Reviewer's report

Title: Knowledge, attitudes, and perceptions towards waterpipe tobacco smoking amongst college or university students: a systematic review.

Version: 0 Date: 23 Oct 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: I find the presented systematic review to be an interesting work which provides necessary information to public health professionals and, through them, to decision makers. I agree with the authors that their review has several strengths. In addition to the listed advantages of distinguishing between the global north and global south and focusing on several specific research questions, I find it very helpful to see a systematic review of both qualitative and quantitative studies with a distinction between cross-sectional and longitudinal findings. Emphasizing, where available, the results relating to medical students is also an advantage.
REQUESTED REVISIONS:
I positively assess the paper and do not have suggestions for major changes. However, I hope that the authors will consider taking into account the multiple minor comments below, which will be beneficial for their paper.

In the Discussion section, the authors write "However, these separate systematic reviews fail to conclusively compare findings between the global north and global south, are not specific to the university cohort and finally fail to discuss specific themes such as knowledge and perceptions regarding WTS policy." Although I agree that the presented systematic review has definite advantages and achievements, it is not worth explaining the characteristics of the earlier papers as failures because these are the works you have actually used as a starting point for further inquiry.

The ending of the Discussion including 'Implications for practice' is in need of revision. In the text, the authors state that the level of knowledge is usually not predictive of initiating or stopping waterpipe smoking. However, in the individual and community level implications, they emphasize educational interventions. This seems contradictory. Further on, in the policy-making subsection, suggestions including location, taxation and advertising issues appear more justified. The prohibition measures suggested at the beginning of this subsection might be counter-productive.

The Conclusion, quite suddenly, switches to 'shisha' terminology which was not used in the rest of the text. From my point of view, it needs to be avoided.

In the Reference list, some entries need revision. Examples are below:
   6. Association AL. Tobacco policy trend alert... - was this 'American Lung Association'?
   13. Jackson D AP. - the name of the second author turned into 'AP' here
   42. Maziak Wea. - Problems with the author's name here as well

ADDITIONAL REQUESTS/SUGGESTIONS:
The text is generally well written. However, it will definitely benefit from professional language editing and observing some of the norms of academic writing. Some of the phrases which obviously require correction are listed below. I keep the line numbers from the pdf to enable the authors to more easily find the listed pieces.

In the Abstract: "We excluded studies where results of waterpipe tobacco smokers could not be distinguished from other forms of tobacco use and studies reported as abstracts where the full text could not be identified." - People could not be distinguished from tobacco.

"We included observational (cross-sectional, case-control, cohort) and interventional 42 (randomised or non-randomised) quantitative or qualitative studies that addressed college or 43 university students' knowledge, attitudes and perceptions regarding WTS for inclusion in this 44 study." - "included" is used twice.

"We identified a total of 919 papers related to WTS and satisfied 89 our inclusion criteria." - Grammar problems.

"Twenty of these studies demonstrated that the 160 majority of university students worldwide could identify some of the health hazards associated 161 with primary WTS, for example, cardiovascular disease, respiratory disease and cancer (9-11,
"194 3. Association between knowledge and WTS use" - Some headlines are numbered, others are not.

"In one longitudinal study, only students who answered "do not know" to questions regarding their knowledge of WTS, tar, nicotine and carcinogen content were associated with a reduced risk of initiation of WTS after one year (aOR 202 = 0.35, 95% CI = 0.14 - 0.90) (28)." - Students cannot be associated, only phenomena can.

"In a sample of four universities in Jordan, the belief that cigarette smoking is more harmful than WTS was significantly associated with the outcome of monthly waterpipe use (p < 0.001), but not for the outcome ever use (p = 0.090) (67)." - it would be good to make this sentence more explicit. Currently, it is not clear which belief was associated with a greater frequency of use.

"Specifically, it is interesting to report in our findings how while students are able to report correct knowledge of WTS harms, this fails to deter them from WTS use (a finding that differs from studies of adult WTS users (2))." - This 'how... while' construction needs some attention.

" 365 students. We followed the PRISMA methodology to conduct this review." - Should it be PRISMA?

" 373 towards WTS as they allow us to explore temporality. Given we found five longitudinal studies," " It is necessary to reverse the popularity and prevalence of waterpipe and reduce its contribution to the global tobacco health burden." - This statement, especially "reverse the prevalence" sounds naïve and contradicts the overall relatively mature views of the authors.

" 400 of WTS. Therefore, interventions involving religious and community leaders might help decrease the prevalence this habit."

Note: This reviewer report can be downloaded - see attached pdf file.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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

Needs some language corrections before being published

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