

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Protocol for a cluster randomized controlled trial of home cook intervention to reduce salt intake in China
AUTHORS	Zhang, Xiaochang; Hu, Xiao; Ma, Jixiang; Zhang, Puhong; Li, Yuan; Luo, Rong; He, Feng J; MacGregor, Graham A; Wang, Jinglei; Yin, Zhaoxue

VERSION 1 – REVIEW

REVIEWER	Branka Legetic prof. Pharmaceutical Faculty, Novi Sad, Serbia
REVIEW RETURNED	13-Oct-2019

GENERAL COMMENTS	Review the outcome section, as besides effectiveness of intervention, outcome is to be the intervention package for sodium reduced home cooking. explain in more detail how family 7 day salt intake monitoring will be performed. It is not clear through applet We Chat/web page, who and how will monitoring be performed..
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REVIEWER	Neusa Jessen Central Hospital of Maputo, Mozambique
REVIEW RETURNED	08-Dec-2019

GENERAL COMMENTS	<p>The researchers present the `Protocol for a cluster randomized controlled trial of home cook intervention to reduce salt intake in China`. If proved feasible and effective, this project will raise important evidence on an intervention method to reduce salt intake at a population level, one of the WHO's `best buys` interventions for the prevention and control of non-communicable diseases. Both the design of the study and the methodology proposed are appropriate. The cluster randomized design is increasingly used in public health research and is suitable in this case, where the intervention applies to the cluster. Also, the use of 24-hour urinary collection for sodium estimation is a strength of the study. Even so, some aspects raise concern and I would advise better clarification, including:</p> <ul style="list-style-type: none"> • The researchers state that `the results should generally be applicable to the whole Chinese population` - it is not clear how the chosen provinces were selected, was there a sampling frame (population census for example) available and used for the selection of the provinces and clusters that will be included? • Regarding the intervention package: <ul style="list-style-type: none"> <input type="checkbox"/> Action 1, Supportive environment - researchers will develop material regarding salt reduction and put them up both in communities and markets - the control communities will not be
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	<p>also exposed to this material and possibly reduce the observed effect in the intervention group?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Action number 2 – It was not well explained how the lectures will be delivered. Will they be conducted at the household or at the health institution? <input type="checkbox"/> Action 3, Family 7-day salt intake monitoring activity – How will the researchers access the amount of salt intake per person per day? Will a dietary questionnaire be employed (in this case, how will the salt intake calculated) or urinary sodium excretion measured? <input type="checkbox"/> Action 4, Online health education through social media - WeChat public account will be used to conduct health education for the public - all intervention family members will have access to this chat? <p>• Also, I would advise a complete review, reformulation of some sentences and minor language corrections. Some examples are:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Page 3 line 43 – The cRCT will be conducted.. <input type="checkbox"/> Page 3, line 43 – “ ..was 10.5g in 2012 which using dietary..” – suggestion: “In in 2012, a report on Chinese residents’ chronic diseases and nutrition, using a dietary survey, showed that the average daily salt intake for Chinese adults was 10.5g”. <input type="checkbox"/> Page 3 line 5 - replace KAP for Knowledge-attitude-practice (KAP) in the abstract. <input type="checkbox"/> Page 6, lines 36, 37 – “resources, etc. to ensure all the communities with similar characteristics.” – suggestion: ..communities have similar..? <input type="checkbox"/> Page 7, line 4 – “..currently participate in any other..” – suggestion: participating; <input type="checkbox"/> Page 7, line 21, 22 – “..and the baseline assessments have completed..” – suggestion: remove have; <input type="checkbox"/> Page 11, lines 40, 41 – “All analyses were two sided,…” – suggestion: will be.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Branka Legetic

Institution and Country: prof. Pharmaceutical Faculty, Novi Sad, Serbia

Please state any competing interests or state 'None declared': none declared

Please leave your comments for the authors below

Review the outcome section, as besides effectiveness of intervention, outcome is to be the intervention package for sodium reduced home cooking.

explain in more detail how family 7 day salt intake monitoring will be performed. It is not clear through applet We Chat/web page, who and how will monitoring be performed..

Response: A 7-day salt intake monitoring activity is to estimate the amount of salt intake for every member of the family and improve the awareness of salt reduction among the target population. Participants will record the frequency of dining out, consumption of processed foods and amount of salt added during cooking. The added salt will be assessed by weighing salt, soy sauce and other primary salty condiments on the first and last day of the evaluation period. Additionally, the local CDCs and primary health institutions will help participants with the results estimated by this method and remind the families about their salt intake in relation to the set targets and highlight further action plans. The more detailed information could be found in another published paper (i.e. Zhang L, Zhao F, Zhang P, et al. A pilot study to validate a standardized one-week salt estimation method evaluating

salt intake and its sources for family members in China. *Nutrients* 2015;7:751–63).

Reviewer: 2

Reviewer Name: Neusa Jessen

Institution and Country: Central Hospital of Maputo, Mozambique

Please state any competing interests or state 'None declared': None declared.

Please leave your comments for the authors below

The researchers present the 'Protocol for a cluster randomized controlled trial of home cook intervention to reduce salt intake in China'. If proved feasible and effective, this project will raise important evidence on an intervention method to reduce salt intake at a population level, one of the WHO's 'best buys' interventions for the prevention and control of non-communicable diseases. Both the design of the study and the methodology proposed are appropriate. The cluster randomized design is increasingly used in public health research and is suitable in this case, where the intervention applies to the cluster. Also, the use of 24-hour urinary collection for sodium estimation is a strength of the study. Even so, some aspects raise concern and I would advise better clarification, including:

- The researchers state that 'the results should generally be applicable to the whole Chinese population' - it is not clear how the chosen provinces were selected, was there a sampling frame (population census for example) available and used for the selection of the provinces and clusters that will be included?

