Deliberate Self-Harm: Have We Scratched the Surface?

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This article presents the current state of knowledge in deliberate-self harm (DSH). DSH presents as a comorbidity with a number of personality disorders and psychopathologies, but is also relatively common in the psychologically healthy population. Over the past 10 years, attention has shifted from the investigation of DSH as a cardinal or comorbid symptom of psychopathology to an attempt to understand the behaviour itself, without reference to other psychopathological processes. It is argued that this development in understanding the aetiology of DSH has not been matched by developments in treatment or management of DSH, with the majority of treatment programs targeting larger syndromes of which DSH is a symptom. Treatment regimes aimed at reducing DSH appear to be either untested or demonstrably unsuccessful.

Deliberate self-harm (DSH; also referred to as self-mutilation, self-harm, and self-injurious behaviour) is the deliberate destruction of healthy body tissue without conscious suicidal intent (Favazza, 1998). DSH is associated with a number of psychopathological and cognitive disorders, such as psychosis, eating disorders, pervasive developmental and organic brain disorders, and borderline personality disorder, and has typically been considered to be a symptomatic manifestation of those disorders rather than a behavioural disturbance in its own right. However, relatively high levels of DSH are also found in samples of people without comorbid psychopathology. For example, Klonsky and colleagues (Klonsky, Oltmanns, & Turkheimer, 2003) and Briere and Gil (1998) respectively report that 4% of adult military personnel and 14% of college students have engaged in at least one significant episode of deliberate self-injury. There is, therefore, converging opinion suggesting that DSH ‘may be significant in and of itself’ (Favazza, 1998) independently of any comorbidities.

Classification of Self-Harm Severity

DSH is classified on the basis of the degree of tissue destruction and on the timing and organisation of the injurious behaviours into major, stereotypical and moderate self-injury (Favazza, 1998). The three categories do not reflect aetiology but tend to
cluster with characteristic comorbid disorders. Major DSH includes severe acts such as eye enucleation, castration and limb amputation and is most commonly associated with psychosis. Stereotypical DSH refers to repeated acts such as head banging, self-hitting and self-biting which are commonly seen among patients with severe developmental disabilities but are also present in acute psychosis, schizophrenia, autism and a number of neuropsychiatric conditions such as Lesch-Nyhan syndrome, de Lange syndrome, Retts’ disorder, neuroacanthosis and Tourette syndrome (Favazza, 1998). Moderate DSH, the most commonly presenting of the three categories of DSH, includes such things as skin cutting, carving and burning, picking and scratching, bone breaking, and interfering with wound healing. Moderate DSH is further classified into compulsive, episodic and repetitive on the basis of the frequency and apparent motivation of the behaviour (Favazza, 1998). Skin cutting and burning are the most common self-injurious behaviours associated with disorders such as borderline, histrionic and antisocial personality disorders; posttraumatic stress disorder; dissociative disorders; and eating disorders (Favazza, 1998). A large Australian study of a community-based adolescent sample found that of those that engaged in DSH, 59% used cutting and 30% overdosing (De Leo & Heller, 2004). However, a large European study found drug overdose to be the most common form of self-harm in that sample, with cutting and hitting accounting for only 11% to 17% of all deliberate self-harm (Michel et al., 2000). These large differences in the rates of various self-destructive acts arise in part from local differences in definition of DSH, and whether accidental and deliberate overdose is included. Given the ubiquity of DSH in a range of psychological disorders, it is probable that DSH is the final common pathway of a number of potentially independent motivations.

Aetiology of DSH

In general, there are four theoretical approaches to understanding the proximal causation of DSH: impulse-control models, anxiety-reduction models, addiction models and a cluster of approaches that regard DSH as motivated by need for stimulation or self-punishment.

