Author’s response to reviews

Title: Theory and Design of the Community for Successful Ageing (ComSA) Program in Singapore: Connecting BioPsychoSocial Health and Quality of Life Experiences of Older Adults

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Author’s response to reviews:

Response to reviewers

Dear Editor and Reviewers,

We are very thankful for the critical feedback and for taking time to make valuable suggestions that have greatly helped to improve our study and reporting of analyses.

Specifically, we have taken on board Reviewer 3 suggestion for a major set of revisions, separating out the qualitative and qualitative studies into two distinct papers.

• Reviewer 3: I believe there are issues with the objective and design of the paper in its current format - biting off more than they can chew by presenting in a single paper. Overall, I think these authors are trying to put too much information into a single paper. The work is sound, the analysis is appropriate, and the findings are meaningful, but it's just a lot of information to try to meld together into a single paper. I would recommend this be presented in two separate papers
the focus group findings / qualitative results could be a single paper. This could include the community program activities and delivery considerations. The second paper could address the quantitative analysis and findings. I understand they've used a mixed methods approach, and they believe there's an important connection between their qualitative and Quantitative findings, but the paper just includes too much information. I'm afraid the meaning gets lost...

This suggestion is also supported by our second reviewer’s comment, in which he notes that strictly speaking our analysis is multi, rather than mixed, methods.

• Reviewer 2: This is described as a mixed-methods study, using a baseline survey of participants alongside 4 focus groups with program staff and trainers. Strictly speaking, it might more accurately be described as multiple methods, as the use of qualitative methods in this instance is not really helping us to understand or explain the findings of the baseline survey.

In accordance with these observations, we propose a linked submission of two separate manuscripts. The BPS program theory connects both papers. The quantitative analysis is therefore positioned as the first submission (BGTC-D-18-00730), followed by the qualitative analysis and process evaluation of the implementation and delivery system as a new upload (BGTC-S-19-00300).

Our responses to reviewers, as enumerated below, are submitted identically for both manuscripts. The revision responses are separated out according to the quantitative and qualitative sets of feedback. Comments that apply to both are addressed last.

To avoid confusing track changes, we track changes excluding deletions and formatting updates. We have indexed the changes using comments in the manuscript linking to the responses below. This includes the responses to Reviewer 1 (R1.1-R1.4), Reviewer 2 (R2.1-R2.8) and Reviewer 3 (R3.1-R3.3).

Once again thank you for reviewing our submission, we are most grateful for the opportunity to continue with two manuscript submissions.

Sincerely,

Su Aw and Zoe Hildon
QUANTITATIVE PAPER 1

New proposed title -

Theory and design of the Community for Successful Ageing (ComSA) program in Singapore: connecting BioPsychoSocial health and quality of life experiences of older adults

Reviewer 1

This is an original, well designed and well conducted study. There some points which need clarification to improving the reporting of the study.

R1.1 The strongest relationship reported is between perception of ageing and QOL. But the authors haven't considered or if considered haven't reported a potential bias: the first statement in CASP-19, their measure of QOL is also statement about perception of ageing ("My age prevents..."). Ideally, a sensitivity analysis between perception of ageing and a CASP scale where the first item is dropped should be done.

• We thank the reviewer for suggesting that we present our sensitivity analysis. The sensitivity analysis between perception of ageing and a CASP scale where the first item is dropped (CASP18) showed that the perceptions of ageing construct remained the strongest among the associations proposed from BPS measures. Analysis is reported on pg. 10 (methods), and pg. 11 (results) of the newly submitted manuscript.

R1.2 An important aspect of this paper is the integration of BPS with quality of life. However, that integration has not been elaborated in the text or in Figure 1.

• ‘Quality of life’ (QoL) as measured by CASP-19 has been defined as theoretically distinct from biopsychosocial health. It was nevertheless likely that QoL would be most associated with the psychosocial (PS) aspects of health, since these can be seen to most prominently catalyze dimensions of control, autonomy, self-realization and pleasure that define QoL. We have added this point and expanded our literature review to further discuss how QoL and dimensions of BPS health have been conceived and treated as distinct but connected, see pg. 3-4.

• The BPS program theory, Figure 2, also illustrates how these constructs and sub-constructs may be expected to load onto QoL.
R1.3 In the file I reviewed, there were two Figure 2s, with differences and two Figure 3s which seemed identical. Relabel or remove them.

• We are sorry for this error in uploading. In the revised manuscript we have ensured that there are no duplicated figures.

