A CAT-based early intervention for Borderline Personality Disorder: A Pilot Study

CHRISTEL J. HESSELS, ODILIA M. LACEULLE, IRIS VAN DIJK & MARCEL VAN AKEN

Abstract

Objectives: Clinical interventions for borderline personality disorder (BPD) traditionally focused on established and chronic forms of the disorder. Increasing evidence indicates the reliability, validity, and clinical importance of the diagnosis of BPD in adolescence. This underscores a more developmental perspective to the disorder and sets the stage for prevention and early intervention. However, much is still unclear about the clinical practice of early intervention. This study aims to (a) explore a sample within an early intervention program, (b) explore how the different treatment modalities within this program were used, and (c) provide a preliminary test of general difficulties and psychosocial functioning change within young people participating in early intervention.

Design: The current paper describes a pilot study of the program 'Helping Young People Early' (HYPE) in the Netherlands. HYPE is an early intervention program for BPD in youth based on cognitive analytic therapy (CAT), developed in Melbourne, Australia.

Methods: For the current pilot study, data were used from 22 adolescents (M_{age} = 17.3, SD_{age} = 2.3). Subjects were offered HYPE treatment, comprising time-limited individual CAT, CAT-informed family therapy and

Christel Hessels Psychiatric Center GGz Centraal, P.O. Box 3051, 3800 DB Amersfoort, The Netherlands. Tel: 0031 33 4609585; Fax number: 0031 33 4650463; E-mail: C.Hessels@ggzcentraal.nl

Odilia M. Laceulle, Department of Developmental Psychology, Utrecht University, Utrecht, the Netherlands E-mail: O.M.Laceulle@uu.nl

Iris van Dijk, Department of Developmental Psychology, Utrecht University, Utrecht, The Netherlands E-mail: i.vandijk@uu.nl

Marcel A.G. van Aken, Department of Developmental Psychology, Utrecht University, Utrecht, the Netherlands. E-mail: M.A.G.vanAken@uu.nl

psychosocial coaching integrated within the general psychiatric care. The sample and use of the specific treatment modalities were explored. Changes in experienced difficulties and psychosocial functioning were examined at six-month follow up.

Results: Individuals within the HYPE program showed (sub)threshold levels of BPD and received on average 15 sessions of individual CAT therapy, in addition to family therapy, psychosocial coaching and generic psychiatric care over a six-month period. After a six-month follow-up a trend was found suggesting a decrease of difficulties, emotional problems and self-harm. Prosocial behaviour seemed unchanged.

Conclusions: This pilot study offers a helpful characterisation of the patient sample within an early intervention program and the use of different treatment modules in this program. Preliminary findings suggest a decrease in experienced difficulties within adolescents participating in the HYPE program. This study supports the argument for early intervention studies in general. It then arguably also justifies and implies the need in this European setting for further extended studies of previous ones undertaken in an Australian setting. Further studies are required to study effectiveness of early intervention on a larger scale.

Keywords: borderline personality disorder; adolescents; early intervention; cognitive analytic therapy

IN the last decades, borderline personality disorder (BPD) is being considered a lifespan developmental disorder more and more (Chanen & Kaess, 2012). Theories of the aetiology of BPD include complex transactions between biological vulnerabilities of the child and the family environment (Chanen & Kaess, 2012). The data supporting this developmental view are convincing, as BPD has been found to be continuous in different developmental periods and similarities in terms of phenomenology, structure, stability, validity, and morbidity are found for adolescents and adults (Chanen & Thompson, 2014; Newton-Howes, Clark, & Chanen, 2015). A growing body of research shows that BPD can be assessed in adolescents in a reliable and valid manner (Chanen *et al*., 2004; Chanen, Jovev, & Jackson, 2007; Miller, Muehlenkamp, & Jackson, 2008; Westen, Shedler, Durrett, Glass, & Martens, 2003) and different national guidelines acknowledge that diagnosing BPD is justified in adolescents (Fonagy *et al*., 2015; National Health and Medical Research Council, 2012).

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) describes BPD as a severe mental disorder characterised by a pervasive pattern of impulsivity, emotional instability, interpersonal dysfunction, and disturbed self-image. Despite widespread use in research and treatment settings, the concept of BPD based on the criteria of DSM-IV and DSM-5, has never been universally accepted in the field. This lack of acceptance can be understood from limitations, such as excessive comorbidity, within-disorder heterogeneity, and diagnostic instability (e.g., Widiger & Trull, 2007) and has led to redefining BPD using traits, as well as the introduction of an alternative model of personality disorders with dimensional elements in DSM-5. Different theoretical and psychotherapeutic models have defined a theory-specific understanding of BPD, with a central role of the internalization of negative or adverse early interpersonal experiences as a framework for later psychosocial functioning. This is also a central key within the procedural sequence object relations model as used in Cognitive Analytic Therapy (Ryle, 1985). This more psychotherapeutic understanding of BPD adds to a life span developmental view on the disorder.

Within a lifespan developmental view of BPD, adolescence and young adulthood are crucial developmental phases. BPD usually emerges during adolescence (Sharp, 2016) and is defined by high comorbidity and poor outcomes (Chanen & McCutcheon, 2013; Ha *et al*., 2014). Prevalence rates of BPD in adolescents seem similar to those found in adult populations, 1–3% in community-dwelling samples, 11% in outpatient samples, and 33–49% in clinical inpatient samples (Johnson *et al*., 2008). It also shows a rise in prevalence from puberty and a steady decline with each decade from young adulthood onwards (Chanen & McCutcheon, 2013). Therefore, BPD is an important disorder to focus on in treatment especially in young people.

