Self-Mutilation in Adolescents: Recognizing a Silent Epidemic

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Self-Mutilation in Adolescents: Recognizing a Silent Epidemic

Constance H. Glenn, RN, MSN, APRN-BC and Susan DeNisco, MS, APRN-BC

This article describes the physical and emotional manifestations of self-mutilation behavior (SMB) in adolescents and provides information about diagnosis and treatment. The authors' own survey of school nurses' on-the-job experience with SMB is presented. Finally, the implications of the problem for nurse practitioners (NPs) who care for teens at risk for SMB are discussed.

Self-destructive behavior in the US pediatric population, particularly adolescents, is a disturbing phenomenon that has been increasing since the 1990s. In the school setting, students who appear to be well adjusted and sociable (ie, the "mainstream" population) may be hiding evidence of such behavior under their clothing. Literature published on this topic prior to the 1990s indicated that self-destructive behaviors such as cutting or scratching were generally seen only in children with a history of abandonment or abuse, or in psychiatric populations (ie, persons with schizophrenia, major depression, borderline personality disorder, or multiple personality disorder).

Early identification of these adolescents creates an opportunity to initiate treatment before the SMB practice becomes established as a central means of stress reduction or of expressing anger at oneself. Many nonpharmacologic and pharmacologic approaches have been found effective in treating this complex behavior. However, evidence-based recommendations cannot be offered because the necessary research is still lacking.

Epidemiology

In vulnerable individuals, SMB usually first appears in early adolescence and continues through early adulthood. Much of the literature on this topic focuses on episodes in girls. Although the rate of SMB is reportedly higher in females than in males, this excess may be due simply to under-reporting in males, who are less likely than females to seek help and who are therefore under-represented in the clinician's office and in scientific studies. In addition, in the United States, the cultural norm and unspoken acceptance of more aggressive male behavior patterns makes SMB more difficult to quantify in males. Results of a study conducted by Tyler et al indicated no difference between the sexes in terms of the overall number of self-destructive acts, although the sexes did differ in terms of the specific type of self-mutilation. Females used somewhat less violent methods of self-destructive behavior than did males; girls were more likely to cut or carve their skin, bite their mouth, or scrape their skin to draw blood. By contrast, boys were more likely to hit themselves, burn their skin with a match or cigarette, or insert objects underneath their nails or skin.
The incidence of these behaviors is approximately 13% in the general adolescent population and 18% to 40% in adolescents hospitalized or incarcerated (typically with a diagnosed personality disorder in either case).\(^3\,^5\,^9\) SMB is also associated with homelessness, running away from home, deviant subsistence strategies, and depression with its associated behaviors.\(^3\,^5\,^9\) However, the most recent trend is the explosion of SMB among mainstream students. The manner in which SMB is expressed varies greatly, and is limited only by the self-mutilator’s creative means and imagination. This behavior is usually performed secretively. For example, these adolescents will wear long sleeves and long pants to cover up the afflicted areas, and may otherwise appear happy, sociable, and well-adjusted.\(^5\,^{10,11}\)

Reasons for the increasing incidence of SMB within the mainstream population are multifactorial. \(^5\) Social and cultural influences on adolescents cannot be underestimated. The rise in the rate of substance abuse among teens, which inhibits problem-solving and self-soothing skills, is well known. Many adolescents lack impulse control and want to experience whatever they consider outrageous or extreme.\(^5\,^{13}\) SMB also tends to be “infectious.” Adolescents are exposed to SMB that is glamorized on the Internet, in movies, or on television, or practiced by prominent media icons, as well as by members of their own peer group. Not surprisingly, adolescents then want to practice this behavior on their own. The media are instrumental not only in publicizing cutting, other self-destructive behaviors, and suicide, but also by filming destructive acts by rock stars.\(^5\,^{13}\) Derouin and Bravender also mention the deleterious impact of video game violence in terms of precipitating SMB.\(^1\)

According to the National Institute of Mental Health, 10% of children and adolescents have a serious emotional disorder and 12.5% experience bouts of depression.\(^1\,^4\) Furthermore, the rate of suicidal ideation/attempts among high schoolers ranges from 3% to 15%.\(^1\,^4\) Suicide is the third leading cause of death among adolescents and is the only cause of death that is not decreasing in this age group.\(^1\,^4\) SMB (eg, cutting, drug abuse, anorexia) may be a predictor of a suicide attempt or a completed act of suicide.

