Cognitive-behavioural therapy for deliberate self-harm

Slee, N.


chapter 2

Cognitive-Behavioural Therapy for Deliberate Self-Harm

Nadja Slee, Ella Arensman, Nadia Garnefski,

& Philip Spinhoven

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Abstract

Patients who engage in Deliberate Self-Harm (DSH) form a heterogeneous population. There is a need for psychotherapeutic interventions that give therapists the flexibility to tailor the treatment plan to the needs of an individual patient. To detect essential ingredients for treatment, three different cognitive-behavioural theories of DSH will be reviewed: (1) the cognitive-behavioural theory Linehan (1993), (2) the cognitive theory of Berk et al. (2004), and (3) the cognitive-behavioural theory of Rudd et al. (2001). A review of these theories makes it possible to compare the different approaches to the essential aspects in the treatment of DSH: a trusting patient-therapist relationship, building emotion regulation skills, cognitive restructuring and behavioural pattern breaking. An overview will be given of therapeutic techniques that can be used to address the cognitive, emotional, behavioural and interpersonal problems associated with DSH.

Introduction

Most clinicians agree that patients who harm themselves deliberately are among the most complex and therapeutically challenging patients they are confronted with. These patients form a heterogeneous population with respect to characteristics such as the number of previous episodes of Deliberate Self-Harm (DSH), motives for DSH and psychological and psychiatric problems. In this article, the construct of DSH covers all types of non-lethal self-harming behaviour either with or without suicidal intent (e.g. trying to hurt *or* kill oneself).

With this heterogeneous population in mind, the main objective of this paper is to provide guidance for clinicians. There is a need for psychotherapeutic interventions that give therapists the flexibility to tailor the treatment plan to the needs of an individual patient. If the connection between the problems of an individual patient and specific treatment strategies and techniques can be specified, this will enable the clinician to match patient and treatment more precisely. The questions we will address here are: What do DSH patients need? How can we be more effective in treating DSH? To detect essential ingredients for treatment, three different cognitive-behavioural theories of DSH will be discussed: (1) the cognitive-behavioural theory Linehan (1993) developed to reduce DSH in patients with borderline personality disorder, (2) the DSH specific cognitive theory of Berk, Henriques, Warman, Brown and Beck (2004), and (3) the DSH specific cognitive-behavioural theory of Rudd, Joiner and Rajab (2001). A review of these theories makes it possible to compare the different approaches to the essential aspects of DSH and the related specific therapeutic techniques.

Cognitive-behavioural theories of DSH

A cognitive-behavioural approach to DSH proposed by Linehan, named Dialectical Behaviour Therapy

In treating chronically suicidal patients who have been diagnosed with borderline personality disorder, Linehan discovered an important shortcoming in standard cognitive and behavioural treatments: They focused almost exclusively on helping patients change their thoughts, feelings and behaviours. This approach was not particularly helpful: patients often felt misunderstood and dropped out of treatment. With these shortcomings in mind, Linehan developed an intensive treatment program called Dialectical Behaviour Therapy (DBT), combining general cognitive-behavioural techniques with elements from Zen (Linehan, 1993). In line with cognitive-behavioural principles, emotion regulation, interpersonal effectiveness, distress tolerance, core mindfulness and self-management skills are actively taught. In line with Zen, patients are encouraged to develop an alert, non-judgmental attitude towards events as well as to their own emotions and cognitions. According to DBT this mindful attitude is crucial in order to prevent impulsive, mood dependent behaviour and the associated recurrence of DSH.

A mindful, non-judgmental attitude is also considered to be essential for the therapeutic relationship, as DBT focuses on validating the patient's experiences. This requires that the DBT therapist searches for the truth inherent in each of the patient's responses and communicates this to the patient. Validation also involves sympathetic acknowledgement of the patient's sense of emotional pain. Throughout treatment, the emphasis is on building and maintaining a positive, collaborative relationship between patient and therapist. Furthermore, the judicious use of humour – "irreverence" – is advocated as a useful technique for keeping the interaction between patient and therapist on the go when it might otherwise slow to a halt. Another major characteristic of the therapeutic relationship is that the primary role of the therapist is as consultant to the patient, not as consultant to other individuals.