Traditionally, clinical interventions for BPD have focused on individuals with established and/or chronic forms of the disorder. However, studies have shown both in adults (Zimmerman *et al*., 2013) as well as in outpatient youth that subthreshold BPD features are already associated with greater psychosocial co-morbidity, such as more DSM-IV mental disorders, poorer social and occupational functioning, being more likely to be referred for treatment for suicidality and/or disruptive behaviour, compared with outpatient youth with no BPD features (Thompson *et al*., 2018). This underpins the clinical significance of subthreshold BPD features in youth and, therefore the need for early

intervention, aimed to strengthen the developmental pathways regarding psychosocial functioning and psychopathology.

Particularly during adolescence, (subthreshold) BPD may interfere with the process of gradually assuming more adult roles and responsibilities typical for the adolescent years. Longitudinal studies in adults with BPD consistently demonstrate that BPD features naturally attenuate over time, whereas impairments in social and vocational functioning persist, even decades after the diagnostic features of BPD are no longer clinically evident (Chanen *et al*., 2020). Longitudinal data also show that elevated levels of BPD features at a mean age of 14 years predict poorer functioning over the subsequent 20 years of follow up, in social functioning, life satisfaction, academic and occupational attainment, less partner involvement, and fewer attained adult developmental milestones (Winograd, Cohen & Chen, 2008). This could imply that BPD features during adolescence have the potential to disrupt the transition to adulthood, derailing the acquisition of essential skills (Chanen *et al*., 2020).

Both inside and outside the family, social interactions are important for the development of personality in young people. Problems in social functioning are considered a key problem in BPD as well as in personality pathology in general (Hopwood, Wright, Ansell, & Pincus, 2013). Paris (2014) stated that social relations of individuals with personality pathology are a key element for understanding the course of disorders. Moreover, Chanen and Kaess (2012) stated that in contrast to the relatively unstable nature of the diagnosis BPD, both in adolescents and in adults, problems in social functioning are relatively stable and may have long-lasting consequences for the individual's functioning. Therefore, early intervention needs to be targeting specifically social functioning in young people with subthreshold BPD.

Early Intervention based on Cognitive Analytic Therapy

Early intervention focuses on early diagnosis and treatment for BPD and subthreshold borderline personality pathology (Chanen, Sharp, & Hoffman, 2017). The program Helping Young People Early (HYPE) is an early intervention program for BPD in youth (12 to 25 years of age) based on cognitive analytic therapy (CAT) as developed by Ryle (Ryle & Kerr, 2002). The HYPE program was developed by Chanen and McCutcheon in Orygen, the National Center of Excellence of Youth Mental Health in Melbourne, Australia (Chanen *et al*., 2009). In the Netherlands,

the HYPE program has started in 2016, with training and support from the founders of the original HYPE program. The HYPE program employs an integrated, team-based treatment model with multiple elements, all based on cognitive analytic therapy (CAT). The current paper describes a pilot study of the HYPE program in a mental health institution in the Netherlands. The elements of the intervention are summarized in Table 1.

Table 1 Elements of Early Intervention in the HYPE Program

- Assessment of BPD and comorbid psychopathology
- Individual cognitive analytic therapy (CAT)
- Family intervention based on CAT
- Psychosocial coaching
- General psychiatric care, with specific assessment and treatment of co-occurring psychiatric syndromes (comorbidity), including the use of pharmacotherapy
- When indicated: Crisis care, with clear model of brief and goal-directed inpatient care
- Individual and group supervision of staff
- A quality assurance program

Cognitive analytic therapy. CAT is the core of the HYPE treatment model, as CAT is used in the different treatment elements and is used as a framework within the team meetings. CAT is a time-limited psychotherapy that has been developed in the United Kingdom (Ryle & Kerr, 2002). CAT is developed as an integration of theoretical elements of psychoanalytic object relations theory and cognitive psychology, as a model in which the self is seen as being characterised by an internalized repertoire of relationship patterns, acquired throughout early and subsequent relational experiences. The CAT model provides a radical social and relational understanding of the person with BPD. In this view the self is formed through a process of development during which an infant with its genetic predispositions interacts reciprocally with care-

givers in a given culture and time, and psychologically forms and internalizes a repertoire of relational patterns embodying action, thinking, feeling and meaning (Ryle & Kerr, 2002). When this relational development is suboptimal (as for example in the development of BPD), and early caregiving interactions are not supporting or even damaging, these relationship patterns when internalized will be re-enacted inappropriately and/or inflexibly (Chanen *et al*., 2009). As described in the CAT Multiple Self-States Model three aspects of impaired psychological functioning can be described in BPD; (1) early and extreme relational patterns, usually derived from relationships with caretakers are internalized and persist in determining self-management and relationships with others; (2) partial dissociation, reflecting in a fragmented and discontinuous experience of self, which can be observable in for example discontinuities in memories, behaviours and affects as switches and shifts between disparate and contrasting self-states and; (3) impaired and interrupted self-reflection, which leads to experiences and emotions experienced as confusing, disturbing or meaningless (Pollock, Broadbent, Clarke, Dorrian, & Ryle, 2001, Ryle & Kerr, 2002).

CAT aims at developing a joint (patient-therapist) understanding of the individual's problematic relational patterns and the thoughts, feelings, and behavioural responses that result from these patterns ('reformulation'). This reformulation provides the framework for the patient to practice recognizing these relational patterns, and finally revise them in more helpful patterns. In addition, this relational focus provides a framework, not only for the patient, but also for the family as well as for the therapist and the team, that is helpful in reflecting when relational patterns are enacted in daily life or the therapeutic relationship. Therapists make use of diagrams (diagrammatic reformulation) and writing (reformulation letter) in the process of joint and explicit reformulation (Ryle & Kerr, 2002). Termination is an important issue within CAT, as within the time-limited nature of CAT, separation is evident from the beginning. In CAT these issues are recorded in a 'goodbye letter' from the therapist, which is read and discussed in the last session. Patients are invited to write a goodbye letter as well, to promote an exchange of good-bye letters and reflections upon the ending of therapy.

