

Investigation Of The Relationship Between Childhood Traumas and Chronic Pain In Adulthood : A Scoping Review

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1. Introduction

- **Context:** Childhood Traumas (CT) are a **major public health concern**, linked to increased risk of chronic diseases and mental disorders in adulthood (Dye, 2018). Among various CT types, **emotional neglect (EN)** is the strongly predictor of negative health outcomes (n



→ However, **childhood traumas** are **more damaging** than adult traumas due to ongoing neurological and psychological development (DeBellis et al., 2014):

- Exposure to a chronic or repeated childhood traumas, especially within attachment relationships, may lead to **complex PTSD (CPTSD)**, which includes additional symptoms beyond PTSD, such as emotional dysregulation, negative self-concept, and relational difficulties (WHO, 2018) (ICD-11).
- Traumas in early life also disrupt biological systems involved in stress response and pain modulation, particularly the hypothalamic-pituitary-adrenal (HPA) axis. Dysregulation of this system can impact the **pain regulation** and lead to heightened pain sensitivity (Burke et al., 2019).

Objectives of the current study:

- Investigating the link between childhood traumas and chronic pain in adulthood;
- Identifying which types of childhood traumas are specifically linked to the development of which type of chronic pain in adulthood;
- Identifying the various mechanisms underlying this relationship.



Research Question:

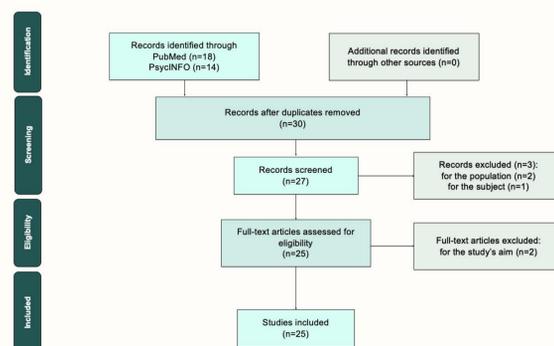
"Is there a link between childhood traumas and the development of chronic pain in adulthood?"

2. Methodology

A scoping review following PRISMA-ScR guidelines:

- **Databases:** PubMed, PsycINFO
- **Keywords:** "Childhood Trauma", "Early Life Stress", "Child Abuse", "Chronic Pain"
- **Inclusion Criteria:**
 - English/French, peer-reviewed
 - Published between May 2005-2025
 - Adult population
 - Empirical studies, reviews, meta-analyses
- **Tools for assessing childhood trauma:**
 - Most studies used *ACEs Questionnaire* (standard or adapted)
 - Only 2 studies (Yeung et al., 2016; Thomas et al., 2014) used the *Childhood Trauma Questionnaire (CTQ)*

Flow Diagram



3. Results

- The 11 most relevant studies included are summarized thematically below:

Except for 2 studies and 1 systematic-review, all the included studies were limited to examining the total score of childhood traumas.

1. Cumulative ACEs as a key factor:

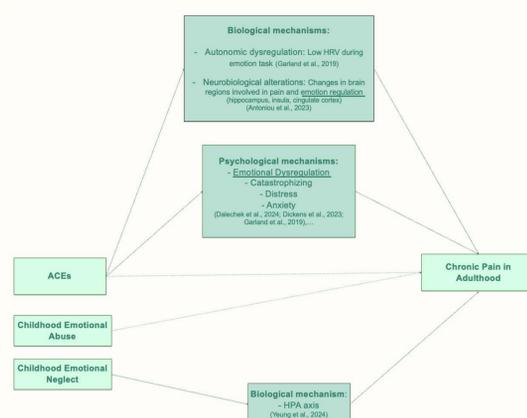
Strong significant association between the number of ACEs and chronic pain in adulthood (e.g., AOR=1.95 for ≥4 ACEs).

2. The specific role of emotional maltreatment:

In studies investigating the effect of each type of CT, the specific long-term effect on chronic pain of **Emotional Neglect (EN)** and **Emotional Abuse (EA)**, were highlighted, as opposed to physical and sexual abuse (Karimov-Zwienenberg et al., 2024; Prangnelle et al., 2019; Yeung et al., 2016).

3. Complex PTSD (C-PTSD) and Pain Chronification: C-PTSD is **more closely related to persistent pain than PTSD** (Karimov-Zwienenberg et al., 2024).

Preliminary results:



4. Discussion

- The preliminary results of our scoping review indicates that the **total number of adverse childhood experiences (ACEs)** could be a **key factor** in the onset of **chronic pain in adulthood**.

→ This findings align with the systematic review of Karimov-Zwienenberg et al. (2024) and add evidence showing the additional effects of **Complex PTSD (C-PTSD)**, compared to PTSD.

→ The association between CT and adult CP in our results were based **on cumulative traumas scores**, limiting the ability to infer the role of specific traumas subtypes. → However, distinct effects on HPA and health between neglect and abuse (Yeung et al. 2015).

- **Childhood emotional neglect and emotional abuse** seem to play a key role in persistence of chronic pain in adulthood, suggesting a **specific emotional pathway in chronic pain**
- This study highlighted **emotional regulation (ER)** as an important mechanism underlying the CT-CP relationship which deserves further investigation and could be explained by HPA dysregulation consecutive to CT and explain anxiety and distress observed in our review. If this mechanism is proven, it could be a **potential target for treatment** in pain management for trauma survivors.

• These findings echo the **Fear-Avoidance Model of Pain** (Vlaeyen & Linton, 2000), which suggests that individuals who catastrophize pain may develop fear, adopt avoidance behaviors, and enter a cycle that maintains or worsens chronic pain. Emotional childhood trauma, especially EN, may increase vulnerability to this cycle by impairing ER and reinforcing maladaptive pain interpretations.

• This study supports the importance of a system approach to **trauma care in pain management** and rehabilitation services.

• Future studies should:

- Investigate the **differential effects of emotional vs. non-emotional CT on adult chronic pain**, as well as the effects of **neglect vs abuse**, to determine whether and to what extent these forms of trauma are associated with unique healthcare needs in the management of chronic pain (Karimov-Zwienenberg et al., 2024).

- Explore **alexithymia** as a mediator, especially given its link to emotional neglect (Ditzer et al., 2023), emotional avoidance and pain perception;

References

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