Maryland Behavioral Health Integration in Pediatric Primary Care (MD BHIPP) Resilience Break

3/19/2021

Understanding Adolescent Self-Injury

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1-855-MD-BHIPP (632-4477)

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Conflict of interest disclosure

- No potential conflicts of interest
- Faculty at the Johns Hopkins School of Medicine
- ECHO funding through the Health Resources and Services Administration

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Definitions

- Self-harm/self-injury (also known as “NSSI”)
  - Deliberate inducement of pain or tissue damage without suicidal intent
  - Often refers to “cutting” or “scratching”

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Learning objectives

- Identify conditions and characteristics associated with self-injury
- Identify 4 risk factors for when self-injury is most associated with suicide attempts
- Know how to ask about self-injury to understand its function and assess its dangerousness
- Identify the 2 most common treatments most help kids who self-harm

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Self-harm as a behavior

- Why see it that way?
  - Self-harm is not necessarily a treatable disorder itself but can signal the presence of other disorders
  - Something reinforces self-harm to enable the behavior to persist
  - To stop self-harm, you must address the antecedents and consequences

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Prevalence, Risk Factors, and Characteristics

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Self-harm: By the numbers: Pooling the Data

REVIEW

Check for updates

Prevalence and Characteristics of Self-Harm in Adolescents: Meta-Analyses of Community-Based Studies 1990–2015

Donna Gillies, PhD, Maria A. Christou, MD, Andrew C. Dixon, MD, Oliver J. Featherston, MA, Iro Rapti, MD, Alicia Garcia-Anguita, PhD, Miguel Villasis-Keever, MD, Pratibha Reebye, MB, BS, Evangelos Christou, HSD, Nagat Al Kabir, MB, BCh, Panagiota A. Christou, MD

- 261 studies of adolescent self-harm
- 31,000 children and adolescents reviewed

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By the Numbers: Rates of NSSI

- Lifetime prevalence: 23%
- Females 1.72x more likely than males to self-harm
- Mean age at the first instance is 13 years
- 47% of kids self-harm once or twice
- 5% of kids self-harm more than ten times
- Rates have been increasing since 1990

Gillies, D., Christou, M. A., Dixon, A. C., Featherston, O. J., Rapti, I., Garcia-Anguita, A., ... & Christou, P. A. (2018). Prevalence and characteristics of self-harm in adolescents: meta-analyses of community-based studies 1990–2015. Journal of the American Academy of Child & Adolescent Psychiatry, 57(10), 733-741.

