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OPEN PEER REVIEW

Relationship Between COVID-19-related Factors and Self-management Behaviors in People with Type-2 Diabetes: A Cross-sectional Study

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

5 comments · 27 Jun 2022 – 29 Jun 2022

Referee 1 Reviewer

MINOR REVISION 27 Jun 2022

The Relationship between Covid-19-related Factors and Self-Management Behaviors in People with Type-2 Diabetes: A Cross-sectional Study

The study investigates the association between COVID-19-related personal, familial, and psychological factors and diabetes self-management behaviors. In general, I think this work has potential (e.g., the novelty of the study in terms of examining the relationship between various factors associated with COVID-19 and diabetes self-management).

However, I think that the work can be presented in a more organized way so that it is clearer to the reader. I provide some comments and suggestions that I think can make the manuscript easier to read.

OBJECTIVES

• p. 5: The authors include information about the study design and relevant dates in the objectives section. This information seems to belong in the methods section.
•
• p. 5: The authors did not make any hypotheses regarding their results. It seems that it should be clear what they expect to find.

METHODS
• P.5: The authors included “having no individual or family history of COVID-19 for the past two months age” as one of the inclusion criteria. It is not clear to me why this criterion is considered.

• P.5: The authors mentioned in the process section that the personal information questionnaire was completed and other variables were evaluated with the relevant scales. It seems better to specify the sequence of questionnaires and how the evaluator responded when a participant found any item on a scale ambiguous.

• P.5: It would be less ambiguous to mention that information about COVID-19-related personal and familial factors was extracted from the personal information questionnaire. In addition, the five scales and questionnaires were used to assess psychological factors. At this point, it is necessary to give a brief explanation of why this number of scales and questionnaires was used only to examine the psychological factor.

OUTCOME MEASURES

• P.5: In the personal information questionnaire paragraph, it seems that it is necessary to specify exactly which variables were considered family and personal factors.

• The authors should include brief information on the psychometric properties of the scales and questionnaires used to assess the psychological factor.

RESULTS
• The authors used the phrase “data not shown” where the results of the analysis are given in the text and not in the tables and graph. It does not seem necessary to use this phrase.

• P 7, paragraph 2: In reporting the results of independent t-tests, t-statistics should be reported along with the p-value.

• The authors include a brief paragraph on gender differences for a number of variables. This part seemed to be in the paper just by chance: it is unclear to me why it is important to highlight these aspects, which should

be better integrated into the text (also in light of the results and discussion sections, where there are dedicated parts on gender differences).

• The authors merely report the direction and significance of the relationship wherever they report a relationship using a correlation coefficient. There is no mention of the value or its interpretation. Why are most correlation coefficients in a weak range?

• The authors have reported the results of their analyses using subheadings based on the statistical analysis method. It seems that if the subheadings are based on the independent variables, i.e., personal factors, etc., it will be easier to understand the analysis results.

• In examining the model of factors associated with self-management behaviors (table 3), it seems that only the total score of DSMQ is considered as a dependent or outcome variable. Am I right? What about subscale scores?

DISCUSSION

• The discussion section also appears somewhat poorly organized and unclear to the reader. I suggest that this section be better organized based on the examined factors and their relationship to DSMQ.

• P . 10: I think the line "In addition, the COVID-19-related fear, anxiety, and distress, were associated with diabetes distress" should be rechecked based on figure 1.

Referee 2 Reviewer

MAJOR REVISION 28 Jun 2022

Thank you for the opportunity to review this manuscript. I carefully read the manuscript as well. This can be an interesting study and a well-written manuscript. But there are several issues that should be considered by the authors to improve the manuscript. I'm attaching my comments and suggestions as a Word file.

With best wishes.

Referee 3 Reviewer

MAJOR REVISION 28 Jun 2022

Thank you for the opportunity to review this manuscript. The present study investigated the association between COVID-19-related personal, familial, and psychological factors and diabetes self-management. This can be an interesting study. However, to improve the manuscript, the authors should address the following suggestions and comments.

General comments:
The manuscript should be revised by a native English speaker, especially the introduction and discussion sections.
In the abstract, the results section is much longer than the conclusion section.
I suggest that the authors read the STROBE checklist for cross-sectional studies and adapt their manuscript to this checklist. I attached the checklist for the authors.
The methods section should be checked against STROBE. There are many flaws in this section regarding reporting according to the STROBE checklist, including the location of the study, participants' attrition, and so on.
Please number the subheadings of the results and methods sections.

