

INPLASY PROTOCOL

To cite: Cheng. How to measure healthy ageing: a systematic review based on the World Health Organization's Healthy Ageing framework. Inplasy protocol 202230179. doi: 10.37766/inplasy2022.3.0179

Received: 31 March 2022

Published: 31 March 2022

Corresponding author:
Yan Cheng

cynjszyy@njucm.edu.cn

Author Affiliation:
Nanjing Hospital of Chinese Medicine Affiliated to Nanjing University of Chinese Medicine.

Support: The research was supported by.

Review Stage at time of this submission: Data extraction.

Conflicts of interest:
None declared.

How to measure healthy ageing: a systematic review based on the World Health Organization's Healthy Ageing framework

Cheng, Y¹.

Review question / Objective: 1. What are the most used multi-dimensional comprehensive indicators, to assess and healthy aging based on the World Health Organization's Healthy Ageing framework? 2. What are the quantitative methods used to measure healthy ageing based on the World Health Organization's Healthy Ageing framework? 3. What are the key determinants of healthy ageing based on the World Health Organization's Healthy Ageing framework?

Condition being studied: At present, a lot of reviews have been carried out in healthy ageing. These reviews provided overviews of the concept of healthy ageing, concluded domains and measurements of healthy aging, explored the relationship between socioeconomic position, lifestyle behaviour, residential greenspace and healthy ageing. But, in these reviews, there are some common problem: (1)when they formulate search strategies for healthy aging, the search strategies include all the theories of ageing(such as healthy ageing, active ageing, productive ageing, successful ageing). This inconsistency in healthy ageing definitions lead to heterogeneity of outcome, which is a limitation to healthy ageing research, (2)none of them review the methods of calculating healthy ageing score, (3)none of them review the criteria whether healthy aging has been achieved, (4)none of them review the methods of evaluating trajectories of health ageing.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 31 March 2022 and was last updated on 31 March 2022 (registration number INPLASY202230179).

INTRODUCTION

Review question / Objective: 1. What are the most used multi-dimensional

comprehensive indicators, to assess and healthy aging based on the World Health Organization's Healthy Ageing framework?

2. What are the quantitative methods used to measure healthy ageing based on the World Health Organization's Healthy Ageing framework? 3. What are the key determinants of healthy ageing based on the World Health Organization's Healthy Ageing framework?

Rationale: None of studies have explored the measuring of healthy ageing based on the World Health Organization's Healthy Ageing framework. This review is to fill the gap, by conducting a systematic review of multi-dimensional comprehensive indicators, the methods of calculating healthy ageing score, the criteria whether healthy aging has been achieved, the methods of evaluating trajectories of health ageing, key determinants of healthy ageing.

Condition being studied: At present, a lot of reviews have been carried out in healthy ageing. These reviews provided overviews of the concept of healthy ageing, concluded domains and measurements of healthy aging, explored the relationship between socioeconomic position, lifestyle behaviour, residential greenspace and healthy ageing. But, in these reviews, there are some common problem: (1)when they formulate search strategies for healthy aging, the search strategies include all the theories of ageing(such as healthy ageing, active ageing, productive ageing, successful ageing). This inconsistency in healthy ageing definitions lead to heterogeneity of outcome, which is a limitation to healthy ageing research, (2)none of them review the methods of calculating healthy ageing score, (3)none of them review the criteria whether healthy aging has been achieved, (4)none of them review the methods of evaluating trajectories of health ageing.

METHODS

Participant or population: The population group includes humans with no limit on age, sex, ethnicity, health condition, or context.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: We performed a systematic review of observational epidemiological studies (cross-sectional and longitudinal studies) measuring healthy ageing based on the World Health Organization's Healthy Ageing framework.

Eligibility criteria: To be included in this review, studies were required to meet the following criteria: (1) the definition of healthy ageing was based on the World Health Organization's Healthy Ageing framework, (2) base on the multi-dimensional comprehensive indicators to measure healthy aging, (3) be published as a peer-reviewed original research article, with full-text availability in English. The exclusion criteria included: (1) the definition of healthy ageing was not based on the World Health Organization's Healthy Ageing framework; (2) base on the single dimensional indicator to measure healthy aging, (3) Ecological studies, reviews, meta-analyses, comments, experimental studies, qualitative studies, case-studies or any other studies without primary data.

Information sources: CINAHL Complete via EBSCO, COCHRANE, Embase via OVID, medline via ovid, APA PsycInfo via ovid, scopus and web of science.

Main outcome(s): Multi-dimensional comprehensive indicators, the methods of calculating healthy ageing score, the criteria whether healthy aging has been achieved, the methods of evaluating trajectories of health ageing, key determinants of healthy ageing.

Data management: Study selection was managed in Citavi 6.10.0.0.

Quality assessment / Risk of bias analysis: Risk of bias assessment of included articles were conducted using an adjusted version of Newcastle-Ottawa Scale. The scale was adjusted to fit the purpose of this review. This tool considers three main domains of bias including selection, comparability, and outcome. Scores were

assigned for each criterion, with a maximum score of 9 for cross-sectional and 11 for longitudinal studies. Studies were then given a risk of bias rating of “low”, “intermedium” or “high”. Any disagreement between reviewers’ ratings was resolved by consulting a third reviewer. Studies were not excluded based on their quality score.

Strategy of data synthesis: If at least two studies are located for same exposures and studies are sufficiently similar, meta-analyses will be conducted using RevMan. If insufficient studies are located or if there is high heterogeneity a narrative summary of results will be produced.

Subgroup analysis: Not applicable.

Sensitivity analysis: Not applicable.

Country(ies) involved: China.

Keywords: multi-dimensional comprehensive indicators, criteria, trajectories, key determinants, healthy ageing.

Contributions of each author:
Author 1 - Yan Cheng.