Personality disorders and insecure attachment among adolescents

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Table of Contents

Appendices:

Chapter 1: **Introduction**

Looking back on your adolescence, what do you remember? Do you remember this phase in life of transition from childhood to adulthood as one of the happiest in life? Do you remember the excitement of getting older, discovering new things and the sense of possibilities? Do you remember getting along with family and friends and having your first romantic relationship? Do you remember successfully completing an academic degree? Do you remember leaving home and living on your own for the first time? Most people remember their adolescence as a happy phase in life with some temporary mild to moderate problems. When people with a severe personality disorder in adolescence look back on this lifetime, they remember above all severe mental health problems: depression, low self esteem, non-suicidal self injury, suicidal thoughts and actions, interpersonal problems with family, friends, school, work and sometimes criminal justice. Marie of now 22 years old, diagnosed with a personality disorder in adolescence, remembers the following about that time in life:

"I feel like I don't remember much about the time before the treatment. I was 16 years old and every day felt like any other day where I just could not win. I am an avoider, so I did not fight any battles, I only kept losing the opportunity to face myself. I felt like an airport, a train station, in a body. I cannot escape myself, but others were always leaving. I wasn't suffering from depression, but my personality got stuck up in itself too much. I knew some trauma's happened to me but that was not the problem, nor the cause. It only made things worse that otherwise would have befallen me. I needed to learn ways to stand up and battle myself and make sure I could feel safe enough to try and win."

And Emma of now 24 years old remembers:

"When I approached my 18th birthday I was certain that sooner or later I was going to die because of an overdose, violence or an alcohol or drugs related accident. But I didn`t really care about that. I was this kid who always had a lot of problems, with a family with a lot of problems. I lived in another dimension than the rest of the world. My dimension was troubled and confused like a tangled ball of wool. The inside me was not there, only thinking, not feeling anything. Where my former classmates graduated and where going to university I was responding to 'my need' for money to buy alcohol and drugs. I was there in my own little dimension on an bench in a park waiting for the time to pass. And I didn`t care, because that was all there was".

In adolescence, Marie and Emma came in touch with healthcare because of their severe psychiatric problems. Both young women were diagnosed with a personality disorder and insecure attachment, and performed non-suicidal self-injury; problems between which seems great coherence.

As outpatient treatment resulted in insufficient reduction of these problems, they followed a residential psychotherapeutic treatment for adolescents.

To better help adolescents like Marie and Emma, this thesis aims to improve our understanding of personality disorders, insecure attachment and non-suicidal self-injury in adolescence.

Personality disorders in adolescence

Personality disorders are defined as "ways of thinking and feeling about oneself and others that significantly and adversely affect how an individual functions in many aspects of life" (DSM-5 APA). People with personality disorder have far higher morbidity and mortality than those without (Tyrer, Reed, & Crawford, 2015). Life expectancy at birth is shorter by 19 years for women and 18 years for men than in the general population (Tyrer et al., 2015). Prevalence rates of personality disorder in the general adult population vary from 4% to 15%, and are higher in adolescents than in adults (Chanen et al., 2004; Johnson et al., 2000), which is explicable as normal adolescent characteristics resemble criteria of personality disorders. Personality disorders often start and peak in middle to late adolescence (Hutsebaut, Feenstra, & Luyten, 2013; Shiner & Allen, 2013). When youngsters go to therapy, the risk of dropout is relative high (A. De Haan, A. Boon, J. De Jong, M. Hoeve, & R. Vermeiren, 2013; Hauber, Boon, & Vermeiren, 2017; Owen, Miller, Seidel, & Chow, 2016). In case of dropping out of psychiatric treatment, their personality disorders might persist or even worsen later in life. The psychosocial and economic burden is high (Chanen & McCutcheon, 2013; Feenstra et al., 2012). Against that background it is notable that relatively little research has been done on personality disorders in adolescents and specifically into effective treatments (Biskin, 2013; Chanen & McCutcheon, 2013; Courtney-Seidler, Klein, & Miller, 2013; Hutsebaut et al., 2013; Weisz et al., 2013). This has to do with the fact that the normal emotional maturation in this life phase is characterized by an interplay between progression and regression (Kaltiala-Heino & Eronen, 2015), which resembles criteria of personality disorders. This complicates the diagnostic process of personality disorders and thereby leads to reluctance among professionals to diagnose personality disorders in adolescence (Hutsebaut et al., 2013). This reluctance is intelligible although it is likely to hamper research and thus the development of effective treatments for this group of patients. If personality disorders in adolescence are ignored, inappropriate treatment might be given, resulting in chronic dysfunction.

In need of developing effective treatments of personality disorders among adolescents, this thesis aims to examine the dropout and outcome of intensive psychotherapy and to identify factors that promote recovery during intensive psychotherapy for this group.

Insecure attachment in adolescence

Insecure attachment is a risk factor for developing a personality disorder (Levy, Johnson, Clouthier, Scala, & Temes, 2015; Venta, Shmueli-Goetz, & Sharp, 2013). Attachment is defined as mental representations that children form of relationships with their caregivers based on interactions with and adaptations to this care-giving environment (Bowlby, 1973). Prevalence rate of insecure attachment in clinical adult populations is found to be 73% (Bakermans-Kranenburg & van IJzendoorn, 2009). Research on the prevalence of insecure attachment among adolescents with mental health problems is scarce (M. van Hoof, N. D. J. van Lang, S. Speekenbrink, M. H. van IJzendoorn, & R. R. J. M. Vermeiren, 2015). Current attachment research suggests a diathesis-stress model in which current and past stressors, parent-child attachment, temperament and genes, all contribute to the emergence and understanding of psychopathology (M. Steele, Bate, Nikitiades, & Buhl-Nielsen, 2015). In clinical practice, a direct relationship is assumed between insecure attachment and personality disorders. However, up till now no systematic association has been found (Allen, 2008; Bakermans-Kranenburg & van IJzendoorn, 2009; Dozier, Stovall-McClough, & Albus, 2008; Levy et al., 2015; Sroufe, Egeland, Carlson, & Collins, 2005; Westen, Nakash, Thomas, & Bradley, 2006). This assumed relationship is likely since attachment theory provides a clinically useful and theoretically coherent model for understanding many of the intrapsychic and interpersonal aspects that are core to personality disorders (Cassidy, 2008; Levy et al., 2015). For early detection and treatment of personality disorders in adolescence, it is thus of clinical interest to know if insecure attachment and adolescent personality disorders are related and if insecure attachment differs between the different personality disorders (Allen, 2008; Bakermans-Kranenburg & van IJzendoorn, 2009; Levy et al., 2015; Venta et al., 2013). Therefore, it is crucial to investigate insecure attachment and personality disorders in adolescence.

This thesis therefore aims to examine if insecure attachment is associated with adolescent personality disorders and if insecure attachment representations differ by type of personality disorder. Furthermore, this thesis aims to examine outcome of intensive psychotherapy on adolescent insecure attachment.

Non-suicidal self-injury

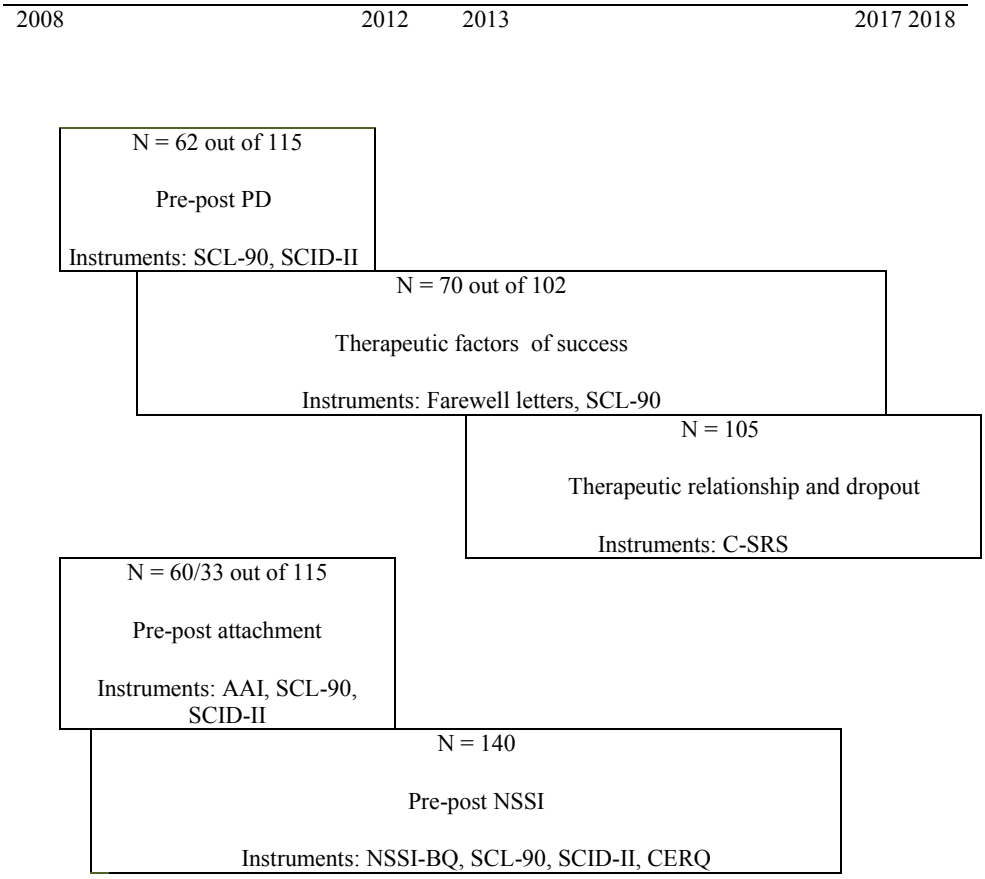
Non-suicidal self-injury (e.g., self-inflicted burning, cutting and hitting) (NSSI) among youth is a major public health concern (Glenn et al., 2016) and occurs pervasively in clinical practice among adolescents with personality disorders. Non-suicidal self injury is associated with significant functional impairment (Madge et al., 2011). Self-reported life-time prevalence of NSSI among adolescents varies from approximately 5% to 40% across community and clinical settings, due to different definitions and numerous methodological variations (Asarnow et al., 2011; Hamza, Stewart, & Willoughby, 2012; Madge et al., 2011; Wilkinson, 2013). Prior to intensive psychotherapy NSSI is often hidden behaviour and therewith a missed signal of an adolescent in need of help. Therefore, enhancing knowledge of NSSI is needed for early detection and for clinical practice.

In this thesis the aim is to examine different aspects of NSSI in clinical adolescent practice, in a group of adolescents with personality disorders.

Intensive psychotherapy for adolescents

As intensive psychotherapy is likely to diminish personality disorders, insecure attachment patterns and non-suicidal self-injury among adolescents (Innerhofer, 2013; Levy et al., 2015; Maxwell, Tasca, Ritchie, Balfour, & Bissada, 2014), the studies in this thesis are based on data collected as part of the treatment protocol of an adolescent residential psychotherapeutic institution. This institution, called the Albatros and located in an urban area (The Hague) in the Netherlands, offers a 5 days a week intensive mentalization based treatment (MBT) with partial hospitalization (Bateman & Fonagy, 2006, 2012; Hauber, 2010) for adolescents in the age of 16 to 23 years with personality disorders and a variety of non-psychotic comorbid disorders. This structured and integrative psychodynamic group psychotherapy program is manualized, adapted to adolescents (Bateman & Fonagy, 2006, 2012; Hauber, 2010) and facilitated by a multidisciplinary team trained in MBT. The program offers weekly verbal and non-verbal group psychotherapies and individual- and family psychotherapy. These different therapies focus on the adolescents' subjective experience of himself or herself and others, and on the relationships with the group members and the therapists. From January 2008 until July 2018 the clinical adolescents of the Albatros were studied in different overlapping subsamples. Figure 1 shows an overview of the different subsamples regarding number, subject and instruments in this thesis on a timeline according to the chapter order.

Figure 1. *Overview of different subsamples with the number of participants, subject and instruments in this thesis on a timeline according to the chapter order*



PD = Personality Disorder; NSSI = Non-Suicidal Self-Injury; AAI = Adult Attachment Interview; SCL-90 = Symptom CheckList-90; SCID-II = Structured Clinical Interview for DSM personality disorders; C-SRS = Child-Session Rating Scale; NSSI-BQ = Non-Suicidal Self-Injury Behaviour Questionnaire; CERQ = Cognitive Emotion Regulation Questionnaire

Outline of these thesis

The aim of this thesis was to investigate personality disorders, insecure attachment and non-suicidal self-injury in adolescence, and to examine therapeutic factors related to dropout and outcome of intensive psychotherapy on these problems. This aim is addressed in the following studies:

In Chapter 2 changes in adolescent personality disorders and symptomology before and after intensive MBT, and the relation between personality disorder variables and treatment outcomes were examined.

In Chapter 3 therapeutic factors that relate to patient's reported recovery in high risk adolescents during intensive treatment was examined.

In Chapter 4 the association between the therapeutic relationship and dropout in an intensive MBT treatment for adolescents with personality disorders is evaluated.

In the first part of Chapter 5 adolescent insecure attachment in Borderline Personality Disorder (BPD) and other personality disorders was studied. Also, deviations in attachment distribution of the normative pattern were investigated. In the second part of this chapter, changes in adolescent insecure attachment before and after intensive MBT, and the relationship between such changes and alterations in psychological symptoms of distress was examined.

In Chapter 6 different aspects of NSSI in clinical practice in association with personality disorders, symptoms, and coping skills were studied to enhance the understanding of NSSI and improve treatment interventions.

Finally, in Chapter 8 the results found in preceding chapters are summarized, strengths and limitations are addressed, and findings are discussed in unison. Then implications for clinical practice and recommendations for future research are given.

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Chapter 2: **Examining changes in personality disorder and symptomology in an adolescent sample receiving intensive mentalization based treatment - a pilot study**

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Abstract

Objective: To examine changes in personality disorders, symptomology and the relation between personality disorder variables and treatment outcomes in an adolescent sample during partial residential mentalization based treatment.

Method: In a sample of 62 (out of 115) adolescents treated for personality disorders, assessment was done pre- and post-treatment using the Structured Clinical Interview for DSM personality disorders and the Symptom Check List 90.

Results: Significant reductions in personality disorder traits (t = 8.36, p = .000) and symptoms (t = 5.95, p = .000) were found. During pre-treatment, 91.8% (n = 56) of the patients had one or more personality disorders, compared to 35.4% (n = 22) at post-treatment. Symptom reduction was not related to pre-treatment personality disorder variables.

Conclusion: During intensive psychotherapy, personality disorders and symptoms may diminish. Future studies should evaluate whether the outcomes obtained are the result of the treatment given or other factors.

Background

Relatively little research has been conducted on personality disorders in adolescents; specifically, research regarding effective treatments is limited (Biskin, 2013; Chanen & McCutcheon, 2013; Courtney-Seidler et al., 2013; Hutsebaut et al., 2013; Weisz et al., 2013). This is an omission, as the psychosocial and the economic burdens of adolescents with (traits of) personality disorders are high (Chanen & McCutcheon, 2013; Feenstra et al., 2012). Interestingly, the direct mental health and medical costs for adolescents in the year prior to treatment for personality disorders were demonstrated to be substantially higher than for adults (Feenstra et al., 2012; Soeteman, Hakkaart-van Roijen, Verheul, & Busschbach, 2008). Timely detection and treatment of (traits of) personality disorders during adolescence are for that reason important. Therefore, the aim of this cohort pilot study is to examine the changes in a group of adolescents with clinically diagnosed personality disorders who received an intensive mentalization based treatment (MBT) with partial hospitalisation (Bateman & Fonagy, 2006, 2012; Hauber, 2010). Mentalizing refers to the ability to understand and differentiate between the mental states of oneself and others and to acknowledge the relation between underlying mental states and behaviour (Bateman & Fonagy, 2012; Fonagy, Luyten, & Strathearn, 2011).

Doubts regarding the permanence of personality disorders in adolescents are considered to be the main problem underlying the lag in research on this topic (Chanen & McCutcheon, 2013; Courtney-Seidler et al., 2013; Feenstra, Busschbach, Verheul, & Hutsebaut, 2011; Tyrer et al., 2015). Despite guidelines (NICE, 2009) advising professionals to diagnose personality disorders (with the exception of antisocial personality disorder during adolescence), most psychologists and psychiatrists are hesitant to diagnose personality disorders in minors. As a result, minors are not offered specific treatments. This is partly understandable as, during adolescence, normal emotional maturation is characterised by an interplay between progression and regression (Kaltiala-Heino & Eronen, 2015), which complicates the diagnostic process of personality disorders. In addition, diagnosing personality disorders might stigmatise adolescents. However, the reluctance of professionals to diagnose (traits of) personality disorders in adolescents is likely to delay research and thus the development of effective treatments for this group of patients.

According to current research, the primary information used to treat personality disorders in adolescents is based on randomised controlled trials of treatments developed for adults, mostly treatments for borderline personality disorder (BPD). The few studies that have been conducted on adolescents with (traits of) BPD have yielded mixed results. Two studies showed no advantages over treatment as usual (Mehlum et al., 2014; Rathus & Miller, 2002); one study showed only a short term effect (Chanen et al., 2009); while another found a better outcome compared to treatment as usual (Rossouw & Fonagy, 2012). All treatments were associated with improvements over time, which may

partially reflect the natural course of BPD in adolescents. Whether existing adult treatment programmes are useful for adolescents with personality disorders other than BPD is mostly unknown, as research is scarce. One study investigated the treatment outcome of a 12 month inpatient psychotherapy intervention for adolescents with personality disorders. Only 51 patients of a total sample of 109 completed the research protocol, of whom 29% recovered fully in terms of the level of symptom severity, 12% improved, while 49% showed no significant change and 10% showed deterioration (Feenstra, Laurenssen, Hutsebaut, Verheul, & Busschbach, 2014). Furthermore, none of the specific personality disorders or clusters of personality disorders (A,B, C and NOS) predicted treatment outcome. In conclusion, the results of the few studied treatments for adolescents with (traits of) personality disorders have shown mixed results; however, the most severe sample studied, the inpatient group, showed moderate results.

Difficulties in establishing randomised clinical trials (RCTs) in clinical practice – especially in a high risk adolescent sample with comorbidity –is another reason that potentially explains the scarcity of research in adolescents with personality disorders. Although RCTs are essential for studying the comparative effectiveness of treatments and have a high internal validity, trials dictate strict protocol adherence and often have a low external validity (Rothwell, 2005). Furthermore, randomising carries ethical and practical ramifications in a high risk adolescent group in need of an inpatient programme due to family dynamics, suicidal actions, self-injury and prolonged school absenteeism. Randomisation on the individual level within an inpatient treatment programme is even more intricate, as it implies training half of the treatment staff to follow a study protocol and compare the effect of their interventions with the effect of the interventions of the non-trained half. Moreover, as populations and circumstances differ significantly, the results of RCTs may have limited relevance to clinical practice. Therefore, nonrandomised evaluations of inpatient programmes focusing on external validity, in order to obtain generalisable knowledge of the patient group and treatment evaluation, are needed. The Transparent Reporting of Evaluations with Nonrandomised Designs (TREND) group (Des Jarlais, Lyles, & Crepaz, 2004) has developed a 22 items checklist to improve the reporting standards of nonrandomised evaluations of behavioural and public health interventions.

In this study, we provide treatment evaluation data following the TREND guidelines (Des Jarlais et al., 2004) from a prospective pilot study of 115 adolescents with clinically diagnosed personality disorders, of whom 62 (54%) completed the treatment protocol and filled out questionnaires during pre- and post-treatment. This group received intensive MBT with partial hospitalisation (Bateman & Fonagy, 2006, 2012; Hauber, 2010). The external validity is tested. Furthermore, the predictive power of personality disorder variables on treatment outcomes concerning symptomology is explored.

Methods

Setting

The present study was conducted from January 2008 until December 2014 at a residential psychotherapeutic institution for adolescents in the urban area of The Hague in the Netherlands. This facility offers a five days a week intensive MBT with partial hospitalisation for adolescents between the ages of 16 to 23 years with personality disorders. This structured and integrative psychodynamic group psychotherapy programme is manualised, adapted to adolescents (Bateman & Fonagy, 2006, 2012; Hauber, 2010) and facilitated by a multidisciplinary team trained in MBT. The major difference with the MBT programme for adolescents in England (Rossouw & Fonagy, 2012) is the psychodynamic group psychotherapy approach. The mentalizing focus of the different therapies in the programme is on the adolescent's subjective experience of himself or herself and others and on the relationships with the group members and therapists. The programme offers weekly verbal and non-verbal group psychotherapies, such as group psychotherapy, art therapy and psychodrama therapy, in combination with individual and family psychotherapy. The average duration of treatment is one year with a maximum of 18 months. Commonly, the treatment starts with hospitalisation and continues as day treatment later on during the programme. Medication is prescribed if necessary by a psychiatrist working in the therapy programme, according to protocol. Referrals come non-systematically from other mental health professionals from within and outside our mental health care institution.

Subjects

In total, 115 adolescents with clinically diagnosed personality disorders were studied with a mean age at the start of treatment of 18.2 (*SD* = 1.6, range = 15-22; females 80.9%). Most of the participants had other comorbid axis-I disorders (mood disorder 58%; anxiety disorder, including PTSD 31%; eating disorder 13%; ADHD 8%; substance dependence 7%; dissociative disorder 3%; and obsessive compulsive disorder 2%). The average duration of treatment was 277.8 days (*SD* = 166.1, range = 3-549), with an average of 186.1 days (*SD* = 146.1) of hospitalisation. Intelligence was estimated based on the level of education and was average to above average. All patients followed the treatment on a voluntary basis and were fluent in the Dutch language.

Of the 115 adolescents who were included in this study, 13 were considered treatment dropouts because they withdrew or were sent away before their treatment duration exceed the diagnostic phase of two months (61 days) (A. M. de Haan, A. E. Boon, J. T. V. M. de Jong, M. Hoeve, & R. R. J. M. Vermeiren, 2013; Swift & Greenberg, 2014). These 13 dropouts did not differ

significantly from the rest in age, gender or severity of symptoms or personality disorders. The remaining sample consisted of 102 respondents, with 83 females (81.4%) and 19 males (18.6%). While all were assessed by the SCID-II interview initially, only 62 (60.8%) post-treatment SCID-II interviews were administered. One adolescent did not complete the SCID-II interview at pre-treatment but did at post-treatment. The average duration of treatment of adolescents who only participated in a pre-treatment SCID-II interview was shorter (202.1 days; *SD* = 115.2, 61-526), with an average of 146.4 (*SD* = 124.9, 0-420) days of hospitalisation, compared to those who also participated in a post-treatment SCID-II interview (378.6 days; *SD* = 126.0, 120-549), with an average of 246.0 (*SD* = 139.4, 0-547) days of hospitalisation ($p = 0.000$; $t = 7.406$). Of the respondents who only participated in a pre-treatment SCID-II interview, 43% completed the treatment according to protocol, as compared to 92% of the adolescents who also participated in a post-treatment SCID-II interview. The number and type of personality disorders did not differ between these groups. Missing post-treatment research data was caused by respondents who failed to complete the set of web-based questionnaires during post-treatment or repeatedly failed to show up at the final SCID-II interview appointment.

Measures

The participating adolescents completed a set of web-based questionnaires at the beginning and end of treatment, including the Dutch Questionnaire for Personality Characteristics (Vragenlijst voor Kenmerken van de Persoonlijkheid) (VKP) (Duijsens, Eurelings-Bontekoe, & Diekstra, 1996) and the Symptom Check List 90 (SCL-90) (Arrindell & Ettema, 2003; Derogatis, Lipman, & Covi, 1973). Subjects were interviewed using the Structured Clinical Interview for DSM personality disorders (SCID-II) (Spitzer, Williams, Gibbon, & First, 1990).

VKP

The VKP is a questionnaire consisting of 197 questions with the answer categories ‘true’ or ‘false’; its purpose is to screen for personality disorders according to the DSM-IV. The VKP is known for its high sensitivity and low specificity (Duijsens et al., 1996) and is recommended (Dingemans & Sno, 2004; Verheul, Van der Brink, & Spinhoven, 2000) as a pre-assessment instrument before administering the Dutch version of the SCID-II. Presumed and certain indications of a personality disorder on the VKP indicate which SCID-II personality disorder sections should be applied. The test-retest reliability (Cohen’s Kappa) of the VKP on categorical diagnoses was moderate ($k = .40$) (Duijsens et al., 1996).

SCL-90

An authorised Dutch version of the SCL-90 (Arrindell & Ettema, 2003) is a questionnaire consisting of 90 questions with a 5-point rating scale (ranging from 1 'not at all' to 5 'extreme'). This questionnaire assesses general psychological distress and specific primary psychological symptoms of distress. Outcome scores are divided into nine symptom subscales: anxiety; agoraphobia; depression; somatisation; insufficient thinking and handling; distrust and interpersonal sensitivity; hostility; sleeping disorders; and a rest subscale. The total score (range 90–450) is calculated by adding the scores of the subscales. The test-retest reliability was reasonable to good (k = .62 -0.91) (Arrindell & Ettema, 2003).

SCID-II

The SCID-II (Spitzer et al., 1990) is a semi-structured interview consisting of 134 questions. The purpose of this interview is to establish the ten DSM-IV personality disorders, and depressive and passive-aggressive personality disorders. In line with the DSM-IV criteria, the depressive and passive-aggressive personality disorders are covered by the 'personality disorder not otherwise specified' (NOS). The language and diagnostic coverage make the SCID-II most appropriate for adults (age 18 or over), while with slight modification it can be used for younger adolescents (Spitzer et al., 1990). Only the sections that were indicated by the outcome of the VKP were applied in the clinical interview. The SCID-II was administered by trained psychologists. The inter-rater reliability (Cohen's Kappa) of the SCID-II for categorical diagnoses was reasonable to good (k = .61 -1.00) (Seqal, Hersen, & Van Hasselt, 1994), and the test-retest reliability was also reasonable to good (k = .63) (Weertman, Arntz, & Kerkhofs, 2000).

Procedures

From 2008, 115 newly admitted patients were asked to participate in the study. The data of patients ending treatment before the end of 2014 were used. Following a verbal description of the treatment protocol to the subjects, written informed consent was obtained according to legislation, the institution's policy and the Dutch law (Eurec, 2017). All patients (N = 115) agreed to participate and, in accordance with the institutional policy, they participated without receiving incentives or rewards. All procedures in this study were in accordance with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. According to the treatment protocol, the patients completed a set of web-based questionnaires, including the VKP and the SCL-90 during the first and

last weeks of treatment. The participants filled out the questionnaires by themselves and were not aware of the study's objective.

Statistical analysis

All analyses were performed using the Statistical Package for the Social Sciences, version 20.0 (IBM Corp, 2011). A Wilcoxon Signed-Rank Test was performed between the number of pre-treatment SCID-II personality disorders and the number of post-treatment SCID-II personality disorders. To compare the total score on the SCL-90 across the number of SCID-II personality disorders at pre- and post-treatment an ANOVA was used. A Pearson correlation test was performed to compare the length of treatment with changes in the SCL-90 and paired t-test were performed to compare the SCL-90 and number of SCID- II personality disorders between two groups based on length of treatment. A linear regression analysis was used to explore the relationship between the predictor variables (VKP, SCID-II scales) at t-1 and the SCL-90 outcome at post-treatment.

Results

Pre- and post-treatment personality disorders SCID-II

In Table 1, the number of patients who met the criteria for a personality disorder according to the VKP and the SCID-II at pre- and post-treatment are shown.

