%). Among DSM-IV axis II (APA, 1994), 44.4% ($n=4$) of the patients were diagnosed with an Antisocial PD and 44.4% ($n=4$) with a Borderline PD. One patient had more than one PD diagnosis: he was diagnosed with Antisocial, Borderline, and Narcissistic PDs. The mean psychopathy score in this sample, as measured with the Psychopathy Checklist-Revised (PCL-R; Hare, 1991), was 18.6 ($SD = 7.9$). Three patients (33.3%) had scores indicative of psychopathy when using a cut-off of ≥ 25 : patients 4 (PCL-R = 25), 6 (PCL-R = 28.4), and 7 (PCL-R = 32) (Table 1).

Measures

DSM-IV diagnoses, psychopathy and IQ scores were retrieved from existing patient files. The DSM-IV diagnoses were based on diagnoses made by psychiatrists. Information regarding psychopathy and IQ were based on psychological assessments performed by members of dRW's diagnostic department of whom all members were trained as clinical psychologists. Patients were diagnosed for psychopathy with the *Psychopathy Checklist-Revised* (PCL-R; Hare, 1991) and IQ with the *Wechsler Adult Intelligence Scale–III* (WAIS-III; Wechsler, 1997). Both instruments have been translated and validated in Dutch samples, and have demonstrated good reliability and validity in numerous studies (e.g., Hare, Clark, Grann, & Thornton, 2000; Kosson, Smith, & Newman, 1990; Wechsler, 1997).

Mode Observation Scale (MOS; Bernstein, et al., 2009a). The MOS is an instrument that assesses the intensity of schema modes in psychiatric and forensic patients, based on observations of clinical situations (e.g., individual or group therapy session). We chose an observation-based instrument instead of a self-report measure of schema modes because forensic patients' self-reports are often unreliable (Cima, 2003; Keulen-de Vos, Bernstein, Clark, Arntz, Lucker, & de Spa, 2011; Lobbestael, Arntz, Löbbes, & Cima, 2009; Sieswerda, Arntz, & Wolfis, 2005). The MOS rates 18 schema modes, including the 5 modes we assessed for this study, on a 5-point Likert-type scale (1=absent; 5=extremely intense). The modes are rated based on their maximum intensity within a predetermined

rating interval (e.g., one minute intervals). Detailed descriptions of the modes are provided in a manual.

The MOS has demonstrated acceptable to good initial inter-rater reliability in forensic samples for most schema modes (Van den Broek, et al., 2011; Keulen-de Vos, Bernstein, & Arntz, 2010). In the present study, the ICCs for the average of two raters for the specific modes used in this study were .94 for Vulnerable Child mode and .86 for Angry Child mode.

Procedure

Drama Therapy Protocol. We created a protocol for the purpose of our study in which the drama therapist uses different techniques in drama and play. These techniques are based on general drama therapy techniques (e.g., Dayton, 1994; Landy, 1994). The protocol consisted of 5 individual one-hour therapy sessions. The order of sessions 3 and 4 was counterbalanced in order to prevent order effects. Patients with even ID numbers received the following order of sessions: session 1, session 2, session 3, session 4, session 5. Patient with uneven ID numbers received session 1, session 2, session 4, session 3, session 5.

Session 1 – Introduction. In this session, the basic rules of drama therapy, such as play versus reality, are introduced and explained. The drama therapist also introduces the 4 basic emotions: anger, happiness, sadness and anxiety. By picking cards, the patient is invited to play these emotions together with the drama therapist. At the end of this session, the drama therapists evaluates what the patient experienced, for example, how he felt and what he thought.

Session 2 – Family table. In this session the patient is asked to explain his home situation with family members or other caregivers when he was a child. The patient visualizes his family at a dinner table and is invited to talk about their names, their characteristics, their gestures, and specifically how they behaved towards the patient at the time. Using props and furniture, the home setting is created in a way so that it has maximum similarities to the memory of the patient so that it may activate some of the patient's childhood and core emotions. In other words, the enactment in session 2 provides the therapist a clear understanding of the patient's potential (dysfunctional) schemas and emotional states that originate from childhood. At the end of this session, the patient is asked how he experienced it, how he feels about this childhood situation.

Session 3 – Vulnerability Induction. Based on the previous session, the drama therapist has a sense of which of the patient's needs have not been met in the past. Often these needs are very basic, such as warmth, trust, care and protection. The therapist asks the patient for a specific situation in which a particular need was neglected or violated. For example, the patient wanted to share his worries with his mother but she ignored him. In this case, the therapist will play the mother while the patient plays himself. When the scene is first enacted, the therapist observes the patient, and the matter in which his needs are not met. The therapist deliberately gives room for more vulnerable sides of the

patient to be expressed. After playing the scene, the therapist will ask the patient about his emotions and his needs. After this, the therapist asks the patient to switch roles. The therapist will play the role of the patient, the patient the role of 'the other person'. Then, role-play continues with rescripting or changing the course of the original situation. A more positive atmosphere is created in which the needs of the patient are met instead. The aim of this session is to access a patient's hidden feelings of vulnerability. At the end of this session, the patient is asked to reflect upon the scene, his own thoughts and feelings.

Session 4 – Anger Induction. In this session, the patient is asked about a recent situation in which he felt really angry. The drama therapist and patient discuss who were involved in the situation, what happened and why, and how did this particular situation made patient think and feel. Often the patient felt misunderstood, hurt, made a fool of, or humiliated by others. The patient is asked to play the 'angry' part, while the therapist will play the object of his anger/conflict in the scene. The scene is set in a fictional way, which means that details are changed. The patient is asked to exaggerate what has happened in real life. After this, the therapist asks the patient to switch roles. The therapist will play the role of the 'angry one', the patient the role of the object of anger/conflict. In this scene also the therapist will exaggerate the conflict and the expression of emotions in order to access more problematic emotions (e.g., anger, frustration) that are blocked. The aim of this session is to access a patient's repressed anger. At the end of this session, the therapist and patient evaluate the play and focus on any real emotion that may have occurred during the play.

Session 5 – 'Wrap up'. In this last session, the therapist and patient look back on the previous sessions, and the patient reflects on what has been played and how this was experienced by him. The drama therapist also reflects and gives feedback on the sessions.

The therapist took a number of steps to insure that patients had no undue adverse reactions to the drama therapy sessions. First, she always gradually introduced the interventions and made frequent use of "time-outs" to safeguard a patient's safety (i.e., a procedure where the patient or therapist can stop the intervention if, for example, the patient becomes overwhelmed by his emotions). In addition, the therapist checked up on each patient after every session, and communicated regularly with ward staff to inform them of any reactions that the patients had, so that they could be dealt with appropriately. In one case, a patient ended a session early because of feeling upset during the protocol, and became overtly angry after returning to his room. However, the patient was able to discuss these feelings, and continued his participation in the protocol the following week. There were no other instances of adverse reactions to the drama therapy protocol.

The drama therapist who conducted the protocol (R.V.) was trained and regularly supervised by a senior drama therapist (E.P.A.B.). The drama therapist was introduced to the exercises and the (alternating) order of the sessions. For the purpose of our study,

she was specifically asked not to talk about schema modes or use schema therapy language, to make sure that the sessions were purely drama therapeutic and not a variation of schema therapy.

Rating Schema Modes. The drama therapist videotaped all sessions so that they could be rated by independent raters. Tapes were rated by three trained master students from Maastricht University. They received two days of training by two of the authors (D.P.B. and E.P.A.B) which consisted of reading relevant literature and watching videotapes about schema therapy, schema modes, and arts therapies in forensic sessions. After watching the tapes, several emotional states were role-played so that the students got a clear sense of how particular schema modes can be visible in patients. The students also rated arts therapy tapes together with the trainer (E.P.A.B) and discussed their ratings afterwards. The students then independently rated 5 tapes that were also rated by the trainer (E.P.A.B). These practice tape ratings were tested for inter-rater reliability; the reliabilities for Vulnerable Child mode and Angry Child mode were excellent, with ICCs of .99 and .87, respectively. For our study, the students rated the videotapes of the sessions on a minute-by-minute basis; sessions lasted 45 minutes on average. The ICCs for the sessions in our study were .94 for Vulnerable Child mode and .86 for Angry Child mode. These findings are consistent with previous studies that demonstrated acceptable to good initial inter-rater reliability in forensic samples for most schema modes (Van den Broek, et al., 2011; Keulen-de Vos, Bernstein, & Arntz, 2010).

The students were blind to any information about the patients. They watched the tapes together but rated the tapes independently from one another. We averaged the ratings of pairs of student raters.

Statistical analyses

The order of the session 3 (vulnerability induction) and 4 (anger induction) was counter-balanced to avoid order effects. However, our sample consisted of an uneven number of patients which resulted in an incomplete counterbalance: the different ordering of the sessions was not equally represented. We conducted a repeated measures ANOVA with 'order of sessions' as an extra factor to examine whether this had an influence on our results. Results were non-significant, therefore, we have disregarded the inequality in counterbalancing in our further analyses. Our counterbalancing did not include session 2, because it is an assessment and exploration session, and needs to be conducted prior to sessions 3 and 4.

For the experimental sessions, we calculated baseline and peak schema mode scores, because we were interested whether there would be more mode intensity as a result of the induction. Baseline scores reflected the average of the ratings that were made prior to the start of the intervention. Peak scores reflected the highest rating made after the emotion was induced. One of us (M.K.) viewed the tapes to determine the point at which the intervention began.

We chose to analyse the data by aggregating the data across patients instead of a single subject analysis because $n=1$ analyses prohibit possible generalizability of the findings. Finally, the power of the analyses we conducted is similar to that of a multi-subjects approach. We did not choose a repeated measures ANOVA because the omnibus F-test of the null hypothesis that all sessions are equal has low power (e.g., five sessions of nine patients). We also chose against the use of a multivariate ANOVA because of our small sample size (e.g., more measurements than participants, which leads to collinearity). Instead, we chose to test three comparisons that corresponded to our three a priori hypotheses, using paired-samples t -tests: comparing vulnerability and anger peak and baseline scores in the family table session (session 2), the vulnerability-induction session (session 3) and anger-induction session (session 4) (i.e., one comparison using vulnerability scores, and the other using anger scores).

To test for significant differences, we used paired-samples t -tests with a two-tailed alpha of .05. We corrected our alpha according to the FDR (false discovery rate) correction for 6 tests (3 sessions \times 2 emotions), using a p -value of $p < .02$ (see Narum, 2006, pp. 787). All data were analyzed with the Statistical Package for the Social Sciences (SPSS, 2005), version 13.0.

Results

Vulnerability and Anger

The minute by minute Vulnerable Child and Angry Child mode scores across the three experimental sessions is depicted in Figure 1. Patients experienced significantly greater emotions in the family table session (session 2) after the intervention was initiated. Specifically, the intervention elicited more Vulnerable Child mode ($M=1.88$, $SE=.28$) when compared to the baseline score ($M=1.0$, $SE=.00$, $t(7)=-3.13$, $p=.017$, $r=.76$). In contrast, patients did not experience significantly more Angry Child mode after the intervention ($M=1.25$, $SE=.25$) was initiated than prior it ($M=1.00$, $SE=.00$, $t(7)=-1.00$, $p=.35$, $r=.35$).

Consistent with our hypothesis, within the vulnerability-induction session (session 3), patients experienced significantly more intense Vulnerable Child mode after the intervention that was intended to elicit this emotional state ($M=2.06$, $SE=.30$) than prior to the induction ($M=1.09$, $SE=.06$, $t(7)=3.26$, $p=.014$, $r=.78$). Patients also experienced more Angry Child mode in the vulnerability session after the intervention was initiated ($M=1.56$, $SE=.26$) than prior to the induction ($M=1.00$, $SE=.00$, $t(7)=2.18$, $r=.64$), though this finding was at a trend level of significance ($p=.06$).

In contrast to our hypothesis, patients experienced significantly more Vulnerable Child mode in the anger-induction session (session 4) after the intervention was initiated ($M=2.33$, $SE=.26$) than prior to the intervention ($M=1.00$, $SE=.00$, $t(8)=5.06$, $p=.001$, $r=.87$). Also, patients did not experience significantly more Angry Child mode after the inter-

vention that was intended to elicit this emotional state ($M= 1.17, SE=.12$) than prior to the induction ($M= 1.00, SE=.00, t(8)=1.41, p=.19, r=.45$).

Further, on an exploratory basis, we compared vulnerability in each experimental session to all of the remaining sessions, using a Bonferroni-corrected p-value of $p<.0125$ (i.e., $.05/4$). Patients showed greater intensity of vulnerability in the vulnerability-induction session ($M= 2.06, SE=.31$) than in the wrap-up session ($M= 1.25, SE=.13, t(7)= -2.88, r=.84$), a difference that was not statistically significant after Bonferroni correction ($p=.024$). Patients showed significantly more Vulnerable Child mode in the anger-induction session (session 4) ($M= 2.33, SE=.26$), than in the wrap-up session ($M=1.22, SE=.12, t(8)=3.73, p=.006, r=.80$). Patients in the family table session (session 2) did not show more vulnerability than in the other four sessions. There was little Angry Child mode observed in any of the sessions, so we did not conduct statistical analyses comparing levels of anger across the different sessions.

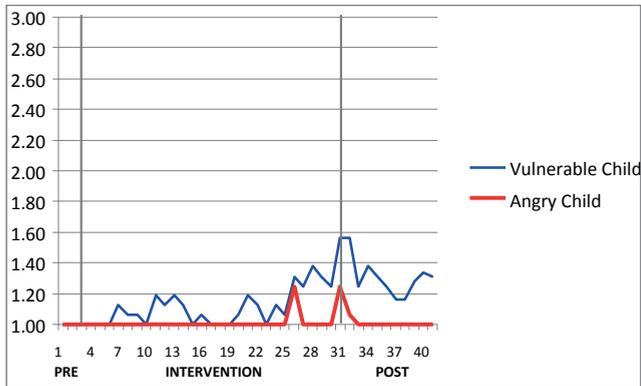
Table 1. Descriptive information and peak vulnerability scores per patient

Patient	Age	Axis II Diagnoses	PCL-R	Session 2		Session 3		Session 4	
				Vulnerability peak score	Anger peak score	Vulnerability peak score	Anger peak score	Vulnerability peak score	Anger peak score
P1	48	BPD	9.0	3.0	3.0	2.5	1.0	4.0	1.0
P2	32	ASPD	14.0	1.0	1.0	1.0	2.0	2.5	1.0
P3	46	BPD	15.8	1.0	1.0	- ^a	- ^a	1.0	1.0
P4	45	ASPD	25.0	2.5	1.0	2.0	1.0	1.0	1.0
P5	30	BPD	13.7	2.0	1.0	3.0	1.0	2.5	1.0
P6	27	ASPD	28.4	1.0	1.0	1.0	3.0	2.0	1.0
P7	39	ASPD, BPD, NPD	32.0	2.5	1.0	3.0	1.0	1.5	1.5
P8	42	BPD	12.0	- ^a	- ^a	1.0	2.0	3.0	1.0
P9	35	ASPD	17.9	2.0	1.0	2.0	2.5	1.0	2.0

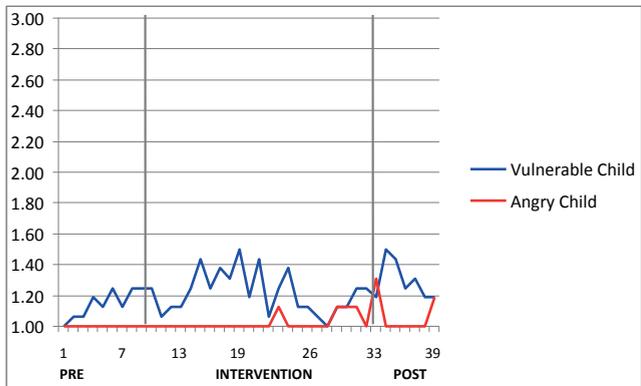
Note. ASPD=Antisocial PD; BPD=Borderline PD; NPD=Narcissistic PD. a = data is missing because the video tapes were defective. Session 2 = family table intervention. Session 3 = vulnerability induction. Session 4 = anger induction.

Figure 1. Average minute by minute mode scores for the three experimental sessions.

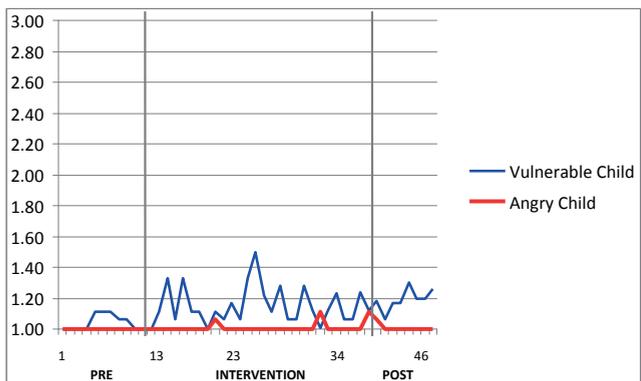
Session 2 (family table session)



Session 3 (vulnerability session)



Session 4 (anger session)



Discussion

Forensic patients with cluster B personality disorders showed significantly more vulnerability after the experimental interventions were initiated, compared to baseline mode ratings in the same sessions. This was true for all three experimental drama therapy interventions – the family table, vulnerability-induction, and anger-induction – and not only the session that was intended to induce vulnerability. Thus, all 3 of these procedures evoked vulnerability in these patients, a finding that is striking, given that forensic patients with personality disorders are often characterized as being quite emotionally detached. Although the peak levels of vulnerability were of low to moderate intensity, this is still noteworthy, given that these patients had only had one session of contact with the drama therapist before the experimental interventions were initiated. Moreover, the emotions experienced by these patients during the experimental sessions may have been more intense than their outward manifestations suggested. In a post-protocol debriefing, the patients reported having found the drama therapy interventions to be quite emotional. Thus, given the observation that many forensic patients with personality disorders remain quite emotionally detached, even after months or years of psychotherapy, our findings suggest that drama therapy interventions may be particularly rapid and effective in accessing vulnerable emotions in these patients.

