Author’s response to reviews

Title: Biopsychological traits of Sasang typology based on Sasang Personality Questionnaire and Body Mass Index

Authors:

Soo Jin Lee (leesooj@gmail.com)
Soo Hyun Park (parksoohyun@yonsei.ac.kr)
C. Robert Cloninger (crcloninger44@gmail.com)
Yun Hee Kim (yuni0503@daum.net)
Minwoo Hwang (azure92@hanmail.net)
Han Chae (han@chaelab.org)

Version: 3
Date: 7 July 2014

Author’s response to reviews: see over
July 8, 2014

Editor-in-Chief
BM C Complement ary & Alternative Medicine

Re: BioMed Central M S 7062730861193523 "Biopsychological traits of Sasang typology based on Sasang Personality Questionnaire and Body Mass Index"

Dear Sir;

Please find enclosed the manuscript which has been revised in accordance with the suggestions made by the reviewer.

The reviewer also made important suggestions for improving the manuscript, which we detail in the attached letter. Within the revised manuscript, specific changes are highlighted in yellow.

We believe that the manuscript has been substantially improved based on the valuable suggestions offered by the reviewer. We hope that this manuscript is now acceptable for publication in your journal, BM C Complementary & Alternative Medicine. The paper is 3513 words long and there are 4 tables and 2 figures.

Sincerely,

Han Chae, M D, Ph D , D iplAc.

Associate Professor,
Division of Longevity and Biofunctional Medicine,
School of Korean Medicine, Pusan National University
The authors sincerely thank for the comments from reviewer 1 as "An article whose findings are important to those with closely related research interests."

In our revised manuscript and response to the reviewers, we clarified explanations concerning issues provided by the reviewer for better understanding. We hope that these editing explains the value of traditional Korean Sasang typology in therapeutics and prevention of illness.

REVIEWER 1

1. In this article, you mentioned that you analyzed the differences across sex and age. In terms of age, if you see Table 2, demographic characteristics, you didn’t present p value in each section, for example sex, job, education etc and if you see the Sasang type section along the age group, in 20’s and 30’s there were lots of differences among 3 types, that is, there were big num bers of Soeum type more than Soyang or Taeeum type. If you saw the skewness of types in 20’s and 30’s, I think you need to come up with another statistical method when you apply the correlation or mean value difference for example partial correlation or ANCOVA. So let me summarize, first how about presenting the p value of each section, second the problem of uneven distribution for Sasang type in 20’s and 30’s.

   → The purpose of this study was to show the SPQ and BMI measures of each Sasang types with consideration of age and gender, and these were illustrated in figure 2. And other necessary statistical analyses were used for the better understanding with respect to the page limitation. The authors suppose reviewers concern was already considered. First, the table 2 was used for presenting demographic feature of subjects in this study, and the descriptive statistics were used. Since the age, gender and Sasang types were major interest of this manuscript, we perform ed analysis only on these variables and provide the results in manuscript body.

   Second, since SPQ and BMI of each Sasang types were compared by age groups in Table 3, so the skewness in ages that reviewer mentioned were already considered in this study. Also considering the sample size (n=2565) of this study, the uneven distribution of Sasang types would not cause much differences in the correlation coefficients between SPQ and BMI. In previous study, the correlation coefficient between SPQ and BMI was 0.097 with 227 college students which is in agreement with current study. We incorporated this reference on page 13 as follows; "The correlation analysis between SPQ and BMI showed only weak correlation, confirming that these two aspects of temperament and constitution represent largely independent biopsychological features of Sasang typology [19]."

2. I think your SPQ is related to biopsychological traits as you mentioned in the above title, but when you see the biopsychological traits of Sasang types you mentioned that you might think you need to include BMI as the title says. But in my opinion, the inclusion of BMI into the biopsychological traits seem a little bit awkward. I think in your research Taeeum type is in the middle of the two values(Soyang type and Soeum type) so it’s hard to discriminate 3 groups using
only SPQ so I guess you came up with BMI.

→ The purpose of this manuscript was describing the biological and psychological features of Sasang typology in objective manners. For this reason, we used the BMI for biological (somatic) portion and the SPQ for the psychological (temperament) portion of the human. The reason for saying the SPQ as biopsychological trait is that it measures temperament representing the psychological features with physiological basis. As you can find on page 9, The SPQ was described as 'assessment tool in measuring temperament characteristics from the perspective of the Sasang typology'. The Body Mass Index (BMI) was shown to represent the biological or phenotypic features of Sasang typology in many articles [1], and it is hard to describe the biological traits of Tae-Eum type without BMI. And we did include the BMI for biological features of Sasang types, not for the discrimination of four Sasang types in this study.

3. For the table 1, characteristics of the Sasang typology. If someone who is not familiar with Sasang typology or Sasang constitutional medicine, sees this table 1, I guess he or she might assume it is your work. Because the characteristics of it seem mixed with your research work and translation of Dongeui buseowon. So I think you need to make sure which one is from your own work and which one is from Dr. Lee's book.

→ The authors have followed routine procedures for making this table and suppose readers would not regard all of table 1 were performed in this study. However, for the clarification, we added more comments and references on page 5 as follows; “The original description [6] and results of previous research on biopsychological characteristics [2,7,11], pathophysiology [12,13], and interventions [9,10] based on Sasang typology as well as illustrative features of each Sasang types are summarized in Table 1 and Figure 1”. And the title of table 1 was changed from “Characteristics of the Sasang typology” to “Review of characteristics in Sasang typology”.