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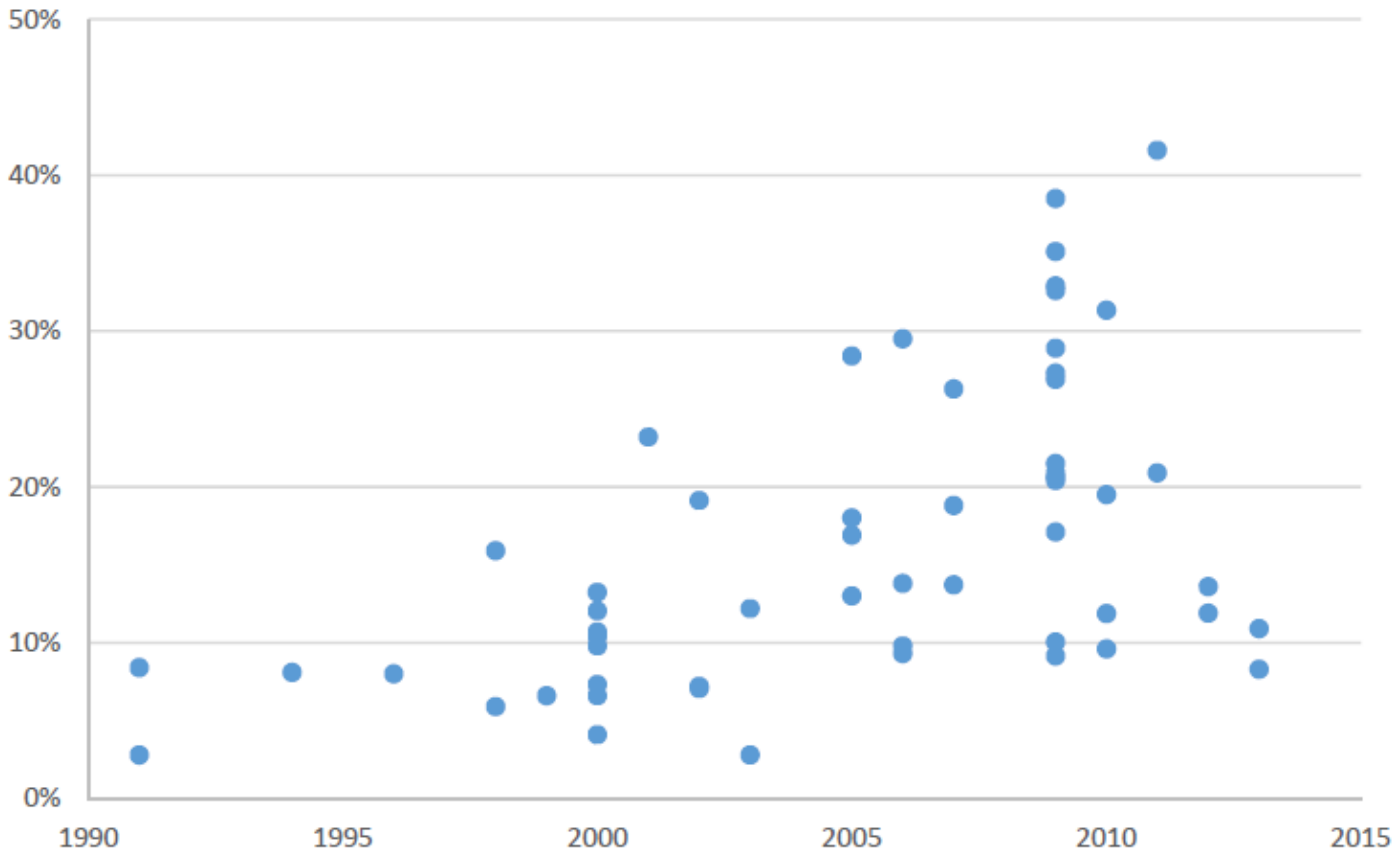
Self-Harm: By the Numbers - Increasing over time

FIGURE 2 Lifetime Prevalence Versus Year of Study



Note: Regression modeling identified a significant increase in the estimated lifetime prevalence of self-harm over time in years (coefficient = 0.077, p < .0001, 56 studies, 228,340 participants). Please note color figures are available online.

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Other things to treat: Associated conditions

- Inpatient participants
  - Reported NSSI in the last 12 months
  - Age 12-17
- Comorbidities:
  - High rates of depression
  - High rates of trauma
  - High rates of problems with “self-regulation”
  - High rates of substance use

Table 1
Axis I diagnoses of adolescents engaging in NSSI

Variable	%
Axis I diagnosis on DISC	
Any internalizing	51.7
Major depressive disorder	41.6
Post-traumatic stress disorder	23.6
Generalized anxiety disorder	15.7
Any externalizing disorder	62.9
Conduct disorder	49.4
Oppositional defiant disorder	44.9
Any substance use disorder	59.6
Alcohol abuse	18.0
Alcohol dependence	16.8
Nicotine dependence	38.6
Marijuana abuse	12.6
Marijuana dependence	29.5
Other substance abuse	3.4
Other substance dependence	5.6

Note: DISC = Diagnostic Interview Schedule for Children.

Nock, M. K., Joiner, T. E., Gordon, K. H., Lloyd-Richardson, E., & Prinstein, M. J. (2006). Non-suicidal self-injury among adolescents: Diagnostic correlates and relation to suicide attempts. *Psychiatry research*, 144(1), 65-72.

NSSI and Suicide

Just how worried should we be?