Table 1. *Number of patients with personality disorders according to the VKP and the SCID-II at t-1 and t-2 (N = 62)*

	VKP*		SCID-II		VKP*		SCID-II	
	N	%	N	%	N	%	N	%
No PD	3	4.8	6	9.7	15	24.2	40	64.5
Paranoid PD	31	50.0	13	20.9	11	17.7	5	8.1
Schizoid PD	11	17.7	2	3.2	3	4.8	0	0.0
Schizotypal PD	12	19.4	0	0.0	1	1.6	0	0.0
Antisocial PD	6	9.7	1	1.6	1	1.6	0	0.0
Borderline PD	18	29.0	23	37.1	5	8.1	7	11.3
Histrionic PD	4	6.4	0	0.0	2	3.2	0	0.0
Narcissistic PD	1	1.6	0	0.0	0	0.0	0	0.0
Avoidant PD	41	66.1	34	54.8	19	30.6	11	17.7
Dependant PD	19	30.7	3	4.8	6	9.7	1	1.6
Obsessive Compulsive PD	15	24.2	8	12.9	5	8.1	3	4.8
Depressive PD	32	51.6	29	46.8	8	12.9	9	14.5
Passive Aggressive PD	5	8.1	2	3.2	2	3.2	0	0.0
PD NOS			2	3.2			1	1.6

PD = Personality Disorder

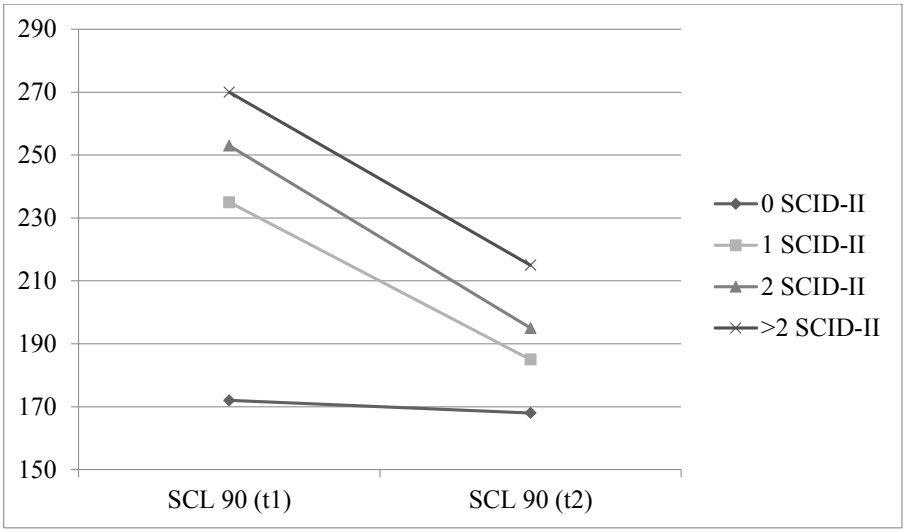
*Certain indications of a personality disorder according to the VKP. The presumed indications of a personality disorder according to the VKP were left out of this table.

When comparing the number of pre-treatment versus post-treatment SCID-II personality disorders, a significant decrease was found (*t-1*: $M = 1.42$, $SD = 1.21$, range 0-4; *t-2*: $M = 0.48$, $SD = 0.78$, range 0-4; $z = 5.76$, $p = .000$). The effect size for this analysis ($d = 0.92$, 95% CI [0.77-1.26]) was found to exceed Cohen's (1988) convention for a large effect ($d = .80$). At pre-treatment, 91.8% ($n = 56$) of the patients had one or more personality disorders, compared to 35.4% at post-treatment ($n = 22$). The majority, 74.1% ($n = 46$) of patients, showed a decrease in the number of SCID-II personality disorders at the end of treatment; 19.4% ($n = 12$) retained the same number; and 6.5% ($n = 4$) had more personality disorders at the end of the treatment. Although clinical judgment indicated a personality disorder, at the start of treatment, six (9.6%) patients were free of any personality disorder on the SCID-II. One adolescent out of the six deteriorated to having one SCID-II personality disorder at the end.

Pre- and post-treatment personality disorders and SCL-90

Of the 62 adolescents who participated in pre- and post-treatment SCID-II interviews, 56 (90.3%) completed the SCL-90 at both points in time. A significant symptom reduction was observed ($t = 5.95$, $p = .000$). The mean t-1 total score of 241.0 ($SD = 51.8$) on the SCL-90 declined to 189.8 ($SD = 64.8$) at t-2 ($d = .87$, 95% CI [33.9-68.4]). A significant correlation was found at pre- and post-treatment between the number of SCID-II personality disorders and the total score on the SCL-90 (*t-1:* $N = 61$, $F = 4.71$, $p = .005$; *t-2:* $N = 57$, $F = 10.64$, $p = .000$) (Figure 1).

Figure 1. *Comparison of the pre- and post-treatment total SCL-90 score by number of SCID II diagnosis initially*



The group with one or more SCID-II personality disorders ($n = 51$) differed significantly on the total SCL-90 score between pre- (247.73, $SD = 47.38$) and post-treatment (191.92, $SD = 63.77$; $t = 6.29$, $p = .000$, $d = .87$, 95% CI [35.9-68.7]). Moreover, the separate groups of SCID-II personality disorders reported significantly fewer symptoms at post-treatment in comparison to their initial levels (Table 2). The group without SCID-II personality disorders at the start of treatment reported fewer symptoms both pre- and post-treatment in comparison to the SCID-II groups, and it showed no symptom decrease ($n = 5$, *t-1*: 172.20, $SD = 48.90$; *t-2*: 168.20, $SD = 78.84$, $t = 0.15$, $p = .891$, $d = .06$, 95% CI [-72.2-80.2]).

Table 2. *Comparison of the number of personality disorders at the start with the total SCL-90 score pre- and post-treatment*

		Total SCL-90 score						
			t-1		*t-2*			
		n	mean	*SD*	mean	*SD*	*t*	*p*
Number of personality disorders at *t-1*	0	5	172.20	48.90	168.20	78.84	0.15	.891
	1	29	240.31	51.39	187.07	60.05	4.27	.000
	2	16	255.25	40.39	198.25	70.18	3.61	.003
	>2	6	263.50	44.38	198.50	73.40	3.04	.029

Length of treatment and changes in the SCL-90 and the SCID-II

No significant correlation was found between the length of treatment and symptom reduction on the total SCL-90 ($r = 0.168$; n = 64; $p = 0.184$). The total group was divided in three groups based on length of treatment, resulting in a less than 234 days group (N = 8), a 235-364 days group (N = 22) and a more than 365 days group (N = 32). The less than 234 days group (N = 8) was to small for analyses and had to be excluded. The two remaining groups based on length of treatment, the 235-364 days group and the more than 365 days group, were compared by using the total SCL-90 scores and the number of SCID-II personality disorders at the beginning and the end of treatment. The 235-364 days group (symptoms: $n = 23$, *t-1*: 233.00, $SD = 47.76$; *t-2*: 190.87, $SD = 61.44$, $t = 3.68$, $p = .001$, $d = .77$; personality disorders: $n = 22$, *t-1*: 1.73, $SD = 1.03$; *t-2*: .59, $SD = .73$, $t = 4.74$, $p = .000$, $d = 1.28$) and the more than 365 days (symptoms: $n = 31$, *t-1*: 247.45, $SD = 55.16$; *t-2*: 183.84, $SD = 64.21$, $t = 5.15$, $p = .000$, $d = 1.06$; personality disorders: $n = 32$, *t-1*: 1.97, $SD = 1.23$; *t-2*: .63, $SD = 1.16$, $t = 6.29$, $p = .000$, $d = 1.12$) showed approximately equal symptom and number of personality disorders reduction. No significant differences were found between the two length of treatment groups on the different SCID-II personality disorders.

Predictive value of personality disorder variables on treatment outcome

The scales of the pre-treatment VKP and pre-treatment SCID-II were entered in a logistic regression with age, gender and duration of treatment as control variables and SCL-90 outcome as a dependent variable. None of the independent variables contributed significantly to the outcome.

Discussion

Our pilot study indicates that, during intensive psychotherapeutic treatment including partial hospitalisation, the number of personality disorders and symptoms may decrease substantially. At the end of the treatment, approximately three quarters of the participants showed a lower number of personality disorders, while two thirds did not meet the SCID-II criteria for a personality disorder after treatment any longer. However, a large part of the sample was not assessed at the end of the treatment. Since this cohort study was not randomised, it is not possible to draw conclusions about the direct effect of the treatment itself. Furthermore, symptom reduction could not be predicted by pre-treatment personality disorder variables. Nevertheless, this pilot study suggests that personality disorders in adolescents can diminish during intensive psychotherapy.

It is of substantial clinical interest to examine whether the positive outcome obtained in the part of the sample that completed measurements at t-1 and t-2 was the result of the provided treatment or other factors. Age-related development or the social support of family and friends (van Harmelen et al., 2016) may partly have been responsible for the decrease in symptoms and personality pathology. Nevertheless, if the treatment affected the outcome, focus should be placed on examining which element of the treatment caused these improvements. A hypothesis is that working in a group with a group psychodynamic approach is especially relevant for adolescents (Yalom & Leszcz, 2005). In combination with MBT (Bateman & Fonagy, 2006, 2012; Hauber, 2010) and the focus on the relationships with group members and therapists, this may have stimulated a positive outcome. Future research directions should focus on the role of treatment groups for adolescents with personality disorders in treatment outcomes.

Moreover, the duration of the partial hospitalisation may be a factor of particular relevance. The treatment lasted relatively long, and effects of time cannot be ruled out without a control group. The effectiveness of approximately five months inpatient psychotherapeutic treatment was described as optimal for adults with cluster B personality disorders (Bartak et al., 2010), cluster C personality disorders (Bartak et al., 2009) and with personality disorders not otherwise specified (Horn et al., 2014), in comparison to longer inpatient psychotherapeutic treatment. Currently, the maximum duration of partial hospitalisation is set at six months. Future research should examine whether there is a general optimal duration of hospitalisation for an intensive group psychotherapy programme for adolescents with personality disorders or the variables a personal optimal length depends on.

Considering our results, the question is whether adolescents with personality disorders are more capable of change than adults with similar problems, as our study found larger changes than those observed in most adult studies. Developmental change may have played a role, as it is known that adolescents become more capable of regulating emotions and behaviour over time. Adolescence

may be a developmental phase in which opportunities for change in personality pathology are greater, under the right conditions, than in adulthood. Furthermore, clinical impression suggests that joint problem definition between parents and adolescents, willingness to change and parental support, together with a relatively stable and safe home environment, are crucial to the treatment's success. These factors may be of less crucial importance in adults. If parents are not able to reflect on family dynamics and are critical towards treatment offers, the treatment has fewer chances of success. Unfortunately, in this study no data were collected regarding the role of parents. Future research should examine the effect of the role of parents on the treatment outcome in adolescents with personality disorders.

It is necessary to discuss the strengths and limitations of this study. One strength was the inclusion of a high risk adolescent sample with comorbidity that is rarely examined. The first limitation is that only part of the patients that were included in this study could be followed from the start until the end of treatment. Information about the patients we did not follow is scarce. Initially, however, these patients did not differ in number and type of personality disorders. The shorter duration of treatment suggests that this group either profited less from treatment than those who completed it or improved enough so as not wish to continue treatment. In this study, possible causal mechanisms for the premature termination of therapy amongst adolescents with personality disorders remained unclear. The second shortcoming of this study was that the Axis I disorders were left out due to the practical consideration of not overloading patients with assessment instruments. Finally, the third limitation is that, due to the research design, the extent to which treatment played a role in the positive outcome and which parts of the programme may have contributed remains unknown.

Research on the outcome of treatment for adolescents with personality disorders other than borderline personality disorder or a combination of personality disorders is scarce (Weisz et al., 2013). Examining the specific mechanisms of change in the different treatments for adolescents with personality disorders is thus important. The treatment examined in this pilot study is promising, although essential questions remain unanswered. Replication is necessary in order to determine whether the results were based on coincidence or not.

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Chapter 3: **Therapeutic factors that promote recovery in high risk adolescents intensive group psychotherapeutic treatment**

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Abstract

Background: The aim of this study was to investigate whether therapeutic factors as identified by Yalom and potential additional therapeutic factors could be found in the qualitative individual reports of high-risk adolescents with personality disorders at the end of an intensive group psychotherapeutic MBT programme and whether the therapeutic factors were related to therapy outcomes.

Methods: At the end of treatment, 70 adolescents were asked to write a farewell letter. Content analysis of the letters was performed by two independent raters, using the 12 therapeutic factors of Yalom and potential additional therapeutic factors as coding categories. The factors were related to outcome, operationalized as a decrease in psychological symptoms as measured with the Symptom Check List 90 (SCL-90).

Results: All therapeutic factors of Yalom and four new factors were identified in the letters, ranging from 1 to 97%. The factors of 'cohesion' (97%), 'interpersonal learning output' (94%), 'guidance' (98%) and 'identification' (94%) were found in most letters. By contrast, 'universality' (1%), 'family re-enactment' (3%) and 'instillation of hope' (1%) were found in very few letters. The factors 'interpersonal learning input', 'self-esteem' and 'turning point' were significantly associated with therapeutic recovery.

Conclusions: Large presence differences were encountered in therapeutic factors associated with resilience processes and the resolution of psychological distress. Although a relationship was found between certain factors and change in symptoms, it was unclear whether the factors had led to such change. Further research seems important for treatment in general and for the personalization of treatment.

Background

Psychotherapeutic practices for youth show a great variety in treatment approaches deriving from different theoretical orientations (Garland, Bickman, & Chorpita, 2010; Weersing, Weisz, & Donenberg, 2002). Although many adolescents benefit from psychotherapy, for others the outcome is discouraging (Garland et al., 2010; Weisz, Jensen-Doss, & Hawley, 2006). Against this background, it is understandable that there is a tendency to search for effective elements of mental care for youth (Garland et al., 2010; Shepherd, Sanders, & Shaw, 2017). Therefore, examining the therapeutic factors related to successful treatment of adolescents may help therapists to optimize the treatment outcomes for this population, particularly for severely disordered groups such as young people with personality disorders. Mixed-method research with adolescents who report on the outcome of their individual treatment can help to provide an understanding of the success factors (Bledin et al., 2016; Chan, Kirkpatrick, & Brasch, 2017). Hence, the aim of this study was to identify such therapeutic factors in ego narratives written without instruction by a high-risk adolescent sample after treatment for a personality disorder, and to relate these to changes in symptoms during treatment.

Although as effective as individual therapy (Hoag & Burlingame, 1997), it is argued that group psychotherapy, with its focus on peer relationships and identity formation, is preferable for adolescents (Chase, 1991). To provide an understanding of clients' perceptions of the effectiveness of group psychotherapy in general, Corsini and Rosenberg (1955) and later on Yalom (Yalom & Leszcz, 1985) devised the concept of therapeutic factors. The definitions of this concept vary, but typically the term refers to 'curative factors' or 'mechanisms of change that occur through an intrinsic interplay of varied guided human experiences' (Yalom & Leszcz, 2005). Yalom's 12 therapeutic factors generated from his questionnaire were as follows: altruism, cohesion, universality, interpersonal learning input and output, guidance, catharsis, identification, family re-enactment, self-understanding, instillation of hope, and existential factors. They are now widely accepted as corresponding to relevant and potent mechanisms that bring about changes through group psychotherapy.

Yalom's therapeutic factors in group psychotherapy have been studied in different group settings in a dozen studies, using Yalom's group therapeutic factors questionnaire (Kösters, Burlingame, Nachtigall, & Strauss, 2006; Yalom & Leszcz, 2005). However, until this study, no research had examined reports written by patients about therapeutic factors that contributed to their recovery. In addition, no researchers had focused on identifying therapeutic factors related to inpatient group treatment for adolescents with personality disorders or high-risk adolescents. In self-report studies on Yalom's therapeutic factors, 'cohesion' is considered the central therapeutic factor that facilitates the other factors (Bernard et al., 2008). However, the interplay between all therapeutic factors, and the value placed on each, differs according to the content and purpose of a group (Yalom & Leszcz, 2005). One study on inpatient adolescent group therapy reported that 'cohesion',

'universality' and 'instillation of hope' were the most valued therapeutic factors (Chase, 1991). Another study found that inpatients with comorbid personality disorder scored significantly higher on 'family re-enactment' and 'self-understanding' than patients without comorbid personality disorder, and significantly lower on 'cohesiveness' (Sayin et al., 2015). The investigation of unstructured reports of therapy outcomes, written by patients without instruction, might reveal other therapeutic factors or alter the rankings of importance among such factors.

In this mixed-method study, therapeutic factors related to patients' reported recovery were examined for a high-risk adolescent population who had been clinically diagnosed with personality disorders. As part of a goodbye ritual at the end of an intensive group psychotherapy programme, participants were asked to write a farewell letter to express their thoughts and feelings about the treatment. This letter was read aloud to the group and treatment staff. Using content analysis (Elo & Kyngäs, 2008), these farewell letters were studied to identify the therapeutic factors of Yalom (Yalom & Leszcz, 2005). Guiding questions were, first, which therapeutic factors were mentioned in the letters, and how often; second, which therapeutic factors could be related to a reduction in psychological stress and symptoms during treatment. Based on previous studies, it was expected that first, all of Yalom's therapeutic factors would appear in the letters guided by the hypothesis that working in a group with peers using a group psychodynamic approach (Yalom & Leszcz, 2005) would provide a positive influence; second, the therapeutic factors of 'family re-enactment' and 'self-understanding' were expected to be related to significant less psychological stress and symptoms at the end of the treatment following the study of Sayin (Sayin et al., 2015) by subtracting the post-treatment total score on the SCL-90 from the pre-treatment score.

Methods

Participants

The participants were adolescents who had voluntarily been admitted to a partial residential mentalization-based treatment (MBT) facility of a youth psychiatry institution in the urban area of The Hague in The Netherlands. They had clinically diagnosed personality disorders and non-psychotic co-morbidity, and had completed the treatment according to protocol. Referrals came non-systematically from other mental health professionals, both within and outside the mental health care institution.

Between 2008 and 2017, 70 farewell letters were collected along with pre- and post-treatment data from the SCL-90. The adolescents' mean age at the end of treatment was 18.9 years (SD = 1.7, range = 16–23) and most (88.6%) of the group were female. The average duration of treatment was a year, with a maximum of 18 months. Their intelligence, estimated from their level of education, was

average to above average. Dutch was spoken fluently by all participants. In table 1 an overview of the study population is given.

Table 1. *Overview of study population on gender, DSM-IV Axis I classification and Axis II personality disorders (N = 70)*

	n	%
Gender		
Female	62	88.6
Male	8	11.4
Axis I disorders		
Mood disorders	41	58.6
Anxiety disorders	22	31.4
Identity disorder	11	16.0
Eating disorders	9	12.9
Substance dependence	5	7.1
Dissociative disorders	2	2.8
Obsessive compulsive disorder	1	1.4
Attention deficit hyperactivity disorder	6	8.6
Axis II disorders		
No PD	6	8.6
One PD	57	35.7
Two PD's	5	7.1
Three PD's	1	1.4
Four PD's	1	1.4
Paranoid PD	1	1.4
Antisocial PD	1	1.4
Borderline PD	18	25.7
Avoidant PD	16	22.9
Dependant PD	2	2.9
Obsessive compulsive PD	1	1.4
PD NOS	35	50.0

PD = Personality Disorder

The excluded 32 patients with pre- and post-SCL-90 data but without a farewell letter, did not differ significantly from the others in age, gender, severity of symptoms, personality disorders, or duration of treatment from the rest of the sample.

Setting

The studied facility is named Albatros; it offers a five-day-a-week structured and integrative psychodynamic group psychotherapy programme. Therapy often starts with residential treatment and then becomes day treatment during the treatment process. This intensive group psychotherapy is adapted for adolescents in an MBT programme (Bateman & Fonagy, 2006, 2012; Hauber, 2010) facilitated by a multidisciplinary team trained in MBT. The programme differs from the MBT programme offered for adolescents in England (Rossouw & Fonagy, 2012) using the psychodynamic group psychotherapy approach. The mentalizing focus of the various therapies is the adolescent's subjective experience of himself or herself and others, and on relationships with group members and staff. Weekly verbal and non-verbal group psychotherapies, such as group psychotherapy, art therapy and psychodrama therapy are offered, combined with individual and family psychotherapy. Rituals form part of the programme – such as a birthday ritual, an old and new year's ritual, and a farewell ritual. As the therapy programme progresses, each group member is given more responsibility regarding their participation in society and for other group members and group psychotherapy culture. If necessary, medication is prescribed according to protocol by a psychiatrist on the staff.

Measures

Only participants who completed the treatment programme as planned wrote a farewell letter as part of a ritual at the end of treatment. At the start and end of treatment, the Symptom Check List 90 (SCL-90) (Derogatis et al., 1973) was completed.

Farewell letters

As part of the farewell ritual, the farewell letter is read to group members, treatment staff and one or two important persons outside of the treatment. No writing instruction was given, but the participants were familiar with the farewell letters of former group members. This familiarity meant that certain standard components appeared in most of the letters. All farewell letters were kept in folders accessible to the patients.

SCL-90

The authorized Dutch version of the SCL-90 (Arrindell & Ettema, 2003) is a questionnaire with 90 questions; it uses a 5-point rating scale ranging from 1 ('not at all') to 5 (extreme response). The questionnaire assesses general psychological distress and specific primary psychological symptoms of distress during the last week. Outcome scores are divided into nine symptom subscales:

anxiety, agoraphobia, depression, somatization, insufficient thinking and handling, distrust and interpersonal sensitivity, hostility, sleeping disorders, and rest. The total score (range 90–450) is calculated by adding the scores of the subscales. The test-retest reliability has been shown to be fair to good (k = 0.62–0.91) (Arrindell & Ettema, 2003).

Procedures

During a 9-year period (2008–2017) all newly admitted adolescents were asked to participate in the study. A verbal description of the treatment protocol was provided to the participants. Then their written informed consent was obtained, according to legislation, namely the institution's policy and Dutch law (Eurec, 2017). All patients agreed to participate, and in accordance with institutional policy they received no incentives or rewards. The procedures in this study were in accordance with the 1964 Helsinki declaration and its later amendments and comparable ethical standards. According to the treatment protocol, patients who finished treatment as planned were asked to write a farewell letter. The letter was read as part of the farewell ritual.

Analysis

Content analysis

The first author and a senior colleague who is a psychologist were both part of the treatment team of the researched facility. They familiarized themselves with Yalom's 12 therapeutic factors on the basis of Yalom's 60-item group therapeutic-factor list (Yalom & Leszcz, 2005, pp. 62-63). The sample of 70 farewell letters was then examined using content analysis (Braun & Clarke, 2006). This qualitative method of analysis started with the first author reading ten letters while taking notes of themes, therapeutic factors of Yalom, and potential additional therapeutic factors. All sentences in the letters were numbered to compare the results of the coders. Thereafter, seven other farewell letters were coded independently by the two psychologists. All therapeutic factors found, which were not proposed by Yalom, were tracked systematically. The results were discussed regarding the use of the 12 factors and the identification of additional therapeutic factors. The maximum number of factors per sentence was limited to five.

Next, the remaining letters were analysed by the two psychologists, who coded every line for therapeutic factors based on Yalom's 60-item group therapeutic-factor list and the additional therapeutic factors. The inter-rater reliability was determined by analysing which therapeutic factors

occurred for which respondent, regardless of the number of times the factors occurred per respondent. The inter-rater reliability qualified as almost perfect (k = 0.83) (Landis & Koch, 1977).

The therapeutic factor 'cohesion' was most recognized by both psychologists, and 'family re-enactment' the least. Only factors about which the raters agreed were used; factors for which there was no agreement were not used in further analyses. Some therapeutic factors (2, 5, 8) were mentioned by almost every participant while others occurred almost never (3, 9, 11). Because the aim of this study was to identify factors that differentiated between successful and unsuccessful treatments, factors that were not expected to differentiate because of low or high frequency were excluded from further analysis.

Statistical analysis

All quantitative analyses were performed using the Statistical Package for the Social Sciences, version 23.0 (IBM Corp, 2011). To operationalize therapeutic success, an SCL-90 outcome score was composed by subtracting the post-treatment total score from the total pre-treatment score. To compare the total score on the SCL-90 at the beginning of treatment with the end of treatment an ANOVA was used. Next, it was investigated which of the 12 plus four additional therapeutic factors correlated with this SCL-90 outcome score. Linear regression analysis was used to explore the relationship between the predictor variables (therapeutic factors) and the SCL-90 outcome scores.

Results

Results of content analysis

When comparing the pre- and post-treatment SCL-90 total data, a significant decrease in symptoms was found (t = 7.257, p = .000). The mean t-1 total score of 238.36 (SD = 50.93) on the SCL-90 declined to 186.86 (SD = 62.96) at t-2 (d = .90, 95% CI [37.34-65.66]). Content analysis of the 70 farewell letters showed that the patients generally summarised their struggles before treatment, followed by a description of the therapeutic process and the contact with group members and treatment staff. Most letters followed the same structure, starting with a salutation to the patient group and a description of how it feels to say goodbye; this was followed by a narrative of the participant's mental state and struggle before or at the start of treatment, and a first impression of the patient group and group psychotherapy culture at the start of treatment. They described the psychotherapeutic interventions and contact with other patients, staff members, and loved ones. Many people mentioned the high points in the therapeutic programme, such as camping, practical jokes, and the changes they made, and ended by thanking and empowering the group members.

All 12 therapeutic factors of Yalom and four additional therapeutic factors – namely 'self-esteem', 'turning point', 'resilience' and 'epistemic trust' – were identified. The final 16 therapeutic factors are described in detail below, with the use of illustrative quotations (noted by both psychologists) for their richness of description. To outline the context of an example, a quotation sometimes contains more sentences than the one that was associated with that specific factor. This example might also illustrate other therapeutic factors that were detected. Moreover, certain therapeutic factors seemed inevitably linked to each other. For example, the therapeutic factor 'cohesion' seemed to provide a necessary basis for 'interpersonal learning' factors; thus, these factors were often found together. The number of participants who mentioned specific therapeutic factors appears in the quantitative section. Indicators of frequency were employed to categorise quantity as follows: 'many' (approximately 85% or more), 'most' (more than 50%), 'minority' (less than 50%), and 'few' (less than 15%).

Altruism

'Altruism' was defined as group members helping and supporting one another. This factor was mentioned by a minority of participants, who encouraged the group to persevere and to believe in themselves. In addition, wise words, song lyrics and poems were included to illustrate this point.

'Fortunately, there were many people around me to help me.'

Cohesion

'Cohesion' was defined as a sense of belonging to the group and being understood and accepted. This factor was expressed in many ways in the farewell letters, for instance by saluting the group with a nickname and using metaphors for the facility.

'Dear, dear, dear, dear, dear, dear everybody,

Yes, the little bird is ready to spread her wings and fly out of the nest. The nest that's called the Albatros.'

Almost all letters contained a paragraph describing in detail the joyful and playful moments among the group members, as well as shared moments of despair. Furthermore, participants expressed their gratitude to group members and treatment staff.

'Besides all the heavy therapies and tears, I have also experienced so much fun with you Albatrosses.'

'What I also remember very strongly from my first week is the water and flour fight with group evening. In our wet and dirty clothes we walked back from a great fight to drink hot chocolate milk.'

'*Even though some periods were really difficult and sometimes I really wanted to go home, the nice, fun and cosy moments I will never forget, for example playing cards at night in the hallway, singing with a washing-up brush or just standing outside and chatting with everyone and many more things.'*

'Dear Albatrosses, I am going to miss you very much. I have experienced so many high and low points with you. I laughed and cried with you. You have all become special to me.'

Universality

'Universality' was described as the importance of recognising one another, and the sense of not being the only person to feel a certain way. Remarkably few participants mentioned this factor.

'*I want to thank the group for the recognition.'*

Interpersonal learning input

'Interpersonal learning input' was characterized as having learned how to present oneself to others. Most respondents referred to this factor. Receiving feedback was mentioned as valuable but difficult. Feedback from both group members and staff (which also counted as guidance) was described in the following quotes.

'My reactions to others were often unpredictable and caused a lot of insecurity in the group. An example was my suicide attempt in the beginning of my treatment. I have scared many groupmates with this and still regret it to this day.'

'I was shocked, but accepted the tips. Eventually I started working on it, because yes, I really needed that kick in the pants.'

'It was difficult but due to the confrontations and support I received, I was able to take steps.'

'Thank you for helping me to get to know myself. Thank you for having taught me that I am allowed to be vulnerable. Thank you for your commitment and patience.'

Interpersonal learning output

'Interpersonal learning output' was defined as learning how to relate to others. Many participants described how they became familiar with group members and with other people.

