Author's response to reviews

Title: Patterns of medical pluralism among adults: results from the 2001 National Health Interview Survey in Taiwan

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Author's response to reviews:

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Melissa Norton, MD
Editor-in Chief
The BMC Health Service Research Editorial Office
Re: Manuscript 7352884882840105 Revision 2

Thank you very much for your February 12nd letter informing us of the need to revise the manuscript. The revision was completed according to comments from the three reviewers. This revision responds to the comments point-by-point.

We followed the reviewers’ comments in making this revision, focusing the background, discussion and removing redundancy. Some important references cited in the text by the recommendation from reviewers. We have clarified our study background, purpose and defined medical pluralism. We also summarized the conclusion and make it clearly in accordance with the reviewers’ comments. Point-by-point responses to each reviewer’s comments are included for your review, as well as the revised manuscript. We thank all reviewers’ important and useful suggestions and comments.

This is an original article with no prior publication and no submission with any overlapping information. This article is not under consideration for publication in any language elsewhere. It will not be submitted to any other journal while under review by BMC Health Service Research. No other types of conflict of interest are involved in this study. The sponsor also has no involvement in our
publication. All authors have read and agreed to this version of the manuscript and take full responsibility for the content.

Thank you very much for your consideration of this revised paper for publication in the journal. We appreciate the thoughtful and helpful comments very much.

Sincerely,
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Contributions of each author

Chun-Chuan Shih: (1) Conducted data analyses and interpretation; (2) Initiated the draft of the article and revised critically for the important content; (3) Final approval of the version to be submitted;

Yi-Chang Su: (1) Participated in data analyses and interpretation; (2) Revised the article critically for the important content; (3) Final approval of the version to be submitted;

Chien-Chang Liao: (1) Participated in data analyses and interpretation; (2) Revised the article critically for the important content; (3) Final approval of the version to be submitted;

Jaung-Geng Lin: (1) Substantial contributions from the inception in the development of this article; acquisition of data; data analyses; (2) Initiated and revised the article critically for the important content; (3) Final approval of the version to be submitted;

All of the above authors have approved the final revision.

This present study is in part supported by the Taipei Chinese Medical Association, Taiwan (TCMA97-AR-01). The sponsor had no involvement in the study design, the collection, analysis, and interpretation of data, the writing of the report, or the decision to submit the paper for publication. This study is based in part on data from the National Health Interview Survey and National Health Insurance original database provided by the Bureau of Health Promotion, Department of Health and National Health Research Institutes. The interpretation and conclusions contained herein do not represent those of the Bureau of Health Promotion, Department of Health or National Health Research Institutes. All authors agree to and take full responsibility for the manuscript.
To reviewer Vivian Lin:

Major Compulsory Revisions:

I believe the authors have addressed the reviewers' comments and made useful changes to the manuscript.

Minor essential revisions are needed:

p. 8 - under definition of FT. I believe they intended to use the word 'bottle' (rather than 'vacuum battle therapy')
Reply:
Thank you for the reminding. We have corrected the spelling, please see page 9.

p. 3 - last sentence of the abstract implies a causal relationship between living in areas of high density of TCM physicians and adoption of medical pluralism. The paper reports on an association, so it is possible that TCM physicians site their practices where their clients live. So this final sentence should be edited to acknowledge the association, but not imply a cause-effect relationship.
Reply:
Thank you for your suggestions, the inadequate sentence was modified. Please see the abstract.

a discretionary issue: Xue et al’s study of CAM use in Australia (in JCAM, 2007) is not referred to. In that study, the adoption of medical pluralism in Australia is not less than in Taiwan. It may be interesting to acknowledge that that despite historical cultural practices, the level of medical pluralism is comparable to western society.
Reply:
We added the important reference in the manuscript. Please see the first sentence in the “Background” section. Thank you for the recommendation.

To reviewer Deepa Rao:

Major Compulsory Revisions:

1. Thank you for providing some information on the importance of medical pluralism. I would like to see a bit more information on the prevalence of use of WM and CAM in Taiwan. Prevalence of TCM among white collar Caucasians has been reported but not among the general Taiwanese population. A high prevalence of use for both these systems will help justify the importance of the
study. Also more detail on the possible adverse effects due to the simultaneous use of these two systems would be useful. Specific examples would make the justification for this study stronger.

Reply:

According to the results of 2002 National Health Interview Survey in Taiwan (Chin Med J 122:1544-1548), the recent one-month prevalence of use of WM, TCM and FT were 39.4%, 10.4%, and 7.9%, respectively.

The adverse effects due to simultaneously use of TCM medicine and WM medicine was reported in many studies. The combined use of warfarin and danshen may result in over-anticoagulation and bleeding complications (Ann Pharmacother 2001;35:501-3) (Int J Cardiol 2005;98:1-14). Page et al (Pharmacotherapy 1999;19:870-6) found that there was an 2-fold elevation in prothrombin time and international normalized ratio after taking dong quai and warfarin concurrently for 4 weeks. It has been reported that the concurrent use of ephedra and theophylline may lead to hypertension (Drugs 2001;61:2163-75). Intake of ginseng may increase the side effect of steroids (Drug Saf 2002;25:323-44) (Arch Intern Med 1998;158:2200-11). We have added these statements in the “Discussion” section, please see page 16.

2. In the ‘Definitions and measures’ section, MP is defined as people having used WM and TCM at least one time each in 2001. I would also like to see a literature definition of medical pluralism. Is it the phenomenon of using more than one health system in a given period or is the simultaneous use of more than one healing systems for treating an illness at any given time?

Reply:

According to Wade et al (J Women Health 2008;17:829-840), medical pluralism can be defined as the employment of more than one medical system or the use of both conventional and complementary and alternative medicine (CAM) for health and illness. We added these statements and definitions in the “Definitions and measures section”

3. It is unclear why the third and second tertile of the population density were classified as areas of high and moderate urbanisation respectively. Clarify the link between population density and urbanisation.

Reply:

According to the website of United Nation Statistics Division (http://unstats.un.org/unsd/demographic/sconcerns/densurb/default.htm), most countries in the world defined urban area with using population density. According to the previous studies (Chin Med J 2009;122:1544-1548) (Public Health 2006;120:1170-1176) (Taiwan J Public Health 2006;53:223-230), in this study, we classified the third and the second tertile of the population density as high and moderate urbanization, respectively.

4. Tobacco smoking, alcohol drinking and areca chewing were considered to be unhealthy lifestyles. What is the basis for choosing these three factors? What about factors such as diet and physical activity?
Reply:

The prevalence of smoking, alcohol drinking, and areca chewing among males in Taiwan was high and they were considered as main unhealthy lifestyles for the Taiwan health authority to perform prevention and intervention. In addition, it is difficult to estimate or to evaluate the frequency or volume of unhealthy diet (such as hamburger, coke, French fries) exactly. Furthermore, to measure the frequency and time of physical activity was not easy. Recall bias may have a great influence on the information. Therefore, we did not consider diet and physical activity as unhealthy lifestyle in this study.

5. In the discussion section, it is unclear how the authors made the conclusion that 1 in 3 people may not be satisfied with WM. Considering that the earlier sentence states that people living in an area with a high density TCM physicians were more likely to adopt MP, I would think it’s more a matter of easy access. If a service is easily accessible, it is more likely to be used. It cannot be concluded that high use of a particular service is because of lack of satisfaction with another service. If the question on satisfaction with WM services was asked in the interview, then it should be reported before such a conclusion is made.

Reply:

We agree that it is more a matter of easy access to TCM services. According to a reference (N Engl J Med 1993;328:282-283), the reason people go to unconventional medicine is simple: (1) They want to feel better; (2) Access is easy; (3) Invitations to be healed are everywhere; (4) Many people dissatisfied with the medical establishment. Therefore, we considered that TCM medical accessibility is an explanation of medical pluralism.

6. In the discussion section, second paragraph third line – ‘Because TCM is considered as one type of CAM in western countries, it provided another choice for those dissatisfied with WM services’. This sentence is unclear. Can the authors please clarify this statement?

Reply:

Because Campion (N Engl J Med 1993;328:282-283) suggested that the reason people go to unconventional medicine is simple: (1) They want to feel better; (2) Access is easy; (3) Invitations to be healed are everywhere; (4) Many people dissatisfied with the medical establishment. Therefore, we considered that TCM is another choice for those dissatisfied with conventional medicine. We added these statements in the “Discussion” section, please see page 13.

7. Discussion page 15, second paragraph, last sentence – ‘It was also found that in Taiwan, patients with cancer receiving outpatient chemotherapy may also use CAM’. Unclear how this fits. It seems a bit out of context. Please provide more detail on how this information is relevant to this study otherwise delete.

Reply:

We deleted the inadequate sentence according to your opinion.

8. Page 16, fourth line – ‘Second, some of the respondents denied claiming their NHI data’. Unclear how this is a limitation? What implications would this have on
the results of the study? How would the results have been different had they claimed the data? Please provide clarification and detail.

Reply:

After the discussion with some epidemiologists and statisticians, we remove the second study limitation. Please see the last paragraph in the “Discussion” section in page 16. Thank you for your questions and suggestions.

Minor Essential Revisions

In the results section, please include the units for income e.g. family income =NTD 30000 to 49999.

Reply:

Thank you for your rectification. We added the units for income. Please see page 12.

Discretionary Revisions

In the results section, it is reported that people who used folk therapy were more likely to adopt MP than people with no FT use. What is the prevalence of FT use in the sample interviewed?