Due to the philosophical nature of the theory, DBT cannot easily be verified. However, a large number of treatment studies have now demonstrated the efficacy of DBT in reducing both the number and severity of repeated DSH episodes, reducing the number of hospital days and improving general and social functioning as well as treatment compliance over a one year follow-up period (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Linehan, Heard, & Armstrong, 1993; Linehan, Tutch, Heard, & Armstrong, 1994; Linehan, Comtois, Murrey et al., 2006). No differences were found between DBT and treatment as usual with respect to depression, hopelessness, suicidal ideation and reasons for living. In a study among borderline patients with co-morbid substance abuse disorder, DBT resulted in greater reductions of DSH than treatment as usual. It is noteworthy that the beneficial

impact on frequency of DSH was far more pronounced among those who reported higher baseline frequencies of DSH compared with those reporting lower baseline frequencies (Van den Bosch, Verheul, Schippers, & van den Brink, 2002; Verheul et al., 2003). Although standard DBT is effective for borderline patients with and without co-morbid substance abuse problems, it does not seem to affect substance abuse problems. Therefore, DBT appears to be effective in terms of the specific target that is focused on (e.g., DSH). Standard DBT could be modified such that multiple targets can be focused on, depending on the specific problems of individual patients. This may be useful, since patients tend to have multiple problems (Van den Bosch et al., 2002). Given that this patient population is difficult to treat, the results are encouraging. However, the intensity of this approach probably precludes its use in current routine clinical practice, but elements of it may be directly applicable (Hawton, 1997).

A cognitive-behavioural approach by Berk et al

Berk et al. (2004) have elaborated Beck's Cognitive Therapy (Beck, 1967; 1976) to develop a brief cognitive treatment (10 sessions) for DSH. Since the treatment focuses on repetition of DSH, all issues brought forth by the patient are discussed in terms of their relation to the self-harming behaviour. The treatment includes interventions such as a multi-step crisis-plan, a detailed cognitive conceptualization of the irrational negative beliefs associated with DSH and the use of coping cards. Within this general framework, therapists are active and directive. A recent study shows that the treatment can effectively reduce repetition of DSH (Brown et al., 2005). Within the follow-up period of a year and a half, people in the Cognitive Behavioural Therapy group were approximately 50% less likely to engage in DSH than individuals in the control group. Those who received cognitive therapy scored also significantly lower on measures of depressed mood and hopelessness. Although this is the only study of this specific treatment in DSH patients, there is a considerable weight of evidence for the effectiveness of Cognitive Behavioural Therapy in other psychological disorders (Alford & Beck, 1997). This brief and effective treatment might therefore be a good alternative for people who do not have the motivation or energy for longer courses of therapy. Furthermore, the short-term feature of this treatment would make it particularly applicable for the treatment of DSH at community mental health centres.

A cognitive-behavioural approach to DSH by Rudd et al

While Linehan (1993) developed a treatment for chronically suicidal patients diagnosed with borderline personality disorder, Rudd et al. (2001) developed a suicide and DSH specific cognitive behavioural treatment for a broader range of patients. Their approach to DSH is similar to the approach of Berk et al. (2004), in that DSH itself is the primary target of treatment, rather than it being approached as secondary to an underlying psychiatric

problem such as depression. In the theory proposed by Rudd et al. (2001), the so-called "suicidal mode" consists of suicidal cognitions, mixed affects, death related behaviours and physiological reactions. According to Rudd et al. (2001) cognitions associated with suicide and DSH are characterized by hopelessness, which comprises core beliefs of unlovability, helplessness and poor distress tolerance. Suggested intervention techniques following from this theory are symptom management, restructuring the patient's belief system, and building skills such as interpersonal assertiveness, distress tolerance and problem solving. Another characteristic element of this theory is the development of a strong therapeutic alliance. Rudd et al. (2001) argue that when the therapeutic relationship is made central to the treatment plan, it may function as a source of safety and support during crises. Although this specific treatment has not been studied in a controlled clinical trial, in general, cognitive and cognitive-behavioural therapies directed at cognitive restructuring seem to be promising in successfully treating DSH (Hawton et al., 1998).

