BRIEF REPORT

First Empirical Evaluation of Outcomes for Mentalization-Based Group Therapy for Adolescents With BPD

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Adolescent borderline personality disorder (BPD) is a devastating disorder, and it is essential to identify and treat the disorder in its early course. A total of 34 female Danish adolescents between 15 and 18 years old participated in 1 year of structured mentalization-based group therapy. Twenty-five adolescents completed the study, of which the majority (23) displayed improvement regarding borderline symptoms, depression, self-harm, peer-attachment, parent-attachment, mentalizing, and general psychopathology. Enhanced trust in peers and parents in combination with improved mentalizing capacity was associated with greater decline in borderline symptoms, thereby pointing to a candidate mechanism responsible for the efficacy of the treatment. The current study provides a promising rationale for the further development and evaluation of group-format mentalization-based treatment for adolescents with borderline traits.

Keywords: mentalization, adolescents, group treatment, epistemic trust, borderline personality disorder

Borderline personality disorder (BPD) is characterized by a range of symptoms such as emotional and behavioral dysregulation, affective instability, unstable relationships, impulsivity, self-

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harm, and suicide attempts (Gunderson & Links, 2008). In both adults and adolescents, personality disorders severely undermine social functioning (Johnson et al., 2005), and are related to poor quality of life and high societal costs (Feenstra et al., 2012). Prevalence rates for BPD in adolescents has been reported as high at 14% (Chabrol, Montovany, Chouicha, Callahan, & Mullet, 2001), but studies generally report prevalence rates between 1.0% and 3.3% (Bernstein et al., 1993).

Research shows that BPD can be diagnosed reliably in adolescents (Chanen & Kaess, 2012; Sharp & Romero, 2007), and accordingly, the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*–5, American Psychiatric Association, 2013) legitimizes the diagnosis of BPD in patients younger than 18 years. Moreover, adolescent BPD appears to have similar comorbidity patterns compared to adults (Cohen, 2008), and is linked to poor social (Zanarini, Frankenburg, Reich, & Fitzmaurice, 2010) and poor functional (Winograd, Cohen, & Chen, 2008) outcomes.

Given the above, early intervention for adolescent BPD is essential. Nonetheless, there is a paucity of research exploring the effect of treatment programs for BPD in adolescents (Biskin, 2013). One treatment method that has been tested is Mentalization-Based Treatment for Adolescents (MBT-A; Rossouw & Fonagy,

2012). MBT-A was developed from its adult counterpart (Bateman & Fonagy, 2008) and is grounded in mentalization-based theory, where an integration of attachment theory and the development of mentalizing are combined to explain one pathway for the development of BPD (Bateman & Fonagy, 2004). Mentalizing refers to the capacity to understand mental states in self and others, and that human actions are rooted in mental states, such as desires, beliefs, wishes, and so forth (Fonagy & Target, 1997). The concept of mentalizing is related to Theory of Mind, social cognition, and metacognition (Bo, Abu-Akel, Kongerslev, Haahr, & Bateman, 2014), and has been shown to be impaired in adolescent borderline patients, (see Sharp, 2014, for a review), potentially accounting for the problems in social functioning and interpersonal conflicts observed in these patients (Bateman & Fonagy, 2011). Recent extensions of the basic theory suggest specific developmental factors for the emergence of BPD in adolescents' linking attachment, mentalizing, and the concept of epistemic trust in the understanding of BPD, along with suggestions on how to tailor the specific treatment (Bo, Sharp, Fonagy, & Kongerslev, 2015; Sharp, 2014). The main prediction is that interventions aimed at enhancing patients' mentalizing capacity will alleviate symptoms and improve interpersonal functioning, which has been documented in various studies (Bateman & Fonagy, 1999, 2001, 2008, 2009). Furthermore, by enhancing mentalization, the capacity to trust others and to make use of social and cultural information from peers and relatives is improved, and epistemic trust established (Bo et al., 2015; Fonagy & Allison, 2014; Fonagy, Luyten, & Allison, 2015).

