Author’s response to reviews

Title: Psychosocial and demographic predictors of adherence and non-adherence to health advice accompanying air quality warning systems: A systematic review

Authors:

Donatella D'Antoni (Donatella.D'Antoni@kcl.ac.uk)
Louise Smith (louise.7.smith@kcl.ac.uk)
Vivian Auyeung (vivian.auyeung@kcl.ac.uk)
John Weinman (john.weinman@kcl.ac.uk)

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Author’s response to reviews:

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Philippe Grandjean, University of Southern Denmark, Denmark
David Ozonoff, Boston University School of Public Health, USA

Editors in Chief
Environmental Health

Dear Dr. Grandjean, Dr. Ozonoff, and Dr. Semenza,

Thank you for considering a revised version of Manuscript ID ENHE-D-17-00138 entitled ‘Psychosocial and demographic predictors of adherence and non-adherence to health advice accompanying air quality warning systems: A systematic review’.

We thank the reviewers for their kind and insightful comments and offer the following replies. In brackets are the page and line numbers indicating the position in the manuscript where the amendments have been made. Changes made to the manuscript are highlighted using the track changes mode in MS Word.

Reviewer reports:
Reviewer #1: This manuscript provides a review of the psychosocial and demographic factors that influence the adherence to health advise that accompanies an air quality warning. The authors concentrated their review to studies that included participants who were aware of the warning systems, meaning that the overall number of studies included in the review is quite small. However, the studies included, and subsequent analyses undertaken, result in a comprehensive set of findings around the facilitators and barrier to adherence to air quality warning systems that will provide a useful resource to those developing air quality warning systems. My suggestions for revisions are minor and concentrate around clarification of methods, and clarity of language, rather than any suggestions for reanalyses.

Specific comments

* Whilst the manuscript in general is well written, the abstract is quite difficult to read, with long confusing sentences. I suggest a re-write. In particular the conclusion portion does not include any of the important findings of the study, instead it merely states what has been done and how it can be used. Methods- what do you mean by "inception"? Suggest just including the time period covered.

We agree that the abstract included some long sentences, which can make them quite difficult to read. We have therefore, tried to divide sentences into smaller ones, where necessary, and simplified some other sentences. We agree also that the conclusion did not include the main findings, so we have corrected according to your suggestions. The methods section was also amended as per your comment on the term ‘inception’ (see page 2).

* Page 3, line 3- define WHO

This point has been addressed accordingly (see page 3, line 5).

* Ref 1 form the WHO is a report rather than a "news release".

This point has been addressed accordingly (page 3, line 5).

* Page 3, line 12- "In this context…" I find this sentence very difficult to understand. What are you informing the general population of?

We agree that this sentence is incomplete and therefore difficult to understand. We have corrected it as necessary (page 3, line 14).
* Page 5, line 6- "This systematic review.." are you referring to the current paper or the ref cited above? This sentence does not make it clear. Also the use of "themselves".

We agree that this paragraph is confusing and therefore we have adjusted as necessary to add clarity (page 5, line 10).

* Introduction- It is not made clear that the manuscript is a review until the end of the introduction. This needs to be mentioned earlier.

We agree with this point. To address this issue we have clarified the aims of the study earlier on, on page 3, line 21.

* The review included studies undertaken over a long period of time. How may this have influenced results?

Thank you for highlighting this aspect. To answer your comment, we have discussed this point in the Limitations section (page 24, line 7).

* Did the method of delivery of the air quality warning influence responses?

We thank the reviewer 1 for this fair comment. We have tried to address this point by focusing on two aspects of the delivery method: message tailoring and delivery channel.

Message tailoring: On page 8, line 2, and page 10, lines 12-15, we have clarified what we meant by tailored messages, and which studies focused on these types of messages. We also felt it was appropriate to say a bit more about the potential impact of tailored messages on adherence rates (page 22, line 22- page 23, lines 9-12).

Delivery channel: we reported adherence rates for the group of studies assessing actual adherence to health messages delivered using personal delivery methods only with the studies using non-personal delivery methods (page 10, line 15). The data synthesis section (page 8, line 23) and discussion section (page 23, line 6) were updated accordingly.

* Given most studies included in the review were assessed to have moderate to high biases I would suggest expanding this section to discuss these biases in more detail, and how they may influence results.
We agree that we could have been a bit more specific when discussing the potential impact of the risk of bias on our results. We have therefore tried to clarify this on page 11, line 20.

* As with the abstract the conclusions section is very short and does not include a summary of the main findings of the research. I suggest this is expanded.

We again agree with this point. We have expanded the conclusion section to include a summary of the main results (page 24, line 18).

We are aware that your journal discourages the use of subheadings in the Results section. We have therefore removed the majority of subheadings from this section. However, as we are reporting a variety of results, we feel that leaving just the main subheadings would be beneficial to the reader.

We again thank you for allowing us to submit a revised version of the manuscript and look forward to hearing from you in the future.

Sincerely,
The authors

Corresponding author
Donatella D’Antoni, MRes, MSci
Clinical Practice & Medication Use Group
Institute of Pharmaceutical Sciences
King’s College London
Franklin-Wilkins Building
150 Stamford Street
London
SE1 9NH
Donatella.D’Antoni@kcl.ac.uk