> *'I notice that I learned the most of my groupmates because with you I have been able to practice with things that I found difficult, like appealing to people.'*

> *'It is now normal for me to talk in a large group about myself and to give my sometimes unpopular critical opinion.'*

> *'It was very safe and very familiar, and it was very nice to be able to sit at the table with fellow group members and team members, and talk nicely.'*

Guidance

'Guidance' was defined as group members receiving helpful, accurate information and therapeutic interventions. Many different therapies and therapeutic interventions were mentioned. First, the inpatient treatment itself was seen as an important step in breaking through fixed patterns, by being away from home and in a new environment.

> *'After my long crisis period of about 2.5 months in the closed ward, I finally opted for treatment. I was terrified by this big step.'*

Second, specific interventions by the treatment team were mentioned as confrontational and difficult, but also as crucial for the process of change.

> *'After a while the care ban came. The (symbolic) care desk closed, and suddenly it was about me!'* (This therapeutic intervention was aimed at stopping the patient from focussing on and caring for others so that she could first take care of herself.)

Third, specific therapy forms were cited; these included individual and family group psychotherapies, such as EMDR and psychodrama therapy. Family therapy, specifically, was mentioned in the context of revealing family secrets or breaking through symbiotic relationships.

> *'And as if the feeling was not heavy enough, the team decided to speed up the process. I got the choice: whether you share your trauma with your parents or otherwise your treatment stops sooner.'*

Fourth, therapeutic alliances and contact with specific persons on the treatment staff were cited.

> *'I had damaged the trust of the group and the team, and had to think about what I had done and how I wanted to restore confidence again. In retrospect, I am very grateful for it, because this was really a turning point in my treatment.'*

Fifth, having to complete adolescent tasks, such as going to school, taking a job and practising hobbies, was described by many as not having been easy.

> *'I started school, oh dear that made me scared, I did not even dare to stand up and walk through the classroom. Luckily I started with a slow build-up programme.'*

Catharsis

'Catharsis' was characterized as the process of learning to cope with and to express painful emotions, and was described by many patients. Certain moments when they succeeded for the first time in being honest about their feelings and showing them, were described as important.

> *'I showed my sadness and anger. It was weight off my shoulders. It all became much calmer, not only in my head but also in my stomach.'*

Metaphors like wearing a mask were used to describe their old way of dealing with stress and negative emotions.

> *'I want to thank you for the fact that I was allowed to have my fighter jacket on, but especially for helping to take it off.'* (In this example, taking the fighter jacket off meant showing emotions in contact with the group instead of pushing the group away.)

Identification

Successful behaviour among group members was imitated by many; 'identification', in the sense that group members and team members provided examples for new behaviours, was not found.

> *'Hello dear group and team, first the well-known phrase: here I sit, on the farewell bench.* (This farewell bench referred to a seat on which the departing group member sat during the farewell ritual, and wrote his or her name. The sentence 'Here I sit on the farewell bench' occurred in almost every farewell letter).

Family re-enactment

'Family re-enactment' was defined as freeing group members from familial roles. A few patients mentioned being freed of their familial roles, or that being part of a group had helped them to relive and understand the family in which they had grown up.

> *'Some of you were just like little sisters for me. Due to that awareness and that experience with you, my relationship with my sister has become a lot better.'*

Self-understanding

'Self-understanding' referred to discovering and accepting previously unknown or unaccepted parts of oneself. Self-understanding was described by a minority.

> *'I know myself better now. I understand why I do what I do.'*

Instillation of hope

A few patients mentioned 'instillation of hope' by indicating that change was possible. Authors of such farewell letters encouraged other group members not to give up their hope for change. In addition, the ritual of reading a farewell letter itself had the goal of instillation of hope.

> *'I saw the Albatros as the last chance to make me feel better and finish my schooling.'*

Existential factors

A minority referred to 'existential factors', defined as taking responsibility for their lives while accepting the good and bad aspects. Also, participants mentioned having learned to accept negative emotions as part of life.

> *'I am willing to face the world, to have good but also bad times, and to take control of my own life again.'*

> *'I can only make myself happy, that is one of the things I have learned in my treatment on the Albatros.'*

> *'Feelings that unfortunately belong to me, which I dare to feel and accept.'*

Self-esteem

'Self-esteem' was described as a sense of being valued by the group and feeling self-confident. It was expressed by a minority. In this context, finding oneself was sometimes mentioned, as well as the sense of belonging.

'But not anymore; I am full of self-confidence, and I am myself.'

'But above all that I am capable of much more than I think myself.'

Turning-point

A few participants pointed out a crucial moment of change in their treatment. Some of these 'turning points' were due to therapeutic interventions or changes in the treatment programme.

'From the moment I went to day treatment, there was a turning point in my treatment for me.'

'And when the subject was raised by Willy and Pieter, I found out that I was completely lost in caring for others. I therefore did not do anything about my own problems and felt incredibly depressed. That conversation with Willy and Pieter was a turning point for me in my treatment.'

'I did a psychodrama about my acting out and how it got in the way of the contact with the group, and that really was the turning point for me.'

Other turning points were due to the group and treatment staff demanding that a patient should try out new behaviour, or setting boundaries for behaviour that undermined change. Participants described receiving a supportive reassessment of treatment from a member of the treatment staff, in the presence of a group member as support, which was experienced as a 'wakeup call'.

'I actually only had contact with them (subgroup) *and I was missed on the group, I felt unseen and I damaged myself so that I was seen. That is why I got a treatment policy conversation, I personally see this as one of the turning points in my treatment. '*

'The realization came when I thought that no one liked me anymore, nobody shared secrets with me anymore, I had to talk about real things. It was the end of the world for me, I even wanted to resign. Then I fell, something broke. People were not there for me to hurt or bully me but to see me as a person. I have jumped, the contact I have with people now is real and the real contact is 10 times better than that secrets hassle.'

Resilience

'Resilience' was defined as the belief that once could cope with stressful life events. A few adolescents mentioned the topic of resilience. They described how they had learned to adapt without falling back into acting-out behaviour.

> *'I still find this difficult, but I can cope with it now.'*
>
> *'I am aware of how I feel at a moment and how I can deal with it, without falling into acting out.'*
>
> *'I sometimes feel sad or lonely, the difference is that it no longer feels endless, I know how to deal with it and that I can accept it.'*

Epistemic trust

A few participants mentioned 'epistemic trust', defined as the ability to learn from and trust others. Epistemic trust differs from for instance the factor interpersonal learning input in the fact that this ability enables social learning in an ever changing social and cultural context and allows individuals to benefit from their social environment (Fonagy & Allison, 2014) and therefore seems a precondition for the other therapeutic factors. Experiences in the therapeutic milieu were described as being a corrective emotional experience.

> *'The Albatros was a safe house for me, a house where I could trust everyone, which at first seemed impossible.'*
>
> *'Thank you for what you have shown me. For the fact that thanks to your help, things have become bearable and that I have learned to feel what it is really like to care for people and to be able to rely on them.'*

Results of the quantitative analysis

The 70 analysed letters consisted of 4669 sentences in total. Each letter had an average of 66.7 sentences, with the shortest letter containing 17 and the longest 171. The frequency of occurrence of the 12 therapeutic factors of Yalom and the four new therapeutic factors per participant are presented in Table 2.

Table 2: *Definition and frequency of therapeutic factors (number and percentage of participants who named the relevant factor; N=70)*

Therapeutic factor	Definition	Prevalence	
		n	%
1. Altruism	Members help one another through giving of themselves to others	26	37.1
2. Cohesion	The sense of belonging to the group and being understood and accepted	68	97.1
3. Universality	The sense of not being the only one to feel this way	1	1.4
4. Interpersonal learning input	Refers to members learning how they come across to others	36	51.4
5. Interpersonal learning output	Refers to members learning how to relate to others	66	94.3
6. Guidance	Group members receiving helpful, accurate information and therapeutic interventions	62	88.6
7. Catharsis	The expression of feelings, both positive and negative	39	55.7
8. Identification	Members imitate successful behaviours modelled by other members or the treatment staff	66	94.3
9. Family re-enactment	Frees group members from familial roles	2	2.9
10. Self-understanding	Refers to members discovering and accepting previously unknown or unacceptable parts of themselves	13	18.6
11. Instilling hope	Refers to sense that change is possible	1	1.4
12. Existential factors	Members learn to take responsibility for the way they live their lives	21	30.0
13 Self-esteem	A sense of worth within the group and of being self-confident	19	27.1
14. Turning point	Member pointing out a crucial moment of	7	10.0

	change in the group therapy		
15. Resilience	The belief that one can cope with stressful life events	11	15.7
16. Epistemic trust	Learning to trust and learn from other people	9	12.9

Among the 11 therapeutic factors left for analysis, a significant correlation was found between the SCL-90 score change and three therapeutic factors. These factors were 'interpersonal learning input' ($r = .336$, $p = .004$), 'self-esteem' ($r = .241$, $p = .044$) and 'turning point' ($r = .324$, $p = .006$). Multiple regression was then used to assess whether these three Yalom factors (4, 13, 14) accurately predicted the SCL-90 score change. Preliminary analyses were conducted to ensure there were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. All three therapeutic factors were entered together into the model. The total variance explained by the model was 22.4% (F (3, 66) = 6.35; $p = .001$). Each of the three factors made a unique and statistically significant contribution to the model. The strongest predictor was 'interpersonal learning input', which contributed 6.5% to the variance, followed by 'self-esteem' (5.8%) and 'turning point' (5.1%).

Discussion

The aim of this mixed-method study was to investigate whether the therapeutic factors proposed by Yalom, with potential additional therapeutic factors, featured in letters written by recovering adolescents after completing an intensive group psychotherapeutic MBT. In addition, the relationships between these therapeutic factors and changes in symptom scores were explored. In 70 farewell letters written (without instruction) by a high-risk adolescent sample, all the therapeutic factors of Yalom (Yalom & Leszcz, 2005) were identified in association with resilience processes and the resolution of psychological distress among the participants. Large differences were observed in the number of respondents who mentioned specific therapeutic factors. The factors of 'cohesion', 'interpersonal learning output', 'guidance' and 'identification' were almost always mentioned, and are therefore considered important among adolescents with personality pathology. These therapeutic factors seem to be a precondition for variables that were associated with therapeutic success. Therefore, although it would be premature to propose firm clinical implications based on these findings, the data indicate with great caution that it may be beneficial for clinicians to consider certain focus points in intensive group psychotherapy for adolescents with personality disorders. Clinicians could focus on the following issues, in addition to the common therapeutic factors: a) how the group

members come across to one another, b) their sense of being valued by the group, and c) demanding that patients try out new behaviour, and setting boundaries to acting-out behaviour that undermines change. Replication is necessary to determine the generalizability of these results to other intensive MBT services for adolescents with personality pathology.

Similarly, the large differences in the number of respondents who mentioned a certain therapeutic factor could also be indicative of the individual needs and reflections on what helped during treatment. The study presented here provided insights into the way adolescents with clinically diagnosed personality disorders described their treatment and treatment outcome. The farewell letters highlighted for instance the importance of positive experiences with the group and treatment staff in addition to the treatment of psychopathology. The goal of the inpatient treatment is not only diminishing psychopathology, but also stimulating positive affects and experiences with others through therapeutic factors such as 'cohesion' and 'interpersonal output'.

Following this, the question arises whether the interplay of all therapeutic factors and the value placed on them in general might differ not only according to the content and purpose of a group (Yalom & Leszcz, 2005) but also among individual group members. In that case, treatment could focus not only on diminishing symptoms, yet also on optimizing the therapeutic factors that are most important to each individual. Furthermore, writing a farewell letter as part of the farewell ritual at the end of the treatment seemed to stimulate patients' reflection on their therapeutic process. This can be important to highlight the result obtained through treatment.

The validity of using questionnaires with a high-risk adolescent group with varying mental states is questionable. In this study, change in symptom scores on the SCL-90 were used as indicator of therapeutic success. However, according to the treatment staff, all participants in the studied sample finished their treatment successfully. Patients who were not successful were offered a different farewell ritual (without writing a letter) and their data were not included in this study. Therefore, written reflections on the treatment process and progress during treatment could be more indicative of therapeutic recovery than a questionnaire score for these patients. This information could provide important input for treatment staff regarding how to optimize individual therapeutic factors. The importance of individual therapeutic factors could also differ across the phases of the psychotherapy process. For instance, the therapeutic factors of 'cohesion' and 'interpersonal output' could be especially important for some patients in the first phase of treatment, to help them learn to connect with others. 'Guidance' and 'interpersonal input' could be important in the second and third phase to work through interpersonal problems. Therefore, written reflections on the treatment process and patients' progress could provide treatment staff with input on how to optimize the therapeutic factors for an individual in each treatment phase.

This study is unique in that rather than using a questionnaire that asked about every therapeutic factor of Yalom, as occurs in most studies, therapeutic factors were detected from the farewell letters. It is conceivable that those therapeutic factors that were barely evident in this study might have been more strongly observed through a questionnaire. For instance, 'identification', in the sense of participants mentioning that group members and team members had served as an example for new behaviour, was not mentioned. Four therapeutic factors were encountered in addition to those of Yalom, namely 'self-esteem', 'turning point', 'resilience' and 'epistemic trust'. Two out of the three therapeutic factors that were related to the reduction of symptoms, namely 'self-esteem' and 'turning point', were newly identified therapeutic factors. Whereas the groups studied by Yalom were mostly weekly outpatient groups, the facility studied in this research offered a five-day intensive group psychotherapy programme with continuous availability of MBT-trained nursing staff. Therapeutic method and treatment staff likely influence therapeutic factors and factor rankings. However, it remains unclear whether differences in intensity, treatment staff availability, and patient groups were related to the new therapeutic factors. Nevertheless, it seems advisable for adolescent clinical practice to demand that patients try out new behaviours and to set boundaries to acting-out behaviour that undermines psychotherapy. Future research is needed to examine whether the new factors are indeed therapeutic factors.

Limitations of this study should be mentioned. First one may wonder if the identified therapeutic factors were implied as important for recovery in their therapeutic interventions by the treatment staff and copied by the writers. It seems likely that the treatment staff would provide role models regarding attitudes and rules of engagement. For example, some adolescents seemed to have used psychological language in their letters. The question here is whether the contents of those letters resembled the patient's own reality, or rather reflected the desire to please the group and treatment staff. The second shortcoming of this study is the limited generalizability of the results due to the use of inpatients at a single facility, and the small sample. Despite these limitations, the study remains valuable because little prior research had been done regarding personality disorders among adolescents (Courtney-Seidler et al., 2013; Hutsebaut et al., 2013; Sharp et al., 2016).

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Chapter 4: **Therapeutic relationship and dropout in high risk adolescents intensive group psychotherapeutic programme**

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Abstract

Background: Dropout rates in youth psychotherapy are high. An important determinant of dropout is the quality of the therapeutic relationship. This study evaluated the association between the therapeutic relationship and dropout in an intensive MBT treatment for adolescents with personality disorders.

Method: Patients (N=105) included were dropouts or completers of intensive MBT treatment. The therapeutic relationship was measured with the Child version of the Session Rating Scale (C-SRS) that was completed after each group therapy session by the patient. For each patient, the treatment termination status (dropout or completer) was indicated by the treatment staff. The reliable change index (RCI) was calculated for the C-SRS to determine significant changes in the therapeutic relationship.

Results: Both groups started with similar scores on the C-SRS, while at the end of the treatment period the scores differed significantly between dropouts and completers. On average, the scores of completers increased from the start to the end of therapy while the scores of dropouts decreased during therapy, although dropout could not be predicted based on the C-SRS scores. During the last two sessions however a significant decrease (RCI) in C-SRS scores occurred more often for dropouts.

Conclusions: Our findings show that the patient's judgement of the quality of the therapeutic relationship should be monitored continuously, and decreases discussed with the patient and the group with the aim to prevent dropout.

Introduction

Dropout of child and adolescent therapy is a common phenomenon (De Haan, Boon, De Jong, Hoeve, & Vermeiren, 2013; Hauber, Boon, & Vermeiren, 2017; Owen, Miller, Seidel, & Chow, 2016a). When youngsters drop out of psychiatric treatment, their disorders might persist or even worsen later in life. For instance, children with untreated disorders are likely to grow up as adults who rely on mental health services, which has negative consequences for themselves, their surroundings and society (Dulmus & Wodarski, 1996; Kessler, Chiu, Demler, & Walters, 2005; Reis & Brown, 1999). Therefore premature termination of therapy is considered a serious problem (Armbruster & Kazdin, 1994; Gopalan et al., 2010; Midgley & Navridi, 2006). In adolescent mental health care dropout percentages of 38.4% for outpatients (De Haan, Boon, De Jong, Hoeve, & Vermeiren, 2015) and 34.4% for inpatients (De Boer, Boon, De Haan, & Vermeiren, 2016) were found. A determinant for dropout is the quality of the therapeutic (patient-therapist) relationship (De Haan et al., 2013; Garcia & Weisz, 2002; Hawley & Weisz, 2005; Kazdin & Wassell, 1998; Owen et al., 2016a; Stevens, Kelleher, Ward-Estes, & Hayes, 2006). Therapeutic relationship or therapeutic alliance has commonly been defined as the agreement between the therapist and client on the goals for treatment as well as the ways to reach those goals and the emotional or relational bond between the client and therapist (Bordin, 1979). Although several studies have been conducted on the relation between the therapeutic relationship and dropout, it is hard to compare these studies because the time at which the therapeutic relationship was measured varies considerably (Cordaro, Tubman, Wagner, & Morris, 2012; Robbins et al., 2006; Robbins, Turner, Alexander, & Perez, 2003; Shelef, Diamond, Diamond, & Liddle, 2005). In several studies trained observers rated the therapeutic alliance at one or two therapy sessions during the course of therapy, but this approach does not take the patients' opinion about the relationship into account. Other studies measured the relationship after therapy has ended, although this will be strongly influenced by the way patients feel at that termination point. In a review on the therapeutic relationship within youth therapy, it is advised to measure the therapeutic relationship during several sessions of the therapy process (Zack, Castonguay, & Boswell, 2007). If adolescents perceive the therapeutic relationship as supportive and agree with the topics and goals of the sessions this will facilitate their engagement (Karver, Handelsman, Fields, & Bickman, 2006). Until now however adolescent patients are hardly used as an informants about the therapeutic alliance (De Haan et al., 2013). In adult therapy a moderately strong relationship between psychotherapy dropout and therapeutic alliance is found (Sharf, Primavera, & Diener, 2010).

Studies on the relationship between the therapeutic alliance and dropout in youth therapy have been hindered by two topics: first, the method in which the therapeutic relationship was measured and second, the definition of dropout. First, most available measures for the therapeutic relationship in child and adolescent therapy are parent report measures. The therapeutic Alliance Scale for Children

and Adolescents (TASC/A) is an exception and was designed to be administered to children and adolescents themselves (DeVet, Kim, Charlot-Swilley, & Ireys, 2003; Kazdin, Marciano, & Whitley, 2005; Shirk & Saiz, 1992). The TASC/A was however designed to be administered at only one or two sessions during therapy. The only available child-report instrument that measures the therapeutic relationship during all sessions, is the Child version of the Session Rating Scale (C-SRS) (B. Duncan, Sparks, Miller, Bohanske, & Claud, 2006; B. L. Duncan et al., 2003; Miller & Duncan, 2004). This instrument is designed to be used at the end of every therapy session and the child version of this tool makes it possible to assess the child's or adolescent's self-reported relationship with the therapist. Although designed for individual therapy, the instrument can also be used for group therapy. Second, there is also no agreement in the way dropout is defined. The definition varies across studies, and influences which dropout predictors were found per study (De Haan, Boon, De Jong, Geluk, & Vermeiren, 2014; De Haan et al., 2013; Warnick, Gonzalez, Weersing, Scahill, & Woolston, 2012; Zack et al., 2007). In our study therapy dropout had been defined as occurring when a participant discontinued the treatment program before completing the treatment protocol. So only participants completing the treatment program as planned, were considered completers.

The aim of our study was to extend and specify insights on the association between the therapeutic relationship and dropout during adolescent group psychotherapy. In accordance with Zack et al. (2007), we measured the therapeutic alliance of each psychotherapy session with the authorized Dutch version of Child-Session Rating Scale (C-SRS) (B. Duncan et al., 2006; Hafkenscheid et al., 2006). Studies evaluating the (C-)SRS have confirmed the psychometric quality and usability of the instrument, and showed an association between the therapeutic relationship and therapeutic change or outcome (Boon, De Boer, & Ravestijn, 2012; Campbell & Hemsley, 2009; B. L. Duncan et al., 2003; Owen, Miller, Seidel, & Chow, 2016b; Sundet, 2012). The association between the C-SRS and dropout has been studied in a sample of ethnic minority youth (De Haan, Boon, De Jong, et al., 2014). It was also shown that the scores on the C-SRS were not influenced by whether the patient knew that the scores would or would not be observed by the therapist, or whether the questionnaires were completed in presence of the therapist, nor were the (C-)SRS scores significantly correlated with a measure of social desirability (Reese et al., 2013).

Method

Setting

The studied facility, a department of De Jutters-Youz, a YMHC centre in The Hague (one of the three main cities of the Netherlands), offers a five days a week structured and integrative

psychodynamic group psychotherapy programme. This treatment commonly starts as residential treatment and transitions into a day treatment halfway through. It is a mentalization based treatment (MBT) programme, manualized and adapted for adolescents (Bateman & Fonagy, 2006, 2012; Hauber, 2010) facilitated by a multidisciplinary team trained in MBT. The programme differs from the MBT programme for adolescents in England (Rossouw & Fonagy, 2012) in the psychodynamic group psychotherapy approach with an optimal group therapy size of 6 members instead of 8. The different therapies main focus is on the adolescents' subjective experience of himself or herself and others, and on the relationships with the group members and the treatment staff. Next to weekly group psychotherapy, other (non-verbal) group therapies as well as individual- and family psychotherapy are offered. In case medication is needed in addition to the treatment, this is prescribed by a psychiatrist of the treatment according to protocol.

Participants

The participants were a sample of 105 patients with clinically diagnosed personality disorders admitted between 2013 and 2018. Upon arrival, patients and their parents were asked to sign a consent form to indicate that their data could be used anonymously for scientific research. Adolescents mean age at the start of treatment was 17.7 (*SD* = 1.7 range = 15-22), (females 81.0%). Average duration of treatment during this study was 215.2 days (*SD* = 100.8, range 21-640). Most of the patients (90.4%) were clinically diagnosed with a personality disorder often with comorbid axis- I disorders (mood disorder 48.5%, anxiety disorder including PTSS 57.3%, eating disorder 8.7%, ADHD 7.6 %, substance dependence 3.9 %, dissociative disorder 1.9% and ASD 4.8%). Of the 94 patients diagnosed with a personality disorder, 49 (52.1%) were diagnosed as Personality disorder NAO, 16 (17%) Borderline, 16 (17%) Avoidant, 2 (2.1) Dependent and 1 (1.1%) Antisocial. Intelligence estimated based on level of education was average to above average. Most patients 94.4% had a native Dutch background and the Dutch language was fluently spoken by all participants.

Measures

The Child-Session Rating Scale or C-SRS (Duncan et al., 2006; Miller & Duncan, 2004) is a four item visual analogue instrument. The version for adolescents differs from the adult version of the SRS because it uses emoticons: a smiley (positive) and a frowny face (negative). The C-SRS has been translated in Dutch by (Hafkenscheid et al., 2006). The Dutch C-SRS has already been used in Dutch research (Boon et al., 2012; De Haan, Boon, Vermeiren, & De Jong, 2014). The reliability (internal

consistency) of the Dutch version of the C-SRS was satisfactory (Cronbach's $\alpha = 0.86$) (Hafkenscheid, Duncan, & Miller, 2010). The therapeutic relationship is defined with three interacting elements: (1) a relational bond between the therapists, the group members and patient; (2) agreement on the goals of therapy; and (3) agreement on the tasks of therapy. In the C-SRS these theoretical ideas are represented by four 10-cm visual analogue scales with emoticons. Respondents are instructed to place a hash mark on a line. Negative responses are placed on the left (frowny faces) and positive responses indicated on the right (smileys). The first item is a relationship scale to rate the session on a continuum from "The therapists and group members did not listen to me" to "The therapists and group members listened to me." The second item is a goals and topics scale that rates the session on a continuum from "We did not do or talk about the things I wanted to work on or talk about" to "We did do or talk about what I wanted to work on or talk about." The third item is an approach or method scale asking the patient to rate the session on a continuum from "I did not like the way the therapists and group members approached my problems today" to "I liked the way the therapists and the group members approached my problems today." The fourth item asks how the patient perceived the session in total and the group alliance along the line from: "Overall, today's session was not right for me - I did not feel part of the group." to "Overall, today's session was right for me – I did feel part of the group." Because the scores on the four items (the 10 cm line represents scores between 0 and 10) are added, the session total score will vary between 0 and 40: High average total scores are an indication for a high quality of the therapeutic relationship.

Procedure

The C-SRS was presented to the patients at the end of each weekly group therapy session, after which it was collected and viewed by the therapist. Our purpose was to let the patients fill in the form during every therapy session. Although therapists sometimes forgot to hand out the C-SRS, in general the C-SRS was completed during most of the group therapy sessions. The first C-SRS was completed after the first therapy session. The C-SRS that was completed during the last session (planned in the case of completers and unplanned in the case of dropouts), was marked as the last C-SRS. It largely depended on the length of therapy how many C-SRS forms the patient finally completed.

Termination Status: Dropout and Completion of Therapy

In case premature termination was suggested by a patient, the patients family or the treatment staff, a supportive reassessment of treatment was organized. Only when both the therapist and the patient (and family) agreed that therapy goals had been reached, or when both agreed to terminate while therapy goals had only partly been reached, was the patient classified as a "completer." When both stated that therapy was not completed yet, or only the patient or only the therapist stated that therapy was not completed, the exact reasons for termination were examined. In these cases, the patient was classified as a "dropout" when the patient prematurely terminated therapy but the therapist did not agree on this termination (i.e., according to the therapist the therapy should have been continued). The intention was to classify the patients as "unilaterally terminated by the therapist" when the therapist wished to terminate therapy while the patient wished to continue. Among the included 70 patients, there were no cases of "unilaterally terminated by the therapist." Finally, 25 patients were classified as dropouts, and 45 patients were classified as completers.

Statistical analyses

All analyses were performed using the SPSS, version 25.0 (IBM, 2017). First, using a t-test dropouts and completers were compared on the C-SRS score of the first session and the last session. A mixed model analysis was performed with the C-SRS score as dependent variable and time and dropout as independent variables to see if dropout was related to C-SRS scores over time.

Second, the reliable change index (RCI) for the C-SRS was calculated using Jacobson and Truax formula (Jacobson & Truax, 1991), based on all questionnaires (N=2378) with a reliability (Cronbach's Alpha) = .921 and *SD* = 8.15, the standard error was 3.24. The reliable change criterion was (1.96 * 3.24) 6.35.

Third, a Generalized Estimating Equations analysis (GEE) with an exchangeable working correlation matrix was performed to see if a descent in C-SRS score could predict dropout with the dichotomous variable significant decrease (RCI) in the C-SRS score between two consecutive sessions as independent and dropout within three sessions as dependent variable.

In a fourth step percentages of significant decreases (using RCI) during the last five sessions of therapy were compared between dropouts and completers.

Results

Descriptives

The 105 subjects attended group psychotherapy between march 2013 and October 2018, with an average number of group members of 5.0. The number of C-SRSs completed per participant ranged from 2 to 43 times (M = 22.07, SD = 10.45). The number of missed sessions (M = 3.53, SD = 4.97) was calculated by subtracting the attended sessions (M = 25.6, SD = 12.7) from number of planned sessions (M = 26.3, SD = 12.7), based on which the percentage of missed sessions per respondent was calculated. This percentage did not differ (p =.72) between completers 2.78% (SD= 0.58) and dropouts 3.27 (SD = 1.51). Of the 2832 attended sessions, 2367 C-SRS were completed (response 83.6%).

Dropouts versus completers

The treatment duration of the dropouts (M = 125.56 days, SD = 99.1) was significantly (t = 7.497, p < 0.001) lower than that of the completers (M = 261.91 days, SD = 63.3). Dropouts (N = 36) completed the C-SRS on average 13.42 times (SD = 11.38), and completers (N = 69) completed it on average 26.58 (SD = 6.33) times. These numbers differed significantly (t = 7.629, p < 0.001).

