

# INPLASY

## Meta-analysis of the effect of childhood trauma on non-suicidal self-injury behavior in patients with depression

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### ADMINISTRATIVE INFORMATION

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**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202450077

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 May 2024 and was last updated on 16 May 2024.

### INTRODUCTION

**Review question / Objective** P: People with depression I: Childhood trauma C: No childhood trauma O: Non-suicidal self-injury. The aim of this study was to explore the influence of childhood trauma on NSSI behavior in patients with depression and the specific association between different types of childhood trauma and NSSI behavior in patients with depression.

**Condition being studied** Non-suicidal self-injury (NSSI) refers to suicidal suicidal behaviors, such as cutting and burning skin, that cause intentional damage to tissues without suicidal intent. It is often seen as an outward manifestation of dysfunctional emotional regulation, a coping strategy for individuals when they are unable to withstand their inner pain. Previous studies have suggested that childhood trauma is not only an important predictor of adolescent depression, but also significantly correlated with adolescent NSSI

behavior. Various types of childhood trauma such as physical abuse and physical neglect can increase the risk of NSSI, and the risk increase is between 2.7 and 6.1 times. In order to further explore the relationship between childhood trauma and NSSI in depression, this study adopted the meta-analysis method to conduct a systematic review and comprehensive analysis of existing studies. The aim is to determine the extent to which childhood trauma affects NSSI behavior in patients with depression and the specific associations between different types of childhood trauma and NSSI behavior in patients with depression.

### METHODS

**Search strategy** CNKI, Wanfang Database, China Biomedical Literature Service System Database:

(抑郁OR重性抑郁障碍OR抑郁发作OR单相抑郁OR抑郁症) AND (非自杀性自伤OR自伤OR自残OR自我伤害) AND (童年创伤OR童年逆境OR童年虐待

OR童年期虐待OR童年期创伤OR童年期逆境OR早期创伤OR早期逆境OR早期生活事件OR儿童期不良经历)

EMbase、PubMed、Cochrane Library、PsycINFO ("Depressive Disorder"[MeSH Terms] OR "Depression"[MeSH Terms] OR Depressive Symptoms[Title/Abstract] OR Depressive Symptom[Title/Abstract] OR Symptom, Depressive[Title/Abstract] OR Emotional Depression[Title/Abstract] OR Depression, Emotional[Title/Abstract] OR Depressive Disorders[Title/Abstract] OR Disorder, Depressive[Title/Abstract] OR Disorders, Depressive[Title/Abstract] OR Neurosis, Depressive[Title/Abstract] OR Depressive Neuroses[Title/Abstract] OR Depressive Neurosis[Title/Abstract] OR Neuroses, Depressive[Title/Abstract] OR Depression, Endogenous[Title/Abstract] OR Depressions, Endogenous[Title/Abstract] OR Endogenous Depression[Title/Abstract] OR Endogenous Depressions[Title/Abstract] OR Depressive Syndrome[Title/Abstract] OR Depressive Syndromes[Title/Abstract] OR Syndrome, Depressive[Title/Abstract] OR Syndromes, Depressive[Title/Abstract] OR Depression, Neurotic[Title/Abstract] OR Depressions, Neurotic[Title/Abstract] OR Neurotic Depression[Title/Abstract] OR Neurotic Depressions[Title/Abstract] OR Melancholia[Title/Abstract] OR Melancholias[Title/Abstract] OR Unipolar Depression[Title/Abstract] OR Depression, Unipolar[Title/Abstract] OR Depressions, Unipolar[Title/Abstract] OR Unipolar Depressions[Title/Abstract] OR MDD[Title/Abstract] OR major depressive disorder[Title/Abstract]) AND ("Adverse Childhood Experiences "[MeSH Terms] OR Adverse Childhood Experience[Title/Abstract] OR Childhood Experience, Adverse[Title/Abstract] OR Childhood Experiences, Adverse[Title/Abstract] OR Childhood Trauma[Title/Abstract] OR Childhood Traumas[Title/Abstract] OR Trauma, Childhood[Title/Abstract] OR Traumas, Childhood[Title/Abstract] OR Traumatic Childhood Experiences[Title/Abstract] OR Childhood Experience, Traumatic[Title/Abstract] OR Childhood Experiences, Traumatic[Title/Abstract] OR Experience, Traumatic Childhood[Title/Abstract] OR Experiences, Traumatic Childhood[Title/Abstract] OR Traumatic Childhood Experience[Title/Abstract] OR Adolescent Trauma[Title/Abstract] OR Adolescent Traumas[Title/Abstract] OR Trauma, Adolescent[Title/Abstract] OR Traumas, Adolescent[Title/Abstract] OR Early Life Stress[Title/Abstract] OR Early Life Stresses[Title/Abstract] OR Life Stress, Early[Title/Abstract] OR