R1.4 Was the questionnaire done in English? Quality of life is a culturally sensitive, therefore, authors should discuss the impact of measuring it in English (if that was done).

• We agree with the reviewer on this point. We had taken steps to ensure cultural sensitivity by translating the survey questionnaire into Chinese, Malay and Tamil, and pilot-testing with each ethnic group before data collection but overlooked reporting this. We have since added this detail to the methods section on pg.8.

Reviewer 2

Dear authors, this is an interesting paper describing: 1) the associations between an expanded number of BPS domains with the CASP-19 QoL score, and 2) the organizational mechanisms and contexts that influenced delivery of this complex community-based intervention, which combined BPS components in a group of older adults. I have the following comments which will hopefully strengthen your manuscript

R2.1 Background: Clear rationale for the BPS focus of the intervention. Not so clear rationale for your proposal of the three additional constructs, though they do make intuitive sense.

• We have selected the additional sub-constructs at face-validity and in congruence with programmatic thinking and content application of the ComSA CD intervention. The creation of the program theory was based on an iterative process of matching known theoretical constructs derived from the literature with the programmers’ intervention approach, this has been explained pg. 4.

R2.2 I am not convinced that the term "the Third Age" is universally well understood - perhaps "early older age" or a given age range may be clearer.

• We agree that the terms the “Third Age”, originally coined by Peter Laslett (1996) as the period between retirement and the onset of chronic illness, or the “Fourth Age”, may not be
universally understood. We concur that this term needed defining and/or rewording. In addition, in accordance with Reviewer 3, who also points out that the lower age band in our survey cohort is rather younger than ‘old’, starting at age 50 (see comment R3.1), we have relabeled our participant's age band accordingly, and no longer use the term “Third Age.” The survey participants were recruited from a list of participants whom Tsao foundation had invited to join the program. This has been clarified, in the abstract pg. 1, and methods pg. 7.

R2.3 You have done a baseline survey, but are there plans to follow this up? That is, to see which of the different interventions (and which contexts) resulted in improvements to QOL and BPS domains?

- Yes, we conducted longitudinal a 1-year follow-up study with all intervention participants as well as process evaluation with participants and program trainers to explain changes in BPS health. We are reporting these findings in a separate manuscript under review elsewhere. This has been clarified pg. 7.

R2.4 Result: On p.11 - Quantitative section - the OR for SC is not reported, despite it being greater (2.11) than that of S social support (1.88)

- We thank the reviewer for the meticulous review of the quantitative reporting. We have carefully reviewed the section throughout accordingly. We have added the OR for SC pg. 11.

R2.5 In the next paragraph, the BP-P OR (95% CI) reported does not match that in Table 3 - says 3.80 (2.35-6.15) in the Table, but 3.80 (2.45-6.15) in the text

- The figures in Table 3 are correct. We have ensured that the reporting of OR between BP and P in the table matches in the reporting in the text, pg. 11.

R2.6 There is a discrepancy in the B-BP figures also (OR 1.83 in the text, vs 1.72 in Table 3)

- We have ensured that the reporting of OR between B and BP in the text matches that of the table, pg. 12.

R2.7 Table 1 (originally submitted as supplementary information) - suggest that 2 decimal points are not required after % - one or 0 would be the norm. Some of yours have one (e.g. 100.0) and some have 2 separate points (e.g. 26.0.0 and 38.0.0).
Thank you for spotting this. We have since simplified this table, please see table 1 of the revised manuscript. We have made sure that the new percentages are all reported using 1 decimal point.

In addition, the original reporting by subgroups (supplementary table 1) made sense as part of the mixed methods paper because we needed to explore the adaptation of the program according to program tracks. However, for the purposes of the current analysis we have now combined these data and report all baseline characteristics for program participants as consistent with Table 2 and 3. Descriptive information on the sample is now reported at the outset of the results section, pg. 11.

Reviewer 3

R3.1 I see that older adults were considered age 50 and older. In the US, research describing "older" adults typically includes subjects 65 and older; sometimes 60 and older. So that stands out to me as a potential flaw since the paper is focused on successful ageing - most consider 50 to be middle-aged. Are there cultural considerations that make using 50+ more appropriate? If so, those should be clarified. (I don't know what "Third Age" means, but 50 does not sound like it...)

Since our current study is derived from program evaluation baseline data, it consists of a self-selecting sample of individuals recruited from a list of participants whom Tsao foundation had invited to join the program. The intervention was open to older ages and middle-agers transiting to older ages (50 years and older), the rationale being that health promotion at the early ages is beneficial for transiting into older ages. Fourteen percent of the 321 participants in our study were between the age range of 50-59, and the median age was median=70 years, IQR=63-76 These details have been clarified in the study reporting, in the abstract pg. 1, and methods pg. 7.

