

# Study suggests 'born-again' believers have smaller brains

by [Yonat Shimron](#)

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DURHAM, N.C. (RNS) For decades, mainline Protestants have been beset by bad news: declining numbers, aging membership, waning cultural influence.

A new study from Duke University Medical Center, however, gives these Protestants one reason for cheer: they seem to have larger brains than born-again Christians, Roman Catholics and the religiously unaffiliated.

The study, which examined the hippocampus region of the brain, found that Protestants who did not have a "born again" experience had significantly more gray matter than either those who reported a life-changing religious experience, Catholics, or unaffiliated older adults.

The study, funded by the National Institutes of Health and the Templeton Foundation, included at least two MRI measurements of the hippocampus region of 268 adults between 1994 and 2005.

It found an association between participants' professed religious affiliation and the physical structure of their brain. Specifically, those identified as Protestant who did not have a religious conversion or born-again experience -- more common among their evangelical brethren -- had a bigger hippocampus.

Amy Owen, a psychologist who did a post-doctoral fellowship at Duke and was the main writer for the study, said she hoped others would try to reproduce the study or offer other reasons for the association.

"There may be more factors responsible for the correlation," she said of the study published on March 30 in "PLoS One," a peer-reviewed, open-access, online publication.

Participants, all 58 or older, were initially recruited for a larger study on the effects of depression in the elderly. That study is ongoing. For this study, researchers ruled out depression or lack of social support as reasons for the smaller brain size, or hippocampal atrophy.

The hippocampus is an area buried deep in the brain that helps regulate emotion and memory. Atrophy or shrinkage in this region of the brain has long been linked to mental health problems such as depression, dementia and Alzheimer's disease.

So why would born-again Protestants, Catholics and those with no religious affiliation have a smaller hippocampus? Researchers speculate it may have something to do with the stress of belonging to a minority group. Chronic stress floods the brain with hormones that, over time, may damage the hippocampus.

Sociologists of religion, meanwhile, aren't buying it. They say the researchers' theory flies in the face of U.S. religious demographics. While it's true that evangelicals are a minority, they're a sizable one -- 40 percent of the U.S. population, according to Gallup Polls -- and not exactly a stressed-out minority, especially in the South.

"There are probably more born-again Protestants than non-born-again Protestants, and just about as many Catholics as either born-again or non-born-again Protestants," said David Roozen, sociologist of religion at Hartford Seminary.