

Does Physical Trauma Change Risk-Taking Behavior in Children?

A Systematic Review

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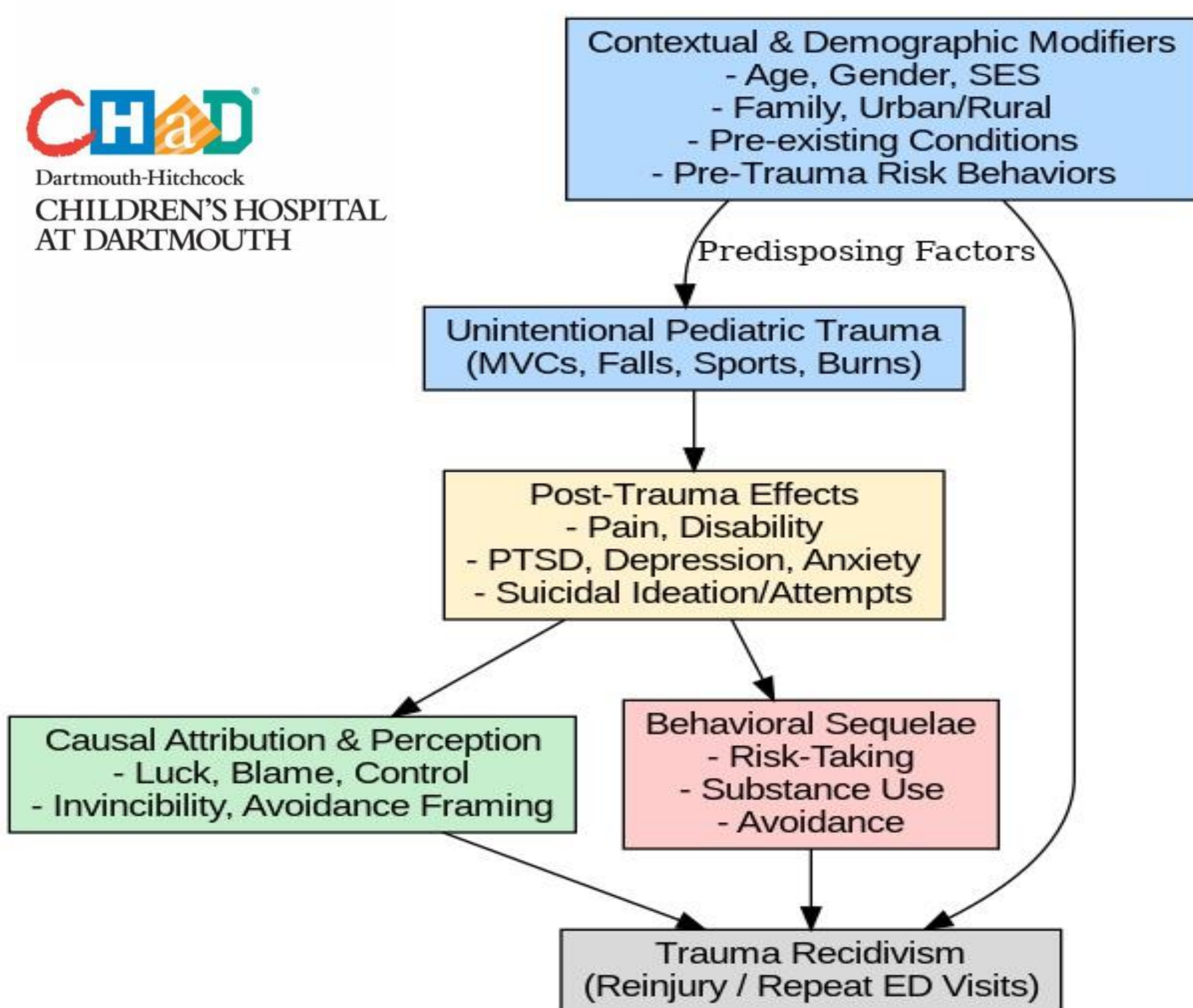
BACKGROUND

Traumatic injury is the **leading cause of morbidity and mortality** among children and adolescents in North America¹. In the United States, 7,444 children aged 0–19 died from unintentional injuries in 2019—an average of 20 preventable deaths per day².

Trauma is also among the leading reasons for pediatric ER visits, accounting for more than nine million presentations annually in the U.S.³ Beyond the immediate harm, childhood trauma can result in lasting physical disability, chronic pain, and psychological illness, including PTSD, anxiety, suicidal ideation, and depression⁴.

