## Peer Review File

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### **Reviewer A**

### Comment No. 1 - General:

You are attempting to combine information focused on individuals across the life course. This is too broad for a review as there are differences between groups. These are not discussed but later in the manuscript you report that the findings are not relevant to individuals under 18 years. It was not clear that this would be the case.

You use non scientific language throughout and there are many spelling and grammar errors which needs addressing.

Your referencing style is inconsistent and needs to be corrected.

### Response No. 1:

The language throughout the manuscript has been edited with the support of an academic language and writing expert, many spelling and grammatical errors have been removed.

The references have been checked for inconsistencies and corrected throughout the in-text citation as well as in the list of references at the end of manuscript.

## **Comment No. 2 - Introduction:**

You need to carefully consider the structure of this section. You jump between health benefits of physical activity (PA), a definition of Green Exercise and then the percentage of adults meeting activity recommendations. You need to first discuss PA recommendations, those meeting guidelines and the health benefits; then progress to the topic of nature/green exercise and the potential synergistic health benefits.

Some sections do not have any references. There is a lack of depth of discussion of the points made, for example the discussion of the health benefits of PA, in particular for health and wellbeing as per the focus of the study, are very vague.

Your definition of green exercise is not entirely correct or clear. You need to have some discussion of theories as to why nature can enhance health (attention restoration theory, psych evolutionary stress reduction theory, biophilia) as background information.

You also need to define all other key terms (e.g. mental health, wellbeing). What do you mean by green concept? What are green prescriptions? This is an entirely different line of enquiry.

Your review aims are too broad. You stated that you aimed to "assess effectiveness of GPA for improving health and wellbeing and suggest recommendations for the New Zealand population". As far as I can see there

are no recommendations for the NZ population.

Your study justification is lacking. There are systematic reviews in this field that have demonstrated the beneficial effects. What is this review adding?

# Response No. 2:

The structure of the section has been widely revised and recommendations have been incorporated. Please see pages 4-5, as indicated in track changes. The parts of the paragraphs where a reference was required, an in-text citation has been added.

A clear definition with reference support has been provided on page 4, line 73-76.

The definition of mental health and wellbeing, as well as the green concept and green prescription have also been described with reference to this review, see page 5, lines 93 – 100

The recommendations have been added in the last section specifically focused on New Zealand population, see page 18 & 19.

The justification of this review has also been revised and comprehensively rewritten, see page 7, lines 145 – 167.

# Comment No. 3 - Methods:

You mention inclusion and exclusion criteria but so not state what these are. This would be very useful. When was your search conducted?

Lines 179 onwards do not make sense. You talk about how the studies were evaluated by there is not evidence of this in your findings.

## Response No. 3:

A clear and detailed description of inclusion and exclusion criteria are given, see page 9, lines 186-195.

## Comment No. 4 - Key findings:

You largely discuss the results of studies one by one, which is not a scientific approach to a review. You also do not give sufficient detail about studies. It is unclear to the reader what the studies have done and what the results are. What populations do the results allude to?

You need to carefully consider your structure. You mention a five categories of health outcomes but do not seem to discuss all of these. Perhaps subheadings would be useful.

## Response No. 4:

The structure of key findings section has been throughout revised and provided with more clarity and logical sequence, and as suggested by the reviewer, the findings are now divided and catergorised in sub-headings see pages 10 to 13.

Comment No. 5 - Discussion/recommendations:

This is not a discussion section and is repetitive of the key findings. You need to carefully consider the structure of this review as it is very difficult to follow. Should these sections perhaps be combined? Is discussion the appropriate subheading?

You do not provide clear recommendations in the context you proposed as a review aim. What are the specific recommendations for the NZ population?

#### Response No. 5:

The discussion section has been throughout revised, and considered the flow of analyses provided based on main and key findings.

Also, the recommendations and future actions are clearly provided with reference to the New Zealand population and context, see pages 15 to 20.

#### **Reviewer B**

### Comment No. 1:

Some definition of 'natural' spaces, settings or environments would be useful.

#### Response No. 1:

A clear definition with reference support has been provided on page 4, line 73-76.

### Comment No. 2:

Some additional contextual information would be helpful in the Background section. It would benefit from a more narrative flow with some additional context and connection between the benefits suggested, and from a brief conclusion to this section to bring the points together.

#### Response No. 2:

The context and the description have been widely revised and recommendations from the reviewer have been incorporated. Please see pages 4-5, as indicated in track changes.

#### Comment No. 3:

The methodology requires some more specific information. Why were the chosen data bases used, what search criteria were used, what were the inclusion and exclusion criteria and how were the papers used for data collection evaluated? What type of analysis was used to make meaning of the findings?

