

Self-Injurious Thoughts & Behaviors in Youth

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Disclosures

- SafeUT Research Quality and Improvement Program (ReQuIP) Member



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- Utah State Board of Education (MWS)



Outline

- **Background:** Adolescent Self-Injurious Thoughts & Behaviors
- **Accessible Care:** SafeUT & Youth Accessing Crisis Chat Services
- **Neurobiology:** Identifying Correlates & Potential Treatment Targets
- **Ongoing Work:** Advancing knowledge and development of interventions using a neurobiologically-informed approach
- **Broader Applications:** What individuals and communities can do to help



Self-Injurious Thoughts and Behaviors (SITBs)



Thoughts or Ideation






Non-Suicidal Self-Injury
Passive Death/Suicide
Ambivalent Death/Suicide
Active Suicide



Behaviors

Non-Suicidal Self-Injury
Ambivalent Self-Injury
Suicide

National Trends

| The Percentage of High School Students Who:* | 2011 Total | 2013 Total | 2015 Total | 2017 Total | 2019 Total | 2021 Total | Trend |
|---|------------|------------|------------|------------|------------|------------|---|
| Experienced persistent feelings of sadness or hopelessness | 28 | 30 | 30 | 31 | 37 | 42 |  |
| Experienced poor mental health† | – | – | – | – | – | 29 | – |
| Seriously considered attempting suicide | 16 | 17 | 18 | 17 | 19 | 22 |  |
| Made a suicide plan | 13 | 14 | 15 | 14 | 16 | 18 |  |
| Attempted suicide | 8 | 8 | 9 | 7 | 9 | 10 |  |
| Were injured in a suicide attempt that had to be treated by a doctor or nurse | 2 | 3 | 3 | 2 | 3 | 3 |  |

***Non-Suicidal Self-Injury = 22%**

Why...

Do youth engage in SITBs?

Are SITB rates increasing?



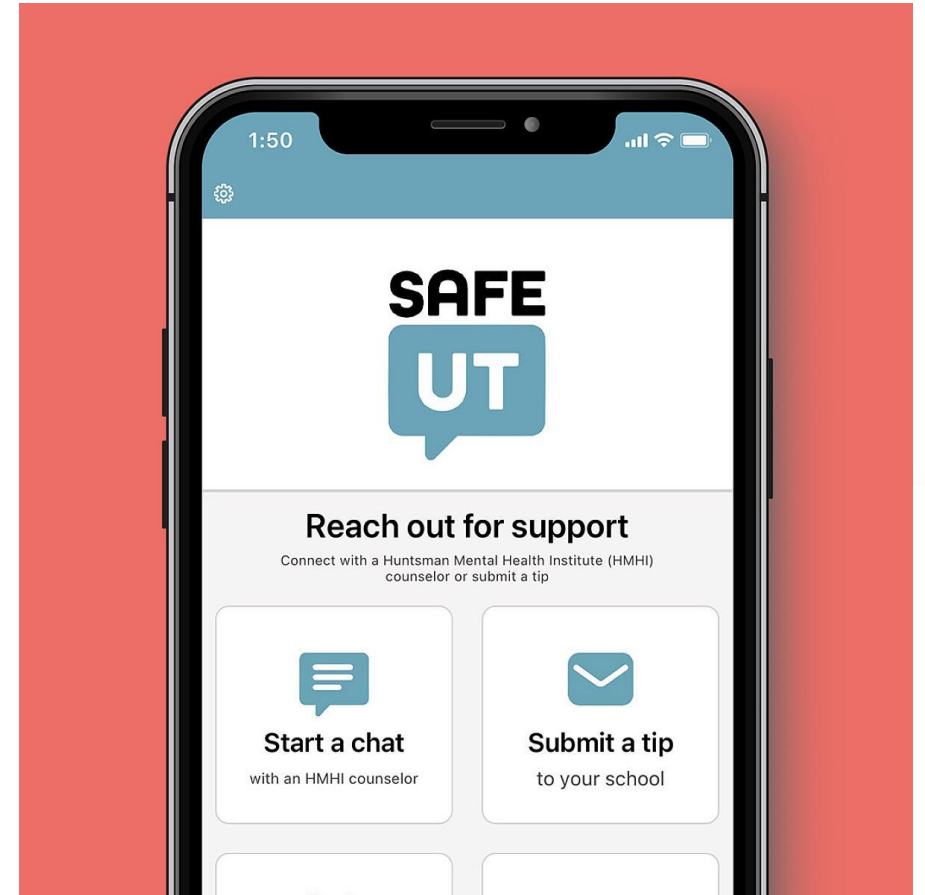
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SafeUT

- Utah State Legislature response to youth suicide
- Launched early 2016
- Students, caregivers, school staff
- Anonymous support via text, phone call, or tip
- Licensed clinicians