**Forms of Self-Mutilation**

Self-injury is defined as the intentional infliction of bodily harm or disfigurement that is performed during a state of emotional crisis.\(^1\,^3\) This behavior is directed at oneself and occurs in the form of tissue or organ damage; it differs from suicide attempts in that it is not intended to be life-threatening.\(^1\,^3\) SMB involves repeated occurrences of cutting with razors, scissors, knives, or any sharp instrument (eg, a pen top), as well as wound excoriation or burning. Whereas suicide is usually a deliberate act, with a single method chosen (if repeated attempts are made), cutting usually involves a variety of methods over time. In fact, choice of method is often specific to the emotion felt at the time.\(^5\) Some studies extend the definition of self-mutilation to include eating disorders such as anorexia and bulimia, intentional discontinuation of medication, trichotillomania (compulsion to pull out one’s hair), suicide attempts, self-hitting, and reckless behaviors such as self-piercing, smoking, and substance abuse.\(^5\,^5\)

**More Information About Cutting**

Cutting, the most popular form of SMB, is most common during adolescence.\(^5\,^{6,12}\) Cutting is a non-lethal but effective—albeit maladaptive—method of coping with a psychological issue or crisis.\(^5\,^{8,13,16}\) In other words, many adolescents who cut themselves do so to modify or reduce psychic pain related to frustration, depression, and/or stress. Cutting is also reported to relieve feelings of emptiness.\(^10\) Some adolescents use it as a method of self-punishment.\(^10\) Some teens who cut themselves have a need to see blood in order to know that they are alive, or to release anger or to detach from a situation.\(^4\) Cutting behavior can be regarded as morbid behavior, but it is also a form of self-help behavior because it is intended to provide relief from intolerable emotions that, if left unchecked, might result in temporary psychosis or a suicidal act. So, in somewhat of a paradox, cutting serves a therapeutic purpose for the self-mutilator.\(^13\,^{16}\) NPs should also be aware of the inclusion of cutting as a manifestation of parasuicidology, which is defined as suicide-like attempts and infliction of deliberate self-harm, but with no intent to kill oneself.\(^2\)

One of the key characteristics that distinguishes cutting from other forms of self-harm is that it is followed by a cessation of pain, a sense of relief, or even a numbing sensation, which is, in turn, followed by a sense of calm.\(^6\,^{8,10,12}\) By contrast, a failed suicide attempt evokes persistent thoughts of death and dying, with no feeling of relief but, rather, feelings of helplessness and rage about the failure to escape from unbearable pain.\(^6\) Although a link between SMB and suicide exists, NPs should note...
the distinguishing features between the two acts.2

The repetitive nature, low lethality, and calming effect of cutting must be considered when determining effective treatment options. NPs should also note the level of physical damage incurred. Lacerations requiring sutures, or cutting of the face, breast, or genital area represent relatively more self-injurious behaviors and reflect increased distress and dissociation.5 These behaviors are red flags that necessitate crisis intervention.1,3

**Neurobiology of Self-Mutilation**

Absence of pain during self-mutilation is likely mediated by an increase in secretion of endogenous opiates such as B-endorphins.6 Most notably, an extreme stress reaction prior to the act of cutting prompts release of the endorphin metenkephalin,4 which results in a pleasant, opiate-like feeling that is reinforced by subsequent self-mutilation. Implications of decreased serotonergic activity suggest that SMB causes production of endorphins that reduce dysphoria.15 The act of causing bleeding itself also seems to mediate a change in mood, with a rapid reduction in tension. Persons who are vulnerable to this behavior include those who otherwise lack an ability to self-soothe, verbalize overwhelming pain, or communicate an intolerable level of stress. In essence, it is an attempt to avoid suicide. Cutters' need to see blood is considered a need to feel real or alive and to overcome feelings of dissociation and of being invisible.3,6

**Diagnosis**

Because depression is one of the leading predictors of SMB, early recognition and treatment of depression will likely lower the incidence of this behavior.4,5 SMB is not included as its own entity in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, but it is included as one of eight criteria for borderline personality disorder.17 In the profile for histrionic personality disorder, the DSM-IV lists SMB as "apparently common."1,7 During routine checkups in adolescents with known risk factors for SMB and, nowadays, even in those without obvious risk factors, NPs should pose questions regarding the types of stressors that patients experience or perceive, and ask how they handle the stressors. The information provided will indicate whether further involvement by the practitioner is needed. During the physical examination, NPs should look for objective physical signs of self-injury. Along with a careful review of systems, this type of observation is needed to determine the extent of injury and diagnose SMB (Table 1).

