



HEALTH

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Education 'helps brain compensate for dementia changes'

By Caroline Parkinson
Health reporter, BBC News

People who stay in education for longer appear to be better able to compensate for the effects of dementia on the brain, a study suggests.

A UK and Finnish team found those with more education were as likely to show the signs of dementia in their brains at death as those with less.

But they were less likely to have displayed symptoms during their lifetime, the study in *Brain* said.

Experts said scientists now had to find out why the effect occurred.

Over the past decade, studies on dementia have consistently shown that the more time you spend in education, the lower the risk of dementia.

But studies have been unable to show whether or not education - which is linked to higher socio-economic status and healthier lifestyles - protects the brain against dementia.

Compensation

The researchers in this study examined the brains of 872 people who had been part of three large ageing studies.

Before their deaths they had also completed questionnaires about their education.

The researchers found that more education makes people better able to cope with changes in the brain associated with dementia.

Post-mortems showed the pathology - signs of disease - in the brains of people with and without long educations were at similar levels.

But the researchers found those with more education are better able to compensate for the effects of the condition.

It also showed that, for each year spent in education, there was an 11% decreased risk of developing dementia.

Dr Hannah Keage of the University of Cambridge, who co-authored the study, said: "Previous research has shown that there is not a one-to-one relationship between being diagnosed with dementia during life and changes seen in the brain at death.

"One person may show lots of pathology in their brain while another shows very little, yet both may have had dementia.

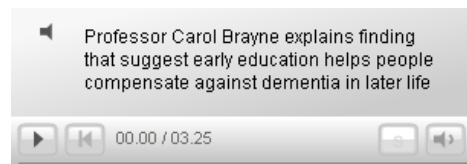
"Our study shows education in early life appears to enable some people to cope with a lot of changes in their brain before showing dementia symptoms."

'Dementia resistant'

The researchers used data from the Eclipse collaboration, which combines the three European population-based longitudinal studies of ageing from the UK and Finland which have assessed people for up to 20 years.

Professor Carol Brayne, who led the study, said: "Education is known to be good for population health and equity.

"This study provides strong support for investment in early life factors which should have an impact on society and the whole lifespan.



"This is hugely relevant to policy decisions about the importance of resource allocation between health and education."

Ruth Sutherland, chief executive of the Alzheimer's Society, said: "This is the largest study ever to confirm that hitting the books could help you fight the symptoms of dementia in later life. What we don't know is why a longer education is so good for you.

"It could be that the types of people who study longer have large brains which adapt better to changes associated with dementia.

"Another reason could be that educated people find ways of managing or hiding their symptoms."

She added: "We now need more research to find out why an education can make the brain more 'dementia resistant'. Until then the message appears to be stay in school."

Rebecca Wood, chief executive of the Alzheimer's Research Trust, added: "During dementia, proteins build up in the brain and nerve cells become damaged. This research suggests that education is not able to stop the damage but enables the brain to cope better and alleviate its impact. "

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