

Relationship Between Social Interaction and Cognitive Function Among Chinese Community-Dwelling Older Adults: Exploration of the Mediating Role of Depression

Yuewen Liu^{1,2}, Ying Yu^{1,*}, Qi Guo¹

¹College of Rehabilitation, Shanghai University of Medicine and Health Sciences, Shanghai, China

²School of Psychology, Shanghai University of Sport, Shanghai, China

Email address:

lplyw1006@163.com (Yuewen Liu), yuying@sumhs.edu.cn (Ying Yu), guoqijp@gmail.com (Qi Guo)

*Corresponding author

Abstract

Background: Cognitive decline in older adults is a critical public health concern, with social interaction and depression recognized as key modifiable factors influencing cognitive functioning. While prior studies have established independent associations between social engagement, depressive symptoms, and cognitive outcomes, the mediating role of depression in linking social interaction to cognitive health remains underexplored. This gap limits the development of targeted interventions, as the mechanisms through which social engagement preserves cognition, especially in aging populations with limited social resources, are poorly understood. Addressing this knowledge gap, our study investigates whether depressive symptoms mediate the relationship between social interaction and cognitive functioning among Chinese community-dwelling older adults, providing insights for designing dual-focused interventions targeting both social engagement and mental health. **Objective:** The functioning of older adults is affected by both social interaction and depression, but the underlying mechanisms between these variables have not been thoroughly investigated in most studies. This study aimed to examine the mediating role of depression in the relationship between social interaction and cognitive functioning in older adults. **Methods:** This study included 1861 community-dwelling older adults aged 60 and above living in Tianjin and Shanghai, China (761 men and 1100 women). The cognitive function was assessed using Mini-Mental State Examination. Depressive symptoms were assessed using the 30-item Geriatric Depression Scale. The mediation analysis was performed by fully adjusting for all potential confounders. **Results:** Social interaction and depressive symptoms were associated with cognitive function. Social interaction was negatively correlated with depression ($r_s = -0.143$, $P < 0.001$) and positively correlated with cognitive function ($r_s = 0.164$, $P < 0.001$). Depression was negatively correlated with cognitive function ($r_s = -0.170$, $P < 0.001$). Further, depressive symptoms mediated the relationship between social interaction and cognitive functioning. **Conclusions:** This study found that social interaction was crucial in indirectly predicting cognitive impairment in older adults through depressive symptoms. Therefore, for older adults who lack social interaction activities, health care workers should provide targeted health education to improve their health awareness and self-management skills, as well as their mental health.

Keywords

Cognitive Impairment, Depressive Symptoms, Social Interaction