

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Determinants of return at work of breast cancer patients: results from the OPTISOINS01 French prospective study.
AUTHORS	Arfi, Alexandra; Baffert, Sandrine; Soilly, A-L; huchon, cyrille; Reyal, Fabien; Asselain, Bernard; Neffati, Souhir; Rouzier, Roman; Hequet, Delphine

VERSION 1 – REVIEW

REVIEWER	Maryse Caron PhD candidate Université de Sherbrooke Canada
REVIEW RETURNED	12-Dec-2017

GENERAL COMMENTS	<p>1- The aim of the study is clearly stated. However, some important concepts are not well described and that make it hard for me to get precisely what you wanted to study. As an exemple, in the intro, you talk about maintenance at work but your results are about sick leave. It would be easier for me if I knew what you mean by «maintenance at work».</p> <p>2- Your abstract is good but it would be even more completed if you add the principal characteristics of your sample.</p> <p>4-In general, the methods are well described. However, there are two things that need to be rectified: to give a explanation on how the «perceived quality of reintegration» has been measured and to specify where were considered participants who had precisely 155 days of sick leaves (longer sick leaves or shorter sick leaves).</p> <p>8- 8 references / 36 are older than 10 years and more than the half of the references used in the intro to establish the problematic are 10 years and older.</p> <p>10- Maybe it is me that do not understand but it seems to me that there are inconsistencies between data presented in the Tables.</p>
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REVIEWER	MDJ Wolvers AMC Amsterdam, the Netherlands; Helen Dowling Institute Bilthoven, the Netherlands
REVIEW RETURNED	03-Jan-2018

GENERAL COMMENTS	<p>This manuscript addresses an interesting question on the factors that are associated with maintaining work after initiation of treatment for breast cancer. In enjoyed reading it.</p> <p>General comments</p> <p>It is not clear why the analyses were performed on dichotomized data. A lot of information is</p>
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	<p>neglected as such, which is wasteful and, to the best of my knowledge, unnecessary as more sophisticated methods are available. Please explain this decision and/or adjust.</p> <p>I am not sure (but I am not a native speaker) whether 'maintenance at work' and 'cessation at work' are proper/best phrases to describe the subject. Please verify. Some of the references are outdated and can be replaced/complemented with newer/more relevant ones.</p> <p>Extra, non-parametric tests are performed for two (seemingly randomly chosen) measures. Are these analyses performed 'post-hoc'? Why did you pick only these? Please explain.</p> <p>It was unclear how the data was gathered. Is it possible to elaborate on the log book, how often participants were required to fill it in and what questions were asked (that are also used for this study)?</p> <p>Introduction</p> <p>P7, L37: 'have not been clearly identified': please make sure you incorporate more information on what is already known (throughout the introduction). A lot of qualitative as well as quantitative work is already available in the literature.</p> <p>P7, L46: 'during BC treatment'; this aim is very generic. Also, from what I understand, predominantly pre and post assessments are actually reported (except problems with coworkers?). Please mark out more specifically which factors you are interested in.</p> <p>Methods</p> <p>Report whether tests were one-sided or two-sided. Were there any adjustments for multiple comparisons? The one-year work questionnaire (P12, L3) was not mentioned in the methods section. Was it part of the log book?</p> <p>Results</p> <p>The results are very clear, but may allow a more compact representation.</p> <p>The results on cost of sick leave are very briefly described. It was not clear from the methods section that it would only lead to a comparison of the one factor that came out as 'significant' from multivariate analyses. Please elaborate on these analyses.</p> <p>Discussion</p> <p>One of the main subjects from the discussion is the booklet, however the permutation analyses showed no difference between groups; please elaborate on these contradicting findings before accepting the results from the univariate analysis as a conclusion. Please make explicit what this study added to the body of literature on the matter, as well as how parts of it may conflict with existing literature.</p> <p>P16, I19: 'RTW is a difficult process'; this was not a research aim and is to my opinion not supported by the results.</p> <p>P17, I35: "The work and cancer information booklet appeared to help patients return to work with significantly shorter sick leave." The study design does not allow for this conclusion. Please elaborate</p>
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	<p>on why patients did not receive a booklet and how it may have biased any results. Please support the following statements with literature or rephrase: - P17, I37: "The first key ... anticipation". - P18, I10: "Patient support appears to be one of the keys to successful RTW" P19, I26 – 34: "Moreover, BC Working woman". This phrase is subjective and stigmatizing. The literature that is referred to does not suggest that changing priorities or the decision to reduce working hours is related to being a woman, mother or wife. Conclusion For me the research aim and reasoning provided does not lead to this conclusion. If the authors do feel this is the correct conclusion I would like to see some more elaboration on the statements that are made in this phrase "One of the keys to in the management of maintenance at work". Finally I hope you find these comments useful. I do believe that these concerns and questions can be answered and addressed so that there is a good opportunity for successful revision.</p>
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VERSION 1 – AUTHOR RESPONSE

Response to reviewers.

