PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Integration of Traditional and Complementary Medicine into medical school curricula: A survey among medical students in Makerere University, Uganda
AUTHORS	Mwaka, Amos; Tusabe, Gersave; Garimoi, Christopher; Vohra, Sunita; Ibingira, Charles

VERSION 1 - REVIEW

REVIEWER	Dr.Naseem Akhtar Qureshi National Center for Complementary and Alternative Medicine, Ministry of Health, Riyadh, Saudi Arabia
REVIEW RETURNED	27-Mar-2019

GENERAL COMMENTS	1. Traditional, alternative and complementary medicines are used mainly in CHRONIC disease like diabetes mellitus, etc. Line 22. 2. Sample size estimation by Kish.....:briefly describe the intricacies of this method. 3.There are many studies conducted in the Middle East and literature search will certainly identify these studies.....it would be nice to write a brief paragraph about literature search strategy using certain search engines and keywords to broaden the global scope of this paper and more sophisticated "discussion". 4. There should be a separate paragraph in 'introduction' that describes the basic/fundamental principles of traditional, alternative and complementary medicine, the "words" are mentioned but salient details are missing (other than what is explored in one table concerning attitude. 5.Another scope of this study is lost when foreign students (n=36) were excluded from this cross sectional study. 6. The use of "Traditional healing practices" is often drived by cultural/religious beliefs; this perspective is not covered at all; possible to discuss partly in introduction and discussion. 7. Beside easy access to traditional practices, cost of these practices also need to be mentioned in introduction.....Good Luck

REVIEWER	Gerard Flaherty National University of Ireland Galway
REVIEW RETURNED	17-May-2019

GENERAL COMMENTS	This is an interesting cross-sectional study of the attitudes of undergraduate medical students at a single site in Africa towards traditional and complementary medicine and its integration into the medical curriculum. The study is well executed and the manuscript is well written. The rationale for the study is very reasonable and it is interesting to gauge the views of students in developing countries. The survey instrument used is not validated although it was appropriately piloted. The inclusion of internal consistency data such as a Cronbach's alpha coefficient would augment the report. Did the authors consider the use of a validated tool such as IMAQ? Please consult a study from Ireland using IMAQ which may be helpful for comparison purposes to the findings of your study (available at: https://www.ncbi.nlm.nih.gov/pubmed/26559366). The authors should comment further on the generalisability of their results - to what extent is the large male dominance in respondents representative of the student population at the medical school and what is the likelihood of volunteer bias influencing the outcome of the study? Overall, this is an interesting study which advances our understanding of the prevalent attitudes to T&CM of a subgroup of health professional students in Uganda. The authors should recommend further avenues of research around this theme.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Dr. Naseem Akhtar Qureshi

Institution and Country: National Center for Complementary and Alternative Medicine, Ministry of Health, Riyadh, Saudi Arabia

Please state any competing interests or state ‘None declared’: I have no 'conflict of interest'

Please leave your comments for the authors below

1. Traditional, alternative and complementary medicines are used mainly in CHRONIC disease like diabetes mellitus, etc. Line 22.

Thank you Dr. Naseem for your valuable comments.

We agree with you entirely that most patients who use T&CM MAINLY have some kind of CHRONIC diseases.

2. Sample size estimation by Kish.....: briefly describe the intricacies of this method.

We appreciate your concern; bias could arise from the sampling approach and sample size determination technique. Simple random sampling approach has the advantage that every member of the population has an equal none zero chance of being selected into the sample. The approach, therefore could be more representative of the whole population. The approach however does not take into considerations underlying variabilities between groups or strata if such differences exist. It considers the various categories/strata or groups as homogenous. Stratified or cluster sampling approaches could mitigate such bias. Another way would be to introduce a design effect, which effectively increases the sample size and takes care of intrinsic intergroup differences.

I suppose these are some of the issues you are flagging regarding our study; that year of study could be viewed as strata with unique differences in and by themselves and which would ultimately explain some observed differences in the sample.

Our survey was exploratory, and students were consecutively sampled, including almost all the members in each year of study (the strata) except for the foreign students (and they were very few).

In addition, traditional and complementary medicine training is not taught at any of the year of studies in this university. If T&CM were taught, for example in year 3, and no adjustments have been made at sampling or analyses stage, then measured differences could be due to the effect of teaching and exposure to the students of 3rd, 4th and 5th years. In the absence of teaching of T&CM, any systematic differences by year of study (strata), would be important of and in itself, and could be a basis for an explanatory study of itself.

In conclusion, we agree that the sampling approach and sample size calculation technique could potentially introduce some bias, but perhaps not of such significant magnitudes to change the direction of the observed findings.

Thank you for this important observation.