Essential characteristics of DSH and associated mechanisms of change

The three theories in this article make it possible to compare the different approaches to the essential aspects of DSH and the related specific therapeutic techniques. Emotion regulation is a central concept in the theories of both Linehan (1993) and Rudd et al. (2001), as well as in a recent theory which describes the primary function of DSH as avoidance or escape from unpleasant experiences (Chapman, Gratz, & Brown, 2006). Although the precise mechanisms behind emotion regulation are not yet clear, it seems likely that by allowing emotions to be experienced (exposure) without judgement, new associations are acquired (Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006; Williams, Duggan, Crane, & Fennell, 2006). Indeed, one of the key proposed mechanisms of change in Dialectical Behaviour Therapy is exposure and acting opposite to emotion-related action tendencies (Lynch et al., 2006). Avoidance responses may also be reduced through mindfulness techniques (Linehan, 1993). In addition to reducing avoidance responses, mindfulness could also increase the individuals' ability to turn their attention to what they would like to focus on and let go of that which they do not (Teasdale, Segal, & Williams, 1995). This would make their behaviour more effective and in tune with a specific situation.

In cognitive behavioural therapies cognitions are seen as the central pathway to DSH (Rudd et al., 2001). Hence, the interventions all focus on cognitive vulnerabilities. They aim to increase the patient's hope by systematically targeting negative views of self and the future (Beck, Rush, Shaw, & Emery, 1979; Rudd et al., 2001). Support for the central role of cognitions of hopelessness in DSH also comes from a more theoretical model, which conceptualizes DSH as a cry of pain (Williams, 1997; 2002). A test of this model shows that individuals who engage in DSH react to a stressful event with a greater sense of defeat, no escape, and no rescue than matched controls (O'Connor, 2003). Although this

model is grounded in and supported more by laboratory studies than clinical evidence, it shows similarities with the cognitive models discussed here. For example, the core beliefs of this model correspond with the cognitions of the suicide mode as proposed by Rudd et al. (2001) and adapted into the cognitive therapy trial of Brown et al. (2005). More specifically, the cognition of *defeat* shows similarities to *poor distress tolerance* (the psychological distress can't be handled). Also, the cognition of *no escape* overlaps with the cognition of *helplessness*, since they both express that solutions can not be found. Furthermore, the cognition of *no rescue* and the cognition of *unlovability* both refer to a (perceived) lack of social support. Cognitive therapy might work by changing these suicidal cognitions. Consistent with cognitive theory, the cognitive intervention of Brown et al. (2005) significantly reduced DSH as well as cognitions of hopelessness. However, the specific mechanisms behind these favourable outcomes are still unclear.

The cognitive behavioural therapies point to the importance of a third psychological process that may underlie DSH: poor problem solving ability. Recent research findings show that passive and avoidant reactions to problems are associated with repetition of DSH (McAuliffe et al., 2006). It has also been argued that people who engage in DSH tend to perceive problems as unsolvable (Williams, 1997; Rudd et al., 2001). This sense of hopelessness and helplessness may maintain problem solving difficulties, which may then further increase the risk of DSH. In line with these findings, the therapies reviewed here identify the training of behavioural skills as an important target for intervention (Linehan, 1993; Rudd et al., 2001). However, despite the promising findings of Cognitive Behavioural Therapies with a problem solving component (Hawton et al., 1998), the optimal treatment approach is still uncertain.

Different therapeutic approaches, including the ones presented here, also seem to agree that a necessary prerequisite for any successful intervention for DSH is a good and trusting patient-therapist relationship. The therapeutic alliance may enable the therapists to better understand what DSH means to the patient, which is essential to help a patient to develop new ways of coping. Also, the empathy and acceptance expressed by the therapist may be a model for the way patients gradually learn to relate to themselves (Linehan, 1993; Jobes, 2000; Rudd, Ellis, Rajab, & Wehrly, 2000; Orbach, 2001; Leenaars, 2004).

Reviewing the three theories, there seem to be four mechanisms of change that are at the core of effective cognitive-behavioural treatments of DSH: (1) a trusting patient-therapist relationship, (2) building emotion regulation skills, (3) cognitive restructuring (4) behavioural skills training. Table 1 summarizes these four mechanisms.