**Treatment**

A multidisciplinary team comprised of the adolescent patient exhibiting SMB, the parents or guardians, the healthcare provider, a contact person at school (eg, nurse, social worker, psychologist), and a clinical psychologist or psychiatrist is needed for successful treatment. Effective treatment focuses on meeting the patient's psychosocial needs as well as attending to his or her physical concerns.16,19

**Nonpharmacologic Options**—Adolescents benefit from a caring and supportive environment in which communication is encouraged and acceptance is provided. They need to feel safe in expressing disturbing thoughts and feelings. Referral to a mental health specialist who is skilled in the use of cognitive behavioral therapy (CBT) and/or dialectical behavior therapy is important in managing SMB (Sidebar).20,21 Use of these strategies assists patients in learning new coping mechanisms, better impulse control, emotion regulation, and cognitive restructuring. Group therapy has also been effective in promoting improvement in social and communication skills, alternative coping skills, and anger management. Focus groups may deal with specific issues such as death of a parent and health problems within the family unit.6

**TABLE 1**

<table>
<thead>
<tr>
<th>PHYSICAL EXAMINATION FINDINGS IN ADOLESCENTS WHO SELF-MUTILATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Linear marks on the skin</td>
</tr>
<tr>
<td>■ Various stages of wound healing</td>
</tr>
<tr>
<td>■ Irregular or fine demarcations on the skin</td>
</tr>
<tr>
<td>■ Marks under sleeves or bracelets</td>
</tr>
<tr>
<td>■ Marks on the arms, legs, and/or abdomen</td>
</tr>
<tr>
<td>■ Tattoos, scratches, or burn marks</td>
</tr>
<tr>
<td>■ Self-piercings</td>
</tr>
</tbody>
</table>

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In order to prevent adolescent patients from "spreading" the mal-adaptive SMB, which appears to be rather contagious, NPs should instruct them to avoid discussing cutting with their peers. Instead, patients should talk to their NP, psychotherapist, parents, or school counselor. NPs should also discourage patients from showing the cuts and scars to others, who might find these injuries distressful and who might not know how to react to them.

Replacement-skills training has been shown to be effective as a temporary measure (Table 2). The aim of this training is to decrease the automatic emotional trigger response of the SMB and to serve as a temporary tool to interrupt the pattern. This strategy is used for 1 to 2 weeks, and is followed by an attempt to stabilize the newly learned behaviors. In addition, NPs need to engage patients' parents in monitoring their child's behavior and provide consistent boundaries and rules for safety. Even with an optimal home environment, today's youth are faced with enormous pressures—to do well in school and to resist temptations (eg, drugs, alcohol, premature sexual behavior) of the peer group, and yet be popular and fit in with the peer group.

NPs should encourage family bonding activities such as dining together. By sharing at least one meal a day, at-risk or troubled adolescents have an opportunity to discuss their daily activities and air their concerns. Nurturing and responsive parents tend to have healthier children. In many cases, however, supportive measures must be provided outside the home. For example, children who live in homes with domestic violence or in stressful, violent neighborhoods need to have someone else to whom they can turn for guidance and support. Thus, NPs should refer patients and their family members to a psychotherapist who specializes in family issues.

Pharmacologic Options—The first step in dealing with adolescents who exhibit SMB is to treat the cuts and wounds or other physical injuries. More specific pharmacologic treatment for adolescents who exhibit evidence of SMB should be directed to the underlying cause. As a bonus, effective pharmacotherapy may make it possible for patients to engage in productive psychotherapy. However, medications (eg, antidepressants, anxiolytics) should augment, not substitute for, a multifaceted approach, including CBT. Because SMB has multiple causes, even in one person, one medication or modality is unlikely to suffice. Pharmacotherapy should be symptom-specific to reach the goal of symptom severity reduction. In this regard, selective serotonin reuptake inhibitors (SSRIs) are considered optimal because they can relieve the underlying depression, impulsivity, and/or obsessiveness usually associated with SMB. Table 3 lists commonly used psychotropic agents in patients who exhibit SMB. Choice of agent depends on the diagnosis of any underlying or comorbid disorder.

