



PEER-REVIEW REPORT

Name of journal: *World Journal of Cardiology*

Manuscript NO: 76089

Title: Cardiometabolic risk factors in young Indian men and their association with parameters of insulin resistance and beta cell function

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05872883

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: India

Manuscript submission date: 2022-03-01

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-02 11:52

Reviewer performed review: 2022-03-11 02:47

Review time: 8 Days and 14 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

This paper has some important findings among among young Asian Indian males. My suggestions to improve the manuscript are as follows. 1. In the supplementary table 1, the association of HOMAIR with metabolic variables should be analyzed using , but not Category 2. 2. They are the same in supplementary table 2,3. The The variable should be disposition index and insulin resistance/disposition index respectively. 3. In the introduction, the relationship of HOMAIR and disposition index with cardiometabolic risk factors should be illustrated.



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Peer-review model: Single blind

Reviewer's code: 00863327

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Full Professor

Reviewer's Country/Territory: Taiwan

Author's Country/Territory: India

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Reviewer chosen by: AI Technique

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Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

It is an interesting research article evaluating 635 young North Indian men for burden of cardiometabolic risk factors, in relation to parameters of insulin resistance (HOMA-IR) and beta cell function (oral disposition index or oDI). The authors found that diabetes/prediabetes overweight/obesity, metabolic syndrome and hypertension were present in 5.4/46.8%, 61.1%, 40.6% and 19.4% of participants, respectively. The prevalences of dysglycemia, metabolic syndrome, and hypertension were significantly higher in participants in the worst HOMA-IR and oDI quartiles. The adjusted odds for dysglycemia, hypertension and metabolic syndrome were significantly higher in individuals in worst quartile of HOMA-IR. Finally, it was concluded that the burden of cardiometabolic risk factors is high among young Indian males, highlighting the importance of using parameters of insulin resistance and beta-cell function in phenotyping the cardiometabolic risk in such a population. The manuscript is well-written in English, and the content is directly relevant to the clinical application in Indian men. There is one suggestion as follows. 1. In the reference no. 3 (Diabetes mellitus and its complications in India Nat Rev Endocrinol 2016;12:357), the cardiovascular complications include coronary artery disease (CAD) and peripheral vascular disease. Nevertheless, in this study examining cardiometabolic risk factors, only hypertension was included. The authors should further evaluate, or at least discuss in detail, other cardiovascular risk factors such as CAD.



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Provenance and peer review: Invited Manuscript; Externally peer reviewed

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Reviewer's code: 06269628

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: United States

Author's Country/Territory: India

Manuscript submission date: 2022-03-01

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-04 21:55

Reviewer performed review: 2022-03-15 21:22

Review time: 10 Days and 23 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

Overall, I believe there is some potential for insights from the data, but I do not think it is presented in a clarified way that provides significant insight or fills gaps of knowledge. I do not find the description of the cohort to be particularly important or a gap in the literature (ie the prevalence of conditions in this cohort) and a significant amount of time in the paper is dedicated to this. The proving of a relationship between insulin resistance and beta cell dysfunction with glycemic outcomes does not appear to be novel or exciting. So the only measure that is not intrinsically linked with these variables is hypertension. It may be more compelling if those without dysglycemia within the population are studied separately and are studied for their association of beta cell dysfunction/HOMAIR with hypertension or other measures like dyslipidemia or waist circumference. For example in the following paper: "Esteghamati, Alireza, Omid Khalilzadeh, Mehrshad Abbasi, Manouchehr Nakhjavani, Leila Novin, and Abdul Reza Esteghamati. "HOMA-estimated insulin resistance is associated with hypertension in Iranian diabetic and non-diabetic subjects." *Clinical and experimental hypertension* 30, no. 5 (2008): 297-307." Or perhaps they could explore which of these measures, HOMAIR or oDI, is associated the most with glycemic outcomes? The clumping of the subjects of dysglycemia and those without into these quartiles for analysis does not make sense to me. I think the abstract spends too long describing the cohort in question without describing the relationship between the measures on beta cell dysfunction and insulin resistance which I think is the main point. I think it can be substantially shortened. While the authors do describe the need to specifically study this population (young Indian men) I think the background confuses their aims. Are they trying to describe



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prevalence of certain conditions in this population? If so this may not be the appropriate cohort to make conclusions for the general Indian population. I think they need to describe how showing beta cell dysfunction/insulin resistance as early markers of metabolic disease/independent, independent of dysglycemia is relevant to clinic care. I do not believe they do so adequately. In terms of the Methods, I find the division into the different quartiles and phenotypes to be extremely confusing and unjustified. Why can these not be studied as continuous variables with other statistical measures for association? Does having the categories in addition the phenotypes helpful? The way these are parsed out into so many different categories I do not find helpful. In terms of the discussion, I did not agree with the following statement: "Our study findings add to the limited and evolving understanding of diabetes pathophysiology in South Asians." Because there is not really a quantification of the pathophysiology of this. I did not get a sense from the paper that they were describing the diabetes phenotype of the population. Their discussion of the limitations of the paper was also quite brief Could also comment on a variety of other potential confounders that do not appear to be adjusted for in the odds ratio including smoking history, alcohol history, and BMI to name a few that could have also been adjusted for. The supplementary tables require listing of adjusting variables in them. The supplementary tables also need much clearer establishment of what the categories are being compared to. I think the first 5 tables are very redundant. I think this may be helped by reducing the amount of categories/phenotypes described or doing so only by continuous measurements. I think there needs to be a considerable decrease in the amount of relationships describes.



RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Full Professor

Reviewer's Country/Territory: Taiwan

Author's Country/Territory: India

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Reviewer chosen by: Li-Li Wang

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Reviewer performed review: 2022-05-27 09:50

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors have revised their manuscript according to the reviewer's suggestions, and all of the raised issues have been clarified. There are no further comments on the revised manuscript.