Dear Editor:

I am pleased to resubmit for publication the revised version of 2017-020276 manuscript, entitled "Determinants of maintenance at work of breast cancer patients: results from the OPTISOINS01 prospective study".

I appreciated the constructive criticisms of the reviewers. I have addressed each of their concerns as outlined below.

Reviewer: 1

Reviewer Name: Maryse Caron

Institution and Country: PhD candidate, Université de Sherbrooke, Canada

Comments in the decision letter:

1- The aim of the study is clearly stated. However, some important concepts are not well described and that make it hard for me to get precisely what you wanted to study. As an exemple, in the intro, you talk about maintenance at work but your results are about sick leave. It would be easier for me if I knew what you mean by «maintenance at work».

We clarified this point in the tetx (hisghlighted in the intro). We know that return to work after cancer is difficult, therefore, we need to encourage maintenance at work during cancer. Studying the factors associated with maintenance at work or sick leave during cancer could help to identify patients that need an active support during cancer.

2- Your abstract is good but it would be even more completed if you add the principal characteristics of your sample.

We added the principal characteristics in the results part of the abstract (highlighted in blue)

4-In general, the methods are well described. However, there are two things that need to be rectified: to give an explanation on how the «perceived quality of reintegration» has been measured. We used a standardized self-questionnaire (income change, difficulties at work with coworkers and/or with superiors...). This has been specified in the manuscript (methods section)

and to specify where were considered participants who had precisely 155 days of sick leaves (longer sick leaves or shorter sick leaves).

Patients with exactly 155 days of sick leaves were considered in the group longer than 155 days. We had 2 groups: longer or equal to 155 days and less than 155 days. This has been corrected in both text (methods) and results (table 3).

8- 8 references / 36 are older than 10 years and more than the half of the references used in the intro to establish the problematic are 10 years and older.

It is correct. We added latest data. However, this illustrates both that reference studies are still useful and that only few recent papers highlighting new concepts in this discipline are available in literature. Moreover, most of the references used in the discussion are more recent.

10- Maybe it is me that do not understand but it seems to me that there are inconsistencies between data presented in the Tables.

The studied populations considered are not the same. We modified the flow chart to clear this point (presented below)

Comments in the PDF file (manuscript):

Abstract:

What do you mean by «maintenance»? Maintenance as to keep on working during treatment or to maintain an employment tie?

Yes, maintenance as to keep on working during treatment

What do you mean by BC management? BC treatment? BC experience?

Yes BC treatment. This has been modified in the manuscript (abstract)

Can you elaborate a bit more on the principal characteristics of the study's sample?

We added the principal characteristics in the results part of the abstract (highlighted in blue)

Introduction:

In general, it would be a lot easier for the readers if you could elaborate on the definition of principal concepts as: return to work, work maintenance, breast cancer management.

This has been clarified in the introduction section

It is hard for me to understand how you conceptualize return to work? As a process? As an event? Can you elaborate a bit more about that?

Return to work is only the time you return to work after sick leave. This is an event. These concepts (return to work or maintenance to work) are usually always considered the same way in the literature about cancer and work.

The link you are doing here is not obvious for me. Can you elaborate a bit more on how you think that by studying work maintenance results will have the potential of helping healthcare professionals to more accurately identify patients at risk of RTW difficulties, and thus that have not maintained themselves at work?

We know that return to work after cancer is difficult, therefore, we need to encourage maintenance at work during cancer. Studying the factors associated with maintenance at work or sick leave during cancer could help to identify patients that need an active support during cancer. It is not for themselves, but based on the factors identified on a population, we can help other patients with the

same cancer or sociodemographic characteristics to keep on working during BC treatment. This has been clarified in the introduction section.