Our findings are in line with the guiding assumption of drama therapy that experience, as evoked through role play, enables the patient to get in touch with his emotions (Malchiodi, 2003), and is consistent with a recent study showing that drama therapy increases emotional expression (Blacker, Watson, & Beech, 2008). Our findings support the idea that drama therapy interventions are effective in evoking vulnerable emotions in forensic patients, including in some psychopathic patients, who are typically very emotionally detached. The emotional detachment of these patients contributes to the difficulties that many treatment providers experience in engaging them in therapy (Howells, Day, & Wright, 2004; Howells & Day, 2006). Traditional verbal forms of psychotherapies may be limited in their ability to reach these patients emotionally (Bergman, 2000; Greenwald, 1992). Drama therapy, which utilizes experiential interventions to induce emotions, may be a more effective alternative or ancillary form of therapy with this challenging patient population.

We were not able to confirm our hypothesis with respect to anger. The anger-induction intervention did not elicit more anger compared to baseline levels. Although some anger was observed in the vulnerability induction session, this finding was only at a trend level of significance, and levels of anger appeared to be lower than those of vulnerability in our sample. There are several possible explanations for why the anger-induction session failed to elicit anger. First, some of the patients in our sample might be characterized as over-controlled. Over-controlled individuals typically inhibit their anger expressions excessively, and use avoidance as a strategy for coping with their emotions (Davey, Day, & Howells, 2005; D'Silva & Duggan, 2010; Greene & Coles, 1994). This

was evident in one of the participants in our study, who aborted the session because he felt too overwhelmed by anger. After the session, he experienced an angry outburst during which he destroyed paintings in his room. This observation suggests that when over-controlled patients are no longer able to use avoidance as a coping strategy, their control over emotions may break down altogether. Second, certain patients may not have felt comfortable expressing anger in the forensic setting. Within a forensic hospital, there is a restrictive atmosphere in which there are rules with regard to expression of anger and aggression (Lemerise & Dodge, 2000; Mobley, 2006). For example, display of verbal or physical anger has social consequences in terms of privileges that patients may or may not have (Gross, 2001). These consequences may potentially lead to social desirable responding and thus, in this case, to suppression of anger (e.g., Haywood, Grossman, & Hardy, 1993; Sieswerda, et al., 2005).

Limitations. Several limitations of this study should be acknowledged. First, this study was an initial investigation of whether emotional states could be deliberately induced in forensic cluster B PD patients. It was based on a small sample which affects the generalizability and possible power of our findings. However, with respect to power, at least for the vulnerability intervention, this small sample was sufficient to show a significant difference between interventions. Also, due to the small sample size, we were unable to compare different categories of PDs and non-PD offenders. Second, although the absolute value of the levels of vulnerability and anger is low, they are just the external manifestations of these schema modes. In other words, we had only one outcome measure, the MOS, which relied on observational ratings. Although these ratings are informative with respect to the expression of emotions, they may not be indicative of the patient's experience of emotions. The subjective emotional experience of the patients may be more intense. Therefore results might have differed had we also used self-reports of emotion. Also, emotions can be expressed in subtle ways. For example, vulnerability may be expressed by teary eyes, or 'breaking' of the voice, and feeling 'choked up', whereas anger may be expressed by overt aggression. In future studies, we will add additional measures of emotion to our protocol, and investigate different aspects of emotion (e.g., subjective mood, physiological arousal, cognitive aspects of emotion) that are evoked by drama therapy techniques. Third, the anger induction we used may not have been provocative enough. There are several ways of inducing anger, such as film, an interview, punishment and harassment (e.g., Gross & Levenson, 1995; Philippot, 1993; Stemmler, 1997). For instance, a recent study by Lobbestael, Arntz & Wiers (2008) has shown that harassment, or critical statements, was most effective in inducing anger. Perhaps our anger induction session did not contain enough (appropriate) provocation. Fourth, the anger-induction sessions focuses on a recent situation, while this is not the case in the vulnerable-induction and family table session. This may have influenced our findings; perhaps the use of childhood experiences would have elicited more anger. Fifth, there was only one therapist who participated in our study, which hampers the ability to separate the effects of the interventions from those of the therapist. For exam-

ple, it may be that this particular therapist was better at eliciting vulnerability than anger. Sixth, two out of nine patients in our sample were prescribed anti-depressant medication. Sometimes these medications may dull a patient's ability to experience strong emotions (e.g., Opbroek, et al., 2002; Price, Cole, & Goodwin, 2009). However, the two patients in our sample did not show lower vulnerability scores than the other seven patients after the vulnerability evoking interventions. Finally, the study was not double-blind; thus both the supervisor and the therapist carrying out the protocol were aware of the hypotheses under investigation. However, this is almost always true of mood induction procedures, which involve deliberate attempts to evoke particular mood states. Thus, it is not possible to deliver these interventions while remaining blind to their intentions. Furthermore, the students who rated the patients' emotional states were blind to the study's hypotheses, and were also kept blind to any information about the patients, except the fact that they were forensic patients.

Further research on evoking emotional states in forensic cluster B PD offenders is needed. Although frequently used in forensic patients, there is little evidence on the effectiveness of Arts therapies in these populations in general, and for drama therapy in particular. In addition to replicating this study in a larger sample and revising the protocol with respect to anger, future research should focus on particular personality disorders in offenders, and should compare forensic PD patients to various control groups, such as forensic non-PD patients, and normal controls. Another line of research is to focus especially on psychopathic offenders who are considered to have a lack of emotional responsiveness. The fact that all three psychopathic patients in our sample showed some evidence of vulnerability during the drama therapy interventions is worth attempting to replicate in a larger sample of patients with high levels of psychopathy. If drama therapy techniques can access vulnerable emotions in psychopathic patients, it would raise intriguing possibilities regarding enhancing emotional processing in these patients, who are usually considered difficult or impossible to treat using standard forms of psychotherapy (Keulen-de Vos, Bernstein, & Duggan, submitted; Salekin, 2002). Our findings pave the way for other studies which can examine whether experiential techniques carried out by drama therapy can lead to better emotional regulation and integration, as well as improved clinical outcomes. In addition, future research should examine the (long-term) effects of emotion induction on emotion regulation, how emotions are communicated, and whether the effects of mood induction are stable over the course of time.

This study supports the idea that the experiential interventions in our experimental protocol carried out by drama therapists can induce emotional vulnerability in forensic patients with personality disorders. Our anger hypothesis was not supported. From a theoretical perspective, the induction of emotional states provides support for a guiding assumption that certain experiential interventions trigger vulnerable emotional responses. From a practical perspective, this study suggests that experiential techniques carried out by drama therapists may be effective in accessing vulnerable emotions in forensic cluster B PD patients.

Acknowledgements

Thanks are due to Otmar van Deventer, Manon Peeters and Anne Vromen for their help in collecting the data; Gerard van Breukelen and Eric Schouten for their statistical advise; and Susanne Vermeeren for providing expert ratings during the training process of the students. We are grateful for the collaboration of the direction board, staff and patients of forensic psychiatric centre 'de Rooyse Wissel', location Maastricht, The Netherlands.

CHAPTER 8

Arts therapies and Schema Therapy: A pilot study

Van den Broek, E.P.A., Keulen-de Vos, M.E., & Bernstein, D.P. (2011). Arts therapies and Schema Focused therapy: A pilot study. *The Arts in Psychotherapy*, 38, 325-332.

Abstract

Arts therapies and Schema Therapy (ST), use experiential techniques to help patients access and reprocess emotions. We conducted a randomized controlled pilot study to determine the effectiveness of these therapies at evoking emotional states (“schema modes”) in forensic patients, a group that is considered difficult to reach emotionally. Ten male forensic patients with Cluster B personality disorders who were enrolled in a randomized clinical trial of ST versus usual forensic treatment (“treatment as usual,” TAU) participated in the study. We investigated the effect of Arts therapies versus verbal psychotherapy, and ST versus TAU on modes. As hypothesized, patients showed significantly more healthier emotional states in their Arts therapy sessions than in their verbal psychotherapy sessions ST evoked more child modes than TAU, at a trend level of significance. Patients in the ST and TAU conditions showed no differences in schema modes early in therapy, and were equivalent on all baseline characteristics. These findings, though requiring replication in a larger sample, suggest that Arts therapies and ST have potential for evoking emotional states in difficult to reach patients.

Introduction

Arts therapies¹, such as drama, art, music, dance and movement therapies, and psychomotor therapy, are increasingly used in psychiatric and forensic settings as an adjunct, or alternatives, to traditional verbal forms of psychotherapy. Dramatherapists use methods such as role play, masks, improvisation, text and poems. Role playing gives the patient and the therapist the opportunity to play with reality and to experiment and explore the facts of real life (Johnson, 1991). Forensic patients are a group of patients that are difficult to reach emotionally. Many forensic patients are emotionally detached, or tend to express their emotions inappropriately (Bernstein, Arntz, & de Vos, 2007; Day, 2009). Although drama therapy techniques are similar in both general and forensic psychiatry, the emphasis in forensic dramatherapy is on expression of emotions, exploring destructive behavior and on the increase of self-control (Blacker, Watson, & Beech, 2008; Reiss, Quayle, Brett, & Meux, 1998).

Art therapists use art methods such as drawing, painting, working with clay, wood or stone. Art therapy in forensic psychiatry aims at creating an art object in which patients' internal processes are externalized into a concrete form. This form can also help the patient understand the events, thoughts and feelings that have led to an offence (Gerber, 1994; Gussak, 2007).

Music therapists use music instruments, singing, songwriting, rap, and body percussion. These methods can be experienced in a receptive and active manner. Forensic musicotherapy specifically focuses on aggression and social interaction. For instance, the way you interact with others during musical play gives the music therapist an insight in the patients' dominant social strategies (e.g., playing out loud, or subtle and very quiet). Also aggression can be explored and expressed in a safe and indirect manner, for example, via instruments (e.g., hitting the drums excessively) (Hakvoort, 2002; Reed, 2002).

Dance and movement therapy and psychomotor therapy are founded on the basis that movement and emotion are directly related (Hekking & Fellingner, 2011; Payne, 2006). Forensic Dance and Movement Therapists use structured or free dance and movement exercises to explore the physical aspects of destructive behavior such as aggression and poor impulse control (Smeijsters, 2005). The psychomotor therapist uses physical exercises that focus on posture, musculature, breathing, and the person's ability to adjust. Forensic psychomotor therapists address a patient's self-perception and self-regulation skills because these are often impaired in forensic patients (Chakhssi, de Ruiters, & Bernstein 2010b; Hornsveld, Van Dam-Baggen, Leenaars, & Jonkers, 2004).

There are several potential advantages of Arts therapies, compared to traditional, verbal therapy approaches. First, increasing research suggests that much of cognitive processing is unconscious (e.g., Greenwald, 1992). Arts therapies may be more effective than verbal psychotherapies at facilitating processing at a nonverbal, unconscious level. Second, there is increasing evidence for the importance of emotion in various forms of cognitive processing (David, Miclea, & Opre, 2003; David & Szentagotai, 2006). The Arts

therapies incorporate a broader range of methods to evoke and reprocess patients' emotions than in traditional verbal forms of therapy. Finally, many patients have difficulty in accessing and expressing their emotions verbally. Thus, traditional verbal therapies may prove to be unproductive for some patients, particularly for those who are very emotionally detached or cognitively challenged. Arts therapies may prove a more effective alternative especially for these patients.

In this study, our primary aim was to test a central assumption of Arts therapies, namely, that they are more effective than verbal forms of psychotherapy at evoking emotional states, including both "vulnerable" emotional states, such as sadness, fear, and loneliness, as well as joyful, pleasurable emotional states. We tested this assumption using a sample of forensic patients with personality disorders – a group that is generally considered to be very emotionally detached, hostile, and mistrustful, and is often reluctant or unable to show emotions openly. Forensic patients with personality disorders often respond poorly to standard, verbal forms of psychotherapy, such as cognitive-behavior therapy (Timmerman & Emmelkamp, 2005). Some of these patients, especially those with high levels of psychopathy, are generally considered to lack the emotional prerequisites for successful psychotherapy, such as the capacities for bonding, empathy, and experiencing feelings (D'Silva, Duggan, & McCarthy, 2004). Arts therapies are being increasingly used with forensic patients as a possibly more effective alternative. However, the effectiveness of Arts therapies with forensic patients has never been tested, neither the key assumption that these alternative therapy forms are more effective than standard, verbal therapies at evoking emotions.

A second aim of this study was to compare the effectiveness of Schema Therapy (ST; Young, Klosko, & Weishaar, 2003) to usual forensic treatment for evoking emotional states. ST is an integrative form of psychotherapy combining cognitive, behavioral, psychodynamic object relations, and humanistic/experiential approaches (Young, et al., 2003). ST has shown effectiveness in treating patients with borderline PD (Farrell, Shaw, & Webber, 2009; Giesen-Bloo, et al., 2006), and has recently been adapted for forensic patients (Bernstein, et al., 2007). In patients with severe personality disorders, the focus of ST is on "schema modes", also referred to as emotional states or "parts of the self" that temporarily dominate a person's thoughts, feelings, and behavior (Young, et al., 2003). According to ST theory, these states are relatively dissociated from each other in patients with severe personality disorders. Thus, patients may shift rapidly between extreme emotional states, or remain rigidly "stuck" in one state to the exclusion of other states. For example, patients with Borderline PD may shift rapidly between states involving emotional pain ("Vulnerable Child mode"), anger or rage ("Angry Child mode"), emotional detachment or numbness ("Detached Protector mode"), and self-punitiveness ("Punitive Parent mode"). The goal of ST is to ameliorate maladaptive schema modes that block access to emotions (e.g., "Detached Protector mode"), heal the patient's early emotional wounds ("Vulnerable Child mode"), and strengthen the patient's capacity for

healthy self-reflection (“Healthy Adult mode”) and spontaneous joy and pleasure (“Happy Child mode”).

Although ST is primarily a verbal form of psychotherapy, it incorporates experiential techniques such as imagery rescripting and role-playing to reprocess patients’ emotions (Young et al., 2003). Thus, it bears some similarity to Arts therapies, which are also experientially oriented. On the other hand, Arts therapies incorporate a broader range of experiential methods, and are more focused on experiential as opposed to verbal learning, compared to standard ST. Recently, some Arts therapists have begun to integrate elements of ST into their work (Griffith, 2003a; Muste, Weertman & Claassen, 2009). The schema mode model appears to provide a useful conceptual framework for Arts therapies, given that Arts therapies use a variety of media (e.g., drama, music, dance) to evoke and reprocess emotions (Muste et al., 2009). From an ST perspective, the methods used by Arts therapists can be conceptualized as “mode evoking techniques” – techniques for evoking emotional states (“schema modes”) that may be more difficult to access via conventional therapies. Thus, the integration of the schema mode conceptual model into Arts therapies may enhance the effectiveness of Arts therapy interventions.

The present study investigated the effectiveness of Arts therapies and ST in evoking emotional states in forensic patients. The study was conducted as part of a three year, multicenter randomized clinical trial of ST that is currently taking place in 7 secure hospitals in The Netherlands. The larger clinical trial tests the effectiveness of ST versus usual forensic psychotherapy (“Treatment as Usual”; TAU) in reducing personality symptoms and recidivism risk in forensic patients with cluster B personality disorders (Bernstein, 2009). At one of the 7 sites for the clinical trial, Forensic Psychiatric Centre ‘de Rooyse Wissel,’ patients who were randomly assigned to either the ST or TAU condition were also given Arts therapy as an adjunctive treatment.

We assessed patients’ emotional states (“schema modes”) based on randomly selected videotapes of therapy sessions made after patients had received between one and one and a half years of therapy – enough time, we hypothesized, to observe differences in patients’ emotional states, if indeed, the treatments had the mode evoking effects that we predicted. Although the sample size was small, we used several methods to increase the statistical power of our experiment: a repeated measures design, in which patients served as their own controls; two independent raters, whose mode ratings were averaged to improve reliability; and rating two videotaped Arts therapy and verbal psychotherapy sessions per patient (i.e., 40 total sessions were rated), to create more reliable and generalizable composite mode scores.

We hypothesized that patients would show more vulnerable emotions (“Vulnerable Child mode”), less emotional detachment (“Detached Protector mode”), and more healthy modes, including states of healthy self-reflection (“Healthy Adult mode”) and spontaneous joy and pleasure (“Happy Child mode”), during: (1) Arts therapy sessions compared to verbal therapy sessions, and (2) ST therapy versus TAU therapy. Moreover, we predicted that patients: (3) would show the most vulnerable and healthy states, and

the least emotional detachment, during the sessions where they received ST-oriented Arts therapies (i.e., a significant ST by Arts therapy interaction effect).

Method

Setting

This study was conducted at Forensic Psychiatric Centre (FPC) 'de Rooyse Wissel'. The hospital admits male patients under the penal measure 'disposal to be treated on behalf of the state' (TBS). These patients have committed severe crimes but are legally adjudicated to not be fully accountable for these crimes because of a mental disorder or traits of different mental disorders, such as psychotic disorders or personality disorders. Under Dutch criminal law, patients can be admitted involuntarily to TBS hospitals if their crimes are judged to have been caused at least partly by the presence of (a) mental disorder(s). The average length of stay in TBS hospitals is 8.5 years (Brand & van Gemmert, 2009), during which time patients engage in a multi-modal treatment regimen including therapy, vocational training, and other services. When TBS patients are deemed to pose an acceptably low risk of recidivism, they are gradually reintroduced into the community (Hildebrand & de Ruiter, 2004). The most prevalent mental disorders in TBS settings are personality disorders, psychotic disorders, sexual disorders (e.g., paraphilias), and mental retardation (Hildebrand & de Ruiter, 2004).

Sample

The patients in this study were selected from a larger sample of forensic patients taking part in a multi centre randomized clinical trial on the effectiveness of Schema Therapy (ST; Young, et al., 2003). The RCT was conducted at 7 forensic psychiatric hospitals in the Netherlands. When recruiting for the study is completed, 100–120 patients will receive 3 years of therapy, either Schema Therapy (ST) or treatment as usual (TAU). The ST is given by psychotherapists that were given extensive training in this therapy form and had to demonstrate competency based on videotaped interviews of their therapy sessions with practice patients. TAU is the customary treatment provided by a particular clinic, which is typically a form of cognitive-behavioral, psychodynamic or humanistic psychotherapy. The purpose of the study is to determine whether ST is more effective than TAU in reducing recidivism risk and ameliorating personality disorder symptoms.

