

Depression, self-harm and suicide risk in adolescents

Minnesota Psychiatric Society Annual Meeting

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October 1, 2022  UNIVERSITY OF MINNESOTA
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Overview

- Depression, self-injury and suicide risk in adolescents
- Special considerations
 - Sex and gender
 - The COVID-19 pandemic
 - Social media
- Strategies for intervention

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Prevalence rates in adolescents

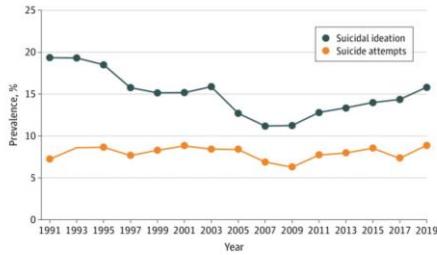
Depression	NSSI	Suicidal Ideation	Suicide attempts
6-25%	18%	11%	6%

In 2020, more than 6,600 U.S. youth ages 10-24 died by suicide
-- National Center for Health Statistics

Muehlenkamp et al *Child Adolesc Psychiatry Ment Health* 2012
Fleming J. *J Am Acad Child Adolesc Psychiatry*. 1990;29(4):571-580.
Kessler R, et al. *Depression Anxiety*. 1998;7(1):3-14.
Lewinsohn P. *Clin Psychol Rev*. 1998;13(7):765-794.  UNIVERSITY OF MINNESOTA
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Prevalence of Suicidal Ideation and Suicide Attempts Among US Adolescents, 1991-2019



Xiao et al JAMA Network Open 2021  UNIVERSITY OF MINNESOTA
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Rank	5-9	10-14	15-24	25-34	35-44	45-54	55-64	All Ages
1	Unintentional Injury 621	Unintentional Injury 15,117	Unintentional Injury 31,315	Unintentional Injury 31,057	Malignant Neoplasms 34,589	Malignant Neoplasms 115,242	Heart Disease 696,962	Heart Disease 696,962
2	Malignant Neoplasms 267	Suicide 581	Homicide 6,456	Suicide 6,454	Heart Disease 12,177	Heart Disease 36,168	Heart Disease 88,551	Malignant Neoplasms 402,255
3	Congenital Anomalies 171	Malignant Neoplasms 478	Suicide 6,942	Homicide 7,125	Malignant Neoplasms 10,789	Unintentional Injury 17,819	COVID-19 42,890	COVID-19 350,831
4	Homicide 169	Homicide 285	Homicide 1,356	Heart Disease 3,964	Suicide 7,314	COVID-19 16,964	Unintentional Injury 28,915	Unintentional Injury 293,955
5	Heart Disease 56	Congenital Anomalies 150	Heart Disease 870	Malignant Neoplasms 3,273	COVID-19 6,079	Liver Disease 9,303	CLRD 18,816	Cerebrovascular 169,264
6	Influenza & Pneumonia 50	Heart Disease 171	COVID-19 501	COVID-19 2,254	Liver Disease 4,938	Diabetes Mellitus 7,546	Diabetes Mellitus 9,802	CLRD 152,637
7	CLRD 54	CLRD 93	Congenital Anomalies 94	Liver Disease 4,482	Homicide 7,249	Suicide 7,249	Liver Disease 9,111	Alzheimer's Disease 134,242
8	Cerebrovascular 52	Diabetes Mellitus 60	Diabetes Mellitus 312	Diabetes Mellitus 1,168	Diabetes Mellitus 2,904	Cerebrovascular 3,686	Cerebrovascular 14,153	Diabetes Mellitus 102,188
9	Bengin Neoplasms 38	Influenza & Pneumonia 90	CLRD 220	Cerebrovascular 400	Cerebrovascular 2,008	CLRD 3,338	Suicide 7,989	Influenza & Pneumonia 53,544
10	Suicide 29*	Cerebrovascular 44	Complicated Pregnancy 91	Complicated Pregnancy 191	Influenza & Pneumonia 384	Homicide 1,488	Influenza & Pneumonia 2,542	Nephritis 52,547
11	Septicemia 19*	COVID-19 32	Cerebrovascular 188	Influenza & Pneumonia 178	Septicemia 979	Influenza & Pneumonia 2,111	Septicemia 6,242	Liver Disease 51,642
12	COVID-19 19*	Bengin Neoplasms 21	Influenza & Pneumonia 185	HIV 468	Nephritis 809	Septicemia 2,510	Nephritis 4,213	Suicide 45,979

Approximately 6,000 deaths per year in youth aged 10-24 in US

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Non-suicidal self injury (NSSI)

- The deliberate act of causing damage to one's own body tissue, without suicidal intent.
- Typical onset during the adolescent period
- Transdiagnostic behavior – occurs in multiple different diagnoses, or no diagnosis

