New Canadian research suggests that the brain fires differently when dealing with people of a different race and ethnicity.

Previous research has shown that people are less likely to feel connected to people outside their own ethnic groups, so scientists at the University of Toronto Scarborough set out to find out why.

Jennifer Gutsell, a doctorate student and co-author of the study, says they found that there is a basic difference in the way people's brains react to those from other ethnic backgrounds.

Observing someone of a different race produces significantly less motor-cortex activity than observing a person of one's own race.

The trend is even more pronounced for participants who scored high on a test measuring subtle racism, says Gutsell.

The research explored the sensitivity of the “mirror-neuron-system” to race and ethnicity.

Assistant professor Dr. Michael Inzlicht says the so-called mirror-neuron-system is thought to be an important building block for empathy by allowing people to “mirror” other people's actions and emotions.

“Our research indicates that this basic building block is less reactive to people who belong to a different race than you,” he said in a release.

The researchers had participants view a series of videos while hooked up to electroencephalograms.

The participants – who were all white – watched simple videos in which men of different races picked up a glass and took a sip of water.

They watched white, black, South Asian and East Asian men perform the simple task.

Typically, when people observe others perform a simple task, their motor cortex region fires similarly to when they are performing the task themselves.

However, the researchers found that participants' motor cortex was significantly less likely to fire when they watched the visible minority men perform the simple task.

In some cases when participants watched the non-white men performing the task, their brains actually
registered as little activity as when they watched a blank screen.

Their study was published in the Journal of Experimental Social Psychology.