

The tone perception of Mandarin phonological deficit children: an ERP study

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The perception of lexical tone plays an important role in both reading and learning. Here, we recorded ERPs from preschool children who have poor phonological skills and from a control group to investigate whether their auditory system processes /ji1/ and /ji4/ changes differently. And the consonant pairs (/ba/ and /ta/) were adopted as stimuli for comparison. The speech sounds were presented in an oddball paradigm. The children ERPs were subsequently analyzed according to high or low performance in phonological awareness in order to find a neurophysiological precursor of poor phonological awareness. The results showed that the control and phonological deficits (PD) children processed the speech sound changes differentially as indicated by a mismatch response (MMR). In the control group the MMR was negative both in consonant and tone condition and the PD group did not show a MMR in tone condition. And the difference between PD and control group was significant in tone condition, while not significant in consonant condition. The relationship between tone perception and phonological awareness would be discussed in mandarin children.

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