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OPEN PEER REVIEW

Assessment of Suicidal Ideation and Its Association with Mental Health Disorders Among Medical Sciences Students: 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.

More about open peer review: brieflands.com/knowledgebase/opr

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1 Original submission

3 comments · 19 Feb 2024 – 15 Mar 2024

Referee 1 Reviewer

MAJOR REVISION 19 Feb 2024

I have conducted a comprehensive review of your paper. I have provided constructive feedback to enhance your article's quality and impact. I encourage you to consider these suggestions to improve clarity and overall effectiveness. I am eager to review the updated version once you have implemented the revisions. Your commitment to refining your work is admirable, and I am eager to witness the evolution of your article.
Best regards.

Abstract
• It would be helpful to explicitly mention the primary aim of the study, such as determining the prevalence of depression, anxiety, stress, and suicidal ideation among medical, dental, and pharmacy students in the aftermath of the COVID-19 pandemic.
• Consider mentioning specific recommendations based on the findings, such as implementing mental health awareness programs, increasing access to counseling services, or integrating mental health education into the curriculum.

background
1. Consider presenting the statistical data on prevalence rates (e.g., depression symptoms, anxiety rates) in a more structured and concise manner. You could use bullet points or tables to present this information for better clarity and readability.
2. When referencing specific studies, provide a brief summary of their key findings or implications in relation to the topic under discussion. This will help readers understand the relevance of each study to the overall narrative.
3. To enhance the quality of your introduction, consider incorporating the following references:
• https://link.springer.com/article/10.1007/s11469-021-00617-9
• https://link.springer.com/article/10.1007/s10597-020-00633-4
• https://jpcp.uswr.ac.ir/browse.php?a_id=474&slc_lang=en&sid=1&ftxt=1&html=1
• https://link.springer.com/article/10.1007/s11469-015-9615-5
4. Given the focus on Shiraz University of Medical Sciences (SUMS) in Iran, consider incorporating more specific data or studies related to mental health issues among medical, dental, and pharmacy students in Iran. This will provide a more localized context for the study.
5. Expand on the discussion of social stigma surrounding mental health issues among medical students in Iran. Describe how this stigma manifests in the Iranian cultural context and its impact on help-seeking behaviors among students at SUMS.
6. The objectives are clearly stated; however, you could provide more detail on the specific methodologies and analyses that will be used to achieve these objectives. For example, mention whether a survey-based approach will be used, how data will be collected, and which statistical methods will be employed for analysis.
7. Provide a brief introduction to Shiraz University of Medical Sciences (SUMS) for readers who may not be familiar with the institution. Include relevant information such as its location, size, and any unique characteristics that may be relevant to the study.

Method
1. It would be beneficial to provide more information on the inclusion and exclusion criteria for participants, as well as any measures taken to ensure the representativeness of the sample.
2. It would be helpful to briefly mention the psychometric properties (e.g., reliability, validity) of the instruments in the context of the study population.

3. It would be beneficial to provide more rationale behind the choice of statistical methods and how they align with the research objectives. Additionally, consider providing more details on how missing data, if any, were handled in the analysis.
4. It's commendable that the study received ethical approval from the relevant committee, and the approval code is provided. Consider adding a brief statement regarding participant confidentiality and data protection measures to reassure readers about ethical considerations.

results
1. Consider using subheadings to delineate different subsections (e.g., "Prevalence of Mental Health Issues," "Associations Between Demographic Factors and Mental Health Outcomes") to enhance clarity and readability further.
2. The prevalence rates of high-risk suicidal thoughts, depression, anxiety, and stress among medical, dental, and pharmacy students are clearly presented, along with demographic breakdowns. Providing these prevalence rates allows readers to understand the magnitude of mental health issues among different student groups.
3. The section effectively summarizes the significant associations between various demographic and behavioral factors and mental health outcomes, such as depression, anxiety, stress, and suicidal thoughts. However, it would be beneficial to include effect sizes or measures of association (e.g., odds ratios, beta coefficients) alongside p-values to provide a more comprehensive understanding of the strength of these associations.

Discussion
1. Consider further subdividing the discussion into subsections (e.g., "Prevalence of Mental Disorders," "Factors Associated with Suicidal Thoughts") to enhance clarity and facilitate focused discussions on specific topics.
2. Consider further elaborating on the potential mechanisms underlying these associations to provide deeper insights into the observed patterns.
3. Ensure that the discussion of limitations is comprehensive and addresses potential sources of bias or confounding that may have influenced the study findings.
4. Consider elaborating on specific intervention strategies or policies that could address the identified mental health challenges, such as targeted counseling services, stress management programs, or curriculum modifications to reduce academic pressure.