Methods:

How is perceived quality of reintegration measured?

We used standardized self-questionnaire (income change, difficulties at work with co-workers and/or with superiors...). This has been added in the manuscript (method section).

So where were considered participants who had precisely 155 days of sick leaves?

Patients with exactly 155 days of sick leaves were considered in the group longer than 155 days. We had 2 groups: longer or equal to 155 days and less than 155 days. This has been corrected in both text (methods) and results (table 3).

Results:

To my understanding, there are some data that are not consistent between data from table 1, 2, 3 and supplemental table 1.

We don't consider the same populations. Here the flow chart modified in the revised version, to explain the different studied population from Optisoins01

Does that mean «missing data»? If so, you don't have the type of occupation of almost the quarter of your sample. It seems to me to be alot. Can you explain these missing data? Is there anyway to retrieve these information?

Correct, we had a lot of missing data for the occupational type. Patients were directly asked for this question. We don't have the possibility to retrieve this information. However, the analyses on sick leave duration focused only on the patients with complete data on work activity (comparable population, as shown in the supplemental table 1).

In Table 2, it is mentioned that 165 participants had a sick leaves. So why the univariate analysis was performed on only n=156 (79 participants with less than 155 days of sick leaves + 77 participants with more than 155 days of sick leaves).
explained in the modified flow chart above

Discussion

There are interesting studies about the perception of cancer survivors on supporting practices put in place by their supervisor to support them RTW. It would be interesting if you could elaborate a bit on that matter.

Yes, this topic is also interesting. However, we focused our analysis on the factors that determinate why a patient keep on working or not. We will develop this part for sure in the next analysis based on our prospective study Opticoach.

Reviewer 2

Reviewer Name: MDJ Wolvers

Institution and Country: AMC Amsterdam, the Netherlands; Helen Dowling Institute Bilthoven, the Netherlands

This manuscript addresses an interesting question on the factors that are associated with maintaining work after initiation of treatment for breast cancer. In enjoyed reading it.

I hope you find these comments useful. I do believe that these concerns and questions can be answered and addressed so that there is a good opportunity for successful revision.

General comments

It is not clear why the analyses were performed on dichotomized data. A lot of information is neglected as such, which is wasteful and, to the best of my knowledge, unnecessary as more sophisticated methods are available. Please explain this decision and/or adjust.

We dichotomized the population based on sick leave duration. The cut-off chosen was the median duration of sick leave in the population. This way, we could first identify in an univariate analysis factors associated to sick leave longer than the median and then confirm or not the independent association between these factors and the sick leave duration in multivariate analysis.

Dichotomisation of continuous outcomes can be criticised because of the loss of information incurred. However, to communicate a comparison of risks, dichotomised outcomes may be necessary. Moreover, it has been shown that for normally distributed data (true in this case), we can use dichotomization without losing information or precision.

I am not sure (but I am not a native speaker) whether 'maintenance at work' and 'cessation at work' are proper/best phrases to describe the subject. Please verify.

The manuscript was reviewed before submission by a native speaker who confirmed it is the appropriate terminology.

Some of the references are outdated and can be replaced/complemented with newer/more relevant ones.

It is correct. We added latest data. However, this illustrates both that reference studies are still useful and that only few recent papers highlighting new concept in this discipline are available in literature. Moreover, most of the references used in the discussion are more recent.

Extra, non-parametric tests are performed for two (seemingly randomly chosen) measures. Are these analyses performed 'post-hoc'? Why did you pick only these? Please explain.

We chose this 2 groups based on the median of sick leave duration (=155 days) in the studied population.

It was unclear how the data was gathered. Is it possible to elaborate on the log book, how often participants were required to fill it in and what questions were asked (that are also used for this study)?

Patients were asked to fill the questionnaire on work prospectively during the 1-year follow-up. There were called by phone, twice a year, by a clinical research collaborator to remind them to fill the questionnaire, which was collected at the end of the study. This has been added in the text (method section). The questionnaires were standardized self-questionnaire (income change, difficulties at work with co-workers and/or with superiors...).

Introduction

P7, L37: 'have not been clearly identified': please make sure you incorporate more information on what is already known (throughout the introduction). A lot of qualitative as well as quantitative work is already available in the literature.

