SCIENCE SET
OPEN ACCESS PUBLISHERS

Research Article

Global Journal of Comprehensive Medical Reports & Reviews

Identifying Predictors of Suicide Attempt in Clinically-Referred Adolescents with Non-Suicidal Self-Injury

Maria Nascimento CUNHA[1*] & Oleksandr P. KRUPSKYI[2]

[1]*ISMT -Instituto Superior Miguel Torga, Coimbra, Portugal*
[2]*Oles Honchar Dnipro National University, Dnipro, Ukraine*

[*]**Corresponding author:** Maria Nascimento CUNHA, ISMT -Instituto Superior Miguel Torga, Coimbra, Portugal.

Submitted: 26 December 2025 **Accepted:** 07 January 2026 **Published:** 16 January 2026

Citation: *Cunha, M. N., & Krupskyi, O. P. (2025). Identifying Predictors of Suicide Attempt in Clinically-Referred Adolescents with Non-Suicidal Self-Injury. Glob J of Compr Med Rep Rev, 2(1), 01-09.*

Abstract

Background: *Non-suicidal self-injury (NSSI) represents a significant risk factor for subsequent suicide attempts (SA) in adolescents. Despite this association, the specific predictors that facilitate the transition from NSSI to suicidal behavior within clinical populations remain insufficiently identified, which impedes early intervention efforts.*

Methods: *This longitudinal study seeks to identify clinical and psychological predictors of suicide attempts in adolescents with NSSI. A clinical sample of individuals aged 13 to 17 years who meet DSM-5 criteria for NSSI will be recruited from child psychiatry services. Participants will complete a comprehensive baseline assessment, with follow-up evaluations at 1, 3, and 6 months. The multi-method protocol will employ structured interviews (SITBI, SASII, C-SSRS) and self-report measures to assess self-injurious behaviors, suicidality (SBQ-R), emotion regulation (DERS), impulsivity (UPPS-P), childhood trauma (CTQ), depressive and anxiety symptoms (CDI-2, RCADS, GAD-7), and perceived social support (MSPSS).*

Results: *Key predictors for the transition from NSSI to suicide attempts are expected to include emotional dysregulation, negative urgency, early trauma, and severity of depressive symptoms. It is hypothesized that these factors will significantly contribute to a predictive model, enabling estimation of suicide attempt risk over time.*

Conclusion: *Delineating the specific risk factors for suicide attempts in this high-risk group will contribute to the validation of NSSI as a distinct clinical syndrome within the continuum of self-harm. The findings are anticipated to inform the development of targeted screening tools and evidence-based preventive interventions, with the ultimate goal of reducing morbidity and mortality among adolescents with NSSI.*

Keywords: Non-Suicidal Self-Injury (NSSI); Suicide Attempt; Adolescents; Longitudinal Study; Risk Factors; Emotion Regulation.

Introduction

Non-suicidal self-injury (NSSI) is defined as deliberate, self-inflicted damage to body tissue without suicidal intent and for purposes not socially or culturally sanctioned. NSSI constitutes a significant public health concern among adolescents [1, 2]. Typically emerging in early to mid-adolescence, NSSI frequently co-occurs with psychiatric disorders such as major depressive disorder, anxiety disorders, and borderline personality disorder traits [3-5]. Although previously conceptualized within the context of other diagnoses, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) recognized the clinical importance of NSSI by designating it as a "Condition for Further Study," thereby acknowledging its unique phenomenology, high prevalence, and substantial psychosocial impact.

The relationship between NSSI and suicidal behavior is a cen-

tral topic in current research. Extensive evidence demonstrates that NSSI is among the strongest predictors of future suicide attempts in adolescents [6]. This association has prompted significant debate regarding the conceptualization of self-injurious behaviors. The categorical perspective distinguishes NSSI and suicidal behavior as separate phenomena with distinct intentions. Conversely, the dimensional or continuum perspective suggests these behaviors exist along a spectrum of self-directed violence, sharing risk factors and underlying mechanisms [7]. The continuum model is particularly relevant for clinical practice because it emphasizes the potential progression from non-suicidal behaviors to suicidality and underscores the need for early identification of individuals at risk.

Despite the established association between NSSI and suicidality, a significant gap remains in the literature. While many cross-sectional studies have identified correlates of NSSI, few longitudinal studies have specifically examined predictive factors that facilitate the transition from NSSI to suicide attempts in clinical adolescent populations. Understanding this transition is critical for advancing from correlation to effective prediction and prevention.

Several psychological constructs are hypothesized to influence this progression. Emotion regulation difficulties, particularly challenges in managing intense negative affect, are frequently identified as core features of NSSI and potential contributors to suicidality. Trait impulsivity, especially negative urgency, may increase the likelihood that emotional distress leads to suicide attempts. Additionally, a history of childhood trauma is a well-established vulnerability factor that can intensify emotional dysregulation and promote self-injurious coping strategies.