#### Response No. 3:

The methodology section has been revised as per recommendation and a clear and detailed description of inclusion and exclusion criteria are given, see page 9, lines 186-195.

#### Comment No. 4:

The findings are problematic as they discuss each paper used for data collection in turn with little attempt to group/summarize, compare or contrast the findings under specific headings – such as Mental Health or Physical Gains etc...

#### Response No. 4:

The structure of key findings section has been throughout revised and provided with more clarity and logical sequence, and as suggested by the reviewer, the findings are now divided and categorized in sub-headings as suggested above, see pages 10 to 13.

### Comment No. 5:

The discussion section is more of a findings section as it groups studies together to show the prevalence of particular outcomes. This section would be better identified as a findings section with a new Discussion section being written. The new Discussion section needs to critically engage with the literature to show how this study aligns with existing literature and or compares with it. It also needs to identify what elements of this study provide new knowledge.

#### Response No. 5:

The discussion section has been throughout revised, enriched, by considering the flow of and synthesis of analyses provided based on main and key findings.

#### Comment No. 6:

The conclusion discusses the need for health promotion to address chronic disease, usually related to physical conditions. Given the stated outcome is a prevalence of data related to mental health, it is not clear how this related to the recommendation.

#### Response No. 6:

The recommendations and future actions are clearly provided with reference to the New Zealand population and context, see pages 15 to 20.

Line 33 – reconsider the use of 'famous'. Replaced

Lines 47 – 48 needs rephrasing for clarity of meaning. Rephrased Line 71 – support a healthy lifestyle would make more sense. Replaced

Lines 75-76 Reconsider the phrasing Rephrased

Lines 81 – 83 Need rephrasing for clarity Rephrased

Lines 84 -85 This sentence needs support from the literature. Reference provided

Line 92 & 252 – Nowadays is not a scholarly term. Consider rephrasing. Rephrased

Line 94 – 'Provide and promote'? Agency is needed for promotion. Replaced and corrected

Lines 96 – 97 – do you mean engage in behaviour to contribute to changing sedentary lifestyles? Yes and corrected

Lines 97 – 99 What do you mean by 'a high association'? Some rephrasing of this would be useful to identify the context and study. Rephrased

Line 111 – Sentence beginning here requires a reference. Reference provided

Lines 117 – 120 compare New Zealand and Norway – why? Declared now

Line 118 – Confused agency – which fulfils, would be better than 'to fulfill as people walk for a number of reasons. Revised

Lines 127 – 137 rephrase for clarity, agency and grammar. Rephrased

Lines 168 – 170 – Revise for clarity Revised

Lines 179 – 180 – Revise – currently grammatically incorrect. Revised and corrected

### **Reviewer C**

I think that this work needs an important methodological revision before being considered suitable for publication.

### **Comment No. 1 - Abstract**

It is clear, I suggest to explain the acronyms GPA at least the first time in the background.

### Response No. 1

Full form of GPA has been provided now.

### **Comment No. 2 - Introduction**

Please, explain to the reader the meaning of physical inactivity. Moreover, It is necessary to explain the differences between physical activity and exercise.

The WHO guidelines suggest for children and adolescence 60 minute of physical activity every day, please revised it.

I suggest to enrich the introduction adding more references related to the benefit of practicing green exercises. Additionally, the authors should add other references related to different systematic review performed on this topic, this is not the first work on this field. For this reason it is necessary to explain the added value of this narrative review and the innovative aspect.

### Response No. 2

The introduction and background sections have been throughout revised and synthesized as per above reviewers' recommendations.

### **Comment No. 3 - Methods**

This section need to be revised. First all it is necessary to descriptive the search term applied in each database used with specific limitation (geographic area, time, population, type of intervention). Inclusion and exclusion criteria are not described. Risk of bias assessment.

### Response No. 3

The methodology section have already been throughout revised and corrected/enriched as per above reviewers' (A and B) recommendations

### **Comment No. 4 - Discussion**

This section is very long and simply repeated the content already stated in the results section. Please revise the discussion trying to compare the results of this review with other studies or literatures review. Moreover, I think that you should improve the methodolody of the work. I do not understand the population of your intervention, only adult? Adult and children? It is not clear.

In line with these comment there are many studies performed in European countries on adult and older adult that should be added.

### Response No. 3

The suggestions and recommendations have already been incorporated thoroughly on the basis of reviewers A and B recommendations and suggestions.

Toselli S, Bragonzoni L, Grigoletto A, Masini A, Marini S, Barone G, Pinelli E, Zinno R, Mauro M, Pilone PL, Arduini S, Galli S, Vitiello M, Vicentini B, Boldrini G, Musti MA, Pandolfi P, Liberti M, Astorino G, Maietta Latessa P, Dallolio L. Effect of a Park-Based Physical Activity Intervention on Psychological Wellbeing at the Time of COVID-19. Int J Environ Res Public Health. 2022 May 16;19(10):6028. doi: 10.3390/ijerph19106028. PMID: 35627565; PMCID: PMC9140357.

