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Letter to the Editor

The role of environmental factors and the generalizability of intergenerational differences in cardiovascular health among South Asian Americans



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To the Editor.

We read with pleasure the article by Shah, et al, titled "Cardiovascular health and subclinical atherosclerosis in second generation South Asian Americans: The MASALA study," that found no significant differences in cardiovascular health between first- and second-generation South Asian Americans. However, the following limitations should be considered when interpreting the results of this study:

- a. The role of potentially confounding factors was underexplored or not established. Data on possible underlying health conditions that impact cardiovascular health, such as diabetes mellitus, hypertension, and obesity, were not collected in this study.^{2–4} Furthermore, a similar study conducted among Mexican-Americans showed that, compared to first-generation Mexican immigrants, United States-born Mexican-Americans have increased cardiometabolic complications and implicated environmental and lifestyle factors in producing this outcome.⁵ In particular, socioeconomic status and duration of residency in the United States were examined in this study, with duration of residency being an important factor associated with cardiovascular disease in the study population.⁵ In the present study by Shah, et al, these unaccounted variables may confound the results presented, so any conclusions should be drawn and interpreted with caution.
- b. There were significant differences in sample sizes among the three groups, which may introduce significant bias in the data. The G1 group had 495 participants, while G1.5 and G2 had 38 participants and 21 participants, respectively. Consequently, the mean values for the G1.5 and G2 groups for each of the variables of interest may be skewed by high variability, which would limit

the generalizability of the study. Thus, the results may not be representative of the G1.5 and G2 generations nationally.

Ultimately, this study firmly establishes the need for more granular analyses of the relationship between generational status and cardiovascular health among South Asian Americans.

Ethics approval

This study was exempt from Institutional Review Board approval.

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Declaration of competing interest

The authors declare that they have no competing interests or conflicts of interests,

References

- Shah NS, Siddique J, Huffman MD, Kanaya AM, Kandula NR. Cardiovascular health and subclinical atherosclerosis in second generation South Asian Americans: the MASALA study. *Indian Heart J.* 2021;73(5):629–632.
- Low Wang CC, Ness CN, Hiatt WR, Goldfine AB. Atherosclerotic cardiovascular disease and heart failure in type 2 diabetes - mechanisms, management, and clinical considerations. Circulation. 2016;133(24):2459–2502.
- 3. Wu C, Hu H, Chou Y, Huang N, Chou Y, Li C. High blood pressure and all-cause and cardiovascular disease mortalities in community-dwelling older adults. *Medicine*. 2015;94(27), e2160.
- Khafagy R, Dash S. Obesity and cardiovascular disease: the emerging role of inflammation. Cardiovasc Med. 2021;8, 768119.
- Gill C, Lee M, Vatcheva KP, Rianon N, Smulevitz B, et al. Association of visceral adipose tissue and subclinical atherosclerosis in US-born Mexican Americans but not first generation immigrants. J Am Heart Assoc. 2020;9(20), e071373.

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