True, we modified this sentence in the text

P7, L46: 'during BC treatment'; this aim is very generic. Also, from what I understand, predominantly pre and post assessments are actually reported (except problems with coworkers?). Please mark out more specifically which factors you are interested in.

Yes, we studied factors during and after BC treatment, this was changed in the text. The factors evaluated are described in the method section (highlighted in blue).

Methods

Report whether tests were one-sided or two-sided. Were there any adjustments for multiple comparisons?

The tests were 2-sided tests (added in the method section). We considered adjusted p-value for multiple comparisons (added in the method section).

The one-year work questionnaire (P12, L3) was not mentioned in the methods section. Was it part of the log book?

Yes, this has been explained in the manuscript, and more details given on the 1-year questionnaire (highlighted in blue in the method section).

Results

The results are very clear, but may allow a more compact representation.

We decided to provide all available data and information the studied population, as readers can compare their population to the Optisoins01 population.

The results on cost of sick leave are very briefly described. It was not clear from the methods section that it would only lead to a comparison of the one factor that came out as 'significant' from multivariate analyses. Please elaborate on these analyses.

We performed univariate and multivariate analysis to find the costs' determinants. However, only adjuvant chemotherapy was associated to higher costs (non-medical direct costs linked to sick leave). The part of the results concerning costs have been developed (highlighted in blue in the text).

Discussion

One of the main subjects from the discussion is the booklet, however the permutation analyses showed no difference between groups; please elaborate on these contradicting findings before accepting the results from the univariate analysis as a conclusion.

Chemotherapy is the main factor of sick leave duration. Therefore, even if the booklet was a significant factor of shorter sick leave in univariate analysis, it was not significant in the multivariate analysis because chemotherapy was a really strong determinant of work activity. Unfortunately, our action is limited on chemotherapy administration. However, we can develop actions to support patients, as the booklet example. This is the reason why we develop on this point even if the multivariate analysis could not be conclusive on this. This was developed in the discussion section (highlighted in blue).

Please make explicit what this study added to the body of literature on the matter, as well as how parts of it may conflict with existing literature.

This study described in a prospective way work activity (sick leave/maintenance) during BC. Moreover, this add information on the determinant of sick leave duration and costs of sick leave, which are rarely described in this kind of studies .

P16, I19: 'RTW is a difficult process'; this was not a research aim and is to my opinion not supported by the results.

Correct, we removed this sentence.

P17, I35: "The work and cancer information booklet appeared to help patients return to work with significantly shorter sick leave." The study design does not allow for this conclusion. Please elaborate on why patients did not receive a booklet and how it may have biased any results.

The booklet was available for all patients of all centers, accessible on internet. However, some patients received the booklet and others not, independently of the center type.

As developed above, this factor was not an independent determinant of sick leave duration because of the strong impact of chemotherapy

Please support the following statements with literature or rephrase:

- P17, I37: "The first key ... anticipation".

- P18, I10: "Patient support appears to be one of the keys to successful RTW"

We removed these too general sentences.

P19, I26 – 34: "Moreover, BC Working woman". This phrase is subjective and stigmatizing. The literature that is referred to does not suggest that changing priorities or the decision to reduce working hours is related to being a woman, mother or wife.

Correct, we removed this part

Conclusion

For me the research aim and reasoning provided does not lead to this conclusion. If the authors do feel this is the correct conclusion I would like to see some more elaboration on the statements that are made in this phrase "One of the keys to in the management of maintenance at work".

We adjust the conclusion in the manuscript

Finally

I hope you find these comments useful. I do believe that these concerns and questions can be answered and addressed so that there is a good opportunity for successful revision.

Best regards,

Delphine Héquet, corresponding author

VERSION 2 – REVIEW

REVIEWER	Maryse Caron Université de Sherbrooke Sherbrooke, Québec, Canada
REVIEW RETURNED	09-Feb-2018

GENERAL COMMENTS	Good work! Your article addresses a very important matter. There is just 4 itsy bitsy tiny things that I wish you can change (see my comment in the attach file). Best regards, Maryse Caron -The reviewer also provided a marked copy with additional comments. Please contact the publisher for full details.
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REVIEWER	M.D.J. Wolvers AMC, Amsterdam, The Netherlands HDI, Bilthoven, The Netherlands
REVIEW RETURNED	22-Feb-2018