Table 1 *Mechanisms of change in DSH*

Mechanisms of change in DSH	
Therapeutic relationship	• Characterized by validation and therapist as a consultant of the patient, not of others (DBT of Linehan, 1993) • Therapist is active and directive (CBT of Berk et al., 2004) • Strong and trusting; a source of safety during crises (CBT of Rudd et al., 2001)
Emotion regulation	• Reducing experiential avoidance/avoidance behaviour and developing a mindful attitude (Linehan, 1993)
Cognitive restructuring	• Identifying and restructuring irrational negative beliefs, in particular around hopelessness, and reducing cognitive distortions (Rudd et al., 2001; Berk et al., 2004)
Behavioural skills training	• Enhancing problem solving skills (Linehan, 1993; Rudd et al., 2001)

Clinical implications

The cognitive theories of DSH and the hypothesized mechanisms of change lend itself to several clinical applications, which will be discussed in relation to different phases of the therapeutic process (see figure 1).

Phase One: Case Formulation

In the early sessions of therapy, the therapist's task is to reach, together with the patient, a shared understanding of the most recent episode of DSH. Helping patients to "tell their story" may give them a chance to feel heard and may also facilitate the patient's self-understanding. An additional advantage in having patients tell their story is that it can be used to develop a case formulation. A case formulation is an individualized model of the mechanisms that trigger or maintain a particular patient's psychological problems (Persons, 1989). It starts with the assessment of the most recent episode of DSH: circumstances at the time of the episode, motives and reasons related to DSH, and psychiatric and physical problems. Then the history of the patient is assessed, which results in a theory of how the representation of prior experiences (e.g. abuse) might have influenced current cognitions, emotions, behavioural patterns and relationships. However, the case formulation does not have to be confined to the first phase of the treatment, but can continuously be influenced by information that comes from the treatment sessions.

Phase Two: Treatment Plan

Based on the case formulation, therapist and patient may together select specific problem areas related to DSH. Central problems associated with DSH might include: irrational negative beliefs or schemas, mood intolerance, reduced activity, problem solving deficits,

Figure 1 *Clinical applications for treatments of DSH*

Phase One: Case Formulation

Examining the way aspects of DSH interact and the way the representation of prior experiences influences current cognitions, emotions, behaviour and relations.

Phase Two: Treatment Plan

1 *Goal setting /selecting problem areas* associated with DSH that will be focused on. Problem areas can be ***cognitive*** (irrational negative beliefs and cognitive distortions), ***emotional*** (avoidance of unpleasant experiences), ***behavioural*** (reduced activity, problem solving deficits) or ***interpersonal*** (poor communication and impaired social function).

2 *Selecting appropriate intervention(s)* to address specific problem areas

Problem areas	*Possible Intervention*
• Irrational negative beliefs/ cognitive distortions	Socratic questioning, keeping a positive diary, positive self-verbalization
• Avoiding unpleasant experiences	Increasing tolerance of distress, mindfulness training
• Reduced activity	Activity scheduling
• Problem solving deficits	Skills training
• Impulsive behaviour	Using existing skills, learning new skills, changing cognitions related to loss of control
• Poor communication	Skills training trough modeling or role playing
• Impaired social functioning	Removing obstacles to social support
• Relapse	Discussing possible relapse and looking for ways to prevent it: relapse prevention task and mindfulness techniques (learning to take a new perspective to previously avoided thoughts and feelings)

impaired social functioning and poor communication. The following section gives an overview of these problem areas and of possible intervention techniques.

Cognitive problems associated with DSH: irrational negative beliefs or schemas and distorted thinking

- *Increasing helpful beliefs*

Addressing cognitive problems associated with DSH includes helping patients to learn to identify and restructure specific suicidal thoughts (e.g. thoughts of hopelessness, helplessness, unlovability) (Rudd et al., 2001), distorted thinking (e.g. overgeneralized and dichotomous interpretations) and irrational negative beliefs or schemas about themselves and the world (Alford & Beck, 1997; Young & Klosko, 1994).

