

SOARS model

Risk assessment of nonsuicidal self-injury

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A new assessment tool helps physicians screen adolescents for self-harming behaviors, then develop a treatment plan or referral to therapy for these patients.

Medical providers, particularly pediatricians, are often the first to learn that their patients have been intentionally harming themselves.^{1,2} Nonsuicidal self-injury (NSSI) is defined as directly and intentionally inflicting damage to one's own body tissue without intention of suicide and not consistent with cultural expectations or norms.³ Epidemiologic studies of community samples indicate an approximately 5.9% lifetime prevalence of NSSI among adults and 18% among adolescents, with rates even higher among psychiatric treatment-seeking youth.⁴⁻⁶ Nevertheless, only 1 in 4 clinicians routinely inquires about and addresses NSSI with his or her adolescent patients.⁷

Several authors have provided suggestions for how healthcare providers can respond to patients who self-injure.^{1,2,8,9} We developed the **SOARS** model for medical

providers to use as a brief screening and assessment of NSSI. Each letter of SOARS represents an area to assess: **S**uicidal ideation; **O**nset, frequency, and methods;

Aftercare; **R**easons; and **S**tage of change (Figure 1). Using theory, research, and consideration of real-world practice, we highlight the most important questions to ask, the reasoning for these questions, and recommendations for how to ask them. Before

screening and assessing NSSI, however, an important step for medical providers is to first evaluate their own values and beliefs about NSSI.⁸

Being empathic toward individuals who engage in a behavior typically considered contrary to protecting one's health can be difficult at times. Any negative biases, misconceptions, or judgments about NSSI (eg, manipulative or done primarily for attention) may result in a poor response and lack

FAST FACT
Approximate lifetime prevalence of NSSI among adolescents is 18%.⁷

FIGURE
1

SOARS ASSESSMENT POCKET CARD

Responding to nonsuicidal self-injury (NSSI) using SOARS assessment

Have you ever hurt yourself on purpose without intending to end your life or attempt suicide, like cutting, biting, burning, hitting?

Suicidal ideation

- I know self-injury isn't usually about suicide, but some people may think about suicide when they self-injure. Do you ever think about purposely ending your life when you self-injure?

Onset, frequency, and methods

- When was the first/most recent time?
- How many times a week/month do you self-injure?
- What do you typically do or use?

Aftercare

- How do you take care of the wounds afterward?
- Have you ever hurt yourself so badly that you needed medical attention, even if you never got it?

Reasons

- It sounds like this has been helpful for you. What does it do for you? (In what ways does it help?)

Stage of change

- Is this something you would like to stop?
- Have you ever considered stopping?

of empathy for patients struggling with this behavior. Providers who are aware of their own emotions and perspectives are better able to monitor them and can help their patients more effectively.⁸

Screening for NSSI

Providers who use the HEEADSSS assessment [Home environment, Education and employment, Eating, peer-related Activities, Drugs, Sexuality, Suicide/depression, Safety from injury and violence] to obtain a psychosocial history from adolescents would likely find the most opportune time to screen for NSSI prior to screening for suicide.¹⁰ It may seem easiest to simply ask if they have ever hurt themselves on

purpose without intending suicide. Asking about NSSI using a broad question like this, however, typically results in lower prevalence rates of the behavior than does asking about NSSI in a checklist format.⁵ We recommend normalizing the behavior (eg, "I know that some people who experience stressors similar to yours think about hurting themselves on purpose without intending suicide."), asking them directly about it ("Have you ever hurt yourself on purpose without intending to end your life or attempt suicide?"), and finishing the question by listing common forms of NSSI similar to checklist format ("like cutting, biting, burning, or hitting?"). If patients disclose engaging in NSSI,

providers can do a brief assessment using SOARS. Similar to asking about suicide, no iatrogenic effects have been shown from asking about NSSI.¹¹

Assessing NSSI using the SOARS model

SUICIDAL IDEATION

Because NSSI, by nature, is not suicidal, it should not be confused with or misinterpreted as a suicide attempt. Some adolescents fear that disclosing their NSSI will unnecessarily lead to an inpatient psychiatric hospitalization. Nevertheless, immediately after screening for NSSI, and as part of the HEEADSSS assessment, it is important to assess any suicidal ideation concurrent or in tandem with NSSI.

