

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The Epidemiology of Chronic Pain in Children and Adolescents: A Protocol for a Systematic Review Update
AUTHORS	Tutelman, Perri; Langley, Charlotte; Chambers, Christine; Parker, Jennifer; Finley, Allen; Chapman, Darlene; Jones, Gareth; Macfarlane, Gary; Marianayagam, Justina

VERSION 1 – REVIEW

REVIEWER	Amanda B Feinstein Stanford University School of Medicine, USA
REVIEW RETURNED	05-Nov-2020

GENERAL COMMENTS	<p>Thank you for inviting me to review this paper which outlines a protocol for a systematic review to update the 2011 review synthesizing the literature on the prevalence of chronic pain in children and adolescents. An updated systematic review on this topic is sorely needed, so I thank the authors for taking on this task. I have only minor comments and revisions for the authors to consider.</p> <p>Minor comments:</p> <p>P5 line 38- typo “severe severe”</p> <p>P5 line 40: Do the data exist to make this statement “a substantial majority of children with chronic pain become adults with chronic pain” with such conviction? If so, please consider adding several references both longitudinal and retrospective (in addition to reference 12 which you have already).</p> <p>P6 line 19: Please clarify the wording here, as it is currently unclear: “depending on body site and study” the wording is unclear.</p> <p>P9 Exclusion criteria- It is unclear how diseases such as JIA and sickle cell for example which have pain as a primary component will be included. Bullet point #5, as currently worded, is unclear. Please considering alternate wording.</p> <p>P9 line 31- typo “by” should be “be”</p> <p>P10 line 29: I’m curious about the “other/general pain” category, and wonder if they should be two separate categories. What are the authors thoughts about diagnoses that will fall into this category as it is broadly described here vs what may be ascribed to the categories if they were separated?</p> <p>I appreciate the inclusion of a patient partner on this study.</p>
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REVIEWER	Ana Miriam Velly McGill University
REVIEW RETURNED	22-Nov-2020

GENERAL COMMENTS	The aim of this SR is to provide updated estimates of the prevalence of chronic pain in children and adolescents. Therefore, the authors need to include "surveys" (cross-sectional studies), instead of case-control or cohort studies. Note that case-control or cohort studies are not indicated to assess the prevalence of a condition. Also, it is not clear why the incidence will be assessed. They should also mention how chronic pain will be defined.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name
Amanda B Feinstein

Institution and Country
Stanford University School of Medicine, USA

Please state any competing interests or state 'None declared':
None declared

Comments to the Author: Thank you for inviting me to review this paper which outlines a protocol for a systematic review to update the 2011 review synthesizing the literature on the prevalence of chronic pain in children and adolescents. An updated systematic review on this topic is sorely needed, so I thank the authors for taking on this task. I have only minor comments and revisions for the authors to consider.

RESPONSE: Thank you for these positive comments.

Minor comments:

COMMENT 1: P5 line 38- typo "severe severe"

RESPONSE 1: This typo has been corrected.

COMMENT 2: P5 line 40: Do the data exist to make this statement "a substantial majority of children with chronic pain become adults with chronic pain" with such conviction? If so, please consider adding several references both longitudinal and retrospective (in addition to reference 12 which you have already).

RESPONSE 2: We appreciate this point and agree that additional nuance is needed in this sentence. In addition to the article currently cited, several prospective studies have found that children with chronic pain are at risk for becoming adults with chronic pain. For instance, Walker and colleagues (2010) followed a cohort of 155 pediatric patients with functional abdominal pain prospectively into adulthood. At follow up (on average 10 years later), 35% of patients continued to report symptoms of functional abdominal pain. Similarly, in a long-term follow up study of 1266 adolescents with frequent headache, 19% reported continued frequent headaches 14 years later. We have edited and expanded this statement as follows (page 5):

“Unfortunately, many children with chronic pain become adults with chronic pain. In a prospective study of pediatric patients with functional abdominal pain, 35% continued to report recurrent abdominal symptoms when reassessed in adulthood. Similarly, in 14-year follow up study of adolescents with frequent headaches, 19% continued to report weekly headaches in young adulthood. These rates are similar to retrospective reports of chronic pain in childhood by adults with chronic pain. In a study of adult patients with chronic pain, 17% of participants reported their pain originated in childhood or adolescence.”