Life Stresses, Early[Title/Abstract] OR Stress, Early Life[Title/Abstract] OR Stresses, Early Life[Title/Abstract] OR Early-Life Stress[Title/Abstract] OR Early-Life Stresses[Title/Abstract] OR Stress, Early-Life[Title/Abstract] OR Stresses, Early-Life[Title/Abstract] AND ("Self-Injurious Behavior"[MeSH Terms] OR Behavior, Self-Injurious[Title/Abstract] OR Self Injurious Behavior[Title/Abstract] OR Self-Injurious Behaviors[Title/Abstract] OR Intentional Self Injury[Title/Abstract] OR Intentional Self Injuries[Title/Abstract] OR Self Injury, Intentional[Title/Abstract] OR Intentional Self Harm[Title/Abstract] OR Self Harm, Intentional[Title/Abstract] OR Nonsuicidal Self Injury[Title/Abstract] OR Nonsuicidal Self Injuries[Title/Abstract] OR Self Injury, Nonsuicidal[Title/Abstract] OR Deliberate Self-Harm[Title/Abstract] OR Deliberate Self Harm[Title/Abstract] OR Self-Harm, Deliberate[Title/Abstract] OR Self-Injury[Title/Abstract] OR Self Injury[Title/Abstract] OR Non-Suicidal Self Injury[Title/Abstract] OR Non-Suicidal Self Injuries[Title/Abstract] OR Self Injury, Non-Suicidal[Title/Abstract] OR Self Harm OR Harm, Self[Title/Abstract] OR Self-Destructive Behavior[Title/Abstract] OR Behavior, Self-Destructive[Title/Abstract] OR Self Destructive Behavior[Title/Abstract] OR Self-Destructive Behaviors[Title/Abstract] OR NSSI[Title/Abstract]).

**Participant or population** P: People with depression.

**Intervention** It's not intervention. It's exposure. The exposure factor is childhood trauma.

**Comparator** Depressive people but without childhood trauma.

**Study designs to be included** Cross-sectional study, case-control and study Cohort study.

**Eligibility criteria** ① The subjects met the diagnostic criteria of depression in DSM and ICD-10; ② According to medical history and scale, they were divided into NSSI behavior group and NSSI behavior group; ③The definitions of childhood trauma exposure factors in all studies were basically consistent, and the data were comparable.

**Information sources** EMbase, PubMed, Cochrane Library, PsycINFO, CNKI, Wanfang Database, China Biomedical Literature Service System Database.

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**Main outcome(s)** By March 4, 2024, a total of 1166 relevant literatures were obtained through searching various databases, including 191 Psycinfo, 64 Cochrane, 546 Embase, 262 PUBet, 29 Chinese Biomedical Literature Service, 58 CNKI, and 16 Wanfang. After removing duplicate and irrelevant literatures, the remaining 995 literatures were included. After further screening of the literature, 24 literatures were finally included.

#### **Quality assessment / Risk of bias analysis**

Case-control studies used the Newcastle-Ottawa scale (NOS) for quality assessment. The cross-sectional study was evaluated for Quality by the Agency for Healthcare Research and Quality (AHRQ) standard.

#### **Strategy of data synthesis**

Review Manager 5.3 and Stata17 software were used for analysis. Mean difference (MD), odds ratio (OR) and 95% confidence interval (CI) were used as effect indicators. Heterogeneity among included studies was determined by the I<sup>2</sup> value. If there is no heterogeneity among the results, the fixed effects model is used, and the random effects model is used. Sensitivity analysis was used to explore the stability of results and the influence of individual studies on the combined effect, and Meta regression and subgroup analysis were used to explore the possible influencing factors of heterogeneity. Publication bias was assessed by funnel plot and Egger test.

#### **Subgroup analysis**

Review manager was used to conduct subgroup analysis of study classification, study design type, age, gender ratio, paper language, and study region, and to explore the source of heterogeneity of the included literature.

#### **Sensitivity analysis**

Conduct sensitivity analysis through Review Manager, sort out the literature one by one, and explore the stability of the results and the impact of individual studies on the merger effect.

**Language restriction** Only English and Chinese literature was included.

**Country(ies) involved** China (Nanjing Brain Hospital, Medical School of Nanjing University, Nanjing 210093, China).

**Keywords** Depressive disorder; Childhood trauma; Non-suicidal self-injury; Meta-analysis.

#### **Contributions of each author**

Author 1 - Wenyue Gong - Collection and analysis of documents, responsible for writing and revising the paper.

Author 2 - Haowen Zou.

Author 3 - Zhilu Chen.

Author 4 - Rui Yan.

Author 5 - Haiyan Liu.

Author 6 - Zhijian Yao.