Impulse Control and DSH

Favazza (Favazza, 1998) argues that DSH could be characterised as an Axis I impulse-control disorder not otherwise specified (312.30) as per the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR; American Psychiatric Association, 2000). This is supported by the finding of Favaro and Santonastaso (1998) that skin cutting and burning, suicidal behaviour and substance abuse load together on a general impulsiveness factor. Matthews et al. (2004) note that DSH is reported in some studies in up to 60% of Tourette syndrome (TS) patients (29% in their sample) and correlates in that population with tic severity, suggesting a breakdown of inhibitory mechanisms and impulse control that may be common to the two disorders. Very few neuropsychological studies directly assessing self-injurers have been conducted. Recent work by the current authors (Cumming, Covic, & Murrell, 2005) found a significant positive correlation between chronicity of self-injurious behaviour (number of years since first episode of self-injury) and time taken to complete Part B of the Trail Making Test, a measure reflecting inhibitory control and the ‘efficiency of resolving suppression of a previously-abandoned task’ (Arbuthnott & Frank, 2000, p. 526). Simeon et al. (1992) compared self-injuring
people with personality disorders with non-injuring personality disorder patients on a number of psychometric and biochemical measures. Rates of self-injury and levels of impulse control were found to be correlated, and self-injurers also had more platelet imipramine binding sites than noninjurers, yielding lower presynaptic serotonin availability. Reduced imipramine binding sites have also been found to be associated with impulsivity (Stoff et al., 1991) and aggression (Birmaher et al., 1990). The parallels between DSH and trichotillomania have also been noted. By its nature trichotillomania, or repeated hair pulling, can involve the deliberate destruction of healthy tissue. Trichotillomania is currently classified as an impulse-control disorder characterised by a mounting feeling of tension prior to an episode of hair pulling, which is immediately relieved by the episode. Those who engage in DSH report a similar subjective experience (Cumming, Covic, & Murrell, 2005). As trichotillomania shares clinical features with the compulsive aspects of obsessive-compulsive disorder (OCD), and due to some shared neurobiological features, trichotillomania, along with other syndromes including kleptomania and DSH, is often also classified as an obsessive-compulsive spectrum disorder (Hollander & Benzaquen, 1997). It is not clear whether trichotillomania is best described as an impulse-control disorder or a variant of OCD (see Stein, Simeon, Cohen, & Hollander, 1995, for a discussion of this), and the same ambiguity applies to DSH. In essence, the distinction rests on the extent to which DSH specifically reduces anxiety as opposed to being a more general drive-reducing activity.

**Anxiety Reduction and DSH**

As noted above, the links between DSH and the anxiety disorders, in particular OCD, have also been investigated. In a psychophysiological investigation of self-harmers, Haines, Williams, Brain, and Wilson (1995) found that, compared with control groups, self-harmers showed progressive reduction in psychophysiological arousal that was specific to self-mutilation imagery, consistent with the view that DSH may be reinforced by arousal reduction. Importantly, Haines et al. also found a lag between psychophysiological responsiveness and reported psychological state, suggesting that self-reported motives for the behaviour are post hoc and may not reflect the underlying physiological mechanisms. Andover, Pepper, Ryabchenko, Orrico, and Gibb (2005) found elevated anxiety among self-cutters but not among those who harmed themselves in other ways, leading to the suggestion that different self-harm methods may reflect different aetiological and maintenance factors.

**Addiction Model of DSH**

The notion that DSH is initially a spontaneous, impulsive, drive reducing activity that becomes habitual with repetition has led some authors to regard DSH as an addictive behaviour (Allen, 1995; Tantam & Whittaker, 1992). Marks (1990) developed a set of features characterising *behavioural addiction*, which include the urge to engage in a counterproductive behaviour, a positive hedonic tone early in the history of the behaviour, and the experience of craving and withdrawal if the behaviour is unavailable. DSH would appear, at least among some patients, to exhibit features of a behavioural addiction. However, the notion of behavioural addiction itself is somewhat controversial, with the *sine qua non* of addictions — tolerance and withdrawal — both apparently present in some behaviours that are seen as ‘addictive’ (e.g., gambling) but not in all (e.g., sex addiction). Furthermore, it is not clear how behavioural addictions might differ from other pleasurable motivated behaviours, for example,
sport or hobbies (see Marks, 1990; Jaffe, 1990; Bradley, 1990; Schneider, 1994, for discussion of this debate).

