

Figure 6. Correlation in perceived consonance between tactile-audio(2A-A) and audio-audio(2B-A) in frequency range from 92.4Hz to 184.9Hz (Group A)

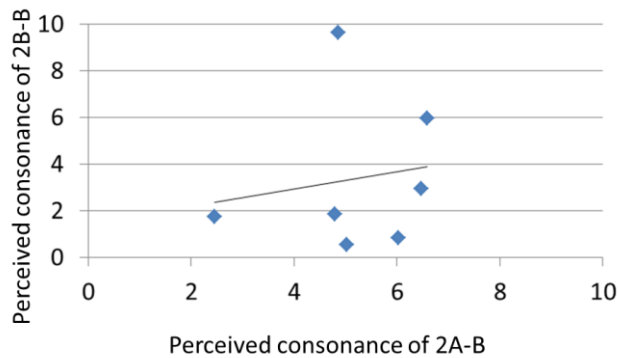


Figure 7. Correlation in perceived consonance between tactile-audio(2A-B) and audio-audio(2B-B) in frequency range from 92.4Hz to 184.9Hz (Group B)

4 CONCLUSIONS

In this paper, we investigated the possibility of tactile-audio cross-modal interaction in frequency perception. In exploring audio and tactile frequency relations, our results suggest that there might be a tactile-auditory frequency matching mechanism that is not dependent on actual pitch but rather depends on whether frequencies are in the same harmonic structure.

Based on this consideration, a further experiment was conducted from which the results showed that frequency consonance between tactile and auditory depended on harmonic content, rather than on actual frequency pitch. Also consonance acuity seems to require previous musical training experience.

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