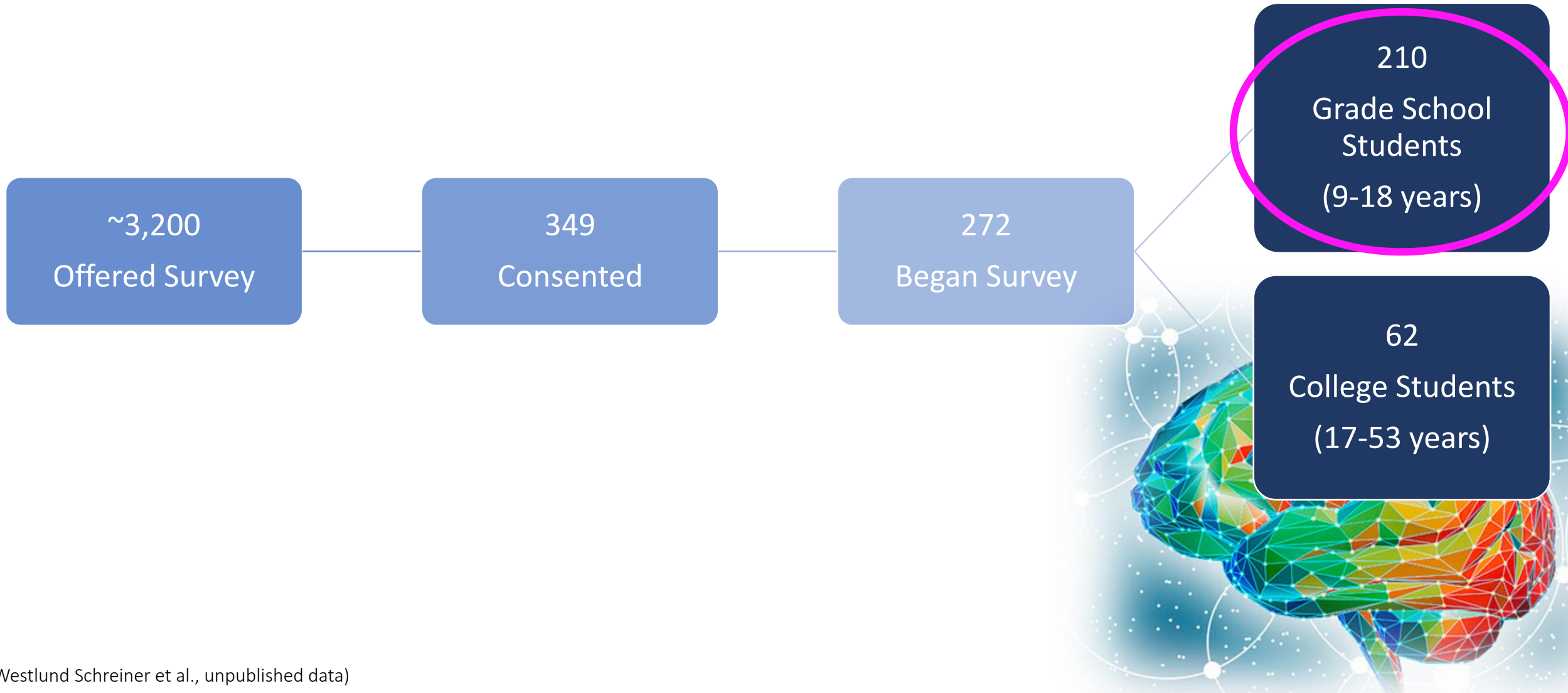


SafeUT User Survey

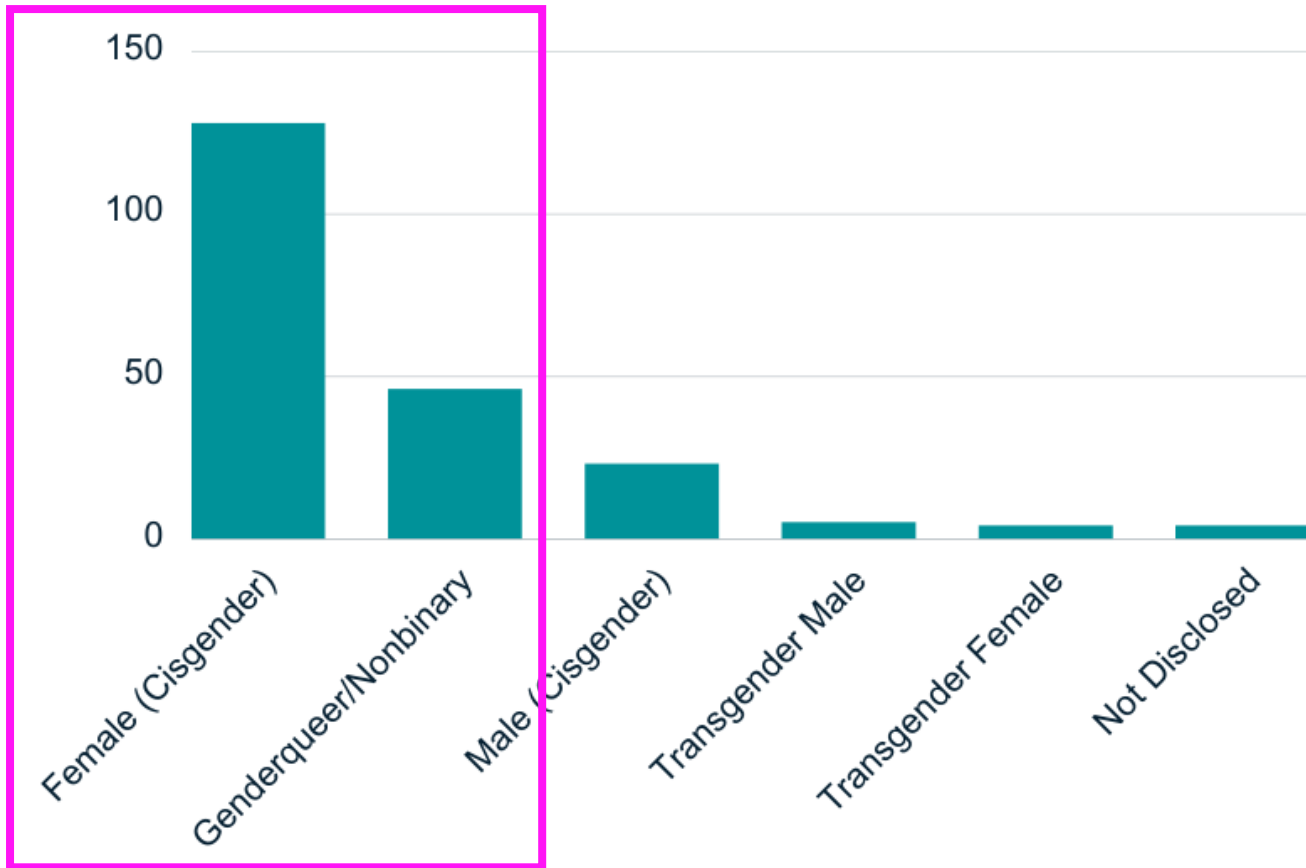
- How common are SITBs in SafeUT users?
- What are the short-term effects of SafeUT contact?
- What other mental health services are they accessing?
- What barriers do they face in accessing care?



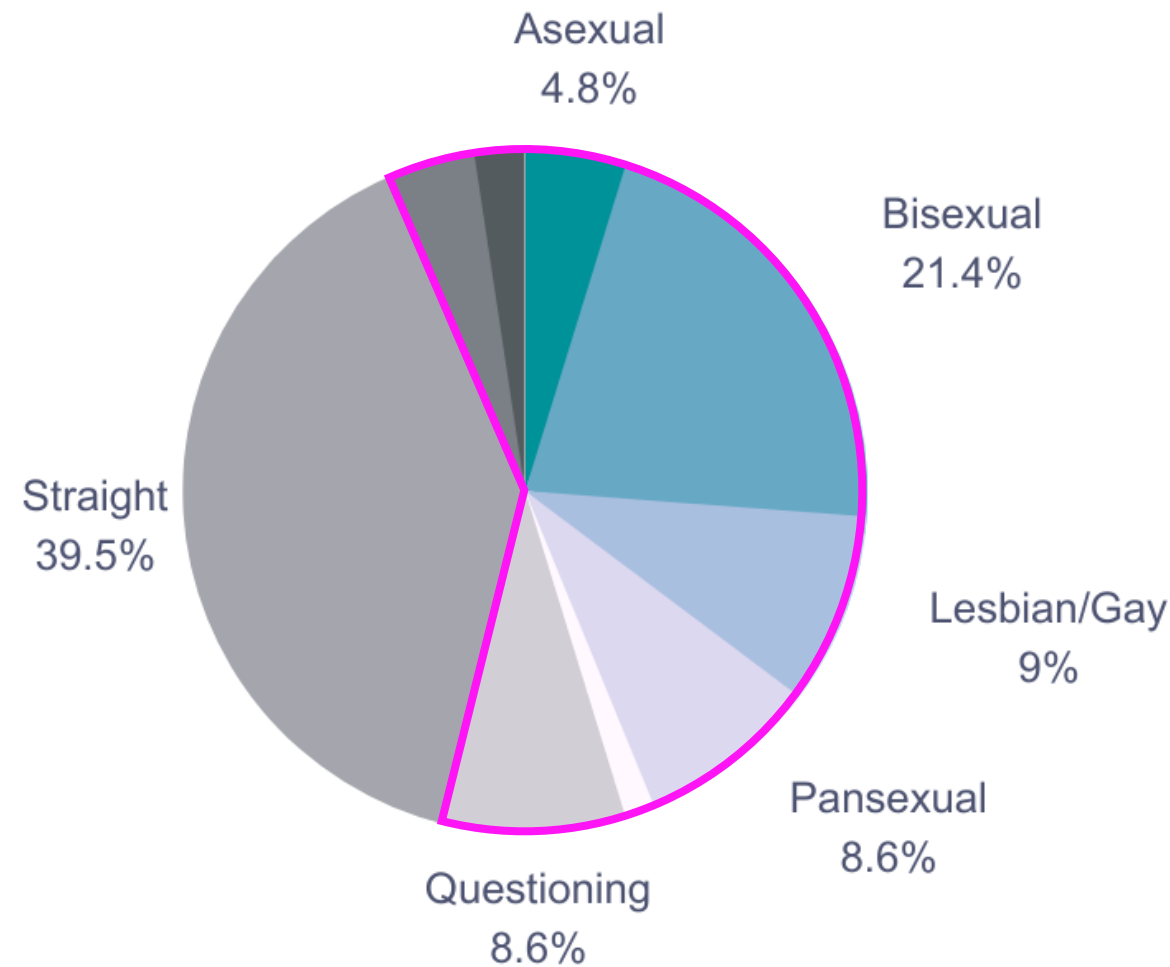
SafeUT User Survey



LGBTQ+ Representation



(Westlund Schreiner et al., unpublished data)

