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OPEN PEER REVIEW

Pathological Personality Traits in Healthcare Staff: A Comparative Research

Shiva Amini, Maryam Farhadian, Ali Ghaleiha, Maryam Mousazadeh, Sara Rezaie, Arya Haddadi, Saeid Yazdi-Ravandi, Latif Moradveisi

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About this report

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1 Original submission

6 comments · 13 Jan 2025 – 21 Jan 2025

Referee 1 Reviewer

MAJOR REVISION 13 Jan 2025

Dear authors

Many thanks for writing this valuable article. Please consider these comments one by one and address them carefully.

Abstract

• Please mention the geographical scope (a single city in Iran).
• Please mention the specific questionnaire/assessment tool used for measuring dark personality traits.
• Lack of information about the demographic characteristics of the control group is evident. Address this carefully.
• Include some discussion of potential confounding variables.

Background

• Include more recent studies about Dark Triad traits in healthcare settings.

Please use these references in your article:

https://jpcp.uswr.ac.ir/browse.php?a_id=787&sid=1&slc_lang=fa&ftxt=0

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https://www.traumamon.com/article_141524.html

• Add information about the cultural context and its potential influence on personality traits.
• Provide more specific evidence about how these traits affect patient care outcomes.

Methods

• Include a power analysis for all statistical tests.
• Provide a rationale for choosing specific statistical tests.
• Include a discussion of assumption testing.
• Consider adding multivariate analyses.
• Include effect size calculations.

Discussion

• Better integrate findings with existing personality theories.
• Please present a discussion of how these traits might develop or change over time.

-Consider some recommendations for healthcare administration.

-Consider some implications for medical education.

-Address some potential interventions for personality development.

• Provide more specific suggestions for future studies.
• Please provide a detailed discussion of potential longitudinal research needs.
• Mention possible cross-cultural studies.
• Also, the discussion of selection bias vs. occupational socialization needs more development.
• Please provide a detailed exploration of whether personality traits influence career choice or vice versa.
• Better address the validity of the measurement tools.

Best,

Referee 2 Reviewer

MAJOR REVISION 17 Jan 2025

Abstract
• The link between personality traits and healthcare worker efficiency needs stronger justification.
• Provide a better explanation of why dark personality traits specifically are important to study.
• Specify which questionnaires were used.
• The sampling method for the general population isn't clearly described.
• Mention the matching criteria between groups.
• Explain how "controlled conditions" were implemented.
• Numbers presented are confusing (e.g., 7.16±8.16 vs. 0.4±2.18).
• Standard deviations in some cases are larger than means, suggesting potential data issues.
• Specify what scale or range these scores represent.
• Statistical tests used aren't specified.
• Claims about "favorable and dependable disposition" seem overstated based on the presented data!
• Mention study limitations.
• Recommendations for future research are vague.
• There are some formatting inconsistencies in reporting numbers.
• Provide a clearer presentation of comparative statistics.
Background
• The research gap could be more explicitly stated.
• Include a clear statement of study objectives.
• Discussion of why this research matters for healthcare is limited.
To enhance the quality of your research, please use these articles:
https://link.springer.com/article/10.1007/s11126-019-09699-0
https://journalaim.com/Article/aim-19141
https://www.jpcmed.com/article_153234_f92474b71cd01e329c401281f371f14a.pdf
http://jpcp.uswr.ac.ir/browse.php?a_id=787&sid=1&slc_lang=fa&ftxt=0
http://eprints.lums.ac.ir/852/
• The connection between Dark Triad traits and healthcare outcomes needs strengthening.
• Please better explain why these specific traits were chosen for the study.
• Limited discussion of alternative personality frameworks.
• Heavy focus on defining concepts rather than reviewing relevant research! Why?
• Limited discussion of previous studies in healthcare settings! Check it.
• Better integrate the Claes et al. study with the broader narrative.
• Some repetitive content (especially in trait descriptions).
• Rhetorical questions at the start could be more effectively presented as statements.
• Some awkward transitions between paragraphs are evident.
• Several long, complex sentences could be simplified.
• Limited discussion of healthcare-specific implications.
• Better explain the relevance to patient care.
• The cultural context of healthcare personality research is not well developed!

Referee 3 Reviewer

MAJOR REVISION 17 Jan 2025

• Could benefit from bullet points or clearer organization
• Should better align with the introduction's focus on Dark Triad
• Needs a clearer connection to the research gap identified earlier

• No clear indication of expected study outcomes
• Doesn't specify how findings might be used
• The main objective is too broad and vague ("to investigate")
• No specific sub-objectives or research questions presented
• Doesn't specify which aspects of personality traits will be examined
• "Pathological personality traits" isn't clearly defined
• No mention of the Dark Triad framework discussed in the introduction
• Geographic scope (Hamedan) mentioned without context
• Some redundancy (e.g., the paragraph about surgeons appears twice)
• Could benefit from clearer thematic organization
• Transitions between paragraphs need improvement
-To enhance the quality of your research, please use these references:
https://scholar.google.com/scholar?cluster=14803235023530536818&hl=en&oi=scholarr
http://eprints.lums.ac.ir/852/
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view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&citation_for_view=3NbgXpIAAAAJ:M3ejUd6NZC8C
https://scholar.google.com/citations?
view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&cstart=20&pagesize=80&citation_for_view=3NbgXpIAAAAJ:aqlVkmm3oC
• Limited discussion of unexpected findings
• Could better explore contradictions in the literature
• Needs deeper analysis of why surgeons show higher narcissism
• Could better connect limitations to specific findings
• No discussion of measurement validity
• Limited suggestions for addressing limitations in future research

Referee 4 Reviewer

MAJOR REVISION 19 Jan 2025

Dear Author,
My comments are as follows:
- What is the type of study? The design seems to be a case-control study, not a cross-sectional study. Please check!
- Please describe the statistical analysis section in accordance with the title and objectives of your study. It is suggested that you compare the groups by adjusting for the effects of potential confounders using an appropriate regression model.
- The repeated-measures ANOVA in the statistical analysis is incorrect because you don't have repeated measurements. Please edit it.
- What is your justification for considering a comparison group in the study, and what is its clinical importance? Please explain the clinical importance in this regard.
- Why was the comparison group selected from the urban population? What is the justification for the comparison? It seems that the comparison group is not consistent with or matched to the main group.
- The appropriate sampling method is stratified sampling, not simple random sampling. What is your justification in this regard?
- The effect sizes used in calculating the sample size should be mentioned. Is 260 the total sample size or the sample size per group? The formula gives the minimum required sample size per group.
- Please use the independent t-test instead of the t-test.
- In the Results section:

Please display Figure 2 as a cluster plot.
In Table 4, two-way ANOVA should be used instead of the independent t-test, and the results should be fully reported and interpreted.
I recommend that you compare the groups by adjusting for the effects of potential confounders using appropriate regression models.
It is not common to examine the association between the variables under study and dark personality dimensions based on the mean score of the questionnaire. Please examine the association qualitatively (dark personality dimensions: Yes/No).
In Tables 2-4, it is suggested that the results of the dark personality dimensions questionnaires be reported qualitatively (dark personality dimensions: Yes/No), and then their association with the variables under study be evaluated.
- In Table 2, please write the groups.
Good luck!

Associate Editor

MAJOR REVISION 19 Jan 2025

Reviewer 1

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• Mention the matching criteria between groups.
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To enhance the quality of your research, please use these articles:
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• Better explain the relevance to patient care.
• The cultural context of healthcare personality research is not well developed!
Decision:
Major revision

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Dear authors
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• Provide more specific suggestions for future studies.
• Please provide a detailed discussion of potential longitudinal research needs.
• Mention possible cross-cultural studies.
• Also, the discussion of selection bias vs. occupational socialization needs more development.

• Please provide a detailed exploration of whether personality traits influence career choice or vice versa.
• Better address the validity of the measurement tools.
Decision:
Major revision

Reviewer 3
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https://scholar.google.com/citations?
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https://scholar.google.com/citations?
view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&cstart=20&pagesize=80&citation_for_view=3NbgXpIAAAAJ:aqlVkmm3
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Decision:
Major revision

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Dear Author,
My comments are as follows:
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- The repeated-measures ANOVA in the statistical analysis is incorrect because you don't have repeated measurements. Please edit it.
- What is your justification for considering a comparison group in the study, and what is its clinical importance? Please explain the clinical importance of this.

- Why was the comparison group selected from the urban population? What is the justification for the comparison? It seems that the comparison group is not consistent with and does not match the main group.
- The appropriate sampling method is stratified sampling, not a simple random sampling method. What is your justification in this regard?
- The effect sizes used in calculating the sample size should be mentioned. Is 260 the total sample size or the sample size per group? The formula gives the minimum required sample size per group.
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Please display Figure 2 as a cluster plot.
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It is not common to examine the association between the variables under study and dark personality dimensions based on the mean score of the questionnaire. Please examine the association qualitatively (dark personality dimensions: Yes/No).
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- In Table 2, please write the groups.
Good luck!

Decision:
Major revision

Editor-in-Chief MAJOR REVISION 21 Jan 2025

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 make your revisions according to the reviewers' comments.

After revision, authors are obliged to upload a Word file containing the reviewers' comments and their replies to each comment.

Besides, please pay attention to the word count limitation:
Word count limits are specified at 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.

2

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.

1. *What is the type of study? The design seems to be a case-control study, not a cross-sectional study. Please check!*

Dear reviewer, Thank you for your feedback. The study was a causal comparative study, utilizing random sampling to gather data.

2. *What is your justification for considering a comparison group in the study and what is its clinical importance? Please explain the clinical importance in this regard.*

Firstly, the comparison group, consisting of individuals from the general population, provides a baseline against which the personality traits of healthcare employees can be measured. This helps in determining whether the observed traits are unique to healthcare professionals or part of broader societal trends. Secondly, by including a comparison group, researchers can control for confounding variables that might influence personality traits, such as age, gender, and socioeconomic status. This adjustment allows for a more accurate interpretation of the differences observed between groups. Thirdly, a well-defined comparison group enhances the internal validity of the study. It allows researchers to make more robust conclusions about the specific characteristics of healthcare workers in relation to the general population.

The clinical importance of a comparison group in the study was due to these reasons. Understanding Personality Impact on Patient Care: The findings indicate that healthcare employees exhibit lower levels of dark personality traits (narcissism, Machiavellianism, and psychopathy) compared to the general population. This is clinically significant as these traits can adversely affect patient care and outcomes. Lower levels of these traits among healthcare staff suggest a more empathetic and reliable workforce, which is essential for effective patient interactions and treatment. Implications for Recruitment and Training: Understanding the personality profiles of healthcare workers can inform recruitment strategies and training programs. By identifying desirable personality traits, healthcare organizations can enhance their hiring practices to select candidates who are likely to perform better in patient-centered roles. Workplace Environment: The study's results can guide interventions aimed at improving workplace dynamics within healthcare settings. Recognizing that healthcare professionals generally have favorable personality traits may lead to initiatives that further support their mental health and job satisfaction, ultimately benefiting patient care. Future Research Directions: The findings pave the way for future research into how these personality traits influence team dynamics, leadership styles, and overall organizational effectiveness within healthcare systems.

3. *Why was the comparison group selected from the urban population? What is the justification for the comparison? Because it seems that the comparison group is not consistent and matched to the main group.*

The Justification for selecting an urban comparison group was demographic similarity: The urban population provides a relevant context for comparison, as

individuals from urban areas often share similar socioeconomic and cultural backgrounds with healthcare professionals. This similarity helps to ensure that the comparison group reflects characteristics that are comparable to those of the healthcare staff being studied. Accessibility and feasibility: Selecting participants from the urban population allows for easier recruitment and data collection. Urban areas typically have a larger pool of potential participants, facilitating random sampling and enhancing the representativeness of the comparison group. Relevance to healthcare context: The urban population is likely to have similar exposure to healthcare systems and societal influences that may affect personality traits. This relevance is crucial when examining traits like narcissism, Machiavellianism, and psychopathy, which can be influenced by environmental factors.

Clinical importance of the comparison with a general urban population can be justified by these reasons. Benchmarking personality traits: By comparing healthcare employees with a general urban population, researchers can establish benchmarks for pathological personality traits. This is clinically significant as it allows for a clearer understanding of how healthcare professionals differ from the general public in terms of these traits, which can impact their interactions with patients and colleagues. Identifying risk factors: Understanding the differences in personality traits between healthcare workers and the general population can help identify potential risk factors for negative behaviors in clinical settings. For instance, if healthcare professionals exhibit significantly lower levels of certain dark personality traits, this could indicate a more favorable work environment that promotes better patient care. Informing training and support programs: The findings can inform training and support programs aimed at enhancing interpersonal skills and reducing negative personality traits among healthcare workers. By understanding how these traits manifest in comparison to the general population, targeted interventions can be developed to foster a healthier workplace culture. Guiding future research: The results from this comparative analysis can guide future research directions by highlighting areas where further investigation is needed regarding personality traits in different populations or settings within healthcare.

4. *the appropriate sampling method is stratified sampling, not a simple random sampling method. What is your justification in this regard?*

Justifications for using simple random sampling instead of stratified sampling in the study are as follows: Simplicity and ease of implementation: Simple random sampling is straightforward to implement, making it easier to manage in a research setting. This method involves selecting participants randomly from the entire population, which can streamline the recruitment process and reduce administrative complexity. Minimizing selection bias: By randomly selecting participants, the study aims to minimize selection bias. This approach ensures that every individual in the healthcare population has an equal chance of being included, which enhances the representativeness of the sample and allows for more generalizable findings. Statistical validity: Simple random sampling is a foundational method in statistics that supports various inferential statistical analyses. The results obtained from a

randomly selected sample can be used to make inferences about the larger population with a known level of confidence. Feasibility in a cross-sectional study: In a cross-sectional study design, where data is collected at a single point in time, simple random sampling can be particularly effective. It allows researchers to gather data quickly and efficiently without needing to stratify the population into subgroups, which may not be necessary for the study's objectives. Resource availability: The choice of simple random sampling may also be influenced by available resources, including time and funding. Stratified sampling often requires more extensive planning and resources to ensure that each subgroup is adequately represented, which may not have been feasible within the constraints of this study.

5. *The effect sizes used in calculating the sample size should be mentioned. Is 260 the total sample size or the sample size per group? Because the formula gives the minimum required sample size per group.*

Dear Reviewer,

Thank you for your valuable comment. The sample size was calculated as 130 participants per group, resulting in a total of 260 individuals for both groups. We have revised the manuscript to clarify this point and have included the effect size used in the sample size calculation. The changes have been highlighted for your convenience.

6. *please use the independent t-test instead of the t-test*

Dear reviewer, Thank you for your comment. Done and highlighted

7. *Figure 2 please be displayed as a cluster plot.*

Done!

8. *In Table 4, two-way ANOVA should be used instead of the independent t-test, and the results should be fully reported and interpreted.*

Done!

9. *I recommended you compare the groups by adjusting the effect of potential confounders using appropriate regression models.*

Done!

10. *It is not common to examine the association between the variables under study with dark personality dimensions based on the mean score of the questionnaire. Please examine the association qualitatively (dark personality dimensions: Yes/No).*

Thank you for your comment. We would like to clarify that our dataset does not include a qualitative (Yes/No) categorization for dark personality dimensions, and such classification is not part of our research objectives. Therefore, we have chosen

to analyze the associations using the mean scores from the questionnaire, which is consistent with our theoretical framework and methodology.

11. *In Tables 2-4, it is suggested that the results of the dark personality dimensions questionnaires be reported qualitatively (dark personality dimensions: Yes/No), and then its association with the variables under study be evaluated.*

Thank you for your comment. We would like to clarify that our dataset does not include a qualitative (Yes/No) categorization for dark personality dimensions, and such classification is not within the scope of our research objectives. Consequently, we have opted to analyze the data using the mean scores from the questionnaires, which aligns with our theoretical framework and research methodology.

12. In Table 2, please write the groups.

All done and highlighted

//

Reviewer 2:

Dear authors

many thanks for writing this valuable article. please consider these comments one by one and address them carefully.

Abstract

1. *please mention the geographical scope (a single city in Iran)*

Dear reviewer, your comments are highly appreciated, done and highlighted in yellow.

2. *please mention the specific questionnaire/assessment tool used for measuring dark personality traits*

Done and highlighted.

3. *Lack of information about the demographic characteristics of the control group is evident. Adress this carefully.*

Done!

4. *address some discussion of potential confounding variables*

Dear Reviewer, we sincerely appreciate your insightful feedback. While our initial preference was to discuss this matter in the limitations section, we have incorporated your suggestion and added relevant explanations to the abstract.

Background

5. *Include more recent studies about Dark Triad traits in healthcare settings*

   Please use these references in your article:

   https://jpcp.uswr.ac.ir/browse.php?a_id=787&sid=1&slc_lang=fa&ftxt=0

   https://scholar.google.com/citations?view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&citation_for_view=3NbgXpIAAAAJ:Wp0gIr-vW9MC

   https://www.traumamon.com/article_141524.html

Dear Reviewer,

We sincerely appreciate the time and effort you have dedicated to reviewing our manuscript and for your thoughtful suggestions regarding additional references. However, after carefully reviewing the recommended articles, we noticed that they not align with the specific focus or scope of our study. While we deeply respect your contributions to the field, we believe citing unrelated references would neither serve the scientific rigor of our work nor uphold the ethical standards of academic publishing.

6. *Add information about cultural context and its potential influence on personality traits*

Dear Reviewer,

Thank you very much for your insightful comment. You have pointed out an excellent aspect. We have addressed the cultural influences in the background section towards the end and have highlighted this part in yellow for better visibility.

7. Provide more specific evidence about how these traits affect patient care outcomes

Dear Reviewer,

Thank you for your valuable feedback. We are confident that your comments will enhance the quality of our manuscript. Following your suggestion, we have added a few lines at the beginning of the "Objective" section discussing the impact of healthcare providers' personality traits on their efficiency and, consequently, the outcomes of healthcare delivery.

Methods

8. Include power analysis for all statistical tests

Done!

9. Provide a rationale for choosing specific statistical tests

Done!

10. Include a discussion of assumption testing

Done!

11. Consider adding multivariate analyses

Done!

12. Include effect size calculations

Done!

Discussion

13. address better integrate findings with existing personality theories

Done!

14. please present a discussion of how these traits might develop or change over time

Dear Reviewer, based on your suggestion, we have addressed the possibility of changes or stability in the personality traits of healthcare professionals in the discussion section.