As CAT targets interpersonal and intrapsychic processes common to personality disorders and as its integrative approach also encompasses co-occurring mental state disorders which are the norm in individuals with personality disorders, CAT has been particularly applied in the treatment of personality disorders (Mulder & Chanen, 2012). Because

of the practical and collaborative style of CAT, this psychotherapy seems to match the needs of young people quite naturally, as it is an active and practical form of therapy, and psychological mindedness is considered a goal of, rather than a prerequisite for therapy.

Despite the widespread adoption of CAT in the UK and other countries, the evidence of its effectiveness to date remains limited. The evidence is predominated by small-scale practice-based studies, showing encouraging results at post-therapy assessments, illustrating low dropout rates and substantial improvements in adults (Calvert & Kellet, 2014; Halam *et al*., 2020; Ryle & Golynkina, 2000). The number of randomized clinical trials is limited, although the results call for more research as they illustrate a reduction of symptoms and improvement in interpersonal functioning, as compared with treatment as usual (Clarke, Thomas, & James, 2013) or to manualised good clinical care in adolescents with BPD features (Chanen *et al*., 2008). Calvert and Kellet (2014) conclude that although the accumulating evidence for CAT in personality disorders suggest that CAT has a major contribution in front line clinical services, the challenge is now to benchmark the effectiveness of CAT via large-scale service evaluations and clinical audits.

Although the developments in the field of mental health care support a developmental view of psychopathology and BPD, early intervention programs are novel. As the diagnosis and treatment of BPD are often delayed (Laurenssen *et al*., 2013), the risk is that only young people who already have chronic and severe forms of the disorder are referred to specialized programs in mental health care. In addition, the CAT model was a break in traditional conventional belief that treatment of BPD needs to be intense and prolonged, which lead to reluctance in applying the CAT model (Ryle, 2004). However, CAT has particular advantages for early intervention for BPD, as its integrative approach enables encompassing co-occurring problems, which are the norm in this patient group, within the overall treatment (Chanen, McCutcheon, & Kerr, 2014), and the time-limited and practical nature of the treatment model matches the psychosocial needs of young people in a flexible way.

Therefore, it is important to study the effects of an early CAT-based intervention. A crucial first step in research on early intervention is to better understand which young people are treated in early intervention programs. From the perspective of clinical staging this could be a diverse group of young people, due to the broad inclusion criteria and the high level of co-occurring psychopathology. Furthermore, due to the reluctance in clinicians to assess BPD features, this could imply that only

older adolescents or adolescents with threshold BPD are referred to early intervention programs. In addition in it is important to explore which interventions are offered specifically within an early intervention program.

Current study

Taken together, in order to study the feasibility of a randomized controlled trial of early intervention, we need to understand more about which patients early intervention targets and about the treatment modules within an early intervention program. Therefore, in this study we aim to (a) explore a sample within an early intervention program, (b) explore how the different treatment modalities within the HYPE program were used, and (c) provide a preliminary test of how experienced difficulties and psychosocial functioning change within adolescents participating in the HYPE program, by studying pre- and post-treatment measurement of the general difficulties, such as emotional symptoms and prosocial behaviour.

Method

Participants and Procedure

This study is part of an ongoing clinical cohort study within HYPE (Helping Young People Early), an outpatient program for early intervention of BPD in an organization for mental health care in the Netherlands. Patients aged 12-to-25 years old were referred to specialized mental health care, mostly by their general practitioner. Patients were referred for assessment and treatment of borderline personality pathology and different co-occurring psychiatric problems, such as anxiety disorders, mood disorders and eating disorders. Participants seeking help who after clinical assessment met three or more criteria of BPD, based on DSM-5 (American Psychiatric Association, 2013) were recruited consecutively into the HYPE cohort study. This means that the inclusion criteria for the HYPE program are quite broad, as we expect that young people probably will have co-occurring psychiatric problems that need to be targeted as well during the treatment. Exclusion criteria for the program are an acute psychotic episode and eating problems or substance abuse that require medical attention. The measures for the study were part of the structured clinical assessment at entry to HYPE. Informed consent was obtained from patients (and caregivers when the patient was under 16 years of age), and patients agreed that the data could be used anonymously for

research purposes. As such, all patients entering HYPE were including in the current study as well. The study was approved by the Utrecht University Faculty of Social and Behavioural Sciences Ethics Committee and the Institutional Research Board. Patients were offered HYPE treatment, comprising time-limited CAT, both in individual therapy as well as in the family intervention. In addition, CAT-informed psychosocial coaching was integrated within the general psychiatric care.

Measures

Borderline Personality Disorder was operationalized with the Borderline scale of the SCID-II screening questionnaire (SCID-II PQ-BPD; Gibbon, Spitzer, Williams, Benjamin, & First, 1997; Chanen *et al*., 2008). The SCID-II PQ-BPD is a screening self-report questionnaire that consists of fifteen items in a yes/no response format. Items correspond to the nine DSM-IV BPD criteria. Each DSM-IV criterion has one question, except for criterion three (identity disturbance; four questions), five (recurrent suicidal behaviour; two questions) and eight (inappropriate anger; three questions). A BPD-score was calculated by counting the number of the affirmative answered items. Different studies showed that the SCID-II PQ-BPD was reliable in outpatient youth (a = .88; Chanen *et al*., 2008; a = .85; Alebeek *et al*., 2015) but found different cut-off scores to obtain the best value of sensitivity and specificity predicting 5 or more criteria of BPD according to DSM-5. Chanen *et al*. (2008) found a cut-off score of 12, while results in a comparable Dutch clinical sample of young people indicated a cut-off score of 6 with the best sensitivity and specificity (Alebeek *et al*., 2015). Research indicates that in outpatient youth, the SCID-II PQ-BPD has satisfactory psychometric qualities (Chanen *et al*., 2008). That is, the instrument has a moderate sensitivity, high specificity and moderate to high predictive value. Compared to other screening questionnaires for BPD, the aforementioned study showed that the SCID-II PQ-BPD had the highest overall diagnostic accuracy, test-retest reliability and internal consistency.

