



Trauma, Attachment and SMBs

Some of the most disturbing and clinically-challenging behaviors are those which are self-mutilatory or self-destructive. As described below there are various “types” of SMB; ranging from picking at scabs, superficial cutting, and head-banging to much more disturbing eye-gouging, deep cutting or stabbing. As described below, these behaviors are often attempts at self-regulation but in the most extreme cases may be manifestations of a profound disintegrative process or psychosis (e.g., self-enucleating the eyeball). One of the most common clinical misperceptions is that the behaviors are antecedent to suicide or are some pre-suicidal action.

Primitive soothing and rewarding efforts common to maltreated children often fall into the category of SMBs. In a traumatized children who have been using dissociative adaptations, a sensitized opioid response has often developed. Any behavior, therefore, that would normally activate the opioid networks can lead to a “soothing” release of endogenous opioids and provide a transient soothing, rewarding experience for the overwhelmed, dysregulated child, youth or adult. Cutting, head-banging, picking at scabs, pulling hair and other classic self-mutilatory actions can serve this purpose. Once “discovered” by the child these behaviors are difficult to extinguish – particularly when there may be few other ways to be regulated (e.g., few positive relational interactions, few soothing somatosensory activities).

This vulnerability to SMBs as soothing behaviors is exacerbated in children who have disruptions in normal attachment. As described elsewhere, children with attachment issues have a “relational reward deficit” – which means, simply, that given the same positive human interaction, a child with attachment problems feels less “pleasure” or reinforcement than a child with healthy attachment. The result is that these children are often more vulnerable to using other, less healthy forms of getting pleasure/reinforcement such as drugs of abuse, sexual behaviors, and SMBs.

As with all human behavior, it is prudent to try to understand the behavior in context of the individual child’s history, current life and relational milieu. To lump all SMBs into one category and then discuss them as if they are all equivalent is certainly an oversimplification of what is likely a complex array of distinct pathophysiology. Yet much can be learned by a review of the current academic and clinical research perspective. A brief review follows.

SMBs

Self-mutilatory behaviors (SMB’s), which are also referred to as deliberate self-harm, self-injurious behaviors, and parasuicidal tendencies, are rising in prevalence. Approximately 4% of people in both clinical and nonclinical populations self-injure, and the rate is about 15% in college populations—especially among females. This behavior, which is often only considered as a symptom of borderline personality disorder, is very common in other clinical and nonclinical populations and is comorbid with many other disorders, such as PTSD and mood disorders.

Types of SMB's include cutting (most prevalent), burning (with a cigarette butt or a pencil eraser), hitting oneself or head banging, bruising, pulling hair, swallowing an object, or not allowing a wound to heal. In most cases, SMB's do not include excessive tattooing or body piercing, as these actions are usually taken with the intent of either fitting into a certain social group or attaining a preferred physical presentation.

The definition and function of SMB's is a topic of some debate, but a recent review of the literature suggests that researchers agree on most aspects and functions of SMB's. First, SMB's are not failed suicide attempts; they are most often anti-suicidal, or, an attempt to cope with life. Second, SMB's serve a similar self-soothing function as but are done for different reasons than SMB's performed by those with biologically-based disorders (such as intellectual difficulties and pervasive developmental disorders like autism). Finally, SMB's are biologically addictive and signal an emotional or psychological need, which often stems from a history of childhood maltreatment that is sometimes unknown until SMB's are detected.

Certain myths concerning SMB's exist, and impede intervention. One is that the purpose of SMB's is to get attention. In reality, nearly all SMB's occur in private or in the company of others who self-injure. Further, parental detection of SMB's is low: for every 7 children who admit to SMB's, only 3 of their parents have detected the behavior. Usually, parents detect the behavior if other externalizing disorders are present that have already drawn attention to the child.

The most common function of SMB's appears to be to regulate emotions. Typically, children feel emotionally out of control and unable to express their emotions. Sometimes, their first experience with self-injury is accidental, and due to their emotional deficits, they feel more soothed by the injury than others would (see article below called "Opiates in Self-Injury"). Once someone self-injures, their brain remembers how rewarding the release of internal endorphins was, and the next time they feel emotionally distressed, they self-injure again. Hence, the act becomes addictive—it serves a function that is paired with strong rewards, even though it is ultimately maladaptive. To further complicate the issue, SMB's are often followed by feelings of guilt, which make the child more emotionally distressed and thus more susceptible to re-injury.

Other children self-injure for different reasons. One reason involves dissociation, and is still ill-understood by researchers. Some children self-injure to feel more alive and less depersonalized; or, to end dissociative feelings. Other children self-injure to dissociate—they enjoy leaving the present moment and going to a place that feels psychologically better. Exactly which children self-injure for which reasons is variable, but females who have been sexually abused are likely to use SMB's to dissociate.

