

Risk Factors for Non-Suicidal Self Injury Among Incarcerated Juveniles: A Meta-Analysis

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Background

- Non-suicidal self injury (NSSI) is defined as the intentional, direct destruction of one's own body tissue without suicidal intent.¹
- Adolescents display the highest rate of NSSI, and NSSI is more prevalent in prisons than in the general population.^{2,3}
- The average age of onset is typically between the ages of 12-14, with NSSI behaviors occurring most commonly in females compared to males.⁴
- Depressive symptomatology and psychological distress are reported as consistent predictors of NSSI in adolescents.⁵
- Longitudinally, adolescents reporting repetitive instances of NSSI had more difficulties with emotion regulation, stress, anxiety, and NSSI compared to adolescents who reported no NSSI at 10-year follow-up.⁶
- NSSI is one of the greatest predictors for future suicidal behavior.⁷
- Therefore, understanding NSSI risk factors among vulnerable groups such as incarcerated adolescents is important in preventing future suicidality.

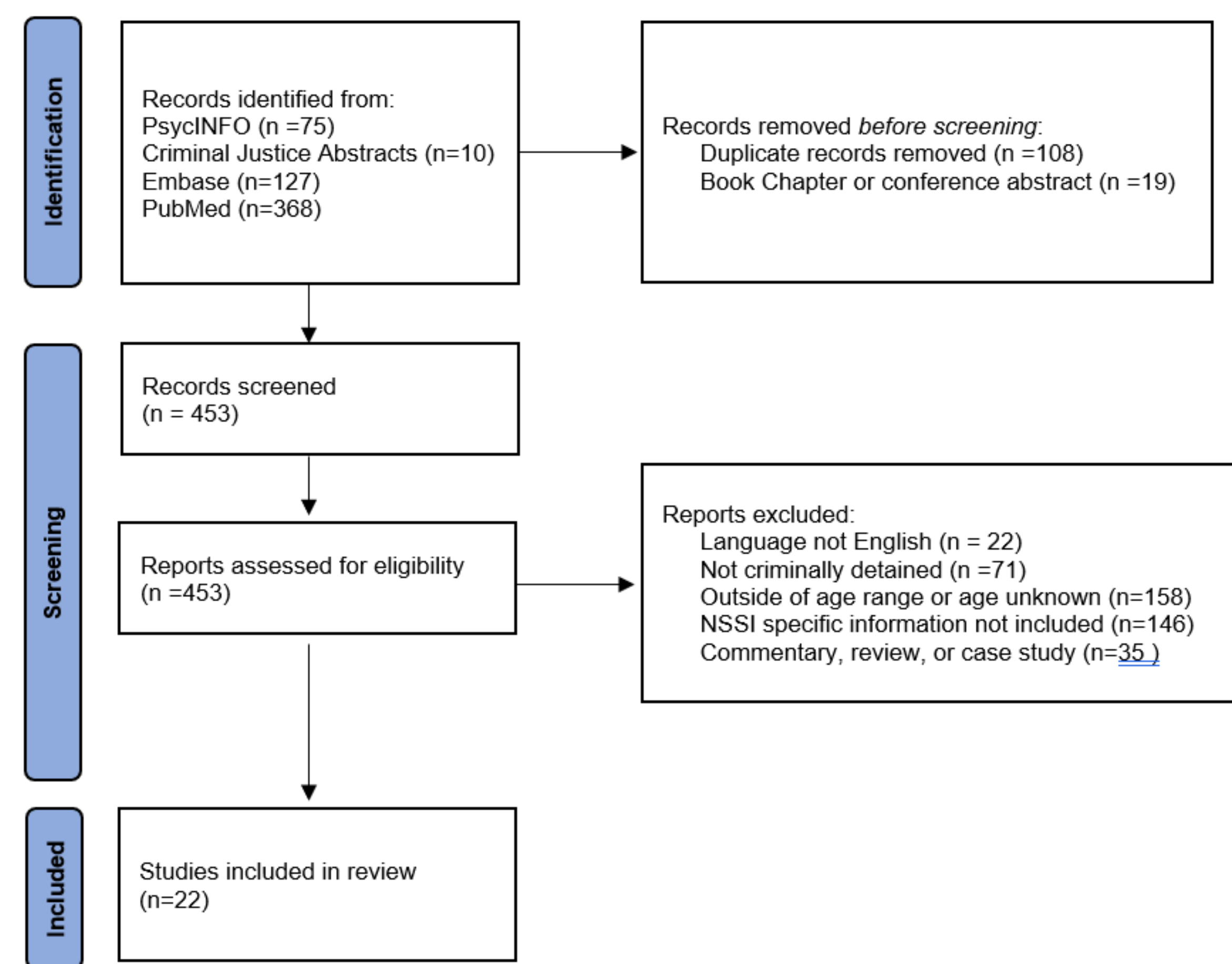
Study objective

The current meta-analysis seeks to identify unique risk factors for NSSI among incarcerated juveniles.

