

## Authors' Responses to the Reviewers' Comments – Revision 1

World Journal of Psychiatry - Manuscript ID: 69315

Title: Screening Dementia and Predicting High Dementia Risk Groups using Machine Learning

We appreciate the editor, who gave opportunity to revise our work. Also, we would like to thank the reviewers for careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. We carefully considered your comments as well as those offered by the reviewers. We agree with most of them, and the manuscript has been revised thoroughly according to the reviewer's advice. We hope that these revisions improve the paper such that you and the reviewers now deem it worthy of publication in World Journal of Psychiatry. Also, we hope our revision meet your approval. We next detail our responses to each reviewer's concerns and comments.

Our response follows (the reviewer's comments and editor's comments are in italics).

Editor

*1) This review highlights the importance of machine learning in screening high-risk dementia group. The manuscript is well-written and informative. Some minor issues are raised by the reviewer, which should be addressed by the authors.*

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Reviewer #1

*I believe its a concise and well constructed article to highlight the importance of machine learning for screening high-risk dementia group.*

*The language as well as the scientific quality of manuscript is excellent.*

We appreciate the reviewer's detailed evaluations and positive comments. We appreciate the positive feedback. Also, we appreciate you very much for giving us the opportunity to revise our paper. We agree with most of them, and the manuscript has been revised thoroughly according to the reviewer's advice. Our changes have been marked in red font and highlight in the revised manuscript. We hope that these revisions improve the paper such that reviewers now deem it worthy of publication in World Journal of Psychiatry. Also, we hope our revision meet your approval.

*1.) The paragraph of 'Definition of machine learning' should be placed right after introduction section. In this way, the flow of the article will be better.*

We would like to thank the reviewer for careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. Also, we appreciate you very much for giving us the opportunity to revise our paper. We agree with the reviewers' comments. In response to the reviewer's comments, we moved the "Definition of machine learning" section right after the introduction.

*2.) In abstract, line 4, add the word 'dementia' with the sentence 'predicting high-risk group...'.*

We appreciate the reviewer's detailed evaluations and positive comments. Also, we appreciate you very much for giving us the opportunity to revise our paper. We have corrected the terminology.

(Page 3) The most remarkable field in medical research is the technology of predicting high dementia risk group using big data and artificial intelligence.

*3.) I believe its important to add an operational definition for 'High-risk dementia group'. It's unclear.*

We appreciate the reviewer's detailed evaluations and positive comments. Also, we appreciate you very much for giving us the opportunity to revise our paper. We agree with the reviewers' comments. In response to the reviewer's comments, we added the following paragraph to the introduction section.

(page 7) Many previous studies [4,5] did not define the high dementia risk group as a dementia group because although their memory or cognitive functions were lower than the group with the same age and education level in a standardized cognitive test, the ability to perform daily life (e.g. activities of daily living) was preserved. In other words, since it is the preclinical stage of dementia, it has been receiving attention in terms of early detection and prevention of dementia.

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