Comorbidities of SMB's, as stated before, include childhood trauma or neglect (approximately 50% of those who self-injure admit to childhood maltreatment), extreme anxiety, alexithymia (the inability to appropriately label or express emotions), low serotonin levels (i.e., depression or mood disorders) and borderline personality disorder (which is characterized by many of the aforementioned symptoms). Usually, SMB's begin in adolescence. However, depending on a child's tendency to dissociate during traumatic experiences or on their level of distress, some children discover the reinforcing value of SMB's early.

Treatment is difficult. It should include strategies to reduce the guilt the child feels in reference to their behavior. Blaming the child is inappropriate...it insinuates that the child is self-harming to gain attention and that the child possesses the coping skills to choose other methods of emotion-regulation. Treatment

should also include an attempt to identify the reason for the SMB's—is there a history of trauma? Does the child have a caregiver with whom they can express their discontent? Alternative coping methods should be modeled for young children, and taught to children who can cognitively understand the reason for their SMB's. Additionally, a group component is often helpful with adolescents—being with others who self-harm reduces guilt, and it gives children a place to safely express their emotions. Finally, interested caregivers should read about Dialectical Behavior Therapy (DBT; an article is referenced below) as it has shown efficacy in decreasing SMB's in borderline patients.

In conclusion, SMB's are dangerous and under-detected. Caregivers and providers should look for warning signs, such as social withdrawal, a “spacey” presentation, wearing warm clothes in hot weather, and blood or sharp objects in unexpected places (i.e., a razor outside of the bathroom or blood on a kitchen towel). Most importantly, once SMB's are detected, an attitude of empathic positive regard should be the first emotion expressed to the child—these children are emotionally distressed, not vying for attention.

Watch for more on this and related subjects in future CTA Special Topic issues.

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Selected Readings on Self-Mutilatory Behaviors

Klonsky, E. D. (2007). The Functions of Deliberate Self-Injury: A Review of the Evidence. *Clinical Psychology Review, 27*, 226-239.

This article reviews current findings on the functions of self-injury, and highlights areas of research necessary to produce evidence-based interventions. Seven functions of self-injury were found in the literature: *affect regulation, anti-dissociation, anti-suicide, interpersonal-influence, interpersonal boundaries, self-punishment, and sensation-seeking*. The most common function of self-injury was affect regulation; over 90% of self-injurers feel some sort of affective relief post-injury. However, the author recognizes that evidence for an anti-dissociative function seems opposite to the affect regulation function. He concludes that some people self-injure to feel less depersonalized and more alive instead of self-injuring to reduce affective stress. Further, some even self-injure so that they *can* dissociate. Thus, psychological correlates of people who self-injure for these disparate reasons should be investigated. Additionally, the author suggests an examination of the reinforcement value of each function, because if a particular function elicits extreme amounts of reinforcement, then those who self-injure for that reason will likely re-injure. Other more specific research directions are proposed, including research on the mechanisms of affect regulation (*how* does self-injury reduce negative affect?). Finally, the author proposes that clinical implications of each function should be explored, because those who self-injure to reduce negative affect may be more of a danger to themselves and require more intense, immediate treatment.

Klonsky, E. D., Oltmanns, T. F., & Turkheimer, E. (2003). Deliberate Self-Harm in a Nonclinical Population: Prevalence and Psychological Correlates. *American Journal of Psychiatry, 160*, 1501-1508.

This article evaluates past research on the prevalence of self-harm behaviors and then discusses new research on the prevalence and correlates of self-harm in a nonclinical population. The rate of self-harm in nonclinical populations is about 4%, and in the college population, especially among females, it rises to 14%. However, gender differences in prevalence rates do not exist in all populations. Cutting is the most common form of self-harm (70%), followed by hitting oneself (21-44%) or burning oneself (35%). The article discusses common correlates of self-harm, such as posttraumatic stress, borderline personality disorder, dissociation, and anxiety. In the current study, a 4% prevalence rate was found, with no gender differences. Self-harmers vs. non self-harmers showed large personality differences: self-harmers endorsed higher levels of all personality disorders except obsessive-compulsive disorder. Further, self-harmers were negatively judged by their peers: they were seen as intensely emotional and fearful of social rejection. A final important finding was that self-harm was more reliably correlated with anxiety than depression.

Mangnall, J. & Yurkovich, E. (2008). A Literature Review of Deliberate Self-Harm. *Perspectives in Psychiatric Care, 44*, 175-184.

