

Supplementary Table 3. The PICOS criteria of the present study for cochlear implant (CI) and normal hearing (NH) groups

Group	PICOS item	Criteria
CI group	Participant (P)	Cochlear implant user fitted unilaterally or bilaterally that undergoes music training or training that use at least one music component(s) (rhythm/ pitch/ timbre/ harmony) as the main stimuli.
	Intervention (I)	Music training involving one or more components (rhythm, pitch, timbre, harmony) of music as training stimuli.
	Control (C)	Cochlear implant user that has not undergoes any music training or have any musical experiences prior to the recruitment.
	Outcome (O)	Outcome measure(s) related to music perception or auditory perception, improvement of at least one of music component perception (rhythm/ pitch/ harmony/ or timbre).
	Study (S)	Study design includes randomized controlled trials, cohort studies (with a control comparison), non-randomized controlled trials, and repeated measures (experiments with additional purposes).
NH group	Participant (P)	Normal hearing person that has no underlying hearing or cognitive problem and undergoes music training or training that use at least one music component(s) (rhythm/pitch/timbre/harmony) as the main stimuli.
	Intervention (I)	Music training involving one or more components (rhythm, pitch, timbre, harmony) of music as training stimuli.
	Control (C)	Normal hearing person that has not undergoes any music training or have any musical experiences prior to the recruitment.
	Outcome (O)	Outcome measure(s) related to music perception or auditory perception, improvement of at least one of music component perception (rhythm/ pitch/ harmony/ or timbre).
	Study (S)	Study design includes randomized controlled trials, cohort studies (with a control comparison), non-randomized controlled trials, and repeated measures (experiments with additional purposes).