**Stimulation and Punishment and DSH**

Earlier approaches to DSH understood it either in terms of a pathological attempt to provide intense sensory stimulation, or as self-administered punishment. For example, psychodynamic approaches to DSH represent it as intrapsychic punishment (e.g., Noshpitz, 1994) and DSH among developmentally disabled individuals is sometimes seen as a reflection of reduced sensory sensitivity (Sandman & Hetrick, 1995).

Regardless of specific aetiological model, DSH can be also conceptualised in terms of its interpersonal and intrapersonal function. Those who engage in DSH report that self-injury serves as an emotion regulation or coping strategy developed through an interaction between emotional vulnerability and environments perceived as psychologically toxic (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991). Those who engage in DSH show higher than normal levels of emotional reactivity (high sensitivity to emotional stimuli) and intensity (tendency to have extreme reactions) and this can contribute to emotional dysregulation (Calkins & Johnson, 1998; Eisenberg, Cumberland, & Spinrad, 1998; Melnick & Hinshaw, 2000). They are also more likely to have been exposed to toxic situations, such as childhood traumas (i.e., physical abuse, sexual abuse), reported in up to 80% of DSH cases (Tantam & Whittaker, 1992). This trauma may lead to a chronic hyperarousal (Eisenberg et al., 1998) as toxic and invalidating environments fail to teach children effective regulatory strategies (Linehan et al., 1991). While this conceptualisation of DSH concurs with the reported experience of those who engage in self-harm, it does not explain the mechanism by which people ‘settle on’ self-harm as their coping strategy of choice, and there is a need for closer investigation of the specific psychological motivations underlying instances of self-injury. Clinical literature suggests that DSH serves to provide a relief from various unpleasant feelings (i.e., anxiety, anger, tension, guilt, loneliness, alienation, self-hatred), externalisation and escape from emotional pain, and reduction of the sense of dissociation (see Gratz, 2003, for details). In fact, it is suggested that DSH may serve multiple and simultaneous functions (Suyemoto, 1998). Empirical literature, although sparse, supports clinical findings in terms of the wide range of DSH functions such as self-punishment, stress, tension, painful feelings, anger management and increased sense of control reported by over 70% of participants (Briere & Gil, 1998). In addition, but less consistently reported, DSH may be a function of gaining a caring response from others (Favazza, 1992). This is commonly seen by medical staff as manipulative behaviour. However, this characterisation overlooks the fact that DSH is mostly a private and a secretive behaviour, with care and medical attention typically an unwanted consequence of going ‘too far’ in an episode of injuring (Gratz, 2003). The reaction of others may be a secondary rather than a primary gain as is evident in the limited endorsement of this function of DSH (Briere & Gil, 1998; Gratz, 2003).

**Course of DSH**

DSH commonly starts in teens and continues into middle-life, although adult onset is sometimes seen in association with bereavement, difficult childbirth and depression (Crowe & Bunclark, 2000). DSH may increase in frequency and severity over time and lead to suicide attempts due to the inability to control it (Favazza, 1998),
placing those who engage in DSH at increasing risk of suicide (Comtois, 2002; Owens, Horrocks, & House, 2002). Hawton and colleagues (2003) found suicide risk to be the greatest in the first year following DSH, at 66 times the general population risk. Subsequently, DSH is often viewed as having suicidal intent. However, while many individuals with DSH do attempt suicide, they can distinguish their suicidal behaviours from non-suicidal deliberate self-harm, in terms of the intent and function of each (Allen, 1995). Some authors propose distinctive groups based on the meaning and functions of self-harm, suggesting that self-wounding, self-poisoning and self-mutilation are distinct categories (Tantam & Whittaker, 1992); however, such distinction may not hold given the range of behaviours individuals may engage in (Allen, 1995) that others may misinterpret as impulsive (Cauwells, 1993).