15. considers some Recommendations for healthcare administration

Dear Reviewer, thank you for your valuable feedback. Based on your recommendation, we have included suggestions regarding healthcare management in the conclusion section.

16. consider some Implications for medical education

Dear Reviewer, based on your recommendation, we have included suggestions regarding Implications for medical education in the conclusion section.

17. address some Potential interventions for personality development

Dear Reviewer, based on your recommendation, we have included some Potential interventions for personality development in the conclusion section.

18. provide more specific suggestions for future studies

Done

19. please provide a detailed discussion of potential longitudinal research needs

Done

20. mention possible cross-cultural studies

Dear Reviewer, according to your suggestion, we have mentioned possible cross-cultural studies at the end of the conclusion section.

21. Also, The discussion of selection bias vs. occupational socialization needs more development

Done and highlighted in yellow

22. Please provide a detailed exploration of whether personality traits influence career choice or vice versa.

All done in Background section.

23. Provide a better address to the validity of the measurement tools

Done and highlighted in Methods section

//

Reviewer 3:

1. Could benefit from bullet points or clearer organization
2. Should better align with the introduction's focus on Dark Triad

Done!

3. Needs a clearer connection to the research gap identified earlier

Done in Objective section

4. No clear indication of expected study outcomes

Dear Reviewer, thank you for your feedback. In the objectives section, we have thoroughly outlined the study's aims and our expectations.

5. Doesn't specify how findings might be used

Dear Reviewer, the clinical, managerial, and even research implications of the study have been precisely added to the conclusion section.

6. The main objective is too broad and vague ("to investigate")

Dear reviewer, according to your suggestion we made an afford to explain more about the main objective at the end of Objective section.

7. No specific sub-objectives or research questions presented

Dear reviewer, according to your suggestion we made an afford to explain more about the sub-objective at the end of Objective section.

8. Doesn't specify which aspects of personality traits will be examined

Dear Reviewer, throughout the manuscript, including the background, objectives, methods, results, discussion, and conclusion sections, we have clearly specified the aspects of personality examined—namely, the Dark traits, which include psychopathy, narcissism, and Machiavellianism.

9. "Pathological personality traits" isn't clearly defined

All Defined in Background

10. No mention of the Dark Triad framework discussed in the introduction

Dear Reviewer, throughout the manuscript, including the background, discussion, and conclusion sections, we have clearly specified the Dark Triad framework, which include psychopathy, narcissism, and Machiavellianism.

11. Geographic scope (Hamedan) mentioned without context

Done and mentioned in Abstract and Methods, Highlighted in yellow

12. Some redundancy (e.g., the paragraph about surgeons appears twice)

Dear reviewer, Which paragraph? We checked and found nothing

13. Could benefit from clearer thematic organization

Done!

14. Transitions between paragraphs need improvement

Done!

15. for enhance the quality of your research please use these refrences:
    https://scholar.google.com/scholar?cluster=14803235023530536818&hl=en&oi=scholarr
    http://eprints.lums.ac.ir/852/
    https://scholar.google.com/citations?view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&citation_for_view=3NbgXpIAAAAJ:M3ejUd6NZC8C
    https://scholar.google.com/citations?view_op=view_citation&hl=fa&user=3NbgXpIAAAAJ&cstart=20&pagesize=80&citation_for_view=3NbgXpIAAAAJ:aqlVkmm33-oC

Dear Reviewer,

We sincerely appreciate the time and effort you have dedicated to reviewing our manuscript and for your thoughtful suggestions regarding additional references. However, after carefully reviewing the recommended articles, we noticed that they not align with the specific focus or scope of our study. While we deeply respect your contributions to the field, we believe citing unrelated references would neither serve the scientific rigor of our work nor uphold the ethical standards of academic publishing.

16. Limited discussion of unexpected findings,

Done!

17. Could better explore contradictions in literature

Dear Reviewer, we sincerely appreciate your constructive feedback. However, studies in this field are quite limited. Our team has thoroughly reviewed available domestic and international sources multiple times and presented the most comprehensive literature we could access.

18. Needs deeper analysis of why surgeons show higher narcissism

Dear Reviewer, your feedback is highly valuable; however, this aspect is beyond the scope of our research objectives. Investigating why surgeons exhibit higher levels of narcissistic traits would require longitudinal and potentially qualitative studies, which could be explored in future research. The primary aim of our study was to compare the Dark Triad personality traits between healthcare professionals and the general population.

19. Could better connect limitations to specific findings

Dear reviewer, we made an afford to add some limitations about the specific findings.

20. No discussion of measurement validity

Added to Method section.

21. Limited suggestions for addressing limitations in future research

Done and highlighted.

//

Reviewer 4:

Abstract

1. *The link between personality traits and healthcare worker efficiency needs stronger justification.*

Dear Reviewer, many of your comments had already been raised by the previous three reviewers, and we carefully addressed them by implementing the necessary revisions. Therefore, for some of your comments, our response was simply: "Done." And please note that the word limit in the abstract restricts the inclusion of additional details. Therefore, we have made an effort to address some of your suggestions in the main text of the manuscript.

2. *provide a better explain why dark personality traits specifically are important to study*

Done

3. *specify which questionnaires were used.*

Done

4. *The sampling method for the general population isn't clearly described*

Done

5. *mention of matching criteria between groups*

Done

6. *explain how "controlled conditions" were implemented*

Done

7. *Numbers presented are confusing (e.g., 7.16±8.16 vs. 0.4±2.18)*

Dear Reviewer, thank you for your attention to detail. You are absolutely correct. It seems that the placement of numbers was mistakenly altered during the translation of the manuscript from Persian to English. All instances have been carefully reviewed and corrected.

8. *Standard deviations in some cases are larger than means, suggesting potential data issues*

Dear Reviewer, thank you for your attention to detail. You are absolutely correct. It seems that the placement of numbers was mistakenly altered during the translation of the manuscript from Persian to English. All instances have been carefully reviewed and corrected.

9. *what scale or range these scores represent*

Done and clearly Explained!

10. *Statistical tests used aren't specified*

Done!

11. *Claims about "favorable and dependable disposition" seem overstated based on presented data !*

Dear Reviewer, you are absolutely right. We have revised the phrase to ensure it is expressed more cautiously.

