

### Abstract

The present study investigated effects of unattended auditory rhythm on body movement, specifically, the auditory-motor synchronization and the nonverbal synchrony. Participants were engaged in a dyadic seating conversation with a metrical regular rhythmic audio playing in the background. Body movement, auditory-motor synchronization, and nonverbal synchrony were measured on fifteen body parts and compared with the conversation in silent condition separately. Movements of hands were significantly more intense than movements of other body parts in dyadic seating conversations, while head moves less than hands, elbows, and hips, and not significantly different with other body parts. Null effect on both types of synchronization were found. Some possible explanations were discussed.

*Keywords:* rhythm, body movement, entrainment, auditory-motor synchronization, nonverbal synchrony