This article sought to convey what deliberate self-harm (DSH) is and is not, and to explain the characteristics of, precursors of, and consequences of DSH. The author conceptualizes DSH as self-harm without the intent of suicide and in the absence of an organic disorder (such as intellectual disabilities or autism). However, she mentions that DSH often correlates with suicide attempts, even though DSH is not a suicide attempt. Highlighted attributes of DSH are repetitive episodes, contagious effects, borderline or other personality traits, dissociative disorder, and alcohol or drug use. Antecedents of DSH discussed are tension/anxiety, hostility/impulsivity, feelings of depersonalization, and a history of abuse. Consequences of DSH mentioned were relief from tension (as measured by cortisol levels), a communication of pain, and negative reactions from providers and caregivers. This negative reaction is concerning, because function of

DSH is not to gain attention; it is to relieve stress. Thus, those who work with this population should reduce their tendency to blame the patient for attention-seeking.

Perseius, K. I., Ojehagen, A., Ekdahl, S., Asberg, M., & Samuelson, M. (2003). Treatment of Suicidal and Deliberate Self-Harming Patients with Borderline Personality Disorder Using Dialectical Behavior Therapy: The Patients' and the Therapists' Perspectives. *Archives of Psychiatric Nursing, 5*, 218-227.

Deliberate self-harm (DSH) is a defining characteristic of borderline personality disorder. Borderline individuals struggle with emotion regulation, interpersonal relationships, and impulse control. Though each individual who is prone to DSH does not also have borderline personality disorder, the only current evidence-based therapy for DSH is Dialectical Behavior Therapy, or DBT—as its efficacy with borderline clients includes its ability to reduce occurrences of DSH. The author describes the mutative components of DBT, which include increasing self-respect, helping the client discover the root of their distress, and a group component (which fosters healthy social relationships). This qualitative analysis of the effectiveness of DBT can give providers a background of techniques they should employ with those who deliberately self-harm.

Polk, E., & Liss, M. (2007). Psychological Characteristics of Self-Injurious Behavior. *Personality and Individual Differences, 43*, 567-577.

This article investigated the prevalence of self-injurious behavior (SIB) in a college population, and whether levels of alexithymia (the inability to correctly label or convey emotions), childhood trauma, and dissociation differentiated those with SIB from those without SIB. A 20% prevalence rate was found. However, SIB in the college sample was less severe than SIB in the comparison group, which was an internet sample. Depression and emotional neglect were the two variables that most strongly differentiated those with SIB from those without SIB. Further, alexithymia was highly associated with the SIB group. Findings on dissociation were unclear; dissociation did differentiate the SIB group from the non SIB group, yet whether dissociation precedes SIB or is the result of SIB is ill-understood. Finally, the authors suggest that child emotional neglect may cause alexithymia (because the child was neglected, healthy emotional expression was not modeled), and then alexithymia may cause of some SIB—those who cannot properly express emotions may choose physical expression.

Sandman, C. A. & Hetrick, W. P. (1995). Opiate Mechanisms in Self-Injury. *Mental Retardation and Developmental Disabilities Research Reviews, 1*, 130-136.

This article details the intricacies of the opiate systems that make self-injurious behaviors (SIB) so addictive. Though this article was written in regard to why those with organic developmental disabilities self-injure, it is fair to assume that these same mechanisms underlie the addictive properties of SIB in those without organic impairment. The article discusses how endogenous (internal) opioids are more addictive than morphine: because they do not have to cross the blood-brain barrier, they do not lose any of their strength. Further, those who frequently self-injure may have opioid levels that are continually raised, which keep the self-injurer from feeling pain in expected intensities. Consistent with this hypothesis, opioid blockers reduce SIB. Thus, treatment for severe SIB may benefit from a psychopharmacological component.

Weierich, M. R. & Nock, M. K. (2008). Posttraumatic Stress Symptoms Mediate the Relation Between Childhood Sexual Abuse and Nonsuicidal Self-Injury. *Journal of Consulting and Clinical Psychology, 76*, 39-44.

The relationship between child maltreatment and nonsuicidal self-injury (NSSI) has been consistently documented. However, the exact pathways of this relationship are generally unknown. This article discusses the three major symptom clusters of PTSD (re-experiencing, avoidance, and hyperarousal).

Results indicate that both the re-experiencing cluster and the avoidance cluster independently mediated (or predicted) the relationship between child sexual abuse and NSSI. In this study, nonsexual abuse was not correlated with NSSI; however, this differs from other findings. It does suggest that victims of child sexual abuse are of increased risk. Clinical implications for treatment are discussed.