Referee 2 Reviewer

MINOR REVISION 19 Feb 2024

General comments:
The paper discusses an important subject. My minor comments are as follows:
Comment 1: What basic sample size was calculated?
Comment 2: Please report the results of the statistical tests in Table 1.
Comment 3: Figure 1 is unclear. Please interpret Figure 1 in detail.
Comment 4. Incomplete reporting of results: please interpret the results of regression models in detail, especially regression coefficients.
Comment 5: Given that the response variables in Table 4 are correlated, please report the multivariate regression results here, because when we have more than one response variable, multivariate regression models are more appropriate.

Editor-in-Chief

MAJOR REVISION 15 Mar 2024

Thank you for submitting your manuscript for consideration for publication in the Iranian Journal of Psychiatry and Behavioral Sciences. Your paper has been evaluated by external peer reviewers. Please revise your manuscript according to the reviewers' comments.

After revision, authors are obliged to upload a Word file containing the reviewers' comments and their point-by-point responses to all comments.

Besides, please pay attention to the word count limitation:
Word count limits are declared in this link: http://kowsarpub.com/en/index.php/services/for-authors/895-word-count

We look forward to receiving your revised manuscript. Thank you for sending your work to the Iranian Journal of Psychiatry and Behavioral Sciences. The full manuscript file must be highlighted to indicate revised text.

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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.

Reviewer 1:
General comments:
The paper discusses an important subject. My minor comments are as follows:
Comment 1: What is the basic sample size calculated?

Response: Based on the following formula, the basic sample size was calculated as 202. Considering that the questionnaires were provided online to the study subjects, finally 292 questionnaires with complete information were collected.

$$n=\frac{z^2 p(1-p)}{d^2}$$

$z=1.96$

$p=0.46$

$d=0.15p$

Comment 2: Please report the results of the statistical tests in Table 1.

Response: thanks for your comment. It was added to the Table 1.
Comment 3: figure 1 is unclear. Please interpret Figure 1 in detail.

Response: : thanks for your comment. We made some corrections in the text in this regards.
Comment 4. Incomplete reporting of results: please interpret the results of regression models in detail, especially regression coefficients.

Response: thanks for your comment. In table 4, the factors associated with depression, stress and anxiety are reported based on the regression model, and the important results of this Table are reported in the text of the results in the "Factors Associated with Mental Disorders"section. Also, in table 5, factors associated with suicidal thoughts are reported based on univariate and multivariate models, and the important results of this Table are reported along with the β in the text of the results in the "Factors Associated with Suicidal Thoughts "section.

Comment 5: regarding the response variables in Table 4 being correlated, please report the multivariate regression results here. Because when we have more than one response variable, multivariate regression models are more appropriate.

Response: thanks for your comment. The researchers aimed to investigate the factors related to depression, anxiety and stress separately, so the models were fitted separately and the results and discussion are written based on this approach. Hence, changing the analytical model will force the authors to revise the different sections of the manuscript which is time consuming and resubmission of new manuscript. So, if you think for the

present manuscript is possible to keep the current analysis and format, we will apply your invaluable suggestion in further studies.

Reviewer 2:
I have a comprehensive review of your paper. I have provided constructive feedback to enhance your article's quality and impact. I encourage you to consider these suggestions to improve clarity and overall effectiveness. Upon implementing revisions, I am eager to review the updated version. Your commitment to refining your work is admirable, and I am eager to witness the evolution of your article.
Best regards.

Abstract
Comment 1: it would be helpful to explicitly mention the primary aim of the study, such as determining the prevalence of depression, anxiety, stress, and suicidal ideation among medical, dental, and pharmacy students in the aftermath of the COVID-19 pandemic.

Response: Thank you for your valuable suggestion. We have revised the manuscript to explicitly state the primary aim of the study.

Comment 2: Consider mentioning specific recommendations based on the findings, such as implementing mental health awareness programs, increasing access to counseling services, or integrating mental health education into the curriculum.

Response: We appreciate your insightful comment. Based on previous findings, we have included some recommendations in our paper.

background
Comment 1. Consider presenting the statistical data on prevalence rates (e.g., depression symptoms, anxiety rates) in a more structured and concise manner. You could use bullet points or tables to present this information for better clarity and readability.