Accordingly, MBT for adults is composed of a combination of individual and group psychotherapy with an emphasis on interventions enhancing the capacity to mentalize. Several studies have found MBT to be cost-effective and superior to treatment as usual (TAU) in adults (Bateman & Fonagy, 1999, 2001, 2008, 2009). However, only two studies have thus far evaluated MBT in adolescents: To examine the effectiveness of MBT-A, Rossouw and Fonagy (2012) used a randomized-controlled design to show that a specifically tailored MBT program (weekly individual sessions and monthly family therapy sessions) for adolescents with selfharming behavior was superior to TAU. Laurenssen et al. (2014) evaluated outcomes of a mentalization-based treatment program for adolescent patients with BPD and observed a decrease in clinical symptomatology and enhanced social functioning over the course of a 12-month MBT program that included individual, group, and family MBT therapy for inpatient adolescents with

Clearly, there is a need for further studies to empirically evaluate MBT for adolescents. In the present study, we aimed to build on the results of prior studies by focusing on group-based MBT for adolescents. In the original MBT treatment manual for adults (Bateman & Fonagy, 2004), it is argued that the primary treatment modality of MBT should include group therapy because of the core dysfunctions seen in these patients' capacity to engage in social relations with other people. Furthermore, Karterud (2012) has described the overt benefits of working with BPD patients in a group format. Hence, the role of the individual therapy module is primarily to ensure attendance to group therapy and to avoid premature exit from the MBT treatment program. Moreover, group therapy may be particularly suited for adolescent populations where the influence of peers is understood to be highly salient

(Steinberg, 2005). However, to our knowledge, there are no studies that have evaluated treatment outcomes where MBT group treatment is the primary intervention in adolescent BPD. In addition, prior studies of MBT in adolescents have not assessed outcomes in theoretically relevant constructs associated with MBT such as reflective function and attachment. Therefore, an additional aim of the current study was to evaluate outcomes also in these domains.

To summarize, the scientific rationale for the current study is based on the following: (a) BPD in adolescence is a major problem with substantial social, interpersonal, and economic consequences if left untreated; (b) it is possible to detect and diagnose BPD in adolescent populations; (c) BPD patients are defined by marked difficulties in the capacity to mentalize, which results in decreased social functioning; (d) MBT has shown to be effective for adolescence populations with BPD, although more research is needed in this area; (e) MBT-Group intervention strategies are pertinent to this population because of their core pathology evolving around social and interpersonal issues; and, (f) only a few studies have been conducted, and none have focused on group interventions as the primary intervention strategy.

Method

Setting

The study was conducted at three outpatient child and adolescent psychiatric clinics in Region Zealand in Denmark serving adolescents aged 13–17. The study was approved by the Regional Ethics Committee of Zealand (SJ-371) and the Danish Data Protection Agency (REG-55–2014).

Participants and Recruitment

Patients were included on the basis of the following inclusion criteria: (a) meeting at least four out of the nine DSM-5 BPD criteria, (b) parents' or parent substitutes' commitment to participate in the MBT-Parents program and to support their child's participation in the program, and (c) signing an informed consent (parents) and assent (adolescent). Exclusion criteria were (a) comorbid diagnosis of pervasive developmental disorder, (b) learning disability, (c) anorexia, (d) current psychosis, (e) diagnosis of schizophrenia or schizotypal and antisocial PD, or current substance dependence. All patients that were referred to the Child and Adolescent Psychiatric Unit in Region Zealand were evaluated for potential personality pathology by experienced psychiatrists and psychologist working in the three clinics. Those patients meeting the inclusion criteria were asked if they wanted to participate in the study, and their parents were invited to an information meeting where the group-based MBT program was presented. Patients were enrolled in the study in 2013 and 2014. Fifty-two eligible patients were asked to participate, 34 gave consent, 9 patients dropped out of the treatment program prior to completion, and 25 completed treatment (see Table 1).

Treatment

Group-based MBT for adolescents is a 1-year structured psychotherapeutic program aimed at treating BPD in adolescents. The program consists of the following elements: (a) MBT-Introduction

Table 1
Demographic Features of 36 Danish Adolescents With Borderline Personality Disorders

