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Global mental health among children and adolescents between one-child and multi-child families: a meta-analysis of comparative studies

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ADMINISTRATIVE INFORMATION

Support - NA.

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202410014

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 January 2024 and was last updated on 05 January 2024.

INTRODUCTION

*R*eview question / Objective Compare the mental health status between the two groups and explore potential moderating factors.

Condition being studied The inclusion criteria were determined using the PICOS acronym as follows: Participants (P): children and adolescents from one-child families in China; Intervention (I): not applicable; Comparison (C): children and adolescents from multi-child families in China; Outcome (O): global mental health status , measured using the Symptom Checklist-90 (SCL-90; mean, standard deviation [SD]); Study design (S): case-control studies with accessible data published in peer-reviewed journals. This meta-analysis excluded: (1) non-empirical and non-quantitative study (i.e., reviews, systematic reviews, meta-analyses, case studies, and commentaries); (2) studies conducted on special populations, such as military personnel, pregnant women, healthcare workers, medical students, students facing major exams, left-behind children and street children; (3) studies conducted during special periods or emergency public health events, such as SARS (severe acute respiratory syndrome), COVID-19 pandemic (Coronavirus disease 2019), and post-earthquake.

METHODS

Search strategy ("Only child" OR "single-child" OR "single child" OR "one child" OR "one-child" OR "Child, Only" OR "Only Children" OR "Children, Only") AND ("psychiatr*" OR "mental*" OR "psycholog*" OR "depress*" OR "major depress*" OR "anxie*" OR "Sleep Initiation and Maintenance Disorders" OR "insomnia" OR "sleep*" OR "posttraumatic stress disorder" OR "PTSD" OR "trauma" OR "bipolar*" OR "manic disorder" OR "schizophre*" OR "attention deficit hyperactivity disorder" OR "ADHD" OR "autism*" OR "autistic disorder" OR "obsessive compulsive disorder" OR

"suicid*" OR "self-harm" OR "self-injury") AND ("China" OR "Chinese").

Participant or population Children and adolescents from one-child families in China.

Intervention No.

Comparator Children and adolescents from multi-child families in China.

Study designs to be included Case-control studies.

Eligibility criteria The inclusion criteria were determined using the PICOS acronym as follows: Participants (P): children and adolescents from one-child families in China; Intervention (I): not applicable; Comparison (C): children and adolescents from multi-child families in China; Outcome (O): global mental health status , measured using the Symptom Checklist-90 (SCL-90; mean, standard deviation [SD]); Study design (S): case-control studies with accessible data published in peer-reviewed journals. This meta-analysis excluded: (1) non-empirical and non-quantitative study (i.e., reviews, systematic reviews, meta-analyses, case studies, and commentaries); (2) studies conducted on special populations, such as military personnel, pregnant women, healthcare workers, medical students, students facing major exams, left-behind children and street children; (3) studies conducted during special periods or emergency public health events, such as SARS (severe acute respiratory syndrome), COVID-19 pandemic (Coronavirus disease 2019), and post-earthquake.

Information sources Three major international databases (PubMed, Web of Science, and PsycINFO) and two Chinese databases (China National Knowledge Infrastructure [CNKI] and Wanfang).

Main outcome(s) Global mental health status , measured using the Symptom Checklist-90 (SCL-90; mean, standard deviation [SD]).

Quality assessment / Risk of bias analysis Study quality was assessed using an 8-item tool for epidemiological studies (Loney et al., 1998; Michael, 1998). The details are provided in Table S1. The total score was calculated by summing up all items and ranged from 0 to 8, which can be graded as low quality (0-3 points), moderate quality (4-6 points) and high quality (7-8 points) (Yang et al., 2016). Disagreements between researchers regarding study quality assessment were resolved through discussion with the senior investigator(YTX).

Strategy of data synthesis Data extraction was independently performed by the same four investigators. Extracted study characteristics included the first author, publication year, survey time, survey site (provinces), study design, and sampling methods of the included studies. Sample characteristics included population type, sample size, mean age of the total sample, number of children and adolescents between one-child families and multi-child families and SCL-90 score.

Subgroup analysis Subgroup analyses for categorical variables (e.g., population type, sampling method, publication year, and geographic regions) and meta-regression analyses for continuous variables (e.g., mean age of total sample, sample size, and quality assessment score) were performed.

Sensitivity analysis A sensitivity analysis was performed by sequentially removing studies individually to assess the stability of the results.

Language restriction No.

Country(ies) involved China.

Keywords Children and adolescents, one-child families, multi-child families, mental health, meta-analysis.

Contributions of each author
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Author 2 - Shu-Ying Rao.
Author 3 - Wei Zhang.
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Author 5 - Yu-Tao Xiang.