

Research finds pain expectation is pain reality for children

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So much for, "See? That wasn't so bad."

If your child thinks the needle is going to hurt, that expectation ensures

it's going to hurt.

That's the finding of first-of-its-kind research from UC Riverside psychologist Kalina Michalska. For the first time, researchers have looked at how expectation influences pain experience in [children](#).

"We know that expectation affects pain experience in adults; we don't know whether this is also true for children," said Michalska, who studies children's reaction to distress—their distress and others'—in her Kids Interaction and Neuro Development Lab.

This bears out what pediatricians know. Dr. Adwoa Osei, who is a practicing pediatrician and a faculty member in the UCR School of Medicine, said prepping children for inoculations ahead of time doesn't help.

Penicillin shots are the worst. The medicine to be delivered is thick in consistency, and takes a while to deliver. It hurts more.

"If I don't say anything before, they might limp a little leaving the office," Osei said. "But if I tell them it's going to be painful, afterward they say, 'I can't walk!' or 'You have to carry me out of the room.'"

In Michalska's experiment, researchers applied thermal heat and asked the subjects to rate levels of pain: low, medium, high—high being about the temperature of very warm tap water. But during the experiment, only one temperature—the one each subject rated medium—was used. The difference was the cues—the tone they heard before the heat was applied. One tone meant low heat, the other, high.

So, even though the subject heard a cue indicating high pain, the pain was only medium.

The study's subjects included 21 healthy children, 27 children with an anxiety disorder, and 25 adults.

One aspect of the findings surprised researchers: All three groups experienced a similar relationship between pain expectation and experience. Researchers expected the strongest expectation-experience correlation among anxious children, followed by healthy children, then adults. That's because research historically finds children are highly suggestible; by what they see in the media, by what peers tell them, etc.

Michalska said her efforts to reassure the children may have impacted results. It's an ethical paradox; reassuring children there is nothing to be afraid of is the right thing to do, but might impact the results.

"We took great care to reassure children and make them feel comfortable. There were always two experimenters in the room with them and a nurse who saw them before and after to ensure they were OK," Michalska said. "We did not take as great a precaution with adults."

These ethical considerations have long been an impediment to the research Michalska conducted. It's why there hasn't been similar research, Michalska said.

Nonetheless, Michalska said, the study reinforced that pain expectation informs [pain experience](#), significantly.

"What we learn is that both healthy and [anxious children](#)'s experience of pain is influenced by what they are told about it. If we tell them they will experience a lot of pain—or they tell themselves this—they will actually experience more [pain](#) and greater negative emotions as a consequence," she said.

Michalska said the study reinforces the necessity of not "hyping up" painful [experiences](#), and of discouraging children from ramping up the experience up in their heads. In practical terms, there is value in distracting children beforehand. And giving them a new, less frightening frame of reference, such as: "This is going to feel like a branch scraping against your skin."

The research appears online in the journal *Psychosomatic Medicine*.

Provided by University of California - Riverside

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