Table 1. *Comparison first- and last session scores C-SRS completers and dropouts*

	N	SRS 1st session		SRS last session			
		M	*SD*	*M*	*SD*	*t*	*p*
Completers	69	27.30	6.67	32.34	6.41	4.84	.001
Dropout	36	26.47	7.45	23.83	9.69	1.44	.159
Total	105	27.01	6.92	29.42	8.66		

For completers the C-SRS scores of the first and the last session increased significantly, while the scores of the dropouts did not differ (Table 1). No significant difference was found (t = 0.583, p = 0.577) on the first C-SRS scores for dropouts versus completers. The scores of the last session however differed significantly (t = 4.756; p < .001, Cohen's d = 1.035) between both groups. Total C-SRS scores decreased by 0.86 points per session on average for the dropouts, while increasing by 0.18 points per session for the completers.

Table 2: *RCI between first- and last session scores C-SRS for completers and dropouts*

	Completers		Dropouts		Total	
	N	%	N	%	N	%
Significantly increased	28	40.6	9	25.0	37	35.2
No significant change	36	52.2	12	33.3	48	45.7
Significantly decreased	5	7.2	15	41.7	20	19.0

Mixed model analyses showed no differences (p =.665) in C-SRS scores over time between dropouts and completers, implicating that dropout cannot be predicted from the progression of C-SRS scores. A GEE-analysis did not reveal dropout to be a significant predictor of significant (RCI) decreases in C-SRS scores (p = .730). Therefore the next step was to identify the last five sessions of therapy and compare the differences in C-SRS scores between these sessions. No differences were found between completers and dropout in comparison of the fifth- and fourth-last session. Comparison of the third-last and the second-last session showed that 7.1% (n = 3) of the completers (N = 42) had a significant (RCI) decrease in C-SRS score between these sessions, while for drop-out (N = 17) this was 35.3% (n = 6) (df = 1, $\chi 2$ = 7.419, p = .006). Subsequently, a comparison of the C-SRS score of the second-last and the last session showed that 4.0% (n = 2) of the completers (N = 50) had a significant (RCI) decrease in C-SRS score between these sessions, while for drop-out (N = 30) this was 26.7% (n = 8) (df = 1, $\chi 2$ = 8.808, p = .003) (table 2). During the last three sessions 7.2% (n = 5) of the completers showed a significant decrease in C-SRS scores, compared to 38.9% (n =14) of the dropouts (df = 1, $\chi 2$ = 15.98, p < .001). The differences between sessions for all respondents for all sessions (N = 1906) showed that 324 times (14.3%) a significant decrease (RCI) in C-SRS scores occurred.

Discussion

The aim of our study was to gain deeper insights on the association between the quality of the therapeutic relationship and treatment termination status among high risk adolescents receiving intensive MBT. We measured the therapeutic relationship during group therapy with the C-SRS, with which the adolescent rated the therapeutic group alliance. No differences were found in the initial scores of the C-SRS, indicating that dropouts and completers did not differ in the way they experience the therapeutic alliance at the start of therapy. The development of C-SRS scores during the course of therapy however, was different for the two groups: completers showed improving scores of the therapeutic relationship during the course of therapy, while dropouts showed declining scores during the course of therapy. These differences however occurred mainly at the end of the treatment course.

These results indicate that an improving therapeutic relationship during the course of therapy is associated with adherence to therapy, while a decreasing quality of the therapeutic relationship during the course of therapy is associated with the patient ending therapy prematurely. Our study showed that the rather short instrument (C-SRS), which can be easily applied in clinical practice and which is completed by adolescent patients themselves, is a valuable instrument for measuring the quality of the therapeutic relationship.

A significant decrease in the therapeutic alliance in the last three sessions was a predictor of dropout. For dropouts such a decrease occurred in 38.9% of the cases, for completers the was 7.2%. Because such a significant decrease in therapeutic group alliance occurred during the treatment process in 14.3% of all cases, only with hindsight it was clear that such decrease has led to dropout. To prevent dropout out of therapy this means that every substantial decrease in C-SRS score is worthwhile discussing. In this study, some participants spoke of being satisfied with the session, while on the C-SRS they rated the therapeutic alliance of that same session as low. By using the C-SRS, such unspoken inconsistency can be recognized, understood and worked through in the next session and thereby outcomes can be improved (Norcross & Lambert, 2018). In case the drop has to do with something that occurred in the working alliance with the therapists and/ or the group members, differences in perspective and thoughts, beliefs, wishes and feelings can be explored and validated (Bateman & Fonagy, 2012). In this way group psychotherapy is a shared attentional process which strengthens mentalizing capacities and interpersonal functioning.

Limitations of this study must be mentioned. First limitation is that it is not clear if these results found in a sample of high risk adolescents can be generalized to group psychotherapy with other patients with personality pathology and patients with other pathology. Second limitations is that Axis-I disorders were left out due to the practical consideration of not overloading patients with assessment instruments. Nevertheless, the C-SRS can help psychotherapists to timely intervene when breaks occur in the therapeutic alliance with adolescents with personality pathology that may lead to dropout.

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Chapter 5: **Adolescent attachment insecurity and the influence of MBT**

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Abstract

Objective: The aim of this study in a high-risk adolescent sample with personality disorders receiving intensive mentalization based treatment (MBT), was first, to examine deviations in insecure attachment distribution of the normative pattern, and in borderline personality disorder and other personality disorders; second, to explore whether MBT alters attachment representations and whether these alterations are related to changes in psychological distress.

Method: A total of 60 adolescents was investigated pre-treatment for both categorical and continuous measures of the Adult Attachment Interview (AAI). Pre- and post-AAI (N = 33) data were compared with psychological distress measured by the Symptom Checklist-90 (SCL-90).

Results: While the most disturbed category of insecure attachment, the cannot classify category, was overrepresented (46.7%) at pre-treatment, no differences were observed by type of personality disorder. At post-treatment, 48.5% of the participants showed positive change in the attachment representation, and their psychological distress lowered significantly (p = .002). The whole sample demonstrated change towards increased secure attachment (z = -2.85, p = .004).

Conclusion: Attachment insecurity was found in all adolescent personality disorders which MBT seemed to be able to alter. However, as we included no control group, we cannot conclude that changes are due to the treatment itself.

Introduction

Attachment insecurity is likely to influence the onset and treatment of personality disorders in adolescence (M. Steele et al., 2015). Adolescence is a stage of life that is eminently characterised by change and instability (Kaltiala-Heino & Eronen, 2015). One can, therefore, question what psychotherapy contributes to this natural process of separation-individuation. In personality disorders, transference-focused psychotherapy, instead of dialectical behaviour therapy or psychodynamic supportive psychotherapy, is shown to change adult attachment representations (Levy et al., 2006). So far, however, it has not been demonstrated, by using the gold standard of attachment assessment, the Adult Attachment Interview (AAI) (Main, Goldwyn, & Hesse, 1998), that mentalization-based treatment (MBT) (Bateman & Fonagy, 2006, 2012) is able to achieve such a impact. Hence, it is of clinical relevance to examine adolescent attachment insecurity and the influence of MBT on this problem among severely disordered adolescents. Therefore, the aim of this study was to assess attachment using the AAI in adolescents with a personality disorder before and after undergoing an intensive MBT program (Bateman & Fonagy, 2006, 2012; Hauber, 2010), to relate possible changes in attachment to changes in psychological distress, and to examine if MBT alters attachment representations.

Considering the evolving state of personality disorder classifications and the difficulty to diagnose personality disorders in adolescence (Laurenssen, Hutsebaut, Feenstra, Van Busschbach, & Luyten, 2013), the analysis of the differences between a sample of highly disturbed adolescents and a non-clinical sample could help advance the understanding of personality disorders in adolescence. It is now well established that adolescent attachment distribution in non-clinical groups is more likely to show dismissing attachments and lower preoccupation in comparison to normative adult attachment distributions (Bakermans-Kranenburg & van IJzendoorn, 2009). Also, the percentage of unresolved attachment representations in adolescents is found to be lower than in adults (18% compared to 11%). Whether this applies to the attachment distribution of clinical adolescents with personality disorders is unknown. This insight is potentially valuable for early detection and development of effective treatment for this group.

While studies on the outcome of psychotherapy on adult attachment are scarce, to our knowledge, no such studies have been conducted among adolescents. This is unfortunate, as adolescence is the period when personality disorders (Feenstra et al., 2011; Rossouw & Fonagy, 2012; Tyrer et al., 2015) and several major mental health disorders develop (Kessler, Chiu, Demler, & Walters, 2005). Since insecure attachment is known to contribute to the emergence of mental health disorders (M. Steele et al., 2015), specific information is needed on how to alleviate insecure attachment in adolescents. For this purpose, it is crucial to determine whether insecure attachment differs among different personality disorders (Allen, 2008; Bakermans-Kranenburg & van IJzendoorn,

2009; Levy et al., 2015; Venta et al., 2013). The distinction between borderline personality disorder (BPD) and other personality disorders is potentially of particular interest, because the origins of BPD in particular have been related to factors such as early childhood environment, caregiving relationships, and traumatic life events (Fonagy et al., 1996; M. Steele et al., 2015). Therefore, part of the aim of this study was to compare pre-treatment insecure attachment representations between BPD and other personality disorders in a sample of adolescent inpatients with clinically diagnosed personality disorders and deviations in attachment distribution from the normative pattern.

Clinical theories and developmental models suggest that insecure attachment is central to the pathogenesis of the borderline psychopathology (Sharp et al., 2016). Existing research on BPD patients confirms such claims, as greater incidence of childhood maltreatment is reported in the said group compared to patients with other disorders (Cirasola, Hillman, Fonagy, & Chiesa, 2017; Courtney-Seidler et al., 2013). Evidence also suggests a predominance of preoccupied attachment representations in both adult and adolescent BPD patients, often in addition to unresolved patterns of attachment (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004; Barone, Fossati, & Guiducci, 2011; Rosenstein & Horowitz, 1996; M. Steele et al., 2015). This group tends to report less love, more rejection, and more role reversal in their childhood relationships with caregivers (Barone, 2003). Recently, an association between adolescent attachment insecurity and BPD was found through its relation with emotion regulation and mentalizing abilities (Kim, Sharp, & Carbone, 2014; Sharp et al., 2016). Mentalizing refers to the ability to understand and differentiate the mental states of oneself and others, and to acknowledge the relation between underlying mental states and behaviour (Bateman & Fonagy, 2008, 2012). The few studies on associations between personality disorders other than BPD and insecure attachment have described connections between preoccupied attachment and histrionic, dependent, and avoidant personality disorder, and between dismissing attachment and paranoid, narcissistic, anti-social, and schizoid personality disorder (Levy et al., 2015). Hence, insecure attachment is likely to differ among different personality disorders in adolescence.

A meta-analysis of the Adult Attachment Interview (AAI) (George, Kaplan, & Main, 1985; Main, Hesse, & Goldwyn, 2008) yielded two main recommendations (Bakermans-Kranenburg & van IJzendoorn, 2009) for the purpose of studying attachment representations among clinical groups. The first recommendation is to use the underlying continuous AAI scales for both childhood experiences with the parents (i.e., loving, rejecting) and the current state of mind with respect to these experiences (i.e., devaluing, coherence of mind) (Bakermans-Kranenburg & van IJzendoorn, 2009). The second is to introduce the 'cannot classify' category (CC) for scoring the respondents who cannot be placed in one of the organised categories of the AAI (secure, dismissing, and preoccupied) (Hesse, 2008). Thus far, the above recommendations have rarely been followed (Kouvo, Voeten, & Silvén, 2015; Scharf,

Mayseless, & Kivenson-Baron, 2012). Therefore, this study investigated both the underlying continuous AAI scales and the CC category of the AAI with regard to personality disorders.

For the reasons mentioned above, the first and observational, cross-sectional part of this study examined insecure attachment in BPD as opposed to other personality disorders in a clinical adolescent population clinically diagnosed with personality disorders. First, deviations in attachment distribution of the normative adult and adolescent pattern (Bakermans-Kranenburg & van IJzendoorn, 2009) were inspected by comparing the whole sample with norm groups. Second, the sample was divided into three groups, namely, BPD, other personality disorders (OP), and no personality disorder (NP), in which associations with insecure attachment representations including the CC category were analysed. Last, continuous scales for both childhood experiences with parents and current state of mind with respect to these experiences of the AAI were compared between BPD, OP, and NP. This approach was based on the study by (Kim et al., 2014) conducted on BPD and non-BPD (OP and NP combined). Drawing on previous studies, it was expected that, first, insecure attachment, especially the more dismissive attachment, would be over presented at pre-treatment; second, that the sample would differ from the norm groups; and third, that attachment insecurity would differ across different personality disorders. The second and prospective part of this study aimed at examining changes in insecure attachment in the adolescent sample receiving intensive MBT, and the relationship between such changes and alterations in psychological distress. Based on previous studies it was assumed that, first, changes in attachment would be related to changes in psychological distress; and second, that intensive MBT would change an insecure attachment representation towards a more secure one.

Methods

Participants

The 60 participants comprised a subsample of 67 patients voluntary admitted to a partial residential MBT facility of a youth psychiatry institution in the urban area of The Hague in The Netherlands. Referrals to this facility came unsystematically from the outpatient facilities of the same and other institutions and of urban and rural areas of the Netherlands. The total sample consisted of 67 adolescents with a personality disorder with a mean age at the start of treatment of 17.8 years (*SD* = 1.3 range = 15-22), (females 82.1%) (see Table 1). The average duration of treatment was 348.5 days (*SD* = 164.4; range = 17–549), with an average of 236.1 days (*SD* = 156.6) hospitalised. Intelligence, estimated based on level of education, was average to above average. All participants were fluent in the Dutch language and followed the treatment on a voluntary basis. Of 67 admissions from February 2008 until February 2012, 60 pre-AAI and 33 pre- and post-AAI were administrated. Three out of the

participants without a pre-AAI were considered as treatment dropouts because they either withdrew or were excluded, while the duration of their treatment did not exceed the diagnostic two-month phase (61 days) (A. M. de Haan et al., 2013; Swift & Greenberg, 2014). Hence, at pre-treatment, 60 SCID-II interviews in combination with the AAI interview were conducted (see Table 1). The mean age of this pre-treatment sample was 17.8 years (*SD* = 1.12; range = 15–22), (83.3 % females). The post-treatment sample consisted of 33 adolescents between the ages of 16 and 22 (*M* = 17.9, *SD* = 1.3), including 31 females (93.9%) and two males (6.1%). The excluded 27 patients without a post-AAI did not differ significantly from the others in age, gender, severity of symptoms, or personality disorders. The duration of treatment of these patients, however, deviated significantly (*M* = 256.9 days, *SD* = 129.4) from the rest of the sample (*M* = 445.4 days, *SD* = 113.9).

Table 1. *Overview of study population on gender, DSM-IV Axis I classification and Axis II personality disorders according to the SCID-II (N = 60)*

	n	%
Gender		
Female	50	83.3
Male	10	17.7
Axis I disorders		
Mood disorders	41	61.0
Anxiety disorders	25	37.0
Identity disorder	11	16.0
Eating disorders	8	12.0
Substance dependence	5	7.0
Dissociative disorders	2	3.0
Obsessive compulsive disorder	1	2.0
Attention deficit hyperactivity disorder	5	8.0
Axis II disorders		
No PD	10	16.7
One PD	19	31.7
Two PD's	14	23.3
Three PD's	11	18.3
Four PD's	1	1.7
Five PD's	5	8.3
Paranoid PD	16	26.7
Schizoid PD	3	5.0
Borderline PD	20	33.3
Avoidant PD	28	46.7
Dependant PD	3	5.0
Obsessive compulsive PD	8	13.3
Depressive PD	29	48.3
Passive Aggressive PD	3	5.0
PD NOS	1	1.7

PD = Personality Disorder

Setting

The studied facility offers a five days a week MBT program, manualised and adapted for adolescents (Bateman & Fonagy, 2006, 2012; Hauber, 2010), which commonly starts as residential

treatment and transitions into a day treatment halfway through the treatment process. The programme differs from the MBT programme for adolescents in England (Rossouw & Fonagy, 2012) in the psychodynamic group psychotherapy approach. The structured and integrated psychodynamic MBT milieu and group program is provided to adolescents between the ages of 16 and 23 who are clinically diagnosed as having personality disorders in combination with other non-psychotic disorders by a multidisciplinary team. Sufficient motivation for treatment is a prerequisite. The program offers weekly large group meetings, sociotherapy, group psychotherapy, art therapy, psychodrama therapy, psychomotor therapy, in combination with individual and family psychotherapy. These different therapies have a mentalizing focus on the adolescents' subjective experience of themselves and others, and on the relationships with the group members and the therapists. The patients are not only taught to regulate their emotions better in contact with an another person yet also to question and adjust presuppositions about what someone might think about them. Especially situations in which it was no longer possible to mentalize are extensively discussed. In this manner a safe therapeutic community is established, in which is aimed not only to improve the mentalizing capacity of the adolescents yet also to diminish insecure attachment. As the therapy programme progresses, each group member gets more responsibilities towards participation in society, other group members and group psychotherapy culture. Medication is prescribed if necessary and according to protocol by a psychiatrist involved in the therapy program.

Measures

Patients completed a set of web-based questionnaires at the beginning and end of treatment including the Dutch Questionnaire for Personality Characteristics, or Vragenlijst voor Kenmerken van de Persoonlijkheid (VKP) (Duijsens et al., 1996). Subjects were assessed by the Structured Clinical Interview for DSM personality disorders (SCID-II) (Spitzer et al., 1990) and the Adult Attachment Interview (AAI) (Main et al., 1998).

VKP

The VKP is a questionnaire comprising 197 questions with two categories of answers, 'true' or 'false'. The purpose of the VKP is to screen for personality disorders according to the DSM-IV. The test-retest reliability (Cohen's Kappa) of the VKP on categorical diagnoses was moderate (k = .40) (Duijsens et al., 1996). Seeing that the VKP is known for its high sensitivity and low specificity (Duijsens et al., 1996), it is the recommended screening instrument for the Dutch version of the SCID-II (Dingemans & Sno, 2004; Verheul et al., 2000). The presumable and certain outcome of the VKP indicates which SCID-II personality disorder sections should be used.

SCID-II

The SCID-II is a structured interview consisting of 134 questions. The purpose of this interview is to establish all ten DSM-IV personality disorders, as well as depressive and passive-aggressive personality disorder. The language and diagnostic coverage make the SCID-II the most appropriate tool for adults (aged 18 or older). With slight modification, however, it can also be used with younger adolescents (Spitzer et al., 1990). Only the sections that were identified as potentially relevant based on the VKP were applied in the clinical interview. In line with the SCID-II, the depressive personality disorder and the passive aggressive personality disorder were determined. Following the DSM-IV categorisation, these diagnoses were classified as personality disorder not otherwise specified (NOS). Trained psychologists with clinical experience administered the SCID-II. These raters underwent extensive training. After the theoretical training, the interviews were repeated together with a supervisor with the aim of optimising the inter-rater reliability. The level of inter-rater reliability of the SCID-II for categorical diagnoses was reasonable to good (k = .61-1.00) (Seqal et al., 1994), and the test-retest reliability was also reasonable to good (k = .63) (Weertman et al., 2000).

AAI

The AAI (George et al., 1985) is a semi-structured interview of 20 questions with accompanying follow-up probes that address recollections of early attachment relationships and any experiences of separation, loss, or trauma. In an approximately hour-long interview, the general descriptions of relationships with each parent and eventual other important attachment childhood figures are evoked, as are the specific supporting memories. Coding of the AAI generates one of the three main adult attachment classifications: Secure-Autonomous (F), Insecure-Dismissing (Ds), and Insecure-Preoccupied (E) (three-way distribution), and two secondary ones, namely, cannot classify (CC) and unresolved/disorganised category (U) (five-way distribution). If problems arise with classifying subjects into one of the three main categories, the so-called cannot classify (CC) category is applied. This category represents contradictions and anomalies observed throughout the transcript. If the interview reveals signs of unresolved experiences of trauma or loss of attachment figures, the unresolved/disorganised (U) category is applied. The U category differs from the CC category in that it is identified via local breakdowns in discourse strategy during the discussion of loss or other potential trauma. The unresolved/disorganised category is superimposed on the three main attachment classifications. Furthermore, subjects categorised under U and/or CC can be forced in one of the three main attachment classifications by using the most apparent category (three-way distribution) and the second-best classification chosen by the scorer.

The interviews were conducted by the first author and another experienced psychologist following the protocol described by George, Kaplan, and Main (George et al., 1985). Both

interviewers were trained to apply the AAI by experienced coders at the Dutch Psychoanalytic Institute in Amsterdam, The Netherlands. Interviews were audio-taped and transcribed for coding. A trained external coder, S. den Hollander, who is reliable since 2001 and trained by D. Pederson & D. Jacobvitz, rated the transcripts using the AAI Scoring and Classification System (Main et al., 1998). The AAI meets stringent psychometric criteria in terms of reliability, discriminant, and predictive validity and it can be used with adolescents (Bakermans-Kranenburg & Van IJzendoorn, 1993a, 2009; Cassidy, 2008; Hesse, 2008; H. Steele & Steele, 2008; van IJzendoorn, 1995). The inter-rater reliability of the Dutch version of the AAI (k = .61) (Bakermans-Kranenburg & Van IJzendoorn, 1993b) qualified as fair (Landis & Koch, 1977). For the purpose of statistical analyses, a continuous scale ranging from one to nine was constructed for both the state-of-mind AAI scales and the experiences toward parents AAI scales.

Procedures

All 67 of the newly admitted adolescents were asked to participate in the study during a four-year period (2008–2012). Following a verbal explanation of the treatment protocol to the subjects, written informed consent was obtained according to legislation, the institution's policy, and Dutch law (Eurec, 2017). All patients (N = 60) agreed to participate, and, in concordance with the institutional policy, they participated without receiving any incentives or rewards. All procedures in this study were aligned with the 1964 Helsinki declaration and its later amendments, or with comparable ethical guidelines. According to the treatment protocol, the patients completed a set of web-based questionnaires in the first and last weeks of treatment, after which they participated in the SCID-II interview, and, finally, in the AAI interview. This order in the treatment protocol resulted in many missing AAI assessments, mainly because adolescents were not easily committed to a long diagnostic process. In addition, the research process was sometimes obstructed by patient crises. Altogether 60 SCID-II interviews were conducted with patients in combination with the AAI interview, and 33 post-AAI interviews.

Statistical analysis

All analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 23.0 (IBM Corp, 2011). In the first and observational, cross-sectional part of this study, chi-square tests were performed to compare the categorical variables of the AAI in the sample to norm groups. Next, based on the SCID-II, three groups were formed based on the type of a personality

disorder: BPD, Other Personality disorders (OP), and No Personality disorder (NP). Fisher's exact test was performed between these three SCID-II groups on the categorical variables of the AAI. The analysis of variance (ANOVA) was carried out to compare the continuous variables of the AAI between the three SCID-II groups. The BPD group was further also compared (t-test) with the two other groups (OP and NP) combined (Non-BPD). Subsequently, a binary logistic regression analysis was performed (BPD versus Non-BPD group) on the continuous scales of the AAI that differed significantly as independent variables on the t-test. The Nagelkerke R-square of the model was used as an effect size measure.

In the second and prospective part of this study, a Wilcoxon signed-rank test was performed to compare the pre-treatment and the post-treatment (forced) AAI classification distributions. Continuous AAI-scales ranging from one to nine of both the state-of-mind scales and the experiences toward parents scales were constructed. A paired t-test was carried out to compare these continuous variables at pre- and post-treatment. For the purpose of forming groups based on the differences between the attachment classifications at the beginning and the end of treatment, the severity of the AAI categories was assessed on a scale ranging from the most insecure category (CC/U = 1) to the most secure category (F = 8) (pre M = 3.81, post M = 5.63) which corresponds to the prototype-based model of attachment (Maunder & Hunter, 2012). This resulted in the following quasi-dimensional AAI scale: CC/U-CC-E/U-E-Ds/U-Ds-F/U-F. Outcome groups were formed based on the differences between the five-way attachment classifications at the beginning and the end of treatment on the dimensional AAI scale, namely the AAI-Improved, the AAI-Unchanged, and the AAI-Deteriorated. The continuous variables and SCL-90 scores of the AAI-outcome groups were compared using paired t-tests. Finally, the AAI Improved group was compared with The AAI-Unchanged and the AAI-Deteriorated groups combined using a t-test.

Results

Observational, cross-sectional part of this study

Attachment distribution and comparison with the norm groups at t-1

The attachment classifications of the adolescents in the sample were compared to norm groups of non-clinical mothers, non-clinical adolescents, and clinical adolescents. The latter group consisted of suicidal adolescents with a range of DSM diagnoses (Allen, Hauser, & Borman-Spurrell, 1996; Bakermans-Kranenburg & van IJzendoorn, 2009) (See Table 2).

In the current study, the most disturbed category of insecure attachment, the CC category, was overrepresented (46.7%). There was a significant difference in the proportion of participants with U/CC between our sample when compared to non-clinical mothers[1] ($\chi 2$ (1, N = 808) = 64.53, p < .001) and non-clinical adolescents[1] ($\chi 2$ (1, N = 667) = 122.66, p < .001). For two norm groups, the CC group could be directly compared with our sample. The non-clinical adolescents[2] ($\chi 2$ (2, N = 136) = 29.32, p < .001) and the hospitalised adolescents[2] ($\chi 2$ (2, N = 126) = 5.98, p < .01) differed significantly from our sample in that they included a smaller proportion of participants within the CC category.

Table 2. *Overview of AAI attachment classifications in relation to other norm groups in N and %*

	Total sample		Non-clinical mothers[1]		Non-clinical adolescents[1]		Non-clinical adolescents[2]		Hospitalized adolescents[2]	
	N = 60		N = 700/748		N = 503/617		N = 76/64		N = 66/40	
	N	%	N	%	N	%	N	%	N	%
F	9	15.0	399	56.0	222	44.0	34	44.7	5	7.6
Ds	10	16.7	112	16.0	171	34.0	12	15.8	12	18.2
E	5	8.3	63	9.0	55	11.0	13	17.1	13	19.7
U/CC	36	60.0	126	18.0	55	11.0				
U	8	13.3					12	15.8	19	28.8
CC	28	46.7					5	6.6	17	25.8
				Forced attachment classifications						
	N	%	N	%	N	%	N	%	N	%
F*	13	21.7	434	58.0	321	52.0	40	56.3	7	16.3
Ds*	16	26.7	172	23.0	216	35.0	15	22.5	17	44.2
E*	31	51.7	142	19.0	80	13.0	9	21.1	16	39.5

AAI = Adult Attachment Interview; F = Free, autonomous; Ds = Dismissive; E = Entangled, preoccupied; U = Unresolved for loss or abuse; CC = Cannot classify

* Three way attachment classifications (i.e. regardless U/CC)

[1] Bakermans-Kranenburg, 2009 [2] Allen, Hauser and Spurrell, 1996: In this study transcripts

Subgroups at t-1

The sample was divided into three subgroups: participants with BPD (BPD) (N = 20), those with other personality disorders (other personality disorders, OP) (N = 30), and a group without a personality disorder (no personality disorder, NP) (N = 10). When BPD was detected in combination with any other personality disorder, the participant was assigned to the BPD group. The ratio of females in the respective groups was: BPD = 85% females, OP = 86.7%, and NP = 70%.

Supplementary material 1 gives an overview of the three-way and five-way attachment classifications distribution (AAI) over the whole sample and over the three SCID-II personality disorder groups.

No relation was found between BPD, OP, and NP and the (forced) attachment classification (Fisher's exact test 1.24, $p = .921$). The comparison between the CC category in the five-way attachment classifications distribution and BPD and OP showed no significant difference ($p = 1.0$). Also, the E category in the forced classifications distribution of the BPD as opposed to the OP group was not significant ($p = 0.569$).

Subgroups and the AAI scales at t-1

Next, differences between BPD, OP, and NP on the paternal and maternal attachment were examined. The BPD group scored significantly higher on the 'Devaluating father' scale (F (2, 59) = 5.69, $p = 0.006$) in comparison with both other groups. Next, when comparing the BPD group (t-test) with the two other groups combined (Non-BPD), differences were found for: 'Loving father' (BPD M = 0.90, SD = 1.37; Non-BPD M = 1.64, SD = 1.25, $t = 2.09$, $p = .041$) and 'Devaluing father' (BPD M = 2.65, SD = 1.81; Non-BPD M = 1.46, SD = 1.06, $t = -2.71$, $p = .012$).

To test the predictive value of the two variables ('Loving father' and 'Devaluating father') of the AAI that significantly differed between the (dichotomous dependent variable) BPD and the non-BPD group, a binary regression was performed. This model was statistically significant ($\chi 2$ (2, $N = 60$) = 6.75, $p = .034$), explaining 14.8% (Nagelkerke R square) of the variance in the Personality disorders groups, and correctly identifying 71,7% of cases (Loving father $OR = 0.908$ 95% CI 0.462-1.279; Devaluing Father $OR = 1.660$ 95% CI 1.052-2.484).

Finally, information on whether the adolescents had a residential father (63%) or mother (93%) or not was compared with the paternal and maternal attachment scales. A significant difference was identified on the 'Devaluing father' ($p = 0.005$) and 'Idealising father' ($p = 0.005$) scale in the group with a non-residential father.

Table 3. *Distribution in number and percentages of AAI attachment classifications by five- (a) and three- way* (b) at the beginning and the end of the treatment (N = 33)*

	a) Attachment classifications				b) Forced attachment classifications*			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
F	5	15.2	13	39.4	6	18.2	16	48.5
Ds	5	15.2	6	18.2	8	24.2	7	21.2
E	4	12.1	0	0.0	19	57.6	10	30.3
U	3	9.1	5	15.2				
CC	16	48.5	9	27.3				

Note. AAI = Adult Attachment Interview; F = Free, autonomous; Ds = Dismissive; E = Entangled, preoccupied; U = Unresolved for loss or abuse; CC = Cannot classify

* Three way attachment classifications (i.e. regardless U/CC)

In Table 3a, the distribution is shown of the five-way attachment classifications at pre- and post- treatment, while in supplementary material 2, a cross tabulation report summarises the changes between pre- and post-treatment. When comparing the pre- and post-treatment AAI classifications, a significant transition towards secure attachment was found (z = -2.85, p = .004). Sixteen of the 33 patients (48.5%) showed an increase in secure attachment, 12 (36.4%) remained the same, and five (15.2%) showed a decrease in secure attachment. Furthermore, the number of securely attached adolescents increased by 24.2% (t1: n = 5, t2: n = 13) at the end of treatment.

Table 3b shows the distribution of the three-way or forced attachment classifications, which included forcing the unresolved and cannot classify cases into an organised attachment classification (secure, dismissing, or preoccupied). Comparing the pre- and post-forced attachment classifications distribution, a significant difference towards increased secure attachment was found (z = -2.80, p = .005).

Changes on the continuous AAI scales at t-2

On 13 of the 24 AAI scales, a significant change occurred ($p < .05$), namely, 'Rejecting mother' (p = .027), 'Pressured to achieve from mother' (p = .012), 'Neglecting mother' (p = .013),

'Loving mother' (p = .031), 'Idealizing mother' (p = .019), 'Preoccupied anger mother' (p = .003), 'Loving father' (p = .028), 'Preoccupied anger father' (p = .002), 'Unresolved loss' (p = .048), 'Unresolved trauma' (p = .040), 'Coherence of transcript' (p = .009) and 'Coherence of mind' (p = .009).

Relating changes in attachment to changes in psychological distress at t-2

In the next step, treatment outcome groups were formed based on the assessment of severity differences between the five-way attachment classifications at the start and the end of treatment (see statistical analysis for more details). Either the pre- or post- total SCL-90 score was missing for three patients of the AAI-Unchanged, who were excluded from this outcome group. Of the three AAI outcome groups, the AAI-Improved (N = 16) differed significantly ($p < .05$) from the AAI-Unchanged (N = 9) and AAI-Deteriorated (N = 5) in changes on the 'Rejecting mother' (t = 3.620, p = .003, d = 3.979), 'Rejecting father' (t = 4.571, p = .000, d = 4.039), 'Loving mother' (t = -2.423, p = .029, d = 4.095), 'Preoccupied anger father' (t = 2.138, p = .049, d = 1.338), 'Coherence of transcript' (t = -4.656, p = .000, d = 1.93), and 'Coherence of mind' scale (t = -3.982, p = .001, d = 1.799). Reciprocally, the AAI-Unchanged group differed significantly ($p < .05$) from the AAI-Improved group and the AAI-Deteriorated group in changes on the 'Loving mother' (t = -2.530, p = .028, d = 1.931), 'Loving father' (t = -2.347, p = .035) and 'Preoccupied anger mother' scale (t = 2.569, p = .026, d = 1.384). Finally, the AAI-Deteriorated group differed significantly from the two other AAI-outcome groups in changes on the 'Metacognitive monitoring' (t = 3.62, p = .034, d = 4.186) and 'Involving/role reversing mother' scale (t = -3.873, p = .018, d = 1.171). These groups were compared to each other on the basis of the total SCL-90 scores at the beginning and the end of treatment. While no significant differences were found on the pre SCL-90 scores (F = .214, p = .808), the total SCL-90 scores decreased significantly for both AAI-groups at the end of treatment (Table 4). The AAI-Improved group showed a medium symptom reduction according to the SCL-90 (N = 16, M = 72.75, SD = 68.01, t = 4.28, p = .001, d = .56). The AAI-Unchanged group also showed symptom reduction, although not as strong (N = 9, M = 48.11, SD = 56.10, t = 2.57, p = .033, d = 0.37). The AAI-Deteriorated group on the other hand, showed small symptom reduction (N = 5, M = 21.20, SD = 75.75, t = .63, p = .565, d = 0.14). Comparing the AAI-Improved group (N = 16, M = 72.75, SD = 68.01, t = 4.28, p = .001, d = .56) with the AAI-Unchanged combined with the AAI-Deteriorated group named the AAI-Non-improved group (N = 14, M = 38.50, SD = 62.30, t = 2.31, p = .038, d = .28), revealed that the changes toward increased secure attachment in the AAI-Improved group were associated with stronger reduction of psychological distress in comparison to the AAI-Non-improved group.

Table 4. *Comparison of the attachment classifications with the total SCL-90 scores at pre-treatment and at post-treatment*

	Pre SCL-90		Post SCL-90				
	mean	Sd	mean	Sd	*Df*	*t*	*p*
AAI improved	233.50	58.71	162.79	49.45	13	3.78	.002
AAI unchanged	245.08	66.67	192.00	57.25	11	3.52	.005

Note. AAI = Adult Attachment Interview

Discussion

Observational, cross-sectional part of the study

The aim here was to compare pre-treatment insecure attachment representations to attachment distribution of norm groups and between BPD and other personality disorders in a sample of adolescent inpatients clinically diagnosed with a personality disorder. First, in comparison to norm groups, our group was characterised by disturbed attachment classifications. Almost half of the group was categorised under the most disturbed category, i.e. the cannot classify category (CC). Second, no differences in attachment classifications were found between personality disorder groups. With regard to dimensional measures, those adolescents who described their fathers in a devaluing way were more likely (*OR* 1.7) to be diagnosed with BPD. However, due to the small sample size, replication is necessary to establish how generalisable these results are.

It is worth noting that half of adolescents in this high risk sample were categorised under CC at pre-treatment, and, when forced into one of the main attachment categories, were subsequently placed in the preoccupied category. Compared to the norm groups, more preoccupied attachments and especially CC classifications were found in the sample (Bakermans-Kranenburg & van IJzendoorn, 2009). This result is quite unique as clinical adolescents in other studies differ from the adult clinical samples by evidencing more dismissive and less preoccupied attachment (Bakermans-Kranenburg & van IJzendoorn, 2009). This is usually explained by the fact that adolescents, who are still in the separation-individuation phase, have had less time to work through their childhood attachment experiences (Bakermans-Kranenburg & van IJzendoorn, 2009; van IJzendoorn & Bakermans-Kranenburg, 2008). Attempts to gain autonomy may lead to higher proportions of dismissing attachments during this developmental period (Warmuth & Cummings, 2015).The same explanation is

applicable to our results, although not concerning the high number of CC adolescents. The overrepresentation of the preoccupied in our sample may be indicative of severe problems experienced during the separation-individuation phase.

As no relation is found between the type of personality disorder and the (forced) attachment classification, the high number of CC adolescents in our study is difficult to explain. A tentative hypothesis is that there is an association between high-risk adolescents and CC category in general. Most inpatient adolescents with personality pathology are high risk, and characterised by a combination of severe As-I and As-II psychopathology and suicidal thoughts and behaviours. Interestingly, the few clinical adolescent AAI studies that introduced the CC category also identified high ratios of CC adolescents in comparison to non-clinical adolescents (Allen et al., 1996; M. J. van Hoof, N. D. van Lang, S. Speekenbrink, M. H. van IJzendoorn, & R. R. Vermeiren, 2015). However, the sample in this study is too small to draw firm conclusions. Thus far, the CC category is grouped together with U-trauma and U-loss responses (Bakermans-Kranenburg & van IJzendoorn, 2009). The CC category needs further study to validate its role in the development of (adolescent) personality disorders, and especially in high-risk adolescent samples.

With regard to implications for prevention programs and clinical practice, our findings suggest with great caution that the relationship with the father during the transition from childhood to adolescence requires further attention. Adolescents who described their fathers in a devaluing way were more likely (*OR* 1.7) to be diagnosed with BPD. Furthermore, adolescents who spoke in an idealising or devaluing way about their father were significantly associated with the odds of having a non-residential father. Future research is needed to examine whether BPD is likely to develop in adolescence in the absence of paternal positive attachment behaviour in combination with the devaluation state of mind towards the father. Secure paternal attachment seemed to protect an adolescent against BPD by helping develop ego-resiliency, which is important in adjusting to the challenges of adolescence (Kim et al., 2014). Furthermore, one may wonder whether there is a 'sensitive period' in the relationship with the father during transition from childhood to adolescence that is comparable to the sensitive period in early childhood in the relationship with the mother (Kouvo et al., 2015; Portu-Zapirain, 2013).

Prospective part of this study

During intensive MBT, significant changes were observed in categorical and dimensional adolescent attachment representations as well as in symptoms of distress. As assumed, at post-treatment, the number of securely attached adolescents increased by 24.2%. Additionally, the sample

as a whole demonstrated significant changes toward increased secure attachment in relation to reduced symptomatology. However, since this cohort study was not randomised, we cannot draw conclusions about a direct effect of the treatment itself on attachment. Nevertheless, this study suggests that insecure attachment in adolescents is likely to diminish during MBT.

The results of this study provide hope concerning treatment and the future prospects of adolescents with insecure attachment. Our study showed that attachment insecurity is malleable, which is of substantial clinical relevance in a high-risk sample of adolescents with personality disorders and comorbidity. Changes towards secure attachment were accompanied by symptom reduction. Therefore, with regard to implications for prevention programs and clinical practice, our findings suggest that fostering attachment security may also improve outcomes as assessed by symptoms, or vice versa. On the other hand, the symptoms of the group that did not change in attachment also improved, although less so than of the group whose attachment became more secure.

The question is what has influenced the change in attachment representations. The influence of social support of family and friends (van Harmelen et al., 2016) or age-related development may have played a role, since normal emotional maturation in adolescence is characterised by an interplay between progression and regression (Kaltiala-Heino & Eronen, 2015). If the treatment was of influence as well, the first hypothesis is that mentalization, as the process in group therapies in the program focusing on the adolescents' subjective experience of themselves and others, and on the relationships with the group members and the therapists, stimulated a positive outcome (Bateman & Fonagy, 2008; Borelli, Compare, Snavely, & Decio, 2015; Rossouw & Fonagy, 2012). Mentalization was previously found to relate positively to secure attachment (Borelli et al., 2015; Fonagy et al., 1996; Reiner, Bakermans-Kranenburg, Van IJzendoorn, Fremmer-Bombik, & Beutel, 2016). Also, the continuous availability of MBT-trained nursing staff in this intensive psychotherapy program may have positively influenced the attachment of the participants (Reiner et al., 2016). The second hypothesis is that psychotherapy in a group with a group psychodynamic approach was especially relevant for adolescents possessing an insecure attachment (Yalom & Leszcz, 2005).

On the other hand, it cannot be ignored that attachment security in 15.2% of the patients deteriorated, and that about one third of the group did not show a change. This is not surprising given the complexity of adolescence, the treatment context that requires the commitment of patients and their families, and that of the treatment team, and possible untoward life events occurring during treatment. The rates of deterioration as an outcome of psychotherapy range from 5% to 14% among adult patients and are thought to be even higher among children (Lambert, 2013). Moreover, we may consider whether a different kind of treatment would be more suited for this group of patients and whether personalised care could offer a solution. Further work is needed to fully understand the implications of the potential prolonged effects.

AAI

Despite the fact that we did not experience any problems conducting AAI in clinical practice, its distinctiveness and developmental fit for adolescents and a high-risk clinical sample in general may be questioned. Furthermore, Warmuth and Cummings (Warmuth & Cummings, 2015) encourage researchers to use the AAI as a measure of adult – and not adolescent attachment representations – and especially of parents caregiving capacity and ability to nurture secure infants. Introducing an AAI scoring and classification system especially designed for adolescents should be considered. Notwithstanding, this study showed that investigating both the underlying continuous AAI scales and the CC category of the AAI and personality disorders may be beneficial. With the use of the continuous AAI scales, the possible relationship between paternal attachment and BPS in adolescents was found. The AAI scales and five-way AAI classifications (F, E, D, U, CC) better covered the complexity of personality disorders and insecure attachment than the three-way (F, E, D) or four-way AAI classifications (F, E, D, U/CC combined).

The use of a quasi-dimensional attachment scale could be useful for the purpose of treatment evaluation, although this type of assessment of the severity of AAI attachment classifications requires further investigation. The main questions concerning this assessment are, first, whether different categories actually represent the severity of attachment insecurity and fit a quasi-dimensional scale, second, whether the dismissive category should be regarded as a less insecure attachment category compared to the preoccupied category (Strauss, Mestel, & Kirchmann, 2011), and, third, how the unresolved/disorganised category, which is superimposed on the three main attachment classifications, fits within the order. Notwithstanding, this AAI study showed that attachment insecurity is prone to change, particularly in patients with personality disorders.

Strengths and limitations

Three limitations of this study should be mentioned. First, the differences in Axis I disorders were not accounted for since it is difficult to motivate adolescents to participate in extensive research protocols. Furthermore, given the diversity in our small sample, we were unable to examine Axis I disorders, especially in combination with the AAI. Second, our results are limited in their generalisability due to the sample size, as well as the lack of a control group. In the nonrandomised evaluation of an inpatient program, external validity was used to obtain generalisable knowledge of the patient group and treatment evaluation. Further, there are ethical and practical objections to randomisation in a high-risk adolescent group, such as the one here, whose results had been insufficient in outpatient or usual treatment. Third, the AAI coder was aware of the nature of the

group, which may have affected her scoring. Notwithstanding these limitations, this study offers unique insights because little research has been done on personality disorders among adolescents (Courtney-Seidler et al., 2013; Hutsebaut et al., 2013; Sharp et al., 2016), and on the role that the father-child and the father-adolescent relationship plays in psychopathology (Phares, Fields, Kamboukos, & Lopez, 2005; Verhoeven, Bögels, & van der Bruggen, 2012), and even less on the combination of personality disorders and insecure attachment (Bakermans-Kranenburg & van IJzendoorn, 2009; van IJzendoorn & Bakermans-Kranenburg, 2008). Furthermore, the use of the AAI as an outcome measure, due to it being a labour-intensive tool, is exceptional (Diamond et al., 2014; Fonagy et al., 1996; Levy et al., 2006; Travis, Bliwise, Binder, & Horne-Moyer, 2001).

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Supplementary material 1: *Distribution of the (forced) Attachment Classification over SCID-II Personality disorders groups*

	BPD N = 20		Other Personality disorders N = 30		No Personality disorder N = 10		Total N = 60	
	N	%	N	%	N	%	N	%
F	3	33.3	5	55.6	1	11.1	9	15.0
Ds	3	30.0	5	50.0	2	20.0	10	16.7
E	2	40.0	1	20.0	2	20.0	5	8.3
U	2	25.0	5	62.5	1	12.5	8	13.3
CC	10	35.7	14	50.0	4	14.3	28	46.7
Forced attachment classifications								
F*	3	23.1	8	61.5	2	15.4	13	21.7
Ds*	6	37.5	7	43.8	3	18.8	16	26.7
E*	11	35.5	15	48.4	5	16.1	31	51.7

AAI = Adult Attachment Interview; F = Free, autonomous; Ds = Dismissive; E = Entangled, preoccupied; U = Unresolved for loss or abuse; CC = Cannot classify

* Three way attachment classifications (i.e. regardless U/CC

Supplementary material 2: *Distribution of attachment classifications (five-way) at the beginning and the end of the treatment (N = 33)*

Post	F		F/U		Ds		Ds/U		E/U		CC		CC/U		Total pre	
Pre	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
F	3	60.0	0	0.0	1	20.0	0	0.0	1	20.0	0	0.0	0	0.0	5	100.0
F/U	0	00.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0
Ds	2	40.0	0	0.0	2	40.0	0	0.0	0	0.0	1	20.0	0	0.0	5	100.0
E	1	25.0	0	0.0	2	50.0	0	0.0	0	0.0	1	25.0	0	0.0	4	100.0
E/U	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	2	100.0
CC	2	22.2	2	22.2	0	0.0	0	0.0	0	0.0	5	55.6	0	0.0	9	100.0
CC/U	4	57.1	0	0.0	1	14.3	1	14.3	0	0.0	0	0.0	1	14.3	7	100.0
Total post	13	39.4	3	9.1	6	18.2	1	3.0	1	3.0	7	21.2	2	6.1	33	100.0

Note. AAI = Adult Attachment Interview; F = Free, autonomous; Ds = Dismissive; E = Entangled, preoccupied; U = Unresolved for loss or abuse; CC = Cannot classify

Chapter 6: **Non-Suicidal Self-Injury in clinical practice**

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Abstract

Background: Non-suicidal self-injury (NSSI) among adolescents is a major public health concern and a common problem in clinical practice. The aim of this study was to examine different aspects of NSSI in a high-risk adolescent sample in clinical practice in association with personality disorders, symptoms, and coping skills to enhance the understanding of NSSI and improve treatment interventions.

Method: In a sample of 140 adolescent inpatients treated for personality disorders, assessments were performed pre-treatment and post-treatment using a questionnaire on NSSI developed for clinical practice, the Structured Clinical Interview for DSM personality disorders, the Symptom Check List 90, and the Cognitive Emotion Regulation Questionnaire.

Results: NSSI was common (66.4%) among the inpatient adolescents. Of those without NSSI behaviour (n = 47), 10 (21.3%) started NSSI during treatment. NSSI was related to number of personality disorders and not to one specific. Participants who experienced NSSI (n = 93) reported significantly more symptoms and the negative coping strategy self-blame. They scored lower on the positive coping strategies of refocusing and reappraisal.

Conclusion: NSSI in adolescent clinical practice is common, not exclusive to borderline personality disorder and could be contagious. Reducing self-blame and enhancing positive refocusing and positive reappraisal seem important treatment targets.

Introduction

Non-suicidal self-injury (NSSI; e.g., self-inflicted burning, cutting, and punching) among youth is a major public health concern (Glenn et al., 2016). Apparently, it is common but often hidden behaviour, especially among adolescents with psychiatric problems (Lockwood, Townsend, Royes, Daley, & Sayal, 2018; Madge et al., 2011). Furthermore, it is associated with elevated psychopathology, risk of suicide attempts, and demand for clinical services (Ougrin, Tranah, Leigh, Taylor, & Rosenbaum Asarnow, 2012; Rodav, Levy, & Hamdan, 2014). Knowledge of NSSI in a high-risk adolescent sample can help us better understand this behaviour and optimize prevention and treatment.

Non-suicidal self-injury prevalence is 17.2% among adolescents and 13.4% among young adults (Swannell, Martin, Page, Hasking, & St John, 2014). The age of onset of NSSI is generally between 12 and 16, and the onset is younger in inpatient adolescents than in outpatient adolescents (Glenn et al., 2016; Kiekens et al., 2015). Non-suicidal self-injury is common among adolescents in clinical practice and it is associated with significant functional impairment (Madge et al., 2011). The prevalence rates of NSSI among inpatient adolescents varies from approximately 35% to 80%, depending on numerous methodological variations and different definitions (Hawton, Saunders, & O'Connor, 2012; Koenig et al., 2017; Madge et al., 2011; Zetterqvist, 2015). Half of the heterogeneity in these prevalence estimates, can be explained by methodological factors such as measurement errors and differences in assessment and sampling strategies (Swannell et al., 2014).

Also, actual differences in NSSI prevalence between countries may be caused by cultural differences with respect to socio-cultural norms, traditions, as well as substance use policies (Brunner et al., 2013; Ougrin et al., 2012). Cultural differences, likely influence risk factors such as substance use, family integrity and neglect, childhood family adversity, peer rejection, victimization, and socioeconomic status (Brunner et al., 2013; Cassels et al., 2018; Giletta, Scholte, Engels, Ciairano, & Mitchell, 2013; Ougrin et al., 2012). Apart from cultural differences, NSSI may also vary as a function of gender, ethnic background, and school-level (Gratz et al., 2012; Hawton et al., 2012). Furthermore, emotional instability in adolescence could partly explain the variability in prevalence rates of NSSI (Kaltiala-Heino & Eronen, 2015).

The distinction between non-suicidal and suicidal self-injury has been a topic of discussion for the last twenty years (Grandclerc, De Labrouhe, Spodenkiewicz, Lachal, & Moro, 2016; Lloyd-Richardson, Nock, & Prinstein, 2009; Zanarini, Laudate, Frankenburg, Wedig, & Fitzmaurice, 2013) due to the fact that most people engaging in NSSI also report suicidal ideation (Glenn et al., 2016; Klonsky, May, & Glenn, 2013; Whitlock et al., 2013). Although most studies consider NSSI an integral feature of borderline personality disorder (BPD), a rapidly growing body of empirical research demonstrates that NSSI co-occurs with a variety of psychiatric disorders, including depression, substance abuse disorders, post-traumatic stress disorder, eating disorders, and other personality disorders (Cawood & Huprich, 2011; Gratz, Dixon-Gordon, Chapman, & Tull, 2015; Wilkinson,

2013; Zetterqvist, 2015). The DSM-5 (APA, 2013) defines a NSSI disorder (NSSID) as deliberate, direct, self-inflicted destruction of body tissue without suicidal intent and for purposes not socially sanctioned, engaged on five or more days in the past year. With this definition more covert forms of NSSI behaviours (e.g., self-poisoning) are excluded although several studies showed the existence of forms of NSSI without visible body tissue damage and with psychological damage (Han, Wang, Xu, & Su, 2018; Skegg, 2005).

Research on different aspects of NSSI reports that in clinical practice, 87.6% of the adolescents engaging in NSSI have a psychiatric disorder (Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006), and cutting is the most common method (Horgan & Martin, 2016; Wilkinson, 2013). Persons with BPD engaging in NSSI report higher rates of cutting, scratching, head banging, and self-punching than patients without BPD (Turner et al., 2015). In addition, the more methods of NSSI that are used, the higher the risk of suicidal ideation (Wester, Ivers, Villalba, Trepal, & Henson, 2016), accompanied by higher scores for of perceived stress and depressive coping and lower scores for active and optimistic coping (Kiekens et al., 2015). Various functions of NSSI, which are not mutually exclusive, are described in order of prevalence, including affect regulation or reduction of mental pain and transferring mental pain onto the body, self-punishment, influencing other people, anti-dissociation, anti-suicide, and thrill seeking (Glenn & Klonsky, 2010; Klonsky, 2007; Lloyd-Richardson et al., 2009). The contagiousness of NSSI is considered problematic, especially in clinical practice (Bateman & Fonagy, 2006), although to the authors' knowledge, no research has been conducted on this topic. The Child & Adolescent Self-harm in Europe (CASE) study (Madge et al., 2011) found that higher impulsivity alongside being in connection with the suicide or self-harm thoughts of others, as well of the occurrence of physical or sexual abuse, worries about sexual orientation and trouble with the police, independently differentiated adolescents who regularly engage in NSSI from single time and non-NSSI adolescents.

Finally, the financial burden of NSSI on society is substantial. In the Netherlands in 2011, the direct medical costs of self-inflicted injury including NSSI was estimated at 60 million euros (RIVM, 2016). Moreover, approximately 157,000 young people between 10 and 24 years old visit emergency departments each year for self-injurious behaviours in the USA, resulting in over 200 million dollars in direct annual medical costs (Glenn et al., 2016). Optimizing prevention and treatment programs can reduce the burden of NSSI on individuals and on society.

In the current prospective cohort study, different aspects of NSSI were inquired pre-treatment and post-treatment in a high-risk adolescent sample with clinically diagnosed personality disorders and comorbidity to enhance the understanding of NSSI. In search of treatment targets, personality disorders, coping skills, and symptoms of distress were examined. Therefore the aims of this study were threefold. First, to investigate the occurrence of NSSI in an inpatient adolescent sample. Second, to examine associations between NSSI and personality disorders, symptoms, and copings skills. Third, to examine contagiousness, frequency, method, and function of NSSI for these groups at pre- and post-

treatment. For this purpose the following three groups were compared: a group that performed NSSI in the year preceding treatment, a group that did not perform NSSI in the year preceding treatment and during treatment, and a group that did not perform NSSI in the year preceding treatment but started NSSI during treatment. Based on previous studies, it was assumed, first, that NSSI will be highly common in this inpatient sample; second, that NSSI will be associated with several personality disorders, symptoms and negative copings skills; and third, that NSSI will be contagious, highly frequent, and cutting the most common method and emotion regulation the most common function of NSSI. To enhance the understanding of NSSI in clinical practice, this study examines NSSI forms with and without body tissue damage.

Method

Participants

The 140 participants were voluntary admissions to a partial residential psychotherapeutic institution for adolescents in the urban area of the Hague in the Netherlands. This facility offers a five days a week intensive mentalization based treatment (MBT) (Bateman & Fonagy, 2006; Hauber, 2010) with partial hospitalisation to adolescents with personality disorders between the ages of 16 and 23 years, although by exception a 15-year old adolescent was accepted. During this intensive MBT programme with average duration of one year with a maximum of 18 month., personality disorders, insecure attachment and symptoms may diminish (Hauber, Boon, & Vermeiren, 2017; Hauber, Boon, & Vermeiren, 2018). At the start of the treatment, patients were asked to report NSSI behaviour with the aim of investigating and reducing this behaviour during treatment. The 140 patients in the sample (see Table 1) ranged in age from 15 to 22 years (M = 17.91, SD = 1.66), and female patients (M = 17.84, SD = 1.58) were (not significantly) younger than male patients (M = 18.24, SD = 1.96). At pre-treatment, the borderline (35.7%), avoidant (42.9%), and depressive personality disorder (41.4%) according to the SCID-II were most common and in more than half of the cases in combination with one or more other personality disorders. Most participants also had other clinically diagnosed comorbid non-psychotic disorders. All patients followed the treatment on a voluntary basis. Table 1 presents an overview of study population according to gender, DSM-IV clinical assessed Axis I disorders and Axis II personality disorders assessed using the SCID-II.

