

# Rapid Review Protocol

Life in Lockdown

Child and Adolescent Mental Health and Well-being in the Time of COVID-19

## UNICEF OFFICE OF RESEARCH – INNOCENTI

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## 1. TITLE AND RESEARCH QUESTIONS:

Title: Life in Lockdown: Child and adolescent mental health and well-being in the time of COVID-19

Research Questions:

1. What are the impacts of the COVID-19 pandemic and associated containment measures (such as lockdowns and school closures) on the mental health of children and adolescents?
2. Which risk and protective factors<sup>i</sup> impact the mental health of children and adolescents during the COVID-19 pandemic, and how do these factors differ across subgroups of children and adolescents?

## 2. RATIONALE

The 2019 coronavirus disease (COVID-19) outbreak has made it urgent for governments around the world to introduce public health measures and infection control strategies, including physical distancing, isolation, and quarantine. These interventions were previously adopted during the 2003 SARS and 2014 Ebola outbreaks. However, in the current crisis they are being implemented to an unprecedented scale, which has led to lockdowns of entire cities, regions, and countries.

During the early stages of the pandemic, mental health and psychosocial concerns were high among global priorities, prompting recommendations by the World Health Organization (WHO) on how to maintain psychosocial and emotional well-being.<sup>1</sup> Although children and adolescents are at lower risk of suffering from severe complications of COVID-19, their psychosocial wellbeing may be affected in similar ways as adults', as well as in ways that are specific to their developmental stage and role in society.<sup>2,3</sup> School and university closures imposed by governments have significantly disrupted many young people's day-to-day lives, leading to increased family time and connection with parents but also loss of other important support networks and safeguarding infrastructures. For some this comes at a critical time in terms of their social-emotional development or choosing future education and career options.<sup>4</sup>

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<sup>i</sup> Risk factors are characteristics at the biological, psychological, family, community, or cultural level that precede and are associated with a higher likelihood of negative outcomes. Protective factors are characteristics associated with a lower likelihood of negative outcomes or that reduce a risk factor's impact. Protective factors may be seen as positive countering events. See <https://www.samhsa.gov/sites/default/files/20190718-samhsa-risk-protective-factors.pdf> for further details.

The implications of the current crisis could take specific forms in youth already exposed to a range of vulnerabilities. Before the pandemic, it was estimated that mental health conditions affect about one in eight (13%) children and adolescents aged 6–18 years, and 14% of adolescents aged 10-19 years. In addition, the global prevalence of mental health conditions among adolescent boys (15%) was higher than that for adolescent girls (13%).<sup>5</sup> In many parts of the world, children are already exposed to multiple and intersecting stressors that contribute to high levels of pre-existing vulnerability to mental health problems, including chronic poverty and subsistence living, child labour, protracted violence, and conflict and displacement. Coupled with weak health, education and protection systems this means that pandemic measures may have disproportionately impacted the lives of children and adolescents in LMICs.<sup>6</sup>

The crucial importance of early investment in mental health is scientifically documented.<sup>7,8,9</sup> The first thousand days presents a unique opportunity for unparalleled cognitive growth and early stimulation which are central to healthy lives. Adolescence provides a second window of opportunity - as a critical period in brain development, emotional regulation, and identity formation. Fifty percent of mental health conditions arise before the age of 14, and 75 per cent by the mid-20s.<sup>10,11</sup> As a result, exposure to adverse events during the early years may mean that children and adolescents carry the mental and emotional costs from the pandemic for years to come, and poor and vulnerable children worldwide will carry an inordinate burden. At the same time, evidence highlights that adolescence is a time when young girls and boys can develop resilience, changing what they do and how they behave to be better equipped to handle adversity.<sup>12,13</sup> Effective positive coping strategies and behavioural management techniques adopted and learned during these years can reap benefits into adulthood.

While there has been a global rush to generate rapid evidence on COVID-19 and mental health, much of this has focused on impacts among adults, and there is limited evidence on the potential impacts, both of exposure to SARS CoV-2 as well as the related pandemic control measures, on children. Among the existing systematic reviews on COVID-19 and youth mental health, many are focused on specific outcomes of interest, rather than providing a landscape of impacts. Analyses of previous epidemics and pandemics, such as HIV/AIDS and Ebola,<sup>14,15</sup> or their impact on child protection,<sup>16</sup> can provide an indication of the possible magnitude and nature of mental health impacts on youth, of potential pathways affecting this burden, as well as possible solutions and strategies. We therefore propose a rapid review to synthesize the evidence on the mental health impacts of COVID-19 on children and adolescents, including insights from previous epidemics and disasters. This review offers evidence synthesis on a wide range of psychosocial outcomes, mediating and moderating factors influencing such outcomes, and trends across subgroups of children and adolescents.

