

A meta-analysis on pain sensitivity and self-injurious behavior in children and youths

15. Other

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Abstract text

Background and Aims

Pain sensitivity has been proposed to be a contributing factor to self-injurious behavior (SIB) (including suicide attempts). Reviews and meta-analytic results show that individuals who engage in SIB have lower pain sensitivity. However, these reviews have so far focused on adult populations. SIB typically begins in the early teen years and is most prevalent among youth and adolescents. The aim of the present meta-analysis was to quantify the association of SIB and pain sensitivity in individuals aged 10-24.

Methods

MEDLINE (Ovid), Web of Science Core Collection (Clarivate) and PsycINFO (Ovid) were searched on 9 February 2023 where the search was last updated on 10 December 2024. Additionally, manual searches of Google Scholar, Google and the reference lists of included studies were checked for potential studies eligible for inclusion. Titles, abstracts, and full texts of studies were independently screened by multiple observers. A multi-level meta-analysis using a random effects model was performed on two pain-related outcomes (pain threshold, pain tolerance). The Preferred Reporting Items for Systematic Reviews and Meta-analyses guideline was followed. Quality assessment was performed using the Newcastle-Ottawa scale.

Results

Of 4553 screened studies, 13 studies fulfilled the criteria (n=934). Meta-analysis demonstrated significant difference in pain threshold ($g=0.88$, 95% CI 0.28 to 1.47, $k = 13$, $Z = 2.07$, $p = 0.004$) and pain tolerance ($g=0.38$, 95%CI 0.15 to 0.61, $k=8$, $Z=3.18$, $p=0.001$) in individuals with SIB compared to healthy controls.

Conclusions

Children and youths engaging in SIB demonstrate higher pain threshold and higher pain tolerance compared to healthy controls. This furthers our understanding of the importance of pain sensitivity in young individuals with SIB and may aid the improvement of healthcare and risk assessments for these patients.