**PubMed:**

**#1 Hearing aid (technology)**

"Hearing Aids"[Mesh:NoExp] OR "background noise"[tiab] OR "noise reduction"[tiab] OR "hearing aid"[tiab] OR "hearing aids"[tiab]OR "hearing loss"[tiab] OR "hearing impaired"[tiab] OR "hearing impairment"[tiab]

**#2 Listening effort**

"Speech Perception"[Mesh] OR "Reflex, Pupillary"[Mesh] OR "listening effort"[tiab] OR "perceptual effort"[tiab] OR "speech perception"[tiab] OR "speech discrimination"[tiab] OR"speech understanding"[tiab] OR "auditory stress"[tiab] OR "auditory fatigue"[tiab] OR "listening fatigue"[tiab] OR "cognitive load"[tiab] OR "Speech Acoustics"[tiab]OR "Speech Intelligibility"[tiab] OR "Pupillary reflex"[tiab] OR "ease of listening"[tiab] OR"Memory"[Mesh:NoExp] OR memory[tiab]

**EMBASE.com:**

**#1 Hearing aid (technology)**

'hearing aid'/de OR'background noise':ti,abOR 'noise reduction':ti,ab OR 'hearing aid':ti,ab OR 'hearing aids':ti,abOR 'hearing loss':ti,abOR 'hearing impaired':ti,ab OR 'hearing impairment':ti,ab

**#2 Listening effort**

'speech perception'/exp OR 'pupil reflex'/exp OR'listening effort':ti,ab OR 'perceptual effort':ti,ab OR 'speech perception':ti,ab OR 'speech discrimination':ti,ab OR'speech understanding':ti,ab OR 'auditory stress':ti,ab OR 'auditory fatigue':ti,ab OR 'listening fatigue':ti,ab OR 'cognitive load':ti,ab OR 'Speech Acoustics':ti,abOR 'Speech Intelligibility':ti,ab OR 'Pupillary reflex':ti,ab OR 'ease of listening':ti,ab OR'memory'/de OR memory:ti,ab

**Cinahl:**

**#1 Hearing aid (technology)**

(MH "Hearing Aids+") OR (MH "Auditory Brain Stem Implants") OR TI ("background noise" OR "noise reduction" OR "hearing aid" OR "hearing aids" OR "hearing loss"OR "hearing impaired" OR "hearing impairment") OR AB ("background noise" OR "noise reduction" OR"hearing aid" OR "hearing aids" OR "hearing loss"OR "hearing impaired" OR "hearing impairment")

**#2 Listening effort**

(MH "Speech Perception") OR (MH "Reflex, Pupillary") OR (MH "Memory") OR TI ("listening effort" OR "perceptual effort" OR "speech perception" OR "speech discrimination" OR"speech understanding" OR "auditory stress" OR "auditory fatigue" OR "listening fatigue" OR "cognitive load" OR "Speech Acoustics"OR "Speech Intelligibility" OR "Pupillary reflex" OR "ease of listening" OR memory) OR AB ("listening effort" OR "perceptual effort" OR "speech perception" OR "speech discrimination" OR"speech understanding" OR "auditory stress" OR "auditory fatigue" OR "listening fatigue" OR "cognitive load" OR "Speech Acoustics"OR "Speech Intelligibility" OR "Pupillary reflex" OR "ease of listening" OR memory)

**PsycINFO:**

**#1 Hearing aid (technology)**

DE "Hearing Aids" OR TI ("background noise" OR "noise reduction" OR "hearing aid" OR "hearing aids" OR "hearing loss"OR "hearing impaired" OR "hearing impairment") OR AB ("background noise" OR "noise reduction" OR"hearing aid" OR "hearing aids" OR "hearing loss"OR "hearing impaired" OR "hearing impairment")

**#2 Listening effort**

(DE "Speech Perception") OR (DE "Memory") OR TI ("pupillary reflex" OR "listening effort" OR "perceptual effort" OR "speech perception" OR "speech discrimination" OR"speech understanding" OR "auditory stress" OR "auditory fatigue" OR "listening fatigue" OR "cognitive load" OR "Speech Acoustics"OR "Speech Intelligibility" OR "Pupillary reflex" OR "ease of listening" OR memory) OR AB ("pupillary reflex" OR "listening effort" OR "perceptual effort" OR "speech perception" OR "speech discrimination" OR"speech understanding" OR "auditory stress" OR "auditory fatigue" OR "listening fatigue" OR "cognitive load" OR "Speech Acoustics"OR "Speech Intelligibility" OR "Pupillary reflex" OR "ease of listening" OR memory)

**Cochrane Library:**

**#1 Hearing aid (technology)**

"background noise" OR "noise reduction" OR "hearing aid" OR "hearing aids"OR "hearing loss"OR "hearing impaired" OR "hearing impairment"

**#2 Listening effort**

"Speech Perception" OR "Pupillary reflex" OR "listening effort" OR "perceptual effort" OR "speech perception" OR "speech discrimination" OR"speech understanding" OR "auditory stress" OR "auditory fatigue" OR "listening fatigue" OR "cognitive load" OR "Speech Acoustics"OR "Speech Intelligibility" OR "ease of listening" OR memory

**#4 excluded publication types**

NOT ("addresses"[Publication Type] OR "biography"[Publication Type] OR "comment"[Publication Type] OR "directory"[Publication Type] OR "editorial"[Publication Type] OR "festschrift"[Publication Type] OR "interview"[Publication Type] OR "lectures"[Publication Type] OR "legal cases"[Publication Type] OR "legislation"[Publication Type] OR "letter"[Publication Type] OR "news"[Publication Type] OR "newspaper article"[Publication Type] OR "patient education handout"[Publication Type] OR "popular works"[Publication Type] OR "congresses"[Publication Type] OR "consensus development conference"[Publication Type] OR "consensus development conference, nih"[Publication Type] OR "practice guideline"[Publication Type]) NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms])