Author's response to reviews

Title: Disease-specific differences in the use of traditional Korean medicine in Korea

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Response to comments by the Reviewers Concerning Manuscript

Disease-specific differences in the use of traditional Korean medicine in Korea (MS: 1221249788957588)

By In-Hwan Oh et al.

Thank you very much for considering our manuscript for publication. Your suggestions were very helpful to us, and we have incorporated those points into our revised manuscript as follows:

A. Referee #1’s comments and Authors’ responses

Comment 1.

The writing of the study design and patient selection is not clear, which raised a big concern about the validation of the study method. Why select 2008, why cross-section study rather than longitudinal cohort study? When was the end of follow-up? How to calculate the using of TKM? Compared with those with shorter observation
period, patients with a longer observation period have a higher chance to use TKM. Did TKM nonuser and TKM user have the same observation period? Besides, the definition of TKM was also unclear. Can TKM doctors use ultrasound, blood tests, X-ray to make accurate western diagnosis? How was the diagnosis of diseases made by TKM doctors determined or validated?

Authors’ response: 
In Korea, because of the difference in disease classification systems, it is hard to determine the relative preference and medical service use patterns of TKM and Western medicine by disease group before. We used the Korea Health Panel for this study because Korea health panel used a uniform disease classification system. The first year of Korea Health Panel was 2008 (Though the pilot study was conducted in 2007). So we used the first year which is available. Also this is conducted as a cross-sectional study, because we would like to find the actual preference of traditional Korea medicine. The health use of cohort during April 2008 to April 2009 was included in this study. This study based on cohort and we excluded who failed to follow, the observation period was same for all participants of cohort. The using of TKM was measured by trained interviewer. Patients were asked “What medical institution did you use to treat this specific case?” and a trained interviewer recorded the kind of the institution. In Korea’s parallel system of Korea, TKM is only provided in TKM medical institutions. Therefore, we can define the use of TKM institution as TKM use. TKM doctors cannot use ultrasound, blood tests, X-ray. For
the disease, trained interviewers asked the cause (disease) that they visited clinics and hospitals.

Comment 2.

The authors provide no statements or references regarding the availability of TKM in Korea. Are these medications available over-the-counter, without a prescription? If so, then TKM intake may not be accurately reported within their population.

Comment 3.

Previous studies indicated that age, gender, the distribution of medical resource, education etc. are highly associated with CAM use. How can authors draw the conclusion that Korean characteristics of service use resemble the complementary and alternative medicine use in other countries when they did not measure or test aforementioned factor. The author should adjusted this confounder and discuss this issue

Comment 4.

I recommend that authors explain why there is the difference between TKM users and non-users.

Comment 5.

TKM includes acupuncture and herbs. I suppose there is the different usage for
different diseases

**Authors’ response:**

Because we tried to estimate the use of TKM which is the official part of CAM, we only measured the TKM which is conducted by TKM doctors. Therefore, the CAM use such as medications available over-the-counter is excluded for this study. Especially it is hard to find which disease result in the use of CAM for the CAM use of this type.

Similarly, we tried to estimate the disease specific use of TKM in Korea because there was no study about the disease specific use of TKM using national representative data before. Therefore, underlying factor such as age, gender is beyond the purpose of our study. Also the modality among TKM such as herbs or acupuncture is also beyond the purpose of our study. We would like to clarify these points at next research. We added these points as the limitation of this study.

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As well, because we focus on the disease specific differences of TKM use, the characteristics of TKM users and the difference between TKM users and non-users are not analyzed. And the efficacy of TKM or the treatment modality among TKM are not analyzed this study. Therefore, further researches on these subjects are needed.
Comment 6.

In conclusion, there was a sentence “The total number of cases and patient expenditures indicate that TKM is an important method of treatment for musculoskeletal and nervous system diseases, including soft tissue disorders and arthrosis.” which might be omitted, because the effects of TKM were not observed in this study.

Authors’ response:

For the clarification, we changed the relevant sentence.

New Manuscript: Conclusion, Page 13

The total number of cases and patient expenditures indicate that TKM is used as an important modality for treating musculoskeletal and nervous system diseases, including soft tissue disorders and arthrosis.

Comment 7.

Cross-sectional study is not an appropriate study design to evaluate efficacy of intervention. Therefore authors’ claim of efficacy of TKM may be confounded by
many potential factors.

Comment 8.

Authors did not provide enough information or rationale for outcome measure, treatment modalities, frequency of TKM use, and length of time of follow-up.

Authors’ response:

Evaluating the efficacy of TKM is not the purpose of in this manuscript. We included it the limitation of our study.

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However, the medical services used by a patient could be affected by comorbidity and not just the primary diagnosis. Furthermore the disease definition by patients could raise the question on the accuracy of diagnosis. And because our study is the cross sectional study, the trend of TKM use could not be estimated.

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Also, because we focus on the disease specific differences of TKM use, the characteristics of TKM users and the difference between TKM users and non-users are not analyzed. And the efficacy of TKM or the treatment modality among TKM are not analyzed this study. Therefore, further researches on these subjects are needed.
B. Referee #2’s comments and Authors’ responses

Comment 1.

Author mentioned about the comparison of medical services and costs between Western medicine and Traditional Korea Medicine. How many doctors of Western medicine and Traditional Korea Medicine should be provided. In addition, hospital number of both Western medicine and Traditional Korea Medicine should also be provided.