Additional analysis showed excluding this 14 % of participants between the ages of 50-59, did not significantly change the quantitative associations. There is no change to the ranking and little change in the size of the odd ratios between CASP-19 QoL and the 6 BPS health domains.
New proposed title - 
Exploring the implementation of the Community for Successful Ageing (ComSA) program in Singapore: lesson learnt on program delivery for improving BioPsychoSocial health

Reviewer 1

R1.1 The reporting of the focus group was very parsimonious. Some kind of tabular or other visualization of emergent themes will be helpful.

- The original Anchor figure (figure 2 of the previous manuscript) was intended to perform this function. Now that the qualitative analyses have been separated out, we hope that the revised figure (figure 1, pg. 11 of the new manuscript) is more prominent and easier to follow for its intended purpose.
- We have also expanded on some of the subthemes, to further elaborate and explain the findings throughout.

R1.2 Normalization Process Theory was mentioned but how its constructs relate to the study was not elaborated, which needs to be done.

- According to the Normalization Process Theory, implementation consists of a set of feedback loops and is not a linear process [16]. Implementing organizations can either adapt the program to accommodate the existing organizational contexts faced or negotiate organizational contexts according to the needs of the program. Building on that, one of the objectives of this paper was to explore organizational perspectives on the ComSA CD program characteristics (relating to novelty, complexity and observability) alongside implementation experiences and challenges. The application of normalization theory has been clarified on pg. 6.

Reviewer 2

R2.1 It was not clear to me if the 1st FGD was a mixed group of GAB and SCOPE trainers with high and low group retention? The term 'high vs low' implies that there were both, but then you describe the 2nd group as a 'mixed group' (presumably meaning mixed backgrounds, i.e. trainers, volunteers, operational staff from Tsao Foundation) - this could be made clearer.

- We described the FGD group as ‘mixed’ only if it comprised of individuals who performed different roles in the program. This happened in FGD2 where there were trainers,
volunteers and operational staff from Tsao Foundation all included in the group. The 1st FGD on the other hand was not mixed as it consisted of only program trainers (both SCOPE + GAB) with highest and lowest dropout rates. This has been clarified on pg. 9.

R2.2 The reporting of the qualitative findings could be clarified - main themes in bold are essentially a mixture of contexts and outcomes, while the sub-themes in italics are easy to confuse with illustrative quotes, which are also in italics. Perhaps an additional table of themes and sub-themes would help to clarify.

- The style of reporting of the qualitative analysis with top-line themes in bold and sub-themes in italics is stated up front, pg. 10. We have since removed the italics for the reporting of quotes to simplify reporting of results pg. 11-19.

R2.3 Not convinced that the anchor image in Figure 3 adds anything.

- We have removed the anchor and in order to show that the middle part of the figure (implementation stages) is the central pillar we have bolded the themes under implementation stages, please see the new figure 1, pg. 33.

R2.4 The expression "top-down grassroots body" seems an oxymoron to me - grassroots usually implies bottom-up hierarchy.

- Due to hierarchical government structure In Singapore, the grassroots body is structured with a tight connection to the ministry and elected officials resulting in rather paradoxical grassroots with a government-led approach. This has been clarified, pg. 12.

Reviewer 3

No further comments
GENERAL COMMENTS ADDRESSED IN BOTH PAPERS

Reviewer 1

No further comments

Reviewer 2

R2.7 General comment - there are numerous grammatical and spelling errors throughout - needs a careful re-reading and editing.

- The manuscripts have been reviewed for grammatical and spelling errors.

R2.8 The weblink at ref [14] is not working.

- The e-link for this reference has been updated, it is now functional and reported in the quantitative manuscript pg. 3, and the qualitative manuscript pg. 6.

Reviewer 3

R3.2 In the US we would say "lessons learned," so depending on the audience I think the paper will need minor grammatical edits along those lines throughout.

- We have followed the UK spelling and grammatical rules throughout both papers.

R3.3 The multitude of abbreviations used throughout the paper [...] is a lot to keep up with for a reader who is not familiar with the program or domains.

- We have reduced the number of abbreviations, particularly throughout the qualitative draft. The Abbreviation list is added pg. 23.

- In the revised quantitative submission, we are upfront about BPS and related subconstruct abbreviations and defining them straight from the abstract. Other abbreviations have been removed or used sparingly. The Abbreviation list is added pg. 15.