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Treating personality fragmentation and dissociation in borderline personality disorder: A pilot study of the impact of cognitive analytic therapy

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Recent findings suggest that personality fragmentation may be a core component of borderline personality disorder (BPD) and that successful treatment of BPD may depend on the extent to which this is addressed. Cognitive analytic therapy (CAT) can increase integration by strengthening awareness, and hence control, of the dissociative processes maintaining fragmentation. This pilot study aimed to conduct a systematic evaluation of the impact of CAT on BPD severity and personality integration. A patient series within-subject design was used. Five BPD participants completed a series of assessments to evaluate the impact of therapy on BPD severity, fragmentation, dissociation, symptomatology and interpersonal adjustment before, during and following 16-session CAT. By follow-up, CAT had produced reductions in the severity of BPD for all five participants, and three participants showed significant changes in their levels of personality fragmentation. Improvements in comorbid disturbance were less consistent, however. Although the small number of participants involved limits these findings, they have theoretical and clinical interest. They generally support the suggestion that integration should be enhanced with BPD patients, and suggest that CAT may be a useful method to achieve this goal.

Interest in borderline personality disorder (BPD) has increased dramatically during the past 15 years. Individuals meeting DSM-IV (American Psychiatric Association, 1994) BPD criteria present themselves to mental health services with increasing frequency (Widiger & Frances, 1989), and receive longer periods of hospital treatment (Stone, Hurt, & Stone, 1987) and more contact from psychiatric out-patient services (Seivewright & Tyrer, 1988) than other groups. Their interpersonal difficulties, impulsivity and parasuicidal behaviour render them a high-risk patient group (Paris, 1993; Stone, 1990) that

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is notoriously difficult to treat effectively (Pope, Jonas, Hudson, Cohen, & Gunderson, 1983; McGlashen, 1987).

Although BPD is the most widely researched personality disorder in terms of epidemiology, diagnosis and aetiology, there are only a few treatment outcome studies. Consequently, the treatment of BPD is based mainly on theoretical guidelines. Different theoretical models assign core component status to different features of BPD, and this has implications for clinical intervention. For example, the central aim of dialectical behaviour therapy (DBT; Linehan, 1993) is to correct emotional dysregulation, while schema-focused approaches (Padesky, 1994; Young, 1994) aim to challenge early maladaptive schemas and extreme construing. Dynamic approaches target yet another feature of BPD. These models regard personality fragmentation—an unstable and discontinuous sense of self—as being a core component of BPD (Kernberg, 1984; Kohut, 1971). Two recent studies provide some support for this interpretation.

Pollock, Broadbent, Clarke, Dorrian, & Ryle (in press) assessed levels of personality fragmentation in three groups: BPD patients, dissociative identity disordered (DID) patients and non-clinical patients. Significantly higher levels of personality fragmentation were found in the BPD group than in the other two groups. High levels of fragmentation were positively related to different aspects of dissociation and mood variability, and were negatively related to improved levels of global functioning for the whole group.

Wildgoose, Waller, Clarke, & Reid (2001) considered the role of personality fragmentation, dissociation and other psychiatric symptoms as factors that might differentiate BPD participants from those with other personality disorders. The BPD group had higher levels of symptomatic distress, which appeared to be mediated by dissociation. This finding is in keeping with recent evidence suggesting that dissociation may mediate the relationship between trauma and psychopathology (Becker-Lausen, Sander, & Chinsky, 1995; Griffin, Resick, & Mechanic, 1997; Zatzick, Marmar, Weiss, & Metzler, 1994). Personality fragmentation also differentiated the two groups, but this was not related to other psychiatric disturbance. Wildgoose *et al.* concluded that, while reducing the levels of comorbid disturbance in BPD depended on reducing dissociation, the amelioration of BPD *per se* may depend on addressing both fragmentation and dissociation.