Methods

- A systematic review was conducted for publications between 1980 and 2022 using four electronic databases (PsycINFO, Criminal Justice Abstracts, Embase, and PubMed) for articles related to NSSI in incarcerated juveniles.
- Boolean search terms included "NSSI or non-suicidal self injury or non suicidal self harm" and "incarc* or prison* and "Adole* or juvenile" or detain*."
- Eligibility for article inclusion were participants detained or recently released for criminal offense, mean age < 20, specific report on NSSI, and English language publication.
- Studies were excluded if the participants were largely adults, the juveniles were detained for non-criminal reasons (e.g., psychiatric detention, refugee/asylum-seekers), the articles were not available in English, the abstract was for a book or a conference, or the study did not report on NSSI or referenced self-harm/self-injury in which definitions combined both suicidal intent and non-intent
- 22 peer reviewed articles and 1 dissertation were included.
- Data for extraction included forms of NSSI, sample characteristics, measures/assessments used, and risk factors identified for NSSI.

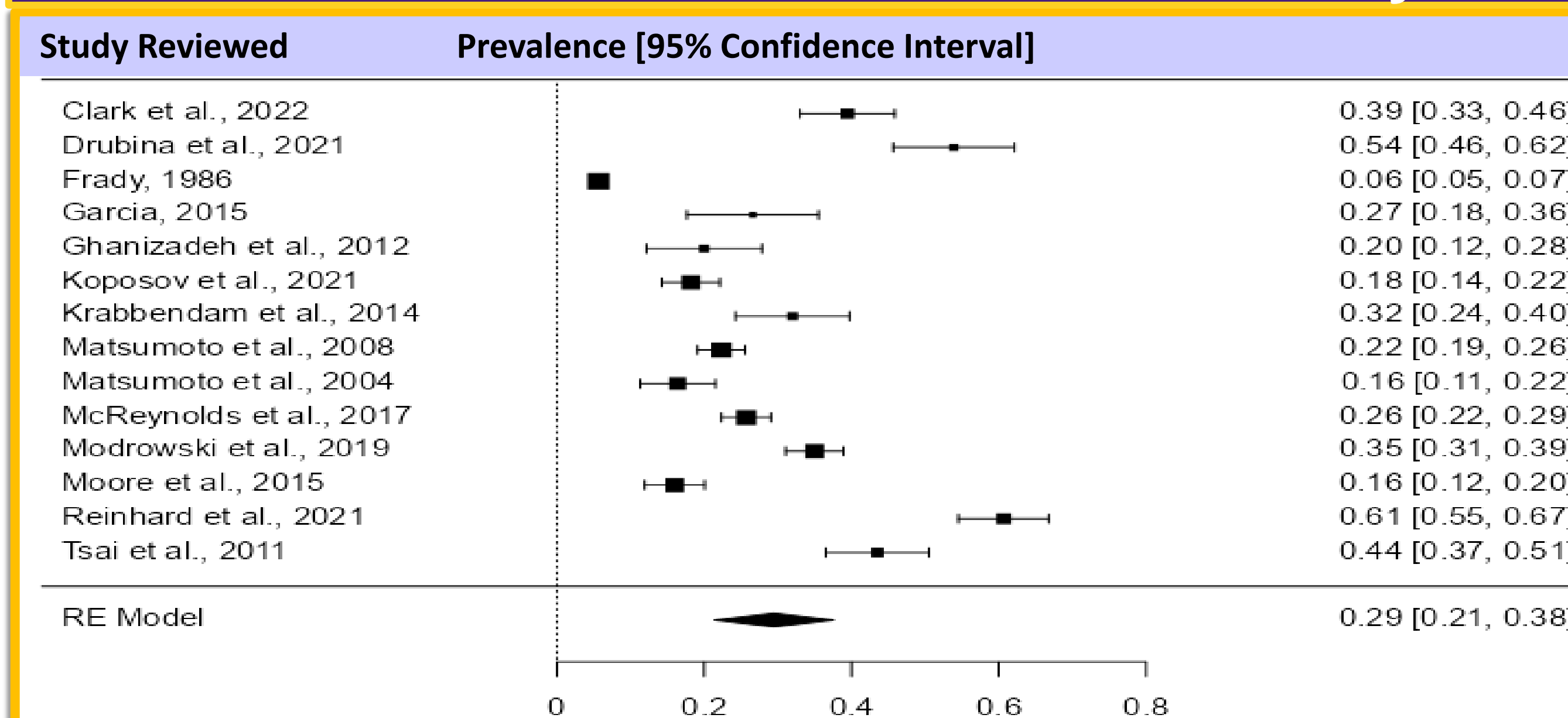
PRISMA Flowchart for Study Selection



Common Risk Factors Associated With NSSI

	Sociodemographic Variables
Race	McReynolds et al. (2011)- Lower rates in African-Americans McReynolds et al. (2017)- Higher rates in White Americans
Female	Moore et al. (2015); Tsai et al. (2011)
Younger Age	Garcia (2015); McReynolds et al. (2017); Tsai et al. (2011)
Gender/Sexual Minority Status	Clark et al. (2022), Frady (1986)
	Life/Family History
Victim of Physical or Sexual Abuse	Drubina et al. (2021); McReynolds et al. (2011); Matsumoto et al. (2004) Frady (1986)- Superficial Self-Mutilators
Lived in Foster Care	Frady (1986)
Family Psychiatric History/Drug Abuse	Koposov et al. (2021); Drubina et al. (2021)
	Psychiatric History
Suicidal or Self-harm Ideation	Matsumoto et al. (2008)- Analgesia Matsumoto et al. (2004); Moore et al. (2015); Roe-Sepowitz (2016) Matsumoto et al. (2004); McReynolds et al. (2017); Penn et al. (2003)
Past Suicide Attempts	Moore et al. (2015)
Co-Morbid Psychiatric Disorders	Frady (1986)
Schizophrenia/Psychotic Symptoms	Moore et al. (2015)
Dissociative Symptoms	Frady (1986); Koposov et al. (2021); Lambert (2016); McReynolds et al. (2011); McReynolds et al. (2017)
Depressed Mood/Depressive Disorders/Depressive Symptoms	Koposov et al. (2021); McReynolds et al. (2011)
Anxiety Symptoms/Anxiety Disorders	Koposov et al. (2021); Mordrowski et al. (2019); Roe-Sepowitz (2016)
