CultureCase

Music training can help children cope with stress

This research was conducted by **Ingo Roden, Florian D. Zepf, Gunter Kreutz, Dietmar Grube** and **Stephan Bongard** at **Carl von Ossietzky University Oldenburg** and **two other universities in Germany and Australia**

Summary

This study attempted to understand how different interventions might reduce the aggressive behaviour of children. A group of primary school children who were given extended music lessons showed less aggressive behaviour in response to provocations via a computer game, compared to those given extended education in natural science. However, no significant differences in physiological measurements such as heart rate, blood pressure, or stress levels were found between the two groups.

Two types of training sessions: music and science

34 children of around seven years of age from similar social backgrounds were recruited from primary schools located throughout different parts of Germany. Each week over the course of 18 months, 14 children were given professional musical instrument training, whilst 20 children were taught natural science and mathematics in groups under the guidance of specially trained teachers. To test the effects music and natural science had on their aggressive behaviour, the children were asked to complete a computerised stress task, which was used as a measurement of their reactive aggressive behaviour. Heart rate, blood pressure and cortisol (i.e. stress) levels were also recorded. Additionally, the children also completed questionnaires assessing their stress responses. These tests were carried out at two time points: before and after the 18-month period of music or science training.

Learning to play an instrument could help children cope with stress

After the training period, children who had undergone musical instrument training showed little-to-no change in their aggressive behaviour, whilst children who had science lessons showed an increase in aggressive behaviour and neither of the two groups exhibited any physiological changes. The authors suggest this could mean that the music-trained children were more able to cope with stress when compared to science-trained children. However, the researchers postulate whether it was the greater physical involvement required to play an instrument that made the real difference. They therefore suggest that future studies should consider alternative, more comparable educational programs.

This summary is by **Elena Popa, King's Knowledge Exchange Associate.**

Keywords

music **experiment** **stress** **Germany** **children**

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