The relationship between childhood trauma, dissociation and borderline personality disorder is well established (Herman, Perry, & van der Kolk 1989; Ogata, Silk, Goodrick, Lohr, Western, & Hilt, 1990). According to van der Hart, van der Kolk, and Boon (1996), personality fragmentation represents a particular form of dissociation that may be associated with very early trauma. They provide a theoretical model with three distinct but related levels of dissociation.

Primary dissociation involves a fragmented, rather than integrated, processing of traumatic events. Secondary dissociation involves the individual perceiving a traumatic event without experiencing the full emotional impact. Tertiary dissociation (personality fragmentation) involves the development of separate ego-states, some of which contain the traumatic experience, including the traumatic cognitions, emotions and behavioural patterns, while other states remain more or less detached from the trauma.

Given the high levels of dissociative symptomatology and personality fragmentation associated with BPD, the successful treatment of this disorder may depend on the extent

to which all three levels of dissociation are addressed. Cognitive analytic therapy (CAT) (Ryle, 1991, 1995, 1997) offers a potential means of achieving this goal. CAT is a time-limited, integrative therapy that combines understandings from object relations theory with cognitive behavioural features. In contrast with other interventions, the central aim of CAT with BPD patients is to provide a higher-order understanding of the dissociative processes that maintain their fragmented sense of self and others. This approach is thus more likely to ameliorate borderline disturbance by strengthening the patient's capacity to self-reflect on dissociative processes, thereby enhancing control and integration.

Because CAT forms the therapeutic basis of the study described later in this paper, Ryle's BPD model (Ryle, 1997) and the key features of CAT that relate to issues of integration are described here. According to this 'multiple self states' model, BPD is best understood as reflecting the changing dominance of a small range of partially dissociated self-states or reciprocal role procedures (RRPs), either pole of which may be identified in relation to a reciprocating other (or part of the self). According to Ryle (1997), developing awareness of dissociated self-states and offering a corrective therapeutic relationship enhance integration. Unique features of CAT (such as the reformulation letter and the self states sequential diagram (SSSD); a map-like representation of the RRPs) enhance both self-reflection and self-cohesion. The SSSD also enables the therapist to offer a collaborative, non-reciprocating relationship, by providing an informed understanding of the complex transference issues that are likely to develop.

The efficacy of CAT has been assessed by a number of descriptive studies. A recent study of 27 participants showed that 50% no longer met DSM-IV diagnostic criteria for BPD, following 24 weekly sessions of CAT (Ryle & Golynkina, 2000). Although the central aim of CAT with this patient group is to reduce personality fragmentation, no systematic evaluation of the impact of CAT on dissociative processes and integration with BPD participants has been conducted to date. This was the primary aim of the present pilot study.

Method

Given the possibility of individual differences in relationship to outcome, we adopted a within-subjects patient series design to assess the impact of CAT on measures of BPD severity, personality fragmentation, dissociation, symptomatic distress and interpersonal adjustment.

Participants

Five participants (three female, two male) with DSM-IV diagnoses of BPD (American Psychiatric Association, 1994) were recruited to the study from the NHS waiting lists of three experienced clinical psychologists trained in CAT. All participants were assessed by the respective clinical psychologist as meeting DSM-IV criteria for BPD, and all scored above the cut-off score (75) for BPD on the Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, Millon, & Davies, 1994). Psychotic patients and patients with a serious substance-abuse problem were excluded. Only one participant had received any previous psychological therapy. Given the small number of participants, a brief description of each is provided to allow an assessment of the representativeness of the sample. All names have been changed to ensure anonymity.

Trevor was a divorced 36-year-old who had been sexually and physically abused by his father until the age of 14. His adolescence had been characterized by drug and alcohol abuse and an active involvement in gangs. Having married in his early twenties, he later discovered that his wife had been having an affair. He was

subsequently imprisoned following a revengeful attempt to harm her lover. His in-patient admission for depression and suicidal ideation occurred 6 months prior to treatment and he had been taking antidepressants since that time. In terms of DSM-IV criteria (American Psychiatric Association, 1994), his presenting difficulties were an unstable sense of self, self-harm (self-burning and cutting) and other impulsive behaviours, a history of unstable and intense relationships, affective instability, inappropriate anger, severe depression and suicidal ideation. This was Trevor's first experience of psychological therapy.