4. In conclusions, you mentioned that the present study provided standardized biopsychological characteristics of the Sasang types using SPQ and BMI. I think it is very strict. The relation between SPQ and BMI has weak correlation, and for the BMI, it is regarded as the good marker to make a Sasang diagnosis as the first step. But you mentioned this study provided standardized biopsychological characteristics using SPQ and BMI. And the last sentence, it provides a reliable quantitative measure, I think in this study you checked the mean value so we can assume the trend, but before establishing the measure for the Sasang typology I think you need some more steps such as prediction test statistically.

→ The purpose of this manuscript is presenting age and gender standardized biopsychological traits of Sasang typology, not providing ultimate and standardized diagnostic tools for four Sasang types. That would be the reason why we just showed mean value and trends in nation-wide large sample, not the prediction test which reviewer suggested. We connected some comments on the conclusion section form one clarification as follows; “This study provides a reliable quantitative measure for the
Sasang typology as a useful guide to effective personalized medical intervention."

As for the reliable and quantitative measures of biological and psychological features, we used SPQ and BMI. The BMI has been used in quite a lot of medical studies as a reliable measure and it was reported to assess significant differences among Sasang types [1]. The SPQ was also showed to be a reliable measure of ten temperament in Sasang typology [2, 3]. As for the weak correlation between SPQ and BMI, this result denotes that BMI and SPQ are two independent and distinctive dimensions for biological and psychological features which make BMI and SPQ more clinically useful.

5. page 5, you mentioned Little (So) constitution type is unstable, while Big (Dae) type is stable. Do you have any references?
   → The unstable-stable and active-passive is lay-person terms for describing high or low score in neuroticism and extraversion of Eysenck's personality. The comparison between Sasang typology and Eysenck's personality model was performed in previous studies, and it was cited as reference # 7.

6. Page 7 I think you need to write his name as Je-ma Lee instead of Jae-ma Lee.
   → We corrected the manuscript as suggested. We appreciate for finding errors in this manuscript.

7. page 8 KCM B bank website: you have a typo http instead https.
   → We corrected the manuscript as suggested. We appreciate for finding errors in this manuscript.

8. Page 9 line 5 emotion SPQ Behavior: SPQ - E (instead of SPQ - B)
   → We corrected the manuscript as follows: "emotion (SPQ - Emotion : SPQ - E)". We appreciate for finding errors in this manuscript.

9. Page 13 line 12 : if you use constitution, then ten temperament and constitution represent features of Sasang typology. So it seem awkward. Maybe how about using body composition or BMI instead of constitution?
   → In general, the term "constitution" has been used for describing somatic properties, body composition, and physical characteristics of the body in medical studies including naturopathic, Ayurveda, and others. For the clarification, we used the term type or typology to avoid such confusions in this manuscript.

10. Page 17 in your study, you mentioned already that there are not enough numbers of Tae-...
type so left them out. But later part of discussion, you showed mean values of SPQ and BMI and interpreted physically similar to Soeum type and psychologically similar to Soyang type. I think there is Taeeum type in the middle of Soyang and Soeum in SPQ, it's hard to say that Taeyang type is similar to Soyang type and as the same reason, it's hard to say physically similar to Soeum type because of lack of significance.

→ We agree with the reviewer's concern that this part of manuscript is too strong considering the number (n=50) of subjects in this study. Since the Tae-Yang type is infrequent to analyze, only few articles have reported the biopsychological features of Sasang typology even with the well-studied BMI. One previous study reported the BMI of Tae-Yang type (n=10) is lower than that of So-Eum type [19], however psychological assessment with objective measures not exist.

However, for the reason that the prevalence of Tae-Yang type is less than 0.1% and its biopsychological traits were not substantially provided, in any studies on Sasang typology ignores the Tae-Yang type or consider it as not exist. So, even though the data is not statistically robust, we supposed that providing our data on Tae-Yang type in discussion section for future research would be very useful.

With the consideration of reviewers comment, we corrected the manuscript as follows; "However, the SPQ and BMI of the entire Tae-Yang type group was 29.29±0.80 and 21.15±0.36, respectively, which may be considered that the Tae-Yang type would be physically akin to the So-Eum type [19], while psychologically to the So-Yang type. The biopsychological features of Tae-Yang type with objective measures should be needed for the further studies."

11. Page 13 later part to Page 14: You need to recheck the number (368 persons, if you divide 368 as 468 then 78.6% and you wrote 76.5%, and next number 147 not 121 and if 147 is denominated as 600 then we can get 24.5%. In your study, SPQ showed that significant differences between mostly SE and SY or SE and TE. In other words, in your hypothesis Eum type and Big (Tae) type, Taeeum type showed different values in SPQ. I think if possible, you can give readers explanation or hypothesis.

→ The percentage was corrected as suggested. It is now written as follows; "This may be related to the level of education because 368 (78.6%) participants in their 30's were college or graduate school graduate, whereas only 121 (24.5%) participants in their 50's were this highly educated." We appreciate for finding errors in this manuscript.

The SPQ measures in this study were in accordance with the previous studies, so we made comments on the results section as follows; "This result is consistent with previous studies on the psychological features of Sasang typology that support the rank ordering of SE < TE < SY axis for the total score of SPQ" on page 13.

References