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Self-harm and suicide

- Predictors of self-harm and suicide attempts:
  - Multiple methods of self-injury
  - Hopelessness
  - Parental conflict
  - **Depressive symptoms**

Asarnow, J. R., Porta, G., Spirito, A., Emslie, G., Clarke, G., Wagner, K. D., ... & Mayes, T. (2011). Suicide attempts and nonsuicidal self-injury in the treatment of resistant depression in adolescents: findings from the TORDIA study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(8), 772-781.

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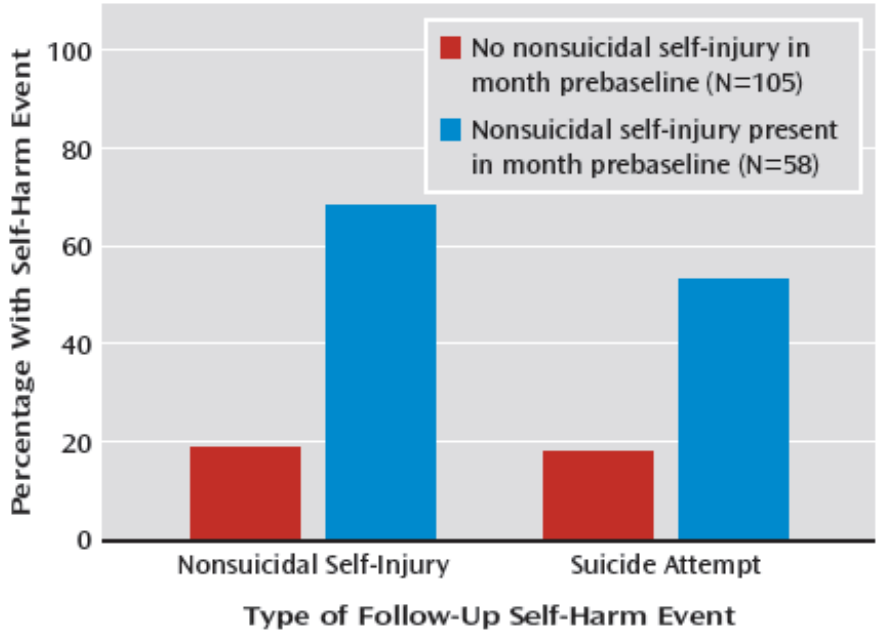
Self-harm and suicide

FIGURE 1. Effects of Baseline Nonsuicidal Self-Injury on Risk of Harm Events in Adolescents With Major Depression Over 28 Weeks of Follow-Up[a]



[a] For nonsuicidal self-injury, $\chi^2=39$, df=1, $p<0.0005$; for suicide attempt, $\chi^2=22$, df=1, $p<0.0005$.

Study of depressed adolescents on SSRI treatment

- Six months after assessment:
  - No history of self-harm
    - 1 in 5 self-harm
    - 1 in 5 attempt suicide
  - History of self-harm
    - 3x risk of self-harming again
    - 2x risk of suicide attempt

Wilkinson, P., Kelvin, R., Roberts, C., Dubicka, B., & Goodyer, I. (2011). Clinical and psychosocial predictors of suicide attempts and nonsuicidal self-injury in the Adolescent Depression Antidepressants and Psychotherapy Trial (ADAPT). *American Journal of Psychiatry*.

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Do families have a role?

Expressed Emotion and criticism

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Self-harm and families

- Expressed Emotion (EE) – extent to which family members express criticism and hostility toward and are emotionally over-involved with a specific person.
- EE is determined from the Five Minute Speech Sample
  - Asked parents, “I’d like to hear your thoughts and feelings about (child’s name) in your own words and without my interrupting with any questions or comments. When I ask you to begin, I’d like you to speak for 5 minutes telling me what kind of person (child’s name) is and how the two of you get along together.”

Wedig, M. M., & Nock, M. K. (2007). Parental expressed emotion and adolescent self-injury. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(9), 1171-1178.