Table 1. *Overview of study population on gender, DSM-IV clinically assessed Axis I disorders and Axis II personality disorders according to the SCID-II (N = 140)*

	n	%
Gender		
Female	115	82.1
Male	25	17.8
Axis I disorders		
Mood disorders	81	58.0
Anxiety disorders*	43	31.0
Eating disorders	18	13.0
Substance dependence	10	7.0
Dissociative disorders	4	3.0
Obsessive compulsive disorder	3	2.0
Attention deficit hyperactivity disorder	11	8.0
Axis II disorders		
No PD	31	22.1
One PD	34	24.3
Two PD's	43	30.7
Three PD's	21	15.0
Four PD's	6	4.3
Five PD's	4	2.9
Six PD's	1	0.7
Paranoid PD	20	14.3
Schizoid PD	5	3.6
Anti-social PD	2	1.4
Borderline PD	50	35.7
Narcissistic PD	3	2.1
Avoidant PD	60	42.9
Dependant PD	5	3.6
Obsessive compulsive PD	23	16.4
Depressive PD	58	41.4
Passive aggressive PD	7	5.0

PD = Personality Disorder
*including posttraumatic stress disorder

Measures

NSSI-Behaviour Questionnaire

The Non-Suicidal Self-Injury Behaviour Questionnaire (NSSI-BQ) N (see appendix 1) is a self-report questionnaire that was developed for clinical practice with adolescents, consisting of nine items. In 2008, a self-report questionnaire specifically for adolescents on the occurrence, frequency, method, function, readiness to quit, and ways to prevent NSSI was lacking in the authors' clinical practice. Therefore, the NSSI-BQ was developed by the first two authors. The assumption was that if adolescents were facilitated to be open about their self-injurious behaviour, they would obtain more insight into the underlying causes of their behaviour. In addition, monitoring this behaviour as an integrated part of treatment would help them to regulate their emotions in treatment (Klonsky &

Muehlenkamp, 2007) and motivate them to diminish their self-injurious behaviour. A comparison of NSSI information in daily reports with NSSI-BQ scores (see appendix 2) confirmed that NSSI can be registered using a self-report questionnaire. In two thirds of the cases, there was agreement between the department reports and the patients, and the cases without agreement primarily involved NSSI that was reported by the patient but not recorded by the practitioner.

SCL-90

The authorized Dutch version of the Symptom Check List 90 (SCL-90) (Arrindell & Ettema, 2003; Derogatis, Lipman, & Covi, 1973) is a questionnaire with 90 questions and a five-point rating scale ranging from one (not at all) to five (extreme). This questionnaire assesses general psychological distress and specific primary psychological symptoms of distress from the last week. Outcome scores are divided into nine symptom subscales: anxiety, agoraphobia, depression, somatization, insufficient thinking and handling, distrust and interpersonal sensitivity, hostility, sleeping disorders, and rest. The total score (range 90–450) is calculated by adding the scores of the subscales. The test-retest reliability was reasonable to good (k = .62 -0.91) (Arrindell & Ettema, 2003).

CERQ

The Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski, Kraaij, & Spinhoven, 2002) is a questionnaire of 36 items that can be answered on a five-point Likert scale ranging from one (almost never) to five (almost always). The questions refer to an individual's thoughts after experiencing threatening or stressful events. The items are proportionally divided into nine scales: self-blame, other blame, rumination, catastrophizing, positive refocusing, positive reappraisal, acceptance, putting into perspective, and planning. Previous research on cognitive emotion regulation strategies has shown that all subscales have good internal consistencies ranging from .68 to .86 (Garnefski et al., 2002).

VKP

The Dutch Questionnaire for Personality Characteristics (Vragenlijst voor Kenmerken van de Persoonlijkheid) (VKP) (Duijsens, Eurelings-Bontekoe, & Diekstra, 1996) is a questionnaire of 197 questions with answers of 'true' or 'false'. The purpose of the VKP is to screen for personality disorders according to the DSM-IV. The VKP is acknowledged for its high sensitivity and low specificity (Duijsens et al., 1996) and therefore is recommended (Dingemans & Sno, 2004) as a screening instrument for the Dutch version of the Structured Clinical Interview for DSM personality disorders (SCID-II) (Spitzer, Williams, Gibbon, & First, 1990). The outcome of the VKP indicates which SCID-II personality disorder sections should be used. In addition, the test-retest reliability (Cohen's Kappa) of the VKP on categorical diagnoses was moderate (k = .40) (Duijsens et al., 1996).

SCID-II

The SCID-II (Spitzer et al., 1990) is a structured interview with 134 questions. The purpose of this interview is to establish the ten DSM-IV Axis II personality disorders, and depressive and passive-aggressive personality disorder. The language and diagnostic coverage make the SCID-II most

appropriate for use with adults (age 18 or over), though it can be used with younger adolescents with minor modifications (Spitzer et al., 1990). Only the sections which were indicated by the outcome of the VKP were applied in the clinical interview. The SCID-II was administered by trained psychologists. The inter-rater reliability (Cohen's Kappa) of the SCID-II for categorical diagnoses was reasonable to good (k = .61- 1.00) (Seqal, Hersen, & Van Hasselt, 1994) and the test-retest reliability was also reasonable to good (k = .63) (Weertman, Arntz, & Kerkhofs, 2000).

Procedure

During an eight-year period (2008-2016), all newly admitted patients were approached to participate in the study. After a verbal description of the treatment protocol to the subjects, written informed consent was obtained according to legislation, the institution's policy, and Dutch law (Eurec, 2017). All patients (N = 140) agreed to participate and in concordance with the institutional policy, they participated without receiving incentives or rewards. All procedures in this study were aligned with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. According to the treatment protocol, the patients completed a set of web-based questionnaires in the first and last weeks of treatment.

Statistical analysis

All analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 23.0 (IBM Corp, 2011). Groups were formed consisting of participants with and without NSSI in the year preceding treatment, and of those who started NSSI during treatment. First the no NSSI, NSSI, and NSSI starters group, and the groups with and without measurements at t-2, were compared based on the number of personality disorders using a chi-square. A chi-square test was then performed to compare the frequency of NSSI between participants diagnosed with BPD and participants with other personality disorders. Second, the NSSI groups were compared based on the level of symptoms (SCL-90) using an ANOVA. A Post Hoc test (Bonferroni) was then used for changes in the level of symptoms. Third, the NSSI groups' coping skills were compared with an ANOVA, post-hoc test, and t-test. Fourth, the method and function of reported NSSI were compared for the NSSI groups using paired t-tests pre and post-treatment. To compare the method of NSSI between participants diagnosed with BPD and participants with other personality disorders, a chi-square test was performed. To compare the method of NSSI used, a list of reported NSSI behaviour was also composed (appendix 3). Because the frequency of NSSI pre and post treatment was assessed at a nominal level analyses were done using a McNemar test. Finally, a binary logistic regression analysis was performed with NSSI at start of treatment versus non-NSSI at the start of treatment as dependent variable. The variables that differed significantly ($p<.05$) between the two groups were included as independent variables.

Results

Of the total sample of 140 adolescents, 66.4% (n = 93, 87,1% females) confirmed that they had committed NSSI behaviour in the year preceding treatment. From this group, significantly more girls (70.4%) than boys (48,0%) admitted to NSSI behaviour (Pearson Chi^2: 4.635, *df* 1, p = .031). Data on NSSI behaviour were available for 102 participants post-treatment. Of these 102 patients (92.9% females), 72 (70.6%) reported NSSI at the end of the treatment. Furthermore, a small group of participants who did not report NSSI at pre-treatment, reported NSSI at follow-up (13.9%), resulting in a no NSSI group of N = 30, a NSSI group of N = 62, and a NSSI starters group of N = 10. In the group of which NSSI data were missing at t-2, eight patients reported NSSI at t-1. This non-responders group consisted of significantly more boys than the NSSI group with pre and post NSSI data did (Pearson Chi^2: 6.695, *df* 1, p = .010). Furthermore, no significant differences in the variables of NSSI behaviour, SCL-90 scores, CERQ-scores, and SCID-II outcomes at t1 were found between the group of non-responders at t2 and the participants who completed both measurements.

Comparison of NSSI groups based on personality disorders

Table 2 presents the number of SCID-II personality disorders in the no NSSI, the NSSI, and the NSSI starters group at pre-treatment.

Table 2: *Number of SCID-II personality disorders in no NSSI, NSSI, and NSSI starters groups at pre-treatment*

	No NSSI		NSSI		NSSI Starters		Total	
Personality disorder	*n*	%	*n*	%	*n*	%	*n*	%
0	6	27.3	11	15.7	3	30.0	20	19.6
1	9	40.9	13	18.6	5	50.0	27	26.5
>1	7	31.8	46	65.7	2	20.0	55	53.9
Total	22	100.0	70	100	10	100.0	102	100.0

NSSI = Non-Suicidal Self-Injury
Fisher's Exact Test: 13.626, p = .005

The NSSI group significantly differed from the other groups in the number of personality disorders (Fisher's Exact Test: 13.626, p = .005).

Comparison of NSSI groups based on symptoms

Comparing SCL-90 score at pre-treatment between the NSSI group (M = 255.7, SD = 44.7) with the no NSSI (M =201.6, SD = 58.8) and the NSSI starters group (M = 227.7, SD = 77.1) revealed significant difference in psychological symptoms of distress (total-score SCL-90) (f = 9.54, p < .001) between the NSSI and the no NSSI group (Post Hoc: p = <.001). At post-treatment the differences between the NSSI group (M = 202.6, SD = 62.0), the no NSSI (M = 155.6, SD = 55.1) and the NSSI

starters group (M = 173.6, SD = 65.5) were also significant (f = 4.46, p = .015). Post Hoc test showed significant difference (p = .014) between the NSSI group and the no NSSI group.

Comparison of NSSI groups' coping skills

Comparing the three NSSI groups using the CERQ at pre-treatment showed significant differences on three scales of the CERQ: Self-blame (NSSI group (M = 14.8, SD = 3.7), no NSSI (M =10.8, SD = 4.5), NSSI starters (M = 12.7, SD = 4.2), F = 8.72, p < .001). Positive refocusing (NSSI group (M = 8.7, SD = 4.0), no NSSI (M =11.1, SD = 4.2), NSSI starters (M = 10.4, SD = 3.3), F = 3.19, p = .046). Positive reappraisal (NSSI group (M = 8.6, SD = 3.2), no NSSI (M =11.8, SD = 4.9), NSSI starters (M = 12.7, SD = 3.5), F = 9.28, p < .001). Post Hoc test showed significant differences (p = <.001) between the NSSI and the no NSSI group on Self-blame and Positive reappraisal.

Logistic regression

The characteristics gender, number of personality disorders, total score of SCL-90 and the coping skills self-blame, positive refocusing and positive reappraisal differed significantly between the NSSI and the non-NSSI group and were entered into a logistic regression equation. The logistic regression analysis was performed to test the predictive value of the variables on (the dichotomous dependent variable) NSSI versus non-NSSI. Only gender, self-blame and positive reappraisal significantly predicted membership of the NSSI-group. The model shows the bivariate odds ratios. Three variables (gender, self-blame and positive reappraisal) significantly predicted membership of the NSSI-group. The model as a whole explained 38 % (Nagelkerke R square) of the variance in NSSI, and correctly identified 80.4 % of cases. Table 3 shows the results of this logistic regression analysis.

Table 3: *Predictors of NSSI*

		95% CI for Odds Ratio		
	B (SE)	Lower	Odds Ratio	Upper
Constant	-0.91 (1.32)			
Gender (female)	1.71* (0.80)	1.16	5.50	26.14
Self-blame	0.19* (0.07)	1.06	1.20	1.36
Positive reappraisal	-0.21* (0.07)	0.71	0.81	0.92

NSSI = Non-Suicidal Self-Injury

R^2 = .38 (Nagelkerke). Model chi^2 (3) = 30.76 * p < .05

Frequency of NSSI in the NSSI group

In the NSSI group, the percentage of participants that reported no NSSI in the last month significantly increased from 23.5% (n = 16) at pre-treatment to 63.2% (n = 43) at post-treatment (Mc

Nemar: $p < .001$). No significant difference was found comparing the frequency of self-reported NSSI on NSSI-BQ between patients with BPD, patients with other personality disorders, and patients with no personality disorder according to the SCID-II.

Method of NSSI in the NSSI group and NSSI starters group

In the NSSI group, scratching and cutting were the methods used most frequently for self-harm at pre-treatment (cutting 69.8%, scratching 66.0%, other method 34.0%, pills 32.1%, drinking 29.2%, head banging 29.2%, burning 16%). For all the patients who admitted to another method of NSSI than those listed, self-punching was the most frequent (see appendix 3 for a list of categories of potential NSSI behaviours). The NSSI starters group used methods of NSSI that were not listed more often (e.g. self-punching, hair pulling, bumping, substance misuse, physical neglect, eating problems, and sexual activities). Furthermore, patients with BPD used the methods of scratching (Pearson Chi^2: 5.515, *df* 1, $p = .019$), drinking (Pearson Chi^2: 4.824, *df* 1, $p = .028$), and pills (Pearson Chi^2: 8.564, *df* 1, $p = .003$) significantly more often than patients with other personality disorders. *Function of NSSI in the NSSI group*

At pre-treatment 80.7% (N = 106) of the NSSI group understood (see appendix 1, question 4) why they performed NSSI behaviour. These participants designated their NSSI behaviour as follows: 64.0% designated it to affect regulation, 22.7% to self-punishment, 0.0% to influencing other people, 18.7% to anti-dissociation, 0.0% to anti-suicide, and 0.0% to thrill seeking. At post-treatment, 88.8% (N = 71) of the participants understood why they performed NSSI behaviour. They labelled their NSSI behaviour at t-2 as follows: 71.8% attributed it to affect regulation, 29.6% to self-punishment, 1.4% to influencing other people, 12.7% to anti-dissociation, 1.4% to anti-suicide, and 0.0% to thrill seeking.

Discussion

The aim of this study was to examine the occurrence, frequency, contagiousness, method, and function of NSSI in a high-risk adolescent sample in clinical practice in association with personality disorders, symptoms of distress, and coping skills. At the start of treatment, in light with our first hypothesis, 12-month NSSI was common (66.4%) among inpatient adolescents as was lifetime NSSI (79.1%). In addition, in line with our second hypothesis, NSSI was related to the number of personality disorders and not to a specific personality disorder. Moreover, the frequency of NSSI was found not to significantly differ between patients with BPD, patients with other personality disorders, and patients with no personify disorder. Patients with NSSI (n = 93) disclosed significantly more psychological symptoms of distress at the start of treatment. They also reported using more the negative coping skill self-blame, and less positive refocusing and positive reappraisal as coping skills than the no NSSI group and NSSI starters group. Girls were more than five times more likely to perform NSSI behaviour than boys. Self blame increased the change of NSSI with a third, while positive reappraisal reduced the probability by a fifth. Then, concerning the third hypothesis, with

great caution NSSI could be contagious among adolescents in clinical practice, as a small group of patients (N = 10) started this behaviour during treatment. However, it is premature to come to conclusions concerning contagiousness of NSSI in clinical practice based on these findings due to this small sample size. Scratching and cutting were the methods used most frequently among participants committing to NSSI behaviour. Other forms of NSSI were mentioned both with and without body tissue damage, although most to a much lesser extent. Affect regulation was mostly communicated as a function of NSSI behaviour. However, replication is necessary to determine the reliability and generalizability of these results due to the small sample size in one facility and the not validated self-report instrument used. The results show that NSSI was not specific to BPD, as it was common among adolescents with BPD and adolescents with other personality disorders, such as the avoidant personality disorder and the depressive personality disorder. However, patients with BPD used the methods of scratching, drinking, and pills significantly more than patients with other personality disorders. Furthermore, NSSI was related to the number of personality disorders that a patient had. A rapidly growing body of empirical research demonstrates that individuals in the general population who engage in repeated NSSI often do not meet the criteria for BPD (Turner et al., 2015) and that NSSI co-occurs with a variety of psychiatric disorders, including depression, substance abuse disorders, post-traumatic stress disorder, eating disorders, and other personality disorders (Cawood & Huprich, 2011; Gratz et al., 2015; Wilkinson, 2013; Zetterqvist, 2015). Therefore, these results could be perceived as preliminary support for a distinct and independent NSSI Disorder (NSSID) classification as suggested in the DSM-5 (APA, 2013) (Glenn & Klonsky, 2013), although according to the results of this study the NSSID definition excludes a small group of NSSI patients that use NSSI methods without body tissue damage. Many participants (87.7%) that admitted to lifetime NSSI at pre-treatment, met the criteria of NSSID. This new proposed category of NSSI could be helpful to reduce problems from the lack of diagnostic specificity for NSSI; to improve the provision of treatment for adolescents who engage in NSSI; and to enhance research on aetiology, treatment, and outcome. Future studies in patients with NSSI, relating to both Axis I and Axis II diagnoses, may shed more light as to a possible validity of an independent NSSI diagnosis. In this study substantial overlap between the personality disorders was found, which resembles findings in other, mainly adult studies (Chiesa, Cirasola, Williams, Nassisi, & Fonagy, 2017; Tyrer, Crawford, & Mulder, 2011). Due to this substantial personality disorder symptoms overlap in combination with the overlap with adolescence (e.g., confusion, mood swings. or identity conflicts) and with the co-occurrence of Axis I psychiatric disorders, classifying personality pathology in adolescence correctly is problematic, particularly in severely dysfunctional adolescents. For this reason, the current DSM categorisation by type of personality disorder seems arbitrary in adolescents with co-morbidity.

Notable is that the NSSI group relatively often used the coping skills self blame, acceptance, putting in perspective, and less positive re-interpretation and less blaming others. Especially for adolescent girls, it seems important to change the negative coping strategies such as self-blame as

adolescence is the period when NSSI, personality disorders (Amoss, Lynch, & Bratley, 2016; Tyrer, Reed, & Crawford, 2015) and several major mental health disorders develop (Kessler, Chiu, Demler, & Walters, 2005). Prevention and treatment interventions can target these coping skills to prevent NSSI behaviour.

The findings from this study should be interpreted in relation to limitations. Since the NSSI-BQ is a self-developed, self-report questionnaire for studying adolescents in a clinical psychotherapy facility and not in another target group, the psychometric properties remain unclear. Also, the generalizability of our results is limited due to the use of an inpatient sample of one facility. Another limitation is the amount of dropouts in this study despite attempts to reach and motivate them. Only a part of the adolescents that were included could be followed from the start until the end of treatment. Presumably, there was a lack of motivation to participate in this research project without reward. Furthermore, the small number of the NSSI starters group is a limitation due to which it would be premature to come to conclusions concerning contagiousness of NSSI based on these findings. Finally, not all Axis-II disorders and no Axis-I disorders were examined in this study to avoid overloading patients with assessment instruments.

In conclusion, this study provided preliminary support that NSSI behaviour could be contagious among adolescents in clinical practice. Important prevention and treatment targets seem to improve positive copings skills, such as positive refocusing and positive reappraisal, and reduce the negative coping skill self blame. Since this negative coping strategy self blame was related to NSSI, it could be a marker bearing clinical relevance.

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Appendix 1

Non-Suicidal Self-Injury Behaviour Questionnaire

Date: ……../……../ 20….	Name: ……..

This questionnaire asks about injuring yourself. Self-injury is intentionally hurt yourself, cause sickness or undertake other actions that are not really good for you. Many young people who have psychiatric problems, struggle to deal with their feelings, uncertainties and problems in a healthy way. Sometimes they exhibit self-injurious behavior. To make life more bearable, they suppress these feelings by inflicting damage to themselves. Some cut themselves more than daily, for example, many others drink on weekends. But there are also many who sleep, overeating or buy many things they do not need

Self-harm is a very intimate topic, something most people do not easily talk about. However, we ask you to fill in this form to get an impression of your potential self-injurious behavior in the past and present. There is no right or wrong answer. Therefore complete this questionnaire as honestly as possible. We understand that the answers are very personal and we will therefore confidentially deal with your information. Without your consent, the results will be discussed with anyone outside the team.

1. Have you ever injured yourself?
O Yes
O No.

2. How long ago did you (approximately) for the last time? (circle the correct answer)

One day or less	A week	A month	Two months	Half a year	A year	For more than one year

3a. How many times have you done this in the past month? (circle the correct answer)

0 1-5 6-10 11-20 21-30 31-40 41-50 more than 50 times

3b. How many times did you ever do this in a time frame of one month? (circle the correct answer)

Less than once 1-5 6-10 11-20 21-30 31-40 41-50 more than 50 times

4. Do you know why you are doing this or did this?
O No
O Yes, namely …….

……

Proceed to fill in the back of this list.

5. If you injure yourself, how do you do that? (there is more than one answer possible)

O scratching
O cutting
O burning
O head banging
O drinking
O pills
O otherwise, namely …….

6a. You had the urge to injure yourself the last three months, but you did not do so?
O Yes
O No

If so, how many times did that occur?

0 1-5 6-10 11-20 21-30 31-40 41-50 50 times or more

6b. How you can prevent yourself from self- injure?

……

…… ……..

7. How many times have you intended last year to stop with self-injuring?

0 1-5 6-10 11-20 21-30 31-40 41-50 50 times or more

8. How honest have you completed this questionnaire?
O completely honest
O a little honest
O completely not honest

9. Do you have more things you want to share about this?

……..

……..

…….....

……..

……..

……..

Thank you for your cooperation

Appendix 2

Comparing NSSI information in daily reports with scores on NSSI-BQ

The NSSI-BQ was filled out every three months from the start of treatment. The scores of two university students on the scoring list of categories of potential NSSI behaviours (see appendix 3) who independently reviewed all the daily reports of a subsample of 70 patients, were compared. The inter-rater reliability was high (Cohen 's kappa = 0.803; $t = 69.24$; $p = 0.000$). Landis and Koch (Landis & Koch, 1977) consider a value above .80 as 'almost perfect'. The assumptions of this examination was that when patients reported NSSI on the NSSI-BQ while staff members made no mention of it in the daily reports, this meant that patients reported behaviour on the questionnaire that remained hidden or was not reported by the staff members.

On self-report (NSSI-BQ), 19 patients reported that they had not engaged in NSSI while 51 patients reported that they did (Table 1). Within the group not having engaged in NSSI ($n = 19$), 7 (36.8%) were reported by staff to have shown NSSI behaviour. These behaviours could be interpreted as performed with other, not necessarily injurious intentions (drinking, cannabis use, vomiting, not eating and binge eating). Of the group mentioning NSSI on the NSSI-BQ ($n = 51$), 14 patients (20.0%) had no NSSI events in their file (Table A).

Table A: *Comparison between observed and self-reported NSSI*

$N = 70$		Patient file	
		NSSI	No NSSI
		n (%)	*n (%)*
Self-report (NSSI-BQ)	NSSI	37 *(52.9%)*	14 *(20.0%)*
	No NSSI	7 *(10.0%)*	12 *(17.1%)*

NSSI = Non-Suicidal Self-Injury

The agreement between the occurrence of observed and self-reported NSSI was 70%. Of the 14 patients (20%) reporting NSSI that was not observed by the staff members, some behaviour was evidently self-injuring (scratching; cutting; head banging; injury caused by knocking against objects; and burning) while some behaviours were less evidently self-injuring (drinking, taking pills, cannabis use; N=XX). The number of different behaviours that were reported according to the NSSI-BQ was higher than the number of different NSSI behaviours in the daily reports. The NSSI-BQ average is 2.56 ($SD = 1.97$, range 0-7) and the daily reports average 1.86 ($SD = 1.93$, range 0-6) ($t = 2.123$; $p < 0.05$).

Appendix 3: *List of potential non-suicidal self-injury behaviour*

Non-suicidal self-injury through
1: scratching
2: cutting
3: burning
4: head banging
5: drinking
6: taking pills
7: self-punching
8: self-biting
9: hair pulling
10: skin picking
11: pinching
12: breaking bones
13: bumping
14: obstructing wound healing
15: pushing objects/nails into skin
16: substance misuse (alcohol and drugs)
17: medicine misuse (for instance neglect of medication, insulin misuse)
18: physical neglect (for instance sleep too much or too little, move too much or too little)
19: eating problems (for instance vomiting, eating too much or too little or not drinking)
20: performing sexual activities
21: swallowing non edible objects
22: isolating oneself (for instance by gaming and watching series)
23: tattooing oneself
24: removing skin
25: other activities (for instance spending too much, walking or running laps, putting oneself in dangerous situations)

Chapter 7: **Summary and general discussion**

Introduction

This final chapter presents a summary of the findings from this thesis. Thereafter, the results are connected and interpreted. Lastly, the broader implications of our study are discussed. What have we learned of personality disorders, insecure attachment and non-suicidal self-injury (NSSI) in adolescents? How can mental health care for adolescents with these problems be improved? What further research is recommended?

The aim of this thesis is to investigate personality disorders, insecure attachment and NSSI in adolescence, and to examine therapeutic factors related to dropout and outcome after intensive psychotherapy for these conditions.

Summary of findings

In Chapter 2, changes in personality disorders and symptomatology were explored after intensive MBT in adolescents, and the relation between personality disorder variables and outcomes. To this end, a sample of 62 (out of 115) adolescents was examined for personality disorders at pre- and post-treatment by using the Structured Clinical Interview for DSM personality disorders (SCID-II) and the Symptom Check List 90 (SCL-90). Dropout was due to respondents failing to complete the set of web-based questionnaires during post-treatment or not showing up for the final SCID-II interview appointment. These respondents did not differ from the final sample in number and type of personality disorders. At pre-treatment, co-occurrence between the personality disorders was high. At post-treatment, about three quarters of the participants showed a lower number of personality disorders, while two thirds no longer met the SCID-II criteria for a personality disorder. However, symptom reduction could not be predicted by pre-treatment personality disorder variables. Thus, personality pathology can diminish after intensive MBT, although it is not clear if this outcome is a result of the treatment given, as no control group was included.

In Chapter 3, therapeutic factors known to promote recovery (Yalom & Leszcz, 1985) were examined in farewell letters (N = 70) written without instruction at the end of treatment and whether these factors were related to therapy outcome. Content analysis was performed on these letters by two independent raters using Yalom's 12 therapeutic factors combined with potential additional therapeutic factors as coding categories. These factors were related to outcome, operationalised as a decrease in psychological symptoms measured with the SCL-90. All therapeutic factors of Yalom and

four new factors were identified, although in different rates compared to studies using self-report questionnaires. The therapeutic factors 'cohesion', 'interpersonal learning output', 'guidance' and 'identification' were mentioned by nearly all participants and are therefore considered important for recovery in adolescents with personality pathology. These therapeutic factors seem to be a precondition for the factors that were correlated with therapeutic success, namely the factors 'interpersonal learning input', 'self-esteem' and 'turning point', though it is not clear whether these factors led to this change. For that reason, it is suggested with great caution that clinicians in an intensive group psychotherapy practice among adolescents with personality disorders should focus on—next to the common therapeutic factors—a) how the group members come across to one another, b) the sense of value for the group, and c) trying out new behaviour and setting boundaries for behaviour that undermines change. However, it would be premature to connect firm clinical implications to these findings. Further prospective research is necessary to determine the generalisability of these results to other intensive MBT services for adolescents with personality pathology. Furthermore, the question arises whether the interplay between all therapeutic factors and the value placed on them in general differs not only according to the content and purpose of a group (Yalom & Leszcz, 2005) yet also in individual group members. In that case, treatment could focus not only on diminishing symptoms but also on optimising important therapeutic factors for that individual. Further research seems important for treatment in general and for personalisation of treatment.

In Chapter 4, the association between the therapeutic relationship and dropout in an intensive MBT treatment for adolescents with personality disorders was evaluated. Patients (N=105) included were both dropouts and completers of intensive MBT treatment. The therapeutic relationship was measured with the Child version of the Session Rating Scale (C-SRS) that was completed after each group therapy session by the patient. For each patient, the treatment termination status (dropout or completer) was indicated by the treatment staff. It was found that both groups began with similar scores on the C-SRS; although on average as treatment progressed, the scores of completers increased from the start to the end of therapy, while the scores of dropouts decreased during therapy. At the end of the treatment period the scores differed significantly between dropouts and completers. A significant decrease in C-SRS scores between consecutive sessions was common for all patients, though a significant decrease in C-SRS scores during the last two sessions occurred more often for dropouts. The conclusion was drawn that a substantial reduction of the rated quality of the therapeutic relationship during the course of therapy increases the risk of premature termination. As a consequence, the patient's judgement of the quality of the therapeutic relationship should be monitored and discussed with the patient and the group. Doing so could improve the therapeutic relationship and decrease the risk of dropout.

