Author’s response to reviews

Title: Adverse mental health outcomes in breast cancer survivors compared to women who did not have cancer: systematic review protocol

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Author’s response to reviews:

Reviewer #1

1. General comments:

This is a very well-written and constructed protocol.

Overall, the methods are relevant and reported in adequate detail that replication of the review would be facilitated.

Thank you. We welcome the overall evaluation on our manuscript. Please see our answers below to each specific comment.

2. Specific comments:

i) Authors should consider searching additional databases i.e. CINAHL and Social Sciences Citation Index which may have potentially relevant papers.

We have included the two databases suggested by the reviewer in the data sources (please see page 6, lines 146-7).
ii) authors should consider providing a rationale for including cancer survivors one-years post-diagnosis. Definitions in the literature suggest from the point of diagnosis or once treatment with curative intent is completed an individual is known as a survivor.

We will include studies in which all women were diagnosed at least one year previously to assess the long-term effect of the diagnosis and cancer treatment on the women’s mental health. A previous systematic review showed that 30-40% of the patients in oncological settings had a mood disorder (Lancet Oncol. 2011 Feb;12(2):160-74). Our interest is to evaluate the effect it may have in the years after initial treatment is completed, when many women return to their pre-cancer routines and have to cope with the iatrogenic effects of the cancer treatments, in addition to the fear of cancer recurrence and death. The precise moment when treatment with curative intent ends is often unknown, so researchers commonly use a fixed point in time to capture, in a pragmatic way, the moment at which the main course of treatment is likely to have been completed. We also opted to include only studies that reported the time elapsed since diagnosis because the effect of having been diagnosed and treated for breast cancer may also vary over time. This arbitrary cut-off will be systematically applied to all studies. We have now clarified this in the manuscript, please see page 9, third paragraph.

iii) the description of the comparator for the search strategy in the abstract and the methods should be the same.

Thank you for spotting this. The comparators are now the same, please see page 6, line 150.

iv) stipulate how discrepancies in data extraction will be resolved (in the data extraction section)

Done. Please see page 7, lines 203-4.

v) funnel plots should only be undertaken if there are at least 10 studies

We agree. We have changed the manuscript accordingly (please see page 8, line 235).

Associate Editor

1. Specific comments:

Thank you for your submission. In addition to the comments from reviewer #1, I have two minor comments:
Typo? "one-point in time" should be "one point in time"?

Yes, we thank the Editor for spotting this mistake. We have now corrected it (please see page 7, line 200).

"If a prospective study provides data for more than one-point in time, we will abstract all information but only the first point after the first year of survivorship will be considered for analysis." - a rationale for this would be useful - do you expect the effect to differ over time? Is there a optimal time point for observing an effect, or a clinically relevant time point, and if so would it be better to select this time point? I am not an expert in this field, but wonder if it would be sensible to plan subgroup analyses around time point of outcome.

We thank the Editor for this good point. A few studies have suggested that the risk of mental disorders may decrease over time and thus sub-group analyses by time since diagnosis is sensible. We have added this to our protocol, please see page 8, lines 227-230.