**Interventions for DSH**

DSH has a substantial impact on the healthcare system. One large study suggests that less than 10% of management decisions concerning DSH are cost-effective in terms of clinical and health service outcomes (Byford et al., 2003), and Australian data suggest that less than half of patients presenting with DSH receive appropriate psychosocial care in the emergency departments (Boyce, Oakley-Browne, & Hatcher, 2001). DSH is known to have a high relapse rate, with evidence suggesting that between 12% and 25% of patients re-present for care to emergency departments (Owens et al., 2002). This rate is likely to be an underestimate of the rate of repeated self-injury, as many of those who engage in DSH manage their injuries themselves and only present to emergency services when they have injured themselves more seriously than intended (Guthrie et al., 2001). Hawton and Sinclair (2003, p. 955) suggest that DSH should be considered as ‘... not a diagnosis but a behaviour ... seen in a diverse range of patients’ who may require differentially targeted management. Management of DSH is further challenged by the poor rates of treatment (after care) compliance in this population (e.g., 52% poor compliance reported in Haw, Houston, Townsend, & Hawton, 2002, and similarly in other studies, such as Crawford & Wessely, 2000 and Tyrer, Jones, et al., 2003). In addition, the comorbidity that is common in DSH, especially in regard to depression and alcohol abuse, may require additional interventions for those disorders and currently it is not clear which treatments may be beneficial (Haw et al., 2002).

A number of reviews have considered the nature of DSH and its management, and no treatment modality has demonstrated satisfactory efficacy (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). Only a handful of adequately designed and controlled studies have addressed specific DSH treatment effectiveness. Some of the difficulties in DSH research, especially treatment effectiveness, may be due to a lack of distinction between DSH and suicide attempts, heterogeneous DSH subtypes, unclear diagnosis for DSH, lack of understanding of the range of the aetiology and risk factors associated with DSH, and limited evidence-based DSH treatments. Subsequently, the therapeutic services may be ‘driven by crises’ rather than being ‘well planned’ (Allen, 1995, p. 245).

**DSH and Comorbid Disorders**

The rates of Axis I disorders among those who engage in DSH are 2 to 4 times higher than in the general community and 6 to 10 times higher in relation to
schizophrenia, bipolar disorder, eating disorder and substance dependence (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). In particular, about one third of individuals with DSH regularly misuse drugs or alcohol (Haw, Hawton, Houston, & Townsend, 2001). Compared to other people who engage in DSH, those with comorbid alcohol abuse were more likely to be older, male, living alone, unemployed and high on anger, aggression and impulsivity measures (Haw et al., 2001). Individuals who engage in DSH and present to hospital commonly exhibit comorbidities such as major depression (8%–62%), dysthymia (3%–35%), substance abuse or dependence (10%–46%), schizophrenia (up to 25%) and high rates for personality disorders (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). In addition, some studies report depression or personality disorders in almost half of DSH patients, and multiple comorbidities, commonly depression and alcohol abuse, in over 40% of cases (Haw et al., 2002). The most significant short-term predictor of repeated DSH is depression (Haw et al., 2002; Sidley, Calam, Wells, Hughes, & Whitaker, 1999), while personality disorders such as borderline personality disorder are associated with higher repetition of DSH and poorer intervention outcomes (Tyrer et al., 2004). However, while depression is commonly found in those who engage in DSH as well as those who commit suicide, personality disorders such as borderline personality disorder and substance abuse are more prominent in the DSH population (Ferreira de Castro, Cunha, Pimenta, & Costa, 1998; Suominen et al., 1996).