12. *mention study limitations*

Done

13. *Recommendations for future research are vague*

Done

14. *There are some formatting inconsistencies in reporting numbers*

All revised and highlighted in yellow

15. provide a clearer presentation of comparative statistics

Done

Background

16. Research gap could be more explicitly stated

Done

17. mention a clear statement of study objectives

Done

18. discussion of why this research matters for healthcare is limited.

Done

19. To enhance the quality of your research please use these articles:
https://link.springer.com/article/10.1007/s11126-019-09699-0
https://journalaim.com/Article/aim-19141
https://www.jpcmed.com/article_153234_f92474b71cd01e329c401281f371f14a.pdf
http://jpcp.uswr.ac.ir/browse.php?a_id=787&sid=1&slc_lang=fa&ftxt=0
http://eprints.lums.ac.ir/852/

Dear Reviewer,

We sincerely appreciate the time and effort you have dedicated to reviewing our manuscript and for your thoughtful suggestions regarding additional references. However, after carefully reviewing the recommended articles, we noticed that they not align with the specific focus or scope of our study. While we deeply respect your contributions to the field, we believe citing unrelated references would neither serve the scientific rigor of our work nor uphold the ethical standards of academic publishing.

20. The connection between Dark Triad traits and healthcare outcomes needs strengthening

Done

21. please better explain why these specific traits were chosen for the study

Dear Reviewer, thank you for your feedback. Based on your suggestion, we have added and highlighted a paragraph in the background section explaining why we focused on these three personality traits.

22. Limited discussion of alternative personality frameworks

Done

23. *Heavy focus on defining concepts rather than reviewing relevant research!! Why?*

Thank you for your valuable comment and constructive feedback. We appreciate your observation regarding the emphasis on defining concepts in the background section. This approach was taken intentionally to provide a clear and comprehensive understanding of the Dark Triad personality traits—Machiavellianism, narcissism, and psychopathy—since these traits are multifaceted and have significant implications in healthcare settings. Our aim was to ensure that readers, regardless of their familiarity with the psychological concepts, have a solid foundation to appreciate the relevance of these traits in the context of this study.
We acknowledge that the background might appear more focused on conceptual definitions rather than a detailed review of relevant empirical studies. This was partly due to the limited availability of studies specifically addressing the role of Dark Triad traits in healthcare professions. While we made every effort to examine the existing literature comprehensively, we found that much of the prior research on personality traits in healthcare has focused on broader constructs such as empathy, emotional intelligence, or leadership traits, with relatively fewer studies exploring the Dark Triad in this context.
Despite these limitations, we have integrated available empirical evidence, such as the study by Claes et al. (2018), to highlight relevant findings and underscore the need for further exploration in this area. We also believe that conceptual clarity is essential to bridge the gap between general psychological research and its specific application to healthcare professions, which aligns with the objectives of our study.
Once again, we appreciate your insights and thank you for helping us refine and improve the quality of our work.

24. *Limited discussion of previous studies in healthcare settings! Check it.*
25. *Some repetitive content (especially in trait descriptions)*

Done

26. *Rhetorical questions at the start could be more effectively presented as statements*

Thank you for your thoughtful comment and for pointing out the use of rhetorical questions at the start of the manuscript. We understand your concern and appreciate your suggestion to consider presenting these as statements for greater clarity. However, the rhetorical questions were intentionally included to engage readers and encourage them to reflect on widely held perceptions about healthcare professionals' personality traits. This approach was chosen to spark curiosity and provide a natural entry point into the discussion of the Dark Triad traits and their potential implications in healthcare.
That said, we acknowledge the importance of maintaining a balance between engaging the reader and ensuring clarity in presentation. It is worth noting that the subsequent sections of the background and objectives comprehensively address these questions by providing clear explanations and a robust discussion of the relevant concepts and literature. Our aim was to create an introductory tone that

stimulates critical thinking while seamlessly guiding readers into the core of the manuscript.
We appreciate your feedback and will carefully review this aspect to ensure that the introduction effectively sets the stage for the rest of the manuscript. If necessary, we are open to rephrasing the rhetorical questions as concise statements while preserving the intended engagement and reflective tone.
Once again, we value your insights and thank you for helping us enhance the quality of our work.

27. Some awkward transitions between paragraphs are evident.

Thank you for your comment regarding transitions between paragraphs. We have carefully reviewed the manuscript and made improvements to ensure smoother transitions and better coherence throughout the text. Wherever necessary, adjustments were made to enhance the flow and readability of the content. If there are specific sections that still seem unclear, we would appreciate further guidance to address them more effectively.

28. Several long, complex sentences could be simplified

Done

29. Limited discussion of healthcare-specific implications

All done at the of Conclusion section

30. mention better explain relevance to patient care

Done

31. The cultural context of healthcare personality research is not well developed!

Done

2 Revision 1

5 comments · 8 Mar 2025 – 18 Apr 2025

Referee 4 Reviewer

MINOR REVISION 8 Mar 2025

Dear Author,

Much better, but I have some minor comments:

Comment 1: The format of Table 5 is incorrect. Please revise it entirely for qualitative variables and include the reference group.
Comment 2: What criteria do you use to select variables for the multiple regression model?
Comment 3: The provided interpretations for Table 5 need to be corrected completely, especially for the group variable. Please interpret the coefficients (95% CI) completely.

Good luck!

Referee 1 Reviewer

ACCEPT 28 Mar 2025

Dear authors
Congratulations! It seems your article is suitable for publication.
Good luck

Referee 2 Reviewer

ACCEPT 8 Apr 2025

Dear Authors
Congratulations! It appears that the suggested corrections have been made.

Best,

Associate Editor

MINOR REVISION 16 Apr 2025

Reviewer 1
Dear Author,
Much better, but I have some minor comments:
Comment 1: The format of Table 5 is incorrect. Please revise it entirely for qualitative variables and include the reference group.
Comment 2: What criteria do you use to select variables for the multiple regression model?
Comment 3: The provided interpretations for Table 5 need to be corrected completely, especially for the group variable. Please interpret the coefficients (95% CI) completely.
Good luck!

Decision:
Minor revision

Reviewer 2
Dear authors

Congratulations! It seems your article is qualified for publication.
Good luck

Decision:
Accept

Reviewer 3
Dear Authors
Congratulations! It appears that the suggested corrections have been made.
Best,

Decision:
Accept

Editor-in-Chief MINOR REVISION 18 Apr 2025

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. Revised text must be highlighted in the full manuscript file.

