Author's response to reviews

Title: Co-occurrence of risky health behaviours: results from the Pre-Empt study.

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Author's response to reviews: see over
Reviewer: Chris Keyworth
Reviewer’s report:
Dear authors,
Thank you for submitting your article examining the co-occurrence of risky behaviours in general practice. This is certainly a timely piece of work given the prevalence of problematic health behaviours and in particular the relationship these have with developing long-term conditions.
This is an interesting piece of work. I have provided some comments that should help strengthen the manuscript. A general point is to ensure that the paper is correctly framed in terms of the main aim of the study. It seems that this paper is about the prevalence of multiple risky behaviours. There are a couple of points where the writing drifts into talking about how risk factors are discussed.

I hope you find the comments useful – best of luck with the submission

<p>| Major Compulsory Revisions |  |
|-----------------------------|  |
| <strong>Abstract</strong>                |  |
| Lines 30-31 – when you talk about being ‘routinely discussed’ this gives me the impression that the study is about how practitioners discuss risk factors with patients. This paper seems to about the prevalence of risk factors. Suggest remove, or adding this line to the conclusion – it is an important discussion point but not the focus of this paper. The aim on the following line is very clear. | Agree – see track changes |
| Conclusion section needs a line about implications of the findings – my point above should address this. | Agree – see track changes |
| <strong>Background</strong>              |  |
| Line 113 – 115 – good point but needs to be clearer. Are you suggesting that highlighting risk | Agree – see track changes |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Changes</th>
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<tr>
<td><strong>factors is a form of primary/secondary prevention of long-term conditions such as CVD?</strong>&lt;br&gt;As I understand it your study is about patients who have no existing long-term condition associated with unhealthy lifestyle</td>
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<td><strong>Methods</strong>&lt;br&gt;Line 164 – please explain why the questionnaire completion was timed</td>
<td>This reference has been removed. The completion was not timed but it had been included to try and show how short the measures were to complete. See track changes</td>
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<td>Line 171-177 – please provide more detail about the measures used. For example AUDIT-C – was this based on the number of units of alcohol consumed? Over what period of time? Same with HIS – based on how many cigarettes smoked?</td>
<td>Agree – see track changes</td>
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<td>Line 179 – reference 29 – is this the correct reference or should it be the government guidelines that you refer to?</td>
<td>The reference was incorrect and has been removed. See track changes</td>
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<td><strong>Results</strong>&lt;br&gt;Line 210 – suggest removing the ‘other’ as it doesn’t add anything to the results</td>
<td>Agree – see track changes</td>
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<td>Lines 227 – 239 – there are some interesting findings here that you could make more of. Particularly the combinations of behaviours that you make reference to. Diet is part of 4 of the 5 combinations, exercise part of 3 of 5. Could you pull this through to the discussion perhaps?</td>
<td>Agree – see track changes</td>
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<tr>
<td><strong>Discussion</strong>&lt;br&gt;Line 276 – make reference to ‘particular health conditions’ – for example lifestyle management is very important for people with CVD and diabetes.</td>
<td>Agree – see track changes</td>
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</table>
In this study, screening was completed by the research team prior to patients going into their appointment thus ‘priming’ the clinician as to which areas might be of benefit to discuss as well as relieving some of the pressure on their time – I am a little unclear on this point. So the results of the screening were relayed to the GP in which they had a discussion? Is this relevant here? May need to add to the methods to clarify this. The full-trial paper could be referenced.

This has been reworded. Please see track changes.

When talking about the practicalities of the tools used – you may need to consider adding this to the limitations

This has been moved to limitations. See track changes

Please explain ‘spill-over effects’

This has been reworded

Very few patients

Agree – see track changes

### Discretionary Revisions

**Abstract**

Lines 43-44 – suggest removing the acronyms from here – use the line on 162-163.

This has not been changed as inclusion in the abstract highlights the use of these specific measures.

Line 53 – do you mean ‘most likely’ or ‘most common’?