### 3. SCOPE AND INCLUSION CRITERIA

Criteria	Details
<b>Population</b>	Children and adolescents (0-19 years)
<b>Exposure</b>	COVID-19 or SARS-CoV-2 and related public health containment measures.
<b>Outcomes</b>	All mental health outcomes, including negative outcomes according to the ICD 11 diagnostic criteria as well as positive mental health outcomes (including mental well-being and resilience).
<b>Context</b>	Global (including high-, middle-, and low- income countries)
<b>Study type</b>	Systematic reviews; Primary studies with longitudinal, cross-sectional, qualitative, or mixed-methods study designs. Searches were undertaken in English but without language restrictions.
<b>Study type exclusion criteria</b>	We excluded the following types of studies from data extraction: <ul style="list-style-type: none"> <li>• Conceptual and theoretical studies</li> <li>• Commentaries, editorials, or opinion pieces</li> <li>• Dissertations or theses unless published as peer-reviewed articles</li> <li>• Guidance documents and policy briefs</li> <li>• Entire books, unless there was a chapter as part of an edited book, which was both eligible and freely available.</li> </ul> Commentaries, editorials, and non-systematic reviews that provided insights to support the analysis were consulted but not included for data extraction.

### 4. OVERVIEW OF APPROACH AND METHODS

We will conduct systematic searches, detailed data extraction, and a comprehensive evidence synthesis to produce a rapid review. The rationale for choosing a rapid review methodology is the expedited timeline which entails a more 'rapid' version of a systematic review (12–15 months). This rapid review will result in the production of 1) a report highlighting key findings across studies focusing on the mental health impacts of the COVID-19 pandemic and identifying gaps to inform recommendations for priority-setting and policy decision-making; and 2) a peer-reviewed publication, synthesizing evidence regarding the burden of mental health outcomes, including factors influencing the type and severity of these outcomes, and the implications for intervention design and implementation.

The following approaches will be adopted for this rapid review:

- **Systematic searches:** We will search only for reviews (systematic reviews) and studies collecting primary data (longitudinal, cross-sectional, and qualitative) on mental health, COVID-19, and children in a limited number of databases that contain peer-reviewed, comprehensive, and COVID-19 relevant literature.
- **Screening:** We will screen studies in two stages according to simple pre-defined inclusion and exclusion criteria. At the first stage, we will screen title, abstract, and keywords to identify key full texts that include mental health, COVID-19, and children. At the second stage, we will apply additional criteria (as detailed above) to include relevant studies for data extraction.
- **Data extraction:** We will extract key data including study type, methodology, authors, title, aim, sample size, age-range, sex, geographical setting, data collection period, pandemic containment measures, mental health outcomes, special populations, findings (quantitative estimates and qualitative themes), and any additional notes.
- **Analysis/synthesis:** In line with other systematic reviews of broad literature that crosses academic disciplines and policy sectors, we will adopt framework synthesis. We have developed a conceptual framework for the impact of COVID-19 on child and adolescent mental health, applying the social ecological model, and integrating other key frameworks across disciplines including child development, public health, clinical psychology, human rights, and child protection. This was part of an initial exercise to scope the theoretical or empirical literature and identify and refine the conceptual framework. The research questions and conceptual framework will guide the analysis and synthesis of data extracted from the studies included.
- **Limitations:** Due to the paucity of time a formal quality appraisal exercise will not be undertaken. This quality appraisal may be undertaken retrospectively at a later date for a more comprehensive assessment of the evidence.