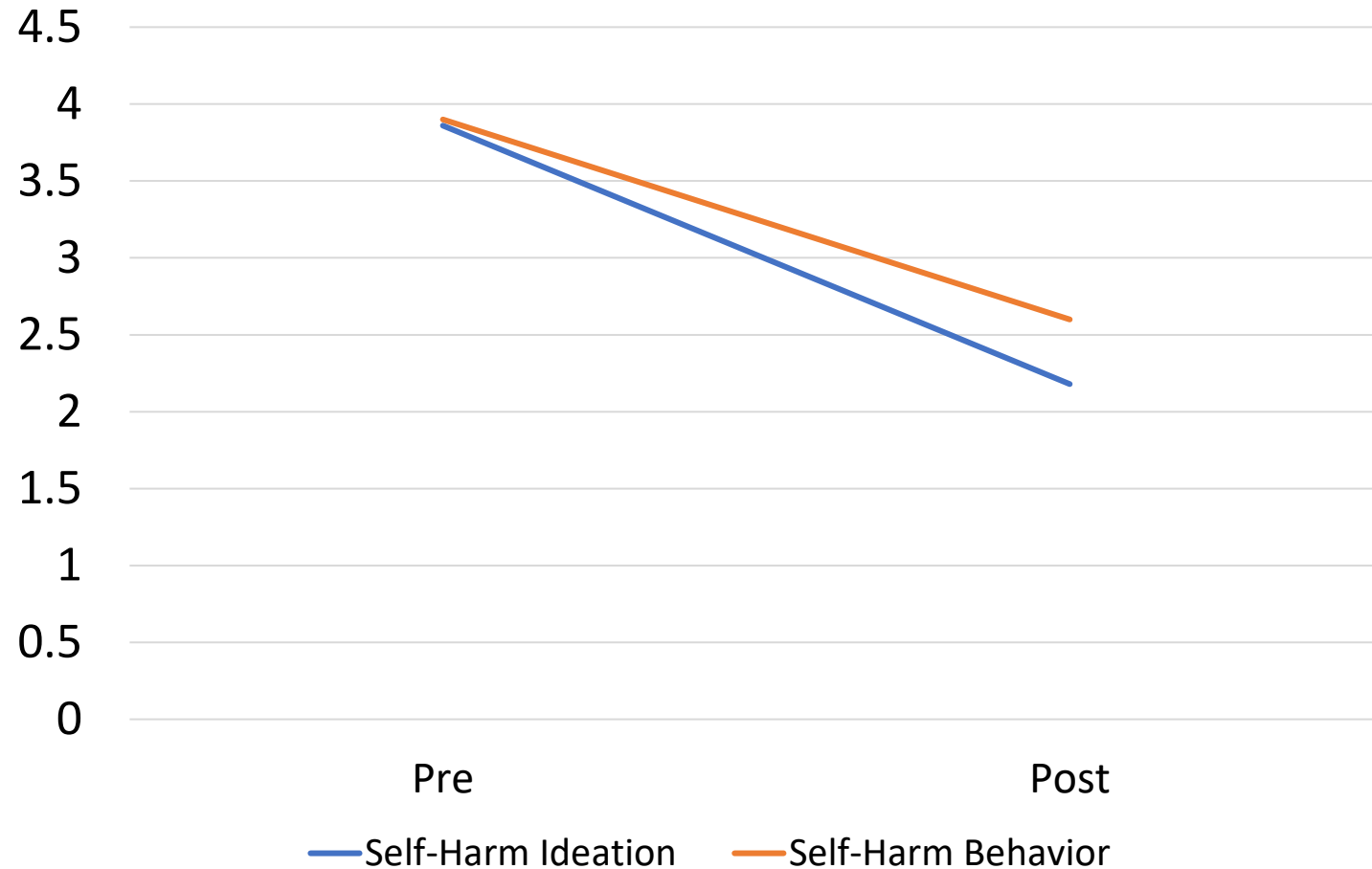


Past Two Week SITBs

| <u>SITBs in Past Two Weeks</u> | <u>N = 202</u> | <u>%</u> |
|---|----------------|------------|
| Thoughts of hurting self without suicidal intent | 118 | 58% |
| Thoughts of hurting self with ambivalent intent | 114 | 56% |
| Thoughts of killing self or suicide | 108 | 53% |
| ANY Self-Harm Ideation (regardless of intent) | 145 | 72% |
| Hurt self on purpose without suicidal intent | 85 | 42% |
| Hurt self on purpose with ambivalent intent | 56 | 28% |
| <i>Attempted suicide with the intent to die</i> | 37 | 18% |
| ANY Self-Harm Behaviors (regardless of intent) | 102 | 50% |

Ratings Before and After Encounter

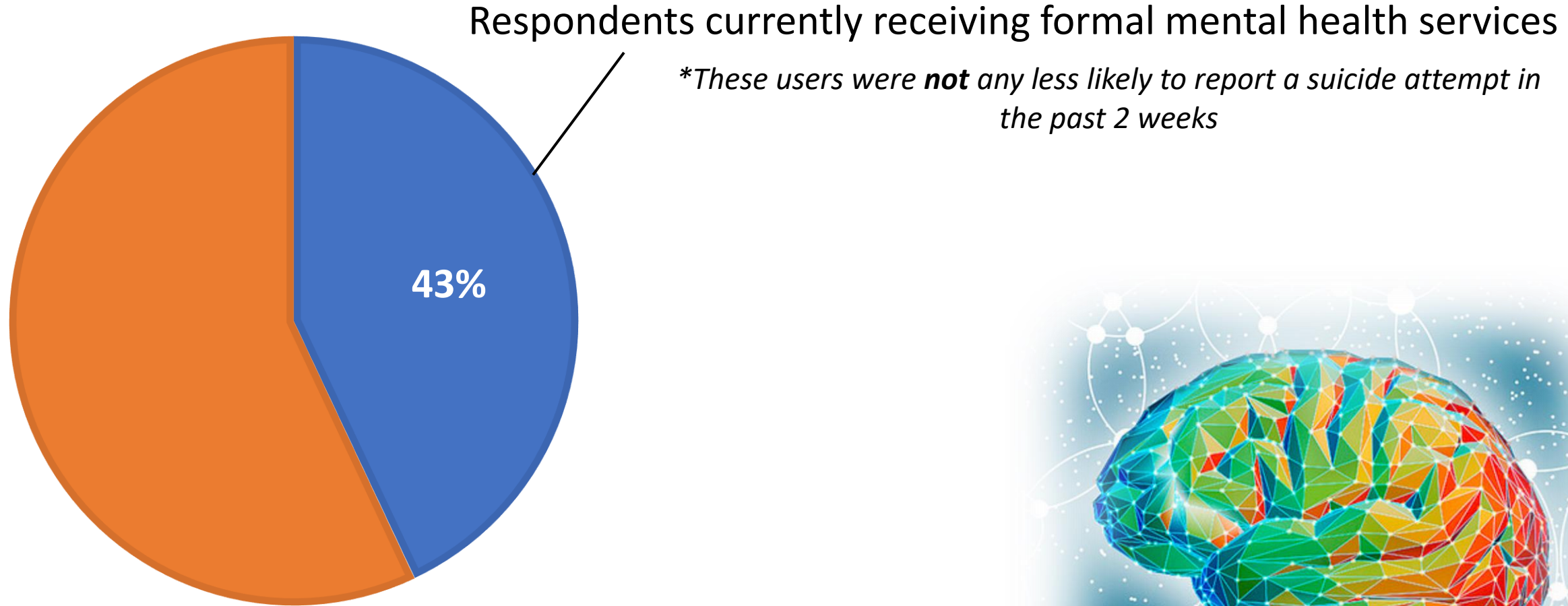
Intensity of Presenting Concern



51% endorsed self-harm ideation
21% endorsed self-harm behavior



Beyond Crisis Services



Beyond Crisis Services

The most significant barrier to accessing mental health services was talking to caregiver **(42%)**



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SITB Interventions for Adolescents

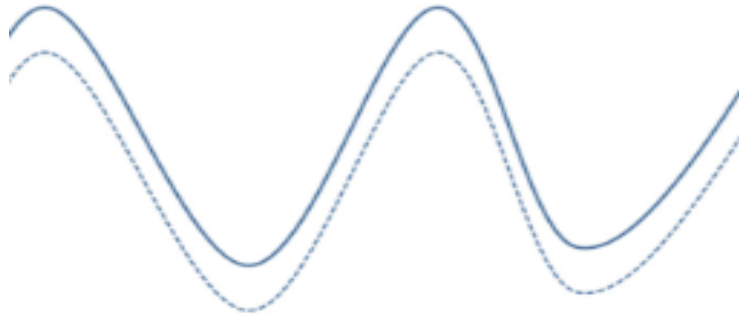
- Lack of SITB-related interventions
- Mechanisms of change and prediction of treatment response
- Use of existing knowledge of neurobiology
 - Confirm relevance of neurobiological targets to SITBs
 - Understand change with treatment
 - Optimize and refine



