Author's response to reviews

Title: When does poor subjective financial position hurt the elderly? Testing the interaction with educational attainment using a national representative longitudinal survey

Authors:

Christy Pu (cypu@ym.edu.tw)
Nicole Huang (syhuang@ym.edu.tw)
Gao-Jun Tang (gjtang@ym.edu.tw)
Yiing-Jenq Chou (yjchou@ym.edu.tw)

Version: 3 Date: 20 December 2010

Author's response to reviews: see over
Cover Letter

Dear associate editor and reviewers,

Thank you very much for your valuable comments and suggestions. We have made the following modifications to the manuscript based on these comments and suggestions:

Dr. Peter Smith

Minor Essential Revisions

1. I found that the revised introduction, while full of great and relevant information, was a little scattered and choppy in its presentation. I would encourage the authors to revisit the structure of the introduction using the guidance provided by Dr. Wolff in her previous revision. Specifically I would like to see them address the following areas in a sequential order: What does subjective socio-economic status mean (in particular how is it different to objective socioeconomic position)? Why is it important to look at (particular among elderly samples)? How can one measure it, specifically focusing on differences in assessing financial SES? Why would we expect the impact of subjective SES to differ by levels of objective SES?

Response: Thank you, and as advised, the introduction has been modified in the above order.

2. As the title suggests this main thrust of the paper is in understanding if the effects of perceived financial satisfaction (a subjective measure of SES) differ across levels of objective SES (education). While the effects presented in table four suggest there may be a difference, statistical significance or not or the effects is not the way this can be assessed (i.e. two effects can differ, but they can also both be statistically significant). The authors need to present a formal statistical test of the interaction between education and financial satisfaction in table four.

Response: Thank you. As suggested, formal statistical tests for interactions are now presented in Table 4. We have also modified the Method and Results parts to include this information.

3. I'm not sure what the basis is for directing “more health promotion” to the elderly (as stated in the first paragraph of the discussion) to reduce the inequalities observed combing both measures of SES. Surely more structural changes are required to address these health inequalities?

Response: Thank you. The other reviewer has also pointed out the inappropriateness of this expression. We thus deleted this sentence.

4. I think the second paragraph added to the discussion is great. However, there is one more explanation which is not specifically mentioned, but maybe should be. If the level of “true” financial hardship is greater among respondents with low
education (e.g. they have to have literally no disposable income to be dissatisfied with their financial status) compared with respondents with higher education (e.g. if they only have a moderate amount of disposable income they are dissatisfied with their financial status), this would also result in the (possible) interactions that the authors have presented. That is, the level of true underlying financial hardship required to be subjectively dissatisfied may systematically differ across educational groups.

Response: Thank you for pointing this out. As advised, we have added some discussion concerning this possibility in Discussion (p.12). We have combined this point with the last point from this report. Specifically, concerning this part, we wrote:

“It is very possible that those with higher education earn more and hence are more likely to be financially satisfied. On the other hand, it is also possible that a person with high education being dissatisfied with his financial position simply due to the fact that he is relatively less well off financially, rather than being actually deprived in any material way. If the assessment of subjective position systematically differs across objective SES measures, than the differences in the distributions of objective SES measures across samples could lead to differences in the impact of subjective assessments.”

Discretionary Revisions
1. The comparison with the study by McLeod (page 10) could also be influenced by having different measures of subjective socioeconomic position (i.e. work-place status versus financial status) – similar to what you suggest at the bottom of page 11.

Response: Thank you. We have added a sentence concerning this (p.10).

2. The authors may also want to include in their conclusion a caution about the sole reliance upon subjective measures of SES, due to reasons of convenience, in elderly population samples. If the assessment of subjective position does systematically differ across objective SES measures, than the differences in the distributions of objective SES measures across samples could lead to differences in the impact of subjective assessments (i.e. in this sample, if the authors only had those with lower levels of education the impact of subjective financial hardship would have been much greater than if the sample was restricted to those with higher levels of education).

Response: Thank you. We have combined this point with the second the last comment, and modified our conclusion concerning this part as above.
Dr. Lisa Wolff

Major Compulsory Revisions
1. I’m slightly confused by Table 4. Is the college educated/very satisfied segment the referent for each of the other categories? It may be that I’m misinterpreting the table, but I assumed that the table was going to present the results of the stratified analyses of the association between financial satisfaction and SRH within each educational level. If that is the case, then within each educational level, “very satisfied” would be the referent group for that stratum. Is that not correct? Or is the college educated/very satisfied group the referent for everyone, so that those who are illiterate have 20.9 times the odds of reporting poorer health compared to college educated people who are very satisfied with their financial position. Is that a correct interpretation? Perhaps an additional sentence or so clarifying the results in Table 4 may help the reader when looking at the results.