Abstract and keywords:
The results and conclusion sections are not appropriately balanced in length. Add inclusion criteria to the

methods section.
Keywords:
It is better to change the keywords. The study is related to COVID-19; however, this was not included as a keyword. It is better to use keywords based on the MeSH database if possible.

Main text:
Background:
The content of this section is very good, but I think that this section should be revised grammatically by a native English speaker.
The ethics approval code should be moved to the methods section.

Methods:
This section should be revised according to the STROBE checklist. There were several issues. Please consider STROBE when revising the manuscript.
P 6: The authors have used several questionnaires in their study. Please report the psychometric properties of these questionnaires.
P 7: Please add the formula used for determining sample size.
Please number the subheadings of the methods section. For example, 3.4.1 Power Analysis.

Results:
Table 2 can be presented in a better manner. The second column can confuse the reader and should be revised.
The locations of the tables and figures were not indicated in the manuscript.

Discussion:
Some of the sentences in this section need appropriate references. For example, P 8, Paragraph 1 (discussion section), and P 9, the last sentences of paragraph 1.
Please number the subheadings of the discussion section.
Please expand the second limitation. Why can these issues cause bias? Also, this section had some grammatical errors. For example: “However, there were some ….” is correct.

Conclusions:
Please revise this section; this is not a good conclusion. This section can be written in a better manner.
Please add the acknowledgment section at the end of this section.
References:
Some references have missing data. References 9, 13, and 22 have some issues. You need to give full information for each of these references.

Associate Editor

MAJOR REVISION 28 Jun 2022

Dear Editor-in-Chief

Thank you for the opportunity to review this manuscript. I carefully read the manuscript as well as the comments of the reviewers. Based on the reviewers' comments, the manuscript needs major revision.

Editor-in-Chief

MAJOR REVISION 29 Jun 2022

Dear Authors
According to the reviewer's and associate editor’s comments, your article needs major revision. When revising

your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

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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 Editor-in-Chief,

We are very grateful for the reviewer's comments and thoughtful suggestions. Based on these comments and suggestions, we have made careful modifications to the manuscript. We believe that the manuscript has been greatly improved and hope it has reached your standards.
Once again, we acknowledge your comments very much, which are valuable in improving the quality of our manuscript.

Sincerely yours,
The corresponding author
Here are our responses to the reviewer's comments.

Reviewer 1:

Thank you for the best job for me to review this manuscript. The present study investigated the association between Covid-19-related personal, familial, and psychological factors and diabetes self-management. This can be an interesting study. However, to improve the manuscript, the following suggestions and comments should be applied by the authors.

Response: We appreciate your kind consideration. Based on your valuable comment, we have carefully revised the manuscript and we feel it has been greatly improved. We hope you find it interesting.

General comments:
The manuscript should be revised by a native English speaker, especially the introduction and discussion sections.
In the abstract, the amount of results section is very large than the conclusion section.
I suggest that the authors should read the STROBE checklist for cross-sectional studies and adapt their manuscript to this checklist. I attached the checklist for the authors.
The methods section should be checked with STROBE. There are many flaws in this section regarding the STROBE checklist to report the study including the location of the study, participants' attrition, and so on.
Please number the sub-headings of the results and methods sections.

Response: Thanks for your valuable comments. The manuscript was edited by an expert editor. The Results section of the abstract was shortened, and the flaws in the Methods section of the manuscript were improved. The subheadings were also added to the Methods, Results, and Discussion sections.

Abstract and keywords:

There is no proper distribution between the parts of the results and the conclusion. Add inclusion criteria to the methods section.

Keywords: It is better to change the keywords. The study related to COVID-19; however, this was not mentioned as keywords. It is better to use keywords based on the Mesh database if it is possible.

Response: Thanks for your comments. The results section of the abstract was shortened and the Conclusion was expanded. Inclusion criteria were added to the Methods section. The keywords were selected based on MeSH terms. COVID-19 and diabetes was also added to the keywords.

Main text:

Background:
The content of this section is very good but I think that this section should be revised grammatically by a native English speaker.

The ethics code of approval should be moved to the methods section.