Self-harm and families

- Subjects
  - 12 – 17 year old adolescents recruited from the community and clinics that asked for self-injurers and non-self-injurers
  - Total of 36 adolescent-parent dyads

TABLE 2

Descriptive Statistics of Rate of SITB

	% Sample Reporting SITB	Mean (SD)	Range of Behaviors	
			Minimum	Maximum
Suicide ideation	41.3	41.91 (156.41)	0	1,000
Suicide plans	21.7	5.93 (30.19)	0	200
Suicide attempts	17.4	0.63 (2.09)	0	10
NSSI	39.1	151.93 (884.74)	0	6,000

Note: SITB = self-injurious thoughts and behaviors; NSSI = nonsuicidal self-injury.

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Self-harm and families

- Results
  - High EE was associated with increased self-harm and suicidal ideation and behavior
    - Only high parental criticism (not over-involvement) is associated with SIB
    - High adolescent self-criticism does not play a role when parental criticism is low
    - **High levels of parental criticism, when combined with high levels of adolescent self-criticism was especially predictive and proved to be a toxic mixture that exponentially increased self-harm**

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Are These Kids Different?

Challenges in Distress Tolerance and Interpersonal Effectiveness

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Nock, M. K., & Mendes, W. B. (2008). Physiological arousal, distress tolerance, and social problem-solving deficits among adolescent self-injurers. *Journal of consulting and clinical psychology*, 76(1), 28.

Differences in Arousal and Distress Tolerance

- Subjects
  - Recruited 92 adolescents from newspaper ads
    - 62 engaged in self-harm and 30 controls
    - Between 12 and 19
  - No differences in gender, age, race, and IQ
  - Of self-harmers: 48% in therapy and 46% on meds and 77% with at least one psychiatric disorder
    - No psychiatric data on the control group

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- Measures
  - Skin Conduction Testing – measure of physiological arousal
    - Distress Tolerance Test – a card sorting task that seems to be solvable but isn't
    - Social Problem-Solving Skills Test – subject imagines different scenarios and potential responses

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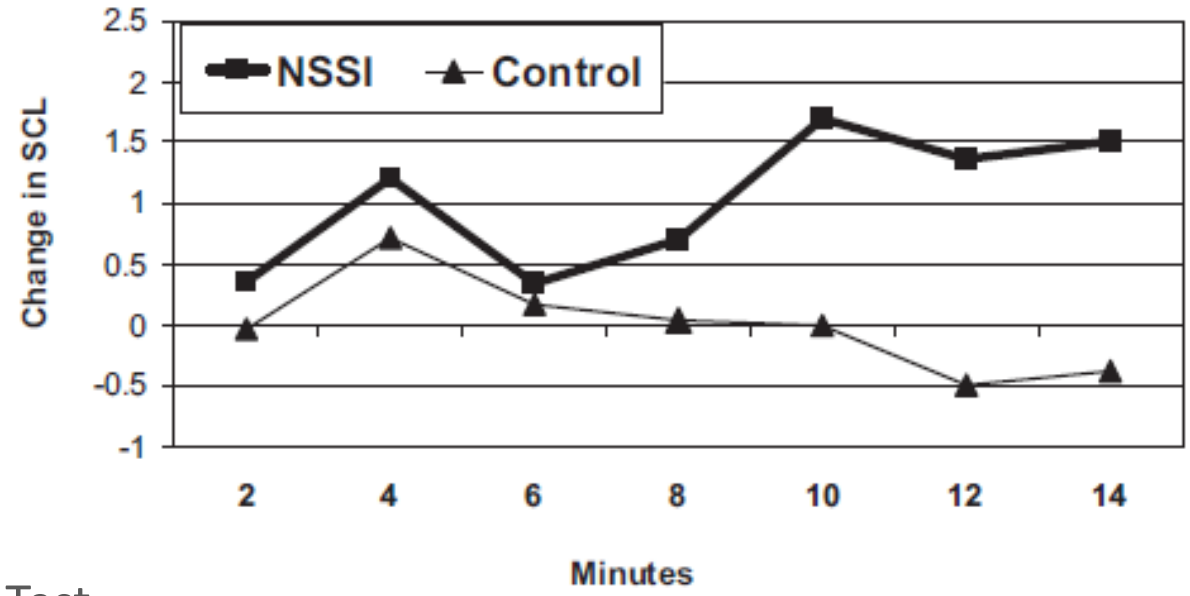
Nock, M. K., & Mendes, W. B. (2008). Physiological arousal, distress tolerance, and social problem-solving deficits among adolescent self-injurers. *Journal of consulting and clinical psychology*, 76(1), 28.



