

- Brain—diseases

Bad dreams in middle age could be sign of dementia risk, study suggests

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People who experience frequent bad dreams in middle age may experience a faster rate of cognitive decline and be at higher risk of dementia as they get older, data suggests.



If confirmed, the research could eventually lead to new ways of screening for dementia and intervention to slow the rate of decline.

Most people experience bad dreams from time to time, but approximately 5% of adults experience nightmares – dreams distressing enough to wake them up – at least once a week. Stress, anxiety, and sleep deprivation are all potential triggers, but previous research in people with Parkinson’s disease has also linked frequent distressing dreams to faster rates of cognitive decline, and an increased risk of developing dementia in the future.

To investigate whether the same might be true of healthy adults, Dr Abidemi Otaiku at the University of Birmingham turned to data from three previous studies that have examined people’s sleep quality and then followed them over many years, assessing their brain health as well as other outcomes. This included more than 600 middle-aged adults (aged 35 to 64), and 2,600 people aged 79 and older.

Their data was analysed using statistical software to find out whether those who experienced a higher frequency of distressing dreams were more likely to go on to experience cognitive decline and be diagnosed with dementia.

The research, published in *eClinicalMedicine*, found that middle-aged people who experienced bad dreams at least once a week were four times more likely to experience cognitive decline over the following decade than those who rarely had nightmares. Among elderly participants, those who frequently reported distressing dreams were twice as likely to be diagnosed with dementia in subsequent years.

One possibility is that people who have frequent bad dreams have poor quality sleep, which could gradually lead to a buildup of proteins associated with dementia. Another is the existence of some genetic factor that underpins both phenomena.

However, Otaiku’s working hypothesis is that neurodegeneration within the brain’s right frontal lobe makes it harder for people to control their emotions while dreaming, which in turn leads to nightmares. He said: “We know that neurodegenerative conditions such as Parkinson’s disease and Alzheimer’s disease often start many years before somebody is diagnosed. In some individuals who already have underlying disease, bad dreams and nightmares might be one of the earliest signs.”

He stressed that only a subset of adults who regularly have bad dreams are likely to develop dementia, However, assuming this link is confirmed, bad dreams could eventually be used to identify individuals at high risk.

“The best way to deal with dementia is to prevent it from occurring, and we know that there are several modifiable risk factors – poor diet, lack of exercise, smoking, and drinking too much alcohol.” Otaiku said. “If we can identify who’s at high risk for getting dementia several years or even decades earlier, we may be able to slow down the onset, or maybe even prevent it altogether.”

Curiously, the study found that the associations were stronger for men than for women. For example, older men experiencing nightmares on a weekly basis were five times more likely to develop dementia than older men reporting no bad dreams – but in women, the increase in risk was only 41%.

Related to this, previous research has suggested that nightmares are more common among women during youth and middle-age, but that men’s risk of nightmares increases in later life. One possibility is that dementia-linked nightmares are only those that develop during older age, and which men are more predisposed to, Otaiku said.