Response: We have revised the manuscript and included bullet points for improving the clarity and readability of our paper.

Comment 2. When referencing specific studies, provide a brief summary of their key findings or implications in relation to the topic under discussion. This will help readers understand the relevance of each study to the overall narrative.

Response: We appreciate your suggestion to provide a brief summary of the key findings or implications of the studies we reference. We attempted to change the manuscript based on your suggestion; however, due to the journal’s policy on word count limitations, we have

tried to keep our explanations as concise as possible. Thank you for your understanding and constructive feedback.

Comment 3. To enhance the quality of your introduction, consider incorporating the following references

- https://link.springer.com/article/10.1007/s11469-021-00617-9
- https://link.springer.com/article/10.1007/s10597-020-00633-4
- https://jpcp.uswr.ac.ir/browse.php?a_id=474&slc_lang=en&sid=1&ftxt=1&html=1
- https://link.springer.com/article/10.1007/s11469-015-9615-5

Response: Thank you for your suggestions. We understand the importance of incorporating relevant references to enhance the quality of our introduction. However, due to the journal's policy on word count limits, we are unable to add all of the articles. We have carefully reviewed the suggested articles and added the most relevant ones to our paper.

Comment 4. Given the focus on Shiraz University of Medical Sciences (SUMS) in Iran, consider incorporating more specific data or studies related to mental health issues among medical, dental, and pharmacy students in Iran. This will provide a more localized context for the study.

Response: Thank you for your suggestion. We have incorporated more specific data and studies related to mental health issues among medical, dental, and pharmacy students in Iran to provide a more localized context for our study.

Comment 5. Expand on the discussion of social stigma surrounding mental health issues among medical students in Iran. Describe how this stigma manifests in the Iranian cultural context and its impact on help-seeking behaviors among students at SUMS.

Response: We appreciate your feedback. We have expanded the discussion on the social stigma surrounding mental health issues among medical students in Iran. We have described how this stigma manifests in the Iranian cultural context and its impact on help-seeking behaviors among students at SUMS.

Comment 6. The objectives are clearly stated; however, you could provide more detail on the specific methodologies and analyses that will be used to achieve these objectives. For example, mention whether a survey-based approach will be used, how data will be collected, and which statistical methods will be employed for analysis.

Response: Thank you for your constructive feedback. We have provided more detail on the specific methodologies and analyses that will be used to achieve our objectives. We have

mentioned whether a survey-based approach will be used, how data will be collected, and which statistical methods will be employed for analysis.

Comment 7. Provide a brief introduction to Shiraz University of Medical Sciences (SUMS) for readers who may not be familiar with the institution. Include relevant information such as its location, size, and any unique characteristics that may be relevant to the study.

Response: We agree with your suggestion. We have provided a brief introduction to Shiraz University of Medical Sciences (SUMS) for readers who may not be familiar with the institution. We have included relevant information such as its location, size, and any unique characteristics that may be relevant to our study. Thank you for your valuable feedback. We believe these changes have strengthened our manuscript.

Method

Comment 1. it would be beneficial to provide more information on the inclusion and exclusion criteria for participants, as well as any measures taken to ensure the representativeness of the sample.

Response: Thank you for your insightful comment. We have expanded the methodology section of our paper to provide more information on the inclusion and exclusion criteria for participants. We have also detailed the measures taken to ensure the representativeness of the sample. We believe these additions will enhance the clarity and comprehensiveness of our study. Thank you for your valuable feedback.

Comment 2. It would be helpful to briefly mention the psychometric properties (e.g., reliability, validity) of the instruments in the context of the study population.

Response: Thank you for your suggestion. We have indeed addressed the psychometric properties such as reliability and validity of the instruments used in our study. This information can be found in the last paragraph of the explanation for each questionnaire.

Comment 3. It would be beneficial to provide more rationale behind the choice of statistical methods and how they align with the research objectives. Additionally, consider providing more details on how missing data, if any, were handled in the analysis.

Response: thanks for your comment. Considering that the results of the study (depression, stress, anxiety and suicidal thoughts) are quantitative variables, linear regression was used to determine the factors related to these variables. Corrections were made in this field in the statistical analysis section. Also, questionnaires were completed online and the participants had to answer all the questions in order to register the completed questionnaire, there was no missing data.

Comment 4. It's commendable that the study received ethical approval from the relevant committee, and the approval code is provided. Consider adding a brief statement regarding participant confidentiality and data protection measures to reassure readers about ethical considerations.