SSRIs. Case experience and open-label trials with fluoxetine (Prozac®), sertraline (Zoloft®), and venlafaxine (Effexor®; not a pure SSRI—it is also a norepinephrine reuptake inhibitor) indicate efficacy of these agents in modulating the aggression, irritability, and SMB in patients who meet criteria for developmental personality disorders. Beneficial effects of these agents include alleviation of depressive symptoms, irritability, and aggression. In general, fluoxetine and venlafaxine appear to be less sedating than sertraline and fluoxetine, which makes them attractive for patients who have difficulty tolerating sedation. Theoretically, both SSRIs and venlafaxine may have additional benefits because they have been shown to increase levels of monoamines (eg, serotonin, norepinephrine), which are thought to play a role in the modulation of aggression and impulsivity. A common side effect is insomnia, which may need to be treated simultaneously with melatonin or other medications.

COGNITIVE BEHAVIOR THERAPY (CBT): Pioneered by Aaron Beck for the treatment of depression and anxiety, and applied to other psychiatric problems such as panic, anger control, and substance abuse, CBT operates under the assumption that thoughts, beliefs, and perceptual biases influence the type of emotion that will be experienced and the intensity of that emotion. CBT elucidates the connection between these thoughts and the self-mutilation behavior (SMB). By recognizing this connection, as well as the damaging and addictive aspects of SMB, patients can devise alternative means of relieving tension and soothing themselves.

DIALECTICAL BEHAVIOR THERAPY (DBT): Marsha Linehan pioneered DBT, which is based on the idea that psychosocial treatment of patients with borderline personality disorder is as important in controlling the condition as traditional psychotherapy and pharmacotherapy. Concomitant with this belief is a hierarchical structure of treatment goals. Paramount among them is reducing parasuicidal (self-injuring) and life-threatening behaviors, followed by reducing behaviors that interfere with the therapeutic process and then reducing behaviors that diminish patients' quality of life.
agents on impulsiveness and aggression appear to be independent of their effects on depression and anxiety. Target symptoms of affective dyscontrol include lability of mood, inappropriate and intense anger, and temper outbursts. Other common associated problems include anxiety, chronic emptiness or depersonalization, dysphoria, loneliness, and anhedonia.

SSRIs and related antidepressants are the treatments of first choice for self-mutilators who are depressed, angry, emotionally labile, and/or anxious. With any of these medications, patients are started on one half of the least potent tablet per day; the dosage is then doubled every 5 to 7 days until the target therapeutic dosage is reached or side effects (e.g., dizziness, nausea, stomach upset, dry mouth) intervene. Failure to respond to one SSRI should prompt a trial of a second SSRI or consideration of a tricyclic antidepressant (TCA). However, evidence supporting the efficacy of TCAs in patients with SMB is lacking.

Neuroleptics. Low doses of atypical neuroleptics (e.g., olanzapine, risperidone), which have a well-defined but nonspecific efficacy in controlling impulsive behaviors, may be useful if patients are exhibiting problems with anger management. Impulsive behaviors include recurrent suicidal threats, parasuicidal behaviors, aggression, assaultiveness, property destruction, binge behaviors (with drugs, alcohol, sex, or food), and low frustration tolerance. Clinical urgency may require use of neuroleptics first, with gradual introduction of an SSRI. Prior to initiating a neuroleptic in a given patient, NPs should obtain a baseline electrocardiogram (ECG) and potassium level. Neuroleptics should be used judiciously, if at all, in patients with cardiovascular disease (CVD), a prolonged QT interval on ECG, a history of seizures, or a condition that could affect metabolic response. Side effects include orthostatic hypotension, blurred vision, dry mouth, and neuroleptic malignant syndrome, a severe reaction characterized by fever and muscular rigidity.

Anxiolytics. Benzodiazepines (e.g., clonazepam [Klonopin®], lorazepam [Ativan®], buspirone [BuSpar®], hydroxyzine [Atarax®, Vistaril®]) may be considered for anxiety management. As an alternative, patients with SMB and comorbid generalized anxiety disorder, separation anxiety, panic disorder, obsessive-compulsive disorder, or phobic disorder may benefit from SSRI treatment and temporary augmentation with a benzodiazepine or buspirone. Benzodiazepines should be used with caution in patients with renal, upper gastrointestinal, or hepatic disease; regular blood testing is crucial to ensure safe use. Precautions also include drug or alcohol abuse, suicidal tendencies, psychosis, and depression. Side effects of the benzodiazepines include dizziness, unsteadiness, nausea, and headache. Abuse potential remains a concern.