Treatment Options for Deliberate Self-Harm

In-patient — Hospitals

The treatment of DSH commonly includes general hospital followed by a referral to psychiatric hospitals. The referral rate in the United Kingdom (UK) is approximately between 5% and 10%, and 21% in Australia (House, Owens, & Patchett, 1998; McGrath, 1989). Much of the literature on treatment of DSH is embedded in the literature on suicidal attempts and commonly included under the term parasuicide. According to Comtois's (2002) review of parasuicide, the risk of suicide completion in this group ranges between 20% to 47%, and given that the standard treatment is psychiatric hospitalisation, parasuicide is an expensive condition to treat. Furthermore, psychiatric hospitalisation may reinforce repetition of parasuicide behaviour through provision of means of removal from the stressful situation and receipt of support and assistance from the staff (Comtois, 2002). In addition, the management of DSH within hospital varies considerably as reported in a review of 32 hospitals in the UK that were found to differ twofold in levels of psychosocial assessment, fourfold in the proportion of hospitalisation and tenfold in the proportion of psychiatric hospitalisation (Bennewith, Gunnell, Peters, Hawton, & House, 2004). A risk factor for repeated parasuicides is that the crisis services staff may become habituated to this behaviour and only respond with hospitalisation when the lethality of the behaviour increases, and thus the risk of death (Comtois, 2002). A number of reviews of psychological treatments to prevent suicide or parasuicide have found no evidence of effective treatment (Gunnell & Frankel, 1994; Hawton et al., 1998; Linehan, 1997; Linehan et al., 1991; Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004; van der Sande, Buskens, Allart, van der Graaf, & van Engeland,
Others, however, have found some success through provision of follow-up letters or phone calls to high risk individuals who refused specific treatment (Motto & Bostrom, 2001), dialectical behaviour therapy (DBT) targeting specifically the suicidal tendencies and DSH in individuals with the borderline personality disorder (Koerner & Linehan, 2000; Linehan, Tatek, Heard, Armstrong, & Hubert, 1994), cognitive–behaviour therapy (CBT) intervention with the multiple high risk suicide attempters (Salkovskis, Atha, & Stover, 1990), problem-solving skill training in addition to CBT (Raj, Kumaraiah, & Bhide, 2001), home visits to address non-compliance in parasuicide cases (van Heeringen et al., 1995), and home visits to provide brief psychodynamic therapy to deliberate self-poisoning cases (Guthrie et al., 2001). Crowe and Buncclark (2000) provide a good overview of features of their own in-patient intervention and those based on psychodynamic framework but offer no quantifiable evaluation of their effectiveness. Similarly, an Australian hospital-based brief intervention study, while reported to have been well received, had no follow-up data and as such cannot be evaluated in terms of its effectiveness (Wilhelm, Schnieden, & Kotze, 2000).

Low, Jones, Duggan, Power, and MacLeod (2001) conducted a pilot study of the effectiveness of DBT with 10 self-harming patients with borderline personality disorder. Over the 12 months of the study, rates of DSH fell significantly. However, in the absence of any control group the relative effectiveness of DBT over other treatments or no treatment cannot be measured. Therefore, while DBT appears to be the best candidate for an effective intervention (Linehan et al., 1991; Simpson et al., 1998), and is well received by patients (Perseius, Ojehagen, Ekdahl, Asberg, & Samuelsson, 2003), multicentre randomised control trials are required to assess its effectiveness. DBT is a lengthy (over 12 months) and intensive intervention, typically involving combinations of individual and group therapy sessions and telephone contact.

An open in-patient setting that is based on patients taking responsibility for their treatment and developing a trusting and collaborative culture between the nursing staff and patients appears to facilitate internal control and therefore reduce impulsiveness in a number of behavioural domains (Bonnivier, 1996). However, this therapeutic approach is also time consuming, with the two case studies reported of duration exceeding 12 months, and as such is difficult to sustain in terms of associated costs.