GENERAL COMMENTS	Thank you for the concise comments and actions to the previous reviews. I still have some minor concerns with the manuscript, but I am confident that it can be revised easily. Thank you for this valuable work. Kind regards. Comments
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	<p>Not sure if the conclusion in the abstract (on screening) and in the manuscript (on personalized coaching) match the research question that was studied.</p> <p>The main outcome is 'duration of sick leave' or 'time to return to work' and not 'maintenance at work'. The term 'maintenance at work' is confusing to me. In the reaction to the previous review, the authors state that it is a common term. I do not know any references that use that term for this outcome, I would strongly recommend the authors to reconsider the use of that term in the title and throughout the manuscript.</p> <p>Page 18, line 5 - 8: The strong impact .. analysis: These are separate models, this is not a justified way of representing the results. The model implies that both are independent factors.</p> <p>Minor comments: page 8, line 54: fill out? or fill in? I never know what it is, but not just fill <input type="checkbox"/> page 17, line 10: 'that is necessary in order to ensure survival' needs some nuance</p>
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VERSION 2 – AUTHOR RESPONSE

Paris, 26th February 2018

Dear Editor and reviewers, please find below the responses to the comments.

Editorial Requirements:

- Please revise your title to state the research question, study design, and location. This is the preferred format for the journal.

We added location in the title which already included question and study design.

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Maryse Caron

Institution and Country: Université de Sherbrooke, Sherbrooke, Québec, Canada

Please state any competing interests: None declared

Please leave your comments for the authors below

Good work!

Your article addresses a very important matter.

There is just 4 itsy bitsy tiny things that I wish you can change (see my comment in the attach file).

Best regards,

Maryse Caron

In my review of the first version of this manuscript, I gave you that comment:

« It is hard for me to understand how you conceptualize return to work? As a process? As an event? Can you elaborate a bit more about that? »

You answered:

« Return to work is only the time you return to work after sick leave. This is an event. These concepts (return to work or maintenance to work) are usually always considered the same way in the literature about cancer and work. » Actually, this is incorrect. Return to work can be seen in the literature conceptualizes as an event (which seems to be your definition) or as a process. In recent years, many studies on return to work after cancer or after other health problems (such as mental health problems and musculoskeletal disorders) conceptualized return to work as a process. This is why it seems to me that it is important to specify how you conceptualized return to work in your study. This can be easily done in one sentence.

We added a sentence in the introduction section to clarify this point.

This link is still not obvious for me. Maybe you could change it for:

« The identification of factors that maintain patients at work during BC treatment could help healthcare professionals to more accurately identify patients at risk work-related difficulties in order to provide them with adapted support during BC management “

Thank you for this proposition, we changed it in the manuscript.

Comments 3 and 4: If this info is added to the table, I think it would be easier to understand your data

Thank you for this proposition, we changed it in the manuscript.

Reviewer: 2

Reviewer Name: M.D.J. Wolvers

Institution and Country: AMC, Amsterdam, The Netherlands, HDI, Bilthoven, The Netherlands

Please state any competing interests: None declared

Please leave your comments for the authors below

Thank you for the concise comments and actions to the previous reviews. I still have some minor concerns with the manuscript, but I am confident that it can be revised easily.

Thank you for this valuable work.

Kind regards.

Comments

Not sure if the conclusion in the abstract (on screening) and in the manuscript (on personalized coaching) match the research question that was studied.

We agree and removed the last sentence of the abstract's conclusion. However, we really wanted to open our article on the potential role of coaching and the need to study it; therefore, we kept the sentence on coaching in the conclusion

The main outcome is 'duration of sick leave' or 'time to return to work' and not 'maintenance at work'. The term 'maintenance at work' is confusing to me. In the reaction to the previous review, the authors state that it is a common term. I do not know any references that use that term for this outcome, I would strongly recommend the authors to reconsider the use of that term in the title and throughout the manuscript.

To be clearer, we removed the term "maintenance at work" throughout the text.

Page 18, line 5 - 8: The strong impact .. analysis: These are separate models, this is not a justified way of representing the results. The model implies that both are independent factors.

We modified this in the manuscript

Minor comments:

page 8, line 54: fill out? or fill in? I never know what it is, but not just fill

Fill in, correct. Modified in the manuscript

page 17, line 10: 'that is necessary in order to ensure survival' needs some nuance

We changed this sentence in the manuscript

Kind regards

Delphine Hequet, corresponding author