

fNIRS を用いた和太鼓演奏時の脳活動の計測

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Brain activity during beating a Japanese drum measured by fNIRS

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In this study, investigated was the discrimination threshold of low frequency components of drum sound. Participants were asked to discriminate the original drum sound from a high-pass filtered sound with one of ten cut-off frequencies (ranging from 20 to 90 Hz in steps of 10 Hz) in two experiments. In Exp. 1, participants detected the difference between the two sounds when the cut-off frequency reached up to 70-80 Hz. In Exp. 2, where participants produced drum sounds by beating a drum pad by themselves, their discrimination threshold of cut-off frequency was around 110 Hz, while the frontal cortex of the brain did activate when the cut-off frequency reached up to 70-90 Hz.

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