Paula was a divorced 46 year old with two adult children, one of whom was a heroin addict. Her parents were strict and emotionally unavailable and she had been sexually abused during her adolescence. Several admissions to psychiatric hospitals followed and Paula had been on prescribed medication for 20 years for both unipolar and bipolar depression. Her weight concerns led her to discontinue antidepressant medication. At the time of her referral for CAT, she was not considered to be suffering from bipolar depression. Her presenting difficulties were frantic efforts to avoid real or imagined abandonment, a pattern of intense and unstable relationships, an unstable sense of self, recurrent self-harm (facial hitting) and suicidal ideation, affective instability, inappropriate and intense anger, severe depression and *bulimia nervosa*. Four years before the present referral, Paula had experienced 2 years of cognitive therapy for her depression.

Samantha was a 30-year-old single mother with three children. She had suffered neglect from her mother and severe ridicule from her father who had scorned her developing sexuality. Samantha had abused drugs and alcohol since she was 14. She had suffered serious physical and emotional abuse from the father of her three children. At the time of her referral, she had attended a residential addiction programme and had been drug- and alcohol-free for 6 months. Her presenting difficulties included a pattern of intense and unstable relationships, an unstable sense of self, promiscuity and other impulsive behaviours, recurrent suicidal ideation, inappropriate and intense anger, low self-esteem and parenting difficulties. This was Samantha's first experience of psychological therapy.

Calam was a 47-year-old who lived alone but was involved in an unstable relationship with an anorexic younger woman. As a child, he had experienced both physical and verbal abuse from his father and neglect from his mother. Following a period of sexual abuse during his adolescence, Calam experienced a number of psychiatric admissions for both depression and anorexia. His presenting difficulties were a pattern of intense and unstable relationships, an unstable sense of self, recurrent self-harm (overdoses) and suicidal ideation, affective instability, chronic feelings of emptiness and severe dissociative symptoms and anorexia. This was Calam's first experience of psychological therapy.

Zoe was a 38-year-old mother of two. Both of her parents were critical and emotionally distant and her father was also physically abusive. She had been sexually abused during her childhood and raped in her early adult life. She had a 10-year history of drug and alcohol abuse and had experienced several in-patient admissions for addiction. Her presenting difficulties were frantic attempts to avoid abandonment, a pattern of unstable and intense relationships, an unstable sense of self, impulsive behaviour, self-harm (overdosing) and suicidal ideation, affective instability and severe dissociative symptoms. This was Zoe's first experience of psychological therapy.

Measures

Several psychometric measures were used; each of which had acceptable statistical properties. In each case, higher scores are associated with higher levels of psychopathology. The Millon Clinical Multiaxial Inventory-III (MCMI-II; Millon *et al.*, 1994) was used to identify Axis II disorders. A cut-off point of 75 was used to determine the presence of BPD. The Personality Structure Questionnaire (PSQ; Pollock *et al.*, in press) is an 8-item self-report questionnaire that measures the extent to which individuals experience themselves and others as integrated and continuous, or fragmented and discontinuous. The remaining measures included the Dissociation Questionnaire (DIS-Q; Vanderlinden, Van Dyck, Vandereycken, Vertommen, & Verkes, 1993); the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1977), and the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988).

Procedure

All of the measures were administered before therapy, at termination and 9-month follow-up. Therapy was given in a NHS setting by three CAT-trained clinical psychologists, who were receiving weekly supervision with a CAT supervisor. Participants were offered 16 weekly sessions of CAT. The reformulation was presented at the fourth session, and the SSSD was developed collaboratively during early stages of the therapy. Follow-up sessions were given at 1, 2, 3, 6 and 9 months, in keeping with Ryle's (1997) recommendations. All the participants attended over 80% of the sessions offered.