Mood stabilizers. Patients who fail to respond to SSRIs, neuroleptics, or anxiolytics may do well with a mood stabilizer. Treatment for persons exhibiting SMB along with symptoms consistent with a comorbid mood disorder (e.g., bipolar disorder) relies on lithium carbonate (Eskalith® and others), valproate (Depakene®, Depakote®), or carbamazepine (Tegretol®). These adolescents should also be referred to a specialist in psychiatric disorders. Main precautions include:

**TABLE 2** REPLACEMENT SKILLS CHECK LIST

<table>
<thead>
<tr>
<th>BEHAVIOR</th>
<th>SUBSTITUTE ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>Punch a pillow</td>
</tr>
<tr>
<td>Frustration, restlessness</td>
<td>Tear up an old newspaper, jog, jump rope, break ice cubes</td>
</tr>
<tr>
<td>Feeling melancholic or sad</td>
<td>Pamper yourself with music, yoga, relaxation techniques</td>
</tr>
<tr>
<td>Feelings of unreality or cravings</td>
<td>Take a cold bath, snap a rubber band against your wrist,</td>
</tr>
<tr>
<td></td>
<td>put your finger in ice cold food</td>
</tr>
<tr>
<td>Inattentiveness, poor concentration</td>
<td>Do research on the Internet, do crossword puzzles</td>
</tr>
<tr>
<td>Need to see blood in order to feel “real”</td>
<td>Make red-colored ice, use washable red magic markers</td>
</tr>
<tr>
<td>Need to pick at scabs</td>
<td>Apply paste to the skin and then peel it off</td>
</tr>
</tbody>
</table>

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# Table 3: Psychotropics for Adolescents Exhibiting Self-Mutilation Behavior

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Proprietary Name</th>
<th>Indications</th>
<th>Precautions, Side Effects, Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Selective Serotonin Reuptake Inhibitors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>Prozac®</td>
<td>Depression, OCD, bulimia</td>
<td>Precaut: Suicidality. SE: dizziness, nausea, stomach upset, dry mouth</td>
</tr>
<tr>
<td>Sertraline</td>
<td>Zoloft®</td>
<td>Depression; OCD; panic disorder; PMDD, PTSD</td>
<td></td>
</tr>
<tr>
<td><strong>Selective Serotonin and Norepinephrine Reuptake Inhibitor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>Effexor®</td>
<td>Depression; anxiety</td>
<td>Precaut: Anorexia, mania, seizure, suicidality, use in patients with CVD. SE: see PI</td>
</tr>
<tr>
<td><strong>Neuroleptics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ziprasidone</td>
<td>Geodon®</td>
<td>Thought disorders, impulsivity, anger</td>
<td></td>
</tr>
<tr>
<td>Risperidone</td>
<td>Risperdal®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Zyprexa®</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anxiolytics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorazepam</td>
<td>Ativan®</td>
<td>Anxiety</td>
<td>Precaut: Use in patients with renal, upper GI, or hepatic disease (monitoring blood counts and liver function crucial), drug or alcohol abuse, suicidal tendencies, psychosis, depression. SE: dizziness, unsteadiness, nausea, and headache. Abuse potential is a concern.</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>Klonopin®</td>
<td>Panic disorder</td>
<td></td>
</tr>
<tr>
<td><strong>Buspirone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BuSpar®</td>
<td></td>
<td>Anxiety</td>
<td>Precaut: Cognitive and motor dysfunction, withdrawal reactions. SE: CNS disturbance, GI disturbance, headache, fatigue</td>
</tr>
<tr>
<td><strong>Hydroxyzine</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atarax®, Vistaril®</td>
<td></td>
<td>Anxiety; insomnia</td>
<td>Precaut: ECG changes, unsafe for use in patients with porphyria. SE: dry mouth, drowsiness, involuntary motor activity</td>
</tr>
<tr>
<td><strong>Mood Stabilizers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium</td>
<td>Eskalith® and others</td>
<td>Mania</td>
<td>Precaut: Monitor serum lithium levels, thyroid and renal function; concurrent use with SSRIs may cause serotonin syndrome; blood testing should be performed 8-12 hours post-dose. Use not advised in patients with renal disease, CVD, dehydration, or sodium depletion, or in those who use diuretics, ACEIs, or ARBs. SE: multiple adverse drug interactions, polyuria, polydipsia, tremor, nausea, dry mouth, and blurred vision.</td>
</tr>
<tr>
<td>Divalproex (valproic acid)</td>
<td>Depakote®, Depakene®</td>
<td>Seizure disorder</td>
<td>Precaut: Inducement of cardiac, renal, hematopoietic, or hepatic dysfunction (serum drug levels should be monitored on a regular basis). Careful monitoring for potential drug interactions is indicated.</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>Tegretol®</td>
<td>Seizure disorder</td>
<td></td>
</tr>
</tbody>
</table>