Winchel and Stanley *AJP* 1991; Bresin & Schoenleber, 2015
Glen, Lunzilo, Esposito et al, 2017; Andover, 2014; Andrews, Martin, Haskling, & Page, 2014; Lloyd-Richardson et al, *Psychol Med* 2007  UNIVERSITY OF MINNESOTA
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Risk Factors for NSSI

- History of adverse experiences (abuse, neglect, bullying)
- Friends that engage in NSSI
- Marginalized identity (e.g. LGBTQ)



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Potential poor outcomes associated with NSSI

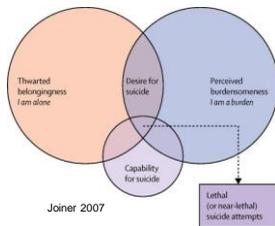
- Chronic NSSI; difficult to quit
- Scarring
- Unintentional severe injuries
- Suicide attempts



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NSSI as “practicing” for suicide

- Joiner’s theory: 3 components lead to suicide attempts
 - Thwarted belongingness
 - Perceived burdensomeness
 - **Acquired capability**





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Sex and gender

- Prevalence of depression and NSSI is greater in adolescent girls
 - Gender difference emerges after puberty
 - Early pubertal timing is a risk factor for adverse mental health in girls but not boys
- These effects are likely to be related to a **combination** biological sex differences (e.g. hormonal differences, sexual dimorphism in the brain, etc.) and experiential differences (e.g. cultural expectations, privileges, societal support versus discrimination)
- Youth who identify as a sexual minority or gender minority are at much higher risk for depression, self-injury and suicide



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COVID-19 impacts on adolescent mental health

- Meta-analyses show high rates of depression and anxiety in children and adolescents during the pandemic
- Adolescents were more impacted by than adults
 - Especially female adolescents
- High rates of loneliness in children and adolescents – a known risk factor for later depression
- Adolescent vulnerability to anxiety and depression persists after the lockdown measures are lifted



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Lockdown interruptions: Impact on child/adolescent development

- School closures
 - Academic difficulties
 - Social isolation from peers
- Extra-curricular activities cancelled
- An interruption in social interaction at a time when peer interaction is crucial for development¹



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Other pandemic stressors impacting adolescents

- Grief – family members lost due to COVID-19
- Financial stress to the family
- Housing losses
- Greater reliance on social media
- Disruption in mental health / behavioral health treatment
- Domestic violence in at-risk families

Novins et al., JAACAP 2021  UNIVERSITY OF MINNESOTA
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Adolescent mental health hospitalizations

- After a lull in the first few months, a nationwide surge in adolescent psychiatric hospitalizations, bed shortages nationwide
- Over half of adolescent psychiatric crisis admissions related to COVID-19-related stressors

Choi et al., J Psychosoc Nurs Ment Health Serv 2021
Reece et al., Clin Child Psychol Psychiatry 2021
<https://www.childrenscolorado.org/about/news/2021/may-2021/youth-mental-health-state-of-emergency/>  UNIVERSITY OF MINNESOTA
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Longitudinal study of brain development in adolescents with and without self-injury

- 152 adolescent girls aged 12-16 with varying levels of severity of self-harm
- Multi-level assessments of brain, behavior and physiology over 3 years

BRIDGES: Brain Imaging Development of Girls' Emotion and Self

 R01MH107394  UNIVERSITY OF MINNESOTA
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NSSI during the COVID-19 pandemic

- All BRIDGES participants and parents were invited to participate in 3 surveys in June, August and October 2020
- Funded by the UMN COVID-19 Rapid Response grant



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Contributing factors to engaging in NSSI during the pandemic

- Persist > Desist:
 - Perceived stress
 - Loneliness
- Desist > Persist
 - lower family support
- Persist > Never:
 - emotion regulation difficulties
- Never > Persist:
 - friend support

Persist: N=25
 Desist: N=36
 Never: N=20



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The Role of Social Media

- Screen time has long been a concern of parents and pediatricians
 - More screen time >> more time being stationary, less green time, fewer real in-person connections
 - Concerns about content need for parental oversight – inappropriate topics, cyberbullying, suicide contagion
 - This issue came to the forefront during the pandemic lockdown when it became impossible to set limits as screens were the only way to continue learning and to connect with peers



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Social Media – Positives

- Information searching / sharing / gathering
- Social support / connectedness – can be critical for young people who can not find a supportive group in their local community
- Searching for humor
- Inspiration
- Creative expression
- Feeling less alone
- Support and advice