Data analysis

Jacobson, Follette, and Revenstorf's (1984) statistics were applied to each participant's scores to assess whether the changes achieved were clinically significant. Because non-patient norms were available for both the SCL-90-R (Derogatis, 1977) and the DIS-Q (Vanderlinden *et al.*, 1993), the clinically significant cut-off point for these measures was determined by identifying the mid-point between the mean of the normal samples and that obtained from the current sample of BPD participants. Jacobson *et al.*'s (1984) alternative criterion of two standard deviations below a dysfunctional population mean were used to determine the cut-off points for the PSQ and IIP scores. Jacobson *et al.*'s (1984) 'reliable change' statistics were also applied to each participant's SCL-90-R and DIS-Q scores to assess whether the change achieved was statistically reliable, using non-patient means and standard deviations.

Results

Severity of borderline personality disorder

The main finding was that CAT produced positive reductions in the severity of BPD for all five participants. The MCMI-III scores obtained for each participant at the pre-, post- and follow-up stages are shown in Table 1. By termination, two of the five participants (Samantha and Zoe) no longer met the criterion of caseness (cut-off score = 75). Although Samantha's score increased at follow-up, all of the remaining participants' scores were below the caseness cut-off 9 months after treatment according to DSM-IV criteria.

Personality fragmentation and dissociation

Jacobson *et al.*'s (1984) tests showed that the PSQ scores of three of the five participants (Trevor, Samantha and Calam) fell below the cut-off point for clinical significance (26.28) at termination (Table 1). Trevor and Samantha maintained their progress at follow-up and Zoe's score also declined to below the cut-off point. With respect to the DIS-Q scores, Jacobson *et al.*'s (1984) tests showed that the scores of one participant (Samantha) fell below the cut-off point for clinical significance (2.21) at termination (Table 1). By follow-up, Samantha had maintained her progress and the DIS-Q scores of Trevor and Zoe also fell below the cut-off point for clinically significant change. Change between pre-test and termination and pre-test and follow-up was statistically reliable for Trevor, Samantha and Zoe.

General symptomatology and interpersonal problems

Jacobson *et al.* (1984) tests showed that the SCL-90-R score of one participant (Samantha) fell below the cut-off point for clinical significance (0.78) by termination

Table 1. Individuals' scores on the MCMI-III, PSQ, DIS-Q, SCL-90-R and IIP before and after CAT

	MCMI-III			PSQ			DIS-Q			SCL 90R			IIP		
	Caseness cut-off [a] = 75			Clinically significant change [b] = 26.28			Comparative normal sample mean = 1.5 (SD = 0.4) Clinically significant change [b] = 2.21			Comparative normal sample mean = 0.31 (SD = 0.31) Clinically significant change = 0.78			Clinically significant change = 2.11		
Name	Pre	Post	Post	Pre	Post	F/up	Pre	Post	F/up	Pre	Post	F/u	Pre	Post	F/up
Trevor	94	88	71[a]	39	24[b]	22[b]	3.03	2.32	1.41[b]	2.93	1.39	0.02[b]	2.54	1.7[b]	0.06[b]
Paula	90	90	74[a]	38	38	35	2.97	3.02	2.9	2.36	2.30	2.49	2.32	2.47	2.47
Sam	89	65[a]	78	35	24[b]	23[b]	2.44	1.65[b]	1.83[b]	1.36	0.49[b]	0.64[b]	2.27	1.1[b]	1.15[b]
Calam	81	88	61[a]	29	26[b]	32	3.35	4.0	4.17	2.34	2.86	3.52	2.25	2.91	2.83
Zoe	88	61[a]	65[a]	32	29	19[b]	2.54	2.27	1.29[b]	2.47	1.66	1.38	2.36	2.05[b]	1.65[b]
Mean	88.40	78.40	69.80	34.6	28.6	26.2	2.87	2.65	2.32	2.29	1.74	1.61	2.35	2.05	1.74
(SD)	4.72	14.15	6.83	4.16	5.55	5.55	0.37	0.90	1.21	0.57	0.90	1.41	0.12	0.70	0.92

[a]Caseness cut-off (Millon *et al.*, 1994).
[b]Clinically significant change (Jacobsen *et al.*, 1984).
[c]The SCL-90-R mean score relates to the General Severity Index (GSI).