This is important for at least 2 reasons: For those who engage in the behavior, using NSSI as a coping strategy to avoid suicide has been shown to be among the strongest risk factors for attempting suicide, and a history of NSSI has been shown to be among the strongest risk factors for future suicide attempt, and for depressed youth, even more so than a history of a past suicide attempt.¹²⁻¹⁵

How to ask. To obtain the most honest response from adolescents who engage in NSSI and to decrease any anxiety that they may be alone, it is best to normalize that some young persons who self-injure think about suicide when they engage in NSSI. So, the question can be posed as: "I know self-injury isn't usually about suicide, but some people may think about suicide when they self-injure. Do you ever think about purposely ending your life when you self-injure?"

ONSET, FREQUENCY, AND METHODS

It is important to ask about onset of NSSI (to determine duration); how many episodes of NSSI in which adolescents have engaged (to determine frequency); and what they typically use to self-injure (to determine number of methods). Each of these characteristics has been shown to be positively associated with an increased risk for suicide.

According to the interpersonal-psychological theory of suicidal behavior (IPTs), individuals die by suicide because they have both the desire to die (based on feelings

of suicide because of pain habituation and decreased fear of death.^{3,17} Research suggests that risk for a suicide attempt among those who self-injure peaks between 20 and 50 lifetime episodes of NSSI and then declines afterward, likely because the NSSI has become an effective coping strategy for those individuals.¹²

Using a greater number of methods for NSSI (eg, cutting, carving, burning, hitting) is also related to suicide attempts, especially when frequency of NSSI is high.^{3,18,19} Each type of method may elicit a different kind of pain (eg, tearing, burning,

times a week do you self-injure?” or “How many times a month do you self-injure?” Asking about increased severity is also important, particularly because this may indicate growing tolerance for pain and acquired capability for a suicide attempt: “Have you found that you have begun to self-injure more often or more deeply than a year ago (or when you first started)?” At least 1 study found that an absence of pain during NSSI is linked to an elevated risk for suicide attempts.³

To determine the number of different types of methods, providers can ask “What do you typically do or use?” If an adolescent responds that he or she cuts using a blade from a small pencil sharpener, the razor from the shower, or a piece of glass, these are all considered 1 method (ie, cutting), and providers can then ask about other methods such as those assessed during the initial screening question.

Over time, individuals who repetitively engage in NSSI have a greater risk of suicide because of pain habituation and decreased fear of death.^{3,17}

of perceived burdensomeness and perceptions of not belonging or fitting in with anyone, which are often symptoms of depression) and the capability to act on that desire.¹⁶ The capability for suicide is acquired over time, theoretically, as a result of exposure to painful and provocative experiences (eg, childhood maltreatment, combat exposure, past suicide attempt, and NSSI) that cause a decreased fear of death and an increased tolerance of physical pain.

According to the IPTs and NSSI research, individuals may first engage in NSSI without ever before having considered suicide. Over time, individuals who repetitively engage in NSSI have a greater risk

(bruising) and may independently be classified as a painful and provocative experience, thereby increasing acquired capability for suicide via both habituation to various forms of pain and decreased fear of death.¹⁹

How to ask. To obtain an idea of how long an adolescent has engaged in NSSI, simply ask “When was the first time you [cut] yourself?” followed by “When was the most recent time?” Similar to assessing other high-risk behaviors using the HEEADSSS format, providers should be specific when assessing frequency and lifetime number of episodes of NSSI. Rather than asking vaguely (eg, “How often . . .”), we recommend that providers be specific and first ask “How many

AFTERCARE

Medical providers are often in the best position to screen for NSSI and to determine severity of injury. Poor wound care can increase risk for infection and even scarring. Some individuals might hurt themselves more severely than intended and require medical attention, although some may not seek it out.

How to ask. As with all assessment questions about NSSI, it is best to use a low-key and nonjudgmental demeanor that shows a respectful curiosity.²⁰ Providers can ask “How do you typically take care of the wounds afterward?” and “Have you ever hurt yourself so badly that you needed medical attention, like stitches, even if you never got it?”

TABLE
1

STRATEGIES FOR BRIEF MEDICAL INTERVENTION

REASON FOR NSSI	BRIEF INTERVENTION	EXAMPLE RESPONSE
To reduce emotional tension and stress	Identifying alternative strategies to reduce emotional distress (eg, talking to a friend/parent, journaling, drawing, exercising, using relaxation techniques).	“What are some other ways you can manage when you’re feeling overwhelmed, even if they don’t work as quickly as self-injury?”
To feel something due to feeling numb or empty	Identifying alternative strategies for generating feelings (eg, taking a cold shower, eating a hot pepper) or discussing how patients might tolerate numbness for the time being (eg, accepting temporary emotional numbness).	“What are some other ways you can feel something when you’re feeling numb or empty, even if they don’t work as quickly as self-injury?”
To communicate with others	Identifying alternative strategies for communicating emotional needs (eg, asking for encouragement, advice, a hug, to sit in silence together, to do something together).	“How might you ask your mom/dad/friend for emotional support and help without hurting yourself or telling them that you’re going to?”
To self-punish	Introducing concept of self-forgiveness and acceptance of imperfections.	“Sounds like you’re experiencing enough of life’s punishments right now. Instead of adding more punishment to yourself, what would it be like to allow yourself some room for mistakes or self-forgiveness?”