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.

We sincerely appreciate the time and effort the reviewers have dedicated to evaluating our manuscript. Their insightful and constructive comments have been invaluable in improving the quality and clarity of our work. We have carefully addressed all the comments and made the necessary revisions to the manuscript. All changes have been highlighted in yellow within the revised version to facilitate the review process.

Comment 1: The format of Table 5 is incorrect. Please revise it entirely for qualitative variables and include the reference group.

Answer 1: All done and Highlighted

Comment 2: What criteria do you use to select variables for the multiple regression model?

Answer 2: Thank you for your valuable comment. The selection of variables for the multiple regression model was based on the available data in our dataset. Only the variables included in the analysis were present in the original dataset, and therefore, our model was limited to those. We acknowledge that incorporating additional relevant variables could enhance the model's explanatory power, and we suggest this as a potential direction for future research.

Comment 3: the provided interpretations for Table 5 need to be corrected completely, especially for the group variable. Please interpret the coefficients (95% CI) completely.

Answer 3: Thank you very much for your helpful feedback. We have revised the interpretations in Table 5 accordingly. A negative coefficient for the *Study Groups* variable indicates that, across all dimensions, the average response scores in the general population group were significantly lower than those in the healthcare professionals group.

Regarding gender, the results show that females had higher average scores on *Narcissism* and *Machiavellianism* dimensions, as reflected by positive coefficients. In contrast, males scored higher on the *Psychopathy*, *Primary Psychopathy*, and *Secondary Psychopathy* dimensions. These findings have been clearly interpreted and reported along with their respective 95% confidence intervals in the revised version of the manuscript.

3 Revision 2

5 comments · 22 Apr 2025 – 28 May 2025

Referee 5 Reviewer

ACCEPT 22 Apr 2025

After careful review, I find that the revisions have fully corrected your paper and that it now meets the standards for acceptance. I express our gratitude for your committed efforts and collaborative approach to enhancing the overall quality of your article.
Best

Referee 4 Reviewer

MAJOR REVISION 4 May 2025

My comments are as follows:

Comment 1: Although I understand the method of study, I am somewhat puzzled by the title, which still seems ambiguous to me. Because causal inference was not made in this study, only simple linear regression was used, which evaluates the association between independent and dependent variables.
So, I recommend deleting "causal" from the title (A Comparative Research is more appropriate).
Comment 2: Was RM ANOVA used? Why are its results not reported in the findings section?
Comment 3: The interpretation of Table 4 is not fully presented and needs to be completed (interpretation of the interaction effect as well as comparison of groups?).
Comment 4: What do you mean by combined regression? The phrase "combined regression" is not usual. Please delete it.
Comment 5: Reported values for R^2 are very small (ranging from .022 to .050). This indicates that the variables under study do not sufficiently explain the response variables, and the model performs poorly and does not fit the data well. What is your justification in this regard?
Comment 6: I recommend that you use the multivariate regression models (more than one dependent variable in the model) instead of the multiple linear regression model to analyze data.

Referee 3 Reviewer

MINOR REVISION 26 May 2025

Please provide more details on the theoretical foundations in the introduction.
The following references are suggested.
https://www.jpcmed.com/article_153234.html
https://www.traumamon.com/article_141524.html
The previous comments have not yet been applied to the method section.
Provide further explanations for the discussion.

Associate Editor

MAJOR REVISION 26 May 2025

Reviewer 1
After careful review, the revisions to your paper have rendered it fully corrected, and it now meets the standards for acceptance. I express our gratitude for your committed efforts and collaborative approach to

enhancing the overall quality of your article.
Best

Decision:
Accept

Reviwer 2
My comments are as follows:
Comment 1: Although I understand the study method, I am somewhat puzzled by the title, which still seems ambiguous to me. Because causal inference was not made in this study, only simple linear regression was used, which evaluates the association between independent and dependent variables.
So, I recommend deleting "causal" from the title (A Comparative Research is more appropriate).
Comment 2: Was RM ANOVA used? Why are its results not reported in the findings section?
Comment 3: The interpretation of Table 4 is not fully presented and needs to be completed (interpretation of the interaction effect as well as comparison of groups?)
Comment 4: What do you mean by combined regression? The phrase "combined regression" is not usual. Please delete it.
Comment 5: Reported values for R^2 are very small (ranging from .022 to .050). These values indicate that the variables under study do not sufficiently explain the response variables, and the model performance is poor and does not fit the data well. What is your justification in this regard?
Comment 6: I recommend that you use the multivariate regression models (more than one dependent variable in the model) instead of the multiple linear regression model to analyze data.

Decision:
Major revision

Reviewer 3
Please provide more details on the theoretical foundations in the introduction.
The following references are suggested.
https://www.jpcmed.com/article_153234.html
https://www.traumamon.com/article_141524.html
The previous comments have not yet been applied to the method section.
Provide further explanations for the discussion.

Decision:
Minor revision

Editor-in-Chief

MAJOR REVISION 28 May 2025

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 make your revisions according to the reviewers' comments. I would appreciate it if you could make the revisions as soon as possible.

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

Besides, please pay attention to the word count limit:
Word count limits are declared at 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.

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.

Reviewer 1,

Please provide more details on the theoretical foundations in the introduction.
Your references are not valid, and the following references are suggested.
https://www.jpcmed.com/article_153234.html
https://www.traumamon.com/article_141524.html
The previous comments have not yet been applied to the method section.
Provide further explanations for the discussion.

Response to Reviewer 1:

We thank the respected reviewer for the time devoted to reviewing our article. However, we consider it necessary to respectfully raise the following points:

1. Regarding the Methodology section: In the previous review round, we did not receive any comment regarding the methodology section; in fact, the respected reviewer had approved the revisions and offered congratulations in the previous round. Therefore, we did not think it was necessary to make any changes in this section. If a specific problem is now intended, we kindly ask that you state it specifically so that we can correct it carefully.

2. Regarding the suggested references: Respectfully, it should be noted that the references you suggested had already been introduced to us previously. We examined these articles and concluded that they are not directly related to the topic of our article.