The primary objective of Chapter 5 was to examine adolescent attachment insecurity in adolescents with personality pathology. The first aim of this study was to examine deviations in

insecure attachment distribution of the normative pattern in the whole sample as well as in subgroups of patients with borderline personality disorder (BPD) and other personality disorders. Sixty adolescents were investigated pre-treatment using both categorical and continuous measures of the Adult Attachment Interview (AAI). The second aim of this study was to explore whether attachment representations alter during the course of intensive MBT and whether these alterations are related to changes in psychological distress. Therefore, pre- and post-AAI (N = 33) differences were related to psychological distress measured by the SCL-90. Adolescents without a post-AAI did not differ significantly from the others in age, gender, severity of symptoms or personality disorders. The duration of treatment for these patients, however, deviated significantly. It was found that the most disturbed category of insecure attachment, the 'cannot classify' category, was overrepresented at pre-treatment. No differences in attachment insecurity were observed by type of personality disorder, although adolescents who spoke in a devaluing way about their father were more likely (*OR* 1.6) to be diagnosed with BPD. At post-treatment, half of the participants showed a positive change in the attachment representation, which was related to a significant lowering in level of psychological distress. Furthermore, the whole sample demonstrated change towards increased secure attachment. Taken together, no relation was found between the type of personality disorder and the (forced) attachment classification. Attachment insecurity diminished over the course of intensive MBT. However, as stated before, it cannot be concluded that changes are due to the treatment itself.

Chapter 6 studied different aspects of NSSI in clinical practice in association with personality disorders, symptoms, and coping skills (N = 140), to enhance the understanding of NSSI and improve treatment interventions. Assessment was done pre- and post-treatment using a questionnaire on NSSI developed for clinical practice as well as the SCID-II, the SCL-90 and the Cognitive Emotion Regulation Questionnaire. As expected, NSSI was found to be common, yet more surprising was that NSSI was related to the number of personality disorders and not exclusively to BPD or any other specific personality disorder. Furthermore, the frequency of NSSI was found not to significantly differ between patients with BPD, patients with other personality disorders and patients without personality disorders. Patients with NSSI disclosed significantly more psychological symptoms of distress at the start of treatment. They also reported using the negative coping skill self-blame more often and positive skills refocusing and positive reappraisal less than the no NSSI group and NSSI starters group. Concerning contagiousness of NSSI, this study found that, with great caution, NSSI can be considered contagious in clinical practice, as approximately one fifth of the inpatients without NSSI behaviour started NSSI during treatment. However, other reasons for starting NSSI besides contagiousness could be applicable, such as increasing stress due to the inpatient treatment, therapeutic interventions, or non-reporting of NSSI at the start of the treatment despite psychoeducation and thorough questioning. To summarise, NSSI is common in clinical practice for clinical adolescents and not exclusive to BPD. The presence of NSSI in others may influence those

who had not previously engaged in the behaviour to begin doing so in clinical practice. Reducing self-blame and enhancing positive refocusing and positive reappraisal could be important treatment targets.

General Discussion

In this thesis, three important results emerged. First, observational practice-based research among clinical adolescents is complicated due to specific circumstances that must be considered, especially concerning treatment outcome. Wherefore the course of action for current research in adolescent personality pathology is questionable. Second, a high rate of co-occurrence exists between personality disorders, insecure attachment representations and NSSI among clinical adolescents. Third, over the course of intensive MBT substantial positive changes occur in clinical adolescents: not only in personality disorders and symptomology, but also in attachment insecurity. In this discussion, these outcomes are further explored.

Observational practice-based research among clinical adolescents

The high-risk adolescents this thesis focusses on have hardly been studied before. In randomised clinical trials (RCTs), considered the highest standard of evidence, these patients are mostly excluded, because they are characterised by comorbidity and all too often lack motivation. This is surprising, since the (financial) burden of this group of patients on society is substantial due to, among others, the direct medical costs of self-inflicted injury including NSSI and suicide attempts. This observational practice-based study differed from the research conducted in controlled specialty settings by studying a real-world practice with clinical adolescents. By doing so, this study provides rare insights into clinical adolescents with personality pathology, insecure attachment and NSSI.

Only a subgroup of patients who were included in this study could be followed from the start until the end of treatment, despite many attempts to reach and motivate them. Several circumstances seem to complicate research on adolescents. First, adolescents are difficult to motivate to participate in research projects without reward, especially in studies with questionnaires in a pre-post design. Participating in research is undoubtedly even more difficult for clinical adolescents due to their psychopathology. Second, adolescents generally think short term and are guided by the here and now, which influences outcomes per measurement moment. Similarly, adolescence is a period of emotional maturation, characterised by big leaps forward and backwards in developmental tasks, such as separation-individuation and identity formation (Kaltiala-Heino & Eronen, 2015). Young people grow and show change until at least 23 years of age. As a result, it is unclear if, for instance, the outcomes of intensive treatment in adolescence are the effect of treatment given, natural developmental change or a combination of both. At the same time, adolescence is a developmental phase in which

opportunities for change in personality pathology are greater, under the right conditions, than in adulthood. Third, the role of parents and peers could be an important factor of influence on the motivation and outcome of intensive treatment and needs further study. To conduct research on adolescents, the aforementioned circumstances must be considered and likely affect the degree to which this group is examined.

There is dispute concerning classifying personality disorders in adolescence, although momentarily classifications are a starting point in research and in some countries for insured health care. On the one hand, classifying personality disorders in adolescence encourages an early intervention and thus prevention of crystallisation of behaviours that can have severe consequences on functioning. In addition, it may stimulate research and thus the development of effective treatments for specific groups. On the other hand, if a clear distinction cannot be made between normal adolescent problems, adolescent psychiatric problems that know a natural recovery and the adolescent problems that are the start of severe personality pathology, the risk of classifying normal behaviour as pathologic is considerable. Research shows a subgroup of severely affected adolescents for whom BPD remains relatively stable over time, while a less severe subgroup moves in and out of the classification of BPD (Miller, Muehlenkamp, & Jacobson, 2008). Another concern is that adolescents in the phase of identity disturbance and formation may be at risk of identifying with a classification of a personality disorder. Therefore, classifying personality disorders in adolescence may stigmatise adolescents. A dimensional or network approach instead of a categorical approach to personality disorders may better account for the developmental variability and heterogeneity found among adolescents.

Specific concerns exist on how to accurately measure insecure attachment in adolescence. In general, one may wonder how secure attachment appears in the developmental stage of adolescence. First, attempts to gain autonomy in adolescence may temporarily lead to higher rates of dismissing attachment during this developmental period (Warmuth & Cummings, 2015) than at later age. A feature of a separation-individuation process is that adolescents tend to rebel against parents, which in case of negative experiences possibly occurs even more. Second, adolescents generally think short term, which may affect the ability to reflect on parent-child early life experiences. In this adolescent AAI study, the overrepresentation of the cannot classify and forced preoccupied attachment representation is possibly indicative of psychopathology severity in combination with temporary vulnerability associated with adolescence. The change towards increased secure attachment at the end of treatment may be related to the lower scores on psychological distress due to which the adolescents were better able to respond AAI questions. Unfortunately, there are as of yet no validated ‘quick and easy’ measures for identifying attachment insecurity, though accurate detailed analysis of attachment seems important among high-risk adolescents. Measurement of attachment in adolescent psychiatry is in its infancy (van Hoof, 2017), although the probability that this will change is likely hampered

because of the complexity of the concept attachment. In this study the AAI is used, which is a labour-intensive tool for clinical practice. Scoring of the AAI is a complex process and requires completion of a two-week intensive training course in scoring and coding procedures (Main, Goldwyn, & Hesse, 1998).

As argued above, research on clinical high risk adolescents is complicated. More research is needed to advance prevention and treatment programs and to reduce the burden of this group on patients, their families and society. Simultaneously, it is questionable whether using mainly quantitative research methods for this target group is the correct course of action for current research in psychopathology. The validity of a questionnaire in high-risk adolescents with varying mental states seems doubtful for this group. Indeed, in this study written reflections on the treatment process appear to be more indicative of therapeutic recovery than a questionnaire. Perhaps qualitative instead of quantitative research methods, or a combination of both, offers more clarity on how to optimise prevention and treatment programs for clinical adolescents and how to reduce dropout.

Co-occurrence in the sample

As expected, in this study substantial co-occurrence between the personality disorders, insecure attachment representations and NSSI was found. The co-occurrence between the personality disorders parallels findings in other studies (Chiesa, Cirasola, Williams, Nassisi, & Fonagy, 2017; Tyrer, Crawford, & Mulder, 2011). Furthermore, no differences in attachment classifications and NSSI were found between personality disorder groups. Due to this substantial symptom overlap in combination with the overlap with symptoms of puberty, classifying personality pathology in adolescence correctly is difficult, perhaps even impossible, particularly in severely dysfunctional adolescents. As a result, the DSM categorisation by type of personality disorder seems arbitrary in adolescents with multi-morbidity. The general model of personality pathology currently in use seems especially limited for adolescents because it disregards overall adolescent developmental problems and family dynamics. The criteria for a personality disorder in the DSM-5 concern the individual and are not based on the context of the patient, even though the context is especially important in adolescents (Chen, Brody, & Miller, 2017; van Harmelen et al., 2016). A dimensional model that describes not only the core pathology but also the influence of adolescence, attachment insecurity and family interactions, may be more meaningful for high-risk adolescents than the current classification system.

The substantial co-occurrence between attachment insecurity and personality pathology could confirm that attachment insecurity is indeed an underlying factor or a risk factor for developing a personality disorder in adolescence (Levy, Johnson, Clouthier, Scala, & Temes, 2015; Venta, Shmueli-Goetz, & Sharp, 2013), assuming that the insecure attachment occurred earlier than the personality disorder. This assumption would fit into the diathesis-stress model, which suggests that parent-child attachment along with current and past stressors, temperament and genes contribute to the emergence of psychopathology (Steele, Bate, Nikitiades, & Buhl-Nielsen, 2015). On the other hand, it may also

be that the two problems have no relationship other than that they often occur simultaneously in adolescents with severe psychiatric problems. Another possibility to be considered is that severe psychopathology and puberty negatively affect attachment security and that recovery of severe psychopathology results in more secure attachment. Nevertheless, this study stresses the importance of secure attachment for adolescent mental health. Especially the influence of paternal attachment during adolescence requires further attention, because this study found with great caution that BPD is likely to develop in adolescence in the absence of paternal positive attachment behaviour in combination with the devaluation state of mind towards the father.

Changes over time

A substantial number of the severely disturbed adolescents in our sample changed positively over the course of intensive MBT. Although MBT was likely of influence, it cannot be concluded that changes are due to the treatment itself. In addition to a decrease in personality pathology and symptomology, attachment insecurity developed for the better as well. The question remains whether intensive MBT contributed to the achieved result; and if that is the case, which element of this treatment had impact? The first hypothesis is that in different ways, the partial hospitalisation was especially relevant for this group of adolescents with overall adolescent developmental problems and their families. Probably, the intensity of being in therapy 24 hours a day, 5 days a week, made the breakthrough of solid, unhealthy patterns possible. Moreover, being away from home increased the likelihood of altering fixed interaction patterns in the family situation and the severely disturbed separation-individuation process. Furthermore, the continuous availability of MBT-trained nursing staff during the partial hospitalisation presumably could have been of influence (Reiner, Bakermans-Kranenburg, Van IJzendoorn, Fremmer-Bombik, & Beutel, 2016). Hypothetically, for some participants an emotional corrective experience occurred in the relationship with the group and treatment staff during the partial hospitalisation, which resulted in a less insecure attachment representation. Second, psychotherapy in a group with a group psychodynamic approach could have contributed to change (Yalom & Leszcz, 2005). The therapeutic factors 'cohesion', 'interpersonal learning output', 'guidance' and 'identification' seem to be pre-conditional factors for the predictors found in this study for therapeutic success, namely 'interpersonal learning input', 'self-esteem' and 'turning point'. Third, focussing on mentalization in the different therapies in the program may have stimulated a positive outcome by learning clinical adolescents' effective emotion regulation and interpersonal interaction. Also, the influence of social support from family and friends (van Harmelen et al., 2016) or age-related development may have caused the change.

The results of this thesis provide hope for treatment and prospects for the future of adolescents with personality disorders, insecure attachment and NSSI. Though, it cannot be ignored that a small group did not show a change after intensive MBT, and an even smaller group deteriorated. This is no

surprise given the fact that deterioration rates as an outcome of psychotherapy range from 5% to 14% among adult patients and are thought to be even higher among children (Lambert, 2013).

Limitations

Several limitations exist in this study. This cohort study was not randomised. As a result, it is not possible to draw conclusions about the direct effect of the treatment itself. Furthermore, a large portion of the sample was not assessed at the end of the treatment. Co-morbid disorders next to the personality pathology were not studied. Moreover, the sample was a relatively small inpatient sample from one facility consisting of mainly girls with average cognitive capabilities. In consequence, generalisability to other adolescent personality disorder intensive psychotherapy services is to be determined. Despite these limitations, this study is quite unique because little research has been done into personality disorders and attachment insecurity among adolescents (Courtney-Seidler, Klein, & Miller, 2013; Hutsebaut, Feenstra, & Luyten, 2013; Sharp et al., 2016).

Clinical implications

What do these findings mean for clinical practice? As stated before, a high rate of co-occurrence between the personality disorders, insecure attachment representations and NSSI was found, let alone other co-morbid disorders that were not examined. The current classifications system for personality disorders seems to be a container of heterogeneity and therefore not appropriate for adolescents with personality pathology. In clinical practice, heterogeneity should be taken into consideration, and not masked by categorising. Consequently, two adjustments are proposed for classifying adolescent personality pathology. It is first suggested that a dimensional approach to personality disorders among adolescents may better account for the developmental variability and heterogeneity. Hopefully, a dimensional approach will reduce risk of stigmatisation or identification with a personality disorder diagnosis in adolescence. In contrast to the categorical diagnostic system, a dimensional system views various personality features along a continuum. The DSM-5 (APA, 2013) proposed dimensional model includes two dimensions: Criterion A: level of personality functioning and Criterion B: pathological personality traits. The second proposal is to use a system of classification that describes the core pathology dimensionally only once the influence of adolescence, attachment insecurity and family interactions has been assessed. In the diagnostic phase, adolescent personality pathology should be described in the context of this developmental phase of life and the patient's social system. This emphasises the importance of thorough descriptive diagnosis instead of merely a DSM-5 classification. A descriptive diagnosis for an adolescent should incorporate the interactions of the adolescent's pathology with 1) development and puberty 2) family dynamics and 3) relationships with peers. This descriptive diagnosis could be combined with the emerging concept of health and well-being called positive health (Heerkens et al., 2018). The positive health field works to

discover which specific health assets in the three domains of health—namely physical, social and mental health—produce longer, more meaningful and healthier life and which health assets lower disease risk and health care costs (Huber et al., 2011). The above requires development of new methods of researching clinical adolescents using qualitative rather than quantitative research methods, or a combination of both.

The identified co-occurrence has further consequences for treatment of adolescent personality pathology. According to the descriptive diagnosis, the treatment is needed to be part of a bigger personalised plan designed together with the adolescent and his/her social system. During treatment, adolescents could be asked regularly to reflect in writing on the treatment process and progress. With this information, treatment staff could adjust the personalised plan to optimise it for important therapeutic factors per treatment phase.

The co-occurrence that is found in other mental disorders (Caspi & Moffitt, 2018; Kessler, Chiu, Demler, & Walters, 2005) than personality disorders also has consequences for the content and organisation of health care in general, since the current health care system depends on the view that mental problems come as categorical disorders (van Os, Guloksuz, Vijn, Hafkenscheid, & Delespaul, 2019). These disorders should be treated according to evidence-based practice treatment guidelines on the basis of meta-analytic evidence of measurable symptom reduction at the group level. However, evidence-based guidelines at the group level may not be generalisable to the individual level, especially for severely disturbed adolescents with combined conditions. Several novel developments (van Os et al., 2019), however, suggest focussing on enhancing resilience, instead of on symptom reduction, and connectedness with others. Our study on attachment and therapeutic factors seems to show the importance of connection with others to grow emotionally in adolescence. For that reason, clinicians have to emphasise throughout all phases of treatment the importance of attachment relationships and learning from one generation to another and from social systems. In clinical adolescent MBT practice, clinicians enhance resilience to deal with vulnerabilities in contact with significant others. This is a task for modern society in which loneliness is the highest mortality risk for human beings (Holt-Lunstad, Robles, & Sbarra, 2017).

Directions for future research

Adolescence is a period of life in which personality disorders often manifest themselves (Kessler et al., 2005; Newton-Howes, Clark, & Chanen, 2015). Despite this knowledge, clinical attention is focussed mainly on adults and BPD. Research investment is needed on personality disorders with comorbidity in adolescence by means of preventive and treatment evaluation using not only quantitative but also qualitative research methods, or a combination of both. Since the validity of

a questionnaire in high-risk adolescents with varying mental states seems doubtful in this study, qualitative research methods seem to offer more clarity on how to optimise prevention and treatment programs and reduce dropout. Future research could also investigate the dimensional model as proposed by the DSM-5 for clinical adolescents with co-morbidity. The research advice is to adjust criterion A for adolescents. This criterion is divided into four aspects of personality functioning: 1) identity, 2) self-direction, 3) empathy, 4) intimacy. These aspects could be described in the developmental context of adolescence.

So far, no studies have followed the course of personality disorder from childhood through puberty to later life, although child and adolescent personality disorder is the strongest predictor of young adult personality disorders (Newton-Howes et al., 2015). Applying staging models (Scott et al., 2013) on personality pathology could be a research direction. However, considering the high co-occurrence found, research should focus on the heterogeneity of problems from a dimensional and developmental point of view of clinical adolescents and not on one classification. With this broader view, staging models among high-risk adolescents can help clinical practice select interventions appropriate to the life phase and to the stage the adolescent is in. Ideally, this information can also help us in the future to differentiate between those adolescents who show temporary symptoms of personality pathology belonging to puberty and those who are at the onset of a chronic problem. Therefore, the focus should be on descriptive diagnosis and treatment, and future research on staging models for adolescent personality disorders from a dimensional and developmental point of view for early detection, prevention and treatment of personality pathology in adolescence

Finally, research investigating moderators of outcome among psychotherapy treatments for adolescent personality disorders is needed. Understanding for whom and under what conditions and dosages, clinicians can employ these working elements of treatments to exert their greatest effects and enhance development of personalised psychiatry. The role of parents and other significant others could especially be an important factor of influence on the commitment and outcome of adolescent personality pathology treatment and needs further study. Research should also focus on moderators of dropout of treatment among these adolescents.

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Appendices

Nederlandse samenvatting en discussie

Inleiding

Dit proefschrift gaat over klinische adolescenten met persoonlijkheidsstoornissen en onveilige hechting. De overgang van lagere naar middelbare school markeert voor deze jongeren vaak de start van een veelvoud aan psychische problemen zoals depressie, laag zelfbeeld, niet-suïcidale zelfbeschadiging (NSSI), suïcidale gedachten en acties, en interpersoonlijke problemen met familie, vrienden, school, werk en soms justitie. Deze misschien wel moeilijkste doelgroep in de Jeugd GGZ herken je in maatschappelijke debatten direct: een indringend voorbeeld van een suïcide of aandacht voor zelfbeschadiging laat de kwetsbaarheid van deze adolescenten zien en onderstreept tegelijkertijd de maatschappelijke onmacht. Het is vervolgens opvallend te noemen dat juist deze doelgroep in wetenschappelijk onderzoek vaak wordt buitengesloten.

Het doel van dit proefschrift is zowel het onderzoeken van persoonlijkheidsstoornissen, onveilige gehechtheid en NSSI in de adolescentie als het onderzoeken van de therapeutische factoren gerelateerd aan uitval en behandeluitkomsten van intensieve psychotherapie voor deze problemen. Eerst wordt een samenvatting van de bevindingen van dit proefschrift per hoofdstuk gegeven. Daarna worden de resultaten aan elkaar verbonden en geïnterpreteerd. Ten slotte worden de bredere implicaties van deze studie besproken. Wat leert dit onderzoek ons over persoonlijkheidsstoornissen, onveilige hechting en NSSI bij adolescenten? Hoe kan de geestelijke gezondheidszorg voor klinische adolescenten met deze problemen worden verbeterd? Welk verder onderzoek wordt aanbevolen?

Samenvatting van de bevindingen

In Hoofdstuk 2 werden veranderingen in persoonlijkheidsstoornissen en symptomatologie onderzocht na intensieve mentalisatie bevorderende therapie (MBT) bij adolescenten en de relatie tussen persoonlijkheidsstoornisvariabelen en behandeluitkomsten. Hiertoe werd een steekproef van 62 (van de 115) adolescenten onderzocht op persoonlijkheidsstoornissen voor en na de behandeling met behulp van het gestructureerde klinische interview voor DSM-persoonlijkheidsstoornissen (SCID-II) en de symptoomchecklist 90 (SCL- 90). Uitval kwam door het niet afrondden van de reeks digitale vragenlijsten aan het eind van de behandeling door respondenten of het niet op komen dagen voor de

eind SCID-II-interviewafspraak. Deze respondenten verschilden niet van de uiteindelijke steekproef in aantal en type persoonlijkheidsstoornissen. Bij de start van behandeling voldeed een meerderheid aan meer classificaties van persoonlijkheidsstoornissen tegelijk. Aan het eind van behandeling had ongeveer driekwart van de deelnemers een lager aantal persoonlijkheidsstoornissen, terwijl twee derde niet langer voldeed aan de SCID-II-criteria voor een persoonlijkheidsstoornis. Symptoomvermindering kon echter niet worden voorspeld door variabelen van de persoonlijkheidsstoornis voorafgaand aan de behandeling. Samenvattend, persoonlijkheidspathologie kan verminderen gedurende intensieve MBT, hoewel het niet duidelijk is of deze uitkomst een resultaat is van de gegeven behandeling, omdat er geen controlegroep was.

In Hoofdstuk 3 werden therapeutische factoren waarvan bekend is dat ze herstel bevorderen (Yalom & Leszcz, 1985) onderzocht in afscheidsbrieven (N = 70) geschreven zonder instructie aan het einde van behandeling, en of deze factoren gerelateerd waren aan de behandeluitkomsten. Inhoudsanalyse door twee onafhankelijke beoordelaars werd uitgevoerd op deze brieven met behulp van de 12 therapeutische factoren van Yalom in combinatie met potentiële aanvullende therapeutische factoren als codeercategorieën. Deze factoren waren gerelateerd aan het therapieresultaat, geoperationaliseerd als een afname van psychologische symptomen gemeten met de SCL-90. Alle therapeutische factoren van Yalom en vier nieuwe factoren werden geïdentificeerd, hoewel in verschillende percentages in vergelijking met onderzoeken met behulp van zelfrapportagevragenlijsten. De therapeutische factoren 'cohesie', 'ontwikkelen van sociale vaardigheden', 'begeleiding' en 'identificatie' werden door bijna alle deelnemers genoemd en worden daarom belangrijk geacht voor herstel bij adolescenten met persoonlijkheidspathologie. Deze therapeutische factoren lijken een voorwaarde te zijn voor de factoren die samenhangen met therapeutisch succes, namelijk de factoren 'leren van elkaar', 'zelfwaardering' en 'keerpunt', hoewel het niet duidelijk is of deze factoren tot deze verandering hebben geleid. Om die reden wordt met de nodige voorzichtigheid geopperd dat behandelaren in een intensieve groepspsychotherapie bij adolescenten met persoonlijkheidsstoornissen zich naast op de gebruikelijke therapeutische factoren moeten concentreren op: a) hoe de groepsleden op elkaar overkomen, b) het gevoel van waarde te zijn voor de groep, en c) nieuw gedrag uitproberen en grenzen stellen aan gedrag dat verandering ondermijnt. Het zou echter voorbarig zijn om stellige klinische conclusies aan deze bevindingen te verbinden. Prospectief onderzoek is nodig om de generaliseerbaarheid van deze resultaten te bepalen voor andere intensieve MBT-afdelingen voor adolescenten met persoonlijkheidspathologie. Verder rijst de vraag of het samenspel tussen alle therapeutische factoren en de waarde die aan de factoren wordt gehecht in het algemeen niet alleen verschilt naargelang de inhoud en het doel van een groep (Yalom & Leszcz, 2005) maar ook per individueel groepslid. In dat geval zou de behandeling zich niet alleen kunnen richten op het verminderen van de symptomen, maar ook op het optimaliseren van

belangrijke therapeutische factoren voor dat individu. Verder onderzoek lijkt belangrijk voor de behandeling in het algemeen en voor het personaliseren van de behandeling.

In Hoofdstuk 4 werd de relatie tussen de therapeutische alliantie en uitval in een intensieve MBT-behandeling voor adolescenten met persoonlijkheidsstoornissen geëvalueerd. Deelnemers (N = 105) waren zowel degenen die een intensieve MBT-behandeling hebben afgerond als degenen die voortijdig uitvielen. De therapeutische relatie werd gemeten met de kindversie van de Session Rating Scale (C-SRS) die na elke groepstherapiesessie door de patiënt werd voltooid. Voor elke patiënt werd de behandelingsbeëindigingsstatus (afronder of uitvaller) geïndiceerd door het behandelend personeel. Er werd vastgesteld dat beide groepen begonnen met vergelijkbare scores op de C-SRS, waarna de gemiddelde score van de afronders naarmate de behandeling vorderde toenam en van de uitvallers juist afnam. Aan het einde van de behandeling verschilden de scores daardoor aanzienlijk tussen afronders en uitvallers. Een significante afname van C-SRS-scores tussen opeenvolgende sessies was gebruikelijk voor alle adolescenten, hoewel een significante afname van C-SRS-scores tijdens de laatste twee sessies vaker bij uitvallers voorkwam. De conclusie was dat een substantiële verlaging van de waardering van de therapeutische relatie in de loop van de therapie, het risico van voortijdige beëindiging verhoogt. Dientengevolge moet het oordeel van de patiënt over de kwaliteit van de therapeutische relatie worden gemonitord en met de patiënt en de groep worden besproken. Dit kan de therapeutische relatie verbeteren en het risico van uitval verminderen.

Het primaire doel van Hoofdstuk 5 was om gehechtheidsonveiligheid te onderzoeken bij adolescenten met persoonlijkheidspathologie. Het eerste doel van deze studie was om afwijkingen in adolescente onveilige gehechtheidsverdeling van het normatieve patroon in de gehele onderzoeksgroep en in subgroepen van patiënten met borderline persoonlijkheidsstoornis (BPD) en andere persoonlijkheidsstoornissen te onderzoeken. Zestig adolescenten werden voorafgaand aan de behandeling onderzocht op zowel categorische als continue schalen van het Adult Attachment Interview (AAI). Het tweede doel van deze studie was om te onderzoeken of hechtingsrepresentaties veranderen in de loop van intensieve MBT en of deze veranderingen gerelateerd zijn aan veranderingen in psychische lijden. Daartoe werden pre- en post-AAI (N = 33) verschillen gerelateerd aan psychologische stress gemeten door de SCL-90. Adolescenten zonder post-AAI verschilden niet significant van de anderen in leeftijd, geslacht, ernst van de symptomen of persoonlijkheidsstoornissen. De duur van de behandeling voor deze patiënten week echter aanzienlijk af. Het bleek dat de meest ernstige categorie van onveilige gehechtheid, de categorie 'niet-te-classificeren', voorafgaand aan de behandeling oververtegenwoordigd was. Er werden geen verschillen in hechtingsonveiligheid waargenomen per type persoonlijkheidsstoornis, hoewel adolescenten die op een devaluerende manier over hun vader spraken, vaker (OR 1.6) de diagnose BPS hadden. Bij afronding van de behandeling toonde de helft van de deelnemers een positieve verandering in de

gehechtheidsrepresentatie, die gerelateerd was aan een significante verlaging van het niveau van psychische problemen. Bovendien toonde de hele onderzoeksgroep verandering in de richting van een grotere veilige hechting. Kortom, er werd geen relatie gevonden tussen het type persoonlijkheidsstoornis en de (geforceerde) hechtingsclassificatie. De onveilige gehechtheid nam af in de loop van intensief MBT. Zoals eerder vermeld, kan echter niet worden geconcludeerd dat veranderingen te wijten zijn aan de behandeling zelf.