- The Distress Tolerance Test
  - Self-harmers had more arousal and no habituation (especially if they typically self-harm for negative reinforcement)
  - Self-harmers quit the task earlier

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Nock, M. K., & Mendes, W. B. (2008). Physiological arousal, distress tolerance, and social problem-solving deficits among adolescent self-injurers. *Journal of consulting and clinical psychology*, 76(1), 28.

- Social Problem-Solving Test
  - Self-harmers generated the same number of solutions
  - Self-harmers chose worse solutions and rated their choices more harshly
  - Deficits are less about intelligence and more about judgment

Table 2
Between-Groups Differences on Distress Tolerance and Problem-Solving Tests

Social Problem–Solving Skills Test	Range	NSSI *M* (*SD*)	Control *M* (*SD*)	*t*(90)	Effect size (*d*)
Attributions					
No. self-critical attributions	0–4	1.1 (1.1)	0.9 (1.0)	0.70	0.15
Response Generation					
No. solutions generated	1.4–5.1	3.3 (0.9)	3.5 (0.8)	0.75	0.16
Response Content					
Quality of overall solutions (coded 1–3)	1.4–3.0	2.5 (0.3)	2.5 (0.2)	1.34	0.28
Response Selection					
Quality of chosen solution (coded 1–3)	1.4–3.0	2.6 (0.3)	2.8 (0.2)	2.60*	0.55
Self-Efficacy					
Self-efficacy rating (0–4)	1.6–3.9	2.5 (0.5)	3.0 (0.4)	4.28**	0.90

Note. NSSI = nonsuicidal self-injury.
* $p < .05$. ** $p < .001$.

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Key Take-Home Points

- Cutting alone doesn't tell us everything about diagnosis
- Kids who cut often cut around 1-2x per week
- Kids who self harm struggle more with strong emotions and can be harshly judgmental
- Depressive symptoms, hopelessness, and high stress predict self-harm
- Social support protects against self-harm
- Watch out for different types of self-harm
- FAMILIES MATTER

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Why Do Kids Self-Harm?

Understanding the problem more fully

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Self Harm's Four Outcomes

How does self-harm "work"?

- Increase in desired feelings: self-punishment , self-stimulation, "endorphin release"
- Decrease undesired feelings: feel less overwhelmed or sad or angry, reduce the feeling of emptiness
- Increase a desired social response: gain attention or support ("manipulation")
- Decrease undesired social response: stop bullying or fighting

Nock, M. K. (2010). Self-injury. *Annual review of clinical psychology*, *6*, 339-363.

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What Kids Report

- 25% to increase a desired feeling
- 65% to decrease an unpleasant feeling
  - 35% to escape anxiety (feeling “overwhelmed”)
  - 24% to escape sadness
  - 20% to escape anger
  - 29% to escape a “bad thought” or “bad memory”
- 4% to create a desired interpersonal outcome
- 15% to decrease a negative interpersonal outcome

Nock, M. K., Prinstein, M. J., & Sterba, S. K. (2009). Revealing the form and function of self-injurious thoughts and behaviors: A real-time ecological assessment study among adolescents and young adults. *Journal of abnormal psychology*, *118*(4), 816.

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Asking About Self-Harm

No Such Thing as a “Stupid Question”

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Guiding Principles

- Respond with “supportive concern”
- Review confidentiality rules but give yourself some wiggle room (what’s ok, what’s not ok, and what do you and your patient do when there’s something in between)
- Keep the Four Outcomes Model in mind
- Safety first!

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The “What” of Cutting

- When did it start?
- How do you self-harm?
  - **Cutting? Burning? Scratching? Purging? Using drugs? How many different ways?**
  - **How often?**
  - Where do you self-harm?
  - With what?
  - **Ask to see scars**
- **Who knows?**
  - **How do those people feel about it?**
  - **What do your parents know about your self-harm?**

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The “Why” of Cutting

- In general, how are you feeling before you cut?
- **What does it do for you?**
  - **Does it help you feel more or less of a particular emotion?**
- How do other people react to your cutting?
  - How do you feel about that reaction?
- How “well” does it work?