Recurrent episodes of DSH may be related to enduring cognitive vulnerabilities, sometimes related to loss, neglect, or abuse suffered during childhood. In this case, early maladaptive schemas may lay the foundation for the distorted perception and interpretation of events, including events occurring in the therapeutic relationship. Understanding the schemas' genesis, beginning with the less traumatic aspects of childhood, and challenging the schemas' appropriateness in current situations can be helpful in promoting insight in the patient (Young & Klosko, 1994). To facilitate schema change, keeping a positive diary might also be helpful (Persons, Davidson & Tompkins, 2001).

Emotional problems associated with DSH: avoidance of unpleasant experiences

- *Enhancing mood tolerance*

Patients may engage in DSH to avoid or escape unpleasant feelings (Chapman et al., 2006). It has been argued that acts of DSH may not directly follow from unpleasant experiences, but seem to be related to inadequate development of adaptive coping strategies as well as to not making use of strategies that are available (Beck, 2003; Chapman et al., 2006). In addition, patients may have a variety of beliefs that attenuate their motivation to inhibit DSH. These might include thoughts such as, "When I get this upset, it's unbearable" or "My urge is too strong to control". In order to enhance mood tolerance, patients might be encouraged to develop an accepting attitude to their experiences, to apply adaptive coping strategies, and to monitor thoughts of low tolerance of distress (Linehan, 1993; Rudd et al., 2001).

Behavioural problems associated with DSH: reduced activity and problem solving deficits

- *Increasing activity*

Increasing the frequency of pleasant activities in the patients' typical day can be very

encouraging (Williams, 1984; Persons et al., 2001). Especially when people are severely depressed, cognitive techniques can only be used after behavioural techniques like activity scheduling have had some success (Beck et al., 1979).

- *Improving problem solving skills*

Patients usually report that episodes of DSH are triggered by stressful events. To improve the capacity to deal with problems, ineffective coping skills and irrational negative beliefs and emotional problems associated with inadequate problem solving could be addressed (Hawton & Kirk, 1989; Nezu, Nezu & Perri, 1989; Rudd et al., 2001; Speckens & Hawton, 2005; McAuliffe et al., 2006). Furthermore, it is important to look for behavioural patterns that increase the risk of DSH (e.g. use of drugs or alcohol), which can be considered as maladaptive ways of coping with problems. Also, people who habitually engage in DSH report that it makes them feel better and restores a sense of being alive (Van der Kolk, 1996; Nixon, Cloutier & Aggarwal, 2002). It is possible that once DSH as a way of emotion regulation has been experienced, this behavioural pattern gets positively reinforced and is therefore more likely to be repeated in situations that are experienced as unpleasant. Therapy could focus on alternative emotion regulation strategies, such as self-soothing (Chapman et al., 2006).

Interpersonal problems associated with DSH: impaired communication and impaired social functioning

- *Improving communication*

Interpersonal processes contribute in a variety of ways to the maintenance of DSH. First, interpersonal difficulties commonly precipitate episodes of DSH, and there is evidence that patients who engage in DSH may be especially sensitive to social interactions. Second, longstanding interpersonal difficulties undermine self-esteem, which may result in increased risk of DSH. Since DSH often occurs against a background of poor communication, especially in relation to parents, patients might benefit from techniques that improve interpersonal communication skills, such as role-playing or modeling (Becker, Heimberg & Bellack, 1987; Rudd et al., 2001).

- *Improving social functioning*

Social isolation is a risk factor for DSH. Attention could be given to cognitive, emotional or behavioural problems that limit someone in finding sufficient support from others (Becker et al., 1987).

Other relevant interventions

The intervention techniques that have been discussed primarily focus on the factors maintaining DSH. However, these intervention techniques might very well be combined with strategies that focus on vulnerability factors, such as Schema-Focused Therapy

(Young, 1994) or Attachment Based Treatment (Bateman & Fonagy, 1999; 2000; 2001). Another possibility is to combine the techniques presented here with family therapy, which may be particularly helpful for young patients. Psychotherapy could also be combined with pharmacotherapy. It is, however, not clear whether pharmacological treatment should precede psychotherapy to stabilize levels of arousal, whether it should be combined with psychotherapy or whether it is useful to continue pharmacological treatment after the termination of psychotherapy.