Prosocial behaviour, general difficulties and co-occurring difficulties. The Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) was used to measure prosocial behaviour and general difficulties. The SDQ is a 25-item behaviour screening questionnaire asking to what extent both positive and negative psychological attributes of the child were true in the past six months, using a 3-point scale (0 = 'not true', 1 = 'somewhat true', 2 = 'certainly true').'The questionnaire contains five subscales, each consisting of five items: prosocial behaviour,

hyperactivity-inattention, emotional problems, conduct problems and peer problems. In this study, we used a self-report version of the SDQ. The scale prosocial behaviour was used to measure prosocial behaviour and items from the four other subscales were added to compute a ìtotal difficultiesî score, indicating the overall level of problem behaviour. The SDQ has satisfactory internal consistency, test-retest stability and parent-youth agreement in Dutch adolescents and is an indicator for psychopathology such as attention problems and anxiety (Muris, Meesters, & van den Berg, 2003). The prosocial behaviour scale of the SDQ is found to be negatively related to psychopathology (Muris *et al*., 2003). For additional exploration of specifically self-harming behaviour, problems in alcohol-use, and problems in drug use, the subscales of the Dutch extended version of the SDQ (SPsy; Van Oort, Van 't Land, & De Ruiter, 2007) were used. The additional scales self-destructive behaviour and problems in drug use were found to have acceptable psychometrics, while the reliability of the scale problems in alcohol use were insufficient (Zwaanswijk, 2016).

Data analysis

In order to explore the sample, questionnaires and demographic data were analysed. To explore how the different treatment modalities within the HYPE program were used, contacts with patients as registered in patient records were categorized based on HYPE treatment variables (e.g., CAT session, phone contact). Additionally, although participants that dropped out of the study were not included in the study of outcome measures, the patient records and questionnaire data of the seven individuals who did not attend the second measurement point within six months ('study dropouts') were similarly analysed to explore possible differences in treatment pathways. A preliminary test was conducted to explore changes over time in total experienced difficulties, prosocial behaviour and co-occurring difficulties (i.e., emotional problems, self-harming behaviour and problems in drug and alcohol use). This was done by conducting paired-samples t-tests and computing test-retest correlations to examine stability of mean scores across measurement points.

Results

Aim a: exploring a sample within an early intervention program

During this trial period of 6 months, 29 individuals who gave permission

for the study had treatment in the HYPE program during the whole six months. Seven of the 29 individuals (24.1%) did not attend the second measurement point within six months, while 22 individuals (75.9%) participated in the first and second measurement point of the HYPE cohort study. Only these 22 participants were included in the study.

The sample in this report consisted of 22 female individuals (*Mage* = 17.27 years old at the first measurement point, *SDage* = 2.31, range = 13-21 years). Participants were college students (45.5%) or secondary students (40.9%), had a full-time or part-time job (4.5%), or had no job or did not go to school (9.1%). The minority of participants used no medication at the start of the treatment (*n* =4, 18.2%). Of the participants who did use medication, one individual used a stimulant, two individuals used a sleep-inducing drug, and one individual used a selective serotonin reuptake inhibitor (SSRI), an anti-epileptic and a sleep-inducing drug. At the second measurement point, more individuals used medication (*n* = 9, 40.9%), mostly (a combination of) stimulants (44.4%), a sleep-inducing drug (44.4%) or an atypical antipsychotic (44.4%). Some individuals used an SSRI (22.2%), an anti-epileptic (11.1%) or a benzodiazepine (11.1%). At the first measurement point, the average score on the SCID-II PQ-BPD was 12.00 (*SD* = 2.59, range = 8-15). This average score is indicative of the presence of five or more BPD criteria (Alebeek *et al*., 2015; Chanen *et al*., 2008).

Aim b: exploring how the different treatment modalities within the HYPE program were used

Mean scores and standard deviations of the various HYPE treatment elements are shown in Table 2. In addition to the average 15 sessions of individual CAT, participants received family intervention, sessions of generic psychiatric care and psychosocial coaching, adding up to on average 33 sessions of treatment within the HYPE program. Given the small sample and the large variation in the amount of sessions, reporting the median of the total HYPE sessions is more informative, which is 29.50. Within the individual CAT with 90.9% of patients, reformulation letters were discussed, 54.5% of goodbye letters written by the therapist and 40.9% of goodbye letters written by the patient were discussed. During their treatment patients had on average 11 phone contacts with one of their therapists. No patients dropped out of treatment; three patients had a negotiated early ending of treatment. One patient had an inpatient admission of one night.