The primary objective of this study is to identify clinical and psychological predictors of suicide attempts in a clinically referred sample of adolescents diagnosed with NSSI. Employing a longitudinal design, the study will monitor participants over six months to determine which factors, including emotion regulation deficits, impulsivity, childhood trauma, comorbid depression and anxiety, and social support, most accurately predict the onset of suicidal behavior. This research aims to validate the continuum model of self-harm and establish an empirical basis for developing targeted, evidence-based screening and preventive interventions to disrupt the progression from NSSI to suicide.

Diagnosis

The conceptualization of Non-Suicidal Self-Injury (NSSI) has undergone significant development, underscoring its clinical relevance. In 2013, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) included NSSI in Section III as a "Condition for Further Study". This classification recognizes NSSI as a clinically significant syndrome characterized by a distinct behavioral pattern, high prevalence, and considerable functional impact, thereby justifying further research for its potential inclusion as a formal diagnosis. Nevertheless, NSSI is not currently an official diagnosis in the DSM-5 and is typically recorded as an "Other Specified" or "Unspecified" disorder.

To promote research standardisation and support clinical identification, the DSM-5 provides proposed diagnostic criteria for NSSI Disorder. Diagnostic Framework for Non-Suicidal Self-Injury (NSSI). The diagnosis of Non-Suicidal Self-Injury (NSSI) is guided by a structured set of criteria essential for distinguishing it from other conditions. A diagnosis requires that all the following criteria are met

Behavioral Pattern

The individual has intentionally inflicted damage to their body surface on five or more days within the past year. Methods may include cutting, burning, or hitting, with the expectation of causing only minor-to-moderate physical harm. A critical distinction is the absence of suicidal intent, which may be explicitly stated or inferred from the individual's behavior and the context in which it occurs.

Motivation and Function

The self-injurious behavior is performed with the intent to achieve one or more of the following outcomes:

- To obtain relief from a negative emotional state (e.g., anxiety, anger) or cognitive state (e.g., self-criticism).
- To resolve an interpersonal difficulty (e.g., to communicate distress or avoid a social demand).
- To induce a positive emotional state (e.g., to feel something when experiencing numbness).

Associated Cognitive and Affective Features

The behavior is associated with significant psychological preconditions, characterized by at least one of the following:
Preceding interpersonal difficulties or intense negative emotions or thoughts immediately prior to the act. A persistent and difficult-to-resist preoccupation with self-injury that precedes the act. Recurrent thoughts about self-injury, even when the individual does not act on them.

Exclusion and Clinical Significance

The behavior must be clinically significant and not attributable to other causes:

- It is not a socially sanctioned practice (e.g., tattooing, cultural rituals) and is distinct from compulsive behaviors like chronic skin picking or nail-biting.
- It causes clinically significant distress or functional impairment in interpersonal, academic, occupational, or other important life domains.

The disturbance cannot be better explained by another mental health condition, neurodevelopmental disorder (e.g., stereotypic movements in Autism Spectrum Disorder), or the physiological effects of a substance.

This diagnostic framework ensures a consistent and reliable approach to identifying NSSI, which is fundamental for accurate clinical assessment, differential diagnosis, and the implementation of evidence-based interventions.

Functions of and Risk Factors for Non-Suicidal Self-Injury Clinical Assessment of NSSI

A comprehensive clinical assessment of Non-Suicidal Self-Injury (NSSI) in child and adolescent psychiatry should extend beyond confirming the behavior to include exploration of its underlying functions, contextual triggers, and associated risk factors. This multifaceted evaluation is essential for developing an effective, individualized treatment plan.

The assessment should systematically address several key domains:

Behavioral Topography
Detailed mapping of the methods used (e.g., cutting, burning, hitting), frequency, severity, chronicity, and bodily locations of self-injury.

Suicidal Ideation and Behaviors
A thorough assessment to distinguish NSSI from suicidal behavior, while acknowledging their potential co-occurrence, using structured tools like the Columbia-Suicide Severity Rating Scale (C-SSRS).

Psychiatric History
Screening for comorbid conditions such as depression, anxiety, ADHD, and substance use disorders, which are highly prevalent and can exacerbate NSSI [8, 9].

Psychological and Emotional Functioning
Evaluating emotion regulation capacities, impulsivity, personality traits, self-esteem, and the presence of alexithymia or hopelessness [10, 11].

Interpersonal and Contextual Factors
Exploring family dynamics, peer relationships, history of bullying, and the quality of social support systems.

Life Events
Documenting a history of adverse childhood experiences, including trauma, abuse, neglect, and other significant negative or positive life events [12].