Response: We considered several factors when selecting the provinces including geographical area, economic status and population level of salt intake. The six provinces distributed in the eastern, central and western of China, thus different diet patterns due to geography will be involved. And both the relatively developed and underdeveloped provinces is considered in this study. And the selected provinces all had a relatively high level of salt intake. Hence, we could explore how the intervention package work in population of different diet patterns and different access to health resources in China. To some extent, we wish the salt reduction intervention package could be applicable to the whole country. But we will be cautious when it comes to extrapolating.

- Regarding the intervention package:

→ Action 1, Supportive environment - researchers will develop material regarding salt reduction and put them up both in communities and markets - the control communities will not be also exposed to this material and possibly reduce the observed effect in the intervention group?

Response: The interventions will be implemented only in the intervention communities. Meanwhile, the control group will not be implemented any of the interventions developed in this study. So, people in control communities will not be exposed to the education materials.

→ Action number 2 – It was not well explained how the lectures will be delivered. Will they be conducted at the household or at the health institution?

Response: We will develop a set of standard slides to disseminate knowledge and skills to reduce salt intake for the target population. In the intervention communities, these slides will be provided for the local health institutions. They will organize and deliver lectures to the participants, especially the home cooks, once every two months. A total of 6 training lectures will be delivered in 12 months. The brief contents of the six courses will include salt-related health outcomes, sources of salt intake, low-sodium salt, misunderstandings of salt reduction, how to reduce salt intake during cooking or when eating outside the home, and how to wisely choose low-salt pre-packaged food.

– Action 3, Family 7-day salt intake monitoring activity – How will the researchers access the amount of salt intake per person per day? Will a dietary questionnaire be employed (in this case, how will the salt intake calculated) or urinary sodium excretion measured?

Response: Participants will record the frequency of dining out, consumption of processed foods and amount of salt added during cooking. The added salt will be assessed by weighing salt, soy sauce and other primary salty condiments on the first and last day of the evaluation period. Additionally, the local CDCs and primary health institutions will help participants with the results estimated by this method and remind the families about their salt intake in relation to the set targets and highlight further action plans. The more detailed information could be found in another published paper (i.e. Zhang L, Zhao F, Zhang P, et al. A pilot study to validate a standardized one-week salt estimation method evaluating salt intake and its sources for family members in China. *Nutrients* 2015;7:751–63). The amount of salt intake recorded in the “A 7-day salt intake monitoring activity” is just a rough figure, intended to promote awareness of salt reduction among participants in the intervention group and remind them to adopt a good diet with less salt. This method is only used for intervention, and the effect of the study will be evaluated by 24h urine sodium, which will be collected both before and after the intervention period.

– Action 4, Online health education through social media - WeChat public account will be used to conduct health education for the public - all intervention family members will have access to this chat?

Response: In our study, the researchers make very sure that all intervention participants can use WeChat and WeChat public accounts before intervention. Hence, all intervention family members will have access to this intervention.

• Also, I would advise a complete review, reformulation of some sentences and minor language corrections. Some examples are:

- Page 3 line 43 – The cRCT will be conducted..
- Page 3, line 43 – “ ..was 10.5g in 2012 which using dietary..” – suggestion: “In in 2012, a report on Chinese residents’ chronic diseases and nutrition, using a dietary survey, showed that the average daily salt intake for Chinese adults was 10.5g”.
- Page 3 line 5 - replace KAP for Knowledge-attitude-practice (KAP) in the abstract.
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- Page 7, line 21, 22 – “..and the baseline assessments have completed..” – suggestion: remove have;
- Page 11, lines 40, 41 – “All analyses were two sided,..” – suggestion: will be.

Response: These language corrections have been revised. Please see the updated manuscript ‘Main Document-marked copy’.

VERSION 2 – REVIEW

REVIEWER	Neusa Jessen Central Hospital of Maputo, Mozambique
REVIEW RETURNED	31-Jan-2020

GENERAL COMMENTS	The researchers present a protocol for an important, adequate and timely intervention project to reduce salt intake at a population level. The study design and the selected methodology are
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	<p>appropriate. The cluster randomized design is increasingly used in public health research and is suitable in this case, where the intervention applies to the cluster. The use of 24-hour urinary collection for sodium estimation is a strength of the study. In the present format, the protocol is much clearer allowing for replication.</p> <p>Suggestion: please define the abbreviation KAP in the first appearance (in the abstract). The title `data collection` is repeated, please review.</p>
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VERSION 2 – AUTHOR RESPONSE

Reviewer: 2

Reviewer Name: Neusa Jessen

Institution and Country: Central Hospital of Maputo, Mozambique

Please state any competing interests or state 'None declared': 'None declared'

Please leave your comments for the authors below

The researchers present a protocol for an important, adequate and timely intervention project to reduce salt intake at a population level. The study design and the selected methodology are appropriate. The cluster randomized design is increasingly used in public health research and is suitable in this case, where the intervention applies to the cluster. The use of 24-hour urinary collection for sodium estimation is a strength of the study. In the present format, the protocol is much clearer allowing for replication.

Suggestion: please define the abbreviation KAP in the first appearance (in the abstract). The title `data collection` is repeated, please review.

Response: Thanks a lot for your comment and suggestions. We have defined the abbreviation KAP in the abstract. And the second title `data collection` has been changed to `data management`. Please see the updated manuscript 'Main Document-marked copy'.