(Table 1). She maintained her progress during the follow-up period and Trevor's SCL-90-R score also declined to below the cut-off point. Three of the five participants (Trevor, Samantha and Zoe) showed statistically reliable change between pre-test and termination, and pre-test and follow-up. With respect to the IIP scores, Jacobson *et al.*'s (1984) tests showed that three of the participants (Samantha, Trevor and Zoe) fell below the cut-off point for clinical significance (2.11) by termination. All of these participants maintained their progress during the 9-month follow-up period.

Discussion

The main finding of this series of single cases was that CAT appeared to produce positive reductions in the severity of BPD for all five participants by follow-up. Given the relatively brief timespan of the therapies and the extreme severity of the participants' disturbance, these findings are encouraging. However, less consistent findings were observed with respect to the participants' comorbid features of BPD. By follow-up, two of the five participants (Trevor and Sam) had made clinically significant changes across measures of personality fragmentation, dissociation, symptomatic distress and interpersonal adjustment, and another participant (Zoe) obtained clinically significant changes in levels of personality fragmentation dissociation and interpersonal adjustment. However, two participants (Paula and Calam) showed poor outcomes in this respect. One (who had failed to benefit previously from 2 years of cognitive therapy) appeared to be unaffected by the intervention, and the other participant showed a deterioration across all measures of comorbid disturbance at termination.

The ending of a brief therapy is known to be a distressing experience for BPD patients because of their abandonment fears (McHenry, 1994). Thus the possibility of increased levels of borderline and comorbid disturbance at termination (as with Calam) must be acknowledged. The present study involved only 16 sessions, whereas Ryle and Golynkina's (2000) study with BPD participants involved 24-session CAT. Further research should assess systematically whether BPD patients are more likely to achieve a manageable experience of termination with longer therapies.

Although the present study is clearly limited by its uncontrolled nature and small number of participants, a systematic patient series of this kind should reveal individual differences in relation to outcome. For example, two participants (Paula and Calam) showed reductions in their borderline pathology despite the fact that their levels of personality fragmentation and other comorbid disturbance remained high. This finding is contrary to Ryle's (1997) proposition that reductions in borderline severity are dependent on enhancing self-cohesion. More positively, the only two participants who achieved clinically significant gains across all five measures (Trevor and Samantha) obtained significant changes in their overall levels of dissociation. Therefore, changes in dissociation *per se* may be more predictive of a positive outcome in comorbid disturbance than changes in personality fragmentation alone.

Given the high levels of comorbidity observed in BPD (Gunderson, Zanarini, & Kisiel, 1991) and the likely role of dissociation as a mediator of such disturbances, equal attention should be paid to primary, secondary and tertiary dissociation (van der Hart *et al.*, 1996). Self states sequential diagrams should provide full descriptions of different types of dissociation (dissociative procedures), including the internal (cognitive and

affective) and external (environmental and interpersonal) context in which these occur, rather than restricting the focus to describing dissociated self states (tertiary dissociation). Moreover, the incorporation of specific techniques for managing dissociation may enhance the effectiveness of CAT with this patient group. For example, the 'mindfulness' component of DBT (Linehan, 1993) or the cognitive behavioural interventions described by Kennerley (1996) could be integrated within a CAT framework.

In conclusion, although this study was limited in its scope, the results suggest that CAT may be an efficient and relatively effective means of treating some highly fragmented, borderline patients. This study represents a first attempt to assess systematically the impact of CAT on different aspects of dissociation, and suggests that more comprehensive research into this field would be justified.

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