

# How has the COVID-19 pandemic impacted the mental health of children 5 to 18 years old? A Rapid Review

Sulaiman, F<sup>A</sup>; Hamid, E<sup>A</sup>; Dalidowicz, M<sup>B</sup>; Miller, L<sup>B</sup>; Muhajarine, N<sup>C</sup>

A: University of Saskatchewan, College of Medicine | B: Saskatchewan Health Authority Library | C: Faculty Supervisor, Community Health and Epidemiology, University of Saskatchewan

## ABSTRACT

**Background:** There is concern that the changes brought about by the COVID-19 pandemic put the mental health of school-aged children and youth at risk. We conducted a Rapid Review to understand how the pandemic impacted the mental health outcomes of those aged 5-18 years old (See Research Question below).

**Methods:** We performed two literature searches, on February 9<sup>th</sup>, 2021 and on May 20<sup>th</sup>, 2021. We screened abstracts in duplicate. Our final Rapid Review contained 63 articles, including 2 articles of Grey Literature, 2 systematic reviews, 9 cohort and 49 cross-sectional studies.

**Results and Limitations:** Cohort studies report worsening measures of depression, anxiety, and sleep quality, as well as an increase in frequency of substance use. Females and older children were at greater risk; exercise had a protective effect. Many studies were cross-sectional in nature, making it difficult to draw causal relationships. Results from some countries may not be generalizable internationally.

**Conclusions:** The mental health of children and youth is at risk following the COVID-19 pandemic; longitudinal studies from local populations would further elucidate this issue.

## BACKGROUND, PURPOSE AND RESEARCH QUESTION

The COVID-19 pandemic and the resulting public health response brought about many changes and disruptions to the lives of children and adolescents: the shift from in-person to remote classrooms, the cancellation of extra-curricular activities, the restrictions on seeing friends in-person, the impact of increased parental stress in the face of financial insecurity, and more. The pediatric population is therefore especially vulnerable to mental health challenges at this time.

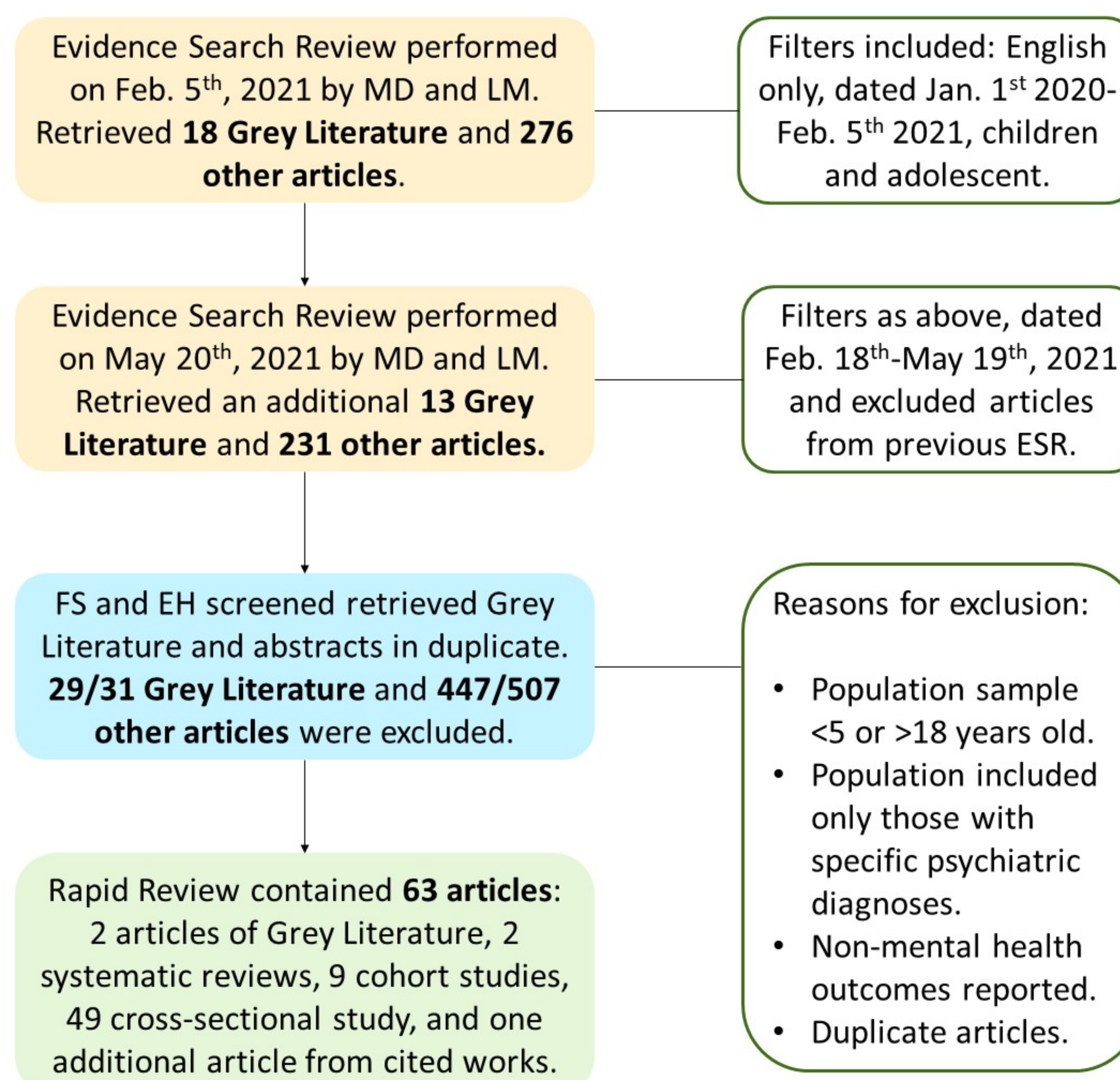
The purpose of this review is to study the impact of the COVID-19 pandemic, and the resulting public health response, on the mental health of children and adolescents aged 5-18 years to inform future interventions in support of children and adolescents' mental health during pandemics.