Inclusion criteria were the presence of a DSM-IV (American Psychiatric Association, 1994) Antisocial, Borderline, Narcissistic or Paranoid personality disorder, male gender, and a TBS sentence. Exclusion criteria were (a) the presence of current psychotic symptoms, (b) schizophrenia or bipolar disorder, (c) current drug or alcohol dependence (but not abuse), (d) low intelligence (i.e., Full Scale IQ < 80), (e) serious neurological impairment (e.g. dementia), (f) an autism spectrum disorder (e.g., autism, Asperger's disorder), and (g) pedophilia (i.e., a fixated sexual preference towards children).

The patients in this study were selected from only one of these hospitals, FPC 'de Rooyse Wissel', because of a unique feature of the research design at this particular site: they were being treated by both a psychotherapist and an Arts therapist. The Arts therapies delivered in this study were Drama therapy, Art therapy, and Psychomotor Therapy. 19 patients were treated at FPC de Rooyse Wissel in the context of the RCT. We only included those patients who had already received at least 1–1.5 years of therapy, and for whom we were able to arrange to tape sessions in both therapy conditions within the same three-month period. In a number of patients, it was not possible to tape sessions in both the Psychotherapy and Arts therapy condition. Therefore we were able to only include 10 patients in our pilot study. The inclusion criteria of the present pilot study were identical to the criteria of the RCT in which this pilot study is embedded. Patients who were randomly assigned to the ST condition had two sessions a week of psychotherapy and one session a week of Arts therapy. Patients assigned to the TAU condition had one session a week of psychotherapy and one session per week of Arts therapy. Thus, we were able to compare the patients using an experimental design with two crossed treatment conditions: one between subjects factor (ST versus TAU) and onewithin subjects factor (psychotherapy versus Arts therapy).

At time of enrolment in the RCT, the patients had an average age of 40.7 years ($SD = 7.4$). Their stay in the current setting was 38.3 months ($SD = 8.4$). Regarding their conviction of crimes, 30% of patients were convicted for murder or attempted murder, 10% for manslaughter or attempted manslaughter, 20% for sexual crimes, 20% for assault, and 20% for property crimes.

Among the axis I disorders, substance related disorders were most prevalent (100%; $n = 10$), followed by paraphilias (30%; $n = 3$), mood disorder (20%; $n = 2$), anxiety disorders, (20%, $n = 2$) and attention deficit hyperactivity disorder (10%; $n = 1$). In terms of Axis II disorders 90% ($n = 9$) was diagnosed with Antisocial PD, 40% ($n = 4$) with Borderline PD, 30% ($n = 3$) with Narcissistic PD. There were no patients diagnosed with Paranoid PD. The mean Psychopathy Checklist – Revised (PCL-R; Hare, 1991) score was 23.8, ($SD = 7.4$). Six of the patients had a PCL-R score greater than or equal to 25. Three had a PCL-R score greater than or equal to 30. PCL-R scores of 25 and higher are indicative of psychopathy.

Measures

Diagnostic assessments for axis I and axis II disorders were conducted using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) and the Structured Interview for DSM Personality-IV (SIDP-IV; Pfohl, Blum, & Zimmerman, 1995). They were administered by experienced diagnosticians. In a sub-sample of 5 patients, we examined the inter-rater reliability of the SCID-I diagnoses. Percent agreement between raters was perfect (100% agreement) for all 5 diagnoses assessed, except for substance related disorders and paraphilias, which had 80% agreement. In a sub-sample of 5 patients, the inter-rater reliabilities for the SIDP-IV rat-

ings, were ICCs = .45 for Antisocial PD, .74 for Borderline PD, .94 for Narcissistic PD. There was perfect agreement for Paranoid PD². Only ICCs for these PDs were calculated as they are the main PDs investigated in the RCT.

Mode Observation Scale (MOS; Bernstein, de Vos, & Van den Broek, 2009a). The MOS is an observational measure that assesses the presence and intensity of schema modes in clinical situations, such as therapy sessions. The MOS rates 18 modes on a 5 point Likert scale (1 = absent, 2 = mild, 3 = moderate, 4 = high, 5 = extremely intense). We asked raters to score the highest intensity for each mode that they observed during the entire session. The 18 modes that are rated in the MOS include the modes originally proposed by Young and colleagues (2003), and additional modes proposed by Bernstein and colleagues (2007) for forensic populations. The modes, which are described in Appendix A, are grouped into the following domains: Child Modes, Avoidant and Surrender Coping Modes, Overcompensating Coping Modes, Internalized Parent Modes, and Healthy Modes. Child modes are emotional states involving the spontaneous expression of painful feelings, such as fear, sadness, and anger, as well as impulsive behavior. The Avoidant and Surrender Coping modes involve attempts to cope with situations and emotions through avoidant or compliant behavior. The Overcompensating Coping modes involve attempts to cope with situations and emotions through overcompensatory behavior. The Internalized Parent modes are emotional states involving excessive self-directed criticism or demands. The Healthy modes are emotional states involving the healthy self-reflection or spontaneous joy and pleasure. For purposes of data analysis, we created mode domain scores by taking the mean of the individual mode scores within each domain. The inter-rater reliability of the mode ratings for the two students whose mode scores were used in this study are presented in Table 1. The table shows the inter-rater agreement (intraclass correlations) of the students with the average scores of two expert raters (i.e., experienced SFT therapists) (N = 10 sessions), and the students with each other (N = 21 sessions). These analyses showed that averaging two student ratings was superior to using the ratings from just one student. For the agreement between the two student ratings, the average measures ICCs for the mode domain scores ranged from .65 to .86 (median = .76). For the agreement between the student ratings and the expert ratings, the average measures ICCs for the mode domain scores ranged from .74 to .91 (median = .80).

Table 1. Reliability for the MOS schema modes

Agreement (ICC)	Stud.-Stud. (n=21)		Stud.- Exp. (n=10)	
	Single Measures	Average Measures	Single Measures	Average Measures
	<i>Child Modes</i>	.48**	.65**	.59*
<i>Avoidant/Compliant Modes</i>	.53**	.69**	.83**	.91**
<i>Parent Modes</i>	.69**	.82**	.76**	.86**
<i>Overcompensatory Modes</i>	.61**	.76**	.67**	.80**
<i>Healthy Modes</i>	.76**	.86**	.66**	.80**

Note. ICC = Intra-class coefficient. Stud.-Stud. = Student-Student. Stud.-Exp. = Students-Experts. * $p < .05$, ** $p < .01$

Therapy Integrity Scale (TIS; Bernstein, de Vos, & Van den Broek, 2009b). The TIS is an observational measure that we developed to assess the integrity of ST and Arts therapies. Therapy integrity concerns the extent to which therapists adhere to the interventions of a particular therapy. The TIS contains 109 items of which 55 items relate to psychotherapy and 54 to the Arts therapies. Examples of Arts therapy items are: ‘The therapist uses musical instruments during the session’ and ‘The therapist asks the patient to express his feelings in an artistic manner, for example by creating a painting’. The TIS measures 14 overall techniques that are rated on a 3-point Likert scale (1 = absent to 3 = strongly present). Ten techniques relate to ST, and 4 to Arts therapies. The Arts therapies techniques referred to drama therapy, music therapy, art therapy, and psychomotor therapy. We asked raters to score the therapeutic techniques that they observed in two therapy sessions per patient (N = 10). For the purpose of our analyses, we averaged the ratings of the two sessions, and created a score for all of the ST intervention items (ST total score), and a score for all of the Arts therapies intervention items (Arts total score). Internal consistency reliability for the ST total score and Arts total score, aggregated across student ratings, was excellent with alphas = .98 and .91 respectively. The inter-rater agreement (ICC) between student ratings for the ST total score was .92 and .75 for the Arts total score.

Procedure

In all four of the treatment conditions, four consecutive therapy sessions were videotaped. All the Psychotherapists and Arts therapists in both the ST and TAU conditions had more than 5 years experience in treating patients with personality disorders. All of the Psychotherapists and Arts therapists in the ST condition had received similar training in SFT, consisting of following general workshops in ST and a series of specialized workshops in ST for forensic patients. They were all under supervision of an experienced schema therapist who is a certified supervisor in the International Society for Schema

Therapy (D.P.B.). All of the therapists in the ST condition had at least 3 years of experience in providing SFT to forensic patients before starting this study.

The distribution of the Arts therapies across the two treatment conditions was as follows. Patients in the TAU condition had received either psychomotor therapy or drama therapy, while ST participants were offered either psychomotor therapy, drama therapy or art therapy.

All patients were 12–18 months in therapy. The average time in treatment for patients in the ST condition was 14.1 months (SD = 2.4), and 13.8 months (SD = 3.5) for patients in the TAU condition. There was no significant difference between time in treatment in the two conditions ($t = .63$, $df = 8$ $p = .54$). The tapes of Psychotherapy and Arts therapy sessions were made during a three-month period. We randomly selected 2 tapes per patient per condition (Psychotherapy and Arts therapy) to be rated by the MOS. Students from Maastricht University were extensively trained to rate the MOS. The students then independently rated 10 tapes that were also rated by the experienced ST therapists. Their ratings were tested for inter-rater reliability. The ratings were made blind to any information about the patients, including patients' identity, criminal or clinical history, diagnosis, or treatment condition. The students watched videotapes of whole therapy sessions, which usually lasted for 45–50 min, and rated them with the MOS and the TIS.

Statistical analysis

The inter-rater reliability was determined using the intra-class correlation coefficient (ICC). Because multiple raters had assessed each tape, we made use of the two-way random effects model (ICC; Shrout & Fleiss, 1979). Given the pilot character of this study in a small sample, and the fact that assumptions of normality of distribution were violated, we chose non-parametric statistics to test the effects of the different treatment conditions. Mann–Whitney U tests were used to compare SFT versus TAU, and to compare the four treatment conditions among each other. Wilcoxon signed-rank tests were applied to compare Psychotherapy and Arts therapy. We also calculated the effect size with

Cohen's d , with $ES = \frac{\bar{X}_{G1} - \bar{X}_{G2}}{spooled}$.

When calculating d for the comparisons ST versus TAU, and all four treatment conditions among each other, we used the pooled standard deviation with the formula. All data were analyzed with the Statistical Package for the Social Sciences (SPSS, 2005), version 13.0.

Results

Preliminary analyses

To determine whether the patients that were randomly assigned to the ST and TAU conditions were different regarding their baseline (i.e., pre-therapy) characteristics, we com-

pared the two groups on the following baseline variables using independent samples t-tests on: age, time in treatment, DSM-IV personality disorder symptoms (by SIDP-IV interview), and PCL-R scores. At baseline, there were no significant differences in the aforementioned characteristics. Thus, the randomization procedure created groups that were equivalent at baseline on these variables. In addition, we compared the patients in the SFT and TAU conditions with regard to schema modes early in treatment, using MOS scores rated from videotapes of patients' 3 month psychotherapy sessions. No equivalent tapes had been made from patients' Arts therapy sessions early in therapy. Three-month psychotherapy session tapes were available for 8 of the 10 patients (ST, N = 5, TAU, N = 3). There were no significant differences in patients' 3-month mode domain ratings for Child Modes Avoidant/Compliant Modes Parent Modes, Over compensatory Modes or Healthy Modes Thus, at 3 months, the ST and TAU patients were equivalent with respect to schema mode domains that were observed during psychotherapy sessions.

Table 2. Descriptive information for MOS Schema Mode domain scores per therapy condition

	Psychotherapy TAU ¹		Arts Therapy TAU ²		Psychotherapy ST ³		Arts Therapy ST ⁴	
	M	Std.	M	Std.	M	Std.	M	Std.
<i>Child Modes</i>	1.20	.17	1.56	.26	2.42	.92	2.28	.84
<i>Avoidant/Compliant Modes</i>	3.19	.83	1.83	.20	2.75	.97	2.62	1.18
<i>Parent Modes</i>	1.16	.31	1.03	.06	1.69	1.35	1.25	.39
<i>Overcompensatory Modes</i>	1.49	.56	1.04	.08	1.33	.60	1.45	.59
<i>Healthy Modes</i>	2.44	2.00	4.42	1.73	2.38	1.15	3.13	1.51

Note. ¹ = N = 2, ² = N = 2, ³ = N = 3, ⁴ = N = 3

Therapy Integrity

We used the TIS to determine the therapy integrity of patients who received ST versus TAU, and Arts therapy versus psychotherapy. With regard to therapy integrity, we created a SFT total score, representing the sum of all ST intervention items. The mean ST total score was M = 16.9 (SD = 4.6) for TAU Psychotherapy, M = 18.9 (SD = 3.6) for ST Psychotherapy, M = 11.5 (SD = .6) for TAU Arts therapy, and M = 17.1 (SD = .9) for ST Arts therapy. We conducted non-parametric Mann-Whitney U and Wilcoxon signed-rank tests to test whether the differences in the TIS ST total scores were significant across therapy conditions. There was a main significant effect for ST total score for the Psychotherapy versus Arts therapy distinction (T = 5.0, p = .02). There was also a significant main effect for the ST versus TAU condition (U = 2.0, p = .03). There was no significant interaction between the Psychotherapy versus Arts therapy distinction, and the ST versus TAU distinction (U = 7.0, p = .29). Thus, there was greater adherence to ST techniques

in the SFT sessions compared to the TAU sessions, and in the Psychotherapy sessions compared to the Arts therapy sessions.

With respect to Arts therapy sessions, tapes of 7 out of 10 patients showed the use of experiential techniques specific to one of the Arts therapy disciplines (i.e., Drama, Psychomotor, or Art Therapy). The tapes of 3 patients did not show any Arts therapy experiential techniques. Instead, they consisted of verbal therapy elements only, where the therapist and patient discussed problems that the patient was experiencing. With regard to these 3 tapes, 1 belonged to the ST Arts therapy condition (drama therapy), and 2 tapes to the TAU Arts therapy condition (psychomotor therapy). In contrast, none of the tapes of the Psychotherapy condition sessions were rated as showing experiential techniques specific to an Arts therapy discipline. Fisher's Exact Test showed a significant difference between the Psychotherapy and Arts therapy conditions for the presence of Arts therapy interventions (Fisher's Exact Test = .002, 2-tailed). Comparisons of schema modes at 12–18 months in therapy. The schema mode mean scores across the 4 therapy conditions at 12–18 months into therapy are given in Table 2. To test whether the differences in mean schema mode scores were significant across therapy conditions, we conducted non-parametric Mann-Whitney U and Wilcoxon signed-rank tests, with alpha set at two-tailed $p < .05$. Results are presented in Table 3. Comparing the Psychotherapy versus Arts therapy distinction, there was only one significant main effect, the Healthy mode domain ($T = 7.00$, $p < .05$). Patients showed more Healthy modes in the Arts therapy condition than in the psychotherapy condition. The effect sizes were $d = .07$ for the Child domain scores, $d = -.33$ for the Avoidant/Compliant domain scores, $d = -.47$ for the Parent domain scores, $d = -.21$ for the Overcompensatory domain scores, and $d = .80$ for the Healthy domain scores. Second, with regard to the ST versus TAU condition, no significant main effects were found. However, there was a trend towards significance for Child modes ($p = .09$), with a very large effect size of $d = 1.55$. The other effect sizes were $d = .39$ for the Avoidant/Compliant domain scores, $d = .59$ for the Parent domain scores, $d = .26$ for the Overcompensatory domain scores, and $d = -.59$ for the Healthy domain scores.

Table 3. Main and interaction effects of the MOS schema mode domain scores

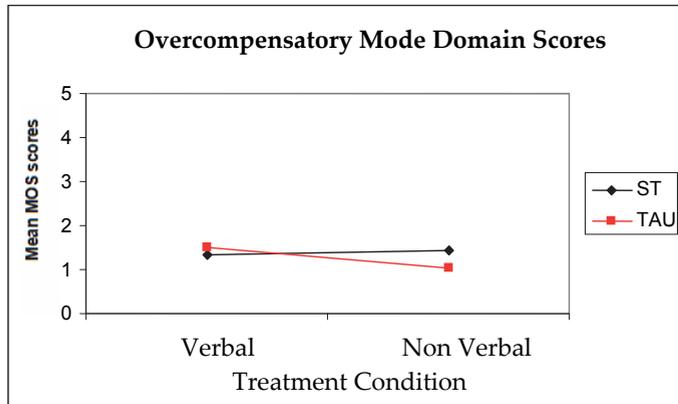
Schema Modes	ST vs TAU		Psychotherapy (PT) vs Arts Therapy (AT)		ST/TAU vs PT/AT	
	Z	p	Wilcoxon (z)	p	Z	p
<i>Child Modes</i>	-1.71	.09	-.56	.58	-1.07	.28
<i>Avoidant/compliant modes</i>	-.21	.83	-.77	.44	-1.93	.05
<i>Parent Modes</i>	.00	1.00	-1.07	.29	-.53	.60
<i>Overcompensatory modes</i>	-.43	.67	-.17	.87	-2.41	.02
<i>Healthy Modes</i>	-.54	.59	-2.09	.04	-1.29	.20

Note. PT = Psychotherapy (e.g., ST and TAU). AT = Arts therapy (e.g., ST and TAU). Z= Mann-Whitney U Test z-score.