Phase Three: Relapse Prevention

Before therapy is terminated, the therapist may help the patient to identify problems that could possibly trigger relapse of DSH. In the cognitive intervention of Berk et al. (2004) patients are prepared for possible relapse by activating the original mood in which the suicidal thoughts occurred. People are not discharged until they are able to deal effectively with the feelings and thoughts that arise. This seems a very practical and useful way to help patients to rehearse emotion regulation and behavioural skills and to assess the progress they have made.

Mindfulness-Based Cognitive Therapy (Segal, Williams, & Teasdale, 2002; Williams et al., 2006) might complement the more traditional cognitive therapies that have been described here, in that it is a preventative program designed for patients currently in remission of DSH. Unlike the other approaches, it does not focus on changing the content of cognitions but on changing the relationship to cognitions. It encourages individuals to take an accepting stance toward previously avoided thoughts and emotions. This non-judgemental attitude towards emotions, cognitions and bodily sensations is thought to prevent escalation of negative thoughts into suicidal thinking (Williams et al., 2006). Preliminary findings suggest that Mindfulness-Based Cognitive Therapy may indeed prevent the reactivation of the suicidal mode (Williams et al., 2006).

Conclusions and recommendations

The questions we addressed here were: What do DSH patients need? How can we be more effective in treating DSH? Discussing the three cognitive-behavioural theories has helped to formulate four mechanisms of change that could guide therapists in their work with patients who engage in DSH: (1) a trusting patient-therapist relationship, (2) building emotion regulation skills, (3) cognitive restructuring (4) behavioural skills training. The three therapies might work by targeting these mechanisms of change. However, the specific mechanisms behind the favourable outcomes of the therapies are still unclear. Consequently, the ultimate aim here is to provide a framework that encourages

practitioners to look for these mechanisms of change in the context of their work with DSH patients. In particular, the framework may help therapists to decide what to do when patients fail to progress and their approach does not seem to work. The framework may then suggest that they may have to refine the case conceptualization, which may help them to more specifically identify the beliefs or behaviours that may underlie the patient's problems in therapy. The framework may also inspire them to look in more detail at all four ingredients of change and see what possible targets for treatment possibly have not been adequately addressed in their delivered therapy approach. With this framework therapists can quickly identify the specific cognitive, emotional, behavioural or interpersonal aspects most needing—and most amenable to—change. Another advantage of this approach is that it is not limited to specific groups of DSH patients (such as those with borderline personality disorder or depression), but that it addresses the needs of a wide range of patients. It also shows how the treatment of current problems can be complemented by interventions aimed at relapse prevention. Furthermore, it encourages patients and therapists to formulate clear targets for intervention. Having a clear focus might improve the effectiveness of their work considerably. This seems to be especially relevant when working with patients who present with a wide range of problems. Clearly, there is a need to prioritize here and to address the targets of treatment one by one.

For the purpose of this paper only those theories have been discussed that are relevant to cognitive-behavioural interventions for DSH. However, recent theoretical models point to the importance of a broad range of aspects associated with DSH in addition to the psychological factors discussed here, including psychiatric (e.g. major depression), developmental (e.g. childhood trauma), social (e.g. unemployment) and biological aspects (e.g. low serotonin) (Yang & Clum, 1996; Sandin, Chorot, Santed, Valiente, & Joiner, 1998; Mann, Waternaux, Haas, & Malone,1999; Fergusson, Woodward, & Horwood, 2000; Van Heeringen, 2001; Reinecke & DuBois, 2001; Williams, 2002; Johnson et al., 2002; Evans, Hawton & Rodham, 2004). With regard to young DSH patients, it has been suggested that specific age related aspects are particularly relevant as well (Reinecke & DuBois, 2001), including stressors and difficulties related to adolescence (De Wilde, 2000). It has been argued that DSH may best be understood by employing a conceptual framework which is integrative, that is, one in which psychiatric, psychological, developmental, social and biological aspects and their interactions are considered simultaneously. However, testing these complex models as a whole may not be feasible due to practical limitations. An advantage of the limited focus on psychological aspects may be that there is a clear connection between theory about DSH and clinical practice.