3.There are many studies conducted in the Middle East and literature search will certainly identify these studies.....it would be nice to write a brief paragraph about literature search strategy using certain search engines and keywords to broaden the global scope of this paper and more sophisticated "discussion".

You are absolutely right. Indeed, our team plans a separate and more detailed scoping review on the topic. This primary research data is a good place to start.

4. There should be a separate paragraph in 'introduction' that describes the basic/fundamental principles of traditional, alternative and complementary medicine, the "words" are mentioned but salient details are missing (other than what is explored in one table concerning attitude.

We regret the omission. A paragraph defining traditional and complementary medicines has been included in the introduction/background section of the manuscript. Thanks.

5. Another scope of this study is lost when foreign students (n=36) were excluded from this cross sectional study.

Not all is lost though; the study was primarily intended to capture country specific disposition in order to inform development of curricula in Uganda; curricula that would be acceptable by the primary stakeholders.

The level of integration of T&CM into medical school curricula, and mainstream practices are different in different countries. Including the foreign students would perhaps call for complicated sub group analyses to adjust for the intercountry differences arising from variations in integrations of T&CM and biomedicine between countries. And yet the foreign students are few – perhaps we would end up with very wide confidence intervals.

We hope the country specific information provided here, given the aim of the study, are good enough.

6. The use of "Traditional healing practices" is often driven by cultural/religious beliefs; this perspective is not covered at all; possible to discuss partly in introduction and discussion.

We agree with you completely. We had this in mind at design stage. However, determining any particular measures of culture is a complexity of its own. We intended the variable region of origin to reflect cultural orientations of the students because the tribes from the various regions in Uganda are different and are of different cultures.

Our analyses did not show variation by region – the only surrogate measure for culture we included (Results are in Tables 2 and 4). We then preferred to discuss this under limitations and recommendations rather than hone it any louder. That does not in any way mean culture does not play a role in determining the disposition of the students to include T&CM into the medical school curricula. But our study did not capture much of culture and religion. Thanks.

7. Beside easy access to traditional practices, cost of these practices also need to be mentioned in introduction.....Good Luck.

We have included some more aspects on reasons for choice of traditional medicine practices in the introduction/background. Thanks.

Reviewer: 2

Reviewer Name: Gerard Flaherty

Institution and Country: National University of Ireland Galway

Please state any competing interests or state ‘None declared’: None declared

Please leave your comments for the authors below.

This is an interesting cross-sectional study of the attitudes of undergraduate medical students at a single site in Africa towards traditional and complementary medicine and its integration into the medical curriculum. The study is well executed and the manuscript is well written. The rationale for the study is very reasonable and it is interesting to gauge the views of students in developing countries.

Thanks Gerard for the positive appraisal of our study. We are glad you have found the manuscript informative.

The survey instrument used is not validated although it was appropriately piloted. The inclusion of internal consistency data such as a Cronbach's alpha coefficient would augment the report. Did the authors consider the use of a validated tool such as IMAQ? Please consult a study from Ireland using IMAQ which may be helpful for comparison purposes to the findings of your study (available at: https://www.ncbi.nlm.nih.gov/pubmed/26559366).

We appreciate your concern regarding the limitations arising from lack of validation of the tool/not using a previously validated tool. We searched for published validated tools used in settings similar to ours (low-income, sub Saharan Africa), but did not find one.

Thank you for pointing to the IMAQ tool. Adopting and locally validating such a tool would indeed increase the validity and generalizability of our findings. However, we did not have the opportunity to undertake rigorous tool validation. We acknowledge some of these shortfalls in the limitation section.

The authors should comment further on the generalisability of their results - to what extent is the large male dominance in respondents’ representative of the student population at the medical school and what is the likelihood of volunteer bias influencing the outcome of the study?

There is general male dominance in the medical schools in Uganda both at students and Faculty levels. This is the case in many countries in sub Saharan Africa, and perhaps many other low-income countries.

Volunteer bias seems to not have skewed our findings: There were no refusals to participation, with 99.5% participation rate (393 of 395 invited students participated). And sex was not statistically significantly associated with the disposition to include T&CM into the medical school curricula. Therefore, the sample could be representative of the general population and generalizability of findings could be appropriate.

Overall, this is an interesting study which advances our understanding of the prevalent attitudes to T&CM of a subgroup of health professional students in Uganda. The authors should recommend further avenues of research around this theme.

VERSION 2 – REVIEW

REVIEWER	Dr. Naseem Akhtar Qureshi National Center for Complementary and Alternative Medicine, Saudi Arabia
REVIEW RETURNED	09-Jul-2019

GENERAL COMMENTS	Evidently,the authors have carefully responded to all reviewers' comments including editors suggestions for improving this manuscript.I am not attaching any file anymore.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Thank you so very much Dr. Naseem A.Q. We highly appreciate your contributions to making this manuscript more palatable to readers of the Journal.