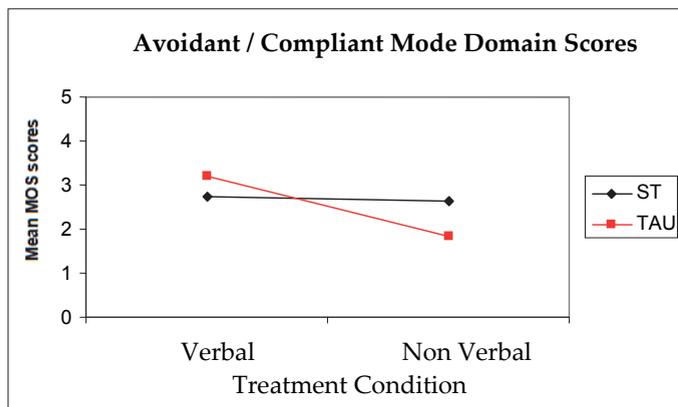
Finally, a significant interaction was found for the Overcompensator mode domain scores (Fig. 1a) ($U = 1.00, p < .05$). The TAU patients showed slightly more Overcompensatory modes in the Psychotherapy sessions, while the ST patients showed slightly more Overcompensatory modes in the Arts therapy sessions. The interaction effect for the Avoidant/Compliant mode domain scores almost reached significance (Fig. 1 b) ($U = 3.00, p = .054$). For the Avoidant/Compliant mode domain scores, there was little difference within ST patients between the Arts therapy and psychotherapy conditions. However, in the TAU patients, there were slightly more intense Avoidant/Compliant modes in the verbal psychotherapy condition than in the Arts therapy condition (Table 3). Interaction domains for the remaining mode domains scores were non significant. The effect sizes were $d = .81$ for the Child domain scores, $d = -1.77$ for the Avoidant/Compliant domain scores, $d = .36$ for the Parent domain scores, $d = -1.67$ for the Overcompensatory domain scores, and $d = .67$ for the Healthy domain scores.

Figure 1 a-b. Significant Interactions Effects for the Overcompensatory Mode Domain score and Avoidant/ Compliant Mode Domain Scores

a)



b)



Discussion

The results of this pilot study partly confirmed our main hypothesis regarding Arts therapies. Arts therapies evoked more healthy self-reflection, and healthy states in general (i.e., a domain score that combined healthy self-reflection and spontaneous joy and pleasure), compared to verbal forms of psychotherapy. To our knowledge, these findings are the first empirical confirmation of a central assumption of Arts therapies, namely that they are more effective than conventional therapies at evoking emotional states, including negative and positive emotions. These findings are also noteworthy because they occurred in a patient population – forensic patients with personality disorders – that is often characterized by emotional withdrawal and hostility. Thus, they support the clinical

cal impression that Arts therapies are effective at accessing emotions even in “difficult-to-reach” patient populations, such as forensic patients (Smeijsters & Cleven, 2006). These results may be explained by the focus on experiential work in Arts therapies. Although there are verbal elements in Arts therapies, especially at the beginning and end of sessions, when exercises are introduced and discussed, respectively, the main focus is on doing and experiencing in the “present moment” (Stern, 2004). In experience-based exercises, there is less time to think, plan, and act deliberately, than in verbal forms of psychotherapy. The aim of Arts therapy interventions is to trigger spontaneous thoughts, feelings, and behavior in interactions with others, via the use of certain media and exercises. Of course, in this study, we did not directly test the hypothesis that experiential techniques per se accounted for the success of Art therapies in evoking emotional states. These effects could be attributable to other aspects of the Arts therapies that were delivered, or to the personal qualities of the Arts therapists themselves, as the Arts therapies and verbal therapies were provided by different therapists. Thus, although we hypothesize that experiential techniques are the mechanism through which Arts therapists evoke emotional states, this hypothesis remains untested. In our latest research, we are using an experimental protocol to determine whether specific schema modes are evoked when Arts therapists perform different experiential interventions. This directly tests the hypothesis that experiential techniques are the mechanism through which Arts therapists evoke changes in patients’ emotional states.

The results of our current study partially confirmed our hypothesis about ST. ST evoked more vulnerable emotional states than TAU, and more child modes in general, a domain that included vulnerable, lonely, impulsive, and angry states. However, our hypothesis, that SF=T patients would show less emotional detachment and more healthy modes than in the TAU condition, was not confirmed. One of the central aims of ST is to reach the patient’s vulnerable side, so that the therapist can provide for some of the patient’s unmet early developmental needs (e.g., the need for secure attachment) within appropriate limits (“limited reparenting”) (Rafaeli, Bernstein, & Young, 2011; Young et al., 2005). Like Arts therapies, ST uses experiential methods to bypass maladaptive coping modes, so that the vulnerable side of the patient can be accessed. To our knowledge, this study is the first empirical demonstration that ST is more effective in accessing patients’ vulnerable emotions than conventional therapies. The use of experiential techniques, along with ST’s focus on patients’ early needs, may explain ST’s success in accessing vulnerable emotional states. In comparison with both ST and Arts therapies, patients showed the least vulnerability and the most emotional detachment in conventional forms of verbal psychotherapy (i.e., the TAU verbal psychotherapy condition). In working with forensic patients who are typically quite emotionally detached, standard verbal therapy methods may not be sufficient to access more vulnerable emotions (Bergman, 2000).

We were not able to confirm our hypothesis that ST-oriented Arts therapies – that is, Arts therapies that integrate various ST elements, such as the schema mode conceptual

model – would be the most effective of the 4 treatment conditions at evoking emotional states. In most respects, ST-oriented Arts therapies were as effective as the Arts therapies delivered in the TAU condition, and also as standard, verbal ST. On the other hand, we did find a few significant interactions effects. These indicated that the TAU Arts therapy condition was more effective than the TAU verbal therapy condition at reducing emotional detachment, avoidant and compliant modes in general, and over compensatory modes. With respect to these modes, TAU Arts therapy was the most effective of the 4 treatment conditions delivered. While our findings suggest that ST-oriented Arts therapies are generally effective at evoking modes, they also suggest that the integration of ST with Arts therapies might benefit from further development and testing.

This pilot study has several limitations. First, only 10 patients participated, 6 in the ST condition and 4 in the TAU condition. Thus, any generalizations about the effectiveness of Arts therapies or ST at evoking schema modes must be considered tentative until these findings can be confirmed in a larger sample. On the other hand, we rated schema modes from 40 therapy sessions (4 sessions per patient), giving us a larger sample of observations on which to base our conclusions. Second, the within-subjects nature of our experimental design meant that patients in the TAU and ST conditions received both verbal therapy and Arts therapy. It is possible that synergistic effects occurred from the combination of verbal and Arts therapies. We do not know whether the same findings would have been obtained had we used a purely between-subjects design, where patients were assigned to either Arts therapy or verbal therapy, but not to both conditions. Third, although our use of multiple therapists in each condition was a methodological strength, our design would have been improved by the inclusion of larger number of therapists. Fourth, different Arts therapies were involved in the ST and TAU conditions. The Arts therapies in the TAU condition consisted of psychomotor therapy and drama therapy, while the ST condition consisted of psychomotor therapy, drama therapy and art therapy. Another drawback is the number of overall TIS techniques that referred to the Arts therapies. Although the number of items on the TIS that related to psychotherapy and Arts therapy was virtually equal (e.g., 55 items refer to psychotherapy, 54 to Arts therapy), more overall techniques referred to psychotherapy. Of the total of 14 overall techniques, only a total of 4 were for the different kinds of Arts therapies. These differences might have affected the results we obtained. Fifth, only 7 of the 10 Arts therapy patients received Arts therapy experiential interventions during the 2 sessions that we randomly chose to be rated. However, they undoubtedly received experiential interventions in some of their other Arts therapy sessions, as these types of interventions are the major focus of the therapies that they received. Sixth, we used a newly developed instrument, the MOS, to assess schema modes. Although the reliability we obtained with the MOS was acceptable to good for most of the modes we assessed, this instrument requires further validation. Seventh, we conducted multiple statistical tests, which carry a risk for spurious significance (experiment-wise Type 1 error). We did not control for multiple comparisons because the dependent variables we tested (i.e., the schema

modes) were independent. Moreover, because this was a pilot study, we did not want to increase the risk of making type II errors (i.e., missing important new findings). The fact that nearly all of our findings were consistent with our hypotheses makes it less likely that they occurred just by chance. Eight, the Arts therapies share certain elements, but drama-, music-, art- and psychomotor are also very different, for example with regard to their goals and range of interventions. However, in our study, we did not differentiate between the effects of the different Arts therapies. Finally, we do not know what patients' mode scores were at the beginning stage of the Arts therapies, because these early sessions were not videotaped.

However, patients in the ST versus TAU conditions did not show differences in schema modes in their 3-month verbal psychotherapy sessions, nor did they differ on their baseline characteristics. Thus, the randomization procedure appears to have resulted in equivalent groups at the beginning of therapy. This increases our confidence that the effects we obtained were the result of the treatments the patients received, and not due to some pre-existing differences between the groups. Of course, it would be desirable to replicate this study in a larger sample, using more patients and therapists in each treatment condition, and rating schema modes in sessions occurring in early, middle, and late therapy.

These findings support the effectiveness of Arts therapies and ST for evoking emotional states in forensic patients with cluster B personality disorders. Although these findings require replication in a larger sample, they suggest that these therapy forms have potential for treating patient populations that are difficult to reach emotionally. Of course, whether these approaches will ultimately lead to improved patient outcomes remains an open question. Future studies should investigate the mechanisms underlying these therapy forms, and test their effectiveness with regard to treatment outcomes.

Acknowledgements

Thanks are due to Catelijne 't Lam, Sanne van Berkel, Ieke Willems, Ushi Gerrits, Samantha Hovens, Charlotte Konings, and Annette Löbbes for their help in collecting the data. We are grateful for the collaboration of the direction board, staff and patients of forensic psychiatric centre 'de Rooyse Wissel', location Venray. The authors gratefully acknowledge the support of the 'Expertisecentrum Forensische Psychiatrie' [Forensic Expertise Centre], KenVak and Maastricht University's Faculty of Psychology and Neuroscience.

Notes

1. In this article, we use the term "Arts therapies" to refer to Drama therapy, Art therapy, Music therapy, Dance and Movement therapy, and Psychomotor therapy. Psychomotor therapy is not technically considered a form of Arts therapy, because these

therapists have different educational backgrounds from Arts therapists. However, because Psychomotor therapy has many similarities to the Arts therapies, in this article we group it together with the Arts therapies for the sake of simplicity.

2. SIDP-IV dimension scores were used, so although no patient met criteria for Paranoid PD, an ICC can be calculated.

Appendix A. *Schema modes for forensic settings (MOS, Bernstein, et al, 2009a)*

Child Modes	involve feeling, thinking, and acting in a “child-like” manner
Avoidant/Compliant Modes	involve attempts to protect the self from pain through avoidant or compliant forms of coping
Parent Modes	involve internalized dysfunctional parent “voices”
Overcompensatory Modes	involve extreme attempts to overcompensate for feelings of shame, loneliness, or vulnerability
Healthy Modes	involve healthy forms of emotional expression and adaptation

CHAPTER 9

Summary and General Discussion

Interest in the treatment of forensic patients has increased enormously in recent years. For example, there is a growing literature on the treatment of sex offenders, domestic violence offenders and offenders with (co-morbid) substance-related disorders (e.g., Isherwood & Brooke, 2001; Lösel & Schmucker, 2005; Murphy & Ting, 2010). However, knowledge about the treatment of *personality disordered* (PD) offenders is still in its infancy. Evidence based treatment is important for the general psychiatric field, but are especially important for the forensic field because the risks involved in treatment failures in forensic patients can have severe consequences. For example, forensic PD patients pose an increased risk of criminal and violent recidivism compared to other forensic patients. Therefore forensic treatment should especially be based on theoretically sound and empirically validated principles.

This thesis specifically focused on Schema Therapy (ST). ST is more optimistic than traditional CBT approaches for forensic patients. Rather than viewing offenders as irrevocably handicapped, and helping them to compensate for handicaps, ST attempts to ameliorate the core personality pathology that it views as responsible for maladaptive behavior. In other words, it attempts to change the personality pathology in forensic patients with cluster B personality disorders, including psychopathy, and to therefore attempt to alter the underlying risk factors for recidivism in these patients. Schema Therapy's standpoint is also in line with the Dutch penal measure of 'TBS' which can be defined as treatment at the disposal of the state. According to Dutch criminal law, offenders ought to be sentenced to involuntary treatment if the accountability for their crimes is judged to be diminished because they suffer from (a) mental disorder(s). Thus, ST aims to ameliorate mental disorders and thus reduce the risk for future crime and violence. Finally, among existing forensic treatments for PDs in The Netherlands, Schema Therapy is one of therapies that is specifically adapted for forensic PD patients.

This dissertation represents a comprehensive test of the construct validity of the theoretical model on which ST for forensic patients is based; it also represents empirical evidence for the effectiveness of experiential techniques in evoking emotional states. These techniques are prominently incorporated in both ST and Arts therapies (i.e., drama, music, arts therapy). Secondly, this thesis examined the empirical evidence for the effectiveness of the existing treatments for forensic cluster B PD patients, and put forward an algorithm for more effective matching of patients to treatments. Overall, this thesis aimed to answer the question to what extent Schema Therapy contributes to the understanding and treatment of forensic PD patients.

The following eight main research questions were addressed:

Part I – Forensic treatment and assessment

1. Which treatments are currently used for forensic cluster B PD patients and what is their evidence base?

2. Which forensic treatments might be most effective for which individual patients with cluster B PDs, with which specific problems, and under which set of circumstances?
3. Do patients and informants in forensic settings differ in how they view PD symptoms, and does this view change over time?

Part II – Schema modes

4. How do schema modes relate to criminal behavior and institutional violence in forensic cluster B PD patients?
5. Which modes are central in ASPD, BPD, NPD and psychopathy in forensic patients?
6. How do schema modes relate to recidivism risk in forensic cluster B PD patients?

Part III – Schema Therapy techniques

7. Can vulnerability and anger be deliberately evoked in forensic cluster B PD patients using experiential techniques?
8. What is the effectiveness of Schema Therapy and Arts therapies in evoking emotional states?

This final chapter will give a summary and discussion of the most important findings of the research presented in this thesis. Furthermore, the limitations and implications for forensic clinical practice are provided, along with suggestions for future research.

Summary of study rationale and conclusions

Part I

Chapter 1 gives a theoretical description of Schema Therapy's original framework, its rationale with regard to forensic patients and guidelines for forensic clinical practice. Schema Therapy is an integrative form of therapy that was specifically developed as a treatment for PDs. This therapeutic approach has a special focus on the therapeutic relationships, the re-processing of childhood traumas and the use of experiential techniques that focus on emotional deficits. The three key pillars of ST are early maladaptive schemas, dysfunctional coping styles and schema modes. Early maladaptive schemas are self-defeating cognitions that originate from negative childhood experiences. Dysfunctional coping styles refer to the maladaptive ways of dealing with the activation of schemas. Schema modes are emotional states representing the moment-to-moment emotions, cognitions and behavior. In forensic PD patients, Schema Therapy is specifically focused on those schema modes that are risk factors for violent and criminal behavior. For example, violent behavior is often characterized by cold and ruthless aggression (Predator mode), instrumental aggression (Bully and Attack) or deceit and manipulation (Conning and Manipulative mode). These modes are believed to trigger by painful feelings, frus-

tration, anger of impulsivity. By targeting these factors, schema therapists aim to reduce the patient's risk for violence and future antisocial behavior.

In [Chapter 2](#) existing treatment options for cluster B PD offenders were reviewed and investigated for their empirical evidence. Over the years several programs have been specifically developed for different types of offenders. Programs are structured approaches that are time limited, delivered in a group-format and usually contain several modules that are based on CBT principles. Examples of frequently used programs are the Violence Reduction Program (VRP) and Aggression Replacement Therapy (ART) for violent and aggressive offenders; the Systems Training for Emotional Predictability and Problem Solving (STEPP) for Borderline PD offenders; and substance abuse programs derived from Dialectical Behavior Therapy and Schema Therapy for offenders with addiction problems. The main forms of psychotherapy for offenders are standard Cognitive-Behavioral Therapy (CBT), Dialectical Behavior Therapy (DBT), Schema Therapy (ST), Mentalization-Based Therapy (MBT) and Cognitive Analytic Therapy (CAT). In addition miscellaneous approaches are typically offered to forensic cluster B PD patients. For example, prior to the start of therapy, offenders regularly undergo specific programs that focuses on the aspects that have triggered criminal behavior; Motivational Interviewing (MI) to enhance their motivation to engage in treatment; or various kinds of Arts therapies. The empirical evidence for aforementioned therapies is scant, especially because there have been no methodologically adequate random clinical trials to test their effectiveness, with exception of the RCT of ST that is currently under way in The Netherlands. Based on the literature review, it can be concluded that there is very limited evidence on which to evaluate the effectiveness of these treatments, despite the availability of a number of plausible treatment alternatives.

In [Chapter 3](#) a new decision-making algorithm is proposed for answering the key question of which treatments might be most effective for which problems in which patients under which circumstances. This algorithm is based both on (limited) empirical evidence and on theoretical considerations, and help guide clinicians and institutions in making rational decisions for individual offenders with cluster B PDs. First, treatment alternatives for patients whose aggression poses immediate and severe danger to themselves or others are addressed, followed by a description of treatments for patients who show aggressive behavior that does not pose danger to others and treatment choices for patients whose motivation for engaging in treatment is low or absent. Second, treatment alternatives for Antisocial, Borderline and Narcissistic PD, common axis I co-morbid disorders and specific risk factors and strengths were reviewed. Third, treatment alternatives for specific circumstances, such as type of facilities and degrees of security (e.g., low, medium, high) are discussed. Finally, suggestions for treatment of patients with specific cultural and ethnical backgrounds are presented. The conclusion of this chapter is that its premature to make definite recommendations with regard to which treatment is most effective in which patients. The algorithm in this chapter serves as a tool to help clinicians think about their practical problems of selecting treatments in a systematic way.

A clear understanding of an offender's pathology is a prerequisite for determining suitable treatment options. However, self-reports in forensic patients are often biased; offenders regularly withhold important information, try to make positive impression or have an unduly positive image of themselves. Therefore, Chapter 4 examined an innovative instrument to assess personality disorder pathology in offender populations in a more reliable and valid way. This study tested the validity of patient- and informant-versions of the widely used Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993). This study had both a cross-sectional and longitudinal component. The SNAP was administered to twenty-four (24) patients and three informants (i.e., staff members) per patient over six month intervals over a period of 18 months. The aim of the study was to examine whether patients and informants differed in how they view PD symptoms and whether this view changed over time. Psychometric evaluation of the SNAP-F showed good internal consistency and low but still significant inter-rater reliability between patient and informant reports. There was an incongruity between patients and informants; patients consistently reported less pathology than informants did. Second, personality pathology declined over time, however, the discrepancy between patients and informants remained. The findings in this chapter support the value of informant reports in PD assessment in forensic settings.