Table 2 Descriptives of HYPE Treatment Variables

HYPE treatment sample (n = 22)				
	M	SD	Median	Range
Number of individual CAT sessions	15.36	3.08	16.00	5-21
	N	%		
Reformulation letter discussed	20	90.9%		
Goodbye letter discussed	12	54.5%		
Goodbye letter patient discussed	9	40.9%		
	M	SD	Median	Range
Number of sessions family intervention	7.27	6.64	5.00	1-28
Number of generic psychiatric care sessions	5.27	4.12	4.50	2-21
Number of psychosocial coaching sessions	4.91	6.60	2.50	0-27
Amount of phone contact	11.05	7.79	9.50	2-36
Number of no shows	1.55	2.60	1.00	0-12
Number of cancelled sessions	4.27	3.17	4.00	0-13
Number of total HYPE sessions	32.82	16.04	29.50	13-97
Number of follow-up sessions	2.00	1.69	2.00	0-5
	N	%		
Dropout	0	0.0%		
Negotiated early ending	3	13.6%		
Inpatient admissions	1	4.5% (1 night)		
Study dropouts (n = 7)				
	M	SD	Median	Range
Number of individual CAT sessions	8.57	5.53	11.00	2-16 /
	N	%		
Reformulation letter discussed	4	57.1%		
Goodbye letter discussed	3	42.9%		
Goodbye letter patient discussed	2	28.6%		
	M	SD	Median	Range
Number of sessions family intervention	4.14	2.19	3.00	3-9
Number of generic psychiatric care sessions	3.86	1.68	3.00	2-7
Number of psychosocial coaching sessions	2.00	1.73	2.00	0-4
Amount of phone contact	12.86	5.61	15.00	4-19
Number of no shows	3.86	3.98	3.00	0-10
Number of cancelled sessions	4.00	1.73	4.00	2-6
Number of total HYPE sessions	20.43	5.59	21.00	13-28
	N	%		
Dropout	1	14.3%		
Negotiated early ending	3	42.9%		
Inpatient admissions	0	0.0%		

Table 3 Means, Standard Deviations and Ranges of Pre- and Posttreatment Total Difficulties, Prosocial Behaviour, Emotional Problems, Self-harming Behaviour and Problems in Alcohol and Drug Use (n = 22)

	Pre-treatment (Wave 1)			Posttreatment (Wave 2)		
	M	SD	Range	M	SD	Range
Total difficulties	20.50	4.33	11-28	18.73	4.69	9-26
Prosocial behaviour	8.41	1.74	3-10	8.73	1.58	5-10
Emotional problems	7.73	1.80	4-10	6.91	2.27	2-10
Self-harming behaviour	2.59	1.05	0-4	2.09	1.05	0-4
Problems in alcohol use	0.64	0.95	0-4	0.50	0.96	0-4
Problems in drug use	0.14	0.47	0-2	0.32	1.04	0-4

Aim c: providing a preliminary test of pre- and posttreatment measurement of general difficulties, and prosocial behaviour

Mean scores and standard deviations of pre- and posttreatment of total difficulties, prosocial behaviour and co-occurring difficulties are shown in Table 3. The group mean score of total difficulties is lower at the second wave than at the first wave (Mean$f$ = 0.23; 95% CI = 0.40-3.15 on a 0-40 scale; t(21) = 2.68, p < .05, 95% CI [0.40, 3.15]). Rank-order stability of total difficulties was high (test-retest correlation = .77). Group mean scores of prosocial behaviour did not significantly change between the two measurement points (Mean▲ = 1.77; 95% CI = -0.71-0.08, on a 0-10 scale; t(21) = -1.67, p = .11). Rank-order stability of prosocial behaviour was high (test-retest correlation = 0.86). The group mean score of emotional problems is slightly higher at the first wave than at the second wave (Mean▲ = 0.82; 95% CI = 0.01-1.62 on a 0-10 scale; t(21) = 2.11, p < 0.05). The relative ordering of individuals on emotional problems was modestly stable over time (test-retest correlation = 0.62). The group mean score of self-harming behaviour is somewhat lower at the second wave than at the first wave (Mean▲ = 0.50; 95% CI = 0.05-0.95 on a 0-4 scale; t(21) = 2.318, p < 0.05). Rank-order stability of self-harming behaviour was fairly high (test-retest correlation = 0.70). The group mean scores of problems in alcohol use are nearly the same across measurement points (Mean▲ = 0.14; 95% CI = -0.36-0.64 on a 0-6 scale; t(21) = 0.568, p = 0.576). The relative ordering of individuals on alcohol use was fairly unstable over time (test-retest correlation = 0.31). Finally, mean scores of problems in drug use also appeared to be nearly the same across measurement points (Mean▲ = -0.18; 95% CI = -0.44-0.08

on a 0-6 scale; $t(7.397) = 0.932$, $p = 0.381$). Rank-order stability of drug use was very high (test-retest correlation = 0.98). Given the small sample size, reluctance is needed in interpretation of the results of the statistical tests.

Additionally, to describe possible differences between individuals who participated in the first and second measurement and individuals who did not attend the second measurement point ('study dropouts'), the means and standard deviations of HYPE treatment elements, BPD features, prosocial behaviour, and total difficulties of the latter group are presented in Table 2 and 4. No statistical test was conducted to test for significant differences, given the small sample size.

Table 4 Means, Standard Deviations and Ranges of BPD Features, Total Difficulties and Prosocial Behaviour for Study Dropouts (n=7)

	M	SD	Range	Mean ▲ compared to study sample
BPD score SCID II PQ wave 1	10.43	2.88	6-15	1.48
Total difficulties wave 1	20.29	3.99	13-24	0.21
Prosocial behaviour wave 1	8.14	1.77	5-10	0.27
Emotional problems wave 1	7.29	3.25	1-10	0.44
Self-harming behaviour wave 1	2.86	0.90	2-4	-0.27
Problems in alcohol use wave 1	0.14	0.38	0-1	0.49
Problems in drug use wave 1	0.43	0.79	0-2	-0.29

Discussion

Within a lifespan developmental perspective on BPD, highlighting the clinical significance of subthreshold BPD, the need for early intervention becomes increasingly clear. In order to study feasibility of a future randomized controlled study on early intervention in the Netherlands, the purpose of this pilot study was (a) to better understand the sample characteristics within an early intervention program, (b) to understand how the different treatment modalities within the HYPE program were used, and (c) to provide a preliminary test of how experienced difficulties and psychosocial functioning change within adolescents participating in the HYPE program.

