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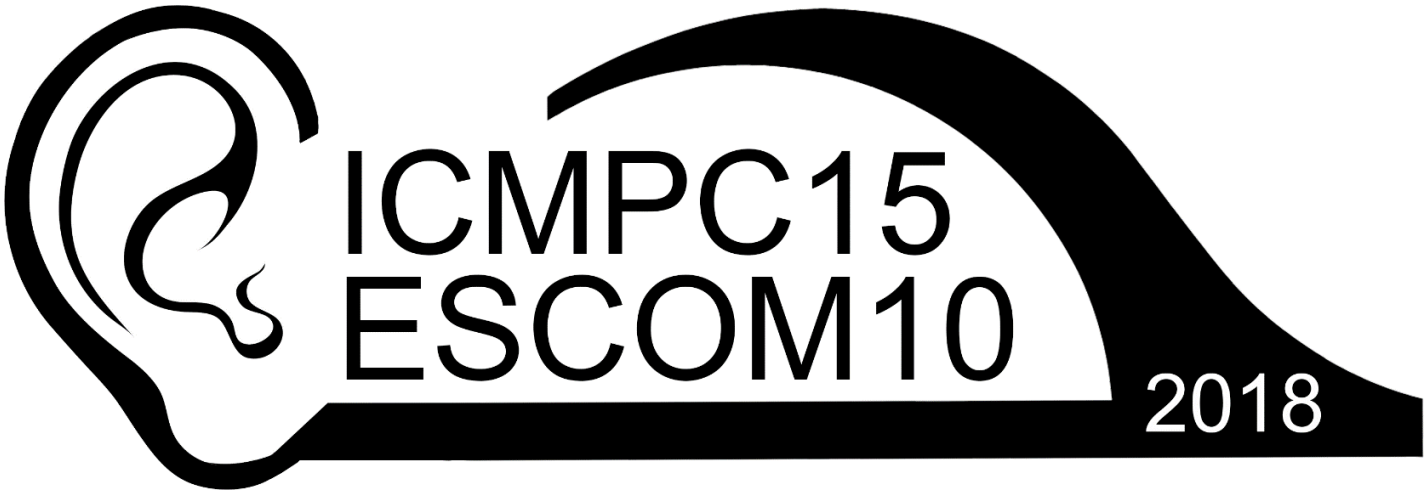

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Abstracts

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THE EFFECT OF MUSICAL TRAINING ON AFFECTIVE MEMORY IN 4/5 YEAR OLD CHILDREN

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Background

Musical training at early age has multiple beneficial effects on cognitive development. It stimulates synaptic plasticity, observed through anatomical, functional and behavioural differences between musicians and non-musicians (Justel & Diaz Abrahan, 2012). Musical training can be either receptive or active- i.e. where the child perceives music and its elements or when he produces music besides perceiving it. Although there is considerable research involving musical training, differences between both kinds of trainings has not been further investigated.

One of the cognitive functions that are influenced by the musical training is memory. Previous research shows that memory for emotional items is better than for neutral ones and also that music can modulate memory for emotional items better than for neutral ones (Cordon et al., 2013). There are investigations that evaluate these issues in adults. However, the influence of emotional vs neutral items in pre-schoolers' memory remains poorly understood.

Aims

The goal of this study was to evaluate the effect of receptive and active musical training for a period of 4 or 10 weeks, on emotional and neutral visual memory of 4- and 5-year-old children.

Methods

One hundred and eighty 4- and 5-year-old (91, 4) children were musically trained during either 4 or 10 weeks. Before and after the training period they were tested on recognition and free recall of 24 emotional (positive and negative valences) and neutral images (from IAPS protocol). Both tests (free recall and recognition) were run immediately after facing the images and a week late.

Results

Results indicate that children evaluate the emotional pictures as more activating than neutral ones. They remember more emotional images than neutral pictures, being negative images the most remembered pictures [$F(2,330)=21.26$, $p<0.0001$]. Of greater relevance, results also indicated that children actively trained obtain better scores than children in receptive training [$F(1,165)=7.25$, $p<0.008$]. On the other hand, the children of 5 years showed a greater memory than the children of 4 years of age [$F(1,165)=11.86$, $p<0.001$]. Finally, the 10-week intervention was more effective than the 4-week one [$F(1,165)=8.37$, $p<0.004$].

Conclusions

The results indicate that musical training can modulate emotional memory. Specifically, these results supporting that musical training has a positive effect on the memory of pre-schoolers, are socially, clinically and educationally relevant. Thus, a child who participates in structured musical activities including both vocal and instrumental performance and composition can take some advantages for memory. These findings, besides being interpreted as a benefit to children, also can be seen as an opportunity to reflect upon appropriate practices in the teaching of music in preschool contexts. In addition, further hypotheses could be studied concerning children with developmental disorders and adults with neurological diseases.

References

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