COMMENT 3: P6 line 19: Please clarify the wording here, as it is currently unclear: “depending on body site and study” the wording is unclear.

RESPONSE 3: We have now rephrased this sentence as follows (page 6):

“This review estimated that the median prevalence of chronic pain in children and adolescents ranged from 11-38% depending on pain type and varied substantially across studies.”

COMMENT 4: P9 Exclusion criteria- It is unclear how diseases such as JIA and sickle cell for example which have pain as a primary component will be included. Bullet point #5, as currently worded, is unclear. Please considering alternate wording.

RESPONSE 4: Thank you for this point. The purpose of this study is to review the prevalence of chronic non-disease-related pain in children and adolescents. Therefore, studies examining the prevalence of chronic pain in children with chronic illnesses, such as JIA and sickle cell disease, will be excluded. Chronic pain secondary to other underlying conditions is considered to be fundamentally distinct from non-disease-related chronic pain (Treede et al., 2019). Thus, including estimates of disease-related pain in the current study would misrepresent the prevalence of non-disease-related chronic pain at the population-level. We have modified the wording in our exclusion criteria for clarity (page 9):

“5. Studies examining the prevalence of chronic pain in specific sub-populations, such as children and adolescents with chronic illnesses (e.g., cancer, arthritis) or other health conditions (e.g., cerebral palsy, muscular dystrophy).”

COMMENT 5: P9 line 31- typo “by” should be “be”

RESPONSE 5: This typo has been corrected.

COMMENT 6: P10 line 29: I'm curious about the “other/general pain” category, and wonder if they should be two separate categories. What are the authors thoughts about diagnoses that will fall into this category as it is broadly described here vs what may be ascribed to the categories if they were separated?

RESPONSE 6: We initially included the “other/general pain” category to mirror the categories reported in the original King et al. 2011 review. However, we agree with the reviewer that the types of diagnoses that would fall into a “general pain” and “other pain” category may be sufficiently different to warrant their separation. We have now separated these categories throughout the manuscript.

COMMENT 7: I appreciate the inclusion of a patient partner on this study.

RESPONSE 7: Thank you for this positive feedback.

Reviewer: 2

Reviewer Name
Ana Miriam Velly

Institution and Country
McGill University

Please state any competing interests or state 'None declared':
None declared.

Comments to the Author: The aim of this SR is to provide updated estimates of the prevalence of chronic pain in children and adolescents. Therefore, the authors need to include "surveys" (cross-sectional studies), instead of case-control or cohort studies. Note that case-control or cohort studies are not indicated to assess the prevalence of a condition. Also, it is not clear why the incidence will be assessed. They should also mention how chronic pain will be defined.

RESPONSE: Thank you for these comments. We agree that the examples included in the first eligibility criterion were unclear and that survey studies should be included. To enhance clarity, we have opted to refer to "observational studies" broadly in the first criterion (page 8):

"1. Observational studies using a population-based sampling frame to estimate the prevalence of chronic pain in children or adolescents (study sample age \leq 19 years)."

Mention of incidence has been removed from page 8.

We also added an additional eligibility criterion specifying how chronic pain will be defined in the current review (page 9):

"2. Studies examining the prevalence of chronic pain in children and adolescents, defined as pain with a minimum duration of at least 3 months or pain that is described as chronic, persistent, or recurrent. This definition was selected to align with current conceptualizations of chronic pain [1] while allowing for flexibility to accommodate established diagnostic criteria for common childhood chronic pain conditions (e.g., functional abdominal pain [33] and migraine [34])."