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Social Disparities in Post-diagnosis Health Behaviors of Iranian Breast Cancer Survivors: The Mediating Role of Psychosocial Factors as Potential Buffering Agents

Mohammad Tavakol, Mohammad Esmaeil Akbari, Reza Tayari Ashtiani, Majid Koosheshi, Maryam Khayamzadeh

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About this report

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1 Original submission

2 comments · 26 Jul 2020 – 27 Jul 2020

Associate Editor

MAJOR REVISION 26 Jul 2020

Dear authors,
Please revise your manuscript according to the reviewer's comments.

Editor-in-Chief

MINOR REVISION 27 Jul 2020

Dear authors,
Please revise your manuscript according to the reviewer's comments.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear referee,

Thank you for your helpful comments and suggestions. We have modified the manuscript accordingly, and detailed corrections are listed below point by point:

It is obvious that psychosocial factors are influential in health care, what is the necessity for your study?
Please refer to the study design in title.

In this study, we showed that psychosocial factors explain part of the inequality in health behavior as mediator variables. This means that by intervening and improving these psychosocial factors we can mitigate part of the social gradient in health behaviors. In other words, psychosocial agents can play a buffering role to enhance these behaviors without grand economic or educational structural changes. The important conclusion is that for the underclass and disadvantaged groups with almost no prospect of economic and educational change, these psychosocial factors could be of help to change their health habits and eventually their health and chance of survival.

It is not clear sampling method in this study.
Refer to the study location and data gathering time.

The information regarding the sampling method was added to the manuscript as requested.

What type of breast cancer did the Sample contain?

We did not gather information in this regard since we reached the conclusion that breast cancer types did not have a significant effect on survivors' diet and exercise habits. Also, other studies related to the health behavior of breast cancer patients have not paid detailed attention to the specific breast cancer types.

At what stage were patients?

The data regarding the stage of diagnosis is added to the manuscripts. It was part of the initial manuscript but was abridged because of the word limitation. Although, I have to say it is essential data and should not has been removed.

The level of significance should be mentioned in the methods of abstract.
Please refer to p value in abstract section.

The level of significance is added to the abstract ($P<.05$).

Some keywords are not selected from MESH.

The socioeconomic status is replaced with Social Class.

In abstract and introduction section please refer to research necessity and purpose, this study what dose benefit compare to previous studies?
The end of introduction, explain why important this study.

The rationale and purpose are added to the introduction and abstract sections.

Please explain about the phone telephone-administration process.

The telephone interview process is added to the method section: *the data was gathered by telephone interviews. The interview carried minimum risk. Nonetheless, two trained interviewers were ready to reduce the possible emotional distress. Oral consent was obtained by the interviewers reading an approved written script to the participant, and briefly explaining the purpose of the study, how they have been selected, and the estimated time of the interview. After ensuring that the participant adequately understood the objectives and the procedure, they began the interview.*

Please mention the reasons of choosing the statistical methods.

After considering the research hypotheses, the scale of measurement of the variables, and the relationship between the variables we decided to use linear regression as the appropriate multivariate method. The dependent variables in this study (diet and exercise) were dichotomous and logistic linear regression seemed the appropriate choice. Another reason for using the regression analysis was the mediating variables which are best analyzed by the regression technique.

Method of sample size calculation should be stated in the method section.

The information is added to the methods section per request.

What treatment did patients receive?

As mentioned in the selection criteria, patients had gone under surgery and were treated by one or both chemotherapy and/or radiotherapy. However, I revised the method section and mentioned types of treatment more clearly.

You stated that the information was collected by phone, was the clinical interview also by phone?

no clinical interviews were conducted in this study. To the best of our knowledge, the clinical information are gathered in person by the CRC staff and physicians.

Why the age criterion did not considered? This issue is very important in cancer patients.

As you put it correctly, the age is important in cancer studies. However, due to the nature of our study the age did not have a significant impact on the dependent variables (physical activity and diet) and the selected health behaviors in this study did not vary much by age. Women in all age-groups had a relatively similar diet and exercise patterns and the age of participation in these promoting behaviors was irrelevant. Most breast cancer survivors participate in light and moderate leisure time physical activities, which are doable in all age-groups.

Please mention to the assumptions for statistical test.

We checked the normality of the distribution and the measurement levels. The process was monitored by Dr. Koosheshi, a skilled statistician (the head of the Demography Department of the University of Tehran). We did not include the procedure in the manuscript due to the lack of space and word limitation.

Please mention the ethical considerations of your study (Ethical code).

This study was derived from a master's thesis submitted to the Faculty of Social Sciences of the University of Tehran. The study was approved by the Sociology Department of the University of Tehran which if effect considers and approves the University of Tehran Research Ethical Committee.

Please refer to research suggestions for future.

I revised and added the requested material.

Some errors in grammar, diction, and sentence structure exist in the paper, which impede reading.

A thorough revision was made per request.

Please use the new references, after 2017, PubMed, at least 10 new references.

I added some new references and also replaced some old references by the new ones.

Some references are not in accordance with Vancouver style completely.

Kowsar style was used which is a modified Vancouver style.

2 Revision 1

2 comments · 25 Jan 2021 – 25 Jan 2021

Associate Editor

MINOR REVISION 25 Jan 2021

Dear authors,
Please revise your manuscript according to the reviewer's comments. In addition, please:
1. Define all abbreviations when they are used for the first time in the manuscript body, such as SES, BC, etc.
2. Mention in the methods section which ethics committee approved the study.