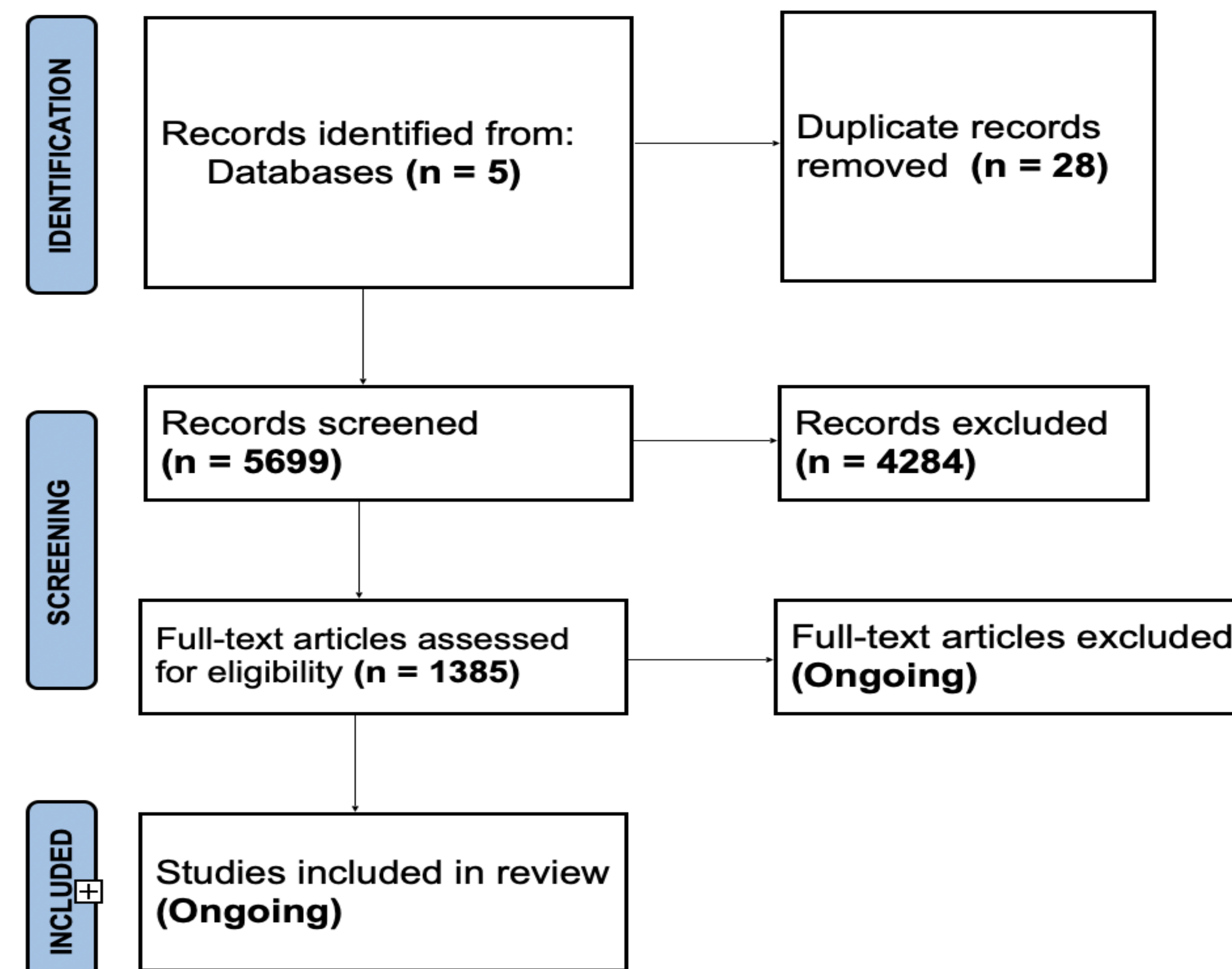
Trauma is rarely an isolated event. Among adolescents with a prior injury, **the risk of reinjury** may be up to **10 times higher**⁵. Despite the high burden of adolescent trauma and reinjury, few studies explore how young people understand the causes of their injuries, or how these beliefs may influence future risk, limiting the implementation of age-tailored prevention strategies.

This systematic review identifies and synthesizes existing evidence on the **causal attributions' adolescents form** after traumatic injury. It also aims to examine how these beliefs **shape reinjury risk** and inform prevention strategies⁶, particularly those that address coping, behavior modification, and risk awareness.



METHODS

- Searches in MEDLINE, APA PsycINFO, Cochrane Library, Scopus, and Web of Science; database inception-02/19/2025
- Search strategies developed in collaboration with Dartmouth Biomedical librarians; peer-reviewed using PRESS guidelines
- Concepts searched:
 - **Injury & trauma:** trauma-related injuries, recidivism
 - **Mechanisms of injury:** sports, vehicle-related injuries, burns, gun violence
 - **Risk-taking & attribution:** risk behaviors, perception, blame, luck, health attitudes
 - **Childhood & adolescence:** child*, adolesc*, pediatric*, teen*, youth, minors
- Identified 7,761 records; **5,727 records** after deduplication⁸.
- Title and abstract screening completed by two reviewers in Rayyan⁷; conflicts resolved by a third reviewer.



