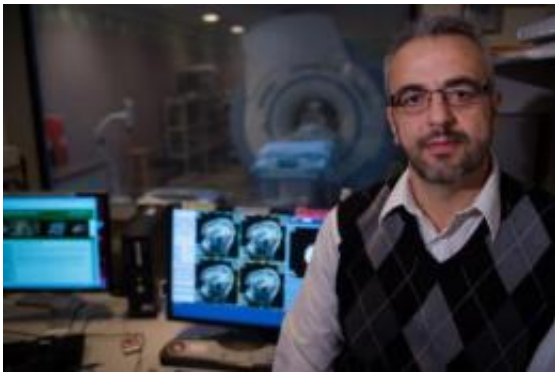


Listen up, doc: Empathy raises patients' pain tolerance

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Michigan State University radiology professor Issidoros Sarinopoulos led a study showing that doctors who express empathy change the way their patients' brains function and help them tolerate pain. Credit: Photo by G.L. Kohuth.

A doctor-patient relationship built on trust and empathy doesn't just put patients at ease – it actually changes the brain's response to stress and increases pain tolerance, according to new findings from a Michigan State University research team.

[Medical researchers](#) have shown in recent studies that doctors who listen carefully have happier patients with better [health outcomes](#), but the underlying mechanism was unknown, said Issidoros Sarinopoulos, professor of radiology at MSU.

"This is the first study that has looked at the patient-centered

relationship from a neurobiological point of view," said Sarinopoulos, the lead researcher. "It's important for doctors and others who advocate this type of relationship with the patient to show that there is a [biological basis](#)."

The study involved randomly assigning patients to one of two types of interview with a doctor before undergoing an [MRI scan](#). In the patient-centered approach, doctors addressed any concerns participants had about the procedure and asked open-ended questions allowing them to talk freely about their jobs, home life and other psychological and [social factors](#) affecting health. The other patients were asked only specific questions about clinical information such as their [medical history](#) and what drugs they were taking.

As expected, those who had the patient-focused interview reported greater satisfaction and confidence in their doctor in a post interview questionnaire.

The participants then were placed in the [MRI scanner](#) and given a series of mild electric shocks, similar to the discomfort of having an IV needle inserted, while looking at a photo of a doctor who they were told was supervising the procedure. The scans measured activity in the anterior insula – the part of the brain that makes people aware of pain – in anticipation of the shocks and when they actually occurred.

The brain scans revealed those who had the patient-centered interview showed less activity in the anterior insula when they were looking at a photo of the interviewing doctor than when the doctor in the photo was unknown. Those participants also self-reported less pain when the photos showed the known doctor.

Sarinopoulos said the study had a small sample of just nine women and will need to be replicated on a larger scale.

"We need to do more research to understand this mechanism," he said, "but this is a good first step that puts some scientific weight behind the case for empathizing with patients, getting to know them and building trust."

Published in the journal *Patient Education and Counseling*, the study was part of a broader effort at MSU, led by professor of medicine Robert Smith, to establish standards for patient-centered health care and measure its effectiveness.

"Medicine has for too long focused just on the physical dimensions of the patient," said Smith, who co-authored the paper. "Those clinical questions are important and necessary, but we're trying to demonstrate that when you let patients tell their story in an unfettered way, you get more satisfied patients who end up healthier."

Provided by Michigan State University

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