**Hospital-Based Assessment**

Perhaps the most important starting point in treatment of individuals with DSH is to optimise the initial management. A number of individuals with DSH are not assessed adequately, which may be due to service shortcomings and failure to follow national guidelines (Hughes, Hampshaw, Renvoize, & Storer, 1998), or self-discharge before the assessment is completed (Crowder, Van der Putt, Ashby, & Blewett, 2004). In a UK study of 107 hospitals, only 44% were found to provide an adequate psychosocial assessment (i.e., conducted by a psychiatrist) as a standard procedure (Hurry & Storey, 2000). In another UK study of 16 randomly selected general practices it was found that 17% of patients discharged themselves from hospital before their initial assessment had been completed and they had three times higher rate of repetition during the 18 months of the follow-up (Crawford & Wessely, 1998). Furthermore, another UK review study found that 41% of those who suicide have contacted hospitals in the previous year and 9% died within a day.
of discharge; similarly, in relation to community health services, 11% of suicide cases have sought services previously and 4% died within a day after (Pirkis & Burgess, 1998). While future DSH cannot be prevented during the initial emergency hospitalisation, it does provide an opportunity to build a therapeutic relationship and provide a specific and rapid follow-up (Isacsson & Rich, 2001). Lower rates of self-discharge (8%) were reported in another study and the authors suggest this may be due to a more integrated care pathway service in their hospital (Crowder et al., 2004). Furthermore, their patient population may have been different to those reported elsewhere (i.e., Crawford & Wessely, 1998), with an overrepresentation of first-time DSH patients, patients without previous contact with local psychiatric services and patients who self-poisoned without alcohol intoxication. Why this third subgroup is overrepresented among early self-discharges requires further research. Conversely, the presence of intoxication was associated with greater likelihood of a completed psychosocial assessment and the authors suggest this may be due to the patients’ reduced tension about being in the hospital and the need to ‘sleep it off’. In addition, the presence of intoxication is possibly associated with a perception that the medical seriousness of the episode is high, which may also be linked to admission to a medical bed (Crowder et al., 2004). The link between hospital admission and intoxication was not, however, found in other studies (Hurry & Storey, 2000).

The increased likelihood of a completed psychosocial assessment taking place if the individual is admitted (67% compared to 34% of discharged individuals) was reported in Hurry and Storey’s study, but more so for younger (12- to 15-year-olds) than older (16- to 24-year-olds) individuals (Hurry & Storey, 2000). The appropriate assessment within the emergency departments was evident only in half of the cases (Hurry & Storey, 2000), as similarly reported for adult populations in other hospitals (Kapur et al., 1998). The lack of appropriate psychosocial assessment may be due to immediate focus on physical rather than psychological needs, focus on short-term risks and belief that there is no serious suicidal intent (Hurry & Storey, 2000).

**Hospital DSH Management Guidelines**

It appears that the recommended guidelines for general hospital management of DSH may not be well utilised (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). The presence or absence of guidelines has been reported to not influence the rates of appropriate assessment (i.e., 43% vs. 39%), and the authors suggest this may be due to a lack of junior doctors’ awareness of the guidelines and the availability of on-site psychiatry, this being most detrimental to the older age group (16- to 24-year-olds; Hurry & Storey, 2000). The guidelines recommend prompt access to medical care in the emergency department, assessment and maintenance of safety, medical/surgical assessment and access to mental health assessment followed by effective treatment of the underlying mental disorders, encouragement of treatment engagement and follow-up attendance and avoidance of treatments that may aggravate DSH (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). While there is much literature on the hospital-based lack of appropriate assessment and application of DSH guidelines in UK hospitals, very little is known about the Australian-based hospital approach to DSH.
Out-patient — General Practitioners

In terms of general practitioner (GP) services the rate and the quality of intervention may still not make a difference. People who eventually commit suicide have been found to be more likely than controls to see their GP regularly except during the month prior to suicide. This suggests that access to mental health resources is not sufficient to offset the risk of suicide or self-harm (Power, Davies, Swanson, Grodon, & Carter, 1997). Similar findings of lack of effectiveness were reported in reference to encouraging individuals with DSH to a follow-up consultation with GPs (Bennewith et al., 2002). In terms of DSH specifically, an Australian study found that 38% of hospitalised cases had visited their GP in the previous week and 63.5% in the previous month, and one third of self-poisoning cases used the medication prescribed by their GP (Pfaff, Acres, & Wilson, 1999). However, while GPs are a common point of contact for individuals with DSH, they have been given little attention or guidance in terms of management of DSH (Pfaff et al., 1999). Furthermore, self-poisoning appears to rarely take place using antidepressants, which, if drug used reflects drug availability, would suggest that a large number of individuals with DSH are under-treated for depression (Alsen et al., 1994; Suominen, Isometsa, Henriksson, Ostamo, & Lonnqvist, 1998).

