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DEPRESSIVE SYMPTOMS PREDICT MEMORY DECLINE OVER SUBSEQUENT 4 YEARS: LONGITUDINAL ANALYSIS OF THE GUANGZHOU BIOBANK COHORT STUDY

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Introduction

Late-life depression may increase dementia risk, raising the possibility of overlapping pathophysiology and potential preventive strategies. We examined whether: a) baseline depressive symptoms predicted memory decline, and b) baseline memory function predicted mood decline, in an older Chinese cohort.

Methods

We conducted a prospective analysis based on the Guangzhou Biobank Cohort Study on 30,518 community-dwelling participants aged 50+ years with a mean follow-up period of 4.1 years. In an unselected sub-sample of 5,954 people (mean age 59.5 years, standard deviation 7.1, 75% females), we assessed baseline Geriatric Depression Score (GDS, maximum 15, higher score indicating more depressive symptoms) and a change in the Delayed 10-Word Recall Test score (DWRT, maximum 10 points, higher score indicating better memory) between baseline and follow-up. Conversely, we also assessed DWRT at baseline and a change in GDS between baseline and follow-up. Multivariate linear regression was used to assess the association between GDS and DWRT.

Results

After adjusting for age, sex, education, occupation, smoking status, alcohol use, physical activity and self-rated health, for every +1 point increase in baseline GDS, there was a significant -0.03 points (95% CI -0.05 to -0.003, P=0.02) decrease in DWRT. Further adjustment for vascular factors (systolic blood pressure, fasting glucose, low-density lipoprotein cholesterol and waist circumference) did not attenuate the association suggesting GDS was an independent predictor of worsening in DWRT score over 4 years . Conversely, after similar adjustments, baseline DWRT score was not associated with worsening in GDS over 4 years (beta-coefficient =-0.01, 95% CI -0.03 to 0.009, p=0.29).

Conclusions

In this large Chinese cohort, depressive symptoms predicted memory decline over 4 years, but not vice versa. Further interventional studies are warranted to clarify the biological and clinical implications of the association, and explore the potential benefits of treating depression in the primary prevention of memory decline.