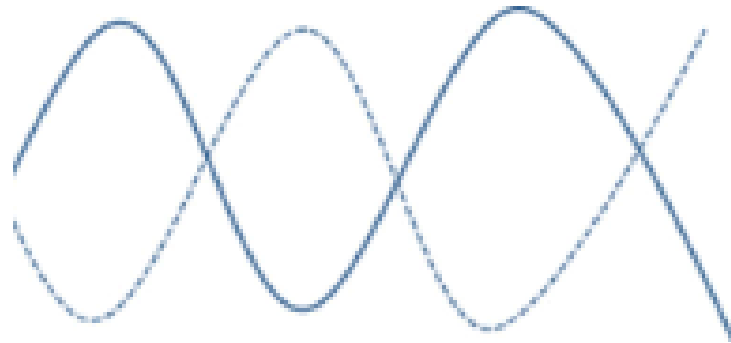
Functional Connectivity

- Correlation between brain regions in blood oxygen level dependent signal

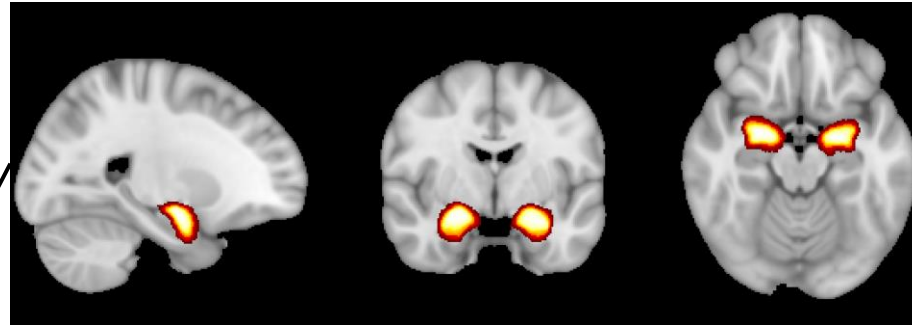
Positive = Similar Goals



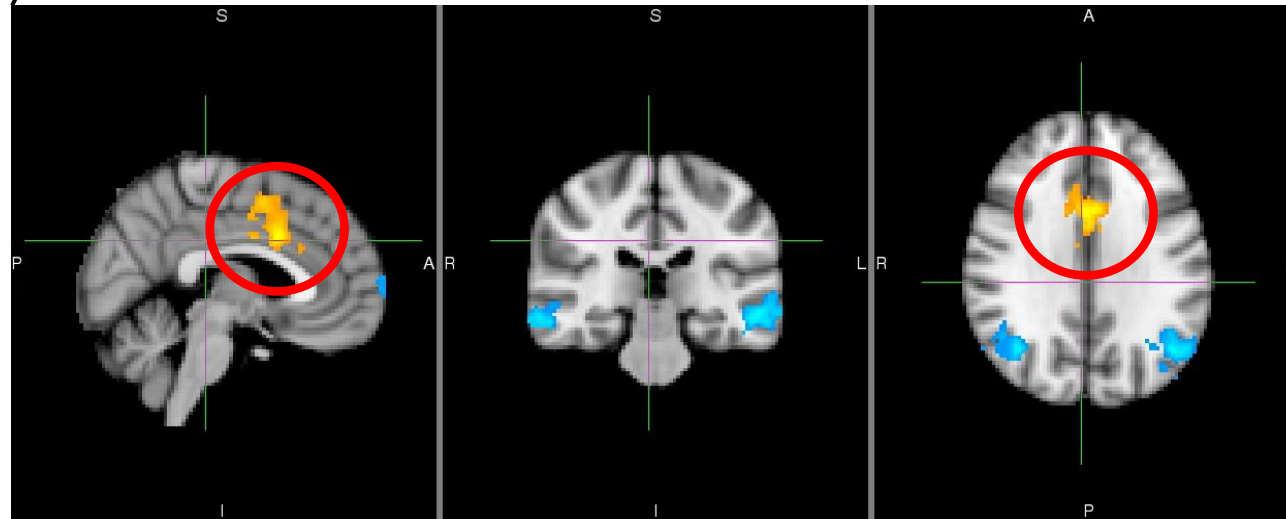
Negative = Opposing Goals



Functional Connectivity Related to NSSI

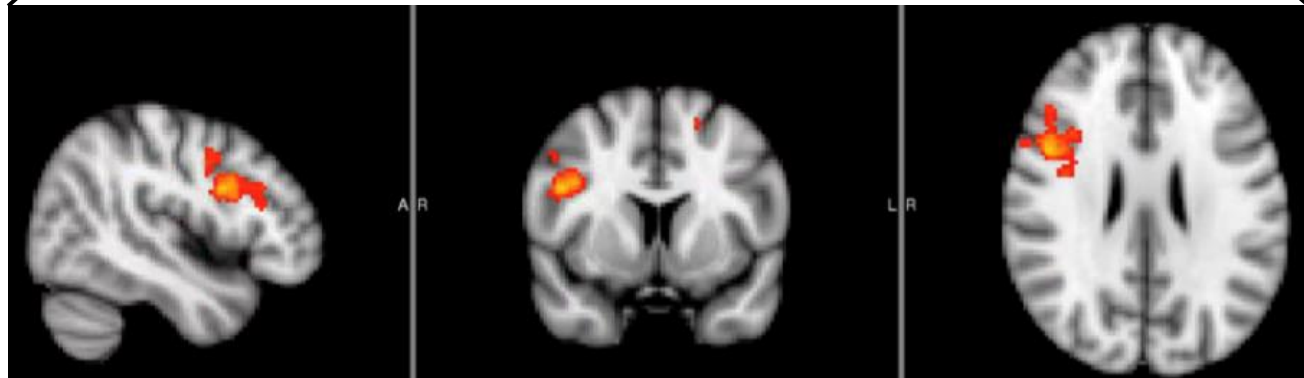
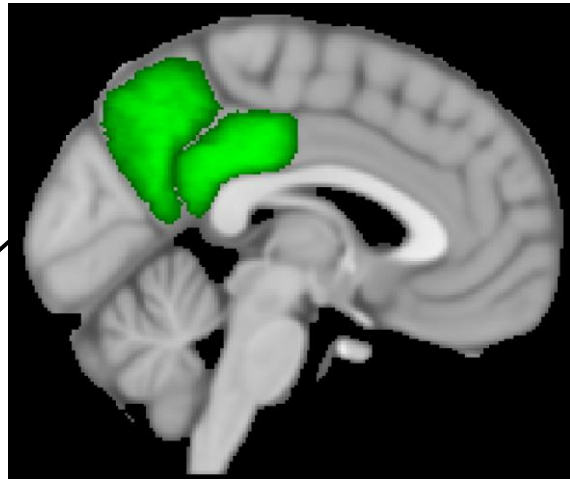