Functions of NSSI
Non-suicidal self-injury is primarily conceptualized as a maladaptive coping mechanism that serves both intrapersonal (self-focused) and interpersonal (socially-focused) functions.

Intrapersonal Functions are directed at regulating internal states:
Affect Regulation
This is the most frequently reported function. NSSI is employed to rapidly reduce overwhelming negative emotions, such as anxiety, anger, or shame, or to counteract experiences of numbness or dissociation (anti-dissociation).

Self-Punishment
Inflicting injury as a form of self-directed reprisal for perceived failures or shortcomings.

Anti-Suicide
In this paradoxical function, self-injury is used to manage and reduce intense suicidal impulses, providing temporary relief that may prevent a suicide attempt.

Creating a Physical Signal
Rendering internal psychological distress tangible and visible through the manifestation of a physical wound. Interpersonal Functions are directed at influencing the social enviro.

Interpersonal Influence
Employing NSSI to communicate distress, seek care or attention from others, or influence the behavior of family members or peers. peers.

Peer Bonding
Engaging in NSSI to integrate into a peer group in which the behavior is present, reflecting a process of social contagion.

Sensation Seeking
Engaging in self-injury to elicit feeling

Boundary Assertion
A less common function in which NSSI is used to establish a sense of self or to create a physical boundary between oneself and others. between the self and others.

Risk Factors for Non-Suicidal
The aetiology of NSSI is multifactorial, involving a complex interaction among demographic, psychological, and environmental variables.

Demographic Factors
Female gender and adolescence are consistently identified as demographic risk factors, although NSSI occurs across all genders and socioeconomic backgrounds [13, 14].

Psychological Traits: Key Psychological Vulnerabilities Include Emotion Dysregulation: Pronounced difficulties in identifying, accepting, and managing emotional responses.

Impulsivity
Particularly negative urgency, or the tendency to act rashly when experiencing negative affect.

Comorbid Psychopathology: The presence of depression, anxiety, ADHD, eating disorders, and borderline personality traits significantly increases risk.

Maladaptive Self-Concept
Low self-esteem, perfectionism, self-criticism, and pervasive hopelessness.

Environmental and Interpersonal Stressors
Adverse Childhood Experiences: A history of trauma, physical/sexual abuse, emotional neglect, and bullying is a prominent risk factor.

Family Factors
Family conflict, parental psychopathology, a history of suicidal behaviors in the family, and poor family communication.

Social Contagion
Exposure to NSSI behaviors within one's peer group or online.

Functions of NSSI
Functions of Non-Suicidal Self-Injury (NSSI)
Non-suicidal self-injury (NSSI) is primarily understood as a maladaptive coping mechanism, serving a range of intrapersonal (self-focused) and interpersonal (socially-focused) functions. Understanding these functions is critical for clinicians to develop effective, individualized treatment plans that address the underlying needs driving the behavior.

Intrapersonal Functions (Directed at regulating internal psychological states)

1. Affect Regulation: This is the most commonly reported function. Adolescents may use NSSI to:

- Reduce overwhelming negative emotions such as anxiety, anger, shame, or intense sadness. The physical pain provides a temporary distraction from and release of psychological distress.
- Counteract feelings of numbness, emptiness, or dissociation (a function sometimes termed anti-dissociation). The sensation of pain helps the individual "feel something" and regain a sense of reality.

2. Self-Punishment

Individuals engage in NSSI to inflict punishment upon themselves. This is often driven by pervasive feelings of guilt, worthlessness, or self-hatred, where the injury serves as a form of self-directed reprisal for perceived failures or shortcomings.

3. Anti-Suicide

In a paradoxical function, NSSI can be used as a strategy to manage and resist active suicidal impulses. The act of self-injury may provide a temporary sense of control and release of tension, thereby curbing the urge to commit a potentially lethal suicide attempt.

4. Generating Positive Feelings

For some, the period following an episode of self-injury can bring a sense of relief or even a brief euphoria, which reinforces the behavior.

5. Creating a Physical Signal

NSSI can be a way to make internal, intangible psychological distress into an external, tangible, and visible mark. The wound serves as a physical validation of unseen emotional pain.

Interpersonal Functions (Directed at influencing the social environment)

1. Interpersonal Influence: Adolescents may use NSSI to:

- Communicate distress to others (e.g., parents, peers, teachers) when they feel unable to do so with words.
- Solicit care, support, or attention from their social network.

To influence or control the behaviour of others, such as attempting to prevent a friend from leaving or to stop parents from arguing.

2. Peer Bonding and Social Affiliation

In some peer groups where NSSI is present, engaging in the behavior can serve as a way to fit in, feel connected to others, or share a "secret" experience, strengthening group bonds (a manifestation of social contagion).