Posttraumatic Stress Disorder/Trauma Symptoms	
Substance Use	Penn et al. (2003)
Conduct Disorder/Delinquency	Koposov et al. (2021)
Somatic Complaints	Koposov et al. (2021)
Academic or Intellectual Disorders	Cardeli (2016), Frady (1986)
	School and Interpersonal Relationships
Dropping Out and Suspensions	Kenny et al. (2008)
Victim of Bullying	Matsumoto et al. (2004); Moore et al. (2015)
Negative Romantic Relationship Events	Drubina et al. (2021)

NSSI Prevalence: Random Effects Analysis



Results

- 7,668 juveniles from ten countries were represented in this systematic review.
- The overall prevalence rate of NSSI was 29%.
- Six studies had male-only samples and two had female-only samples. While most studies were of mixed gender (N=14), the sample composition for these studies were largely male.
- Sociodemographic factors related to increased NSSI including being a gender/sexual minority (GSM), female gender, younger age, and identifying as White.
- Exposure to self-harm from friends and more negative romantic relationship events were associated with higher rates of NSSI.
- Family history of substance abuse, mental illness, or general history of physical and sexual abuse history all increased risk for NSSI. Co-morbid psychiatric disorders and mood disorders/symptoms (depression and anxiety) were also associated with elevated risk.

Summary & Conclusion

Conclusion:

- Meta-analysis indicated that female gender, younger age, White race, GSM, self-harm exposure, physical/sexual abuse, familial substance abuse and mental illness, depression and anxiety were all risk factors for NSSI among incarcerated adolescents.
- These risk factors are consistent with other studies of NSSI.^{4,8,9,10}
- Similar to findings in this review of currently incarcerated juveniles, depressive symptomatology and other indicators of psychological distress in community samples were found to predict the occurrence of NSSI.¹¹
- Criminal detention represents a stressful environment that can exacerbate risk factors for NSSI and suicide. Clinicians may address this by assessing incarcerated adolescents at entry and routinely for risk factors of self-harm and NSSI.

Limitations:

- The definition and assessment of NSSI varied across papers, representing a limitation to any unanimous conclusions.

Future Directions:

- Future studies should evaluate the efficacy of therapeutic and psychopharmacological intervention in incarcerated adolescents performing NSSI, particularly before releasing these individuals back into environments where treatment options may be limited.

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