First, in exploring the sample we can conclude that despite the

reluctance in the clinical field (Laurenssen *et al*., 2013), young people with (sub)threshold BPD were actually being treated in a specialized early intervention program for BPD. This is an important finding, as delay in diagnosis and treatment has long been considered the norm in treatment of BPD, while early intervention seems effective at improving functioning and prognosis (Chanen, Sharp, & Hoffman, 2017). However, we do not have data on the number of young people who were not referred or who refused referral to the HYPE program, so no conclusions can be drawn on the level of willingness versus reluctance in clinicians to refer young people with subthreshold BPD to early intervention.

Second, in exploring the use of the different treatment modules of HYPE, descriptives showed that, in addition to, on average 15 sessions of individual CAT, young patients in the HYPE program also received family intervention, sessions of generic psychiatric care and psychosocial coaching, adding up to on average 29 sessions of treatment within the HYPE program. No participants dropped out of treatment. This is a remarkable finding as BPD in adults generally is associated with substantial fluctuations in completion rates in treatment, fluctuating from 33-37% in any psychological treatment to 75% in psychotherapeutic interventions that have been shown to be effective in treating BPD (Barnicot, Katsakou, Marougka, & Priebe, 2011). Specifically in intervention studies of self-harming adolescents, who are considered at risk for already having or developing BPD (Kaess, Brunner, & Chanen, 2014), poor adherence to follow-up is a major obstacle in providing treatment. Ougrin, Ng, and Low (2008) found a robust improvement of adherence after a CAT-based therapeutic assessment, suggesting the need of an integrative therapeutic model over a single therapeutic method as in engaging young people a variety of therapeutic tools may be needed.

Third, in comparing pre-treatment-posttreatment preliminary findings suggest a decrease in experienced general difficulties, emotional problems and self-harming behaviour. In prosocial behaviour, problems in alcohol use and problems in drug use, no significant were found at six-month follow-up. Prosocial behaviour was already in the normal range at the pre-treatment measurement and remained unchanged. This could imply that the items of the prosocial behaviour scale of the SDQ do not reflect the social difficulties young people with BPD meet. For both problems in alcohol use and problems in drug use, very low levels of problems were reported in this sample. As the criteria of BPD wax and wane over time (Temes & Zanarini, 2018), we did not use BPD criteria as an outcome variable in this study but focused on general and emotional

difficulties and prosocial behaviour. Given the small sample size no conclusions can be drawn from these findings.

In this preliminary testing of how experienced difficulties and psychosocial functioning changed within adolescents participating in the HYPE program 7 participants dropped out of the study, as they did not attend the second measurement at six-month follow-up. This group is worthwhile considering, as they showed less use of treatment modules compared to the participants that completed the study, as shown in less CAT sessions, a lower percentage of reformulation letters that were discussed, less family intervention and a higher number of telephone contact and no-show during treatment sessions and a higher percentage of negotiated early endings. In this group 1 participant dropped out of treatment as well, and the other six remained in treatment although they dropped out of the study. The contrast of dropping out of the study, but not out of treatment is worthwhile considering. It is assumed that treatment dropouts may be more likely to drop out of research assessments than treatment completers, research data may therefore become skewed towards outcomes for treatment completers even when an intention-to-treat analysis is used, limiting its generalizability. However, given the differences we observed in this study between both the participants who completed the six-month follow up measurement and the participants who did not, this might suggest that this group of patients, at an earlier stage had different needs for treatment compared to the group of completers of the study. Based on the results, it is not clear whether is because they have attained the aims for their treatment and experience better functioning, or that therapy has not met their needs. Although, they have had an negotiated ending, which could be interpreted as a collaborative decided ending which specific attention for the ending of therapy and some goodbye letters discussed, we cannot draw any conclusions on the reason for an early ending of treatment. However, considering the importance of endings in intervention for this specific population, in future research it should incorporate findings on (negotiated) early endings and dropout as well.

There are three important limitations to this pilot study. A first limitation is the small sample size. Therefore, our results should be regarded with caution and need to be replicated in future studies with more statistical power. A second limitation is the lack of a control/ comparison group, which means that changes in participants' experience of difficulties cannot be solely attributed to their early intervention. A third limitation was a lack of formal treatment-adherence monitoring.

Although all treatments were supervised and closely monitored within the HYPE team, no structured treatment-adherence monitoring was used. These studies should be addressed within future randomised controlled studies on early intervention.

Despite these limitations there are important implications from this study. A strong point is the reliance on a clinical sample of youth in the age when BPD typically emerges clinically, which allows the preliminary findings to be both generalizable and applicable to a vulnerable group of individuals with (emerging) borderline personality pathology. In addition, we were able to differentiate the different treatment modules within an early intervention program, which need to be studied further in investigating the specific outcomes of each treatment module within an early intervention program.

In conclusion, the present study provides a description of HYPE as an early intervention of BPD in the Netherlands. In further studies feasibility of the trial procedure and patient experience of the treatment should be investigated. Specifically, in future studies special attention should be paid to no-shows and an increase of phone contacts as possible signs of an earlier ending of therapy than originally agreed upon. It should be further investigated how this could be interpreted, for example in the light of improved functioning and despite of a time limited focus still aiming for longer-term therapies than matching the needs of the young person. The current findings suggest that it would be worthwhile to proceed to a randomised controlled trial. Such a trial should investigate the effectiveness of the early intervention program and the different treatment modules within this program. Specifically in a trial focused on early intervention, a risk for comparison with unstructured care needs to be anticipated for, as delay in the diagnosis of BPD in young people (Laurenssen, 2013), could result in offering unstructured treatment-as-usual in clinical practice. In randomized controlled trials for specialised treatments for BPD, well-organized comparator treatments are shown to be equally effective (Bateman, 2012). Therefore, a need for focus on structured intervention is important, carefully minding the risks for cross-contamination due to overlap between therapists' attitudes or techniques used and studying the value of structured early intervention for BPD as well as the mechanisms of change during early intervention. In addition, special attention should be paid to adherence both to treatment and to the study, in which the length of treatment should be carefully considered. This pilot study was a first exploration on early intervention in the Netherlands, offering a helpful characterisation of both the patient sample

and the treatment modules within early intervention. Preliminary findings in this study support the argument for early intervention studies in general. Moreover, our findings indicate the need for early intervention in the European setting and call for more extensive effectiveness studies aligning those conducted in Australia. □

ADDITIONAL INFORMATION

On behalf of all authors, the corresponding author states that there is no conflict of interest.