3. Sensation Seeking

A less common function where the individual engages in NSSI to generate excitement, arousal, or an "adrenaline rush."

4. Boundary Assertion

Some individuals report that NSSI helps them establish a sense of self or create a physical boundary between themselves and others.

Recognizing that an individual may engage in NSSI for multiple, simultaneous functions is essential. Comprehensive clinical assessment should identify the primary drivers for each person to ensure that therapeutic interventions, such as Cognitive Behavioral Therapy (CBT) or Dialectical Behavior Therapy (DBT), effectively target these specific functions and facilitate the replacement of NSSI with healthier coping strategies.

Treatment

Treatment of Non-Suicidal Self-Injury (NSSI)

Effective treatment of Non-Suicidal Self-Injury (NSSI) in adolescents necessitates a comprehensive, multi-modal approach that targets the behavior, its underlying functions, and any co-occurring psychiatric conditions. The primary objective is to eliminate self-injurious behaviors by fostering adaptive coping skills, addressing comorbidities, and enhancing the individual's support system. Evidence-based interventions encompass psychotherapeutic, pharmacological, and family-based modalities.

Psychotherapeutic Interventions

Psychotherapy constitutes the central component of NSSI treatment.

Cognitive-Behavioral Therapy (CBT)

CBT is a foundational intervention predicated on the understanding that NSSI functions as a maladaptive coping mechanism, maintained by its effectiveness in alleviating psychological distress. The therapeutic process typically includes [15].

Functional Analysis

Therapist and client collaboratively identify the sequence of thoughts, emotions, and events that precipitate the urge to self-injure. This clarifies the specific function (e.g., emotion regulation, self-punishment) that NSSI serves.

Cognitive Restructuring

Clients learn to identify, challenge, and modify distorted automatic thoughts (e.g., "I am worthless," "I deserve to be hurt") that contribute to emotional distress.

Skills Training

A critical component involves equipping individuals with alternative, adaptive coping strategies to replace NSSI, including:

Emotion Regulation Skills

Strategies for identifying, tolerating, and managing intense emotions like anger, shame, or anxiety.

Distress Tolerance Skill

Techniques to endure and accept periods of acute psychological distress without exacerbating the situation (e.g., distraction, self-soothing).

Problem-Solving Skills

Breaking down overwhelming problems into smaller, manageable steps to reduce feelings of helplessness.

Dialectical Behavior Therapy (DBT)

Initially developed for Borderline Personality Disorder, DBT demonstrates particular efficacy for complex, high-risk, and chronic NSSI. This comprehensive program emphasizes vali-

dation of the individual's emotional experience while imparting behavioral skills across four key modules.

Mindfulness
Learning to observe and describe thoughts and feelings without judgment.

Distress Tolerance
Crisis survival strategies as an alternative to self-injury.

Emotion Regulation
Understanding and reducing vulnerability to emotional dysregulation.

Interpersonal Effectiveness
Assertively communicating needs and managing conflicts while maintaining self-respect and relationships.

Mentalization-Based Therapy (MBT)
This modality seeks to restore the individual's capacity for mentalizing, defined as the ability to understand one's own and others' mental states, including thoughts, feelings, and beliefs. Enhancing this capacity enables adolescents to reflect on emotional experiences rather than respond with self-injury, thereby improving emotional understanding, self-regulation, and self-esteem. **Family Therapy:** Frequently recommended for adolescents, this intervention addresses dysfunctional family dynamics, improves communication patterns, and fosters a more supportive and validating home environment. Family support is essential for reinforcing the skills learned in individual therapy and reducing familial stressors that may contribute to NSSI [16-22].

Pharmacological Interventions
Currently, no medications are specifically approved for the treatment of NSSI. Pharmacotherapy is employed adjunctively to manage underlying or comorbid psychiatric symptoms that may exacerbate self-injurious behaviors.

Antidepressants
May be prescribed to target underlying depressive disorders or anxiety disorders.

Mood Stabilizers/Antipsychotics
These agents may be utilized to address significant mood instability, impulsivity, or psychotic symptoms, particularly in cases exhibiting features of bipolar disorder or borderline personality disorder.

Treatment of Comorbidities
An effective treatment plan must address co-occurring psychiatric disorders, such as Major Depressive Disorder, Generalized Anxiety Disorder, Post-Traumatic Stress Disorder (PTSD), or Attention-Deficit/Hyperactivity Disorder (ADHD). Successful management of these conditions frequently reduces the frequency and intensity of NSSI urges.

Treatment of NSSI requires individualized planning based on the severity and complexity of the presentation, the primary functions of the self-injury, and the individual's specific psychological needs. An integrated approach that combines psychotherapy, pharmacotherapy when indicated, and family involvement provides the most favorable prognosis for adolescents to achieve lasting recovery and adopt resilient coping strategies.