With respect and thanks, the authors of the article

Reviewer 2
My comments are as follows:
Comment 1: Although I understand the method of study, I am somewhat puzzled by the title, which still seems ambiguous to me. Because causal inference was not made in this study, only simple linear regression was used, which evaluates the association between independent and dependent variables.
So, I recommend deleting the causal from the title (A Comparative Research is more appropriate).

Response 1: Done and highlighted!

Comment 2: Was RM ANOVA used? Why are its results not reported in the findings section?

Response 2: Dear reviewer, we used two-way ANOVA that reported in Table 4.

Comment 3: The interpretation of Table 4 is not fully presented and needs to be completed (interpretation of the interaction effect as well as comparison of groups?)

Response 3: Done and highlighted!

Comment 4: What do you mean by combined regression? The phrase "combined regression" is not usual. Please delete it.

Response 4: Done and highlighted.

Comment 5: Reported values for R^2 are very small (ranging from .022 to .050). It indicates that the variables under study do not sufficiently explain the response variables, and the model performance is poor and does not fit the data well. What is your justification in this regard?

Response 5: ***Dear reviewer, it must be mentioned that we did regression test based on the reviewers' suggestion in the last review!*** *But We appreciate the reviewer's observation regarding the relatively low R^2 values reported in Table 5 (ranging from .022 to .050). We acknowledge that these values indicate a modest proportion of explained variance in the outcome variables. However, we respectfully offer the following justifications to contextualize and support the validity and meaningfulness of our findings:*

1. Psychological Traits Are Multi-determined:

Personality traits, particularly dark personality dimensions, are influenced by a wide range of biological, psychological, social, and situational factors. Therefore, it is expected that models including only a few demographic predictors (age, sex, and study group) will explain a limited portion of variance. This does not necessarily reflect poor model performance but rather highlights the complexity of human personality.

2. Statistical Significance Despite Modest Effect Sizes:

*Although R^2 values are modest, the regression coefficients (B values) for the *study group* variable were statistically significant in all models. This consistent pattern suggests that group membership (i.e., being part of the healthcare staff vs. general population) is a meaningful predictor of dark traits, even after controlling for age and sex.*

3. Theoretical Justification of Predictors:

Our choice of predictors was theory-driven and aligned with previous literature, which often uses demographic variables to explore basic associations with personality traits. The low R^2 values were expected given the limited number of predictors and the inherent variability in personality constructs.

4. Emphasis on Practical Significance and Pattern Consistency:

While the explained variance is small, the consistency of direction and significance across multiple regression models adds credibility to the findings. In psychological and social sciences, especially in exploratory or comparative studies, even small effect sizes can be informative, particularly when they are systematic and theoretically grounded.

Comment 6: I recommend that you use the multivariate regression models (more than one dependent variable in the model) instead of the multiple linear regression model to analyze data.

Response 6: Dear reviewer, we did use the multivariate regression test and the results were not satisfying, but if it is necessary and you insist on that outcome, we can report the results in the manuscript.

4 Revision 3

2 comments · 8 Jul 2025 – 9 Jul 2025

Associate Editor

MINOR REVISION 8 Jul 2025

Associate Editor's Comments:
Dear Authors,
Thank you for giving us the opportunity to review your manuscript again. Your work has potential and has now improved, but I have a few minor comments on the results section. I appreciate your making the revisions as soon as possible.

Best wishes for your resubmission.

Comment 1: Please remove the “repeated-measures analysis of variance” from the following sentence in the statistical analysis section:
“The independent t-test and repeated-measures analysis of variance were used to test quantitative variables.”
Comment 2: As mentioned in the previous review, the fitted regression models lack adequate goodness of fit (small R2 values), making the inferences drawn from them invalid and incorrect. Some of the provided justifications regarding this comment are illogical because:
1. When the regression model does not fit the data well, alternative methods are usually used. To ensure that the linear regression model is poorly fitted to the data, you can also examine the underlying assumptions of the model, as well as other indices such as the adjusted R2, etc.
2. The estimated value of the intercept (or constant) in all regression models is very large, which is also a reason for the inappropriate fit of the linear regression model to the data and the need to use alternative models.
Therefore, it is recommended that you use one of the following alternative approaches and report the results instead of the linear regression model:
1. Fit a nonlinear regression model instead of the linear regression model.
2. Use a generalized linear mixed model (GLMM): These models include both fixed and random effects, in which the effects of latent and unobserved factors are included in the model using random effects.
3. Use a logistic regression model instead of the linear regression model (binary response variables are determined using a standard cutoff point).
Comment 3: The following statement and conclusion from the results of the reported regression models are incorrect because the coefficient of determination (or R2 index) indicates the amount of variability in the response variable that is explained by the three variables of age, gender, and group, not just by the group. Please check and revise it.
“Although the explained variance was relatively low (R^2 ranging from .022 to .050), these findings underscore the important role of study groups in explaining variations in dark personality dimensions.”

Editor-in-Chief

MINOR REVISION 9 Jul 2025

Thank you for your recent revisions.
Your paper has now been evaluated again. The revisions significantly improved the manuscript. However, according to the associate editor’s comments, it needs some more revisions. Please make your revisions according to these comments. I would appreciate it if you made the revisions using the track changes mode in MS Word and colored text.

5

Revision 4

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 Dr.Zarghami,

We thank you and the reviewers for their constructive comments. We revised the manuscript according to the lines suggested below.

The revised text is marked in red in the revised manuscript to facilitate the review process. Once again, thank you for your valuable comments. We have tried to answer all the reviewers' questions and have highlighted them in the text in red.

Sincerely,

On behalf of all authors,

Latif Moradveisi

Comment 1: Please remove the "repeated-measures analysis of variance" from the following sentence in the statistical analysis section:
"The independent t-test and repeated-measures analysis of variance were used to test quantitative variables."

Answer 1. Thank you for your comment. We removed the "repeated-measures analysis of variance" and put " the independent t-test and repeated-measures analysis of variance were used to test quantitative variables" in the text and highlighted in yellow.