Out-patient — Psychological Services

The effectiveness of psychological treatments is difficult to establish due to methodological limitations such as small samples, poor randomisation and exclusion of high risk groups (Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Deliberate Self-Harm, 2004). A few studies have shown reduction in the repetition of DSH: in women with a borderline personality disorder using DBT (Linehan et al., 1991), psychoanalytical therapy within a partial hospitalisation program as a treatment of borderline personality disorder (Bateman & Fonagy, 1999) and a brief interpersonal psychodynamic therapy for individuals who self-poison (Guthrie et al., 2001). However, two of these studies targeted borderline personality disorder (Bateman & Fonagy, 1999; Linehan et al., 1991), only two used manualised programs (Guthrie et al., 2001; Linehan et al., 1991), and one of them only retained a fifth of the sample (Guthrie et al., 2001). In terms of the duration of the effectiveness of the treatment, one showed reduced repetition of DSH during the 1-year program and at 6-months follow-up but not at further follow-up, compared to treatment as usual (Linehan et al., 1991), while Bateman and Fonagy showed better outcomes than standard care at 6- and 18-months follow-up (Bateman & Fonagy, 1999, 2001), but due to the combination of psychotherapy and hospitalisation it was not possible to determine the specific effect of psychotherapy. Guthrie et al.’s (2001) four-session home-based therapy produced significant reduction in self-reported DSH at 6 months, with no further follow-up reported. However, those significant differences may be partly due to inclusion of milder forms of DSH and self-report rather than hospital data only as in other studies. One large UK study involving five centres and 480 randomly allocated individuals to a CBT-based program or treatment as usual found that at 6- and 12-month follow-up there was no significant difference between the two groups in terms of treatment outcomes (repeated DSH at 12 months) but there were fewer suicide attempts (Tyrer, Thompson, et al., 2003a). It is illustrative of the DSH population that 38% of the experimental group failed to attend any treatment session. Furthermore, the authors observed significant differences in the ‘treatment as usual’
across the centres, which limited the comparison of the two treatment modalities (Tyrer, Jones, et al., 2003). However, the intervention group’s treatment was 10% cheaper than the treatment as usual, and significant differences were noted in relation to repeated DSH in terms of the personality disorders, with the quickest repeats in borderline personality disorder (mean 89 days) and the slowest in dissocial personality disorder (mean 384 days; Tyrer et al., 2004). The authors also suggest that the reasons for their lack of significant outcomes for the intervention group compared to studies such as Guthrie et al’s (2001) may be due to not providing home-based programs as they are not usually available within the clinic practice, and to having a considerably briefer intervention program than that of DBT as used in Linehan et al.’s (1991) study.

The above reviewed intervention studies aimed to address the repetition of DSH specifically. However, some success has been reported with problem-solving therapy, which appears to be effective with the depression, hopelessness and specific problems of those who engage in DSH, but which does not appear to be effective specifically for DSH (Townsend et al., 2001).

Hawton et al’s (1998) large (n = 2452; randomised participants with outcome data) study found that the most promising treatments were those that involved a focus on problem-solving, provision of an emergency contact card, depot flupenthixol and long-term psychological therapy for female patients with borderline personality disorder. Hawton et al. also found that assertive outreach services such as home visits and follow-ups were effective in treatment compliance, but that most studies were limited with small participant numbers and thus may fail to detect clinically significant differences even when pooled into meta-analysis.

**Future Research?**

We have argued that DHS can be understood from a number of aetiological perspectives and that several avenues of treatment have been suggested. What is remarkable is how little systematic investigation has taken place, especially in the area of treatment trials. At present, insofar as there are treatment programs for DSH, the treatment programs tend to be programs targeting either syndromes of which DSH is a common symptom (e.g., borderline personality disorder), or targeting common comorbidities with DSH (e.g., suicide). More focused research into the exact aetiological and maintaining mechanisms subserving DSH should permit the development of accessible, flexible treatment protocols aimed at managing this complex, intriguing cluster of behaviours.

**References**


**Behaviour Change**