Response: Thanks for your valuable comments. The manuscript was edited by an expert editor. The ethics approval code moved to the Methods section.

Methods:
This section should be revised according to the STROBE checklist. There were several issues. Please consider STROBE during revising the manuscript.
P 6: The authors have used several questionnaires in their study. Please report the psychometric properties of the mentioned questionnaires.

Response: Thanks for your valuable comments. We improved the flaws in the Methods section based on the STROBE checklist. The psychometric properties of our outcome measures were also added to the Methods.

P 7: Please add the formula used for determining sample size. Please number the sub-headings of the methods section. For example 3.4.1 Power Analysis

Response: Thank you for your valuable comments. We consider the STROBE checklist during revising the manuscript. The psychometric properties of our outcome measures, the formula used for sample size calculation, and subheadings numbers were added to the manuscript.

Results:

Table 2 can be presented in a better manner. The second column can confuse the reader and should be revised.

The places of the tables and figures were not mentioned in the manuscript.

Response: Thank you for your valuable suggestion. The corrections were made.

Discussion:

Some of the sentences of this section need appropriate references. For example P 8, Paragraph 1 (discussion section), and P 9, the last sentences of paragraph 1. Please number the sub-headings of the discussion section. Please expand the second limitation. Why these issues can cause bias? Also, this section had some grammatical errors. For example: "However, there were some …." is correct.

Response: Thank you for your valuable comment. The corrections were made. Telerehabilitation is a preferred method for evaluation and intervention in the COVID-19 pandemic. We also used valid and reliable self-reported measures. Hence, we deleted the second limitation from the manuscript.

Conclusions:

Please revise this section, this is not a good conclusion. This section can be written in a better

manner.

Please add the acknowledgment section at the end of this section.

Response: Thanks for your valuable suggestions. We rewrite the conclusions section.

References:

Some references have missing data. References 9, 13, and 22, have some issues. You need to give full information for each of these references.

Response: Thank you. The corrections were made.

Reviewer 2:

The Relationship between Covid-19-related Factors and Self-Management Behaviors in People with Type-2 Diabetes: A Cross-sectional Study

The study investigates the association between Covid-19- related personal, familial, and psychological factors and diabetes self-management behaviors. In general, I think this work has potential (e.g., the novelty of the study in terms of examining the various factors associated with Covid-19 with diabetes self-management). However, I think that the work can be presented in a more organized way so that it is not blurred to the reader. I provide some comments and suggestions that I think can make the manuscript easier to read.

Response: We appreciate your comments and thoughtful suggestions. Based on your valuable comments, we have carefully revised the manuscript and we feel it has been greatly improved. We hope you find it interesting.

OBJECTIVES

• *p. 5: The authors include information about the study design and relevant dates in the objectives section. This information seems to be in the methods section.*

•

• *p. 5: The authors did not make any hypotheses regarding their results. It seems that it should be clear what they expect to find.*

Response: Thank you for your valuable comment. The corrections were made.

METHODS

• P.5: The authors included “having no individual or family history of COVID-19 for the past two months ago” as one of the inclusion criteria. It is not clear to me why this criterion is considered.

Response: The DSMQ measures one's participation in self-management activities during the last two months. If an individual or their family members were infected with Covid-19 during the last two months, their participation in self-management would be affected, and we could not have a proper evaluation of this variable.

• P.5: The authors mentioned in the process section that the personal information questionnaire was completed and other variables were evaluated with the relevant scales. It seems better to determine the sequence of questionnaires and the evaluator's response to the possible ambiguity of each item of any scale for the participant.

Response: Thanks for your comment. The explanation was added to the manuscript.

• P.5: It seems to be less ambiguous if it is mentioned that information about COVID-19-related personal and familial factors has been extracted from the personal information questionnaire. In addition, the five scales and questionnaires have been used to assess psychological factors. At this point, it is necessary to give a brief explanation of why this number of scales and questionnaires were used only to examine the psychological factor.

Response: Thanks for your comment. We correct the manuscript to include that information about COVID-19-related personal and familial factors has been extracted from the personal and familial information questionnaire.

We also used 5 psychological questionnaires to assess different aspects of one's psychological burden including depression, diabetes-related distress, and COVID-19-related fear, anxiety, and distress. Three of the questionnaires were COVID-19-specific, one was diabetes-specific (DDS) and one was general (PHQ-8). A brief explanation was added to the manuscript.

