Austin Cardiology

Open Access

Austin Publishing Group

Letter to Editor

Association Between Cardiovascular Disease and Depressive Symptoms in Advanced Age

Tong Liu*

Department of Cardiac Surgery, Tianjin Medical University General Hospital, China

***Corresponding author:** **Tong Liu**

Department of Cardiac Surgery, Tianjin Medical University General Hospital, CN 300052, PR China.

Email: 1967212575@qq.com

Keywords: Cardiovascular diseases; Depressive symptoms; Advanced age; Populations

Received: April 25, 2024

Accepted: May 09, 2024

Published: May 16, 2024

Letter to Editor

The lifetime prevalence of major depression in older adults is 16.52% and has become an increasingly important public health priority. Diagnosing depression in elderly individuals can be more challenging than in younger populations [1]. The manifestations of depression in the elderly tend to be more covert and may go unnoticed until the condition reaches a severe stage [2]. Cardiovascular Diseases (CVD) are a leading cause of global mortality. The co-occurrence of CVD and depression significantly reduces quality of life and leads to poor health outcomes and an increased risk of death. The mechanism underlying the association between depressive symptoms and increased risk of CVD is complex and is influenced by multiple factors, and is currently not fully understood [3]. The aim of this study was to explore the association between cardiovascular disease and depressive symptoms among advanced age population.

Our study is a longitudinal study based on data from China Health and Retirement Longitudinal Study (CHARLS). The CHARLS is a representative longitudinal survey of people aged ≥ 45 years. A total of 2338 participants were selected in this cohort study after excluding those aged below 70 years and missing data on CVD and depressive symptoms. Our study collected basic information about the person (Age, sex, marital status, current drinkers, current smokers, and depressive symptoms). We used binary logistic regression to investigate the association between CVD and depressive symptoms in advanced age Chinese population. All statistical analyses were performed using SPSS.25. The study protocol was approved by the Ethical Review Committee of Peking University (approval number: IRB00001052–11,015). All participants provided informed consent before their inclusion in the study.

The average age of the participants was 79.2 years (SD=3.9), and of them, 47% were women. Of the patients, 1206 (52%) suffered from depressive symptoms and 774 (33.1%) suffered from CVD. The logistic regression analysis showed that in the unadjusted model, individuals with CVD exhibited a significantly increased odds of experiencing depressive symptoms compared to those without CVD (model 1: OR = 2.953, 95% CI = 2.846, 2.367). After adjusting for all potential confounders, the association between CVD and depressive symptoms retained its significance (model 3: OR = 2.901, 95% CI = 2.411, 3.491).

Cardiovascular Disease and Depressive Sympt

Characteristic	Model 1				Model 2				Model 3		
	OR	95% *CI*	*p*-value		OR	95% *CI*	*p*-value		OR	95% *CI*	*p*-value
Cardiovascular disease											
No	1.000		<0.001		1.000		<0.001		1.000		<0.001
Yes	2.953	2.846, 2.367			2.846	2.367, 3.421			2.901	2.411, 3.491	

Note: OR: odds ratio; 95% CI: 95% confidence interval.
Model 1: Unadjusted model;
Model 2: Age, sex, and marital status;
Model 3: Model 2 + Current drinkers and Current smokers.

Citation: Liu T. Association Between Cardiovascular Disease and Depressive Symptoms in Advanced Age. Austin Cardio. 2024; 9(1): 1040.

This study analysed the effect of depressive symptoms on the development of cardiovascular disease in advanced age population. Depressive symptoms has consistently shown to be associated with CVD in previous studies [4,5]. In a synthesis analysis of eight studies, Rutledge and colleagues discovered that experiencing depressive symptoms or having depressive disorders leads to a twofold increase in the risk of death or CVD events [6]. The key reason is that individuals with depression and CVD are unlikely to adhere to a nutritious diet, engage in consistent exercise, maintain medication compliance, or undergo comprehensive cardiac recovery. Due to the irreversible nature of CVD as a chronic condition. The extended treatment of medications can also result in economic challenges for patients. Simultaneously, the abrupt nature and severity of the illness can bring about psychological burdens for patients and may potentially induce symptoms of depression. Hence, providing timely health management and psychological counseling for individuals with cardiovascular diseases can alleviate apprehension and significantly impact the prognosis of cardiovascular conditions. Although further research about the drivers of this relationship is needed, these results could help to enhance the integrated management of individuals with depressive symptoms and the development of preventive strategies to reduce the effect and burden of cardiovascular disease.

References

1. Liu QL, Cai H, Yang LH, Xiang YB, Yang G, Li H, et al. Depressive symptoms and their association with social determinants and chronic diseases in middle-aged and elderly Chinese people. Sci Rep. 2018; 8: 3841.
2. Purnichi T, Matei VP, Grigoras R, Banu CR, Pirlog MC. HIGH-SENSITIVITY C-REACTIVE PROTEIN, POSSIBLE BIOMARKER FOR DEPRESSION IN ELDERLY POPULATION. Acta Endocrinol (Buchar). 2019; 15: 215-220.
3. Vaccarino V, Badimon L, Bremner JD, Cenko E, Cubedo J, Dorobantu M, et al. Depression and coronary heart disease: 2018 position paper of the ESC working group on coronary pathophysiology and Microcirculation. Eur Heart J. 2020; 41: 1687–96.
4. Ziwei Z, Hua Y, Liu A. Bidirectional association between depressive symptoms and cardiovascular disease in the middle-aged and elderly Chinese: a 5-year longitudinal study. BMJ Open. 2023; 13: e071175.
5. Liu J, Son S, Mcintyre J, Narushima M. Depression and cardiovascular diseases among Canadian older adults: a cross-sectional analysis of baseline data from the CLSA Comprehensive Cohort. J Geriatr Cardiol. 2019; 16: 847-854.
6. Celano CM, Villegas AC, Albanese AM, Gaggin HK, Huffman JC. Depression and Anxiety in Heart Failure: A Review. Harv Rev Psychiatry. 2018; 26: 175-184.