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PROSPERO
International prospective register of systematic reviews

Citation

Madhu Kharel, Jennifer Lisa Sakamoto, Rogie Royce Carandang, Shinejil Ulambayar, Akira Shibanuma, Ekaterina Yarotskaya, Milana Basargina, Masamine Jimba. Impact of COVID-19 pandemic lockdown on movement and play behaviors of children and adolescents: A systematic review. PROSPERO 2021 CRD42021245924 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42021245924

Review question
What is the impact of COVID-19 pandemic lockdown on movement and play behaviors of children and adolescents?

Searches [1 change]

We will search the following electronic databases: PubMed/MEDLINE, Web of Science, CINAHL, PsycINFO, PsycARTICLES, Academic Search Complete, SocINDEX, Cochrane Central Register of Controlled Trials, and Grey Literature (WHO, CDC, ECDC, JICA, UNICEF, among others). Additional studies will be hand-searched from the reference lists of articles. We will include all published papers in English language from November 2019 to September 2021.

Types of study to be included
Original research articles of all study designs such as randomized controlled trial (RCT), quasi-experimental, cohort, observational, cross-sectional, and other comparative studies as well as case studies and evaluation reports will be included in the study. Letters, editorials, reviews, conference abstracts, and books will not be included.

Condition or domain being studied
Healthy childhood development is fostered through adequate physical activity, limited sedentary behaviors, and enough sleep, collectively known as movement behaviors. Healthy movement behaviors contribute to the physical and mental health of children and adolescents (Carson, 2017), including a stronger immune system (Lasselin, 2016). The COVID-19 pandemic lockdown has led to significant changes in the daily life of children, adolescents, and their families. Little is known to what extent the COVID-19 pandemic has compromised their ability to play and meet movement behavior recommendations. In this systematic review, we aim to examine the impact of COVID-19 lockdown on movement and play behaviors in children and adolescents.

Participants/population
Participants will include children and adolescents aged 19 years and below.

Intervention(s), exposure(s)
The exposure of interest is COVID-19 pandemic lockdown.

Comparator(s)/control
The comparator will be children and adolescents who have not faced lockdown restrictions during the COVID-19 pandemic.

Main outcome(s)
Movement and play behaviors: physical activity, sedentary behaviors (including recreational screen time), outdoor time, and sleep.

Measures of effect

relative risks, odds ratios

Additional outcome(s)
Factors associated with and consequences of unhealthy movement and play behaviors

Measures of effect

relative risks, odds ratios

Data extraction (selection and coding)

Two review authors will be involved in the process of literature search, article screening, and data extraction. The databases will be independently searched using the aforementioned search strategy and identify the studies by title and abstract screening. The team will review the list of articles for eligibility. We will discuss disagreements on the eligibility of study until a consensus is reached. If required, we will consult our supervisor for the final decision.

The data to be extracted include:

Title, citation (author, publication year, source), study location, objectives, study design, study setting, study population, sample size, description of lockdown, comparison group, and reported outcomes.

Risk of bias (quality) assessment

We will assess the quality of RCTs using the risk of bias tools from the Cochrane Handbook. For non-RCTs, we will use the following tools: ROBINS-I for quasi-experimental studies, NIH quality assessment tool for observational cohort and cross-sectional studies, Critical Appraisal Skills Program checklist for qualitative studies, and Mixed Methods Appraisal Tool for mixed-method studies. To assess the certainty of the evidence for the included studies, we will apply the GRADE approach.

Strategy for data synthesis

We will follow the PRISMA checklist for appropriate data synthesis. We will construct a PRISMA flowchart to show the search strategy results at each stage of review. We will conduct a descriptive analysis of individual studies according to the type of lockdown restrictions, sample size, duration, outcome, quality, and risk of bias. We will analyze the impact of lockdown restrictions, based on the reported outcomes. If we find enough studies with quality data, we will conduct a meta-analysis to examine the effect of lockdown restrictions on the movement and play behaviors of children and adolescents.

Analysis of subgroups or subsets

None

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Organisational affiliation of the review

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Type and method of review
Systematic review

Anticipated or actual start date [1 change]

30 April 2021

Anticipated completion date [2 changes]

31 December 2021

Funding sources/sponsors [1 change]

Program of Bilateral Health and Medical Cooperation between Japan and Russian Federation, Ministry of Health, Labor, and Welfare, Japan

Conflicts of interest

Language
English

Country
Japan

Stage of review [1 change]

Review Completed not published

Subject index terms status
Subject indexing assigned by CRD

Subject index terms
Adolescent; COVID-19; Child; Communicable Disease Control; Humans; Movement; Pandemics; SARS-CoV-2

Date of registration in PROSPERO
30 March 2021

Date of first submission
29 March 2021

Details of any existing review of the same topic by the same authors
None

Stage of review at time of this submission [1 change]

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Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	Yes	Yes
Risk of bias (quality) assessment	Yes	Yes
Data analysis	Yes	Yes

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.
The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions

30 March 2021
20 October 2021
04 November 2021