*This is not an exhaustive list; these are representative agents in their class.

OCD = obsessive-compulsive disorder; SE = side effects; PMDD = premenstrual dysphoric disorder; PTSD = post-traumatic stress disorder; CVD = cardiovascular disease; PI = prescribing information; ECG = electrocardiogram; NMS = neuroleptic malignant syndrome; GI = gastrointestinal; CNS = central nervous system; SSRI = selective serotonin reuptake inhibitor; ACEI = angiotensin-converting enzyme inhibitor; ARB = angiotensin receptor blocker.

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tions for lithium use include monitoring serum lithium levels frequently because of the narrow therapeutic and toxic "windows." Thyroid and renal function must also be monitored. Concurrent use of lithium with SSRIs may result in serotonin syndrome. Blood testing should be performed 8 to 12 hours post-dose. Use of lithium is not recommended in patients with renal disease, CVD, dehydration, or sodium depletion or in those who use diuretics, angiotensin-converting enzyme inhibitors, or angiotensin receptor blockers. Side effects of lithium include polyuria, polydipsia, tremor, nausea, dry mouth, and blurred vision. In addition, it may interact adversely with many different drugs. Precautions regarding use of valproate or carbamazepine include inducement of hepatic dysfunction. Therefore, serum drug levels should be monitored on a regular basis. Again, careful monitoring for potential drug interactions is indicated.

**General comment.** Increased suicidal tendency with use of many of these medications, notably the SSRIs, has been reported. These reports have prompted the US Food and Drug Administration to include black box labeling in the package inserts. All users of psychotropic agents should be closely monitored for increased depression and anxiety, especially during initiation of drug therapy and with dosage changes.

**Author's Survey**

In January 2005, one of the authors (Glenn) surveyed 67 school nurses in Connecticut who served nearly 10,000 students in grades 6 through 12 to determine the nurses' knowledge of the number of students who were engaging in SMB. The impromptu questionnaire also asked respondents about their (1) familiarity with cutting behaviors, (2) training in managing this behavior, (3) method of dealing with the behavior, (4) the presence or absence of school policy and procedures for dealing with the behavior, (5) the number of students in the school population served, and (6) information regarding students' ages and grade levels. The questionnaire also provided space for adding anecdotal information.

Reported behaviors included the cutting of wrists, the dismantling of a pencil sharpener to release the metal blade for cutting purposes, the burning of skin with eraser rubbings, self-inflicted tattoos, and repeated ankle burning. Four of the 67 school nurses were unsure of the exact number of students who performed these behaviors because a social worker or principal had primary responsibility for dealing with children in whom SMB was suspected (because of the protocol involved in the particular school in which they worked). In those instances, unless the children needed wound care, the school nurses heard about the SMB only via the Student Assistance Team Reports or through informal discussions with the school psychologist or principal.

Based on respondents' answers to the survey questions, the estimated proportion of students in middle school or high school who engaged in SMB was 4%; this percentage did not include 20 elementary school students who were known to be involved in this behavior. In total, about 400 students were identified by their school nurse as having participated in SMB.

Because of the impromptu nature of the survey, respondents had insufficient time to recall the exact number of students committing such behaviors (many wrote that they erred on the side of lower figures), which may explain why the proportion here is lower than that reported in the literature. Even this low proportion represents a disturbing finding.

**Implications for NPs**

Recognition of adolescents at risk for SMB is a challenge. Psychosocial risk assessment should be an integral part of monitoring adolescents' development during annual visits. A busy NP's time management concerns necessitate consideration of an easily administered and interpreted screening device.