Research Project Line
Background and Aims
Drawing on existing literature, this project aims to validate diagnostic criteria for Non-Suicidal Self-Injury (NSSI), conceptualized as part of a continuum of psychopathological development culminating in Suicidal Self-Injurious Behaviour (SSIB).

The primary objective is to identify factors that predict the transition from NSSI to SSIB in a clinical adolescent population. The overarching aim is to facilitate early preventive interventions targeting these factors to reduce and potentially prevent progression to Suicide Attempt (SA).

Sample
Recruitment and Setting
A purposive sampling strategy will be used to recruit a clinical sample of adolescents for this longitudinal study. Recruitment will occur in two primary settings to ensure representative cohort of youths engaged with mental health services.

1. Child and Adolescent Psychiatry Specialized Care: Patients referred to and receiving follow-up care at the ULSB Paediatric Psychiatry Department, primarily through referrals from the paediatric emergency service after presentations involving self-injurious thoughts or behaviors.
2. Primary Healthcare Screening: Adolescents attending primary healthcare centers who are identified as at risk through a preliminary screening protocol utilizing the Portuguese version of the Suicidal Behaviours Questionnaire-Revised (SBQ-R) and who subsequently meet all study inclusion criteria.

Inclusion Criteria
To be eligible for participation in this study, individuals must meet all of the following
criteria:
- Be between 13 and 17 years of age.
- Fulfil the proposed DSM-5 diagnostic criteria for Non-Suicidal Self-Injury (NSSI) Disorder, as assessed by a structured clinical interview.
- Be actively receiving follow-up care at the ULSB Paediatric Psychiatry Department.
- Demonstrate sufficient communication and comprehension skills, as determined by the research team, to provide informed assent and complete the assessment protocols.
- Provide written informed consent from a parent or legal guardian and personal written assent.

Exclusion Criteria
Individuals will be excluded from participation if they meet any of the following criteria:
- Presence of acute psychotic symptoms, delirium, or intellectual disability (as defined by standard clinical assessment) that would impair their ability to comprehend the study procedures or provide reliable data.
- Require acute inpatient psychiatric admission at the time of potential recruitment.

- Meet criteria for a substance use disorder involving illicit substances.
- Inability or unwillingness of the participant or their legal guardian to provide informed consent/assent.

Sample Characteristics and Comorbidity

Given the transdiagnostic nature of NSSI, participants may present with comorbid psychiatric diagnoses (such as Major Depressive Disorder, Anxiety Disorders, Post-Traumatic Stress Disorder, or ADHD) or with NSSI as the primary concern. Participants may also be receiving concurrent psychopharmacological treatment. This inclusive approach to comorbidities is intended to enhance the ecological validity of the findings and improve the generalizability of predictive models to real-world clinical populations. All participants will receive standard clinical care, which may include psychotherapy and pharmacotherapy for co-occurring conditions.

Methodology

A Comprehensive Psychometric Protocol for Capturing Risk and Resilience Trajectories To address the limitations of subjective clinical assessments and to generate robust longitudinal data, the present study utilizes a rigorous multi-method, multi-informant psychometric protocol. This protocol is designed to systematically monitor the dynamic interactions among self-injurious behaviors, emotional symptoms, psychological vulnerabilities, protective factors, and overall functioning over time.

Collaborative Clinical Assessment Framework

A two-clinician model will be implemented to ensure clinical rigor and data integrity. The attending Child and Adolescent Psychiatrist will conduct all structured interviews and administer the scales during scheduled clinical consultations. An independent Clinical Psychologist will score all instruments and provide expert quantitative and qualitative analysis. This separation of roles is intended to enhance the reliability and objectivity of the data while maintaining a high standard of clinical care. All procedures will adhere strictly to the approved ethics protocol.

Multi-Wave Longitudinal Assessment Strategy

Baseline Assessment (T0)

The initial evaluation establishes a comprehensive psychometric and clinical profile for each participant. This assessment documents the foundational characteristics of the sample and provides a reference point for measuring change.

It includes:

***Self-Injurious Behavior:** Detailed characterization using structured interviews.

***Suicidality:** Assessment of current and historical suicidal ideation and behavior.

***Core Predictors:** Baseline measurement of key theoretical constructs, including emotion regulation, impulsivity, and childhood trauma.

***Clinical Symptomatology:** Levels of depression, anxiety, and general psychological distress.

***Protective Factors:** Perceived social support from family, friends, and significant others.

***Global Functioning:** An overall assessment of the adolescent's psychosocial adjustment.

Table 1 summarizes the specific instruments administered at baseline.

