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Chapter 17

SELF-CUTTING AND SUICIDE IN ADOLESCENTS

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ABSTRACT

Deliberate self-harm (DSH) is a common and typically secret phenomenon in adolescents, especially females that involves two main features—self-derogation and negative emotionality. Causes of non-suicidal self-injury include attempts to get help from professionals, express disgust or self-anger, resist suicidal thoughts, and correct episodes of dissociation. DSH is associated with eating disorders and alcohol abuse, as well as other illicit drug abuse. Fortunately, most self-cutters are not at high risk for eventual suicide; however, all those with DSH histories should be carefully assessed for suicide as well as offered comprehensive management. Programs for prevention of suicide should be implemented for adolescents at risk for suicide and this includes those with histories of DSH.

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INTRODUCTION

Deliberate self-harm (DSH) is not an illness, but a behavior defined “as an act by an individual with the intent of harming himself/herself physically (1).” Methods of self-harm are noted in table 1 (2, 3) with the most common methods being poisoning and self-cutting in non-fatal injuries (4) and females usually outnumbering males (5). In Western countries, 5-8% of adolescents report self-harm each year because of such issues as depression, drug abuse, anxiety, and poverty (6-9). High risk factors for overt suicide in DSH include a strong suicidal intent, concomitant psychiatric disorders, using a method of high lethality (e.g., gun), and taking measures against being discovered (6, 8). Thus, the phenomenon of self-injury is an important issue and will be considered in more detail in this review.

ETIOLOGY

Youth who engage in self-cutting and other features of deliberate self-harm are reflecting underlying emotional conflicts and dysfunction. Each youth is a complex individual and a variety of underlying factors may be found that differ in various people in terms of intensity and number of underlying factors. A major factor often found in many self-cutting youth is severe family dysfunction that induces different states of depersonalization and an altered state of mind (dissociation) (10, 11).

Thus, self-cutting may be noted in youth who suffer from sexual or physical abuse (12-14), severe family neglect (15), early separation from parents, being homeless, and running away from home (16). Research also shows the importance of parental alienation that includes intense criticism by parents of their adolescents that induces non-suicidal self-injury (NSSI) such as self-cutting and self-hitting (17). Intense conflicts with peers can also induce DSH, especially being a victim of bullying (18).

These internal conflicts can induce impulsivity and attention-seeking behavior that induces DSH (3). Self-cutting may develop to relieve “a terrible state of mind” in those involved in DSH (19). The self-cutting activity, though confusing to others, may be used to release intense and unbearable pain from suppressed negative feelings driven by underlying anxiety and depression due to conflicts with peers and/or family members. (20-23).

Youth also participate in non-suicidal self-injury in attempts to influence behaviors of others and to deal with internal emotions (24). Two major pathways to self-wounding have been identified: one is a result of the “switching on” of the impulse (the “switch-path”) and the other reflects that harm may develop because of a steady increase of tension until a threshold is reached (the “spring” path). Dissociation during cutting and a craving for cutting was more often associated with the switch-path mechanism (17, 40).

The type of self-harm may not identify the seriousness of the underlying psychopathology. One study looked at 280 college undergraduates and found that 31% had “minor” self-harm behavior that involved skin picking or fingernail biting over the previous three years; 20% had “major” self-harm behavior with self-cutting and self-burning (26). Both groups were associated with underlying psychopathology, including disordered eating patterns, impulsivity, obsessive-compulsive factors, and somatic issues (27). Deliberate self-

harm may also occur with personality disorders. Self-cutting may also develop in the absence of a history of borderline personality disorder or mental trauma (28).

PREVALENCE

One study looked at 14,892 self-harm patients in England over 23 years that included 428 self-cutters and 11,065 who poisoned themselves (29). The self-cutters were more often male, unemployed, not married, lived alone, abused alcohol, and had a history of self-cutting (29). Other research on 11-18 year old self-cutters (mean age of 15) who were seen in intensive psychiatric programs noted a range of self-cutting behavior (30). Those who are frequent self-cutters (i.e., over three times) were typically females who had a history of sexual abuse and were sexually active without consistent condom use (30).

A Norwegian study used a self-report survey of 4,060 youth (15 to 16 years of age) in which one or more acts of self-harm was reported in 6.6% of these youth; self-cutting was reported in 74% of the DSH versus 17% for drug overdose (31). In this report 6.1% of the self-cutters had contact with hospital personnel in contrast to 47% of those having a drug overdose. Underlying factors included major conflicts with parents, drug abuse, and low self-esteem; also, similar behavior in family members was especially significant in males with DSM history (31). Issues in females with a history of DSH include a history of alcohol abuse, parental divorce, sexual abuse, impulsivity, and impulsivity (31). Self-scratching and self-cutting is increased in adult women who have been diagnosed with post-traumatic stress disorder and substance abuse disorders (32).

A cross-sectional questionnaire study of 3,757 teen students in Australia noted that 6.2% reported DSH in the 12 months before this study; self-cutting was reported in 59% and drug overdose in 30% (33). Underlying issues in those with DSM include self-blame and a history of self-harm in peers and family members. Typically, these adolescents do not seek help before harming themselves (33).

A cross-sectional survey of 3,881 Irish teens reported that 9.1% had a lifetime history of DSM; females were 13.9% versus 4.3% males and self-cutting was 66% (versus 35% drug overdose) (34). Another study in England looked at 4,474 episodes of DSH in one town from 1981 to 2000; DSM rates were increased in females who typically use overdose while males were more likely to be self-cutters (35). The group with the highest rate of DSM was the 15 to 24 year age olds; also, DSM was less likely to be repeated if the first DSM was followed by psychiatric management (35).