Authors’ response:

In 2008, the numbers of Western medicine and traditional Korea medicine were 95,013 and 17,473 respectively. And the numbers of western medicine institution (a tertiary hospital, general hospital, or hospital and clinic) and TKM institution (TKM hospitals and clinics) were 28,723 and 11,482 respectively. Among them the number of Western medicine hospital (including a tertiary hospital, general hospital) and TKM hospital were 2,195 and 148 respectively. As per suggestion, we added relevant sentences and references.

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In 2008, the numbers of Western medicine doctors and traditional Korea medicine doctors were 95,013 and 17,473 respectively. Also the number of Western medicine hospital including a tertiary and general hospital was 2,195. On the contrary, the number of TKM hospital was only 148 [9, 10].

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Comment 2.

Disease classification system of Traditional Korea Medicine was not clear. How to use Sasang constitutional or Ki theory should briefly mentioned. There was no solid relationship of the disease classification system between western medicine and
Authors’ response:

We added the sentences that explain the relationship between TKM and TKM disease classification.

**New Manuscript: Background, Page 4**

Since Korean Traditional Medicine has a distinctive, diagnostic approach, Pattern Identification (PI), Disease classification system of Traditional Korea Medicine is composed to reflect the PI. It categorized the body condition according to the quantity of Qi or Blood such as deficiency of Qi or blood or Sasang constitution such as So-eumin, So-yangin, Tae-umin and Tae-yang-in).

**Comment 3.**

This study not only used public data from the Korea Health Panel survey, it also contains interview data from the trained interviewers. IRB approval is needed because authors mentioned that it.

Authors’ response:
The interview data was a part of Korea Health Panel survey. And it was open as a public data. Therefore, we think that additional IRB is not required.

Comment 4.

Author only mentioned about the Traditional Korea Medicine outpatient visits, diagnosis and cost. How about the emergency and hospitalization? What kinds of diseases use Traditional Korea Medicine in the emergency room and hospitalization?

Authors’ response:

In case of hospitalization, TKM only occupied 0.7% of inpatients case and 1.0% of inpatients cost. Also in case of emergency, TKM only occupied 0.4% of emergency case and 0.1% of emergency cost. Among hospitalization case, a sprain or strain of the lumbar spine (3 cases) and cerebral infarction (3 cases) were most common. Among emergency case, other dorsopathies was most common cause (4 cases). Because the proportion of TKM use among hospitalization or ER is very low, we did not include it to the manuscript.

Comment 5.
This survey only used 2008 Korea Health Panel survey data. It cannot represent the true prevalence of Traditional Korea Medicine use and utilization pattern. Author should provide at least 3 years survey data to show the trend of use or new Traditional Korea Medicine user in 2 or 3 years.

Comment 6.

The limitations of the study should be clear mentioned. Sampling survey data? Accuracy of disease diagnosis? Visits with multiple diagnosis?

Authors’ response:

The first year of Korea Health Panel was 2008. And the first purpose of this study was the disease specific use of TKM using national representative data which was not available before. So we use 2008 data. We mentioned it as the limitation of this study. Similarly, the diseases were defined by trained reviewer, but the accuracy of diagnosis is limited. Also though we use the principal diagnosis, but it could be possible that the medical use due to multiple disease. We mentioned it as the limitation also.

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However, the medical services used by a patient could be affected by
comorbidity and not just the primary diagnosis. Furthermore the disease
definition by patients could raise the question on the accuracy of diagnosis.
And because our study is the cross sectional study, the trend of TKM use could
not be estimated.

Comment 6.

In the manuscript, the medical services and medical cost only calculated in those
survey patients. It should be clear mentioned and how to represent the whole Korea
conditions. Was there rural and urban difference existed?

Authors’ response:

Korea Health Panel is constructed to represent the Korean medical expenditure. The
sample was extracted by proportionate cluster stratified design. But the public open
data did not provide the information about rural or urban.

Comment 7.

There is no mention of Traditional Korea Medicine content. How much percentage of
acupuncture and manipulative therapy beside Korean Herb treatment?
Authors’ response:

Because we focus on the disease specific differences of TKM use, the treatment modality among TKM are not analyzed this study. We mentioned it as the limitation.

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As well, because we focus on the disease specific differences of TKM use, the characteristics of TKM users and the difference between TKM users and non-users are not analyzed. And the efficacy of TKM or the treatment modality among TKM are not analyzed this study. Therefore, further researches on these subjects are needed.

Comment 8.

In Page 8, second paragraph, How to define the chronic disease patients?

Authors’ response:

Korea health panel informed about the chronic disease of patients by asking they had a chronic disease and if the diseases had been diagnosed by a physician. This information was used to define the chronic disease they have.
Comment 9.

In Page 11, second paragraph, author cited the report of utilization pattern of Traditional Chinese Medicine from Taiwan. However, author should also cite the utilization pattern of acupuncture reference (THE JOURNAL OF ALTERNATIVE AND COMPLEMENTARY MEDICINE 2006;12(4): 379–387). Disease of the musculoskeletal system was the major indication for acupuncture in Taiwan.

Authors’ response:

As per suggestion, we cited the reference.

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Also musculoskeletal disease and injury were the most common causes of acupuncture use in Taiwan [23]

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In the revised manuscript, changes are displayed as red color.

We thank you again for your insightful comments on our paper.

Yours sincerely

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