This study has been performed in accordance with the ethical standards of the involved institutes institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from all individual participants included in the study.

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ACKNOWLEDGEMENTS

The authors would like to thank the patients and clinical and research staff of the Early Intervention Program 'Helping Young People Early' (HYPE) for their contribution to the data collection of this study.

REFERENCES

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

Bateman, A. (2012). Treating borderline personality disorder in clinical practice. *American Journal of Psychiatry*, *169*, 560–563. doi:10.1176/appi.ajp.2012.12030341

Barnicot, K., Katsakou, C., Marougka, S., & Priebe, S. (2011). Treatment completion in psychotherapy for borderline personality disorder–a systematic review and meta-analysis. *Acta Psychiatrica Scandinavica*, *123*(5), 327-338. doi: 10.1111/j.1600-0447.2010.01652.x

Calvert, R. and Kellett, S. (2014) Cognitive analytic therapy: A review of the outcome evidence base for treatment. Psychology and Psychotherapy: Theory, Research and Practice, 87 (3). pp. 253-277. ISSN 1476-0835 https://doi.org/10.1111/papt.12020

Chanen, A. M., Jackson, H. J., McGorry, P. D., Allot, K. A., Clarkson, V., & Yuen, H. P. (2004). Two-year stability of personality disorder in older adolescent outpatients. *Journal of Personality Disorders, 18*, 526-541.

Chanen, A. M., Jovev, M., & Jackson, H. J. (2007). Adaptive functioning and psychiatric symptoms in adolescents with borderline personality disorder. *Journal of Clinical Psychiatry, 68*, 297-306.

Chanen, A.M., Jovev, M., Djaja, D., McDougall, E., Yuen, H.P., Rawlings, D., & Jackson, H.J. (2008). Screening for Borderline Personality Disorder in Outpatient Youth. *Journal of Personality Disorders, 22*(4), 353-364. https://doi.org/10.1521/pedi.2008.22.4.353

Chanen, A. M., & Kaess, M. (2012). Developmental pathways to borderline personality disorder. *Current Psychiatry Reports, 14*, 45-53. doi: 10.1007/s11920-011-0242-y

Chanen, A. M., Mccutcheon, L. K., Germano, D., Nistico, H., Jackson, H. J., & Mcgorry, P. D. (2009). The HYPE Clinic: an early intervention service for borderline personality disorder. *Journal of Psychiatric Practice*, *15*(3), 163-172. doi: 10.1097/01.pra.0000351876.51098.f0

Chanen, A. M., & McCutcheon, L. (2013). Prevention and early intervention for borderline personality disorder: current status and recent evidence. *The British Journal of Psychiatry, 202*, s24-s29. doi: 10.1192/bjp.bp.112.119180

Chanen, A. M., McCutcheon, L., & Kerr, I. B. (2014). HYPE: a cognitive analytic therapy-based prevention and early intervention programme for borderline personality disorder. In *Handbook of borderline personality disorder in children and adolescents* (pp. 361-383). Springer, New York, NY.

Chanen, A. M., Nicol, K., Betts, J. K., & Thompson, K. N. (2020). Diagnosis and Treatment of Borderline Personality Disorder in Young People. *Current Psychiatry Reports, 22*(5), 25-25.

Chanen, A., Sharp, C., & Hoffman, P. (2017). Prevention and early intervention for borderline personality disorder: a novel public

health priority. *World Psychiatry*, *16*(2), 215. doi:10.1002/wps.20429

Chanen, A. M., & Thompson, K. (2014) Preventive strategies for borderline personality disorder in adolescents. *Current Treatment Options in Psychiatry*, *1*(4), 358-368. doi: 10.1007/s40501-014-0029-y

Clarke, S., Thomas, P., & James, K. (2013). Cognitive analytic therapy for personality disorder: randomised controlled trial. *The British Journal of Psychiatry*, *202*(2), 129-134.

Fonagy, P., Speranza, M., Luyten, P., Kaess, M., Hessels, C., & Bohus M. (2015). Borderline personality disorder in adolescence: An expert research review with implications for clinical practice. *European Child & Adolescent Psychiatry, 24,* 1307-1320. doi: 10.1007/s00787-015-0751-z

Gibbon, M, Spitzer, R.L., Williams, J.B., Benjamin, L.S., & First, M.B. (1997). *Structured clinical interview for DSM-IV axis II personality disorders (SCID-II)*. Am Psych Pub.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of Child Psychology and Psychiatry*, *38*(5), 581-586.

Goodman, A., & Goodman, R. (2009). Strengths and difficulties questionnaire as a dimensional measure of child mental health. *Journal of the American Academy of Child and Adolescent Psychiatry, 48*(4), 400-403.