Part II

Chapter 5 examined how schema modes were related to criminal behavior in forensic cluster B PD patients. A second aim was to test the relationship between schema modes and institutional violence, and to test the validity of mode assessments in ratings of psychopathy facets. This study represents the first study of the idea that schema modes represent risk factors for criminal and violent behavior. It involved adapting an observational assessment of schema modes, the Mode Observation Scale, for retrospective assessment of schema modes from descriptions of patients' crimes in their dossiers. The findings showed that schema modes play a role in the events leading up and culminating in crimes and acts of violence. In particular, the Vulnerable and Lonely Child modes and the Detached Self-Soother mode were more apparent in the events leading up to criminal behavior than during the crime itself, whereas Bully and Attack and Predator modes were more present during the crimes than during the events leading up to the crimes. Furthermore, feelings of vulnerability and anger experienced in the events leading up to criminal behavior were predictive for the degree of physically aggressive behavior. The overcompensatory modes, Bully and Attack mode and the Conning and Manipulative mode, during the crime were significantly associated with the interpersonal facet of psychopathy, and the Vulnerable Child prior to the crime was negatively related to the affective facet of psychopathy. The findings in this chapter support Schema Therapy's theoretical model, as applied to forensic patients, which hypothesizes that schema modes play a role in the events leading up to and culminating in crimes and acts of violence.

Chapter 6 represents a study to examine the validity of schema modes with respect to their associations with personality disorders and recidivism risk, as well as their higher-order factor structure in a sample of 88 offenders. Factor analyses revealed a higher-order structure that consisted of three factors: internalizing, externalizing and healthy schema modes. These factors distinguished ASPD/psychopathy as disorders involving low scores on internalizing and high scores on externalizing emotional states, and BPD as involving high scores on internalizing states. Furthermore, the externalizing emotional states were a significant predictor for recidivism risk inside the hospital. This study found that BPD was characterized by high levels of Vulnerable Child, Angry- and Impulsive Child, and Detached Self-Soother mode. Mode scores for ASPD revealed high scores for Angry and Impulsive Child, Detached Protector, Bully and Attack, Self-Aggrandizer and Paranoid Overcontroller mode. NPD was characterized by high levels of Detached Self-Soother, and Self-Aggrandizer mode. The findings in this chapter support the construct validity of the schema mode concept in forensic patients with cluster B personality disorders.

Part III

Chapter 7 examined the hypothesis that specific ST-oriented experiential techniques can evoke 2 particular schema modes: Vulnerable Child mode and Angry Child mode. This sample in this study consisted of nine (9) forensic cluster B PD patients. An experimental protocol that consisted of experiential techniques was carried out by a drama therapist. The protocol consisted of 5 sessions: an introductory session, 3 intervention sessions and a concluding session. All three intervention sessions elicited more Vulnerable Child mode compared to baseline mode ratings in the same sessions. There were no differences in Angry Child mode after anger-induction. This study supports the idea that the experiential interventions in our experimental protocol carried out by drama therapists can induce emotional vulnerability in forensic patients with cluster B personality disorders.

Chapter 8 tested the effectiveness of Schema Therapy and Arts therapy in evoking schema modes in ten (10) forensic cluster B PD patients after patients had received from one to one and a half years of ST or TAU. The results showed that ST and Arts therapy in general triggered more vulnerability (Vulnerable Child mode) and other child-like emotions (e.g., loneliness, anger, impulsivity) than non-ST. Arts therapies in general evoked more Healthy Adult mode than psychotherapies in general. ST-Arts therapy did not evoke more vulnerability and healthy behavior and less detachment compared to non-ST Arts therapy. Arts therapies were generally effective in evoking schema modes. This study presents the first evidence that ST, in both psychotherapy and Arts therapy forms, is more effective than TAU in reaching vulnerable emotions in forensic cluster B PD patients.

Discussion

Part I – Forensic treatment and assessment

Reviews

The major finding of the literature review was that there is almost no evidence about the effectiveness of the various treatments that are used in the forensic field. Why is there so little evidence while the number of treatment alternatives is greater than ever before? And why do we know so little while the interest in forensic psychiatry has increased enormously over the last few decades? Perhaps there is no lack of interest into evaluating forensic treatment, but simply a lack of methodologically adequate studies. For example, many studies claim to have the answer to the question whether a particular therapy is effective for a specific type of offenders (e.g., antisocial offenders) while their sample sizes are simply too small and their studies subsequently statistically underpowered to make any definite and generalizing statements. A related aspect might be that there is a lack of consensus about outcome variables and measures. In order to establish whether a treatment approach is effective for particular PD patients, studies should assess changes in PD symptoms instead of solely drop-out rates, institutional transgressions and substance abuse (Duggan, 2008). A third shortcoming is the lack of randomized clinical trials (RCTs). While there has been considerable progress in conducting randomized clinical trials for PD patients outside of the forensic field, there has been almost no progress in doing so within the forensic field. A possible explanation is that institutional barriers for conducting RCTs in forensic settings may be very high. For example, correctional settings are usually closed and non-transparent institutions and this is exactly the opposite of what scientific practice asks for. Scientific practice stands for openness, for examining a free-market of ideas. Thus the culture within forensic settings may hamper the ability to conduct RCTs. Another barrier might be that the infrastructure for research is missing, that is, correctional settings often have no dedicated resources for research. A related point is the high turn-over of management and staff in forensic hospitals, which often leads to renegotiations of research plans. Also, there is a high turnover of therapists, thus therapists leaving a study; these therapists need to be replaced with new therapists who, in turn, need to be trained. Although research asks for controlling for as many things as possible, turnover of staff cannot be controlled for. In the end, methodological shortcomings make it difficult to make comparisons across studies and limit the ability to effectively evaluate forensic services.

Would solving methodological shortcomings solve everything then? The answer is 'no'. The forensic field can only move forward if a number of additional things happen. The biggest thing that needs to happen is a mind-shift in how we think about clinical practice and research in forensic settings. First, forensic practice and research should work together better, because now, clinical practice is often not well informed about relevant scientific findings and ideas. Perhaps investments in forensic RCTs should be

made at a national level to assure that more money is available for adequate research. Another option would be for correctional settings to partner up with universities or academic centers. This is not uncommon in the general psychiatric field. For example, in the US, hospitals in the addiction field have partnered up with universities resulting in the 'National Drug Abuse Treatment Clinical Trial Network'. This network supports and conducts research in the addiction field and ensures that research results are disseminated and used effectively. This way, research findings are readily incorporated into treatment development and into theories guiding the therapy. The societal need for such investments is just as great if not greater in the forensic field because violent behavior causes so much damage to society, not only because of personal or property losses but also because of the high costs for forensic treatment. Also, this would be in line with the Dutch parliamentary committee 'Visser' (Tweede Kamer der Staten Generaal, 2005/2006) that recommends partnership between forensic psychiatric hospitals and universities. This would not only assure more money, but also provide a research infrastructure. An example of such a partnership is the current randomized clinical trial of ST in The Netherlands (Bernstein, Nijman, Karos, Keulen-de Vos, de Vogel & Lucker, in press). Second, before we can make definite statements about which treatment works for which type offenders, perhaps we should first answer the question what the aims of forensic treatment should be. Should we focus on changing an offender's underlying personality pathology or should we just focus on reducing risk by changing behavior? These aims are both very different and imply different pathways of achieving them. If we aim to change the underlying pathology of offenders, another question rises. Which PD traits are amendable for change and which aren't? For example, there is some research suggesting that individuals' personality pathology may consist of dispositional or basic tendencies that are highly stable over time, and of acute, maladaptive, behavioral expressions of these traits that may improve in some circumstances (Skodol, et al., 2005; Zanarini, Frankenburg, Hennen, Reich & Silk, 2005). There are pros and cons to both sides. The pros for modifying behavior are that focusing on modifying behavior might do the trick of reducing the risk for recidivism on the short term. Accordingly the length of treatment is typically short which subsequently means that (societal) costs of forensic treatments is relatively low. Also it fits with the overall aim of forensic treatment to reduce the risk for recidivism and thus to protect society against violent and criminal behavior. However, the downside of modifying behavior is that the effects might not be long-lasting because different contexts trigger different behaviors. The restrictive nature of the forensic setting may contribute to a decrease in violent behavior. However, once re-integrated into society, offenders may struggle with maintaining the effects of treatment. Societal temptation may trigger violent and criminal behavior. Modifying dispositional traits may prove to be more effective in reducing the risk for recidivism on the long-run. But perhaps the two goals, modifying behavior and modifying dispositional traits can go hand-in-hand as some tendencies might be stable over time, where other tendencies may improve over time. Perhaps one should focus on changing some dispositional tendencies *and* on modi-

fyng acute behavior. Finally, a common tendency is to simply implement evidence based therapies from the general psychiatric field in the forensic field without adapting them to make them applicable for forensic PD patients. For example, CBT is often the treatment of choice in forensic PD patients though no forensic theoretical framework exists. In addition, there is little evidence that these treatments work in forensic patients. We cannot simply infer that these treatments will be similarly effective in forensic patients.

In conclusion, there is little evidence to truly justify a particular therapy because studies are methodologically flawed, possibly as a result of institutional barriers. Also, there seems to be a gap between what we know and what we need to know when conducting forensic research.

Patient versus informant report of personality disorders

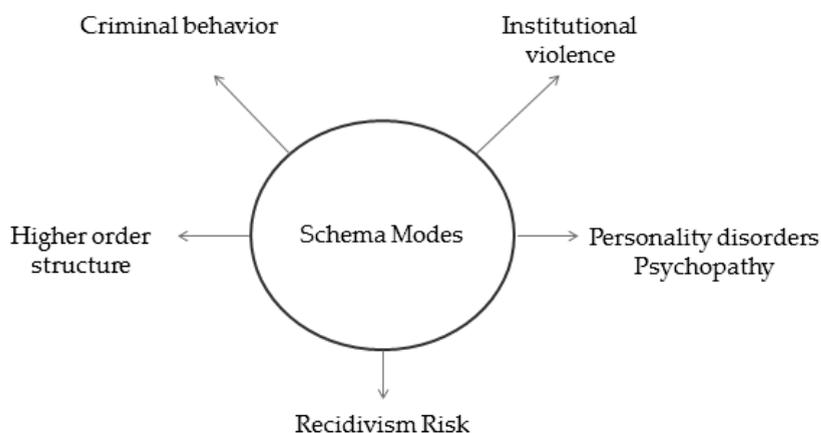
An adequate judgment on which treatment interventions to choose, can only be made in the context of a clear understanding of the patients' specific diagnoses or problems (Roth & Fonagy, 2005). Thus, adequate personality assessment is a prerequisite for selecting treatments. However, the assessment of forensic patients is not clear cut; the reliability and validity of these assessments is often hampered by response biases. For that reason *chapter 4* examined a novel method for assessing PDs in forensic patients: patient's self-reports were complemented by reports from knowledgeable informants (i.e., staff members). There was an incongruity between patients and informants: patients reported less personality pathology than informants did. These discrepancies remained intact over 18 months during treatment. Although both patients' and informants' reports indicated decreases in personality pathology over the 18 months, informant based reports continued to show greater pathology, compared to that of the informants. On the one hand, these findings may be interpreted as support for previous research findings that self-reports are susceptible to bias. On the other hand, the same might be said about informant reports; treatment providers may over-estimate the extent of pathology in their patients. Given the literature on forensic patients' tendency to minimize and deny problems, it seems most likely that informant reports are more accurate. However, the findings of this study cannot, in and of themselves, determine whether patients or informant are more accurate in assessing PD pathology. To resolve this question, we would need to compare patients' and informants' reports with independent measures of personality pathology that are less susceptible to test biases. It could also be that both patients and informants are accurate in their reports of personality pathology. For example, informants might be more accurate in evaluating externalizing pathology, while patients might be more accurate in evaluating their internal thoughts and feelings. Perhaps diagnostic assessment with regard to personality disorder pathology in forensic settings is more reliable when self- and informant-reports are combined. By adapting the SNAP, we created a measure of personality disorders that is suitable for use in forensic settings. This study also demonstrated that both self-report and information versions of the SNAP

are sensitive to changes over time, suggesting that it is useful for measuring change in treatment studies, such as the RCT of ST in the Netherlands.

Part II: Schema modes

The studies in this thesis provide strong empirical support for the construct validity of the schema mode concept in forensic patients with cluster B PDs. In this thesis, a nomothetic network of relationships between schema modes and other variables emerged (see Figure 1). In a nomothetic network, the meaning of a construct is supported by its relationships with variables that have a hypothesized relationship to it. The two main findings of the schema mode research presented in this thesis show that 1) it was possible to understand criminal and violent behavior as an unfolding sequence of schema modes; and that 2) there was a relationship between schema modes and personality disorders including psychopathy, as well as recidivism risk.

Figure 1. Network of schema mode relationships in offenders.



This thesis enhances our knowledge and understanding of forensic PD patients. It provides initial empirical evidence for Schema Therapy and its core feature in forensic cluster B PD patients.

Taken as a whole, this dissertation supports the meaningfulness of schema modes as a construct for understanding and treating forensic cluster B PD patients. The findings suggest that schema modes involve internalizing, externalizing, and healthy emotional states; that modes distinguish between different personality disorders; that modes predict crimes and violence, and predict recidivism risk and institutional violence. Thus this thesis adds to the understanding of schema modes in the forensic context. See Table 1 for an overview of the hypotheses, status and main findings per variable in the nomothetic network.

Table 2. *Study hypotheses per variable.*

<i>Variable</i>	<i>Hypothesis</i>	<i>Status</i>	<i>Main results</i>
Criminal behavior	There will be more intense child modes and detached self-soother mode in the events leading up to criminal behavior than during the crime, and more overcompensatory modes during the crime than before the crime	Confirmed	Child modes were evident in the events leading up to the crime, and more overcompensatory modes in the events during the crime itself.
Institutional Violence	Child and overcompensatory modes rated during the events leading up to the crime and during the crime itself would predict institutional incidents at the beginning of treatment	Partially confirmed	Vulnerable and angry child modes experienced in the events leading up to criminal behavior, and the overall score for the overcompensatory modes scored during criminal behavior were predictive for the degree of physically aggressive behavior. In contrast, other child modes and individual overcompensatory modes were no predictors for institutional violence.
Personality disorders	ASPD is characterized by angry and impulsive child, detached protector, detached self-soother and all of the overcompensatory modes. BPD is characterized by vulnerable child, angry and impulsive child, detached protector, detached self-soother, and bully and attack mode. NPD is related to self-aggrandizer, lonely child, detached self-soother and enraged child.	(Partially) Confirmed	ASPD was characterized by angry child, impulsive child, detached protector, self-aggrandizer, and bully and attack mode. In contrast, there was no relationship with self-aggrandizer and overcontroller mode. BPD was characterized by angry child, impulsive child, detached protector, and bully and attack modes. In contrast, there was no relationship with vulnerable child and detached self-soother. NPD was characterized by detached self-soother and self-aggrandizer mode. In contrast, there was no relationship with enraged- and lonely child mode.
Psychopathy	1. the overcompensatory modes in the events leading up to the crimes are related to the interpersonal facet of psychopathy. 2. angry and impulsive child modes rated during the events leading up to the crimes would be correlated with the lifestyle and antisocial facets of psychopathy. 3. Psychopathy facets were related to schema modes.	1. Partially confirmed 2. Not confirmed 3. Confirmed	1. Bully and attack mode and the conning and manipulative mode showed significant positive correlations with this facet. In contrast, the other three overcompensatory modes (i.e., self-aggrandizer, predator and overcontroller mode) did not show significant correlations. 2. Angry and impulsive child modes did not correlate with the lifestyle and antisocial facets of psychopathy. 3. The lifestyle and antisocial features of psychopathy were correlated with impulsive child mode.
Recidivism risk	HCR-20 risk judgments would be predicted by the Externalizing factor	Confirmed	The Externalizing schema mode factor was a significant predictor for the HCR-20 risk judgments for violence risk within the hospital
High-order structure	There is higher order structure of schema modes that distinguish among PDs.	Confirmed	Internalizing, externalizing, and healthy schema modes distinguish ASPD and BPD. ASPD: low internalizing and high externalizing modes. BPD: high internalizing modes.

Schema modes, criminal behavior and institutional violence

The relationship between schema modes and criminal behavior was tested in *chapter 4* by scoring schema modes based on descriptions of criminal behavior and the events leading up to criminal behavior from patients' dossiers. The fact that vulnerable feelings (e.g., shame, loneliness, abandonment, rejection) played a role in triggering criminal behavior, while particular overcompensatory schema modes (i.e., Bully and Attack, Predator) were present during the execution of criminal behavior, supports Schema Therapy's view on offender's criminal behavior. This model views aggression as often serving an overcompensatory function. Feelings of vulnerability and anger experienced in the events leading up to criminal behavior and the overall score of overcompensatory modes scoring during criminal behavior were also predictive for the degree of physically aggressive behavior during patients' institutionalization. This again suggests that painful feelings, such as vulnerability, and previous aggression behavior can ignite future violent behavior. Anger is typically activated as a response to (perceived) mistreatment, humiliation or frustration.

These feelings may be triggered as a result of the institutional setting, for example by the rules that are imposed upon offenders by staff members, which might, in turn, lead to a(n) (perceived) inability to control a patient's behavior and elicit feelings of frustration that 'need' to be overcompensated for. These retrospective findings of this study cannot, in and of themselves cannot establish a causal mechanism. However, given their temporal sequence, with vulnerability preceding the appearance of maladaptive coping modes, and their predictive validity with later incidents, supports one important aspect of causality, namely temporal order.

Another noteworthy finding, though not hypothesized, was a strong negative correlation between feelings of vulnerability, rated during the events leading up to the crimes, and the affective facet of psychopathy. There was also a low to moderate correlation between the interpersonal facet of psychopathy and the Conning and Manipulative mode rated in the events leading up to the crime and during the crime itself, and with the Bully and Attack mode rated during the events leading up to the crime. These findings suggest that emotion is less of a trigger in psychopaths' violent and criminal behavior. This is in line with the literature that often describes the typical psychopath as emotionally detached. These findings, however, go beyond the ST model of psychopathy that states that experiences such as abuse give rise to overcompensatory modes (i.e., predator mode). Do these findings thus suggest that the motives for psychopath's crimes have less to do with vulnerability and more with power by manipulating others? Or do these findings simply suggest that the onset of criminal behavior in psychopathic offenders is more associated with covert emotionality? In other words, do psychopaths have a lack of emotions or do they just hide their emotions?