Table 1: Baseline Assessment Battery

Assessment Domain	Primary Instruments
Self-Injury & Suicidality	SITBI, SASII, C-SSRS, SBQ-R, ISAS
Emotion Regulation	Difficulties in Emotion Regulation Scale (DERS)
Impulsivity	UPPS-P Impulsive Behavior Scale
Childhood Trauma	Childhood Trauma Questionnaire (CTQ)
Depressive Symptoms	Children's Depression Inventory-2 (CDI-2), PHQ-A
Anxiety Symptoms	Revised Child Anxiety and Depression Scale (RCADS), GAD-7
Social Support	Multidimensional Scale of Perceived Social Support (MSPSS)
Global Functioning	Youth Self-Report (YSR), Child Behavior Checklist (CBCL)

Own source

The baseline assessment battery comprised a range of validated instruments to capture key clinical domains. Suicidality and self-injury were evaluated using several specialized tools: the Self-Injurious Thoughts and Behaviors Interview (SITBI), the Suicide Attempt Self-Injury Interview (SASII), the Columbia-Suicide Severity Rating Scale (C-SSRS), the Suicidal Behaviors Questionnaire-Revised (SBQ-R), and the Inventory of Statements About Self-Injury (ISAS).

To assess underlying psychological mechanisms, we administered the Difficulties in Emotion Regulation Scale (DERS) to measure emotional dysregulation and the UPPS-P Impulsive Behavior Scale, which captures five facets of impulsivity: Negative Urgency, Positive Urgency, Lack of Premeditation, Lack of Perseverance, and Sensation Seeking. A history of adverse experiences was screened with the Childhood Trauma Questionnaire (CTQ).

For specific symptomatology, depressive symptoms were measured using the Children's Depression Inventory-2 (CDI-2) and the Patient Health Questionnaire-Adolescent version (PHQ-A). Anxiety symptoms were assessed with the Revised Child Anxiety and Depression Scale (RCADS) and the Generalized Anxiety Disorder 7-item (GAD-7) scale.

Finally, contextual and functional measures included the Multidimensional Scale of Perceived Social Support (MSPSS) to gauge the subject's perception of their social support network. Global functioning and a broad spectrum of emotional and be-

havioral problems were evaluated using the Youth Self-Report (YSR), completed by the adolescent, and the Child Behavior Checklist (CBCL), completed by parents or caregivers.

Follow-Up Assessments (T1, T2, T3)
This longitudinal component is essential for monitoring trajectories, evaluating the impact of ongoing treatment, and identifying dynamic shifts in risk. Follow-up assessments are scheduled at 1 month (T1), 3 months (T2), and 6 months (T3). The protocol at each stage is tailored to balance comprehensiveness with participant burden:

1-Month Follow-up (T1)
Focuses on early stabilization and acute risk monitoring. Brief, sensitive measures are repeated (e.g., SBQ-R, CDI-2, DERS) to track initial changes.

3-Month Follow-up (T2)
Evaluates medium-term stability and treatment response. Key measures are repeated to identify patterns of relapse or improvement. The Children's Global Assessment Scale (CGAS) is introduced to provide a clinician-rated score of overall functioning.

6-Month Follow-up (T3)
Assesses sustained progress and the consolidation of relapse prevention strategies. A comprehensive review is conducted, comparing results to baseline. The CGAS or the World Health Organization Disability Assessment Schedule (WHODAS) is used to quantify long-term functional outcomes.

Supplementary Assessments for Depth
To ensure a nuanced understanding and address specific research questions, the protocol allows for supplementary assessments. These may include measures of self-esteem (Rosenberg Self-Esteem Scale), quality of life (WHOQOL-BREF), and other relevant constructs. This layered approach facilitates comprehensive assessment of both risk and resilience factors throughout the study period. Non-suicidal self-injury (NSSI) represents a significant public health concern in the pediatric population, characterized by a complex and multifactorial etiology. NSSI is not an isolated phenomenon but is a strong predictor of subsequent suicidal behaviors and is frequently associated with psychiatric comorbidities, emotional regulation difficulties, and environmental risk factors.

Conceptualizing NSSI and suicidal behavior as existing on a continuum of psychopathological development, rather than as a strict dichotomy, offers a critical framework for clinical understanding. This perspective highlights the fluid nature of self-injury and emphasizes the necessity for early, targeted interventions to interrupt the trajectory of risk.

The research project described herein directly addresses this need. By employing a robust longitudinal methodology and a comprehensive, multi-informant psychometric protocol, the study seeks to overcome the limitations of subjective clinical impressions. The central objective is to identify specific predictive factors for the transition from NSSI to suicide attempt in a clinical adolescent population.

Successful completion of this project may contribute significantly to the field by enabling:
Validation of Diagnostic Criteria: Reinforcing the validity of NSSI as a distinct syndrome, as proposed in the DSM-5.

Strategic Prevention: Identifying measurable clinical risk markers that allow clinicians to screen and intervene more effectively with adolescents at higher risk of suicide.