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The “What Next” of Cutting

- **Assess suicidality (self-harm may not be a suicide attempt, but the person self-harming may still be suicidal)**
- Figure out what to treat (remember all those comorbid disorders?)
  - No medication can treat self-harm
  - Many medications **can** treat comorbid disorders
- Be wary of being a “secret keeper”
  - “How are we going to talk to your parents about cutting?”
- Therapy will be necessary

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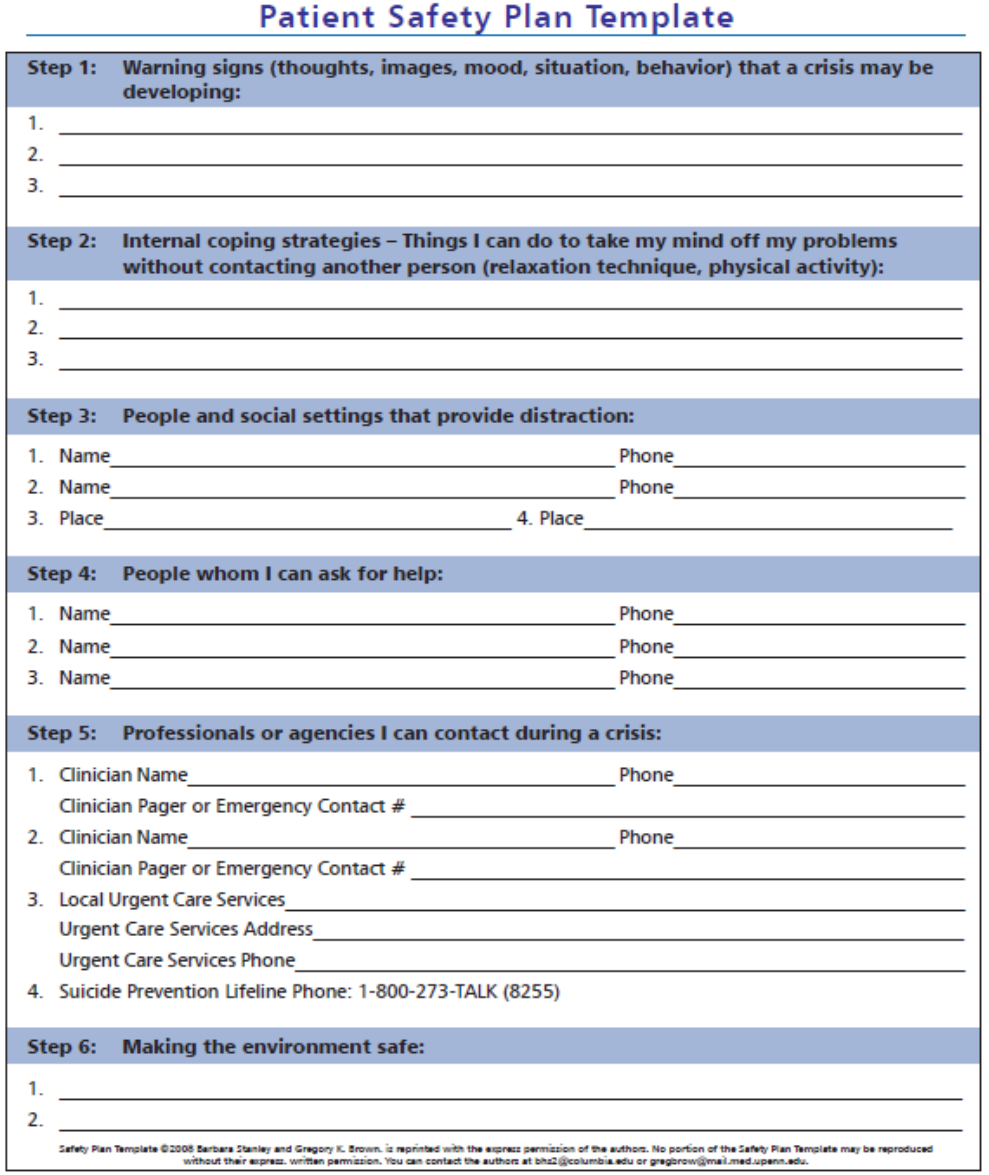
The "What Next" of Cutting