NSSI = 25
Controls = 20

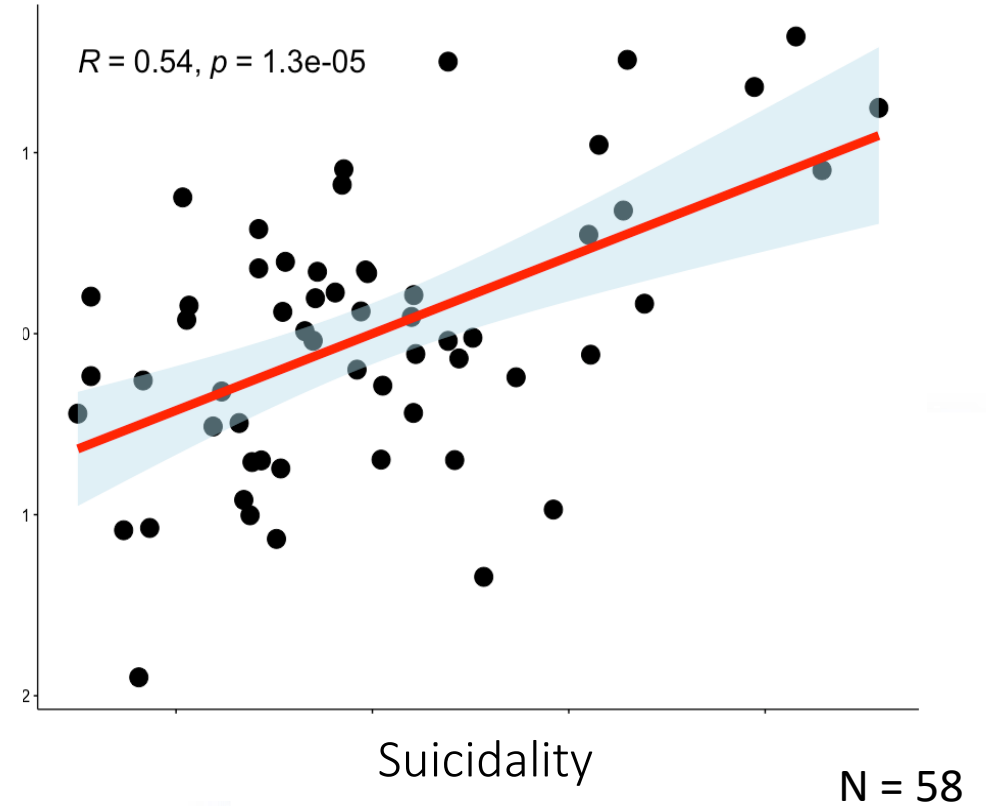


Clinical Trial
NSSI = 18

Functional Connectivity Related to Suicidality



Pre/Post Central, Middle, & Inferior Frontal Gyri





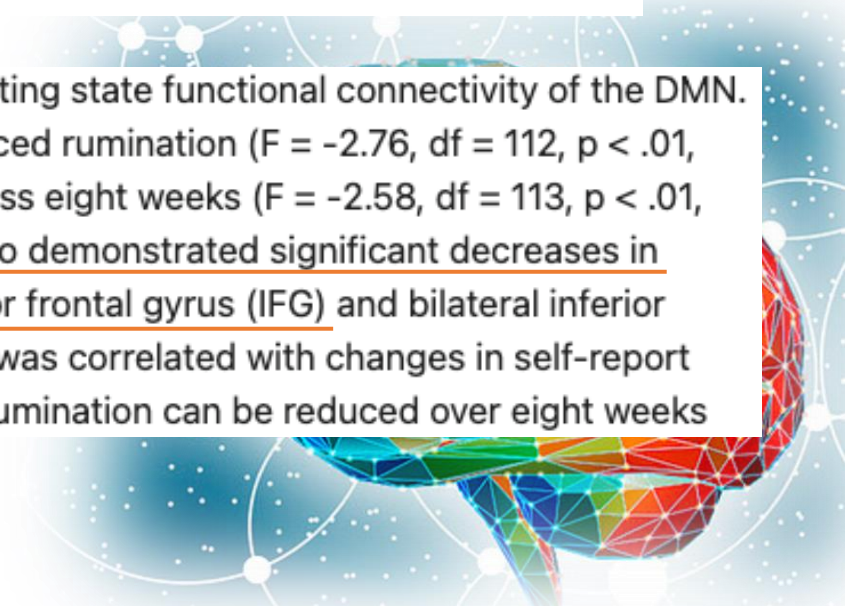
Randomized Controlled Trial > PLoS One. 2016 Nov 23;11(11):e0163952.

doi: 10.1371/journal.pone.0163952. eCollection 2016.

Targeting Ruminative Thinking in Adolescents at Risk for Depressive Relapse: Rumination-Focused Cognitive Behavior Therapy in a Pilot Randomized Controlled Trial with Resting State fMRI

Rachel H Jacobs¹, Edward R Watkins², Amy T Peters¹, Claudia G Feldhaus¹, Alyssa Barba¹, Julie Carbray¹, Scott A Langenecker¹

The left PCC (-5, -50, 36) seed was used to probe resting state functional connectivity of the DMN. Adolescents who received RFCBT demonstrated reduced rumination ($F = -2.76$, $df = 112$, $p < .01$, 95% CI [-4.72, -0.80]) and self-report depression across eight weeks ($F = -2.58$, $df = 113$, $p < .01$, 95% CI [-4.21, -0.94]). Youth who received RFCBT also demonstrated significant decreases in connectivity between the left PCC and the right inferior frontal gyrus (IFG) and bilateral inferior temporal gyri (ITG). Degree of change in connectivity was correlated with changes in self-report depression and rumination. These data suggest that rumination can be reduced over eight weeks



Rumination



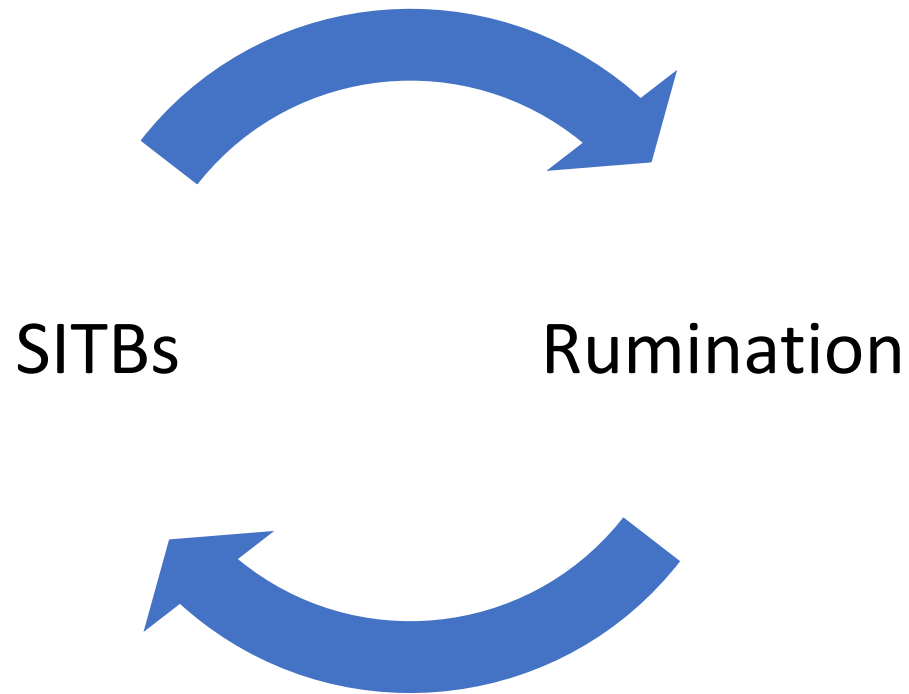
Thinking through a situation logically



Thinking in a circle entirely made up of "what if"s



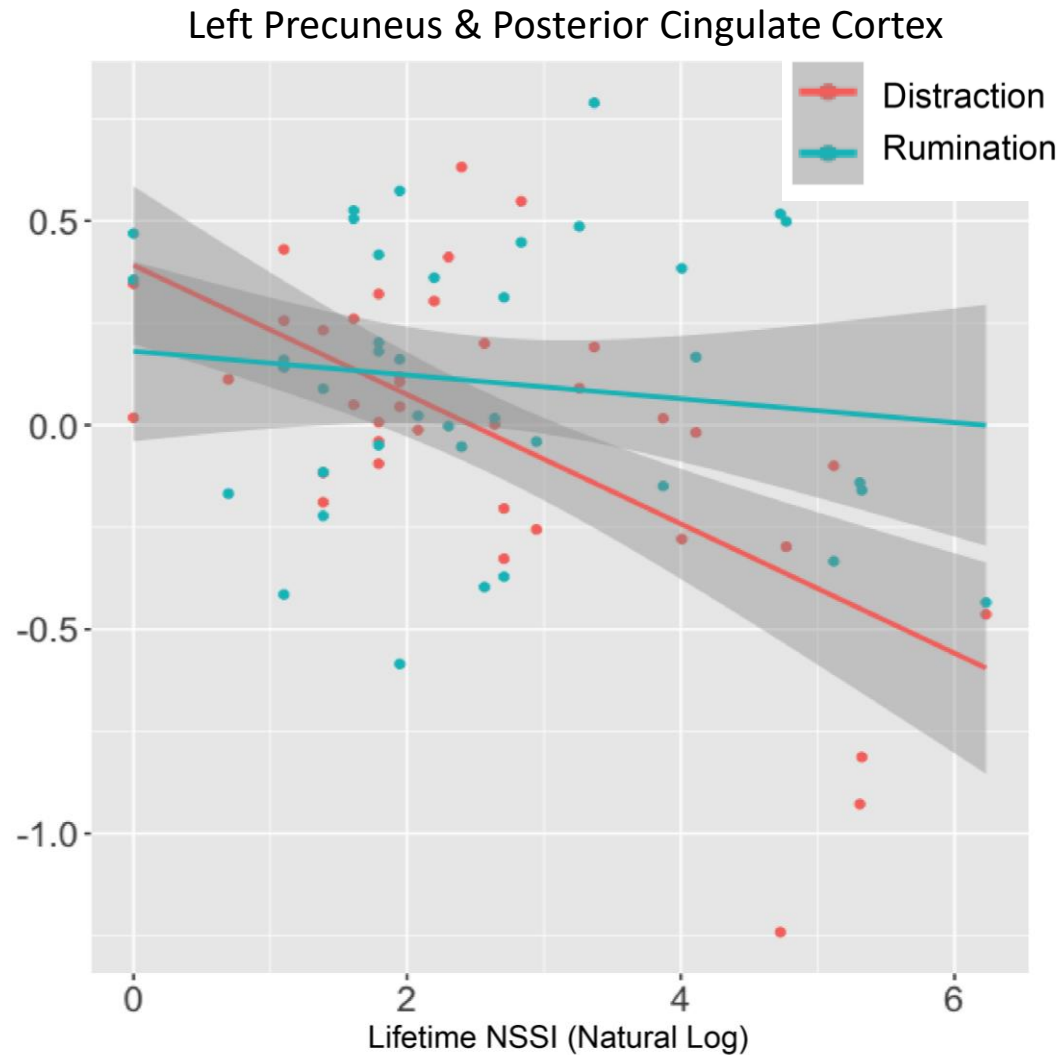
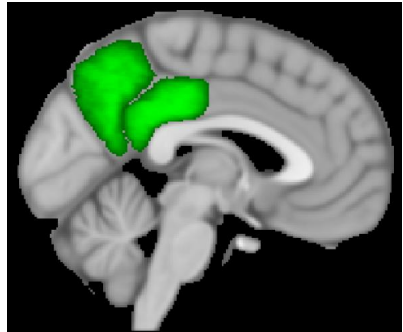
Rumination and SITBs