Other research used a population-based study of community-based, Canadian adolescents that studied the prevalence of DSM (as self-cutting); 17% reported DSH with a mean age of onset of 15.2 years of age and 83% of this self-harm involved self-hitting, scratching, or cutting (20). Another report of 1,036 American 9th to 12 graders revealed a self-cutting range of 26% to 37% that involved 51.2% females; underlying issues of the DSM included criticism by and alienation from parents (17). Finally, a study in Taiwan noted that 1% of reported injuries were for DSM; 80% of this DSH involved stabbing or cutting behaviors and alcohol use was a major contributing factor (36).

Table 1. Methods of self-harm (2-3)

<ol style="list-style-type: none"> 1. Drug overdose and other self-poisoning 2. Self-cutting 3. Other forms of self-mutilation <ol style="list-style-type: none"> a. Biting self-hitting (battery) b. Burning c. Pinching d. Scratching 4. Hanging 5. Jumping into wells or from high places 6. Self-shooting
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Table 2. Methods of DSH management (17)

<ol style="list-style-type: none"> 1. Group therapy 2. School-based interventions 3. Art therapy 4. Hospitalization with intensive therapy 5. Antidepressant pharmacotherapy

SELF-BURNING

Setting fire to oneself is an unusual means of DSH and suicide attempt that is more common in adults than in adolescents (37). Underlying issues for self-burning include substance abuse, schizophrenia, and major depression (37, 38). From 1994-2005, 1,745 patients were seen in a tertiary care burn unit in England, including 41 patients (mean age of 29 +/- 12 years) with a burn that followed an assault; also, there were 86 patients (mean age of 37 +/- 12) with burns that were self-induced (39). Accelerants included gasoline and 29% of these patients with self-induced burns.

Self-burning may develop in response to post-traumatic stress disorder because of experiences with war and under the influence of reports in the media (40). A thorough forensic examination is necessary in burn cases involving children to avoid incorrectly accusing an adult in cases of pediatric death from burns (41). One study of juvenile detention center teenagers in Japan reported that 16.4% were involved in at least one self-cutting episode and 35% had burned themselves at least once (42). In this report, youth with both self-burning and self-cutting histories had higher rates of dissociation and depression in contrast to those with self-cutting behavior only who had less evidence of mental illness.

DSH AND RISK FOR SUICIDE

All youth with a history of DSH should be considered at risk for suicide and all such youth should be carefully screened for suicide (43). If underlying issues are not corrected, such as mental health problems or chronic peer/parental conflicts, multimodal DSH becomes a chronic phenomenon with death as a final pathway (18, 43). Risks for eventual suicide rise over times and some research notes a rise of 1.7% in 5 years after DSH behavior, 2.4% at 10

years, and 3.0% at 15 years (21). One report estimates that 5% of patients with a history of DSH seen in a hospital emergency department were dead from suicide within 9 years of self-harm (21).

Research notes that bulimic males and males who report analgesia during DSH are at increased suicidal risks. Males with bulimia and males who experience analgesia during self-cutting are especially at high risk for eventual suicide (11, 45). Some data suggests that youth involved in wrist cutting versus arm-cutting have increased suicide risks (46). DSH with underlying factors such as sexual abuse develop increased risk for eating disorder and suicide ideation as well as completed suicide (13). One review of 11,583 patients in England collected between 1978 and 1998 revealed that 39% had a history of deliberate self-harm and that the highest suicide risk was noted in females with many incidents of DSH (47). Studies note that cutting of abdomen are highest in Japan and involved transverse abdominal skin cutting (48).

MANAGEMENT

Youth with a history of self-cutting are not a homogenous group and all those with a history of DSH should be identified at high suicide risk and thus, need thorough psychological assessment and management (3,49). The internet has been especially dangerous for encouraging DSH because it makes such behavior seem normal and even encourages it in youth (50). Primary care physicians should inquire about DSH in their patients and teach patients that such behavior is neither normal nor acceptable. The physical examination may note evidence of damage to skin from self-cutting and one should understand that teenagers involved in DSH have increased risks for other high risk behavior, such as sexual behavior, failure of consistent condom use, sexually transmitted diseases, and drug use (51, 52).

In one study of young adults with deliberate self-harm behavior, only half sought advice from clinicians and the worst help was noted to be from emergency medicine clinicians (53). Unfortunately, most with DSH do not seek professional help (34). One should remember that the risk for death from suicide increases over time and all patients need intensive monitoring to improve chances of avoiding a result of death from suicide (3). Various treatment methods can be used, as noted in table 2 (17). Management seeks to improve communication skills, deal with life's stresses, and improve mechanisms of positive coping skills (24). Intensive management is recommended for those with chronic DSH (24).

More research is needed for successful therapy for those with DSH since some data notes the lack of evidence for demonstration of success in preventing eventual suicide in those with a history of DSH (54). Successful management may rest on such factors as continued support of family and friends, availability of crisis intervention, trusting relationship with clinicians, and provision of intensive therapy for underlying psychiatric disorders (6).

SUMMARY

Deliberate self-harm is a common and typically secret phenomenon in adolescents, especially females that involves two main features—self-derogation and negative emotionality (19).

Causes of non-suicidal self-injury include attempts to get help from professionals, express disgust or self-anger, resist suicidal thoughts, and correct episodes of dissociation (55,56). DSH is associated with eating disorders and alcohol abuse, as well as other illicit drug abuse (57). Fortunately, most self-cutters are not at high risk for eventual suicide; however, all those with DSH histories should be carefully assessed for suicide as well as offered comprehensive management (58). Programs for prevention of suicide should be implemented for adolescents at risk for suicide and this includes those with histories of DSH (8, 59-61).

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