# Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

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## Mental health

# Depression in midlife does not raise risk of dementia

Depression may be a prodromal feature of, rather than a risk factor for, dementia, a UK prospective cohort study has found.

A total of 10,308 participants (6,895 men) in the Whitehall II study, aged 35-55 at recruitment, were followed up between 1985 and 2015. During this period, participants were asked to complete the 30-item General Health Questionnaire (GHQ-30) on nine occasions. The presence of depressive symptoms was defined as GHQ-30 caseness (score ≥ 5). Dementia cases were identified from NHS registers and the national mortality register.

Most cases of dementia occurred between 1995 and 2015, with nearly three quarters (73%) documented in the last five years of the follow-up period.

After adjusting for sociodemographic factors, health behaviours and chronic conditions, there was no association between depressive symptoms reported in 1985 and incident dementia; hazard ratio (HR) 1.21 (95% CI: 0.95-1.54). However, those reporting depressive symptoms in 2003 were at raised risk of dementia, HR 1.72 (95% CI: 1.21-2.44).

Similarly, participants with chronic/recurrent depressive symptoms in the early part of the study (GHQ-30 score ≥ 5 on at least 2 out of 3 assessments) were not at increased risk of dementia, adjusted HR 1.02 (95% CI: 0.72-1.44). However, those with chronic/recurrent symptoms in the late phase of the study did have an increased risk HR 1.67 (95% CI: 1.11-2.49).

Retrospective trajectories of mean GHQ-30 scores were modelled for those with dementia (baseline = year of diagnosis) and for those without dementia (baseline = year of death or end of the trial).

Compared with the group without dementia, those with dementia had significantly higher mean scores from 11 years prior to diagnosis difference 0.61 (95% CI: 0.09-1.13) and the difference progressively increased up to the year of diagnosis, difference 5.81 (95% CI: 4.81-6.81).

The sensitivity and specificity of GHQ-30 caseness as a measure of depression were 78% and 83% with a PPV of 0.14, NPV 0.99.[1] As only 14 out of every 100 GHQ-30 'cases' will have had clinical depression, it is possible that the study was underpowered to detect an association between depression at the initial assessment and incident dementia. Nevertheless, the retrospective trajectories suggest that depressive symptoms are a prodromal feature of, not a risk factor for, dementia.

This study provides some reassurance for middle-aged patients with depression that they do not appear to be at increased risk of dementia. However, it also implies that recognition and treatment of depression in elderly patients is unlikely to reduce their risk of developing dementia.

Depression in the elderly is commonly accompanied by cognitive impairment. Those with impaired executive function are less likely to respond to antidepressants and are at increased risk of suicide. Mild cognitive impairment only improves slightly after depression treatment but most patients will not progress to dementia. However, patients with a reversible dementia syndrome (previously termed pseudodementia) are at high risk of developing irreversible dementia.[2] Psychological treatments for depression have no effect on cognition[3] and antidepressants do not appear to influence the rate of cognitive decline.[4]

Apathy, depression and declining physical activity are all prodromal features of dementia. However, there is no replicated evidence that cognitive stimulation, treatment of depression or exercise interventions can slow the rate of cognitive decline.[5]

**DR PHILLIP BLAND**

**Singh-Manoux A, Dugravot A, Fournier A et al. Trajectories of depressive symptoms before diagnosis of dementia. A 28-year follow-up study. *JAMA Psychiatry* 2017;74:712-18**

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