Personalized Interventions: Informing the development of more precise and personalized treatment protocols that target not only the cessation of self-harm but also the mitigation of the underlying factors that drive its escalation.

A comprehensive understanding of the trajectory from NSSI to suicidal behavior is fundamental for developing effective prevention strategies. Implementing systematic screening, rigorous risk assessments, and evidence-based interventions in both clinical and community settings is essential to reduce morbidity and mortality associated with these behaviors and to promote resilience and well-being in the youth population.

Conclusion, Limitations, and Future Directions

This research project outlines a protocol for a longitudinal study designed to identify the critical predictors of suicide attempts in clinically-referred adolescents with Non-Suicidal Self-Injury (NSSI). By conceptualizing NSSI and suicidal behavior as existing on a continuum of self-harm, the study aims to move beyond cross-sectional correlations to establish temporal and predictive relationships. The expected findings, highlighting the roles of emotional dysregulation, negative urgency, childhood trauma, and depressive symptom severity, have the potential to validate the proposed diagnostic criteria for NSSI Disorder and significantly advance risk assessment paradigms. Ultimately, this research seeks to provide an empirical foundation for developing targeted, evidence-based screening tools and preventive interventions. The timely identification of adolescents at the highest risk for transitioning from NSSI to suicide attempt is a critical step toward reducing morbidity and mortality in this vulnerable population.

Limitations

Despite its rigorous design, several limitations of this study must be acknowledged. First, the use of a purposive clinical sample, while essential for studying a high-risk group, may limit the generalizability of the findings to community-based adolescents or those who do not seek specialized psychiatric care. Second, the reliance on self-report measures for key constructs (e.g., childhood trauma, emotion regulation) is susceptible to recall bias and social desirability effects, even when supplemented by structured interviews. Third, the six-month follow-up period, though valuable for capturing short-term transitions, may be insufficient to observe the long-term trajectory of self-injurious behaviors into young adulthood. Finally, while the study controls for several key comorbidities, the complex, transdiagnostic nature of the sample means that unmeasured confounding variables (e.g., genetic predispositions, specific therapeutic interventions received during the study) could influence the outcomes.

Future Directions
The findings from this study will pave the way for several important future research avenues. First, there is a need to replicate

and extend these findings in longer-term longitudinal studies, tracking participants over several years to understand the enduring and evolving risk factors for suicidality. Second, future research should integrate biological and neurocognitive measures (e.g., neuroimaging, physiological markers of stress regulation) with clinical and self-report data to build multi-level predictive models of risk. Third, investigating the protective factors that promote resilience and prevent the transition from NSSI to suicide attempt is a crucial and understudied area. Finally, the predictive models generated by this and subsequent studies should be used to develop and test targeted intervention protocols. Future clinical trials are needed to evaluate whether personalized interventions, specifically designed to mitigate identified high-risk factors (e.g., with modules focused on trauma, negative urgency, or emotional dysregulation), are more effective than standard treatment in preventing suicide attempts among adolescents with NSSI.