Response: Thank you for your commendation and suggestion. We have added a brief statement in our manuscript regarding participant confidentiality and data protection measures.

results
Comment 1. consider using subheadings to delineate different subsections (e.g., "Prevalence of Mental Health Issues," "Associations Between Demographic Factors and Mental Health Outcomes") to enhance clarity and readability further.

Response: We appreciate your feedback. We have revised our manuscript to include subheadings such as “Prevalence of Mental Health Issues” and “Associations Between Demographic Factors and Mental Health Outcomes”. We believe this enhances the clarity and readability of our paper. Thank you for your valuable input.

Comment 2. The prevalence rates of high-risk suicidal thoughts, depression, anxiety, and stress among medical, dental, and pharmacy students are clearly presented, along with demographic breakdowns. Providing these prevalence rates allows readers to understand the magnitude of mental health issues among different student groups.

Response: Thank for your comment, as you have mentioned we have added it before

Comment 3. The section effectively summarizes the significant associations between various demographic and behavioral factors with mental health outcomes, such as depression, anxiety, stress, and suicidal thoughts. However, it would be beneficial to include effect sizes or measures of association (e.g., odds ratios, beta coefficients) alongside p-values to provide a more comprehensive understanding of the strength of these associations.

Response: thanks for your comment. It was added to the text of results.

Discussion
Comment 1. Consider further subdividing the discussion into subsections (e.g., "Prevalence of Mental Disorders," "Factors Associated with Suicidal Thoughts") to enhance clarity and facilitate focused discussions on specific topics.

Response: Thank you for your suggestion. We have subdivided the discussion into subsections

Comment 2. Consider further elaborating on the potential mechanisms underlying these associations to provide deeper insights into the observed patterns.

Response: We appreciate your feedback. We have elaborated on the potential mechanisms underlying these associations to provide deeper insights into the observed patterns. This includes discussing possible biological, psychological, and social factors that may contribute to the mental health issues observed among the students.

Comment 3. Ensure that the discussion of limitations is comprehensive and addresses potential sources of bias or confounding that may have influenced the study findings.

Response: We agree with your comment. We discussed about other sources of biases more

Comment 4. Consider elaborating on specific intervention strategies or policies that could address the identified mental health challenges, such as targeted counseling services, stress management programs, or curriculum modifications to reduce academic pressure.

Response: We value your input. We have elaborated on specific intervention strategies or policies that could address the identified mental health challenges.

2 Revision 1

2 comments · 7 Aug 2024 – 1 Oct 2024

Referee 2 Reviewer

REJECT 7 Aug 2024

Dear,

Thank you again for the opportunity to read your manuscript!
General comments
From my perspective, the clinical implications of the manuscript are still uncertain and unclear. Also, it does not present new findings, so it is not suitable for publication in the journal.

Method: I recommend you revise the statistical analysis section completely.
Results:
- I also recommend you complete the provided interpretations of the regression models, especially p-values and coefficients. In addition, please report the 95% confidence intervals in Table 4 and Table 5.
- Table 4 does not match the title and objectives of the study. Please delete it.
- The sample size formula used is not correct. Please use the formula related to the two groups (with and without suicidal ideation).

Good luck!

Editor-in-Chief

MAJOR REVISION 1 Oct 2024

Thank you for your recent revisions.
Your paper has now been evaluated again. According to the reviewers' and associate editor's comments, it needs some more revisions. Please make your revisions according to these comments. The full manuscript file must be highlighted to indicate revised text.

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.

Reviewer comments:
From my perspective, the clinical implications of the manuscript are still uncertain and unclear. Also, it does not present new findings, so it is not suitable for publication in the journal.

Response:
Dear Reviewer,

Thank you for your thoughtful feedback on our manuscript. We appreciate the opportunity to address your concerns and provide further clarification on the clinical implications of our findings. While it is true that there are a couple of studies about depression, anxiety, stress, and suicidal ideation among medical students, our research brings unique insights in several key areas:

Suicide Crisis Among Medical Students: There is a concerning trend of suicides among medical students, which has been reported in significant numbers. This alarming issue demands attention and underscores the necessity of our study to find factors contributing to this crisis and provide insights for preventive measures. Numerous recently published studies have highlighted the need for continued research in this area (1-5).

Impact of Post COVID-19 Situation: Our study specifically evaluates the mental health of medical science students in the aftermath of the COVID-19 pandemic, a period that has been particularly challenging for this demographic. We believe this context adds significant value and relevance to our findings.