Response: Thank you. The associate editor also requested us to present the results in this table with a reference category for each education group. Thus as advised, Table 4 is now presented in this form, and all descriptions have been modified accordingly.

2. The authors have added a sentence in the discussion: “In this context…. health promotion for the elderly should be directed towards these groups.” I think if a statement like that is going to be made, it needs more substance. Why does this research lead you to say that? Couldn’t we just look at health status data by educational level and see that those with lower educational levels have worse health outcomes (and may benefit from health programs)? How does studying subjective financial satisfaction add to this conclusion? I would suggest either beefing this recommendation up with some more substance or not focusing on the programmatic recommendations. (instead, restricting the discussion to how these results can help researchers understand the concept of SES more robustly).

Response: Thank you. The other reviewer has also pointed out the inappropriateness of this expression. We thus deleted this sentence.

Minor Essential Revisions/ Discretionary Revisions
3. In the abstract and the discussion section, there is a sentence that says “subjective financial status among the elderly should not be explored separately from the traditional measures of SES.” I found this phrasing a bit odd and my first assumption was that it seemed to insinuate that the subjective financial status measure was not as salient as traditional SES measures, which the study shows that not necessarily to be the case. I would suggest just reframing this sentence more as the positive. For example, that “subjective financial status among the elderly should be explored in conjunction with traditional measures of SES” or something of that sort.

Response: Thank you. As advised, we have modified this sentence in the Abstract. This sentence now reads “Subjective financial status among the elderly should be explored in conjunction with traditional measures of SES.”
4. I would suggest another edit of some of the language to make sure that the introduction in particular flows a bit more. Some parts that stuck out:

p. 4: end of page “…it is also unreasonable to assume…” the word “unreasonable” seems a bit strong

p. 5: top of page: “This issue is particularly important for the elderly since it is important…” two uses of word important in same sentence

p. 5 same sentence, second phrase “and a complete measure should include both objective and subjective measure of SES.” The word “should” seems a bit harsh. That could certainly be your conclusion at the end based on the study results, but in the intro section, it seems a bit strong.

p. 7 under health measures – should read “sensitivity analysis” instead of “sensitively analysis”

p. 12: last paragraph: “Obviously, it is very possible that those with higher education…” should say “earn more” instead of “earns” and “hence” instead of “thence”

Response: Thank you very much. All these errors have now been corrected.
Associate Editor:
Thank you for your revised paper which had met many of the reviewers' concerns. There are a few remaining issues which need to be addressed before the article is acceptable for publication. In addition to the reviewers' comments I would highlight 1. Table 4 and interaction effects:
As both reviewers suggest this table should be revised so that the effect of financial satisfaction are shown within each educational groups - i.e. there is a reference category in each education group. This means that the effect of subjective financial position can be compared across different educational groups to assess if there is any interaction. Numbers in each group would add the interpretation of the odds ratios, particularly the lack of statistical significant results for mortality. In addition there should be a formal statistical significance test of any interaction. These results should be discussed in the paper.

Response: Thank you very much. All the above points have now been fixed. Table 4 has been modified to present a reference category in each education group. Number in each group has also been added. In addition, formal statistical significance test of interactions is presented. Results and Discussion have been modified accordingly.

2. Mortality results
The effect of financial satisfaction on mortality is of borderline statistical significance even in the base models in Table 3. The results and discussion should note this and discuss in relation to Macleod's paper.

Response: Thank you. We have added some description and discussion concerning this under Results (p.9) and Discussion (p.11).

3. Missing responses and bias
Although the authors have added comments about missing response they do not consider the potential bias in the results. This may occur if the respondents who did not reply or left out certain questions differed from those who completed the entire questionnaire.

Response: Thank you. We have added the potential bias that may result from the missing data under Method. More specifically, we added “Among the 282 subjects, those with missing values for financial satisfaction tended to have lower education (p<0.01). This should be taken into consideration when interpreting the results.” We have added more discussion concerning the potential direction of biases under Discussion (p.10). Though it is indeed a limitation when there are missing values, however, if assuming those belonged to lower SES groups had higher probability of missing responses (which is the case in this study, as those with lower education tend to have higher missing values for the financial satisfaction variable), then underestimation (instead of over estimation) of the negative impact of lower SES may be suspected. Thus the conclusion of this study should remain unchanged despite the missing values.