CultureCase

The effects of music training on hearing in children

This research was conducted by **Asal Habibi, B. Rael Cahn, Antonio Damasio** and **Hanna Damasio** at the **University of Southern California, USA.**

Summary

This study found that children engaged in music training had an enhanced ability to detect changes in pitch and to process sounds, compared with children who were not given any musical training.

Is musical ability inherited or learned?

Adult musicians have better hearing skills compared to those with no music training but it's unknown if this is due to training alone or if it is a result of genetic or biological factors. Conducting long-term research with young children of the same age and background enables a distinction to be made between predisposing factors and the effects of musical training.

Children took part in a Venezuelan system of musical training known as ‘El Sistema’

Children aged six and seven from mainly disadvantaged Latino families in Los Angeles were recruited to one of three groups: a youth orchestra undertaking ensemble practices and group performances; a sports programme; and a group of children who did no music or sports training. Participants were assessed at the beginning of the study, and again two years later, on how their brains processed sounds in response to violin, piano and pure tones. The study also examined whether the children could distinguish changes in pitch, tone and rhythm.

Music training may result in specific brain changes in school aged children

Children in the music group showed advanced brain activity in those parts used to process sounds and detect changes in pitch, compared with the other two groups. The authors suggest this is related to more active sustained use of those parts of the brain which process sounds and are stimulated through music training. The results indicate that childhood music training has a measureable impact on the development of hearing and that such enhancement may further facilitate language skills, improve social interaction and academic skills.

This summary is by **Tanya Graham, King's Knowledge Exchange Associate**

Keywords

listening **experiment** **USA** **music** **children**

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