Toselli S, Bragonzoni L, Dallolio L, Alessia G, Masini A, Marini S, Barone G, Pinelli E, Zinno R, Mauro M, Astorino G, Loro Pilone P, Galli S, Maietta Latessa P. The Effects of Park Based Interventions on Health: The Italian Project "Moving Parks". Int J Environ Res Public Health. 2022 Feb 14;19(4):2130. doi: 10.3390/ijerph19042130. PMID: 35206319; PMCID: PMC8872154.

### **Comment No. 5 - Limitation**

The authors stated "some of basic tools from the systematic literature review process were used".

It is necessary to explain which tools were used in particular for risk of bias assessment.

### Response No. 5:

Added as PRISMA screening procedure, and CASP tool, see page 19, lines 409 & 410.

### Reviewer D

This is an important area of work, and you have done well to include a range of studies and highlight some of the main findings. I think that the work could be improved by either focusing on an area which has not been covered in recent systematic reviews, or updating an existing systematic review on this topic by focusing on the literature which has been published since. I hope that you will find my comments to help with this article constructive: Abstract Line 31 - GPA should be written out in full the first time it is written in text. Done

Line 33- The phrase 'utilising famous databases' sounds slightly informal, I think it would be sufficient to state something along the lines of 'the following databases were utilised'.

Rephrased as suggested

Line 35- Instead of 'to gather studies published within the last ten years' but the exact time frame which you searched i.e. was in April 2013-April 2023? This was in between 2011 and 2021, as the study was conducted in 2021-2022

You have written 'these health and wellbeing outcomes were assigned into three main categories: mental, physical and physiological, and social and behavioural' in the methodology and then 'The findings were assigned into three main categories: mental, physical and physiological, and social and behavioural' in the findings section, these two sentences are very similar so I think you can remove this from the findings section.

Re-written as suggested

Introduction

Lines 67-69- I think this could be slightly misleading, perhaps state that it is among one of the leading risk factors.

The second paragraph starts to introduce GPA, however then goes back to talking about the benefits of physical activity which is more suitable for the first paragraph.

Line 79- remove the word 'an' in the phrase 'older people an'.

Line 92- 'Nowadays' is quite a vague term, I would remove this.

Line 117- Which ethnic groups?

129-130- What is nature based education more effective than? It would also be good to give a specific statistic to highlight how much better nature based education is rather than use the phrase 'much more advantageous'.

Methodology

Line 162- This sentence could be more specific, what exactly did you aim to find out from conducting a narrative review?

Line 179- What was the inclusion and exclusion criteria? What critical appraisal tool was used?

Provided the inclusion and exclusion criteria as mentioned above in response to Reviewers A, and B.

Key findings

The key findings should start by stating how many studies you included in your literature review.

The key findings could be written in to paragraphs representing the themes which you found.

From what I can see there are no tables included in the article. It would be good to have two tables, one which summarises the data you extracted from each article, and another one which summarises your critical appraisal assessment.

Findings section has already been revised, as mentioned and responded above.

## Discussion

Line 296- what type of mental health outcome, there are many different types of mental health outcomes, if you are referring to multiple types it would be good to also include the multiple different types of health outcomes which were examined.

Line 360-61- What was park prescription intervention being compared to?

The last two paragraphs would be better in the key findings as they are describing the characteristics of the studies.

Limitations

Line 380- this sentence 'Selection bias is the main weakness of the narrative literature review methodology' should be referenced.

Line 383-384- 'The' is not needed at the start of the sentence starting 'The most of health and wellbeing outcomes...'

# Conclusion and recommendations

Lines 398- 401- You do not need to state the limitations again in the conclusion as you have already done this in the limitations section.

I think this is an important area of research, however unfortunately I the article had some limitation in terms of writing style and methodology. In addition, there is another fairly recent systematic review on this topic "Lahart I, Darcy P, Gidlow C, Calogiuri G. The Effects of Green Exercise on Physical and Mental Wellbeing: A Systematic Review. Int J Environ Res Public Health. 2019 Apr 15;16(8):1352. doi: 10.3390/ijerph16081352. PMID: 30991724; PMCID: PMC6518264" therefore I think for this to be publishable it would be better to have done an updated systematic review so as to avoid repeating information which has already been found in a systematic review, which is a more rigorous way of reviewing the available literature than a narrative review.

# Response:

All the above recommendations and suggestions have already been incorporated, while responding to the reviewers A, B and C.