OUTCOME MEASURES

• P.5: In the personal information questionnaire paragraph, it seems that it is necessary to determine exactly what variables were considered family and personal factors.

Response: Thanks for your comment. We revised the section.

• The authors should include brief information on the psychometric properties of the scales and questionnaires used to assess the psychological factor.

Response: Thanks for your valuable comments. The psychometric properties of the scales were added to the manuscript.

RESULTS

• The authors used the phrase "data not shown" where the results of the analysis are given in the text and not in the tables and graph. It does not seem necessary to use this phrase.

Response: Thank you. We deleted the phrase "data not shown".

• P 7, paragraph 2: In the reporting of independent t-tests results, t-statistics should be reported along with the P-value.

Response: Thanks for your valuable comment. Comparing the study variables between men and women was not of the objectives of this study. We deleted these findings.

• The authors include a brief paragraph on gender differences for a number of variables. This part seemed to be in the paper just by chance: it is unclear to me why it is important to underlie these aspects that should be better integrated into the text (also in light of the result and discussion section where there are dedicated parts to gender differences).

Response: Thanks for your comment. Comparing the study variables between men and women was not of the objectives of this study. We deleted these findings.

• The authors merely report the direction and significance of the relationship, wherever reported

a relationship using correlation coefficient calculation. There is no mention of value and its interpretation? Why most correlation coefficients are in a weak range?

Response: Thanks for your thoughtful comment. The value of correlations was added to the Results section and was discussed in the study limitations.

• The authors have reported the results of their analyses by selecting the subtitle based on the statistical analysis method. It seems that if the subtitles are selected by independent variables, i.e. personal factors, etc., it will be easier to understand the analysis results.

Response: Thanks for your thoughtful suggestion. The subtitles of "Personal factors", "Familial factors", and "Psychological factors" were added to the "Bivariate correlations between the study variables" title.

In examining the model of factors associated with self-management behaviors (table 3), it seems that the total score of DSMQ is considered only as a dependent or outcome variable. Am I right? What about sub-scale scores?

Response: Yes, you are right. For brevity, we also reported the model of factors associated with the total DSMQ score and also bivariate correlators of the other study variables.

DISCUSSION

• The discussion section also appears somehow poorly organized and blurred to the reader. I suggest that this section be more organized based on the examined factors and their relationship to DSMQ.

Response: Thanks for your valuable comment. We rewrite the Discussion in a more organized manner. We hope you find it interesting.

• P . 10: I think the line "In addition, the COVID-19-related fear, anxiety, and distress, were associated with diabetes distress" should be re-checked based on figure 1.

Response: We checked Figure 1. The COVID-19-related fear, anxiety, and distress, were associated with total DDS score or different aspects of diabetes distress.

Reviewer 3:

Thank you for this best job for me to investigate this manuscript. I carefully read the manuscript as well. This can be an interesting study and a well-written manuscript. But, there are several issues that should be considered by the authors to improve the manuscript. I'm attaching my comments and suggestion as a word file.

With best wishes.

Response: We appreciate your kind consideration. Based on your valuable comments, we have carefully revised the manuscript and we feel it has been greatly improved. We hope you find it interesting.

2 Revision 1

5 comments · 9 Jul 2022 – 16 Jul 2022

Referee 1 Reviewer

ACCEPT 9 Jul 2022

The authors of this manuscript have made revisions based on the comments of the reviewers. There are no other comments.

Referee 2 Reviewer

ACCEPT 13 Jul 2022

Dear Associate editor

I reviewed the revised version of the manuscript. I think that the manuscript can be published in its current form.

Kind Regards.

Referee 3 Reviewer

ACCEPT 13 Jul 2022

Dear editor

The authors have revised the manuscript based on the reviewers' comments.

Thanks

Associate Editor

ACCEPT 13 Jul 2022

Dear Editor-in-Chief

I have read the revised version of the manuscript entitled "The Relationship Between Covid-19-related Factors and Self-Management Behaviors in People with Type-2 Diabetes: A Cross-sectional Study" and reviewed the reviewers' comments. The manuscript is now acceptable for publication in the journal.

Best.

Editor-in-Chief

ACCEPT 16 Jul 2022

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other high-quality articles from your group.