Author’s response to reviews

Title: Cancer and heart attack survivors' expectations of employment status: results from the English Longitudinal Study of Ageing

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Author’s response to reviews:

We would like to thank the editor and the reviewer for their remarks on our manuscript. We have taken them into account and accordingly have made changes to the manuscript. In this letter, we will respond to the issues raised.

Editor comments

1. Please rename the 'Ethics, consent and permissions' section to 'Ethics approval and consent to participate'.

Answer: We have changed this in the text, in the ‘Declarations’ section.

2. Please provide a 'Consent for publication' section in the 'Declarations' section as detailed here: https://bmcpublichealth.biomedcentral.com/submission-guidelines/preparing-your-manuscript/research-article

Answer: We have added the ‘Consent for publication’, in the ‘Declarations’ section.
Reviewer comments

1. At baseline 46% of the cancer survivors was employed, and 41% of those who survived a heart attack. It is not mentioned what the employment status at 2-year follow-up was.

Answer: The numbers were mentioned in the tables, but based on this comment of the reviewer, we have also added the numbers (both the baseline and follow-up numbers) to the main text.

2. Multiple regression analysis showed that employment status (not employed vs employed) at baseline being by far the most important determinant of employment status at follow-up in both groups. Because of the design, it is difficult to interpret this as a sign that only those with employment also get employment support after cancer / heart attack, or that those who are already jobless due to the cancer/heart attack or not at baseline, will not easily find employment in the next two years in the UK.

Answer: We totally agree with the reviewer that our findings cannot be interpreted as a sign that only those with a job will receive employment support after cancer and those without a job won’t. However, since we made major changes to the analyses (and excluded employment status at baseline), this comment is not relevant anymore.

General

Employment after a major diagnosis is an important topic. It is also important to compare different diagnosis, to be able to filter the diagnosis specific and general determinants. However, there are three major problems with the current study, which hampers drawing conclusions.

1) The design is invalid to test the determinants of employment status at follow-up. The sample is heterogeneous at baseline: the employment status varies. Thus when predicting employment status at follow-up, it is unclear whether one explains getting employment or loosing employment. It cannot be ruled out that these two developments have different determinants.
Including employment status at baseline as determinant does not correct this problem. It even worsens the power of the analysis of the possible effects of the other determinants by being extremely powerful. I recommend to split both samples at baseline in an employed subgroup and an unemployed subgroup, and test the determinants in both subgroups.

Answer: We discussed this extensively within the project team and initially decided to perform the analyses for both subgroups, as suggested by the reviewer. However, since the number of survivors not at work at baseline, but at work at follow-up, is extremely small (cancer survivors N = 7; heart attack survivors N = 4), we decided to conduct the univariate and multivariate analyses only in those at work at baseline. That is, most analyses in those not at work at baseline did not run at all or resulted in inaccurate findings. Based on the new findings, we have rewritten the whole Results section and parts of the Discussion, and have made adjustments to the Tables.

2) The data do not allow to study return to work. The data include employment status and sickness absence or disability pension status are not included. Thus, it cannot be studied whether persons return to work or not after sickness absence. With the current data not only work disability but also economical unemployment due to external factors is studied. In the manuscript, RTW and employment status are both used and confused. I recommend to only use employment status and be careful when comparing to RTW studies.

Answer: We agree with the reviewer that the data are not suitable for exploring return to work, and we also understand that mentioning return to work might cause confusion. We therefore have removed this concept almost entirely from the text. However, we decided to remain ‘return to work’ a few times, specifically, when we are referring to previous studies (that are actually exploring return to work) to place our research question and findings in a broader context.

3) The theoretical framework is a behavioral, individual model. This is interesting, but the current findings do not support this model to a high extent. Moreover, employment status is not a solely individual choice but highly dependent on economical factors, labour market characteristics and policies (e.g. policies for supporting employment of work disabled persons). These characteristics might be country specific. I recommend to contextualize the study's objective by a short description of UK employment policy for cancer and heart attack survivors
and to discuss the findings in the light of the UK policies and labour market characteristics. To what extent do factors other than personal factors play a role and to what extent will the findings be transferable to other countries?

Answer: We agree with the reviewer and have added a whole new paragraph to the Introduction section of our manuscript, explaining UK employment policy. Also, we have added a remark to our limitation section regarding the generalizability of the findings.

Minor general comment:

4) Consider replacing 'heart attack' by 'myocardial infarction', a more common term in the literature. Explain that it is based on self-diagnosis.

Answer: We understand the comment of the reviewer, but we would like to adhere to the terminology used in the ELSA study.

Abstract

5) When the analyses are improved (see comment 1), the directions of the statistical effects can be mentioned in the results.

Answer: Done

6) Regarding the conclusions: there is no similarity in factors, only one factor is found to be important but this is because of a flaw in the design.

