

Letter to the Editor

Authors' Reply to: To Screen or Not to Screen? At Which BMI Cut Point? Comment on "Obesity and BMI Cut Points for Associated Comorbidities: Electronic Health Record Study"

Luke Funk^{1,2}, MD, MPH; Natalie Liu¹, MD

¹Department of Surgery, University of Wisconsin-Madison, Madison, WI, United States

²Department of Surgery, William S Middleton VA, Madison, WI, United States

Corresponding Author:

Luke Funk, MD, MPH

Department of Surgery

University of Wisconsin-Madison

600 Highland Ave

Madison, WI, 53597

United States

Phone: 1 608 263 1036

Email: funk@surgey.wisc.edu

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(*J Med Internet Res* 2022;24(6):e39717) doi: [10.2196/39717](https://doi.org/10.2196/39717)

KEYWORDS

obesity; body mass index; BMI; risk factors; screening; health services; chronic disease; heart disease; myocardial perfusion imaging; anxiety; depression

We thank our colleague from Greece [1] for her interest in our article [2]. Similar to our study, Fotopoulos et al [3] found an association between obesity and coronary artery disease (CAD) in their analysis of patients undergoing cardiac stress tests. They also reported that the presence of obesity and depression together was associated with CAD. Similarly, the presence of obesity and anxiety together was associated with CAD. Our study did not explicitly measure associations between depression and CAD or anxiety and CAD, but Sioka [1] raised important points about how obesity, mental health, and heart disease may interact.

In the adjusted quantile regression analyses (Multimedia Appendix 4 of our paper), we found that patients with a diagnosis of anxiety had a similar BMI as those without anxiety. One systematic review of the literature suggested a positive

association between obesity and anxiety, although a causal relationship has not been established [4]. Patients in our study who had a diagnosis of depression had a slightly higher median BMI than those without depression (0.74 BMI points, 95% CI 0.53-0.94). A meta-analysis of 15 longitudinal studies concluded that obesity increased the risk of depression, and depression was predictive of developing obesity [5].

Our study [2] and the study by Fotopoulos and colleagues [3] both reinforce the concept that obesity is associated with negative health outcomes that affect numerous body systems. Incorporating BMI into screening guidelines for conditions like CAD may help identify high-risk individuals so they can be intervened on earlier than current guidelines support.

Conflicts of Interest

None declared.

References

1. Sioka C. To screen or not to screen? At which BMI cut point? Comment on "Obesity and BMI cut points for associated comorbidities: Electronic health record study". *J Med Internet Res*. 2022;24(6). [doi: [10.2196/37267](https://doi.org/10.2196/37267)]
2. Liu N, Birstler J, Venkatesh M, Hanrahan L, Chen G, Funk L. Obesity and BMI cut points for associated comorbidities: Electronic health record study. *J Med Internet Res*. Aug 09, 2021;23(8):e24017. [FREE Full text] [doi: [10.2196/24017](https://doi.org/10.2196/24017)] [Medline: [34383661](https://pubmed.ncbi.nlm.nih.gov/34383661/)]

3. Fotopoulos A, Petrikis P, Iakovou I, Papadopoulos A, Sakelariou K, Gkika E, et al. The impact of depression and anxiety in prognosis of patients undergoing myocardial perfusion imaging with 99mTc tetrofosmin SPECT for evaluation of possible myocardial ischemia. *Nucl Med Rev Cent East Eur*. Jul 31, 2020;23(2):58-62. [FREE Full text] [doi: [10.5603/NMR.a2020.0014](https://doi.org/10.5603/NMR.a2020.0014)] [Medline: [33007091](https://pubmed.ncbi.nlm.nih.gov/33007091/)]
4. Garipey G, Nitka D, Schmitz N. The association between obesity and anxiety disorders in the population: a systematic review and meta-analysis. *Int J Obes (Lond)*. Mar 8, 2010;34(3):407-419. [doi: [10.1038/ijo.2009.252](https://doi.org/10.1038/ijo.2009.252)] [Medline: [19997072](https://pubmed.ncbi.nlm.nih.gov/19997072/)]
5. Luppino FS, de Wit LM, Bouvy PF, Stijnen T, Cuijpers P, Penninx BW, et al. Overweight, obesity, and depression: A systematic review and meta-analysis of longitudinal studies. *Arch Gen Psychiatry*. Mar 2010;67(3):220-229. [doi: [10.1001/archgenpsychiatry.2010.2](https://doi.org/10.1001/archgenpsychiatry.2010.2)] [Medline: [20194822](https://pubmed.ncbi.nlm.nih.gov/20194822/)]

Abbreviations

CAD: coronary artery disease

Edited by T Leung; this is a non-peer-reviewed article. Submitted 20.05.22; accepted 24.05.22; published 29.06.22.

Please cite as:

Funk L, Liu N

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J Med Internet Res 2022;24(6):e39717

URL: <https://www.jmir.org/2022/6/e39717>

doi: [10.2196/39717](https://doi.org/10.2196/39717)

PMID: [35767330](https://pubmed.ncbi.nlm.nih.gov/35767330/)

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