Demographics (at baseline, $N = 34$)	Completers $(n = 25)$	Non-completers $(n = 9)$		
Age				
Mean years (SD), range	16.4 (.9), 15 to 18	16.3 (.9), 15 to 18		
Sex				
Male	0 (0%)	0 (0%)		
Female	25 (100%)	9 (100%)		
Upbringing				
Both parents	9 (36%)	3 (33%)		
Mother	13 (52%)	5 (56%)		
Father	2 (8%)	1 (11%)		
Foster care	1 (4%)	0 (0%)		
Education				
Primary School	18 (72%)	8 (89%)		
High school	1 (4%)	0 (0%)		
Youth education	3 (12%)	1 (11%)		
None	3 (12%)	0 (0%)		
Living with				
Parents	21 (84%)	8 (89%)		
Appartment	1 (4%)	0 (0%)		
Fostercare	3 (12%)	1 (11%)		
Civil status				
Single	18 (72%)	8 (89%)		
In a relationship	7 (28%)	1 (11%)		
Job status (beside school)				
In a job	5 (20%)	1 (11%)		
Not in job	20 (80%)	8 (89%)		
Treatment duration				
Mean, months (SD)	8.3 (1.3)	1.3 (.5)		

Note. No significant difference were found between the completers and non-completers on demographic variables, except for a (trivial) difference in treatment duration.

(MBT-I), and (b) MBT-Group therapy (MBT-G) and MBT-Parents (MBT-P; see Beck et al., 2016). MBT-G was adapted to adolescents from the original adult MBT program (Bateman & Fonagy, 2004) and through consideration of MBT group treatment principles developed by Karterud (2012). All patients enrolled in the treatment were offered two individual case-formulation sessions (1 hour each session), followed by six group-based MBT-I sessions (1[1/2] hours, see Karterud & Bateman, 2011 for the principles explaining MBT-I). Subsequently, patients had 34 sessions of MBT group-therapy (1[1/2] hours, see Karterud, 2012, for the treatment model). Concurrent with MBT-G, the patients' parents/caregivers received an introduction to mentalization, personality disorder, attachment, and self-regulation (MBT-P, 7 sessions). Individual case management and ad hoc crisis management were undertaken jointly by group therapists.

Therapists

All therapists were experienced psychiatrists or psychologists. Prior to initiating the MBT program, all therapists participated in a 7-day MBT group seminar. All therapists received monthly supervision by specialists in MBT and adolescent psychiatry to acquire MBT techniques and skills as well as to ensure treatment adherence in regard to the manual developed by Karterud (2012).

Measures

The primary outcome was the *Borderline Personality Features Scale for Children* (BPFS-C, Crick, Murray-Close, & Woods, 2005). The scale assesses borderline personality traits dimensionally. The BPFS-C is adapted from the borderline scale of the Personality Assessment Inventory (PAI; Morey, 1991) to be used with children and adolescents (from 9 years). Responses are scored on a 5-point Likert scale, ranging from 1 (*not at all true*) to 5 (*always true*) with higher total scores indicating greater levels of borderline personality features. Crick et al. (2005) demonstrated high internal consistency and established evidence for the construct validity. Sharp and colleagues established evidence for the criterion validity, cross-informant concordance, and concurrent validity (Sharp, Mosko, Chang, & Ha, 2011). Chang, Sharp, and Ha (2011) found that the optimal cut-off for discriminating BPD was 66 for the BPFS-C.

The Youth Self-Report (YSR, Achenbach, 1991; Achenbach & Rescorla, 2001) obtains 11- to 18-year-olds' self-ratings of 104 specific emotional, behavioral, and social problems and measures various forms of psychopathology. It has shown excellent psychometric properties and good correspondence with specific DSM diagnostic categories (Achenbach, Dumenci, & Rescorla, 2003; Nakamura, Ebesutani, Bernstein, & Chorpita, 2009).

Beck Depression Inventory for Youth (BDI-Y, Beck, Beck, Jolly, & Steer, 2005) from Beck Youth Inventories of Emotional and Social Impairment was used to assess depression. The test has shown good psychometric properties including concurrent validity (Ambrosini, Metz, Bianchi, Rabinovich, & Undie, 1991).

Risk-Taking and Self-Harm Inventory for Adolescents (RTSHI-A, Vrouva, Fonagy, Fearon, & Roussow, 2010) measures self-reported self-harming behavior. The RTSHI-A is a 38-item self-report questionnaire adapted from the adult Self Harm Inventory (SHI, Sansone, Wiederman, & Sansone, 1998) for use with adolescents. The measure requires the adolescent to rate the frequency with which he or she has engaged in self-harm or risk-taking behaviors, using a 4-point Likert scale. The RTSHI-A has been shown to have excellent reliability and validity (Vrouva et al., 2010).