Ha, C., Balderas, J.C., Zanarini, M.C., Oldham, J., & Sharp, C (2014). Psychiatric comorbidity in hospitalized adolescents with borderline personality disorder. *Journal of Clinical Psychiatry, 75*, 457–64. https://doi.org/10.4088/JCP.13m08696

Hallam, C., Simmonds-Buckley, M., Kellett, S., Greenhill, B., & Jones, A. (2020). The acceptability, effectiveness, and durability of cognitive analytic therapy: Systematic review and meta-analysis. *Psychology and Psychotherapy Research: Theory, Research and Practice.* https://doi.org/10.1111/papt.12286

Hopwood, C. J. , Wright, A. G. C., Ansell, E. B., & Pincus, A. L. (2013). The interpersonal core of personality pathology. *Journal of Personality Disorders,* 27(3), 270-295. doi: 10.1521/pedi.2013.27.3.270

Johnson, J. G., Chen, H., & Cohen, P. (2004). Personality Disorder Traits During Adolescence and Relationship with Family Members during the Transition to Adulthood. *Journal of Consulting and Clinical Psychology, 72* (6), 923-932. doi: 10.1037/0022-006X.72.6.923

Johnson, J.G., Cohen, P., Kasen, S., Skodol, A.E., Oldham, J.M (2008). Cumulative prevalence of personality disorders between adolescence and adulthood. *Acta Psychiatrica Scandinavia, 118*, 410–3. https://doi.org/10.1111/j.1600-0447.2008.01231.x.

Laursen, B., & Collins, W. A. (1994). Interpersonal conflict during adolescence. **Psychological Bulletin**, 115, 197-209**.** doi: 10.1037/0033-2909.115.2.197

Laurenssen, E. M. P., Hutsebaut, J., Feenstra, D. J., Van Busschbach, J. J., & Luyten, P. (2013). Diagnosis of personality disorders in adolescents: a study among psychologists. *Child and Adolescent Psychiatry and Mental Health*, 7(1), 3.

Kaess, M., Brunner, R., & Chanen, A. (2014). Borderline personality disorder in adolescence. *Pediatrics*, *134*(4), 782-793. Doi: 10.1542/peds.2013-3677

Miller, A. L., Muehlenkamp, J. J., & Jacobson, C. M. (2008). Fact of Fiction: Diagnosing borderline personality disorder in adolescents. *Clinical Psychology Review 28*, 969- 981.

Muris, P., Meesters, C., & van den Berg, F. (2003). The strengths and difficulties questionnaire (SDQ). *European Child and Adolescent Psychiatry*, *12*(1), 1-8.

Mulder, R., & Chanen, A. M. (2013). Effectiveness of cognitive analytic therapy for personality disorders. *The British Journal of Psychiatry*, *202*(2), 89-90. doi: 10.1192/bjp.bp.112.113571

National Health and Medical Research Council (2012). Clinical Practice Guideline for the Management of Borderline Personality Disorder. NHMRC, Canberra. Retrieved from: https://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/mh25_borderline_personality_guideine.pdf.

Newton-Howes, G., Clark., LA, & Chanen, A. (2015). Personality disorder across the life course. *The Lancet*, *385*(9969), 727-734.

Ougrin, D. O., Ng, A. V., & Low, J. (2008). Therapeutic assessment based on cognitive–analytic–therapy for young people presenting

with self-harm: pilot study. *Psychiatric Bulletin*, *32*(11), 423-426. doi:10.1192/pb.bp.107.018473

Paris, J. (2014). Commentary. The relevance of social capital for the treatment of personality disorders. *Personality and Mental Health, 8*, 24-29.

Pollock, P. H., Broadbent, M., Clarke, S., Dorrian, A., & Ryle, A. (2001). The Personality Structure Questionnaire (PSQ): A measure of the multiple self states model of identity disturbance in Cognitive analytic therapy. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice, 8*(1), 59-72.

Ryle, A. (2004). The contribution of cognitive analytic therapy to the treatment of borderline personality disorder. *Journal of personality Disorders*, *18*(1), 3-35.

Ryle, A., & Golynkina, K. (2000). Effectiveness of time limited cognitive analytic therapy of borderline personality disorder: Factors associated with outcome. *British Journal of Medical Psychology, 73*(2), 197-210.

Ryle, A., & Kerr, I. (2002). *Introducing CAT principles and practice*. Chichester: Wiley.

Sharp, C. (2016). Current trends in BPD research as indicative of a broader sea-change in psychiatric nosology. *Personality Disorders: Theory, Research, and Treatment,* 7(4), 334-343. Doi: 10.1037/per0000199

Temes, C. M., & Zanarini, M. C. (2018). The longitudinal course of borderline personality disorder. *Psychiatric Clinics*, *41*(4), 685-694. doi:10.1016/j.psc.2018.07.002

Thompson, K. N., Jackson, H., Cavelti, M., Betts, J., McCutcheon, L., Jovev, M., & Chanen, A. M. (2019). The clinical significance of subthreshold borderline personality disorder features in outpatient youth. *Journal of personality disorders*, *33*(1), 71-81.

van Alebeek, A., van der Heijden, P. T., Hessels, C., Thong, M. S., & van Aken, M. (2015). Comparison of three questionnaires to screen for borderline personality disorder in adolescents and young adults. *European Journal of Psychological Assessment*.

Oort, M. van, H. van't Land, C. de Ruiter (2006). Handleiding voor het gebruik van het screeningsinstrument psychische stoornissen (SPsy) binnen Bureau Jeugdzorg. Utrecht: Trimbos instituut.

Westen, D., Shedler, J., Durrett, C., Glass, S., & Martens, A. (2003). Personality diagnoses in adolescence: DSM-IV Axis II Diagnoses and an empirically derived alternative. *American Journal of Psychiatry,160*, 952-966.

Widiger, T. A., & Trull, T. J. (2007). Plate tectonics in the classification of personality disorder: Shifting to a dimensional model. *American Psychologist, 62*(2), 71-83.

Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: prognosis for functioning over 20 years. *Journal of Child Psychology and Psychiatry, 49*(9), 933-941.

Zimmerman, M., Chelminski, I., Young, D., Dalrymple, K., & Martinez, J. (2013). Is dimensional scoring of borderline personality disorder important only for subthreshold levels of severity?. *Journal of Personality Disorders*, *27*(2), 244-251. Doi: 10.1521/pedi_2012_26_022

Zwaanswijk, M. (2016). De zelftest van Mindmasters.nl.