- ↑ Distress ↓ Problem Solving
- Suicide and mental rehearsal



Brain Activation During Rumination Task

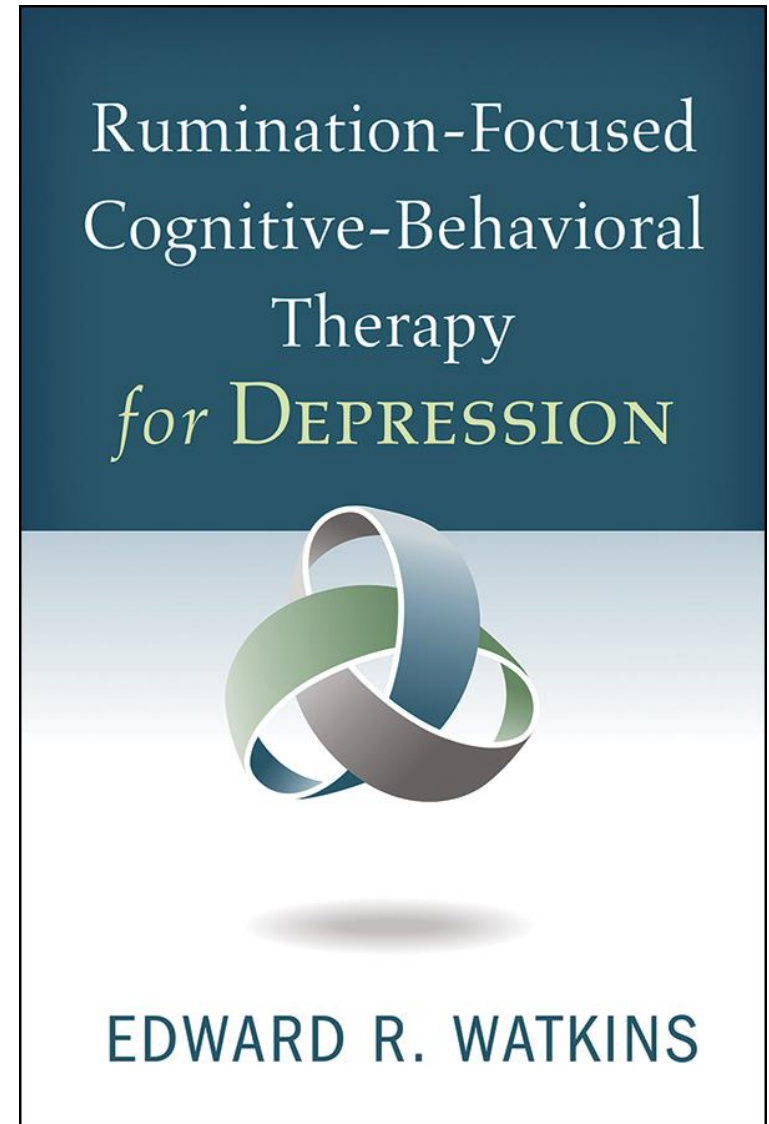


Remitted MDD = 39



Rumination-Focused Cognitive Behavioral Therapy (RF-CBT)

- Rumination as a **habit**
- Identifying **patterns**
- Attention to **details**
- **Adaptive** problem solving
- **Engaging** with experience

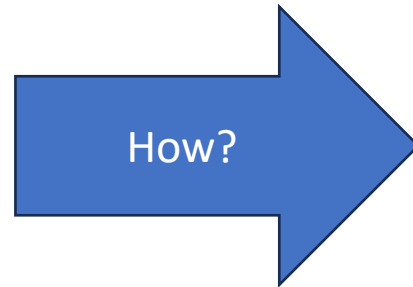


RF-CBT

B Becoming more aware

I Increasing positive emotions

G Getting unstuck



A Active

S Specific

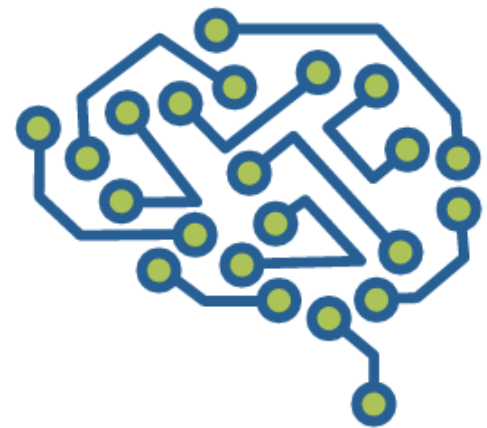
K Kind



Outline

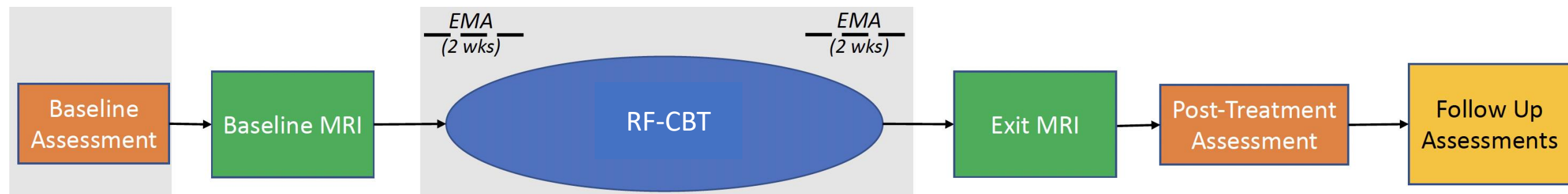
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ReSIST