Inventory of Parent and Peer Attachment—Revised (IPPA-R, Gullone & Robinson, 2005) is a reliable and valid 53-item self-report questionnaire measuring attachment in adolescence. The instrument is composed of two scales, measuring attachment in regard to both parents and peers.

Reflective Function Questionnaire for Youth (RFQ-Y, Sharp et al., 2009) is a 46-item self-report questionnaire measuring the general capacity to mentalize. It has shown good psychometric properties, including construct validity (Ha, Sharp, Ensink, Fonagy, & Cirino, 2013).

Each of the instruments were applied in Danish translated versions that were back-translated using established procedures. All outcome measures were based on self-report. The importance of using patient-reported outcomes has been highlighted in a recent publication by Johnston et al. (2013). Demographic and socioeconomic information were collected during assessment procedures and from medical journals.

Statistical Analysis

Baseline features were summarized using descriptive statistics. We performed paired sample *t* tests to evaluate within-person change from baseline to end of treatment. The effects are expressed as average change scores along with their 95% confidence interval. In addition, we used Jacobson, Follette, and Revenstorf's (1984) "responder" definitions of clinical significant change to assess whether any changes could be perceived as clinically relevant (Criterion A: more than 2 *SD* below the mean of the "problem group"; Criterion B: within 2 *SD* from the mean of the "normal" population). To decide clinically significant change we used norms from Crick et al.'s (2005) study (BPFS-C), Gullone and Robinson's (2005) study (IPPA-R, peer and parent trust), and Ha et al.'s (2013) study (RFQ-Y).

Results

During the course of the treatment we observed a significant reduction of the borderline personality score (BPFS-C, from 84.5 to 64.6, see Table 2). We also found significant improvements for the general psychopathology (YSR-Total and YSR-internalizing), mentalizing (RFQ-Y), peer and parent attachment (IPPA-R), self-harm (RTSHI-A Self-harm), and depressive features (BDI-Y, see Table 2). We did not find any significant improvements for externalizing psychopathology (YSR-externalizing) and risk-taking behavior (RTSHI-A-Total and RTSHI-A Risk Taking). Specifically, and relevant for the mentalizing theory, we found a clinically significant change in terms of Jacobson et al.'s (1984) criterion A and B, for the following measures: borderline pathology (criterion B); mentalizing (criterion A and B); peer trust (criterion A and B); and parent trust (B). (Responder rates are indicated in Table 2.)

Discussion

This study evaluated treatment outcomes of mentalization-based group therapy (MBT-G) for adolescents with BPD. Results provide support for the MBT-G in adolescents with borderline features. The majority of the participants (23 out of 25) displayed symptomatic improvement, specifically, patients showed a marked improvement in borderline traits, depression, peer-attachment, parent-attachment, mentalizing, self-harm, and general symptomatology. The decrease in the mean BPFS-C score from 84.5 to 64.6 in adolescents can be considered clinically significant change in the majority of our patients (see Table 2). In most patients (52%), borderline symptoms dropped below clinical cut-off (Chang et al., 2011) for adolescents in the present study.

Additionally, Ha et al. (2013) found in their study that adolescents mean score for patients who scored above cut-off on the borderline feature scale (BPFS-C) had significantly poorer mentalizing compared to those scoring below cut-off. In this study the mean score for the group at baseline was even poorer than in Ha et al., but increased after end treatment to a higher level, compared to the nonborderline group in Ha et al. In regard to trust toward peers and parents, we found a significant clinical response in the majority of our patients (see Table 2). The increase in trust and mentalization is consistent with theories explaining that the core deficit in BPD is a lack of trust (epistemic mistrust) in information available in social relationships (Bo et al., 2015; Fonagy et al., 2015). Diminished mentalizing and epistemic mistrust shuts down the evolutionary superhighway of learning, fundamental for normal development (Fonagy & Allison, 2014). Reestablishing epistemic trust and mentalizing in the individual provides new relevant social and cultural knowledge valuable for personal growth and development.