Abbreviation: NSSI, nonsuicidal self-injury.

Some providers have suggested that if an injury is discovered on assessment, they should ask “Do you have any other wounds?” and then state matter-of-factly “I need to assess your wounds so we can be sure to provide the proper care and avoid infection.”⁹

REASONS

Individuals who engage in NSSI typically do so because it is helpful as a short-term solution or relief, or serves some particular function(s), such as to deal with stress or overwhelming emotions, in response to feeling emotional numbness, to punish themselves, or to communicate their feelings to someone (Table 1). Determining the reasons the adolescent engages in NSSI will likely be the primary focus of the

assessment, particularly because this will guide providers in their brief intervention and help determine the treatment plan.

For medical providers who have limited time to spend with their patients, a brief intervention may simply mean assessing severity of NSSI and safety, followed by a referral for therapy. A follow-up telephone call or an in-person acute care follow-up visit within 2 to 3 weeks may be indicated to determine if the patient or parent has identified a therapist. For medical providers who have an additional few minutes to provide medical counsel, a brief intervention may include specific targeted advice regarding alternative coping strategies based on function of the behavior.

For example, if the adolescent’s purpose for the behavior is to cope with overwhelming emotional distress, an important element of the brief intervention is exploring additional helpful strategies that he or she can utilize before or instead of engaging in NSSI. Focus should be on bolstering healthy coping skills rather than simply removing unhealthy ones; addition is better (and easier) than subtraction.²⁰ If the purpose of self-injuring is to communicate the adolescent’s feelings to parents or friends, a brief intervention may include exploring alternative strategies for effectively communicating his or her emotional needs. Essential elements in all brief medical counsel include validating that the adolescent’s NSSI seems helpful, sensitively expressing

TABLE
2

COMMON APPROACHES FOR ADDRESSING NSSI

STRATEGY	GENERAL FOCUS	SNAPSHOT IN PRACTICE
Motivational interviewing (MI)	Respectfully guiding individuals to engage in healthy behavioral change by resolving ambivalence and eliciting motivation for change	Exploring the pros and cons of continuing to engage in NSSI and the pros and cons of ceasing NSSI
Cognitive behavioral therapy (CBT)	Modifying thoughts and behaviors to improve mood and emotions	Differentiating between feelings (eg, anxiety) and behaviors (eg, NSSI) and modifying the thought that one must self-injure to improve mood
Dialectical behavior therapy (DBT)	Mindfulness and balancing dialectical (ie, philosophy of opposing ideas) tension between acceptance and change by teaching distress tolerance, emotion regulation, and interpersonal effectiveness skills	Identifying reason(s) for engaging in NSSI, nonjudgmentally accepting associated distressing emotions, and engaging in alternative, healthier behavior
Emotion-regulation group therapy (ERGT)	Addressing NSSI by learning to regulate emotions through understanding and acceptance of emotions, control of behavior, and value-directed living (ie, identifying meaningful things in life and making choices consistent with those values)	Identifying and pursuing meaningful activities in life and inhibiting impulsive behavior (eg, NSSI), even if it means experiencing negative emotions along the way

Abbreviation: NSSI, nonsuicidal self-injury.

From: Rollnick S, et al²²; Beck AT, et al²³; Linehan MM²⁴; Gratz KL, et al.²⁵

concern about the behavior, kindly advising against it for health reasons, exploring alternative strategies, and offering to make a referral for therapy.

Unfortunately, many adolescents who resort to NSSI cannot readily integrate information on alternative, healthier coping strategies. In these situations, listening to them without judgment, empathizing with their emotional distress, and exploring openness to therapy may be therapeutic and the best way to respond if an adolescent is overwhelmed in the moment. Simply telling an adolescent to stop self-injuring or reacting negatively may inadvertently communicate to him or her that it is not safe to talk about the behavior, and the adolescent may choose to continue to engage in NSSI but no longer talk about it with his/her provider.