Social Crisis Context: We gathered data for this study in the middle of a social crisis in 1401 (2022-2023) after the COVID-19 pandemic, which exacerbated the stress and mental health challenges faced by Iranians, especially healthcare workers. During this period, there were significant reports of suicides among healthcare workers, including physicians and residents, highlighting the urgent need for updated studies to identify the underlying factors.

Risk Factors: We identified specific factors associated with suicidal ideation, such as being single, having a positive history of psychiatric illness, and chronic medical conditions. These insights can inform targeted interventions and support programs tailored to the needs of students with these risk profiles.

Protective Factors: Our results also highlight the protective role of higher academic semester and greater interest in courses against depression, anxiety, and stress. This information can be leveraged to develop strategies that enhance student engagement and reduce mental health issues.

New Factors: To the best of our knowledge, there are very few studies that compare medical, dental, and pharmacy students. We have also measured new factors such as economic and residence status to more accurately identify associated factors.

Regional Data Collection: Additionally, there is a pressing need for data from each region. Our study gathered data from Shiraz, providing valuable regional insights that can contribute to a more comprehensive understanding of the mental health challenges faced by medical science students.

Policy Implications: This study was conducted at the Health Policy Research Center. Sharing our findings with the university's governing bodies led them to develop more interventions such as specific counseling services to improve the mental health of medical sciences students.

It is true that some portions of our findings align with previous research, but there are limited studies among the Iranian population. Assessing these factors for the first time among Iranian and Shiraz students is crucial, as it provides important validations specific to this demographic.

We hope this explanation clarifies the clinical and health implications of our study and underscores its contribution to the existing literature.

Method: I recommend you revise the statistical analysis section completely.

Response:

Thank you for your recommendation. We have changed the methods section for clarifying it. We have reviewed and revised the whole parts of the method based on your invaluable comment.

Results:
-I also recommend you complete the provided interpretations of the regression models, especially p-values and coefficients. In addition, please report the 95% confidence intervals in Table 4 and Table 5.

Response:

As you wanted, the interpretations were added to the methods section and confidence intervals added to the tables.

- Table 4 does not match the title and objectives of the study, please delete it.

Response:

Considering your comment we have deleted Table 4 and separated the linear and multiple regression Tables for better presentation of the data.

- The sample size formula used is not correct. Please use the formula related to the two groups (with and without suicidal ideation).

Response:

As mentioned in objectives of abstract and introduction, our first goal was to estimate the prevalence of stress, anxiety, depression, and suicide-related thoughts. In the present study, the sample size was calculated based on the Cochrane formula. Based on the results of Lin's study (6), the global prevalence of mental disorders in medical students was reported to be 48%, and considering an error of 0.12(d=0.12p), the sample size was estimated to be 290.

$$n=\frac{z^2\,p(1-p)}{d^2}$$

z=1.96

p=0.48

d=0.15p

1. Gharebaghi R, Heidary F, Pourezzat AA. Serial Deaths of Young Trainee Physicians in Iran During COVID-19 Pandemic; Messages to Policy Makers. Frontiers in Health Services. 2022;2.
2. Ghaffari E. Suicide among Iranians doctors. International Journal of Science and Research Archive. 2023;9(2):461-5.
3. Devi S. Iranian medic suicides spark criticism of working conditions. The Lancet. 2024;403(10431):1010.
4. Pirnia B. Suicide among medical residents in Iran. The Lancet Psychiatry. 2024;11(6):411.
5. Jahangiri S, Shaygani F, Ahmadi Marzaleh M. Suicide Among Medical Students and Residents in Iran: Potential Causes and Solutions. Arch Iran Med. 2023;26(1):60-1.
6. Lin Y-K, Saragih ID, Lin C-J, Liu H-L, Chen C-W, Yeh Y-S. Global prevalence of anxiety and depression among medical students during the COVID-19 pandemic: a systematic review and meta-analysis. BMC Psychology. 2024;12(1):338.

3 Revision 2

1 comment · 16 Nov 2024

Editor-in-Chief

ACCEPT 16 Nov 2024

We have completed our review of your manuscript and are pleased to inform you that it is considered for publication in the IJPBS. Note that the publication of your article will only be finalized upon your cooperation in the editorial process.
Thank you for your fine contribution. On behalf of the Editors of IJPBS, we look forward to your continued contributions to the Journal.