References

1. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://archive.org/details/APA-DSM-5
2. Gill, C., O'Donnell, A., & Davis, C. (2023). Nonsuicidal self-injury and suicidal beliefs in adolescent inpatients. Medicina, 60(5), 796. https://doi.org/10.3390/medicina60050796
3. Whitlock, J. (2010). Self-injurious behavior in adolescents. PLoS Medicine, 7(5), e1000240. https://doi.org/10.1371/journal.pmed.1000240
4. Chen, X., Zhao, J., Huang, J., He, Q., Zhang, L., & Wang, Y. (2023). Heterogeneity of non-suicidal self-injury behavior in adolescents with depression: Latent class analysis. BMC Psychiatry, 23(1), 384. https://doi.org/10.1186/s12888-023-04808-7
5. Gill, C., Davis, C., & O'Donnell, A. (2024). Network analysis of childhood maltreatment, anxiety, and addictive non-suicidal self-injury in adolescents. International Journal of Mental Health and Addiction. Advance online publication. https://doi.org/10.1007/s11469-024-01344-7
6. Whitlock, J., & Lloyd-Richardson, E. (2012, December 11). Self-injury in young people is a gateway to suicide. Cornell Chronicle. https://news.cornell.edu/stories/2012/12/self-injury-young-people-gateway-suicide
7. Wagner, B. M., Silverman, M. A. C., & Martin, C. E. (2003). Family factors in youth suicidal behaviors. American Behavioral Scientist, 46(9), 1171–1191. https://doi.org/10.1177/0002764202250661
8. Balázs, J., Miklósi, M., Keresztény, Á., Hoven, C. W., Carli, V., Wasserman, C., Apter, A., Bobes, J., Brunner, R., Cosman, D., Cotter, P., Fischer, G., Floderus, B., Iosue, M., Haring, C., Kahn, J. P., Kaess, M., Postuvan, V., Mars Bitenc, U., Wasserman, D. (2018). Attention-deficit hyperactivity disorder and nonsuicidal self-injury in a clinical sample of adolescents: The role of comorbidities and gender. BMC Psychiatry, 18(1), 34. https://doi.org/10.1186/s12888-018-1620-3
9. Gill, C., O'Donnell, A., & Davis, C. (2024). The effect of depression on non-suicidal self-injury and psychological status in adolescents with unipolar and bipolar disorders. BMC Psychology, 12(1), 369. https://doi.org/10.1186/s40359-024-02236-0
10. De Stefano, J., & Taurino, A. (2025). The role of impulsivity and emotion regulation difficulties in nonsuicidal self-injury and borderline personality disorder symptoms among young adults. Personality and Mental Health, 19(1), 45-58. https://doi.org/10.1002/pmh.1612
11. Schmidt, K. M., & Iyer, S. N. (2025). A longitudinal examination of the predictive effects of alexithymia on nonsuicidal self-injury among emerging adults. Journal of Clinical Psychology, 81(1), 125-140. https://doi.org/10.1002/jclp.23811
12. Liu, Y., Zhang, L., Li, X., Li, H., & Li, M. (2022). Risk factors for non-suicidal self-injury (NSSI) in adolescents: A meta-analysis. Journal of Affective Disorders, 310, 1–9. https://doi.org/10.1016/j.jad.2022.03.054
13. Zhou, X., Zhen, R., & Wu, X. (2023). The global prevalence of nonsuicidal self-injury among adolescents. JAMA Network Open, 6(11), e2343806. https://doi.org/10.1001/jamanetworkopen.2023.43806
14. Plener, P. L., Munz, L. M., Allroggen, M., Kapusta, N. D., Fegert, J. M., & Groschwitz, R. C. (2015). Immigration as risk factor for non-suicidal self-injury and suicide attempts in adolescents in Germany. Child and Adolescent Psychiatry and Mental Health, 9, 34. https://doi.org/10.1186/s13034-015-0065-4
15. Nogueira, S., Cunha, M. N., & Krupskyi, O. P. (2025). The evolution of cognitive and behavioural therapies across three generations – a state of the art [Еволюція когнітивно-поведінкових терапій у трьох поколіннях – сучасний стан дослідження]. Психологія. Серія: Психологія, (3). https://doi.org/10.32782/psy-visnyk/2025.3.1
16. American Academy of Child and Adolescent Psychiatry. (2019). Self-injury in adolescents. https://www.aacap.org/AACAP/Families-and-Youth/Facts-for-Families/FFF-Guide/Self-Injury-In-Adolescents-073.aspx
17. Brunner, R., Kaess, M., Parzer, P., Fischer, G., Carli, V., Hoven, C. W., Wasserman, C., Sarchiapone, M., Resch, F., Apter, A., Balazs, J., Barzilay, S., Bobes, J., Corcoran, P., Cosman, D., Haring, C., Iosue, M., Keresztény, Á., Kahn, J. P., ... Wasserman, D. (2014). Life-time prevalence and psychosocial correlates of adolescent direct self-injurious behavior: A comparative study of findings in 11 European countries. Journal of Child Psychology and Psychiatry, 55(4), 337–348. https://doi.org/10.1111/jcpp.12166
18. Cheng, S., Chen, Y., Liu, R., Zhang, Y., & Jia, Y. (2025). The complexity of associations between emotion regulation, interpersonal sensitivity, cognitive insight, and non-suicidal self-injury: A study based on network analysis. BMC Psychiatry, 25(1), 68. https://doi.org/10.1186/s12888-025-07231-2
19. PACEsConnection. (2012). Cutting and self-harm. https://www.pacesconnection.com/topic/cutting-and-self-harm
20. Sornberger, M. J., Heath, N. L., Toste, J. R., & McLouth, R. (2012). Nonsuicidal self-injury and gender: Patterns of prevalence, methods, and locations among adolescents. *Suicide and Life-Threatening Behavior, 42*(3), 266–278. https://doi.org/10.1111/j.1943-278X.2012.00088.x
21. Sornberger, M. J., Smith, N. G., Toste, J. R., & Heath, N. L. (2020). Adolescents' knowledge of a peer's non-suicidal self-injury and own non-suicidal self-injury and suicidality. Acta Psychiatrica Scandinavica, 142(4), 366–373. https://doi.org/10.1111/acps.13229

22. Whitlock, J., & Rodham, K. (2017). Non-suicidal self-injury in adolescence. Current Psychiatry Reports, 19(3), 20. https://doi.org/10.1007/s11920-017-0767-9