

INPLASY

How many Chinese adults meet the 24-hour movement guidelines: A meta analysis

INPLASY202480130

doi: 10.37766/inplasy2024.8.0130

Received: 29 August 2024

Published: 29 August 2024

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Piloting of the study selection process.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202480130

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 August 2024 and was last updated on 29 August 2024.

INTRODUCTION

Review question / Objective How many Chinese adults meet the 24-hour movement guidelines?

Condition being studied Inclusion criteria for identified studies were consistent with the following criteria: 1) population: Chinese adults aged ≥ 18 years; 2) study design: observational study; 3) outcome: meeting the overall 24-Hour Movement Guidelines.

METHODS

Participant or population General Chinese adults.

Intervention None.

Comparator None.

Study designs to be included Observational studies.

Eligibility criteria Inclusion criteria for identified studies were consistent with the following criteria: 1) population: Chinese adults aged ≥ 18 years; 2) study design: observational study; 3) outcome: meeting the overall 24-Hour Movement Guidelines.

Information sources Electronic databases including the Web of Science, PubMed, SPORTDiscus, Scopus, Embase, and CNKI.

Main outcome(s) The main outcome of this meta-analysis was the prevalence of meeting the 24-hour movement guidelines.

Quality assessment / Risk of bias analysis The Quality Assessment Tool for Observational Cohort and Cross-sectional Studies was used. This checklist was comprised of 14 items for longitudinal studies, of which 11 could be applied to observational and cross-sectional studies (except Items 7, 10, and 13). This tool consists of 14 items that measure the following elements: (a) research question; (b and c) study population; (d) groups recruited from the same population and

uniform eligibility criteria; (e) sample size justification; (f) exposure assessed prior to outcome measurement; (g) sufficient timeframe to see an effect; (h) different levels of the exposure of interest; (i) exposure measures and assessment; (j) repeated exposure assessment; (k) outcome measures; (l) blinding of outcome assessors; (m) follow-up rate; and (n) statistical analyses.

Strategy of data synthesis Using Stata (Version 17.0; StataCorp., College Station, TX, USA) and the metaprop procedure, the prevalence of multiple studies was pooled by applying a random-effects model that displayed the results as forest plots using the DerSimonian and Laird method. The exact method was used to establish 95% confidence intervals (95%CI) for prevalence from the selected individual studies, and a Freeman-Tukey transformation was used to normalize the results before calculating the pooled prevalence. An analysis of variance (ANOVA)-like random-effects model developed for meta-analytic research was also used to compare differences in prevalence of meeting the 24-hour movement guidelines according to demographics if possible. Outcome prevalence and respective 95%CIs are presented.

Subgroup analysis Subgroup analysis will be performed if possible.

Sensitivity analysis Sensitivity analysis will be performed if possible.

Language restriction Chinese and English.

Country(ies) involved Australia and China.

Keywords 24-hour movement guidelines, prevalence, China, adults.

Contributions of each author

Author 1 - Jiafu Huang - Drafted the manuscript, literature search, literature selection, data extraction.

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