PRELIMINARY TRENDS

- Males overrepresented and linked with **risk-taking, blame externalization**, risk perception, ADHD, and sports.
- **Socioeconomic status** may influence trauma incidence and reinjury, underscoring **structural inequities** in outcomes.
- Research on trauma recidivism and adolescents' causal attributions is limited, even though attribution style is strongly tied to reinjury risk and mental health outcomes.

FUTURE DIRECTIONS

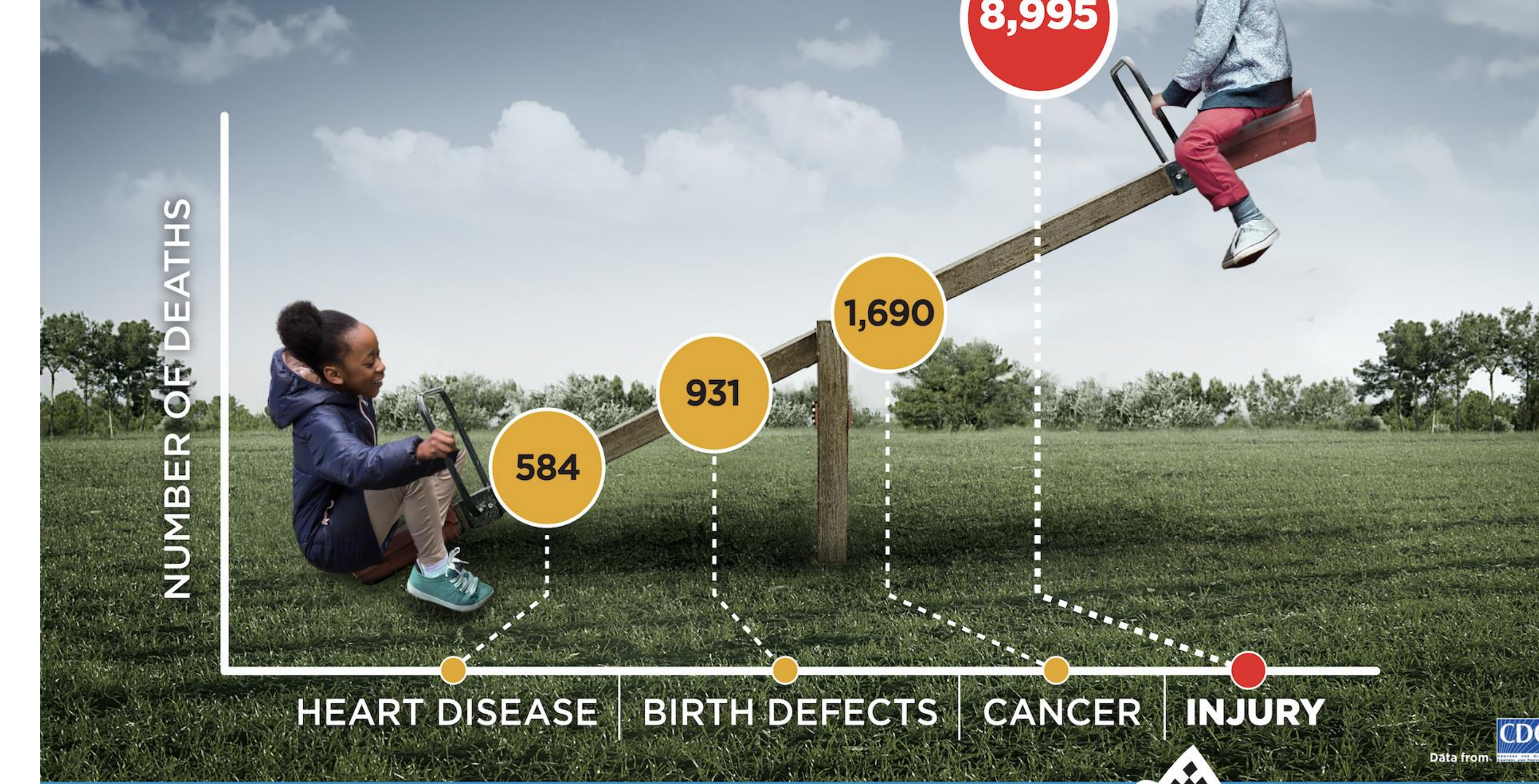
- **Complete** full-text screening using Zotero, data extraction, and synthesis of long-term outcomes; including reinjury, mental health, risk-taking, and attribution themes.
- Initiate **IRB-approved** study at DH using mixed-methods surveys and interviews with adolescent trauma patients to examine how causal injury beliefs shape reinjury risk and prevention.
- Develop **adolescent-focused** screening tools, prevention strategies, and educational materials.

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More children die from injuries than all other causes combined.

One child dies every hour, every day from pediatric trauma and almost 9 million injured children are treated at a hospital each year.



SAVEINJUREDKIDS.org

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Centers for Disease Control and Prevention (CDC), Children's Safety Network. *More children die from injuries than all other causes combined.* SaveInjuredKids.org. Accessed June 2025.

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