Helping parents make a Safety Plan

- No such thing as "contracting for safety"
- Remove lethal means (firearms, pills, etc)
- Empower parents to gently ask their kids about suicide
- It may be necessary to monitor social media
- Include written "if → then" contingency plans

Sample template: https://suicidepreventionlifeline.org/wp-content/uploads/2016/08/Brown_Stanley SafetyPlanTemplate.pdf



Patient Safety Plan Template

Step 1: Warning signs (thoughts, images, mood, situation, behavior) that a crisis may be developing:

1. _____
2. _____
3. _____

Step 2: Internal coping strategies – Things I can do to take my mind off my problems without contacting another person (relaxation technique, physical activity):

1. _____
2. _____
3. _____

Step 3: People and social settings that provide distraction:

1. Name_____ Phone_____
2. Name_____ Phone_____
3. Place_____ 4. Place_____

Step 4: People whom I can ask for help:

1. Name_____ Phone_____
2. Name_____ Phone_____
3. Name_____ Phone_____

Step 5: Professionals or agencies I can contact during a crisis:

1. Clinician Name_____ Phone_____
   Clinician Pager or Emergency Contact #_____
2. Clinician Name_____ Phone_____
   Clinician Pager or Emergency Contact #_____
3. Local Urgent Care Services_____
   Urgent Care Services Address_____
   Urgent Care Services Phone_____
4. Suicide Prevention Lifeline Phone: 1-800-273-TALK (8255)

Step 6: Making the environment safe:

1. _____
2. _____

The one thing that is most important to me and worth living for is:

_____

Treatments that Work

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Therapy helps

- Strongest evidence and largest effect sizes:
  - Dialectical Behavioral Therapy
  - Cognitive-Behavioral Therapy
  - Mentalization Based Therapy

- Key ingredients in treatment:
  - Focus on family interactions
  - Frequent meetings with the adolescent
  - Emphasize self-care: sobriety, sleep, increasing positive experiences

Ougrin, D., Tranah, T., Stahl, D., Moran, P., & Asarnow, J. R. (2015). Therapeutic interventions for suicide attempts and self-harm in adolescents: systematic review and meta-analysis. Journal of the American Academy of Child & Adolescent Psychiatry, 54(2), 97-107.

Brent, D. A., McMakin, D. L., Kennard, B. D., Goldstein, T. R., Mayes, T. L., & Douaihy, A. B. (2013). Protecting adolescents from self-harm: a critical review of intervention studies. Journal of the American Academy of Child & Adolescent Psychiatry, 52(12), 1260-1271.

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DBT vs CBT

Dialectical Behavioral Therapy

- Strongest evidence base
- Mix of group and individual treatment
- Parent component
- Emphasis on “skills” to replace self-injury
- “On-call” skills coaching
- Hard to find treatment in rural areas

Cognitive Behavioral Therapy

- Weaker evidence base
- Individual and parent treatment
- Emphasis on thoughts and behaviors
- No “skills coaching”
- Much more commonly found treatment
- Treats many comorbid conditions

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DBT Skill Example

https://dialecticalbehavioraltherapy.wordpress.com/distress-tolerance-tipp-skills/