Although the current study does not provide the answer to these questions, perhaps one can conclude that both suggestions are true. The findings appear to suggest that for some psychopaths, instrumental motives are more important than reactive ones. This is

in line the psychopathy literature that makes a distinction between primary and secondary psychopathy (e.g., Karpman, 1948; Porter, 1996; Poythress & Skeem 2006; Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). Primary psychopaths are believed to have emotional deficits that are based on constitutional or biological characteristics. Secondary psychopaths are considered detached from their underlying emotions, such as anxiety or depression, and are believed to originate from environmental causes (e.g., abuse, rejection) (Porter, 1996; Poythress & Skeem 2006). Perhaps, in forensic ST, there needs to be an equal focus on instrumental and instrumental motives when working with some psychopathic offenders.

Schema modes, personality disorders and recidivism risk

The relationship between schema modes, personality disorders and recidivism was tested in *Chapter 7*. According to ST-theory, different PDs are characterized by different combinations of modes (schema mode model). The schema mode models for ASPD, BPD and NPD were supported although there were a few notable exceptions when the models for non-forensic and forensic patients are compared. First, ASPD was characterized by Angry Child, Impulsive Child, Detached Protector, Self-Aggrandizer, and Bully and Attack mode. However, this disorder was unrelated to feelings of abandonment (Vulnerable Child mode) and self-directed punishment (Punitive Parent mode). Perhaps an antisocial offender's emotions are typically suppressed or canalized through externalizing or unscrupulous behaviour than in non-forensic ASPD patients. Also, we used a self-report measure (i.e., Schema Mode Inventory) to assess schema modes in this study. Perhaps, some forensic patients are reluctant to acknowledge vulnerable emotions on self-report inventories. Second, BPD was characterized by high scores on Angry Child, Impulsive Child, Detached Protector, and Bully and Attack modes. This study failed to demonstrate a relationship between self-punitive behavior (Punitive Parent mode) and BPD. A possible explanation is, that while BPD diagnoses are very common in forensic and general psychiatric settings, forensic patients with BPD often have co-morbid antisocial traits and often display externalized or other-directed aggression while non-forensic BPD patients usually display self-directed behavior (e.g., self-mutilation). Third, NPD was characterized by the detached self-soother and self-aggrandizer mode. This study revealed no underlying feeling of loneliness and anger (Lonely and Enraged Child mode), but did show to be related to intimidation and threats (Bully and Attack mode) and a sense of entitlement (Self-Aggrandizer mode). This lack of feelings of loneliness might be explained by the fact that the scientific literature typically distinguishes two subtypes or origins of narcissistic dysfunction: the grandiose/overt narcissist and the vulnerable/covert narcissist. Grandiose narcissists are characterized by grandiosity and entitlement that enhances their self-esteem, whereas the vulnerable subtype typically portrays this behaviour to overcompensate feelings of helplessness. Perhaps, forensic NPD patients portray more grandiose dysfunction and dominance than non-forensic narcissists and can therefore fail to come across as vulnerable or lonely? Another expla-

nation might be that narcissistic patients in forensic settings are reluctant to acknowledge vulnerability on self-report inventories. Although the lifestyle and antisocial features of psychopathy were correlated with impulsive child mode, this disorder was not characterized by overcompensation modes (i.e., Self-Aggrandizer, Bully and Attack). In the literature, a distinction between impulsive and predatory violence in psychopaths has been made. Perhaps the findings of our study suggest that our sample consisted of primarily impulsive psychopaths. Another explanation might be the fact that we used the SMI, an inventory that does not include all overcompensatory modes. For example, it does not include the Conning and Manipulative, nor the Predator mode. In the study presented in chapter 5, the Conning and Manipulative mode was the main one that was related to the interpersonal facet of psychopathy. Furthermore, schema modes could be divided into three categories: externalizing-, internalizing- and healthy emotional states. It appeared that externalizing schema modes, thus emotional states that refer to acting-out behavior, were predictive for recidivism risk estimates inside a forensic hospital. This is not that surprising as risk assessments are typically based on observable and aggressive behavior.

The findings about the relationship between the internalizing and externalizing modes and PDs, and most of the hypotheses about specific modes and PDs, support ST's underlying schema mode models in forensic patients. However, the findings regarding psychopathy are less strong.

Part III – Schema Therapy techniques

The main findings of the schema mode research presented in this thesis show that 1) experiential techniques, specifically, those from drama therapy which are similar to those in Schema Therapy, appeared to be a powerful tool for deliberately evoking feelings of vulnerability in forensic cluster B PD patients; and that 2) both psychotherapy and Arts therapy versions of Schema Therapy triggered more vulnerability (Vulnerable Child mode) and child-like emotions (child modes) in general compared to usual forensic treatment (“treatment-as-usual”). This thesis provides initial empirical evidence for experiential techniques used in Schema Therapy and Arts therapies in forensic cluster B PD patients.

Table 2. *Hypotheses with regard to Schema Therapy techniques.*

<i>Variable</i>	<i>Hypothesis</i>	<i>Status</i>	<i>Main results</i>
Evoking vulnerability and anger	Vulnerability and anger can be deliberately evoked in forensic cluster B PD patients using experiential techniques	Partially confirmed	Patients showed significantly more vulnerability after experiential induction. In contrast, patients did not show more anger after the anger-induction procedure
Schema Therapy and Arts Therapies	Patients would show more vulnerable emotions, less emotional detachment and more healthy emotional states during 1) Arts therapy sessions compared to psychotherapy sessions; 2) ST versus TAU; and 3) ST-oriented Arts therapies.	(Partially) confirmed	1. patients showed significantly more healthier emotional states in their Arts therapy sessions than in their psychotherapy sessions. 2. SFT evoked more child modes than TAU, at a trend level of significance. 3. ST-oriented Arts therapies are not more effective in eliciting modes than non-ST Arts therapies.

There are two reasons why the findings of the two studies presented in this section are remarkable. First, forensic patients are a group of patients that are difficult to reach emotionally; many forensic patients are emotionally detached, or tend to express their emotions inappropriately. Second, the sample included patients with high levels of psychopathy (psychopathy scores ≥ 26); hallmark features of psychopathy are a lack of emotions.

Anger and vulnerability in forensic patients

The hypotheses that Vulnerable and Angry Child mode can be evoked in forensic patients with a cluster B PD was tested in *Chapter 7*. For this study, a new 5-session drama therapy protocol was developed; it consisted of an introductory session, three intervention sessions and a concluding or wrap-up session. Patients did not show more anger (Angry Child mode) after the anger-induction procedure, or in the other two experiential sessions. There could be several reasons for why the anger-induction failed. Some patients might be characterized as over-controlled. Over-controlled individuals typically inhibit their anger expressions excessively, and use avoidance as a strategy for coping with their emotions. Others may not have expressed their anger because of the restrictive atmosphere of the forensic setting. This may have led to social desirable responding, in this case, to suppression of anger. The pattern for vulnerability (Vulnerable Child mode) was very different: patients showed significantly more vulnerability within all three experiential intervention sessions after this emotion was evoked.

On the one hand, the finding that vulnerability could be deliberately induced is striking given that forensic patients with personality disorders are often characterized as being quite emotionally detached, even after months of years of psychotherapy. On the other hand, our findings are in line with the guiding assumption of drama therapy that

experience, as evoked through role play, enables the patient to get in touch with his emotions.

From a clinical perspective, this experimental demonstration of mode switching supports the contention that vulnerable emotions can be reached using experiential methods, in forensic patients who are generally quite detached emotionally.

Schema Therapy and Arts therapy

The extent to which Schema Therapy and Arts therapies are effective in evoking schema modes was the focus of *chapter 8*. There was a trend for ST to show more vulnerability than TAU ('treatment as usual'), which means that both psychotherapy and Arts therapy forms of ST showed more vulnerability than psychotherapy or Arts therapy forms of TAU. On the other hand, there was no interaction between ST versus TAU and Arts therapy versus psychotherapy. We hypothesize that experiential techniques are one of the methods through which ST- and Arts therapists evoke emotional states. However, in this study, we did not directly test the hypothesis that experiential techniques per se accounted for the success of Art therapies in evoking emotional states. These effects could be attributable to other aspects of the Arts therapies that were delivered, or to the personal qualities of the Arts therapists themselves, as the Arts therapies and verbal therapies were provided by different therapists. Another defining technique between Schema Therapy and standard types of therapies, is known as limited reparenting. Limited reparenting means that the therapist acts like a "good enough" parent for the patient; he provides some of what the patient missed, in appropriate ways. However, this therapeutic style was not tested in our study.

This study is the first empirical demonstration that Schema Therapy and Arts therapy is more effective in accessing patients' vulnerable emotions than conventional therapies. These findings also suggest that the integration of ST with Arts therapies might benefit from further development and testing. Although these findings require replication in a larger sample, they suggest that these therapy forms have potential for treating patient populations that are difficult to reach emotionally.

Clinical implications

Therapy is most likely to be effective when it incorporates a consistent theoretical framework which provides the rationale for particular interventions (Livesley, 2008). With regard to Schema Therapy, the core theoretical forensic framework is the conceptualization of schema modes as risk factors for violent and criminal behavior. However, it was unclear whether this framework had any empirical basis. This dissertation investigated several aspects of the schema mode model in forensic cluster B PD patients and provided empirical support for several aspects of the model. This puts the entire treatment on a much sounder empirical footing. For example, now there is evidence that

schema modes are related to crime and violence, as well as personality disorders, and that vulnerable emotions can be induced via experiential techniques. Moreover, this research presented in this thesis helps to refine the ST model. For example, it provides important information about the nature of modes that we didn't have before, such as the possibility that modes might be classifiable as internalizing, externalizing, and healthy, and that the motives behind offenders' crimes might vary depending on psychopathy facets, as reflected in schema modes (e.g., the motives of psychopathic offenders with high levels of affective deficits are more instrumental, and have less to do with vulnerable emotions). This is important clinical information, in that it focuses us on the modes that are related to patients' motivations for violence. Consequently, clinicians can make more informed decisions of which interventions might be suitable for which PDs, thus treatment can be better tailored to a particular patient. Also, by providing evidence about the theoretical model on which ST is based, it contributes to the development of ST as an empirically supported treatment.

The research presented in this thesis is also complementary to the RCT of ST in seven forensic psychiatric hospitals (Bernstein, et al., 2012). This RCT examines the effectiveness of ST versus treatment as usual (TAU), which is defined as the customary treatment at a particular facility, in a sample of cluster B PD offenders. The forensic adaptation of ST by Bernstein and colleagues (2007) is used as the basis for treatment. Patients are randomly assigned to either three years of ST or TAU, and are assessed at baseline and every six consecutive months over the course of treatment. This dissertation investigates ST's plausibility whereas the RCT investigates its effectiveness. Both are important contributions to establishing ST as an empirically supported treatment for forensic PD patients.

This thesis showed that vulnerable emotions can be deliberately evoked in cluster B PD offenders, a group of patients that is usually difficult to reach emotionally. Much of forensic treatment is directed at changing cognitions. However, there is little evidence that these approaches lead to more than modest improvements. Given how emotional detached many forensic PD patients are, cognitive approaches may have only limited effectiveness, because cognitions need to be "hot" in order to change them (David & Szentagotai, 2006, Holmes & Mathews, 2005). Forensic ST uses experiential techniques to evoke emotions, activating their associated cognitions, and making them more susceptible to change. This dissertation examined the first step in this process, namely evoking emotions. Further research will be needed to investigate the other steps in the process of emotional change, such as integrating emotions.

The fact that patients could be switched into another schema mode support one of the guiding assumptions of Schema Therapy. Deliberate mode switching also implies that offenders' emotions are indeed amendable to change. These findings may give insight into the temporal characteristics of modes and may also inspire clinicians to use ST-derived experiential techniques during their therapy session, not only to reach core underlying vulnerable emotions but also to challenge patients' maladaptive coping styles.

In depth knowledge about schema modes in offenders can enhance or influence existing treatment approaches or programs. For example, it leads to a better, more nuanced and substantiated understanding of which maladaptive emotional states play a prominent role in criminal behavior and institutional incidents. This knowledge can enhance or influence existing treatment approaches or programs, including, of course, Schema Therapy, and specific offender programs which aim to clarify a patient's pattern of criminal offending.

There is a strong discrepancy between patient and informant assessment of personality pathology in offenders. This suggests that the combination of both types of report might be of special interest in offender samples because it improves the validity of PD diagnoses in these samples. Accurate assessment is of clinical importance because an adequate judgment on which treatment interventions are chosen can only be made in the context of a clear understanding of the patients' specific diagnoses or problems.

The studies presented in this thesis also enhances our understanding of Arts therapies in general and drama therapy in specific. For example, it suggests that these therapy forms have potential for treating patient populations that are difficult to reach emotionally. It provides empirical support for drama therapy which fits in with the general need for evidence based practice. Overall, this may contribute to the development of better integrated treatment interventions for forensic patients.

Strengths of this thesis

The main strength of this thesis is that it examined one of the key interventions of Schema Therapy (i.e., experiential techniques) and because it comprehensively teases apart ST's main feature when working with PD offenders: schema modes. This is important as an empirically validated techniques and conceptual framework is a prerequisite for effective treatment. Another strength of this thesis is that a wide range of methods were used to test our main hypotheses, including an experimental protocol for evoking schema modes, an innovative method for assessing schema modes retrospectively and from videotapes of therapy sessions, and a novel method for assessing personality disorders in forensic settings. Finally, some of the studies used large samples which were obtained from several different forensic psychiatric hospitals in The Netherlands.

Limitations of this thesis

The findings of (the research presented in) this thesis should be considered in light of certain limitations. First, in this thesis, the predictive validity of schema modes for personality disorders and recidivism risk (chapter 7) were not examined longitudinally. Instead, a cross-sectional design was used to establish the predictive value of schema modes. Second, the sample size in some of the studies was relatively small (chapters 4, 7

and 8). This may hamper the generalizability and possible statistical power of the findings. Third, all data in this thesis was collected in in-patient forensic institutions; whether the findings generalize to outpatient forensic settings is unknown. Also, all patients in this thesis were male and were admitted in forensic psychiatric hospitals. We don't know whether the findings of generalized to female forensic populations and to offenders who are sentenced to prison instead of forensic treatment. Fourth, several studies of this thesis had only one outcome measure with regard to schema modes. For example, some chapters rated external manifestations of schema modes (i.e., Mode Observation Scale) (chapters 5, 6, 8) while others assessed the subjective or internal manifestations of schema modes (i.e., Schema Mode Inventory) (chapter 7). Results might have differed had we used more than one outcome measure of emotional states. Finally, this thesis raised several questions with regard to the relationship between schema modes and other variables. These questions have been addressed using statistical correlation analyses. However, based on these analyses, no definite inferences regarding causality can be made.

Suggestions for future research

The studies presented in this thesis call for continued research on schema modes in personality disordered offenders. Future research should examine whether different schema modes can be effectively induced in different types of PDs in forensic patients and whether these effects are different from the effects in specific non-forensic PD patients. The effects of these inductions should be monitored on an emotional, cognitive and physiological level, because in essence, schema modes are specific combinations of early maladaptive schemas and dysfunctional coping responses. It would be important to see whether these aspects do indeed hang together in specific PDs. This kind of research also contributes to research on theoretical foundations of Schema Therapy. Additionally, it would be of interest to examine whether mode evoking techniques, such as experiential techniques, could serve as a diagnostic tool in forensic patients as their core emotional deficits often remain unclear during traditional assessments procedures. For example, anger and violent transgressions are a prominent issue in offenders but are often repressed in forensic institutions, which hampers a clear understanding of what ignites anger or violence in the first place. Eliciting angry modes might provide a safe framework of understanding anger patterns in offenders.

The overall aim of Schema Therapy is to heal underlying child modes so that dysfunctional overcompensatory or coping modes are no longer called for. ST postulates that schema modes are fluctuating emotional states that temporarily dominate a person's thoughts, emotions and actions. Future research should examine whether child and overcompensatory schema modes indeed fluctuate over the course of forensic treatment,

thus whether the maladaptive nature of these schema modes progresses over time. Possibly, schema modes could be outcome measures for treatment effectiveness.

Forensic schema modes are suggested to play an important role in personality disordered offenders. Our research has shown initial evidence for the existence of these types of modes in cluster B PD offenders. However, it remains unclear what the unique contribution or significance is of each of these modes in offenders with specific PDs. Future studies should examine whether the forensic schema modes have added value over and above traditional schema mode conceptualizations.

Future studies should compare the Mode Observation Scale (MOS) with other schema mode instruments to further establish the reliability and validity of this instrument. For example, the MOS and the Schema Mode Inventory (SMI) should be compared. Perhaps both instruments are complementary where the MOS assesses objective expressions of schema modes whereas the SMI assesses the subjective experience of schema modes. On a similar note, our forensic adaptation of Schedule for Nonadaptive and Adaptive Personality (SNAP) should be subjected to further studies to examine the validity of informant reports in forensic settings.

Our study found that Schema Therapy and Arts therapy triggered more vulnerability (Vulnerable Child mode) and child-like emotions (child modes) compared to non-ST psychotherapy and Arts therapy. However, more elaborate research should be conducted to establish how Arts therapies and Schema Therapy are inter-related and how Schema Therapy might be enhanced by Arts therapy or vice versa in offenders with cluster B personality disorders.

Taken as a whole, future research should focus on which Schema Therapy techniques and concepts are most effective for which problems in which PD offenders and under which circumstances.

Samenvatting (Dutch Summary)

De meest voorkomende psychische stoornissen in tbs-klinieken zijn psychotische stoornissen, middelenmisbruik- en afhankelijkheid, en persoonlijkheidsstoornissen (PS). Vijftig tot negentig procent van de tbs-patiënten is gediagnosticeerd met een cluster B PS. Dit cluster bestaat uit 4 persoonlijkheidsstoornissen (antisociale-, borderline, narcistische- en theatrale persoonlijkheidsstoornis). Deze stoornissen hebben betrekking op theatraal, emotioneel of grillig gedrag.

