Reviewer's report

Title: Prevalence, awareness, and associated risk factors of hypertension in older adults in Africa: a systematic review and meta-analysis protocol

Version: 0 Date: 01 Jun 2017

Reviewer: Alexander Tsertsvadze

Reviewer’s report:

Introduction

* A paragraph on systematic reviews (lines 75-81, page 5) should be moved towards the end of introduction section at line 115 (page 7). Please, delete the last paragraph (lines 115-119).

* It is not very convincing what new evidence adds your review when there is a very recent systematic review by Kaze 2017. You state that the age threshold for being old used in the Kaze 2017 review was 55 years as opposed to 50 years defined in your review. Would the difference of 5 years lead to appreciable differences in the effect estimates of prevalence of hypertension and risk factors between the two reviews? I think you need stronger rationale to justify novelty of your review findings. Perhaps you need to highlight methodological or generalizability limitations of the previous review that your review is going to address? One of them being quality appraisal of included studies which was not done in the Kaze review. You may capitalize that you will appraise the study quality and risk of bias unlike the previous review. I found that you cover some of this in Discussion section (1st and 2nd paragraphs on lines 267-281 and 283-290). So why don't you bring up these paragraphs and integrate them with the paragraph starting at line 115, thereby covering the limitations of previous reviews at the end of Introduction section (right before Review Questions)? This would reinforce the differences in your and Kaze's reviews. Moreover, these paragraphs (lines 267-281 and 283-290) are out of place in the Discussion section.

Review questions

* I would delete the 3rd question (i.e., on level of awareness, detection, treatment, etc.). This is another construct, which merits separate searches and a systematic review of its own. The set of studies on prevalence and risk factors that will be included in your review will not allow you to review this evidence systematically. You did not cover these issues (awareness, control, treatment) in the methodology of protocol either. I suggest to drop them.

* Since you are going to include studies from 1980, one could analyse the temporal trend/change in the prevalence and risk factors of hypertension over time. This would be a valuable information (would serve as question #3 and additional contribution to the field). If you decide to add this question, please also cover it in other sections such as data extraction and data analysis.
Methods - Inclusion criteria

* Lines 143-145: if you are going to systematically review the prevalence and risk factors of hypertension in elderly in Africa, you may need to divide them by study design. For example, the prevalence will be reviewed in population-based cross-sectional studies. You cannot assess the prevalence of hypertension in [non-population based] follow-up cohort or case-control studies. The risk factors can be reviewed in observational follow-up cohort, case-control, as well as cross-sectional studies (population-based or not). It should be noted that the cross-sectional design is not optimal for assessing risk factors, because it does not allow to determine the temporal relationship between the risk factor and the occurrence of hypertension. Although the use of cross-sectional studies for risk factors will be acknowledged as a limitation, they are still informative.

* Is there any rationale why 1980 was chosen for eligibility to include?

* P (population). Will the authors specify if the eligible population should be healthy, with one or more chronic disease, and/or mixed?

* Next after P (population), the authors may need to add a new entry called I/E (intervention/exposure): any risk factor

* C (comparator): no exposure/no risk factor/reference group

* Outcome: please add 'the association between a risk factor and hypertension'

Methods - study selection

* At title/abstract screen, who will screen the studies, one or more reviewers? Will they be independent in their assessments? How the conflicts between the two reviewers will be solved? Consensus will be reached between the two reviewers or using a third adjudicator?

* Lines 203-204 (extracted data from multiple publications): this sentence should be in data extraction section.

* Lines 204-205 (bibliographies of selected papers): this sentence should be in the Literature Search section.

* Will the authors mention the PRISMA study flow diagram to describe the screening process and reasons for exclusion at full text screen level?

Methods - data extraction

* Lines 240-242 (sensitivity analysis): this sentence should be moved to the 'Data analysis and synthesis section'
* Lines 242-244 (GRADE): this sentence should read as follows: "The overall quality of evidence will be assessed using an adaptation of the Grading of Recommendations Assessment, Development and Evaluation (GRADE)." Please, move this sentence to the end of the Data analysis section or create a new section (should follow the data analysis section) titled Overall strength of evidence (or Grading the evidence).

* GRADE system is used to assess the overall strength of evidence across intervention and diagnostic studies. I am unaware if it can be applied to prevalence studies. The authors are asked to provide any relevant reference or if not, describe in the data analysis section on how this system will be adapted to prevalence studies.

Methods - data analysis and synthesis

* Please specify what summary measure will be used for prevalence, will it be a proportion prevalence (%)? What summary measure will be used for risk factor-hypertension association, RR, OR?

* The authors will try to pool the ORs/RRs for prevalence. Will they try to pool the ORs/RRs for risk factors as well?

* Will the authors perform any subgroup analysis (e.g., separate meta-analyses by sex, time period, age group, and geographic locality) or a meta-regression to explain any potential heterogeneity in the prevalence of hypertension, if such exists?

Discussion

* Will the authors discuss the policy implications of this research and future research plans outlined by their systematic review findings? This section will also cover limitations and strength of the review as well as evidence itself.

Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

Quality of written English
Please indicate the quality of language in the manuscript:

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