Reply:

According to the recent published paper (Chin Med J 2009;122:1544-1548), the one-month prevalence of folk therapy use for people in Taiwan was 7.9%.

To reviewer Lisa Lix:

Major Compulsory Revisions:

The Background section of the manuscript requires substantial revision. The opening paragraph of the manuscript (page 4) is not relevant to this study; it focuses primarily on United States data about complementary and alternative medicine and therefore might mislead the reader into thinking that this manuscript focuses on CAM in Western countries. The topic of medical pluralism, which is the major focus of this manuscript, should be defined and discussed close to the beginning of the Background, instead of near the end where it is currently found. The Background section should summarize related research about demographic, socioeconomic, lifestyle, behavioral, and health system characteristics that are associated with the adoption of different types forms of
medicine. In its present form, the Background section of the manuscript does not provide the reader with an adequate understanding of previous relevant research that has been conducted on the topic of medical pluralism and/or factors associated with use of alternative forms of medicine that are relevant to the design of this study.

Reply:

Thank you for your suggestions, we made some changes in the “Background” section. The definition of medical pluralism also was added. Factors associated with medical utilization were reported in the “Background” section.

Page 8: Gua Sha is a technique of scraping skin (misspelled word) and Baguan is form of vacuum bottle therapy (misspelled word)

Reply:

Thank you for the reminding. We altered the wording, please see page 8.

Page 9: Do not use “etc.” in the manuscript. Please provide a complete listing of conditions that were defined as severe diseases.

Reply:

According to your suggestions, we provided a completed listing of severe diseases, please see page 9.

The Methods section requires reorganization and revision. The section entitled "Definition and measures" should begin with a listing of the variables that were investigated in this research and then proceed to define each of these variables in sequence.

Reply:

We listed the investigated variables in the beginning of “Definition and measures”.

The Statistical analysis section requires substantial revision. Results about numbers of excluded study participants should not be included in this section; rather, they should be moved to the Results section and discussed when the authors describe the characteristics of the sample. No information has been provided about methods for assessing goodness of fit of the logistic regression models. There is no indication of whether the authors investigated main effects only or also considered interactions. Table 4 results imply that there is interaction amongst a number of factors in the adoption of medical pluralism, therefore one might suspect that there would be interactions amongst study variables in their association with the odds of adopting medical pluralism. The results from the chi-square tests and univariate logistic regression analysis will convey similar information about variable associations, therefore both are not needed. The last sentence of the Methods section requires clarification; in fact, the authors investigated adoption of medical pluralism across variety of participant characteristics. Confidence intervals should be provided for the percentages in
Table 4.
Reply:

Information about numbers of excluded study participants was moved to the “Results” section, please see page 11.

Yes, we used Hosmer and Lemeshow statistics assessing goodness of fit of the logistic regression model. Please see the last paragraph of the “Methods” section. We also considered the interaction terms in the logistic regression model and showed the final results in our initial manuscript. Thank you for your suggestions.

We adopted your opinions and removed the univariate logistic regression analysis, please see Table 3.

According to your opinion, we corrected the last sentence of the “Methods” section. Please see page 10.

Confidence intervals were provided for the percentages in the Table 4, please see page 31.

In the responses to reviewers, the authors have provided substantial information that clarifies details of the Taiwanese National Health Insurance system (e.g., eligibility requirements) and elements of the survey and study design (e.g., no significant differences in age and sex of survey respondents and non-respondents). The authors should incorporate this information in order to strengthen the manuscript.

Reply:

We incorporated the information about NHIS and NHI in the manuscript. Please see the “Methods” section in page 6 and 7.

Table 2 title should be rewords. I suggest the following “Health behaviors and physician density factors of study participants by medical pluralism.”

Reply:

We changed the title of Table 2 according to your suggestions.

The Conclusions section is weak. In particular, the last sentence should summarize the major implications of this research. Given that this study focused primarily on sociodemographic, health behavior, and lifestyle characteristics associated with adoption of medical pluralism, the last sentence, which focuses on physician practices, seem to be an inappropriate choice.

Reply:

Thank you for your suggestions. We made some changes of the “Conclusion” section, please see page 17.

The Abstract requires substantial revision. The authors have not defined medical pluralism in the Background section. Also, the abstract suggests that medical pluralism may lead to adverse health effects, but this is not the focus of the paper. Therefore, the Background section is misleading. The last sentence in the
Methods section of the Abstract requires editing for grammar. Also, the Methods section is incomplete because it does not define the method of analysis. The Conclusions section should succinctly summarize the major findings of the research. It should also include a sentence that describe the implications or significance of the research.

Reply:
We defined medical pluralism in the “Background” section in abstract. The “Background”, Methods, and “Conclusion” section in abstract were modified. Please see page 2 and 3.