Vidal et al. Int Rev Psychiatry 2020



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Social Media – Negatives

- Problematic patterns
 - Addictive use “when I start I just can’t stop”
 - Nighttime use
 - Cyberbullying
 - Posting for shock value
 - Compare and despair

Vidal et al. Int Rev Psychiatry 2020



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Social media and mental health

- Research to date has not revealed a direct correlation between social media use (in and of itself) and mental health symptoms / suicide risk
- Problematic social media use has been generally correlated with depression
 - Some evidence that problematic social media use is more common in adolescent girls and in those starting at a younger age
- Social media posting *about suicide* IS related to suicide risk

Berryman et al. Psychiatric Q, 2018
Swedo et al. J Adol Health, 2021
Vidal et al. Int Rev Psychiatry 2020



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Social media and suicide clusters

- Research on suicide clusters showed that posting suicide content was associated with suicidal ideation (SI) and suicide attempts (SA), and that among those who had no history of SI/SA, viewing cluster suicide-related content was associated with higher odds of SI/SA

Swedo et al, *J Adolescent Health* 2021



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Intervention

- Screening
- Assessment
- Safety Planning
- Evidence-Based Psychotherapies
- Parent Guidance
- Medication Strategies



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Importance of screening

- Youth rarely spontaneously disclose emotional distress, suicidal thoughts or self-injurious.¹
- Parents are usually unaware of their children's self-injury.^{2,3}

1. Boldero and Fallon, *Journal of Adolescence* 1996
 2. Mojtabai and Olson, *Suicide Life Threat Behav* 2008
 3. Velez and Cohen *J Am Acad Child Adolesc Psychiatry*, 1999



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Approach for assessing self-injury and suicide risk in adolescents

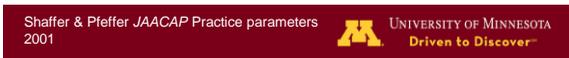
- Open, neutral, matter of fact, safe, supportive, non-judgmental, "I can handle this."
- Interview adolescent separately from parents
- Remember: Asking about suicidal thoughts and self-injury does NOT make it worse! Patients experience being asked about their suicidal thoughts as supportive



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Standard Safety Precautions/Safety Planning

- Removal of means
 - (e.g. remove or lock up guns, sharp objects, etc.; use lock boxes for all prescribed medications; eliminate alcohol from the home)
- Increase parent monitoring and communication
- Resources: local emergency services, crisis services, and suicide hotlines



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Safety Planning

1.	1.	1.	1.	1.
2.	2.	2.	2.	2.
3.	3.	3.	3.	3.

Professionals who I can ask for help:
 My therapist: _____ Phone #: _____
 Hospital/ER: _____ Phone #: _____
 Crisis hotline/Other: _____

FIGURE 43. Sample safety plan format.

From Treating Depressed and Suicidal Adolescents by David A. Brent, Kimberly D. Poling, and Tina R. Goldstein. Copyright 2011 by The Guilford Press. Permission to photocopy this page is granted to purchasers of this book for personal use only one copyright page for the book.

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Treatment approaches for pediatric depression

Mild	Mild to moderate	Moderate to Severe
<ul style="list-style-type: none"> • Psycho-education • Supportive Therapy 	<ul style="list-style-type: none"> • Cognitive Behavioral Therapy (CBT) • Interpersonal Therapy (IPT) 	<ul style="list-style-type: none"> • Medication • Medication + CBT or IPT

Birmaher B. et al. *J Am Acad Child Adolesc Psychiatry*. 2007;46:1503-1516.
 Boylan K. et al. *Psychopharmacology*. 2007;191:27-38.



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1st line treatment for NSSI and Suicidality in adolescents: Dialectic Behavioral Therapy (DBT)

- 173 adolescents with a history of past suicide attempt and repetitive self-harm
- Randomized to DBT versus individual and group supportive therapy
- Significant advantages were found for DBT on both NSSI and suicide attempts, and NSSI at 6 months

McCauley et al. *JAMA Psychiatry* 2018



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Guiding parents

- Emphasize the importance of the parent/teen relationship
- Encourage parents to view the behavior as a symptom and a sign of suffering
 - Be supportive rather than judgmental / punitive
- Encourage **validation** of teen's emotional experience



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Addressing key risk factors

- Identify past traumatic experiences and address sequelae
- Identify and addressing safety in the environment to avoid further adverse experiences (child abuse, bullying, discrimination, etc.)



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Promoting opportunities to connect and thrive

- Engagement
- Connection
- Finding meaning
- Finding enjoyment
- Being in the moment



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Summary

- Depression, self-injury and suicidal ideation commonly emerge during the adolescent period and represent important risk factors for death by suicide
- Prevention and intervention strategies should consider risk and protective factors in a changing world



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Thank you!

Questions?
Please contact:
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