**Screening Tools**—Although many screening tools are readily available, some are protected by copyright; thus, NPs need to proceed with proper authorization for their use. The Pediatric Symptom Checklists (PSC), developed by Drs Michael Jellinek and Michael Murphy, is available for research and clinical trials, and can be obtained (no permission is required) at www.mgh.harvard.edu/allspsych/PediatricSymptomChecklist/psc_home.htm. The PSC is completed by parents while waiting for their child's office visit, and correlates well as a preliminary screen for the more behavior-specific Child Behavior Checklist (CBCL). The CBCL is copyrighted by T.M. Achenbach and C. Edelbrock in Burlington, Vermont; checklists and scoring information can be obtained by logging on to http://www.injuryresearch.bc.ca/Publications/Repository/Child20Behavior%20Checklist.pdf. Developed by the American Medical Association (AMA), the Guidelines for Adolescent Preventive Services questionnaires include versions for
parents, younger adolescents, and older adolescents, and are available in Spanish as well as English. They are downloadable at http://www.ama-assn.org/ama/pub/category/1980.html. These questionnaires may be reproduced but not altered, modified, or revised without written consent of the Child and Adolescent Health Program at the AMA. They should be considered an integral part of each periodic health examination for determination of risk-related behaviors.

**Promoting the Clinician-Patient Relationship—Assisting**

Adolescent patients in developing awareness of the feelings that result in SMB and in verbalizing such feelings is a giant step toward helping them manage those feelings and empowering them to participate in their own recovery. Self-mutilation is not an attention-seeking behavior but, rather, a maladaptive coping response to unbearable stress. This understanding is a prerequisite for the cultivation of a therapeutic environment that will promote healing, both physical and mental. In addition, increasing awareness and knowledge of SMB in adolescents (and their parents) will equip NPs with the ability to more rapidly perform an assessment, institute appropriate interventions, and make referrals to mental health specialists when necessary. Patients should leave the NP’s office with a plan that includes a specific follow-up appointment.

**Future Research**

Although several studies report increases in SMB during adolescence, scientific research on this topic has been limited. Additional research would help to promote better understanding of this problem and aid in the discovery of more effective treatment modalities. This research would equip early adolescents with tools to abstain from these behaviors as a means of self-calming and self-soothing at times of overwhelming stress. More research is needed to determine who is at risk for developing SMB so that earlier interventions can be instituted (eg, in at-risk elementary school-age children). Psychopharmacologic options have been recommended for patients with a depression or anxiety component, but no research studies have reported the results of specific interventions or preventive measures. Education for healthcare providers, as well as presentations for communities at large, could help to raise awareness of this growing problem.

**Conclusion**

The observation that, since the 1990s, SMB is no longer the sole province of psychiatric and incarcerated populations but is now part of the mainstream population is disturbing. Interventions that would prevent these complex behaviors are crucial in supporting adolescents who are at particular risk during the transitioning developmental years. Improved awareness, understanding, and information would likely hasten identification of SMB in vulnerable individuals, as well as distinguish these behaviors from suicidal behavior. This knowledge would be instrumental in securing treatment and prevent recurrences or relapses.

**References**

To the Editor:

I just read Donna Nativio’s column about the choking game (Am J Nurse Pract. 2006;10[6]:43-48), and I was glad to see this problem being exposed. We are close, long-time friends of a family who lost a child in this manner. We know how devastating the death was to everyone in the family. There was no warning. It’s unfortunate that it takes such a tragic incident to bring it to light. I copied your column to give to my children and their families, which include preteens and teenagers. The topic has already generated many family discussions.

Would you believe it? A month after the column was published, our 9-year-old granddaughter saw a similarly aged boy at day camp who played this “game” and vomited. Our granddaughter knew, through these family discussions, about the dangers, and reported the incident to camp officials. I have no doubt that this information will help save lives some day.

Thanks to Donna for writing such an informative and valuable article.

Bette Segal, CRNP
Scottsdale, Arizona

To the Editor:


Ann Carter
Eagle River, Alaska

To the Editor:

I loved Tom Bartol’s column in AJNP. His way of presenting what a nurse practitioner is was fabulous. I have widely distributed the column to fellow NPs, RNs, and hospital administrators. If we could all present an explanation of an NP as Mr Bartol did, the public, as well as fellow healthcare professionals, would have an increased level of respect for what we bring to the table.

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