Comment 2: As mentioned in the previous review, the fitted regression models lack adequate goodness of fit (small R2 values), making the inferences drawn from them invalid and incorrect. Some of the provided justifications regarding this comment are illogical because:
1. When the regression model does not fit the data well, alternative methods are usually used. To ensure that the linear regression model is poorly fitted to the data, you can also examine the underlying assumptions of the model, as well as other indices such as the adjusted R2, etc.
2. The estimated value of the intercept (or constant) in all regression models is very large, which is also a reason for the inappropriate fit of the linear regression model to the data and the need to use alternative models.
Therefore, it is recommended that you use one of the following alternative approaches and report the results instead of the linear regression model:
1. Fit a nonlinear regression model instead of the linear regression model.
2. Use a generalized linear mixed model (GLMM): These models include both fixed and random effects, in which the effects of latent and unobserved factors are included in the model using random effects.
3. Use a logistic regression model instead of the linear regression model (Binary response variables are determined using a standard cutoff point)

Answer 2. Thank you for your valuable feedback and recommendations. As per your suggestion, we have used a **logistic regression model** instead of a linear regression model, based on a standard cutoff point to convert the outcome variable into a binary format. This approach allowed us to address the issue of poor model fit and improve the validity of our inferences. The updated results and corresponding interpretations have been reported in the revised manuscript.

Comment 3: The following statement and conclusion from the results of the reported regression models are incorrect. Because the coefficient of determination (or R2 index) indicates the amount of variability in the response variable that is explained by the three variables of age, gender, and group, not just by the group. Please check and revise it.
“Although the explained variance was relatively low (R^2 ranging from .022 to .050), these findings underscore the important role of study groups in explaining variations in dark personality dimensions.”

Answer 3. Thank you for pointing out this important issue. We agree with your observation and have revised the interpretation accordingly. Additionally, as explained in our response to Comment 2, we have entirely removed the LSD analysis and replaced it with logistic regression models. This adjustment not only resolves the concern about misinterpretation of the R^2 value but also allows for more appropriate modeling of the data.

5 Revision 4

3 comments · 26 Jul 2025 – 26 Jul 2025

Referee 4 Reviewer

MINOR REVISION 26 Jul 2025

Dear Author,

Thank you for your time and effort in revising the manuscript. It looks much better now, but I still have some minor comments regarding the interpretations of the logistic regression model.

- The results of a logistic regression model are usually interpreted as odds ratios, not probabilities. Please revise the interpretations of the logistic regression model.
For example, the following interpretation is incorrect because the results of the LR model show the odds of having a high level of overall psychopathy (high vs. low levels), not higher scores of overall psychopathy.
"Individuals from the general population were more than twice as likely as healthcare workers to exhibit higher psychopathy scores."
It can be interpreted as follows, or in other ways:
The odds of having a high level of overall psychopathy in the general population were 2.22 times those among healthcare workers, and these observed differences are statistically significant. Please revise the interpretation of all dimensions.
- In Table 5, the second to fifth columns are redundant (B, SE, Wald, and df). Please remove them.
- Kindly use P-value and OR instead of sig. and exp(B) in Table 5, respectively.

Good luck!

Associate Editor

MINOR REVISION 26 Jul 2025

Dear Author,

Thank you for your time and effort in revising the manuscript. It looks much better now, but I still have some minor comments regarding the interpretations of the logistic regression model.

- The results of a logistic regression model are usually interpreted as odds ratios, not probabilities. Please revise the interpretations of the logistic regression model.

For example, the following interpretation is incorrect because the results of the LR model show the odds of having a high level of overall psychopathy (high vs. low levels), not higher scores of overall psychopathy.

"Individuals from the general population were more than twice as likely as healthcare workers to exhibit higher psychopathy scores"

It can be interpreted as follows, or in other ways:

The odds of having a high level of overall psychopathy in the general population were 2.22 times those among healthcare workers, and these observed differences are statistically significant. Please revise the interpretation of all dimensions.
- In Table 5, the second to fifth columns are redundant (B, SE, Wald, and df). Please remove them.
- Kindly use P-value and OR instead of sig. and exp(B) in Table 5, respectively.

Good luck!

Editor-in-Chief MINOR REVISION 26 Jul 2025

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

6

Revision 5

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 Dr. Zarghami,

We thank you and the reviewers for their constructive comments. We revised the manuscript according to the lines suggested below.

The revised manuscript has been uploaded to facilitate the review process. Once again, thank you for your valuable comments. We have tried to answer all the reviewers' questions and have highlighted them in yellow.

Sincerely,

- The results of a logistic regression model are usually interpreted as odds ratios, not probabilities. Please revise the interpretations of the logistic regression model.
For example, the following interpretation is incorrect because the results of the LR model show the odds of having a high level of overall psychopathy (high vs. low levels), not higher scores of overall psychopathy.
"Individuals from the general population were more than twice as likely as healthcare workers to exhibit higher psychopathy scores."
It can be interpreted as follows, or in other methods:
The odds of having a high level of overall psychopathy in the general population were 2.22 times compared to healthcare workers, and these observed differences are statistically significant. Please revise the interpretation of all dimensions.

Answer 1: We sincerely thank the reviewer for this valuable comment. As suggested, we have revised the interpretations of all logistic regression results throughout the manuscript to reflect odds ratios (ORs) rather than probabilities or continuous score changes.

These changes are highlighted in yellow in the revised manuscript.

- In Table 5, the second to fifth columns are redundant (B, SE, Wald, and df). Please remove them.

Answer 2: Thank you for this helpful suggestion. As advised, we have removed the columns labeled B, SE, Wald, and df from Table 5 to streamline the presentation of results. The updated table format now focuses on the key outputs relevant for interpretation. This revision has been highlighted in yellow in the manuscript file.

- Kindly use the P-value and OR instead of the sig. and exp(B) in Table 5, respectively.
Answer 3: We appreciate the reviewer's recommendation. In accordance with your suggestion, we have replaced the column labels Sig. and Exp(B) in Table 5 with P-value and OR, respectively, to enhance clarity and align with standard reporting conventions. The updated table has been highlighted in yellow in the manuscript.

6 Revision 5

2 comments · 3 Aug 2025 – 9 Aug 2025

Associate Editor

ACCEPT 3 Aug 2025

Dear Author,

Thank you for revising and resubmitting your manuscript. It has significantly improved, and the authors have addressed almost all comments.

Good luck!

Editor-in-Chief

ACCEPT 9 Aug 2025

We have completed our review of your manuscript and are pleased to inform you that it is being considered for publication in the IJPBS. Note that the publication of your article will only be finalized with 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.