Reducing Self-Injury and Suicidal Thinking

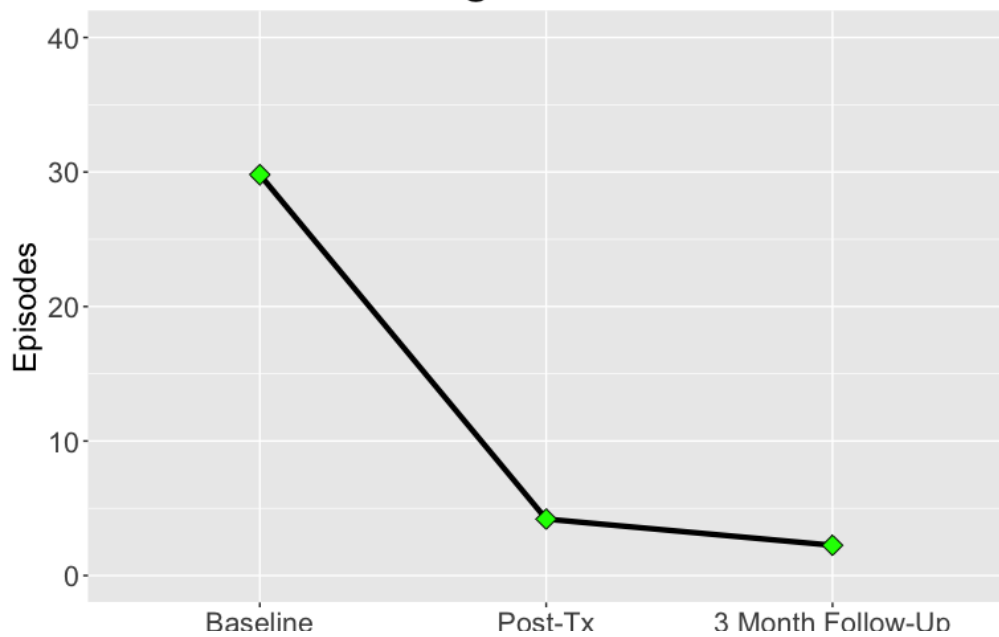


 **BRAIN & BEHAVIOR**
RESEARCH FOUNDATION
Awarding **NARSAD** Grants

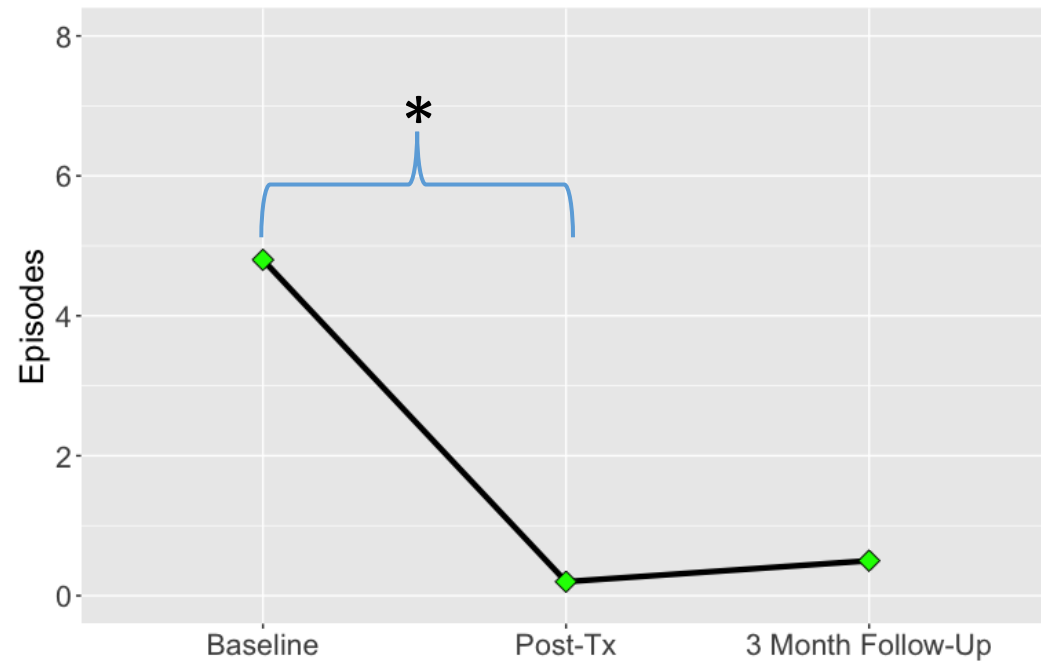


Preliminary Data

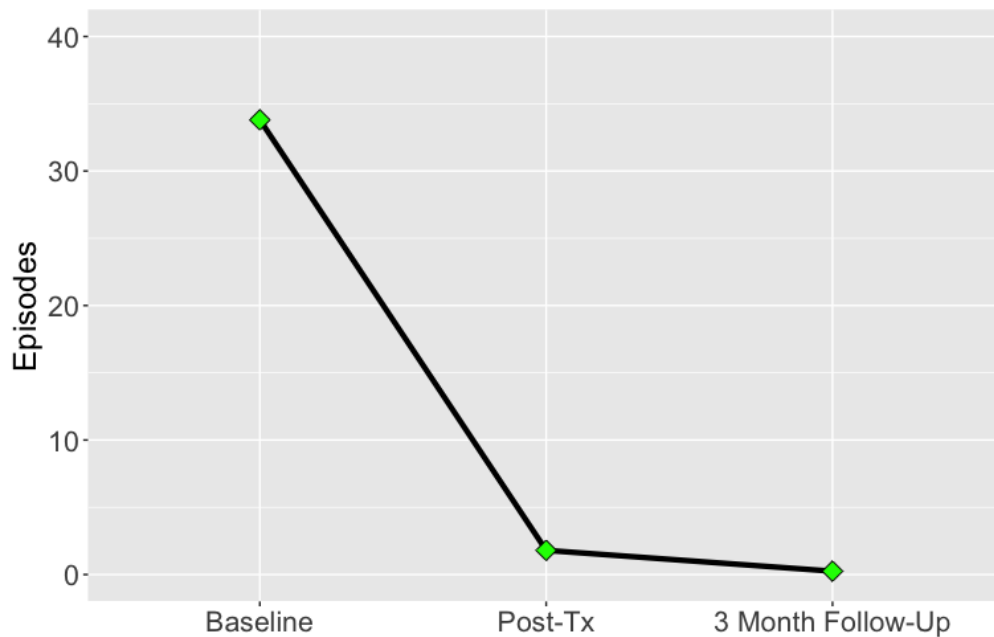
NSSI Thoughts in Past Month



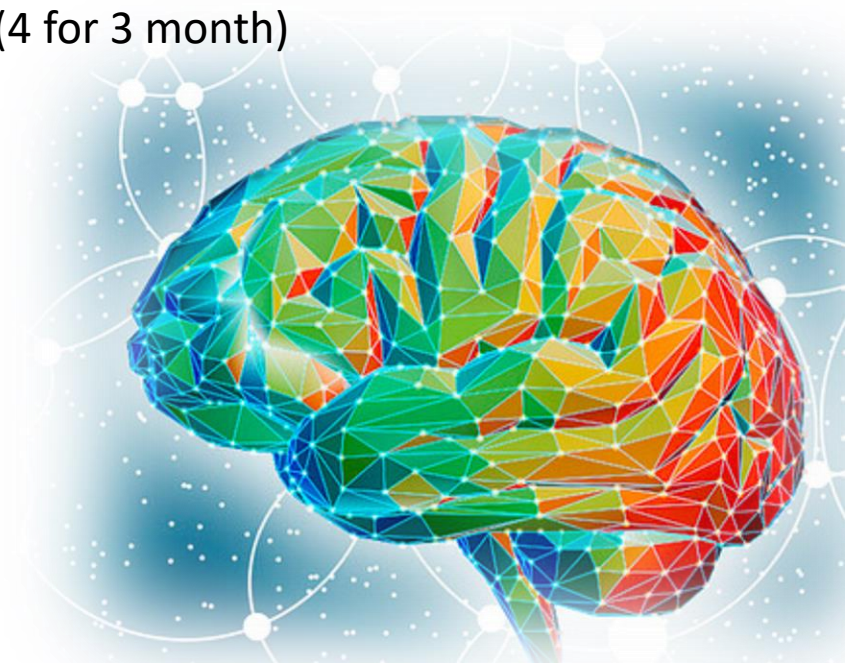
NSSI in Past Month



Suicidal Ideation in Past Month



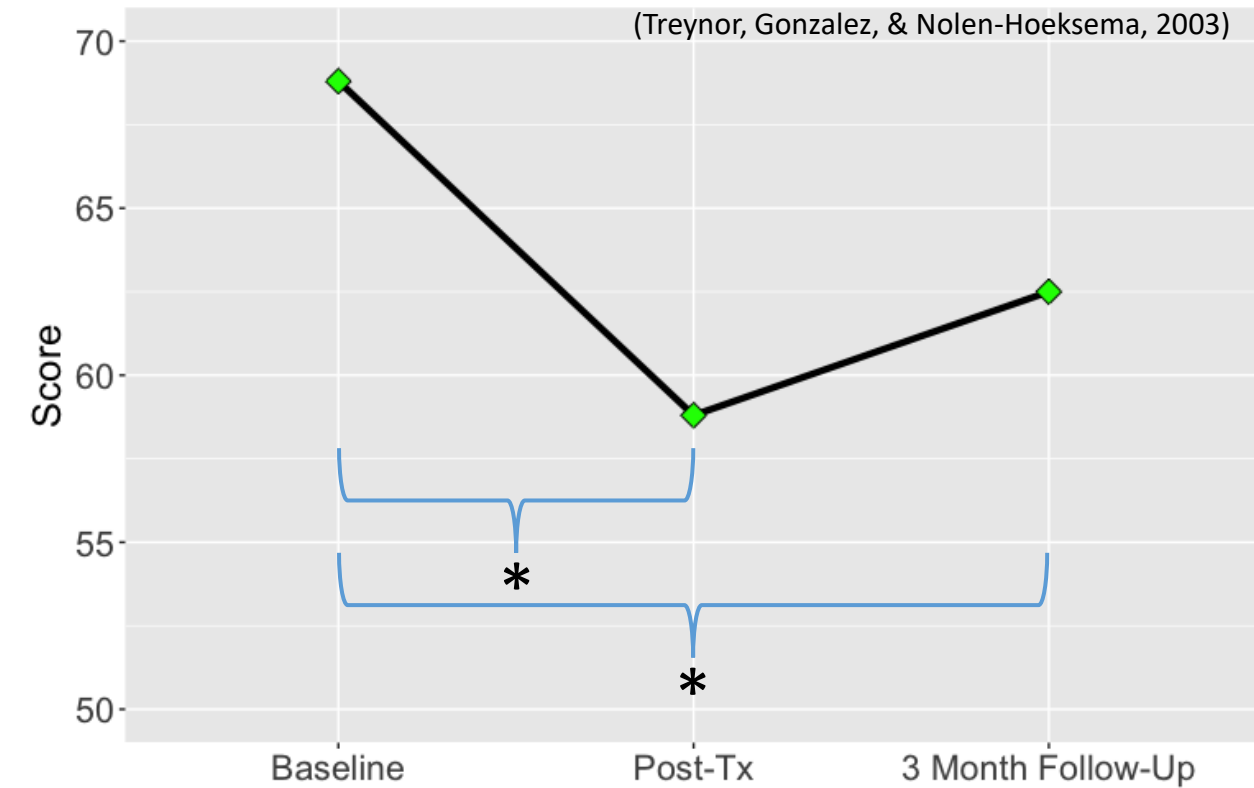
n = 5 (4 for 3 month)



Preliminary Data

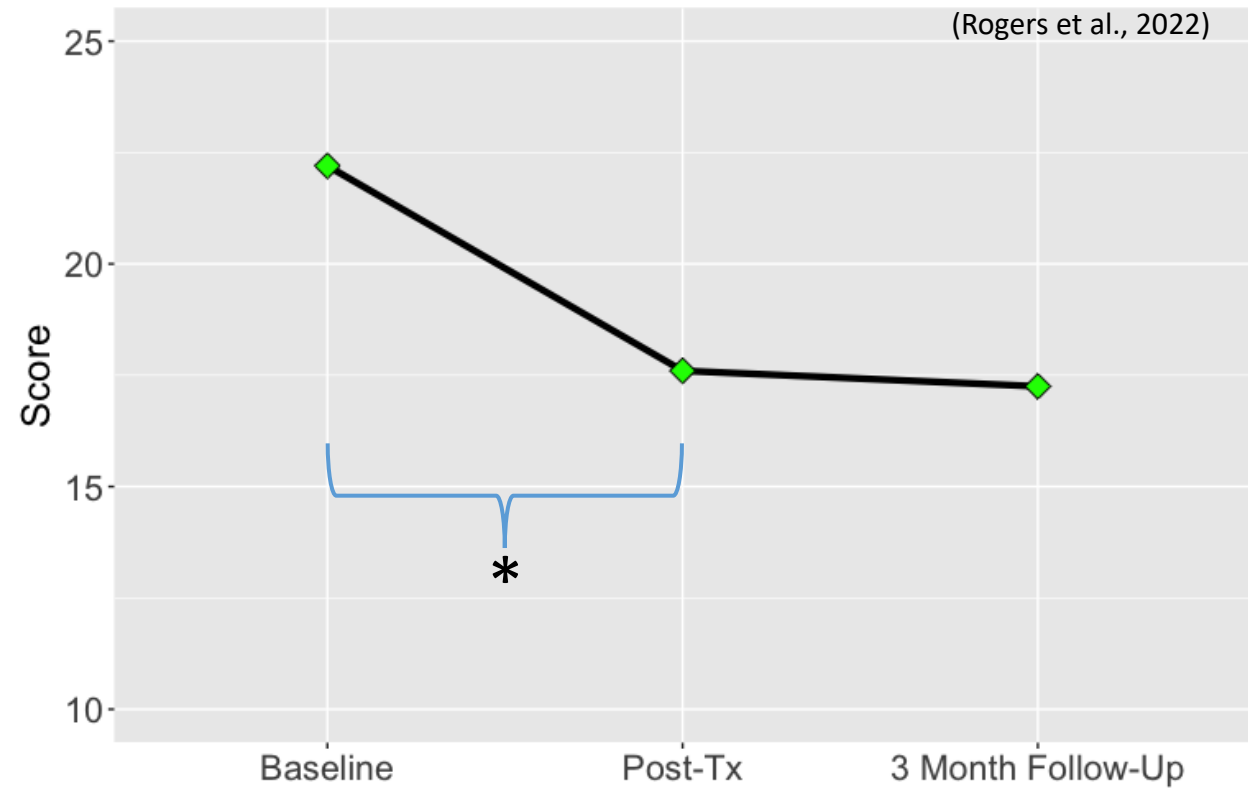
Ruminative Response Scale

(Treyner, Gonzalez, & Nolen-Hoeksema, 2003)



Suicide Rumination Scale

(Rogers et al., 2022)



n = 5 (4 for 3 Month)

(Westlund Schreiner et al., unpublished data)



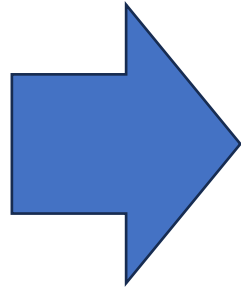
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Why...

*Do youth engage in SITBs?
Are SITB rates increasing?*



How...

*Can individuals,