De interesse in de behandeling van tbs-patiënten is de afgelopen jaren sterk toegenomen. Zo is er een toename in de wetenschappelijke literatuur over de behandeling van zedendelinquenten, plegers van huiselijk geweld en tbs-patiënten met een (comorbide) verslavingsprobleem (Isherwood & Brooke, 2001; Lösel & Schmucker, 2005; Murphy & Ting, 2010). De behandeling van tbs-patiënten met een persoonlijkheidsstoornis (PS) en de kennis over de effectiviteit van deze behandelingen staan echter nog in de kinderschoenen. 'Evidence based' behandelingen zijn belangrijk voor psychiatrische patiënten, maar zijn voor de tbs-patiënten zo mogelijk nog belangrijker omdat de risico's van een mislukte behandeling voor deze laatste groep veel groter zijn. Als de behandeling niet aanslaat, is het risico dat een dergelijke patiënt recidiveert bijvoorbeeld erg groot. Derhalve moet de behandeling voor tbs-patiënten gebaseerd zijn op gefundeerde theoretische kaders en wetenschappelijk getoetste principes.

Dit proefschrift is vooral gericht op Schema Therapie (ST). Deze behandeling heeft een meer optimistisch uitgangspunt voor tbs-patiënten dan andere cognitief gedragstherapeutische behandelingen. ST gaat er namelijk niet van uit dat deze patiënten blijvend 'gehandicapt' zijn en dat deze beperkingen gecompenseerd moeten worden, maar dat er sprake is van een onderliggend persoonlijkheidsprobleem dat verantwoordelijk is voor het criminele gedrag. Schema Therapie probeert de persoonlijkheidspathologie bij tbs-patiënten die een cluster B persoonlijkheidsstoornis hebben te bewerken waardoor de risicofactoren voor recidive afnemen. Dit uitgangspunt komt overeen met de Nederlandse 'TBS' maatregel. TBS staat voor 'ter beschikkingstelling van de staat'. Deze maatregel wordt door een rechter opgelegd als hij van mening is dat een delinquent (gedeeltelijk) ontoerekeningsvatbaar is voor zijn delict doordat hij een psychische stoornis heeft. Van alle behandelingen die in Nederland aan tbs-patiënten worden aangeboden, is Schema Therapie er een die specifiek is aangepast voor deze populatie.

Dit proefschrift omvat een uitgebreid onderzoek naar de construct validiteit van het theoretisch model waar Schema Therapie voor tbs-patiënten op is gebaseerd. Daarnaast biedt het wetenschappelijk bewijs voor de effectiviteit van experimentiële technieken in het uitlokken van emotionele toestanden. Deze technieken zijn een van de pijlers van Schema Therapie en vaktherapie (bijv. drama-, muziek-, beeldende therapie). In de tweede plaatst onderzoekt deze thesis de effectiviteit van bestaande behandelingen voor tbs-patiënten met een cluster B PS, en stelt het een beslisboom om behandelingen en tbs-patiënten beter te matchen. Samengevat beoogt dit proefschrift een antwoord te geven op de vraag in welke mate Schema Therapie bijdraagt aan een beter begrip en behandeling van tbs-patiënten met een cluster B PS. Dit proefschrift richt zich op 3 thema's:

tbs-behandeling en diagnostiek, schema modi, en schema therapie technieken. In deze samenvatting worden de bevindingen van de afzonderlijke hoofdstukken voor elk van deze thema's samengevat.

Forensische behandeling en diagnostiek

Hoofdstuk 1 geeft een beschrijving van het oorspronkelijke theoretische kader van Schema Therapie, de rationale van en richtlijnen voor de behandeling voor tbs-patiënten. Schema Therapie is een integratieve behandeling die speciaal is ontwikkeld voor patiënten met een persoonlijkheidsstoornis. Deze behandeling richt zich met name op de therapeutische relatie, het verwerken van trauma's uit de kindertijd en het gebruik van experiëntiële technieken. De drie pijlers van Schema Therapie zijn vroegkinderlijke onaanpaste schema's, disfunctionele copingstijlen en schema modi. Vroegkinderlijke onaanpaste schema's zijn zelfbeschadigende cognities die zijn ontstaan vanuit negatieve ervaringen uit de kindertijd. Disfunctionele copingstijlen verwijzen naar de wijze waarop iemand omgaat met de activatie van een schema. Schema modi zijn fluctuerende emotionele toestanden die iemands emoties, cognities en gedrag op een bepaald moment beïnvloedt. Schema Therapie voor tbs-patiënten is vooral gericht op die schema modi die een risicofactor zijn voor gewelddadig en crimineel gedrag. Gewelddadig gedrag kan bijvoorbeeld gekenmerkt worden door meedogenloze en kille agressie (roofdier modus), instrumentele agressie (pest en aanval modus), of manipulatie en bedrog (bedrog en manipulatie modus). Deze gedragingen worden uitgelokt door pijnlijke gevoelens, frustratie of boosheid.

In Hoofdstuk 2 worden bestaande behandel mogelijkheden voor tbs-patiënten met een cluster B PS beoordeeld en onderzocht op hun wetenschappelijk bewijs. Door de jaren heen zijn er diverse programma's ontwikkeld speciaal voor bepaalde type tbs-patiënten. Dergelijke programma's zijn meestal kortdurend, worden gegeven in groepen en bestaan doorgaans uit modules die gebaseerd zijn op cognitief gedragstherapeutische principes. Voorbeelden van programma's zijn: het 'Violence Reduction Program' (VRP) en Agressie Hanteringtherapie (AHT) voor gewelddadige tbs-patiënten; de Vaardigheidstraining Emotie Regulatie Stoornis (VERS) voor tbs-patiënten met een borderline PS; en verslavingsprogramma's die afgeleid zijn van Dialectische Gedragstherapie en Schema Therapie voor verslaafde tbs-patiënten. De meest voorkomende psychotherapie behandelingen voor tbs-patiënten zijn: standaard Cognitieve Gedragstherapie (CGT), Dialectische Gedragstherapie (DGT), Schema Therapie, 'Mentalisation-Based' behandeling (MBT), en Cognitief Analytische Therapie (CAT). Daarnaast word er vaak gewerkt met diverse andere behandelvormen zoals Motivationale Gespreksvoering, delictketen module, en vaktherapie (vb. drama, muziek, beeldende therapie). Over het algemeen blijkt er weinig wetenschappelijk bewijs te zijn voor de effectiviteit van deze behandelingen. Dit is mede omdat er geen methodologisch adequaat uitgevoerde 'randomized cli-

nical trials' (RCT) zijn uitgevoerd. Een positieve uitzondering is een RCT naar ST dat momenteel in Nederland wordt uitgevoerd. Er is dus weinig wetenschappelijk bewijs waarmee je tbs-behandelingen kunt evalueren.

In Hoofdstuk 3 wordt er een beslisboom gepresenteerd die uitkomst moet bieden bij de vraag welke behandeling het meest geschikt kan zijn bij welk probleem bij welke patiënten en onder welke omstandigheden. Deze beslisboom is gebaseerd op het (beperkte) wetenschappelijk bewijs en theoretische overwegingen. Deze beslisboom helpt klinici en tbs-klinieken te helpen om rationele keuzes te maken voor individuele tbs-patiënten met een cluster B PS. Allereerst worden er alternatieven aangedragen voor tbs-patiënten wiens agressie een direct gevaar is voor de patiënt zelf of anderen. Ten tweede worden er behandelmogelijkheden geopperd voor tbs-patiënten wiens agressie geen direct gevaar is voor de patiënt zelf en anderen. Ten derde worden er behandelalternatieven gepresenteerd voor tbs-patiënten die niet gemotiveerd zijn voor behandeling. Ten vierde worden er behandelmogelijkheden geschetst voor tbs-patiënten met een antisociale, borderline en narcistische PS, vaak voorkomende co-morbide as I stoornissen en specifieke risico en beschermende factoren. Tot slot worden er behandelmogelijkheden gepresenteerd voor specifieke omstandigheden (bijv. ambulante versus klinische behandeling), mate van beveiliging, en specifieke culturele en etnische achtergronden.

Een helder beeld van de pathologie van een tbs-patiënt is een voorwaarde om te kunnen bepalen welke behandeling geschikt is. Echter, de diagnostiek van dergelijke patiënten is vaak beperkt. Zelfrapportage lijsten zijn vaak onbetrouwbaar omdat tbs-patiënten regelmatig informatie achterhouden, een overdreven positief beeld van zichzelf schetsen of van zichzelf hebben. In Hoofdstuk 4 wordt een nieuw instrument onderzocht om persoonlijkheidspathologie bij tbs-patiënten te diagnosticeren zodat deze diagnostiek betrouwbaarder en meer valide is. Deze studie heeft de validiteit van de zelfrapportage en informantenrapportage van de 'Schedule for Nonadaptive and Adaptive Personality' (SNAP; Clark, 1993), een instrument dat wereldwijd vaak wordt gebruikt, onderzocht. Dit onderzoek had een cross-sectionele en longitudinale component. De SNAP-F werd halfjaarlijks afgenomen bij 24 tbs-patiënten en 3 informanten per patiënt gedurende een periode van 18 maanden. Het doel van de studie was om na te gaan of patiënten en informanten verschilden in hoe zij PS symptomen zien en of dit beeld veranderd over tijd. Evaluatie van de SNAP-F laat zien dat het instrument een goede interne consistentie heeft en een lage interbeoordelaarsbetrouwbaarheid, als is deze nog steeds significant. Er is sprake van een verschil tussen patiënten en informanten; patiënten rapporteren stelselmatig minder pathologie dan informanten. De persoonlijkheidspathologie neemt af over tijd, al blijft het verschil tussen patiënten en informanten wel bestaan.

Schema Modi

Hoofdstuk 5 heeft de relatie tussen schema modi en crimineel gedrag bij tbs-patiënten met een cluster B PS onderzocht. Daarnaast is onderzocht in hoeverre schema modi samenhangen met incidenten die binnen een tbs-kliniek worden gepleegd. Dit betreft de eerste studie naar het uitgangspunt dat schema modi risicofactoren voor crimineel en gewelddadig gedrag vertegenwoordigen. We hebben een observationeel instrument ontwikkeld om schema modi retrospectief te meten aan de hand van strafdossiers van tbs-patiënten: de Modus Observatie Schaal (MOS). De resultaten laten allereerst zien dat schema modi een rol spelen in de gebeurtenissen voorafgaand aan delicten en leiden tot het overgaan tot een delict. Vooral de kwetsbare kind en eenzame kind modus, en onthechte zelfsusser modus blijken meer voor te komen in de gebeurtenissen voorafgaand aan het delict dan tijdens de delicten zelf. De pest en aanval modus en roofdier modus, daarentegen, komen meer voor tijdens het daadwerkelijke delict dan tijdens de gebeurtenissen die daar aan vooraf gaan. Daarnaast laten de resultaten zien dat gevoelens van kwetsbaarheid en boosheid die ia ervaren in de gebeurtenissen voorafgaand aan de delicten, voorspellend zijn voor de mate waarin fysiek agressieve incidenten in een tbs-kliniek worden gepleegd. Tot slot blijken de overcompensatie modi geassocieerd te zijn met de interpersoonlijke stijl van psychopathie. De kwetsbare kind modus gescoord in de gebeurtenissen voorafgaand aan de delicten is negatief gecorreleerd met de affectieve factor van psychopathie.

Hoofdstuk 6 vertegenwoordigt de eerste studie waarin de validiteit van schema modi word onderzocht in relatie tot hun associatie met persoonlijkheidsstoornissen, recidive risico en factor structuur. De onderzoeksgroep bestaat uit 88 tbs-patiënten. Factor analyse liet zien dat er sprake is van een 3-factoren structuur: schema modi zijn onder te verdelen in internaliserende, externaliserende en gezonde emotionele toestanden. Deze factoren onderscheiden ASPS/psychopathie als een stoornis waarbij sprake is van lage scores op de internaliserende factor en hoge scores op de externaliserende factor. BPS kon onderscheiden worden als een stoornis waarbij hoog gescoord wordt op internaliserende schema modi. Daarnaast blijken externaliserende schema modi op een significante wijze het recidive risico binnen een tbs-kliniek te voorspellen. Tot slot blijkt een BPS gekenmerkt te worden door hoge scores op de kwetsbaar kind, boos- en impulsief kind en onthechte zelfsusser modi. ASPS patiënten daarentegen scoren hoog op boos- en impulsief kind, afstandelijke beschermer, pest en aanval, zelfverheerlijker en paranoïde overcontroleerder. NPS, daarentegen, word gekenmerkt door hoge scores op onthechte zelfsusser en de zelfverheerlijker modus.

Schema Therapie technieken

In Hoofdstuk 7 wordt de hypothese onderzocht dat experiëntiële technieken binnen de Schema Therapie bewust twee schema modi uitlokken: kwetsbaar kind en boos kind. De

onderzoeksgroep bestaat uit negen tbs-patiënten met een cluster B PS. Er werd een experimenteel protocol uitgevoerd door een dramatherapeute. Dit protocol bestond uit een kennismaking sessie, drie interventiesessies, en een afsluitingssessie. Schema modi zijn gemeten met de MOS. De resultaten tonen aan dat patiënten inderdaad meer kwetsbaar kind modus laten zien nadat deze wordt geïnduceerd, maar dat de woede-inductie niet leidt tot meer boze kind modus bij vergelijking van de beginwaarden.

In Hoofdstuk 8 wordt onderzocht in hoeverre Schema Therapie en vaktherapie (drama, muziek, beeldende therapie) in staat zijn schema modi uit te lokken bij tien tbs-patiënten bij een cluster B PS. Patiënten hebben ofwel psychotherapie en vaktherapie volgens de ST principes ofwel via standaard CBT principes gekregen. De resultaten toonden aan dat Schema Therapie en vaktherapie in zijn algemeenheid meer kwetsbaarheid (kwetsbaar kind modus) en andere kind modi (bijv. eenzaamheid, boosheid, impulsiviteit) uitlokken dan de standaard psycho- en vaktherapie. ST-vaktherapie lokt niet meer kwetsbaarheid en gezond gedrag of minder onthechting (afstandelijke beschermer) uit dan CBT-vaktherapie. De vaktherapieën waren in zijn algemeenheid effectief in het uitlokken van schema modi. Deze studie presenteert het eerste empirische bewijs dat Schema Therapie, zowel in de psycho- als vaktherapie vormen, meer effectief is in het uitlokken van kwetsbare emoties in tbs-patiënten dan standaard CBT.

Tot slot

Dit proefschrift toont aan dat er weinig wetenschappelijk bewijs is voor de effectiviteit van behandeling van tbs-patiënten met een cluster B persoonlijkheidsstoornis. Daarnaast blijkt dat Schema Therapie veelbelovend is. De studies in dit proefschrift leveren sterk wetenschappelijk bewijs voor de construct validiteit van het schema modus concept in tbs-patiënten met een cluster B PS. De resultaten tonen bijvoorbeeld aan dat crimineel gedrag en het ontstaan ervan begrepen kunnen worden door dit gedrag te definiëren als opeenvolgende schema modi. Voor het eerst worden schema modi conceptualisaties voor antisociale-, borderline- en narcistische persoonlijkheidsstoornis getest bij tbs-patiënten. Dit proefschrift levert het eerste bewijs voor de validiteit van deze conceptualisaties bij dergelijke patiënten. Tevens toont dit proefschrift aan dat het gebruik van informanten een waardevolle toevoeging is bij het diagnosticeren van persoonlijkheidspathologie bij delinquenten. Tot slot biedt dit proefschrift ook wetenschappelijk bewijs voor experimentiële technieken die een belangrijk onderdeel vormen van zowel Schema Therapie als vaktherapie. Deze technieken blijken effectief te zijn in het bewust uitlokken van gevoelens van kwetsbaarheid in tbs-patiënten met een cluster B PS. Zowel schemagerichte psychotherapie als vaktherapie blijken meer kwetsbaarheid en andere kind modi uit te lokken dan standaard psychotherapie en vaktherapie.

Samengevat kan gesteld worden dat dit proefschrift een bijdrage levert aan het empirisch bewijs voor Schema Therapie bij forensische patiënten met een cluster B persoon-

lijkheidsstoornis. Het is belangrijk meer kennis te vergaren over welke ST elementen en technieken wel of niet effectief zijn bij welke patiënten en waarom zodat deze behandeling echt op maat gegeven kan worden bij tbs-patiënten.

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Appendixes

Appendix 1:

Schedule for Nonadaptive and Adaptive Personality – Forensic informant version (SNAP-FI)

Name/ pt id:

Date:

Instruction: You will find a series of statements a person might use to describe the behaviors, attitudes, opinions, interests, feelings, and other characteristics of people they know. Read each statement carefully and decide how well it describes your patient over the last 6 months. Rate each statement according to how true it is of your patient, using a 5-point scale.