Agree – see track changes

Line 54 – 21.8% of patients?

Agree – see track changes

Line 58 – very few patients?

Agree – see track changes

**Background**

Line 80-81 – suggest sticking to one term – either risky or unhealthy

This hasn’t been changed as the authors wanted it to be clear that both terms could be used.

Line 123 – you could make reference here to NICE guidelines. For example CVD prevention guidelines state that healthcare professional

This has not been included
should address lifestyle where the opportunity arises

Line 128 – ‘identification of patterns of health behaviours among different populations’ – I am unclear what you mean by this. Could you clarify? Are you looking at patterns related to the different characteristics of the population? Age, gender etc

| Agree – see track changes |

**REVIEWER 2**
Reviewer: Cassandra Kenning
Reviewer’s report:
Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: I declare that I have no competing interests

This is an interesting and topical article. It is well written and concise and the title and abstract are accurate. The aims are clearly defined and the paper addresses those aims.
Methods are appropriate and well described. The data is taken from the screening stage of an RCT and the paper focusses on this data without unnecessary reference to the full trial methods.
The data appear to be sound and analysis is appropriate for the aims of the paper.

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<th>General comments</th>
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<td>However, I am not sure it is necessary to include the full trial consort diagram when this data is just taken from baseline and there is no further reference to participant retention in the trial.</td>
<td>Agree, this has been removed.</td>
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</table>

| Procedure pg5- There could be more detail about the screening process like if completion of questionnaires was assisted by the researchers. I query this because there are relatively high levels of missing data for patient demographics. | Agree – see track changes |
Referring to table 1 there is missing data on age, marital status and socio-economic classification. If in attendance when patients were completing the questionnaires did the researchers check completion when it was handed back to them?

Additional detail has been included. Patients were encouraged to complete all questions but often some remained unanswered.

**Minor comments:**
Line 71-73 text size changes
Agree – see track changes

**REVIEWER 3**

**Editor's comments:**
The manuscript has been reviewed by three reviewers, including myself and has received detailed critique. In addition to the criticism detailed in the reports of Drs. Kenning and Keyworth, please consider the following

1. **Background:**
   - p. 3, any impact from the environment is not discussed.
   - P 4, impact from stress is not discussed

2. **Methods**
   - P 5 limit information about the RCT since it has very little bearing on the current results.
   - P 5, why was the inclusion criteria set for only one risky health behavior, and not more, considering the focus of the study?
   - P 5 process of selecting patients is not clearly described. For example, when did the practice receptionist actually asked a patient to fill out a survey?
   - Statistics, why were non-malleable factors, e.g., gender, used as predictors rather than control variables?

   More detail has been added, see track changes
   - It was not our purpose here to find predictors that patients could alter to aid them reduce their chances of additional risky behaviours, but simply that we wanted to discover which factors were predictive so that we could identify which groups were at higher risk. We hypothesised that
### 3. Results

Data in Table(s) are reported in too much detail in the body of the text. I don’t think I agree with this.

### 4. Discussions

Be specific as to number of risky behaviors being Discussion.

E.g. the combination of risky behaviors does not show a very high prevalence, although it is written in the ms "highly prevalent", l 262.

Expand discussion as to what is considered "gold standard" screening in primary care, l 303.

Time constrain is being discussed on p 10. But, did the present screening tool substantially decrease the time for identifying risky behaviors?

### Abstract:

Please include an abstract as the second page in your manuscript file (directly following the title page). Please format your abstract according to the guidelines for authors. [http://www.biomedcentral.com/authors/authorfaq/format](http://www.biomedcentral.com/authors/authorfaq/format)

these factors could have an influence on the levels of risky behaviour and were thus included in the model.

<table>
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<th>What p value was set to determine significant differences?</th>
<th>0.05 – added in track changes</th>
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<td>3. Results</td>
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<tr>
<td>Abstract:</td>
<td>This will be addressed</td>
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