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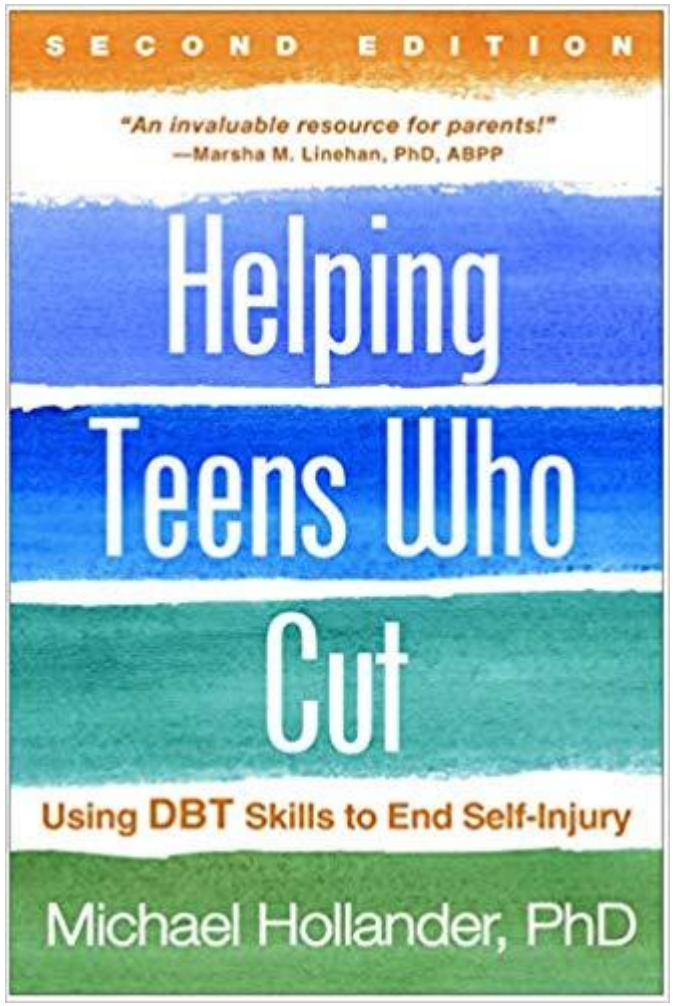
Educating Parents



- Book intended for lay audiences by a major DBT authority
- Explains the concepts and skills of DBT
- May help parents respond to emotional distress more effectively

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Educating Parents

Table. Credible Health-Information Websites That Can be Recommended to Patients Who Self-Injure[a]

Organization Name	URL	Description	Stakeholders
Self-Injury Outreach and Support	www.sioutreach.org	International nonprofit outreach initiative providing information, family and professional resources, and coping guides for NSSI	Individuals who self-injure, families, friends (other youth), romantic partners, physicians, mental health professionals, school professionals
Self-Abuse Finally Ends	www.selfinjury.com	Offers a recognized treatment approach for NSSI; also serves as a professional network and resource website	Individuals who self-injure, families, mental health professionals, school professionals
Cornell Research Program on Self-Injurious Behavior in Adolescents and Young Adults	~~www.crpsib.com~~ www.selfinjury.bctr.cornell.edu	Summarizes research and provides resources related to understanding, identifying, treating, and preventing self-injury	Individuals who self-injure, families, mental health professionals, school professionals

Abbreviations: NSSI, nonsuicidal self-injury; URL, uniform resource locator.

[a] Although not accessible on the first page of Google search results, these websites meet most (if not all) of the Health on the Internet quality of health information criteria, are current and up to date, do not propagate NSSI-related myths, and are sponsored by credible academic institutions.

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Key Take-Home Points

Whats

- Cutting alone doesn't tell us everything about diagnosis
- Kids who cut rarely engage in more than 10 discrete episodes in their lives
- Kids who self-harm struggle more with strong emotions
- Kids who self-harm can have poor social judgment
- Non-suicidal self injury is strongly associated with future suicide attempts

Whys

- Most kids typically self-harm to make a feeling go away
- Self-harm is rarely “for attention”

What nows

- Assess suicidality
- Determine the function of the self-harm
- Identify comorbidities

What next

- Treatments work!

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- Asarnow, J. R., Porta, G., Spirito, A., Emslie, G., Clarke, G., Wagner, K. D., ... & Mayes, T. (2011). Suicide attempts and nonsuicidal self-injury in the treatment of resistant depression in adolescents: findings from the TORDIA study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(8), 772-781.
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For resources related to the COVID-19 pandemic, please visit us at [BHIPP Covid-19 Resources](#).

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