The more reasons behind engaging in NSSI, the greater the risk for suicide.¹² Reasons for NSSI that are most strongly related to suicide attempts include: to avoid suicide, to cope with self-hatred, and to end dissociation or feel something other than emptiness or profound anxiety. Many physicians who see adolescents take confidentiality very seriously and discuss confidentiality and its limits at the beginning of the appointment. Each adolescent is unique, so breaking confidentiality about NSSI behavior is often based on the clinical judgment of the medical provider.¹ At this point in the SOARS interview, clinicians will likely have a good idea of how safe or at risk an adolescent who self-injures is for suicidal behavior. If the purpose of an adolescent's NSSI is to avoid suicide, we recommend that providers break confidentiality

and involve parents. This is important because no one may know if or when the NSSI becomes ineffective as a strategy to avoid suicide, and then the adolescent decides to attempt suicide.

How to ask. It is important to first acknowledge how NSSI is not the true problem for those who engage in the behavior but instead a solution to feelings coming from a deeper problem. Validating that it is a helpful way to cope is not the same as agreeing with the behavior or condoning it. Thus, we recommend that providers ask about the reasons for engaging in NSSI by stating “It sounds like this has been helpful for you. What does it do for you (in what ways does it help you)?”

However, NSSI does not help all adolescents. These young persons typically respond that they heard about NSSI as an effective coping

FIGURE
2

SAR: 3 KEY QUESTIONS



strategy, tried it once or twice, found that it was unhelpful, and stopped engaging in it. Among those who have already ceased the behavior, affirming their choice of healthier coping strategies is sometimes all that is necessary to prevent future episodes.

STATE OF CHANGE

Although many adolescents who self-injure are not ready to stop or cannot stop their NSSI, some desire to stop their self-injury but are unsure how. Some see no need to change at all. The transtheoretical model of behavior change may be a helpful way of conceptualizing whether adolescent patients want to change or are ready to change.²¹ For those who are not yet ready to give up their NSSI, using motivational interviewing can be a helpful way of collaborating with these adolescents, guiding them toward motivation for change and exploring the pros and cons of life without NSSI (Table 2).²²⁻²⁵ Medical providers do not need to go into great depth during this conversation, but posing a question about readiness for change is a good first step for the adolescent to consider how he or she might stop self-injuring and to determine if there is a desire to do so.

How to ask. After an adolescent has disclosed the reasons for his or her NSSI and the functions it serves, a provider can ask, “Is this something you would like to stop?” or, “Have you ever considered stopping?” If the adolescent responds that he or she would like to stop and needs help, then referral to a mental health professional who has experience treating adolescents who self-injure is appropriate. If the adolescent responds that he or she sees no need to change, then brief medical counsel could focus on exploring the pros and cons of the behavior (eg, perhaps it is harming his/her relationship with someone important, such as parents). The adolescent’s response may also provide a sense of the likelihood that he or she will follow up with a referral to a mental health professional.

Summary

Clinicians can choose to spend much more time discussing and assessing NSSI, but the purpose behind the SOARS model for assessing NSSI is to be able to conduct a brief screening and assessment of NSSI by recommending what questions are most important to ask, why they are important to ask (based on empirical research and theory), and

how to ask them. Primary focus should be on the reasons behind the behavior, which will inform the brief intervention or counsel medical providers may give to their adolescent patients. All brief medical counsel should validate the utility of NSSI for each patient, sensitively express concern about the behavior, kindly advise use of healthier strategies for coping (addition is better than subtraction), and offer a referral to therapy.

If using the full SOARS assessment model is not realistic in a given scenario because of time constraints, an even shorter version (Suicidality, Aftercare, Reasons [SAR]) can be used that addresses the 3 most important assessment questions: Suicidality: “Are you thinking about suicide when you self-injure?”; Aftercare: “How do you take care of your injuries?”; Reasons: “In what ways is this helping you?” (Figure 2).

Although no empirically supported treatment targeted specifically for NSSI yet exists (psychotherapeutic or pharmacologic), most treatments that help patients with NSSI have a tendency to address the context in which the behavior occurs (eg, depression, anxiety, emotion dysregulation).² As a result, referrals to experts with a broad background including empirically supported treatments such as cognitive behavioral therapy (CBT), dialectical behavior therapy (DBT), or emotion-regulation group therapy (ERGT) will likely be most helpful (Table 2).²³⁻²⁵ ■



For references, go to
[ContemporaryPediatrics.com/
SOARS-for-NSSI](http://ContemporaryPediatrics.com/SOARS-for-NSSI)