Answer: We agree with the reviewer and have removed this statement from the text.
7) Regarding conclusions: emphasize that these are results from the UK.

Answer: Done

Background

8) Be careful with studies on RTW as the data used are not about RTW.

Answer: See answer to general comment #2

9) Be careful with theoretical notions on RTW as the data are about employment status.

Answer: See answer to general comment #2

10) Be careful to make firm statements on RTW after sickness absence in terms of an individual decision (lines 27-32), since the extent to which this is actually an individual decision varies per country (e.g. in the Netherlands, Norway and some areas in Canada, it is a team decision by law/policy) and in all countries, external factors will also affect this decision. Lines 1-5 on p. 5 suggest persons to possess resources and opportunities, but persons are also given / have access to resources or opportunities or not.

Answer: We agree with the reviewer and hope that the changes we have made to the text clarify that it is not only an individual decision, but that other (e.g., sociodemographic, work-, health-related) factors also play an important role. That said, the statement regarding resources and opportunities applies to the concept self-efficacy as described by Ajzen, and is used here merely as background information.
11) The UK context need to be addressed briefly (what employment support for employees with cancer/MI; what support for self-employed?: length of guaranteed employment after a medical condition)

Answer: See answer to general comment #3

Methods

12) Divide the groups in subgroups on the basis of their baseline work status.

Answer: See answer to general comment #1

Results

13) When the analyses are improved (see comment 1), the directions of the statistical effects can be mentioned in the results.

Answer: Done

14) Describe employment status at follow up of both groups

Answer: Done
Discussion

15) Regarding the conclusions: there is no similarity in factors, only one factor is found to be important but this is because of a flaw in the design.

Answer: We agree with the reviewer and have removed this statement from the text.

16) Discuss the behavioral theoretical framework presented in the background in the light of the (new) results.

Answer: In our adjusted analyses, expectation of being at work was no longer identified as an important determinant for employment status two years later in cancer survivors. Accordingly, we have made changes to the Discussion section and also referred to the theoretical framework as presented in the Introduction.

17) Discuss the measure for Expectations, it seems more a measure for sustainable employability than for expecting to get back to work after illness. Compare with studies which tested the ASE model on RTW and be clear about the differences.

Answer: The expectation question was self-formulated by the researchers of the English Longitudinal Study of Ageing. We agree with the reviewer that it also relates to sustained employability, but it was the variable within ELSA that was closest to the expectation concept. That said, we have added to the Discussion that more specific measures of expectation should be explored in future research, and we elaborated on the effect of the ASE components on RTW. In addition, we included the imprecise way expectation has been measured in this ELSA study in our limitation paragraph.
18) Regarding difference between cancer and MI, there is a vast amount of empirical studies on depression in cardiac patients and worsened work and health outcomes (e.g. Shrey ea 2000, Kimble ea 2001, Kamphuis ea 2002, Soderman ea 2003, Steenland ea 2004, Earle ea 2006, Hemingway ea 2007, Slebus ea 2007, Schofield ea 2008). It does not seem relevant to refer to a study on heart failure and moreover, an effect of depression on work status is not equal to prevalence of depression. When the prevalence is low, the effect can still be enormous and vice versa (p. 16 lines 2-17).

Answer: We agree with the reviewer. However, based on the adjusted analyses, we have rewritten this paragraph. That is, the part on depression has been removed entirely, since no association could be found anymore.

19) There is also a large amount of studies on gender differences in cardiac conditions (Appelman etc) and their work outcomes (Mittag ea 2001, Kamphuis 2002 etc.).

Answer: Thank you for pointing this out to us. We included an even more recent study on gender differences between women and men with cardiac conditions and their work outcomes, i.e., Dreyer et al (2016).

20) Regarding conclusions: emphasize that these are results from the UK and discuss the specific problems with employment support among the groups studied and transferability of findings to other countries.

Answer: We have made changes to the text and have emphasized throughout the manuscript, including the conclusion, that this is a study that was performed in the UK. Also, we have addressed the transferability of findings to other countries in the limitation section of our paper.
21) Regarding conclusions: in the current dataset employees and self-employed are mixed. Often, different outcomes are found for these groups. To what extent has this affected the results? To what extent is the expected part of self-employed in this dataset (relatively more self-employed in the UK compared to Europe, less compared to USA?) comparable with Europe / USA?

Answer: Of the 159 cancer survivors at work, 19 persons indicated to be self-employed (12%); of the 78 heart attack survivors at work, 16 indicated to be self-employed (21%). We agree with the reviewer that employees who work for an employer and those who are self-employed can have different outcomes. Therefore, we have added a comment about the presence of different types of employment in our dataset (i.e., working for an employer or being self-employed) to the limitation section of our manuscript.