## 5. SEARCH STRATEGY

The search terms, databases, and team members will be defined beforehand, with additional searches added where needed. The details of the search terms for the four databases are below:

- **Cochrane Collaboration**  
Search terms: ((COVID\* OR coronavirus OR SARS-CoV-2)):ti,ab,kw AND ((mental disorder\* OR mental health OR psyc\* OR depression OR anxiety OR internalising OR externalizing OR resilience)):ti,ab,kw AND ((child\* OR adolescent\* OR youth

OR young people)):ti,ab,kw- with Cochrane Library publication date in the last 2 years

- Pubmed

Search terms: ((COVID\*[Title/Abstract] OR coronavirus[Title/Abstract] OR SARS-CoV-2[Title/Abstract]) AND (mental disorder\*[Title/Abstract] OR mental health[Title/Abstract] OR psyc\*[Title/Abstract] OR depression[Title/Abstract] OR anxiety[Title/Abstract]) OR internalising [Title/Abstract] OR externalising [Title/Abstract] OR resilience [Title/Abstract])) AND (child\*[Title/Abstract] OR adolescent\*[Title/Abstract] OR youth[Title/Abstract] OR young people[Title/Abstract])

- Pubcovid19

Search terms: Filter by topic 'Mental Health'

- Wellcome Trust COVID Minds

Search terms: Filter by topic 'Mental Health'

## 6. SCREENING AND CODING

Screening and coding will be conducted in two stages. At the first stage, we will screen the title, abstract, and keywords, of all the articles that come up in the search results, and save relevant full texts. At the second stage, we will apply additional inclusion and exclusion criteria to narrow down and finalize the set of full texts for data extraction. At each stage, there will be at least two reviewers, and an additional researcher for quality check, to screen for inclusion, save full texts, and discuss to resolve any discrepancies. These two stages are described in detail below.

### **Stage 1: Title, abstract, keyword scanning**

At this stage we will exclude studies quickly based on the criteria below, and save relevant full texts meeting the inclusion criteria in folders organized by search engine and study type. A second reviewer will be consulted when any criterion is unclear.

Inclusion criteria for this stage are:

1. Date: Published from and after 1 November 2019
2. Population: Does the study report results for children, adolescents and youth (ages 0 to 19)
3. Exposure: COVID-19 or SARS COV 2 infection
4. Outcomes: Any mental health or psychosocial outcomes
5. Study Type: Systematic review, literature review, cross-sectional study, longitudinal study, qualitative study, commentaries and editorials

## Stage 2: Full text review

At this stage, we will review full texts in detail to make sure they meet the criteria listed at stage 1 above, and exclude any additional studies that do not adequately meet these criteria. Additional inclusion criteria applied at this stage include:

1. Population: Do the studies that include the ages outside of 0-19 report disaggregated results for this age group. If studies do not report disaggregated results for young people, these studies will be saved in a separate folder, and the age range will be limited to children and adolescents (0-19 years), as per UNICEF guidelines.
2. Exposure: Some studies may include COVID-19 as well as other previous epidemics (for example, H1N1, Ebola, Zika) as the exposure. Studies will be included as long as they include data on COVID-19.
3. Outcomes: Any mental health or psychosocial outcomes. Based on the ICD-11 criteria and outcomes emerging from systematic reviews, we compiled the following outcomes areas to guide the data extraction. If other mental health outcomes emerge during the full-text screening, they will be discussed with the team and included or excluded.
  - Internalizing outcomes:
    - Fear, panic, anxiety, social anxiety disorder, obsessive compulsive disorder, hoarding disorder
    - Sadness, grief, depression, and mood disorders
    - Trauma, stress related disorders, acute stress disorder, Post-Traumatic Stress Disorder, adjustment disorder
    - Suicidal ideation, self-harm
  - Externalizing outcomes:
    - Anger, aggression, oppositional disorders, impulse control, ADHD, violence, physical and sexual abuse
    - Alcohol and substance use/abuse
  - Lifestyle behaviours:
    - Physical inactivity, sleep, dietary changes, and internet/screen use
  - Positive outcomes:
    - Well-being, coping, resilience, hope, flourishing, happiness, resilience, social connectedness, adaptive and prosocial behaviours
4. Study Type: Systematic reviews, and studies with primary data (cross-sectional study, longitudinal study, and qualitative study).
5. Methodology: Exclude if there is no description of the methodology, or if the article is not peer-reviewed.