**Research Question:** How has COVID-19 and the public health response to the pandemic impacted mental health outcomes of children and youth 5 to 18 years old?

## RESULTS

- **Depression/Anxiety:** two systematic reviews concluded that depression and anxiety worsened post-pandemic but did not quantify this change.<sup>1, 2</sup> Four cohort studies reported worsening depression and/or anxiety.<sup>3-6</sup> Cross-sectional studies reported post-pandemic prevalence rates of 7%-44% for depression, 6%-47.5% for anxiety.
- **Post-Traumatic Stress Disorder (PTSD):** cross-sectional studies reported prevalence in the range of 3%-22%.
- **Substance use:** a study on Canadian youth found reduced prevalence of cannabis use, vaping and binge-drinking, but increased frequency of alcohol and cannabis use.<sup>7</sup>
- **Effects on sleep:** four studies found a decrease in sleep quality and/or quantity during the COVID-19 pandemic.
- **Self-harm/suicidality:** in a report on Emergency Dept. data, two studies showed increased rates; two did not.<sup>8</sup>
- **Risk factors for mental health challenges:** female gender (11 studies), older age (8 studies), use of technology (5 studies), lower financial security (2 studies). Nine studies found a protective effect for exercise/physical activity.

## METHODS



## CONCLUSIONS AND LIMITATIONS

Cohort studies report worsening mental health outcomes on scales of depression and anxiety, as well as worsening sleep quality and an increase in frequency of substance use. Cross-sectional studies report post-pandemic prevalence rates of 7%-44% for depression, 6%-47.5% for anxiety, and 3%-22% for PTSD. Female gender, older age or higher school grade, and increasing use of technology or social media were identified as risk factors for worsening mental health.

Many articles were cross-sectional in nature, and few compared findings to an established pre-pandemic baseline, making it difficult to establish causality. Studies used self-reported or parent-reported survey data; these may differ from clinical assessments. Countries were affected differently by the COVID-19 pandemic; results from one jurisdiction may not be generalizable to others.

Nonetheless, based on the above findings, we conclude that the COVID-19 pandemic poses a risk to the mental health of children and youth. Future Canadian cohort studies, or cross-sectional studies that compare their results to a pre-pandemic baseline, would be ideal to establish causality between the pandemic and mental health outcomes, and inform interventions for the current crisis and in the future.

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