Editor-in-Chief

MINOR REVISION 25 Jan 2021

Dear authors,
Please revise your manuscript according to the reviewer's and associate editor's comments.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear referee,

Thank you for your helpful comments and suggestions. We have modified the manuscript accordingly, and detailed corrections are listed below point by point:

Please mention to the design of study in end of the title.

The study design is added to the title.

Please refer to the study location and data gathering time in abstract section.

The Study location and data collection time is added to the abstract and highlighted.

In abstract you state: breast cancer types did not have a significant effect on survivors' diet and exercise habits, please refer to references for this sentence.

Studies regarding the association between breast cancer type and post-diagnosis exercise, usually investigate the effects of exercise on morbidity and mortality based on cancer type. We could not find any study focusing on a reverse causal relationship in which the effects of cancer type on the level of post-diagnosis exercise in cancer patients are investigated. In addition, because we excluded participants with chronic conditions and mobility problem any potential need to include cancer types was eliminated. In other words, any side effect or complication related to cancer type variations was eliminated due to our inclusion criteria.
Finally, below we have added the link to two studies in which the type of breast cancer has not been considered in studying health behaviors of cancer survivors. Especially, the first study (a systematic review) illustrates that cancer type in health behavior studies is not taken into consideration.

1. Chung C, Lee S, Hwang S, Park E. Systematic review of exercise effects on health outcomes in women with breast cancer. Asian Nurs Res (Korean Soc Nurs Sci). 2013 Sep;7(3):149-59. doi: 10.1016/j.anr.2013.07.005. Epub 2013 Aug 2. PMID: 25030253. https://www.asian-nursingresearch.com/action/showPdf?pii=S1976-1317%2813%2900041-8

2. Park JH, Lee DH, Kim SI, Kim NK, Jeon JY. Moderate to vigorous physical activity participation associated with better quality of life among breast and colorectal cancer survivors in Korea. BMC Cancer. 2020 May 1;20(1):365. doi: 10.1186/s12885-020-06819-z. PMID: 32357850;

PMCID: PMC7193341. https://bmccancer.biomedcentral.com/track/pdf/10.1186/s12885-020-06819-z.pdf

At what stage were patients?

The cancer stage is added to the results section and highlighted.

The level of significance should be mentioned in the methods of abstract. Please refer to p value in abstract section. The level of significance is added to the abstract (P<.05). This type of reporting is wrong. A significance criterion was considered 0.05.

The level of significance has been amended and highlighted as requested.

Were you aware of the population size of breast cancer patients who used Morgan's method to estimate the sample size?

The population (the patients' list obtained by researchers from the CRC) was comprised of nearly 800 breast cancer patients. After filtering based on the research inclusion criteria, around 17% of patients were excluded from the final list. Afterwards, the Krejcie and Morgan table was used to calculate the sample size.

You state: study the age did not have a significant impact on the dependent variables (physical activity and diet) and the selected health behaviors in this study did not vary much by age. Please refer to references for this sentence.

As you put it correctly, age effects are irremovable in cancer studies. To correct and clarify our previous statement regarding the age effects in our study, we must state that age was indeed included in our study. However, we considered age as a control variable (as part of our stepwise regression models). Considering age as a control variable was due to the fact that age possibly affects psychosocial status and health behaviors of cancer survivors but was not part of our explanatory (independent) variables and therefore was controlled-for.

You state: The study was approved by the Sociology Department of the University of Tehran which if effect considers and approves the University of Tehran Research Ethical Committee. Please mention to the ethical code.

The Faculty of Social Sciences at the University of Tehran does not register any ethical code number to the approved research. As mentioned before, the approval by the Sociology Department of the University of Tehran is equivalent to the approval of University of Tehran Research Ethical Committee. However, unfortunately no ethical code number is provided by the Faculty of Social Sciences at this time.

It is important to note that professor Akbari was one the advisors of the thesis from which this paper has been derived. Therefore, the participants' selection, sampling, and data collection was carried out under the direct permission, guidance and supervision of professor Akbari at the time.

Please refer to research suggestions for future and highlight this section.

Research suggestions have been added to the end of the *discussion and conclusion section* and have been highlighted.

Please use the new references, after 2017, PubMed, at least 10 new references and highlight these references.

Ten after-2017 references have been added and highlighted.

Thank you for your time and consideration,

Best regards,

Corresponding Author

3 Revision 2

0 comments

No public comments in this round.

4

Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear referee(s),

Thank you for your helpful comments and suggestions. We have modified the manuscript accordingly, and detailed corrections are listed below:

- **Abbreviations should be used sparingly.**

  1- The use of abbreviations was curtailed overall.

  2- breast cancer abbreviation (BC) was eliminated from the manuscript, entirely.

  3- In several cases, LTPA was substituted by “exercise”.

- **Abbreviations must be introduced in parentheses upon first mention in the Article Body.**

  4- all abbreviations were introduced in parentheses in the article body upon the first usage (highlighted).

- **Abbreviations must be introduced in tables footnote.**

  5- Abbreviations were properly introduced in the tables’ footnotes (highlighted).

- **The authors should state Funding/Support on the journal website.**

  6- The Funding/Support section on the website was revised.

- **Acknowledgments should not be included in the Full manuscript File. Please, include it in the cover letter file.**

7- Acknowledgements was moved to the Cover Letter which was uploaded as a separate file.

- **Other amendments by the authors:**

8- Abstract’s results section was also amended (highlighted).

Thank you for your time and support,

Warm regards,

Corresponding Author

4 Revision 3

0 comments

No public comments in this round.