

# Research suggests that the arts might play a role in empathy training

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Credit: City University London

A recent study from researchers at City, University of London and the University of the Balearic Islands suggests that dancers are more emotionally sensitive than the rest of us.

The research, which is published in the *Journal of Experimental Psychology: Human Perception and Performance*, also shows that dancers not only recognised the emotions better, but their bodies would also respond more sensitively to the displayed emotional movements. It suggests that the arts might play a role in empathy training.

To investigate how individual's sensitivity to other people's body movement varies, the researchers showed short video clips of ballet dancing to 19 [ballet dancers](#) and a [control group](#) of 24 people with no

dance experience. The 48 videos used featured genuine live performances in black and white without any sound. In each clip the dancer's face was blurred so no facial expression was visible and movement in the clips shown was either happy or sad.

To ensure that the changes seen were due to the emotive movements, in half of the trials, movements were played in the order in which they are learned (forward presentation), and in the other half, movements were played backward (control condition).

While participants watched the videos, the researchers placed electrodes on participants' fingers to detect the subtle sweat response triggered by an emotional reaction. Participants were also asked to rate their emotional response, in particular, whether the movements made them feel happy or sad.

The researchers found that expert dancers discriminated more strongly between happy and sad dance clips played in the usual, forward direction than control participants did. Furthermore, when looking at the sweat response via the electrodes placed on participants' fingers, they found that while both the dancers and control group identified the emotions of the ballet clips correctly, the dancers had a much stronger physiological reaction to emotion.

The study suggests that training in the bodily expression of emotions – such as ballet or other forms of dance - enhances an individual's sensitivity to the emotions expressed by others. Training through dance and movement therapy could thus potentially help with the management of disorders such as [autism spectrum disorders](#) which is frequently associated with difficulties in understanding and interpreting social-emotional information.

Dr Julia F Christensen, a Newton International research fellow (funded

by the British Academy) in the Cognitive Neuroscience Research Unit and the Autism Research Group at City, University of London and lead author of the paper, said:

"The interesting thing about this study is that the dancers not only detected the emotions better, but their bodies would also respond more sensitively to the displayed [emotional](#) movements. In particular, we saw that dancers' bodies differentiated between different emotions that were expressed in the clips, whereas the controls didn't exhibit that difference.

"The evidence suggests that training in the physical expressions made the [dancers](#) more sensitive to them. As a result, this indicates an interesting possibility that the neurocognitive mechanisms that make people more sensitive can be trained. Our research also indicates that dance training might be a way to make you more aware of emotions.

"You could even hypothesize that dance makes you more empathetic because it seems that you learn to react automatically and more sensitively to other people's expressions, but this still needs to be tested. This idea is intuitive when considering that all affective expression—be it facial or bodily—normally involves movement of our muscles. After all, emotion is also motion."

Provided by City University London

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