Author’s response to reviews

Title: A Haven of Green space: Learning from a pilot pre-post evaluation of a school-based social and therapeutic horticulture intervention with children

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Author’s response to reviews:

We would like to thank the reviewers for their concise comments in response to this version of the manuscript. Below we provided the reviewers comments, alongside a point-by-point response to each which we trust fully address their comments:

REVIEWER 2: Anne Borge:

The paper has interesting presentation of the topic and the qualitative measures.

You have to inform in the abstract that you only have 27 children from three Schools. The use of MWIA and the Five Ways to Wellbeing is ok. The qualitative data are ok.

RESPONSE: Added to the “results” section of the abstract: “Results were collected from 36 children across the 3 participating schools, and suggest……”. Please note, 36 children were
involved in the evaluation, and participated in various stages (all 36 in principally the pre or post WMIA; 25-31 in the wellbeing check cards). We believe when referring to 27 children the reviewer was looking at the SDQ results.

I have big problems accepting your inclusion of the SDQ. Here are the arguments against using the SDQ.

1) You have only 27 children included in the statistics.

2) You have an overweight of boys in the sample which is not controlled for which we know influences subscales.

4) I have no information about where the figures come from, a subscale, sum scale or which scales in table 5. The figures are impossible to interpret and huge measurement errors are present.

5) 9 pupils at School A have a bad effect of the intervention indicated by score 5, 89 increased 7.33 and we do not know on what scale/scales,

6) 10 pupils at School B with scores slightly improving from 16.4 to 14.4 but why are these scores three times higher than School A?

7) 8 pupils at School C, improves dramatically with scores from 12.2 to 6.88, and why this huge difference from School B and A? A really mix of data unable to understand.

8) At School A different Teachers filled in the SDQ at pre and post, a reliability problem.

It is not recommended to apply the instrument SDQ in this way with tables and figures with no Statistical information about how the data have been treated. This is not how the SDQ should be used. These data are useless and it is not recommende to do analyses on 27 pupils with quantitative statistics. It is strongly recommend that you remove the Whole SDQ out of this paper. British researchers will be baffled to see this use of the SDQ on print. You have plenty of good data from the MWIA and the Wellbeing Cards that make better sense. Removing the SDQ makes the content better because as it stands, it gives no meaningful information at all. SDQ has
been used, but you do not at all inform in table 5 where the figures come from. Is it any of the subscales or the sumscores.

RESPONSE: The SDQ results have been removed throughout the paper. The SDQs are referred to in the description of the evaluation as one method that was excluded from this paper. Additionally, in light of earlier reviewer comments we have opted to retain the use of language that emphasises the exploratory nature of any analysis of quantitative data which seeks to identify potential trends, and does not claim statistical significance of intervention impact.

REVIEWER 4: Isadora Orlando de Oliveira:

Clearly gathering of data was achieved and this study is of interest to the readership.

The most important feedback with respect to revisions is the need to be cautious with conclusions drawn. Interventions and limitations are well described, but the number of participants is not too extensive for reporting any change in outcome over time for comparison concerning the intervention. Therefore, it is not possible to infer from the current data set whether categorizing patient presentations has meaningful impact on outcomes.

RESPONSE: We have removed the SDQ results to focus on MWIA and Wellbeing Check-card results only, further limiting the scope of the study and the subsequent conclusions drawn.

Unfortunately several aspects of the study compromise the usefulness of the work. The first issue is that the background could be condensed into a more elucidative way to explain the "Haven Green space pilot intervention".
RESPONSE: In the absence of specific feedback we are unsure what the reviewer would like to see amended here. We have sought to integrate the background as fully as possible which in this revision includes minor edits to the positioning of information and grammatical edits to ensure readability. We trust these address the reviewers comment.

Also, the lack of demonstration of reliability for the interventions used - there should have been a sub-study or subgroup of the population that was used for reliability. Evaluation methods are in development and there should be evidence of consistency in reliably classifying the patients. Qualitative and quantitative methods are well described, but the evaluation design should be reconsidered.

RESPONSE: As we have sought to emphasise throughout the paper and in previous rounds of reviews, this study was conducted in order to explore the potential utility of further development and testing of the greenspace intervention with children. As is recognised in the literature (Leon et al: 2011), conducting pilot and feasibility research is an essential step in preparing for fully powered comparative research with control groups. The purpose of this study was to inform these efforts and, as can be seen from the findings, essential methodological learning was made during the conduct of this study which requires addressing before larger (and more costly) evaluations of this intervention would be recommended.

As a result this paper was an admirable attempt to provide information from mental wellbeing of the children pre- and post-intervention, and assess the value of the evaluation methods, but critical elements of examiner reliability, small sample size and lack of specific age-appropriate classification criteria are all problematic.

RESPONSE: We fully acknowledge the study limitations raised by the reviewer, and have sought to emphasise these in the manuscript. However, we continue to feel this paper offers
useful methodological insights to be of value to researchers working in this field, as well as learning about greenspace based-interventions that are increasingly adopted as a health-promotion tool, and hope the reviewer also recognises the contribution this study makes to the field.

Specific Feedback:

Background

Page 3 Line 44: remove the additional "s"

RESPONSE: Many thanks for pointing out this error, the “s” has been removed.

Page 8 Lines 48-49: Although defined as: "a pilot study with a small sample size unable to assess statistical significance, this exploratory analysis is intended to capture associations in trends only." , power analyses concerning sample size should be conducted.

RESPONSE: As per the comment above, this is a pilot study not designed to assess intervention effectiveness, therefore now power calculations were conducted (Leon et al, 2011). We are well aware that the small sample size would not be able to yield statistically significant resultss, and have sought to emphasise throughout the manuscript that this study is an exploratory pilot only.

Page 15 Lines 48-59 (Conclusion): Although this conclusion would be appropriate for promoting the need for horticulture activities, it cannot be supported for scientific reporting. Please consider revising the conclusions to be much more similar to the previous paragraph, where it is proposed that a school-based intervention to improve wellbeing, using psychotherapeutic and STH techniques could lead to better outcomes, but further study is warranted to determine this.
RESPONSE: We are confused by this comment, as the conclusion as currently written stresses that:

a) Positive trends are indicated (line 1)

b) Further research is required to verify findings from this study (line 2)

c) That pilot and feasibility research is an important precursor to committing resources to larger studies (line 3)

d) That we support efforts to continue to develop appropriate methodologies for assessing complex interventions with children and young people (line 4).

However, in light of the reviewers comments we have made some language edits which we trust satisfy the reviewer that we are being cautious in the conclusions drawn from this study.

We trust these amendments to the paper and responses fully address the reviewers feedback.