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BEYOND BELIEF

This is your brain on religion

Believers record lower levels of anxiety, which can boost performance but also hinder the ability to fix mistakes, study finds

BY OMAR EL AKKAD

A group of Toronto scientists have found God - or at least the effect God has on a believer's brain.

Newly published research by University of Toronto and York University professors points to reduced stress and anxiety among test subjects who consider themselves to be religious, compared with non-believers, when completing a task under pressure. As a result, the believers performed better on cognitive tests.

"[Religious people] were much less anxious and stressed when they made an error," said Michael Inzlicht, an assistant psychology professor at the University of Toronto and a co-author of the study. "I don't think this has to do with fundamentalism, it's something deeper - religion provides meaning in peoples' lives."

But Prof. Inzlicht said that while a low level of anxiety can boost performance, it also functions as a sort of "alarm bell," and too little activity in that part of the brain can hurt the ability to correct mistakes.

"The more they believe, the less brain activity we see in response to their own errors," he said. In some ways, he added, "that's a good thing. But on



Religious people have a more longitudinal view of life, a theology professor says. ISTOCKPHOTO

the other side, we need to know when we're making a mistake. If we don't, we may make the same mistake again."

In their first study, researchers asked subjects to complete a "religious zeal questionnaire," which included questions such as whether they believed their religion was

more correct than others', Prof. Inzlicht said. The subjects were then given a test that involved naming the colour of the letters in a word such as "red" or "blue" (for example, the word "red" may appear in blue font).

Researchers monitored brain activity using electrodes. The

results showed that subjects with more religious zeal experienced less activity in the anterior cingulate cortex, a part of the brain that is involved in the experience of anxiety and helps modify behaviour. The more religious zeal individuals showed, the better they did on the test.

In a second test, subjects were simply asked to rate their belief in God, rather than answer detailed questions about their conviction. Even less fervent belief in God resulted in lower levels of anxiety than among non-believers.

Prof. Inzlicht said a subsequent study showed a change

in brain activity even when all the subjects were religious. In this study, members of one group were asked to write down why their religion was important, whereas those in another group were asked to describe a topic such as their favourite season. Those who had been primed to discuss their religion once again showed less activity in the portion of the brain associated with anxiety.

David Reed, professor emeritus of pastoral theology and a research professor at Wycliffe College, said he isn't surprised by the study's results.

"Religious people, and I'm speaking for Christians but also other faiths as well, have some larger purpose other than themselves," he said. "They have a more longitudinal view of life, in that they take it beyond death."

Pat O'Brien, president of Humanist Canada, could not comment specifically because he had not seen the study, but said he has heard about others that correlate religious belief with wellbeing. Such studies, he added, still don't answer a fundamental question.

"It probably still doesn't answer the question of whether there's a God or not," he said. "[Even] Santa Claus can make you feel good."