Table 2
Treatment of 25 Danish Adolescents With BPD

Clinical measures	Baseline	EOT			Difference*	Α	В
(N = 25)	M(SD)	M(SD)	t(24)	p	(95% CI)	n (%)	n (%)
BPFS-C							_
Total	84.5 (11.4)	64.6 (14.4)	6.99	<.001	19.9 (14.0 to 25.8)	10 (40%)	22 (88%)
YSR	` ′	· · ·			· · · · · · · · · · · · · · · · · · ·	` '	· · · · ·
Total	110.6 (18.7)	89.6 (29.6)	3.16	.004	21.0 (7.3 to 34.8)		
Externalizing	28.8 (10.1)	26.0 (8.6)	1.06	.302	2.8 (-2.6 to 8.2)		
Internalizing	38.0 (9.7)	26.5 (9.6)	3.93	<.001	11.5 (5.5 to 17.6)		
RFQ-Y	6.8 (.6)	9.5 (1.4)	-8.51	<.001	2.7 (2.0 to 3.3)	21 (84%)	23 (92%)
IPPA							
Peer total	52.5 (6.4)	39.2 (5.3)	7.52	<.001	13.3 (9.6 to 16.9)		
Peer trust	22.3 (3.9)	13.6 (3.4)	7.22	<.001	8.7 (6.2 to 11.2)	20 (80%)	23 (92%)
Parent total	55.7 (8.2)	45.3 (4.7)	5.68	<.001	10.4 (6.7 to 14.2)		
Parent trust	20.4 (3.1)	13.6 (2.7)	7.05	<.001	6.7 (4.8 to 8.7)	13 (52%)	23 (92%)
RTSHI-A							
Total	68.8 (10.2)	67.5 (10.7)	1.27	.216	1.3 (8 to 3.4)		
Risk taking	21.7 (6.3)	20.4 (7.3)	1.36	.188	1.3 (7 to 3.3)		
Self-harm	47.2 (8.3)	39.6 (11.1)	3.13	.005	7.6 (2.6 to 12.6)		
BDI-Y	58.4 (9.5)	47.5 (8.2)	6.13	<.001	10.9 (7.1 to 14.3)		

Note. BPFS-C = The Borderline Personality Features Scale for Children; YSR = The Youth Self-Report; RFQ-Y = Reflective Function Questionnaire for Youth; IPPA = Inventory of Parent and Peer Attachment; RTSHI = Risk-Taking and Self-Harm Inventory; BDI-Y = Beck Depression Inventory for Youth; EOT = End of treatment; CI = Confidence interval; A = Criterion A: more than 2 SD below mean of the "problem group"; B = Criterion B, within 2 SD from the mean of the "normal" population.

^{*} Positive differences indicate an improvement.

The drop-out rate was 9 out of 34 (26%) which is in line with that of similar studies (Laurenssen et al., 2014; Rossouw & Fonagy, 2012). We found no significant differences between the completers and noncompleters in regard to demographic and clinical measures, hence no apparent reasons for premature termination of the 9 patients can be provided. No change was demonstrated for the YSR-Externalizing subscale and the Risk-taking subscale of the RTSHI-A. This finding indicates that MBT groups are more helpful for internalizing problems and that externalizing difficulties may need additional intervention.

The results presented in this study need to be interpreted in the context of various essential limitations. First, the study lacked a control group, or intensive repeated measurements that may, under some assumptions, offer a viable alternative to a control group. Therefore, no conclusion can be drawn as to whether the specific MBT intervention techniques account for treatment outcome, or whether outcome was better explained by spontaneous remission or regression to the mean effects. However, given that BPD symptoms generally increase over the adolescent and young adult developmental periods, improvements based purely on developmental factors are unlikely. In addition, the effect sizes reported are similar to those found in previous studies (Laurenssen et al., 2014; Rossouw & Fonagy, 2012), which suggests that the improvement stems, at least partially, from the treatment provided. A second limitation relates to the small sample size, and future research should include larger samples. Another shortcoming is the fact that outcome measures were self-report questionnaires. Relatedly, no interview-based diagnostic information was gathered for BPD or other disorders. Moreover, all participants in this study were girls, and findings can therefore not be generalized to boys. Finally, no systematic adherence ratings were collected, although all therapists were experienced and received supervision every month from an experienced MBT supervisor.

Despite these limitations, results from this study provide important new data that MBT-G holds promise for work with adolescents with BPD and justifies future controlled experimental studies to further evaluate efficacy.

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