Scoring Procedure

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very often true

Score	
	1. He gets into more fights than most people
	2. In his opinion, most people make friends because they expect friends to be useful
	3. Even when he's around other people he keeps to himself
	4. He considers it very important to have a good reputation in the community
	5. He thinks he is being talked about
	6. He gets so angry that he loses control
	7. He often quarrels with others
	8. He is not the sort of person who holds a grudge
	9. He wouldn't take advantage of other people's weaknesses
	10. When he starts a task, he is determined to finish it
	11. He does everything reckless
	12. He questions whether the people he knows can really be trusted
	13. He frequently drinks too much for his own good
	14. He thinks that people shouldn't mind if he borrows small things without asking
	15. He seems to have an inner world of his own that has its own special meaning

Scoring Procedure

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very often true

Score	
	16. He believes that most people stay friends only as long as it is to their advantage
	17. He'll do almost anything to keep someone from leaving him
	18. Sometimes he hits people if he believes they've done something to deserve it
	19. He likes to show-off
	20. Sometimes he gets so upset that he feels like hurting himself
	21. He often acts without thinking
	22. He believes that sooner or later people always let you down
	23. He likes being the topic of conversation
	24. He has never had trouble with sticking to the rules
	25. He would never start a fist fight
	26. He doesn't enjoy being in the spotlight
	27. He thinks that his friends have often betrayed him
	28. Lying seems to come easily to him
	29. When someone hurts him, he tries to get even
	30. He seems quite willing to bend the truth if it's to his advantage
	31. When he doesn't feel like it, he just doesn't do his job
	32. He enjoys taking advantage of others' weak points
	33. He performs in public whenever he can
	34. He does a lot of things that got him into trouble
	35. He is good at getting others to do his work
	36. He thinks he has many qualities that others wish they had
	37. He thinks that people sometimes try to make him look foolish
	38. He is ready for a fight when someone tries to take advantage of him
	39. He doesn't believe that people are always trying to take advantage of him
	40. He's used drugs quite a bit
	41. He has tried to commit suicide
	42. He believes that he deserves special recognition
	43. He feels that he is almost always treated fairly
	44. When someone insults him, he can forgive and forget
	45. He has an unusual way of looking at the world
	46. He thinks he ought to be admired

Scoring Procedure

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very often true

Score	
	47. He believes that it's safer to keep things to yourself
	48. He doesn't ever like to stay in one place for long
	49. His temper sometimes gets him into trouble
	50. He is sometimes careless with other people's things
	51. He thinks that he is quite an extraordinary person
	52. He has hurt himself on purpose several times
	53. He has been sentenced to forced isolation on the ward
	54. He believes that it's dangerous to show your real feelings
	55. He lives a safe, quiet life
	56. He thinks he has often been lied to
	57. He becomes angry more easily than most people
	58. He doesn't keep particularly close track of where his money goes
	59. I can't imagine that he's ever had the feeling that he was someone else
	60. He believes that he deserves more than he is getting
	61. The way he behaves often gets him into trouble
	62. He thinks that it's best not to let other people get to know you too well
	63. He has trouble opening up to people
	64. He really enjoys beating the system
	65. He has been frequently caught drinking or doing drugs
	66. He feels that people often disappoint him
	67. He gets a lot of fun out of things that others think are immoral or illegal
	68. He feels that people often just use him instead of treating him as a person
	69. He seems to prefer taking each day as it comes, rather than having some major goals set for his life
	70. He has stolen things from time to time
	71. His mood sometimes changes (for example, from happy to sad, or vice versa) without apparent reason
	72. His anger frequently gets the better of him
	73. He often seems nervous for no reason
	74. He can get very upset when little things don't go his way
	75. He often takes his anger out on those around him
	76. He often suspects that those he cares about have been unfaithful to him
	77. He often doesn't meet his responsibilities or adheres to the rules

Scoring Procedure

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very often true

Score	
	78. Most of the time he has a lot of “pep” or vigor
	79. He tends not to trust other people’s motives
	80. He has trouble throwing things out even if they are of no value to him
	81. He is often troubled by guilt feelings
	82. He seems not to be interested in being faithful to just one partner
	83. He seems to think that no one can understand his problems
	84. He puts-up a fight when someone asks him to do something he doesn’t want to do
	85. He spends a good deal of time thinking about things or abilities that others have
	86. He believes that his spouse or partner has been cheating on him
	87. He has been on eating binges a number of times
	88. He always seems afraid that the people he loves are going to leave him.
	89. He thinks that it takes someone really special to understand and appreciate him
	90. He never throws out anything if there’s even a small chance that he might need it sometime
	91. He has been faithful to just one person for more than a year
	92. He seems to feel empty or bored a great deal of the time
	93. He sometimes doesn’t cooperate with people who are trying to help him
	94. Small problems often irritate him
	95. He finds lots of reasons to goof off instead of work
	96. He is a pretty enthusiastic person
	97. He frequently worries about things
	98. He is a cautious person
	99. He leads a very interesting life
	100. Sometimes he seems to feel angry for no good reason
	101. He likes to take chances on something that isn’t sure, such as gambling
	102. His way of doing things is usually quick and lively
	103. Sometimes he feels edgy all day
	104. When he decides things, he always refer to the basic rules of right and wrong
	105. He is able to make chores interesting or fun

Scoring Procedure

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very often true

Score	
	106. Little things upset him too much
	107. In his life, interesting and exciting things happen every day
	108. He often stops in the middle of one activity to start another one
	109. He believes in playing strictly by the rules
	110. He lives a very satisfying life
	111. He worries too much about things that don't really matter
	112. He is a pretty energetic person
	113. He can easily find ways to make a boring day exciting
	114. He usually thinks very carefully when making up his mind
	115. He leads an active life
	116. He gets a kick out of really scaring people
	117. He worries about terrible things that might happen
	118. He has more energy than most of the people I know
	119. He doesn't work any harder than he has to
	120. He can make a game out of things that other people think is work
	121. He often has trouble sleeping because of his worries
	122. He puts a lot of energy into everything he does
	123. He always tries to be completely prepared before he starts working on anything
	124. He often feels nervous and "stressed."
	125. He often gets out of doing things by making up good excuses
	126. Things seem to bother him less than they bother most other people
	127. He is not an "impulse buyer."
	128. When he resents having to do something, he sometimes makes mistakes on purpose
	129. He greatly dislikes it when someone breaks accepted rules of good behavior
	130. He works too hard
	131. He would never hurt other people just to get what he wants.
	132. If he had to choose, he would prefer having to sit through a long concert of music he dislikes to being in a bank during an armed robbery
	133. Before making a decision, he carefully considers all sides of the issue
	134. If he had to choose, he would prefer being in a flood to unloading a ton of newspapers from a truck

Scoring Procedure

1 2 3 4 5
Never true Rarely true Sometimes true Often true Very often true

Score	
	135. He would much rather party than work
	136. He is a serious-minded person
	137. When he is having a good time, he doesn't worry about the consequences
	138. He spends a good deal of his time just having fun
	139. Taking care of details is not his strong point

Appendix 2:

Mode Observation Scale (MOS; Bernstein, de Vos, & Van den Broek, 2009)

Instructions

This rating scale is designed to help you identify Schema Modes in your patients. The scale can be used for clinical or research purposes. Schema Modes are emotional states or “parts of the self” that dominate a person’s thoughts, feelings, and behavior at a given moment in time (Young, et al., 2003).

Place and time

This rating scale should be used to assess modes occurring at a particular place and time. For example, the setting could be an individual therapy session, a group therapy session, or during a structured or unstructured activity, such as meal times, vocational training sessions, or leisure activities. In addition to specifying the setting in which the observations will be made, you should also specify the time frame. For example, the observations could pertain to an entire therapy session, or parts of a therapy session (e.g., the first 10 minutes). Specify the setting and time frame of the observations here:

Name of patient/id number:

Name of rater:

Date:

Setting:

Time frame:

Intensity

Each of the 18 Schema Modes is presented below, along with a brief definition. Rate each mode on a 5-point scale according to its **greatest intensity** from absent to extremely intense during the specified period of time. A rating of “1” means that the mode was entirely absent during the rating interval. A rating of “5” means that the mode occurred with extremely high intensity during the rating interval. For example, if a patient has an extremely intense, angry outburst, he should be given a rating of “5” for Angry Child Mode, even if his outburst lasts only for a few minutes. If a patient shows a moderate degree of emotional detachment through the first half of the rating period, and none thereafter, he should be given a rating of “3” for Detached Protector Mode, because he was at most moderately detached during the session. Thus, rate the mode according to its highest degree of intensity, and not according to how frequently it occurs or how long it lasts. Use the intermediate scale points to make finer differentiations in your ratings.

For example, a rating of “2” means that the mode occurred with only mild intensity, while a rating of “4” means that it occurred with high intensity.

Tips

Be sure to look through and **rate the entire list of modes** – don’t skip modes, and just rate the ones that you think are present. Take a moment to read the definition of the mode, even if you are already familiar with it, before making your rating. This will help you rate the modes more accurately.

If you are having trouble deciding which mode is present, rate the mode that you think represents the best match for the patient’s emotional state. For example, sometimes it is hard to distinguish between Angry Child and Angry Protector modes. Choose the mode that fits best, even if you are not entirely sure.

Be sure to rate the modes **immediately** after making your observations – for example, do your ratings immediately after finishing a therapy session, or watching the videotape of a session. That way, the information will be fresh in your mind.

Make sure that your ratings pertain to the modes that you are **directly observing**, not to modes that the patient is describing but that occurred at another place and time. For example, it often happens that a patient is describing something emotional that happened outside of the therapy session (e.g., crying, or becoming angry), but he does so in an emotionally detached manner. In that case, the mode that you should rate is Detached Protector Mode, because it is the mode that you are directly observing. If, on the other hand, the patient becomes emotional while describing this incident, you should rate the mode or modes that reflect his present emotional state while describing the incident (e.g., Vulnerable Child, Angry Child). In other words, rate the mode that you are directly observing, not one that occurred at a different place and time.

Finally, only use this mode rating scale if you already received training in rating Schema Modes. Otherwise, your ratings may not be reliable.

Child Modes – involve feeling, thinking, and acting in a “child-like” manner

Vulnerable Child (Abandoned, Abused, or Humiliated Child) - feels vulnerable, overwhelmed with painful feelings, such as anxiety, depression, grief, or shame/humiliation.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Angry Child – feels and expresses uncontrolled anger or rage in response to perceived or real mistreatment, abandonment, humiliation, or frustration; often feels a sense of being treated unjustly; acts like a child throwing a temper tantrum.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Impulsive, Undisciplined Child – acts like a spoiled child who “wants what he wants when he wants it,” and can’t tolerate the frustration of limits.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Lonely Child – feels lonely and empty, as if no one can understand him, sooth or comfort him, or make contact with him.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Dysfunctional Coping Modes – involve attempts to protect the self from pain through maladaptive forms of coping

Detached Protector – uses emotional detachment to protect one from painful feelings; is unaware of his feelings, feels “nothing,” appears emotionally distant, flat, or robotic; avoids getting close to other people

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Detached Self-Soother/Self-Stimulator – uses repetitive, “addictive,” or compulsive behaviors, or self-stimulating behaviors to calm and sooth oneself; uses pleasurable or exciting sensations to distance oneself from painful feelings.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Compliant Surrenderer – gives in the to real or perceived demands or expectations of other people in a anxious attempt to avoid pain or to get one’s needs met; anxiously surrenders to the demands of others who are perceived as more powerful than oneself.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Angry Protector – uses a “wall of anger” to protect oneself from others who are perceived as threatening; keeps others at a safe distance through displays of anger; anger is more controlled than in Angry Child Mode

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Complaining Protector – complains, whines, and demands in a victimized, dissatisfied manner; expresses his dissatisfaction in an off-putting manner that masks his real feelings and needs

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Maladaptive Parent Modes – involve internalized dysfunctional parent “voices”

Punitive, Critical Parent – internalized, critical or punishing parent voice; directs harsh criticism towards the self; induces feelings of shame or guilt

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Demanding Parent – directs impossibly high demands toward the self; pushes the self to do more, achieve more, never be satisfied with oneself.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Over-Compensatory Modes – involve extreme attempts to compensate for feelings of shame, loneliness, or vulnerability

Self-Aggrandizer Mode – feels superior, special, or powerful; looks down on others; sees the world in terms of “top dog” and “bottom dog;” shows off or acts in a self-important, self-aggrandizing manner; concerned about appearances rather than feelings or real contact with others.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Bully and Attack Mode – uses threats, intimidation, aggression, or coercion to get what he wants, including retaliating against others, or asserting ones dominant position; feels a sense of sadistic pleasure in attacking others

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Conning and Manipulative Mode – cons, lies, or manipulates in a manner designed to achieve a specific goal, which involves getting what he wants, victimizing others, or escaping punishment.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Predator Mode – focuses on eliminating a threat, rival, obstacle, or enemy in a cold, ruthless, and calculating manner.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Over-Controller Mode (Paranoid and Obsessive-Compulsive Types) – attempts to protect oneself from a perceived or real threat by focusing attention, ruminating, and exercising extreme control. The Obsessive type uses order, repetition, or ritual. The Paranoid type attempts to locate and uncover a hidden (perceived) threat.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Healthy Modes – involve healthy forms of emotional expression and adaptation

Healthy Adult Mode – reflects on himself and his situation in a balanced, realistic manner. Is aware of his needs and feelings; realistically appraises situations and considers how to get his needs met in a productive, appropriate, and adaptive manner.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Playful Child Mode – acts in a playful, fun-loving, free and spontaneous manner; experiences genuine pleasure in people or activities; is open in the expression of his joyful feelings.

1	2	3	4	5
Absent	Mild	Moderate	High	Extremely intense

Dankwoord (Acknowledgements)

Ik kijk met ontzettend veel plezier terug op de afgelopen jaren, niet allen de jaren van mijn promotie onderzoek, maar ook de voorafgaande jaren die in het teken stonden van de voorbereidingen. Ik wil graag een aantal mensen in het bijzonder bedanken, zonder hen zou dit proefschrift niet zijn geworden wat het nu is.

Allereerst dank ik mijn promotoren, de professoren David Bernstein en Arnoud Arntz voor de mogelijkheid van dit onderzoek en hun vertrouwen in mijn kunnen.

Dear David, when we met in 2005 we embarked on an incredible journey. Your 'SFT project' was about to start and I became one of your research assistants. From the early beginning you helped me pursuing my dream of doing PhD research which came true in 2008. We both have high standards and are slightly 'crazy', which resulted in numerous emails/phone calls at all hours of the day and an insane number of dissertation articles. However, your passion and enthusiasm has been contagious. Thank you for your continuous guidance and support, and the chances you have given me.

Beste Arnoud, als 2^e promotor kon ik altijd op je terugvallen als ik vragen over mijn studies had, bijvoorbeeld over het design en de analyses. Ik heb grote bewondering voor jouw methodologisch en statistisch inzicht, en mag alleen maar hopen dat ik ooit een beetje bij jouw kennis in de buurt kom! Veel dank voor je steun en het snel feedback geven op mijn manuscripten.

Directie en personeel van FPC de Rooyse Wissel in Venray en Maastricht; FPC Van der Hoeven Kliniek in Utrecht; FPC Oostvaarderskliniek in Almere; FPC de Kijvelanden in Poortugaal; FPC Mesdagkliniek in Groningen; FPC Veldzicht in Balkbrug; FPK Assen; het Expertisecentrum Forensische Psychiatrie (EFP) in Utrecht, het Ministerie van Justitie, en de Universiteit Maastricht. Hartelijk dank voor jullie steun, medewerking en de prettige samenwerking in de afgelopen jaren. In het bijzonder wil ik FPC de Rooyse Wissel bedanken. Jullie zijn mijn thuisbasis en hebben altijd in mij geloofd, dank dat ik dit onderzoek heb mogen uitvoeren!

Alle patiënten uit de diverse klinieken die hebben meegewerkt aan het onderzoek. Jullie hebben 3 jaar lang belangeloos talrijke vragenlijsten ingevuld en interviews ondergaan. Ik heb er geen woorden voor hoezeer ik dit waardeer. Ik hoop dat het jullie allen goed gaat in de toekomst.

De onderzoeksassistenten van het schema-therapie project: Eva de Spa, Ellen de Jonge, Merel van Vliet, Antoine Sint-Fiet, Mariët Slaats, Thijs Kanters, en Marloes Hartkoorn. Zonder jullie inzet had het SFT-project niet bestaan! Ook de coördinatoren Annette Löbbes, Lieke Bouts en Lotte de Geus, wil ik graag bedanken. Daarnaast wil ik Rosan-

ne Jansen, Erik Schouten en Gerard van Breukelen danken voor de technische en statistische hulp.

De talloze studenten voor het verzamelen van data, met name voor het bekijken en scoren van de videobandjes en DVDs van therapieessies.

Het Kunstencentrum Jerusalem in Venray voor de talrijke uurtjes dat ik in jullie wachtruimte aan artikelen heb zitten werken voordat Maurice en ik op vrijdagavonden naar 'het zuiden' afreden. Speciaal woord van dank voor Hans Calberg voor de muzikale ondersteuning bij het drama therapie project.

Mijn collega's bij FPC de Rooyse Wissel, in het bijzonder Elsa en Stella. Elsa, een tijdje zijn we kamergenootjes geweest op de maandagen en wat hebben we ontzettend veel gelachen, gekletst, met elkaar meegedeeld en gebrainstormd (de drama therapie studie was jouw idee!). De maandag is nog steeds een beetje 'Elsa-dag'. Ik denk ook met veel plezier terug aan de congressen die we samen hebben bezocht. Stella, als kamergenootje stond en sta je dicht bij me. Je bent een dierbare vriendin geworden. Zeker de laatste 2 jaar heben we veel gedeeld: succesjes, twijfels, frustratie, maar wat hebben we ook veel gelachen!

Mijn (schoon)familie en dierbare vrienden voor jullie interesse en meeleven.

Maurice, jij bent mijn grote liefde, mijn maatje, mijn alles. Dank voor je liefde en ons leven samen. Tot slotte wil ik het woord richten tot onze zoon Simon. Ik heb heel erg naar je uitgekeken; de afronding van het proefschrift werd extra speciaal omdat jij in mijn buik zat! Zeker de laatste maanden voelde ik je steeds harder trampelen. Je bent de bekroning op mijn huwelijk. Ik houd ontzettend veel van je!

Curriculum Vitae

Marije Keulen-de Vos was born on March 16, 1983, in Roermond, The Netherlands. In 2001 she graduated from secondary school (VWO, Bisschoppelijk College in Echt, The Netherlands). In the same year she started studying Health Sciences at Maastricht University, she obtained her master degree (MSc) in 'Mental Health Science' in August 2005. From January 2006 onwards, she started working as a research assistant at Forensic Psychiatric Centre (FPC) 'de Rooyse Wissel' in Venray, The Netherlands. She was assigned to a large randomized clinical trial on the effectiveness of Schema Therapy in forensic PD patients, that was conducted in multiple forensic hospitals in the Netherlands. In 2007, she wrote her PhD proposal that was accepted by Maastricht University's research institute of Experimental Psychopathology ('EPP') and funded by FPC de Rooyse Wissel. She started her PhD research in 2008. Since 2008, she also has an honorary appointment at Maastricht University's Faculty of Psychology and Neuroscience, department of Clinical Psychological Science.