

## Gender differences in the association between cardiovascular diseases and major depressive disorder among older adults in India

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**Background:** Despite the global disease burden associated with the cooccurrence of cardiovascular diseases (CVDs) and depression, depression remains underdiagnosed and undertreated in the CVD population, especially among older adults in India. As such, this study examines (1) the association between single and multiple CVDs and major depressive disorder among older Indians; (2) whether this association is mediated by older adults' self-rated health and functional limitations; and (3) whether these associations vary for older men and women. **Methods:** Data come from the 2017–18 wave 1 of the Longitudinal Ageing Study in India. Multivariable logistic regression is used to explore the association between CVDs and major depressive disorder among older men and women. The Karlson–Holm–Breen (KHB) method is used to examine the mediation effects of self-rated health and functional difficulties in the observed associations. **Results:** Overall, 5.08% of the older adults had multiple CVDs. Older women (9.71%) had a higher prevalence of major depressive disorder compared to men (7.50%). Multiple CVDs were associated with greater odds of major depressive disorder after adjusting the potential covariates (adjusted odds ratio [AOR]: 1.49; 95% confidence interval [CI]: 1.10-2.00). Older men with multiple CVDs had a greater risk of major depressive disorder (AOR: 1.64; 95% CI: 1.05-2.57) relative to women with CVDs (AOR: 1.39; 95% CI: 0.93-2.08). The association between multiple CVDs and depression was mediated by self-rated health (34.03% for men vs. 34.55% for women), ADL difficulty (22.25% vs. 15.42%), and IADL difficulty (22.90% vs. 19.10%). **Conclusions:** One in five older Indians with multiple CVDs reports major depressive disorder, which is three times more common than the prevalence of depressive disorder in older adults without CVDs. This association is attenuated by self-rated health and functional limitations. Moreover, these associations are more pronounced in older men relative to older women. These findings depart from prior inferences that men with CVDs are less psychologically distressed than their female counterparts. Moreover, the findings underscore the importance of gender-specific approaches to interventions and therapeutics for CVD-related mental health.

**Keywords:** cardiovascular disease; depression; gender, older adults; LASI

### Biography

Muhammad T. is a Ph.D. Candidate at the Department of Family & Generations, International Institute for Population Sciences, Mumbai. His Ph.D. is in Demography and Population Studies, has MPhil and MA in Population Studies, and MA and BA in Economics. He has 93 peer-reviewed publications in reputed international journals. His research interests include Population aging, mental health, social and geriatric psychiatry, cognitive health, physical/ social/ cognitive frailty, healthy/ active/ positive/ successful aging, socioeconomic inequalities in health, gender, and health disparities among vulnerable populations