communities, and society
help?*



Individuals

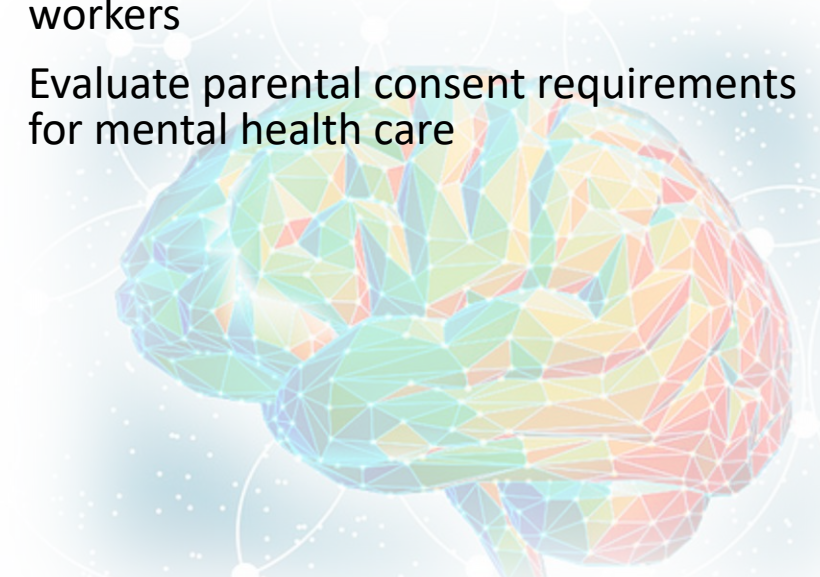
- Show and encourage support of LGBTQ+ youth
- Broaden “trusted adult” beyond parents and caregivers
- Initiate the conversation
- Problem-solve collaboratively, not coercively
- Encourage healthy social relationships
- Reduce access to lethal means

Communities & Programs

- Training and support for SITB assessment and treatment
- Provide mental health education to public
- Empower and involve youth
- Increase partnerships
- Implement evidence-based programs

Society

- Promote *inclusive* LGBTQ+ legislation
- Support mental health literacy and social-emotional learning
- Invest in education, access, research, and evaluation
- Address socioeconomic barriers
- Expand and support mental health workers
- Evaluate parental consent requirements for mental health care



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