Reviewer's report

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

Version: 2 Date: 29 May 2014

Reviewer: Junsang Yu

Reviewer's report:

1) Major Compulsory Revisions

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 sections, 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 difference among 3 types, that is, there were big numbers 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.

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 seems a 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.

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's your work. Because the characteristics of it seem mixed with your research work and translation of Dongeuisusebowon. So I think you need to make sure which one is from your own work and which one is from Dr. Lee's book.

4) In conclusions, you mentioned that the present study provided standardized biopsychological characteristics of the Sasang types using SPQ and BMI. I think it seems 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.

2. Minor revision

page 5, you mentioned Little(So) constitution type is unstable, while Bid(Dae) type is stable. Do you have any references?

Page 7 I think you need to write his name as Je-ma Lee instead of Jae-ma Lee.

page 8 KCMB bank website: you have a typo http instead https.

Page 9 line 5 emotion SPQ Behavior: SPQ-E (instead of SPQ-B)

Page 13 line 12 : if you use constitution, then temperament and chonstitution represent features of Sasang typology. So it seems awkward. Maybe how about using body composition or BMI instead of constitution?

Page 17 in your study, you mentioned already that there are not enough numbers of Taeyang type so left them out. But later part of dicussion, you showed mean values of SPQ and BMI and interpreted physically similar to Soeum type and psychologically similar to So yang 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.

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.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

Nothing