## 7. DATA EXTRACTION

We will extract data in Microsoft Excel using the following coding tool:

Coding category	Subcategories
<b>Bibliographic data</b>	Study Type Authors, Year Title Aim Search/Study period (phase of the pandemic, if included)
<b>Geographic coverage</b>	Country/ies, UNICEF regions
<b>Study population characteristics</b>	N (number of studies for reviews, number of participants for primary studies) Authors of primary studies (for reviews) Age (age sub-group and age range) Special population group (disability, pre-existing health condition, pre-existing psychiatric condition, poverty, humanitarian context) Gender (male, female, other gender identities)
<b>Pandemic/epidemic</b>	COVID-19, but make note if any other epidemic contexts are described (Ebola, Zika, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), HIV/AIDS, H1N1)
<b>Outcomes assessed</b>	<ul style="list-style-type: none"> <li>• Internalizing outcomes:                             <ul style="list-style-type: none"> <li>○ Fear, panic, anxiety, social anxiety disorder, obsessive compulsive disorder, hoarding disorder</li> <li>○ Sadness, grief, depression, and mood disorders</li> <li>○ Trauma, stress related disorders, acute stress disorder, Post-Traumatic Stress Disorder, adjustment disorder</li> <li>○ Suicidal ideation, self-harm</li> </ul> </li> <li>• Externalizing outcomes:                             <ul style="list-style-type: none"> <li>○ Anger, aggression, oppositional disorders, impulse control, ADHD, violence, physical and sexual abuse</li> <li>○ Alcohol and substance use/abuse</li> </ul> </li> <li>• Lifestyle behaviours:                             <ul style="list-style-type: none"> <li>○ Physical inactivity, sleep, dietary changes, and internet/screen use</li> </ul> </li> <li>• Positive outcomes:                             <ul style="list-style-type: none"> <li>○ Well-being, coping, resilience, hope, flourishing, happiness, resilience, social connectedness, adaptive and prosocial behaviours</li> </ul> </li> </ul>

<b>Methodology</b>	<ul style="list-style-type: none"> <li>• Measurement tools</li> <li>• Study platform (online, phone, in-person)</li> <li>• Design of primary studies in reviews</li> <li>• Sampling strategy (primary studies)</li> <li>• Reported by (child, parent, caregiver, health worker)</li> </ul>
<b>Pathways</b>	<ul style="list-style-type: none"> <li>• COVID -19 or SARS COV 2 infection</li> <li>• Infection control measures including quarantine, social distancing, isolation school and day-care closures, movement restrictions, suspension or restriction of social services, closure of non-essential businesses</li> <li>• Consequences of infection including stigma, death/Family loss, trauma, violence, poverty, SES, unemployment, parenting, home environment, caregiver stress, socialization, social support/peer networks</li> <li>• Access to health care, education, nutrition, social protection, recreation</li> </ul>
<b>Findings</b>	<ul style="list-style-type: none"> <li>• Abstract/Conclusions</li> <li>• Estimates (quantitative)</li> <li>• Themes/insights (qualitative)</li> <li>• Details of pathways and results</li> <li>• Recommendations</li> </ul>
<b>Additional</b>	<ul style="list-style-type: none"> <li>• Interventions covered</li> <li>• Notes</li> </ul>

## 8. QUALITY ASSESSMENT AND QUALITY CONTROL

This is a rapid review, so no quality assessment will be conducted. This can be done retrospectively if time and resources allow.

The following steps will be taken to ensure quality control and consistency across team members for the searching, screening, data extraction, and coding process:

- Screening and data extraction will be conducted independently by four team members following a pre-determined inclusion criteria and data extraction framework.
- For articles that are retrieved and full texts saved, ten per cent of the coding will be checked by a second reviewer to ensure they meet the screening criteria and any discrepancies in coding will be resolved
- The lead researcher will supervise the screening and extraction processes and meet members of the team at least twice a week to resolve any doubts or coding inconsistencies

- Synthesis of each outcome will be conducted by one author and independently revised by a second author

## 9. SYNTHESIS

We will conduct a framework synthesis based on the identified outcome areas, developing a simple framework at the beginning of the process, and modifying this as our evidence synthesis proceeds.

Research team: Five researchers, including the lead researcher. The lead researcher will provide the content and methodological lead, along with ensuring quality control. Two of the four co-researchers have extensive background in evidence synthesis (i.e. experience of conducting a systematic review), and two have content expertise in mental health. This will ensure that some of the workload, such as setting up systems to manage data and synthesis/analysis, can be shared with the lead researcher.

## 10. CROSS-SECTORAL/TEAM WORKING AND EXPERT ADVICE

The intention is to involve internal and external experts to provide advice and overall guidance. Experts will be invited to review early and final drafts of the document, reflecting on context, methodology, findings, limitations and conclusions.

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