Hoofdstuk 6 richt zich op het onderzoek naar verschillende aspecten van NSSI in de klinische praktijk in samenhang met persoonlijkheidsstoornissen, symptomen en copingvaardigheden (N = 140), om het begrip van NSSI en behandelingsinterventies te verbeteren. Het onderzoek werd vóór en na de behandeling uitgevoerd met behulp van een vragenlijst over NSSI ontwikkeld voor de klinische praktijk, evenals de SCID-II, de SCL-90 en de Cognitive Emotion Regulation Questionnaire. Zoals verwacht, kwam NSSI veel voor in de onderzoeksgroep. Verrassender was dat NSSI gerelateerd was aan het aantal persoonlijkheidsstoornissen en niet exclusief was voor BPD of enige andere specifieke persoonlijkheidsstoornis. Bovendien bleek de frequentie van NSSI niet significant te verschillen tussen patiënten met BPS, patiënten met andere persoonlijkheidsstoornissen en patiënten zonder persoonlijkheidsstoornissen. Wel rapporteerden patiënten met NSSI aanzienlijk meer psychologische symptomen van angst aan het begin van de behandeling. Met betrekking tot de aanstekelijkheid van NSSI, toonde deze studie - met grote voorzichtigheid - aan dat NSSI in de klinische praktijk als aanstekelijk kan worden beschouwd, aangezien ongeveer een vijfde van de opgenomen patiënten zonder NSSI-gedrag NSSI startte tijdens de behandeling. Andere redenen voor het starten van NSSI naast aanstekelijkheid kunnen echter van toepassing zijn, zoals het verhogen van stress als gevolg van de klinische behandeling, therapeutische interventies of niet-melden van NSSI aan het begin van de behandeling ondanks psycho-educatie en grondige bevraging. NSSI is aldus veel voorkomend in de klinische praktijk voor klinische adolescenten en niet exclusief voor BPS. De aanwezigheid van NSSI bij anderen kan degenen die nog niet eerder met het gedrag bezig waren beïnvloeden om dit in de klinische praktijk te doen. Het verminderen van zelfbeschuldiging, en het verbeteren van concentreren op andere, positieve zaken en positief herinterpreteren zouden belangrijke behandelingsdoelstellingen kunnen zijn.

Discussie

In dit proefschrift zijn drie belangrijke resultaten naar voren gekomen. Ten eerste is observationeel praktijkgericht onderzoek bij klinische adolescenten gecompliceerd vanwege specifieke omstandigheden waar rekening mee moeten worden gehouden, vooral wat betreft de behandelingsresultaten. Daarom moet de huidige manier van onderzoek doen bij adolescente

persoonlijkheidspathologie ter discussie gesteld worden. Ten tweede bestaat er een hoge mate van overlap tussen persoonlijkheidsstoornissen, onveilige gehechtheidsrepresentaties en NSSI bij klinische adolescenten. Ten derde treden er in de loop van intensief MBT substantiële positieve veranderingen op bij klinische adolescenten: niet alleen in persoonlijkheidsstoornissen en symptomatologie, maar ook in hechtingsonveiligheid. In deze discussie worden deze resultaten verder onderzocht.

Observationeel praktijkgericht onderzoek onder klinische adolescenten

De hoog risico adolescenten waarop dit proefschrift zich concentreert, zijn nog niet eerder bestudeerd. In gerandomiseerde klinische studies (RCT's), beschouwd als de hoogste standaard van bewijs, worden deze patiënten meestal uitgesloten, omdat ze worden gekenmerkt door comorbiditeit en vaak weinig gemotiveerd zijn voor onderzoek. Dit is verrassend, omdat de (financiële) druk van deze groep patiënten op de samenleving substantieel is, onder andere door directe medische kosten van zelf veroorzaakte letsels, waaronder NSSI en zelfmoordpogingen. Deze observationele praktijkgerichte studie verschilde van het onderzoek dat werd uitgevoerd in gecontroleerde onderzoekssituaties door de dagelijkse praktijk in een klinische psychotherapie setting met klinische adolescenten te bestuderen. Hiermee biedt deze studie zeldzame inzichten in klinische adolescenten met persoonlijkheidspathologie, onveilige hechting en NSSI.

Alleen een subgroep van patiënten die aan dit onderzoek deelnamen, kon van het begin tot het einde van de behandeling worden gevolgd, ondanks vele pogingen om hen te bereiken en te motiveren. Verschillende omstandigheden lijken het onderzoek onder adolescenten te compliceren. Ten eerste zijn adolescenten moeilijk te motiveren om zonder beloning deel te nemen aan onderzoeksprojecten, vooral aan projecten met vragenlijsten in een pre-post onderzoeksopzet. Deelname aan onderzoek is ongetwijfeld nog moeilijker voor klinische adolescenten vanwege hun psychopathologie. Ten tweede worden adolescenten over het algemeen gekenmerkt door kortetermijndenken en geleid worden door het hier en nu, wat de uitkomsten per meetmoment beïnvloedt. Evenzo is de adolescentie een periode van emotionele rijping, gekenmerkt door grote sprongen vooruit en achteruit in ontwikkelingstaken, zoals separatie-individuatie en identiteitsvorming (Kaltiala-Heino & Eronen, 2015). Jongeren groeien en veranderen tot ten minste 23 jaar oud. Als gevolg hiervan is het onduidelijk of bijvoorbeeld de uitkomsten van intensieve behandeling tijdens de adolescentie het effect zijn van de gegeven behandeling, natuurlijke ontwikkelingsverandering of een combinatie van beide. Tegelijkertijd is de adolescentie een ontwikkelingsfase waarin onder de juiste omstandigheden kansen voor verandering in persoonlijkheidspathologie groter zijn dan in de volwassenheid. Ten derde kan de rol van ouders en leeftijdsgenoten een belangrijke rol spelen in het beïnvloeden van de motivatie en het resultaat van een intensieve behandeling. Dit aspect moet verder

worden onderzocht. Bij onderzoek onder adolescenten, zal met bovengenoemde omstandigheden rekening moeten worden gehouden.

Er is discussie over het classificeren van persoonlijkheidsstoornissen in de adolescentie, terwijl op dit moment classificaties wel de basis vormen van wetenschappelijk onderzoek en in sommige landen voor verzekerde gezondheidszorg. Aan de ene kant stimuleert het classificeren van persoonlijkheidsstoornissen in de adolescentie vroegtijdige interventie en dus preventie van kristallisatie van gedrag dat ernstige gevolgen kan hebben voor het functioneren. Bovendien kan het wetenschappelijk onderzoek stimuleren en daarmee de ontwikkeling van effectieve behandelingen voor specifieke groepen. Aan de andere kant, als er geen duidelijk onderscheid kan worden gemaakt tussen normale adolescente problemen, adolescente psychiatrische problemen die een natuurlijk herstel kennen en de adolescente problemen die het begin zijn van ernstige persoonlijkheidspathologie, is het risico van het classificeren van normaal gedrag als pathologisch aanzienlijk. Onderzoek toont een subgroep van zeer slecht functionerende adolescenten voor wie BPD relatief stabiel blijft in de tijd, terwijl een minder ernstige subgroep in en uit de classificatie van BPD beweegt (Miller, Muehlenkamp, & Jacobson, 2008). Een andere zorg is dat adolescenten in deze fase van identiteitsverwarring en vorming het risico kunnen lopen zich te identificeren met een classificatie van een persoonlijkheidsstoornis. Daarom kan het classificeren van persoonlijkheidsstoornissen tijdens de adolescentie adolescenten stigmatiseren. Een dimensionele of netwerkbenadering in plaats van een categorische benadering van persoonlijkheidsstoornissen kan beter rekening houden met de ontwikkelingsvariabiliteit en heterogeniteit onder adolescenten.

Er bestaan specifieke zorgen over de nauwkeurigheid van het meten van onveilige hechting in de adolescentie. In het algemeen kan men zich afvragen hoe veilige gehechtheid zich presenteert in de deze ontwikkelingsfase. Ten eerste kunnen pogingen om autonomie te verkrijgen in de adolescentie tijdelijk leiden tot hogere percentages van ontwijkende gehechtheid tijdens deze ontwikkelingsperiode (Warmuth & Cummings, 2015) dan op latere leeftijd. Een kenmerk van een separatie-individuatieproces is dat adolescenten de neiging hebben om tegen ouders in opstand te komen, wat in het geval van negatieve ervaringen mogelijk nog meer voorkomt. Ten tweede kenmerken adolescenten zich over het algemeen door kortetermijndenken, wat van invloed kan zijn op het vermogen om na te denken over ouder-kind ervaringen uit het vroege leven. In deze adolescente AAI-studie is de oververtegenwoordiging van de niet-te-classificeren en geforceerde gepreoccupeerde gehechtheidsrepresentatie mogelijk een aanwijzing voor de ernst van psychopathologie in combinatie met tijdelijke kwetsbaarheid verband houdend met adolescentie. De verandering in de richting van een vergrote veilige hechting aan het einde van de behandeling kan te maken hebben met de lagere scores op psychische problemen waardoor de adolescenten beter in staat waren om AAI-vragen te beantwoorden. Helaas zijn er tot op heden geen gevalideerde snelle en gemakkelijke meetinstrumenten

om hechtingsonveiligheid te onderzoeken, terwijl een nauwkeurige gedetailleerde analyse van gehechtheid juist belangrijk lijkt te zijn bij hoog risico adolescenten. Het meten van gehechtheid in de jeugdpsychiatrie staat nog in de kinderschoenen (Van Hoof, 2017), hoewel de kans dat dit zal veranderen waarschijnlijk klein is door de complexiteit van het concept gehechtheid. In deze studie wordt het AAI gebruikt, dat een arbeidsintensief instrument is voor de klinische praktijk. Het scoren van het AAI is een complex proces en vereist de voltooiing van een intensieve training van twee weken in scorings- en coderingsprocedures (Main, Goldwyn, & Hesse, 1998).

Zoals hierboven betoogd, is onderzoek bij klinische adolescenten ingewikkeld. Meer onderzoek is nodig om preventie- en behandelprogramma's te bevorderen en de last van deze groep voor patiënten, hun families en de samenleving te verminderen. Tegelijkertijd is het de vraag of het gebruik van voornamelijk kwantitatieve onderzoeksmethoden voor deze doelgroep de juiste manier is van handelen bij wetenschappelijk onderzoek. De validiteit van een vragenlijst bij hoog risico adolescenten met verschillende mentale toestanden lijkt twijfelachtig. Sterker nog, in deze studie lijken geschreven reflecties op het behandelingsproces meer indicatief voor therapeutisch herstel dan een vragenlijst. Misschien bieden kwalitatieve in plaats van kwantitatieve onderzoeksmethoden, of een combinatie van beide, meer duidelijkheid over de manier waarop preventie- en behandelingsprogramma's voor klinische adolescenten kunnen worden geoptimaliseerd en hoe uitval kan worden verminderd.

Comorbiditeit in de onderzoeksgroep

Zoals verwacht werd in dit onderzoek een substantiële comorbiditeit tussen de verschillende persoonlijkheidsstoornissen, onveilige gehechtheidsrepresentaties en NSSI gevonden. Het naast elkaar voorkomen van de persoonlijkheidsstoornissen komt overeen met bevindingen in andere onderzoeken (Chiesa, Cirasola, Williams, Nassisi, & Fonagy, 2017; Tyrer, Crawford, & Mulder, 2011). Verder werden er geen verschillen gevonden in hechtingsrepresentaties en NSSI tussen persoonlijkheidsstoornisgroepen. Vanwege deze substantiële overlap van symptomen in combinatie met de overlap met de kenmerken van de puberteit, is het classificeren van persoonlijkheidspathologie tijdens de adolescentie moeilijk, misschien zelfs onmogelijk, vooral bij ernstig dysfunctionele adolescenten. Als gevolg hiervan lijkt de categorisering van DSM naar type persoonlijkheidsstoornis arbitrair bij adolescenten met multimorbiditeit. Het algemene model van persoonlijkheidspathologie dat momenteel in gebruik is, lijkt vooral beperkt te zijn voor adolescenten omdat het de algehele ontwikkelingsproblemen en gezinsdynamiek van adolescenten negeert. De criteria voor een persoonlijkheidsstoornis in de DSM-5 hebben betrekking op het individu en zijn niet gebaseerd op de context van de patiënt, hoewel de context met name belangrijk is bij adolescenten (Chen, Brody, &

Miller, 2017; Van Harmelen et al., 2016). Een dimensionaal model dat niet alleen de kernpathologie beschrijft, maar ook de invloed van adolescentie, hechtingsonveiligheid en familie-interacties, lijkt zinvoller te zijn voor hoog risico adolescenten dan het huidige classificatiesysteem.

Het vaak samen voorkomen van hechtingsonveiligheid en persoonlijkheidspathologie kan bevestigen dat hechtingsonveiligheid inderdaad een onderliggende factor of een risicofactor is voor het ontwikkelen van een persoonlijkheidsstoornis tijdens de adolescentie (Levy, Johnson, Clouthier, Scala, & Temes, 2015; Venta, Shmueli- Goetz, & Sharp, 2013), ervan uitgaande dat de onveilige gehechtheid eerder plaatsvond dan de persoonlijkheidsstoornis. Deze aanname zou passen in het diathese-stressmodel, dat suggereert dat ouder-kind gehechtheid, samen met huidige en vroegere stressoren, temperament en genen, bijdragen aan de opkomst van psychopathologie (Steele, Bate, Nikitiades, & Buhl-Nielsen, 2015). Aan de andere kant kan het ook zijn dat de twee problemen geen andere relatie hebben dan dat ze vaak gelijktijdig voorkomen bij adolescenten met ernstige psychiatrische problemen. Een andere mogelijkheid om in overweging te nemen, is dat ernstige psychopathologie en puberteit de hechtingsveiligheid negatief beïnvloeden en dat het herstel van ernstige psychopathologie resulteert in een veiligere gehechtheid. Niettemin benadrukt deze studie het belang van veilige gehechtheid voor de geestelijke gezondheid van adolescenten. Vooral de invloed van de hechting aan de vader tijdens de adolescentie vereist verdere aandacht, omdat deze studie - met de grootste voorzichtigheid te interpreteren - heeft vastgesteld dat BPD zich mogelijk kan ontwikkelen in de adolescentie bij afwezigheid van positief hechtingsgedrag van de vader in combinatie met devaluatief denken van de adolescent over de vader.

Veranderingen over tijd

Een aanzienlijk aantal van de ernstig disfunctionerende adolescenten in onze steekproef veranderde positief in de loop van intensieve MBT. Hoewel MBT waarschijnlijk van invloed was, kan niet worden geconcludeerd dat deze veranderingen toe te rekenen zijn aan de behandeling zelf. Naast een afname van persoonlijkheidspathologie en symptomatologie, ontwikkelde de gehechtheidsonveiligheid zich ook ten goede. De vraag blijft of intensieve MBT heeft bijgedragen aan het behaalde resultaat; en als dat het geval is, welk effect deze behandeling dan heeft gehad? De eerste hypothese is dat de gedeeltelijke hospitalisatie op verschillende manieren vooral relevant was voor deze groep adolescenten met algehele adolescente ontwikkelingsproblemen en problemen met hun families. Waarschijnlijk maakte de intensiteit van het 24 uur per dag, 5 dagen per week in therapie zijn, de doorbraak van rigide, ongezonde patronen mogelijk. Bovendien maakt het van huis weg zijn, de kans groter op verandering in vaste interactiepatronen in de gezinssituatie en in het ernstig gestoorde separatie-individuatieproces. Verder was vermoedelijk de continue beschikbaarheid van

MBT-geschoold verplegend personeel tijdens de gedeeltelijke hospitalisatie van invloed (Reiner, Bakermans-Kranenburg, Van IJzendoorn, Fremmer-Bombik, & Beutel, 2016). Mogelijk trad tijdens de opname in de kliniek bij sommige deelnemers een emotionele corrigerende ervaring op in de relatie met de groep en het behandelpersoneel, wat resulteerde in een minder onveilige gehechtheidsrepresentatie. Ten tweede kan psychotherapie in een groep met een groepspsychodynamische benadering hebben bijgedragen tot verandering (Yalom & Leszcz, 2005). De therapeutische factoren 'cohesie', 'ontwikkelen van sociale vaardigheden', 'begeleiding' en 'identificatie' lijken pre-conditionele factoren te zijn voor de voorspellers in dit onderzoek voor therapeutisch succes, namelijk 'leren van elkaar', 'zelfrespect' en 'keerpunt'. Ten derde kan de focus op mentalisatie in de verschillende therapieën in het programma een positieve uitkomst hebben gestimuleerd door op deze manier effectieve emotieregulatie en interpersoonlijke interactie aan klinische adolescenten te leren. Ook kan de invloed van emotionele steun van familie en vrienden (Van Harmelen et al., 2016) of van leeftijdsgebonden ontwikkeling de verandering hebben veroorzaakt.

De resultaten van dit proefschrift bieden hoop voor behandeling en voor de toekomst van adolescenten met persoonlijkheidsstoornissen, onveilige hechting en NSSI. Daarnaast kan niet worden genegeerd dat een kleine groep geen verandering liet zien na intensieve MBT en dat een nog kleinere groep zelfs achteruitging. Dit is geen verrassing aangezien het percentage dat verslechtert als resultaat van psychotherapie varieert van 5% tot 14% bij volwassen patiënten en bij kinderen zelfs nog hoger worden geacht (Lambert, 2013).

Beperkingen

Deze studie kent verschillende beperkingen. Deze cohortstudie was niet gerandomiseerd. Als gevolg hiervan is het niet mogelijk om te concluderen in welke mate de behandeling zelf tot verandering heeft geleid. Bovendien werd een groot deel van de onderzoeksgroep niet onderzocht aan het einde van de behandeling. Comorbide stoornissen naast de persoonlijkheidspathologie werden niet bestudeerd. Bovendien was de steekproef relatief klein en bestaand uit voornamelijk meisjes met een gemiddeld cognitief vermogen. Dientengevolge moet de generaliseerbaarheid naar andere intensieve psychotherapeutische behandelingen voor adolescente persoonlijkheidsstoornissen nog worden bepaald. Ondanks deze beperkingen is deze studie vrij uniek omdat er weinig onderzoek is gedaan naar persoonlijkheidsstoornissen en gehechtheidsonveiligheid bij adolescenten (Courtney-Seidler, Klein, & Miller, 2013; Hutsebaut, Feenstra & Luyten, 2013; Sharp et al., 2016).

Klinische implicaties

Zoals eerder vermeld, werd een hoge mate van comorbiditeit tussen de persoonlijkheidsstoornissen, onveilige gehechtheidsrepresentaties en NSSI gevonden, en dan werden andere comorbide stoornissen niet eens onderzocht. Het huidige classificatiesysteem voor persoonlijkheidsstoornissen lijkt een container van heterogeniteit te zijn en daarom niet geschikt voor adolescenten met persoonlijkheidspathologie. In de klinische praktijk moet deze heterogeniteit in overweging worden genomen en niet worden gemaskeerd door categoriseren. Derhalve worden twee aanpassingen voorgesteld voor het classificeren van adolescente persoonlijkheidspathologie. Ten eerste wordt gesuggereerd dat een dimensionele benadering van persoonlijkheidsstoornissen bij adolescenten beter rekening kan houden met de ontwikkelingsvariabiliteit en heterogeniteit van deze groep. Hopelijk vermindert een dimensionele benadering het risico van stigmatisering of identificatie met een diagnose van een persoonlijkheidsstoornis tijdens de adolescentie. In tegenstelling tot het categorische diagnostische systeem bekijkt een dimensionaal systeem verschillende persoonlijkheidskenmerken langs een continuüm. Het voorgestelde dimensionele model van DSM-5 (APA, 2013) omvat twee dimensies: Criterium A: niveau van persoonlijkheidsfunctioneren en criterium B: pathologische persoonlijkheidskenmerken. Het tweede voorstel is om een classificatiesysteem te gebruiken dat alleen de kernpathologie dimensionaal beschrijft nadat de invloed van adolescentie, onveilige gehechtheid en familie-interacties is beoordeeld. In de diagnostische fase zal de persoonlijkheidspathologie van adolescenten moeten worden beschreven in de context van deze ontwikkelingsfase van het leven en het sociale systeem van de patiënt. Dit benadrukt het belang van een grondige beschrijvende diagnose in plaats van alleen een DSM-5 classificatie. Een beschrijvende diagnose voor een adolescent zou de interacties van de pathologie van de adolescent moeten omvatten met 1) ontwikkeling en puberteit 2) gezinsdynamiek en 3) relaties met leeftijdsgenoten. Deze beschrijvende diagnose kan worden gecombineerd met het opkomende concept van gezondheid en welzijn, positieve gezondheid genoemd (Heerkens et al., 2018). Het positieve gezondheidsveld onderzoekt welke specifieke gezondheidsdimensies in de drie gezondheidsdomeinen, te weten fysieke, sociale en mentale gezondheid, een langer, betekenisvoller en gezonder leven betekenen en welke gezondheidsdimensies het ziekterisico en de kosten van de gezondheidszorg verlagen (Huber et al. , 2011). Het bovenstaande vereist de ontwikkeling van nieuwe methoden voor het onderzoeken van klinische adolescenten met behulp van kwalitatieve in plaats van kwantitatieve onderzoeksmethoden, of een combinatie van beide.

De vastgestelde comorbiditeit heeft gevolgen voor de behandeling van persoonlijkheidspathologie van adolescenten. Volgend uit de beschrijvende diagnose is het nodig dat de behandeling deel uit maakt van een groter, persoonlijk plan dat is ontworpen samen met de adolescent en zijn / haar sociale systeem. Tijdens de behandeling zouden adolescenten regelmatig

kunnen worden gevraagd om schriftelijk te reflecteren op zowel het behandelproces als op de voortgang. Met deze informatie zou het behandelteam het gepersonaliseerde plan aan kunnen passen om het te optimaliseren op voor deze adolescent belangrijke therapeutische factoren per behandelingsfase.

De comorbiditeit die tevens voorkomt bij andere psychische stoornissen (Caspi & Moffitt, 2018; Kessler, Chiu, Demler & Walters, 2005) dan persoonlijkheidsstoornissen heeft ook gevolgen voor de inhoud en organisatie van de gezondheidszorg in het algemeen, aangezien het huidige gezondheidszorgsysteem gebaseerd is op de opvatting dat psychische problemen optreden als te categoriseren stoornissen (Van Os, Guloksuz, Vijn, Hafkenscheid, & Delespaul, 2019). Deze stoornissen moeten worden behandeld volgens evidence-based behandelrichtlijnen die gebaseerd zijn op meta-analytisch bewijs van meetbare symptoomvermindering op groepsniveau. Echter, evidence-based richtlijnen op groepsniveau zijn mogelijk niet te generaliseren naar het individuele niveau, vooral niet voor ernstig gestoorde adolescenten met gecombineerde aandoeningen. Verschillende nieuwe ontwikkelingen (Van Os et al., 2019) suggereren dat de nadruk moet liggen op het verbeteren van veerkracht, in plaats van op symptoomvermindering, en op verbondenheid met anderen. Ons onderzoek naar onveilige gehechtheid en therapeutische factoren lijkt het belang van verbinding met anderen aan te tonen om emotioneel te groeien in de adolescentie. Om die reden moeten clinici tijdens alle fasen van de behandeling het belang benadrukken van gehechtheidsrelaties en van het leren van de ene generatie op de andere en van sociale systemen. In klinische MBT-praktijken voor adolescenten, bevorderen clinici de veerkracht van adolescenten en hun systemen om kwetsbaarheden in contact met significante anderen op te vangen. Dit is een taak voor de moderne samenleving waarin eenzaamheid het grootste sterfterisico voor mensen vormt (Holt-Lunstad, Robles, & Sbarra, 2017).

Aanbevelingen voor toekomstig onderzoek

De adolescentie is een periode in het leven waarin persoonlijkheidsstoornissen zich vaak manifesteren (Kessler et al., 2005; Newton-Howes, Clark, & Chanen, 2015). Ondanks deze kennis is de klinische aandacht voornamelijk gericht op volwassenen en BPD. Onderzoek is nodig naar persoonlijkheidsstoornissen met comorbiditeit in de adolescentie door middel van evaluaties van preventie- en behandelingsprogramma's met niet alleen kwantitatieve, maar ook kwalitatieve onderzoeksmethoden, of een combinatie van beide. Aangezien de validiteit van een vragenlijst bij klinische adolescenten met verschillende mentale toestanden twijfelachtig schijnt in deze studie, lijken kwalitatieve onderzoeksmethoden meer duidelijkheid te bieden over het optimaliseren van preventie- en behandelprogramma's en het verminderen van uitval. Toekomstig onderzoek zou ook het dimensionele model kunnen onderzoeken zoals voorgesteld door de DSM-5 voor klinische

adolescenten met comorbiditeit. Het onderzoeksadvies is om criterium A voor adolescenten aan te passen. Dit criterium is onderverdeeld in vier aspecten van persoonlijkheidsfunctioneren: 1) identiteit, 2) zelfsturing, 3) empathie, 4) intimiteit. Deze aspecten kunnen worden beschreven in de ontwikkelingscontext van de adolescentie.

Tot nu toe missen studies die het beloop van de persoonlijkheidsstoornis hebben gevolgd van de kindertijd en de puberteit tot het latere leven, wat opvallend is omdat de persoonlijkheidsstoornis van kinderen en adolescenten de sterkste voorspeller is van persoonlijkheidsstoornissen bij jonge volwassenen (Newton-Howes et al., 2015). Het toepassen van stadiëringsmodellen (Scott et al., 2013) op persoonlijkheidspathologie kan een onderzoeksrichting zijn. Gezien de grote comorbiditeit die is gevonden, zou dergelijk onderzoek zich echter niet op één classificatie moeten concentreren zoals nu gebruikelijk is maar op de heterogeniteit van problemen vanuit een dimensionaal en ontwikkelingsoogpunt van klinische adolescenten. Vanuit dit bredere perspectief kunnen stadiëringsmodellen voor hoog risico adolescenten de klinische praktijk helpen bij het selecteren van interventies die geschikt zijn voor de levensfase en het stadium waarin de adolescent zich bevindt. Idealiter kan deze informatie ons in de toekomst ook helpen onderscheid te maken tussen de adolescenten die tijdelijke symptomen vertonen van persoonlijkheidspathologie die behoren tot de puberteit en diegenen die aan het begin staan van een chronisch probleem. Daarom moet voor vroeg detectie, preventie en behandeling van persoonlijkheidspathologie in de adolescentie, de komende tijd de nadruk liggen op beschrijvende diagnose en behandeling, en op onderzoek naar stadiëring van adolescente persoonlijkheidsstoornissen vanuit een dimensioneel en ontwikkelingsoogpunt.

Ten slotte is onderzoek nodig naar moderatoren van de uitkomsten van psychotherapiebehandelingen voor persoonlijkheidsstoornissen bij adolescenten. Met inzicht bij wie, onder welke voorwaarden en dosering, kunnen clinici deze werkzame factoren van behandelingen gebruiken om hoogst haalbare effecten te bewerkstelligen en de ontwikkeling van gepersonaliseerde psychiatrie te verbeteren. De rol van ouders en andere belangrijke anderen op de motivatie en op het resultaat van behandeling van adolescente persoonlijkheidspathologie moet verder worden bestudeerd. Onderzoek zou zich tot slot moeten richten op moderatoren van uitval van behandeling bij deze adolescenten.

List of publications

1) Draijer, P.J., **Hauber, K.,** Colijn, S. (2019). De psychotherapeut als specialist? Tijdschrift voor Psychotherapie, 45 (3), 179-190.

2) **Hauber, K.** (2017). EMDR bij adolescenten met een dissociatieve stoornis**.** In Handboek EMDR. Kinderen en jongeren. Onder redactie van C. de Roos & R. Beer.

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alsook
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de liefdes van mijn leven

Curriculum Vitae

Kirsten Hauber was born in Leidschendam in the Netherlands on 28 April 1972. She attended the Gymnasium Haganum and graduated in Leiden as a psychologist in 1996 after a clinical internship at a Child Guidance Centre in Ohio America. Directly afterwards she started a postdoctoral programme in (group)psychotherapy in Amsterdam which she completed in 2001. Her career started in Ermelo at Veldwijk (now GGZ Centraal). She has been working at De Jutter (now Youz) since 2002, where she among others has set up Albatros, department of clinical psychotherapy for adolescents. She is head of the treatment centre for personality disorders, trauma and attachment disorders. In 2014, she started her PhD project into the relationship between attachment disorders and personality disorders among adolescents at the Curium-LUMC. She is also specialized in the treatment of adolescents with complex trauma and dissociation and has among others written a chapter on this subject in the recently published EMDR manual in children and adolescents. In addition, she has been a board member of the Dutch Association for Psychotherapy (NVP) since October 2013 and chairman since November 2018.