INTRODUCTION

- Listeners with hearing loss (HL) often require greater listening effort than those with normal hearing to understand speech in complex environments. This increased listening effort can accumulate into listening-related fatigue (Davis et al., 2021).
- Children with HL experience higher subjective fatigue than peers with normal hearing (Hornsby et al., 2017). Older adolescents with HL, however, remain an under-studied population.
- The effects of school accommodations, such as remote microphones and closed captioning, on listening fatigue remain unknown. School accommodations can alleviate listening fatigue.

METHOD

- Qualtrics survey administered via social media to adolescents ages 11 to 18 years with any degree of HL, unilaterally or bilaterally.
- Participants included 116 adolescents in 5th through 12th grade (mean age = 15.2 years).
- Participants provided information about use of hearing devices, school setting, and extent to which they use the following school accommodations on a scale from 0 (never) to 4 (always): remote microphone, closed captioning, preferential seating, ASL interpreter, live transcription, note taker, and extended test time.
- Overall amount of school accommodation use was collapsed into one School Accommodations Score (higher score = more use of accommodations).
- Listening fatigue was quantified using the Vanderbilt Fatigue Scale-Child (Bess et al., 2020).

RESULTS

- Listening fatigue differed significantly based on device configuration.
- In general, those with unilateral HL and hearing aids (HAs) or cochlear implants (CIs) had lower listening fatigue than those with bilateral HAs, CIs, or bone conduction devices (BCDs).
- Among adolescents with unilateral HL, CROS users had higher listening fatigue than HA or CI users.
- Participants provided information about use of school accommodations on a scale from 0 (never) to 4 (always). 
  - Remote microphone: n = 25
  - Closed captioning: n = 22
  - Preferential seating: n = 22
  - ASL interpreter: n = 4
  - Live transcription: n = 4
  - Note taker: n = 4
  - Extended test time: n = 4
- Listening fatigue was quantified using the Vanderbilt Fatigue Scale-Child (Bess et al., 2020).

CONCLUSIONS

- Adolescents who experience greater listening fatigue may be more prone to utilizing school accommodations, but these accommodations do not necessarily alleviate listening fatigue.
- Adolescents with unilateral HL generally report lower listening fatigue than those with bilateral HL (see also Sinthar et al., 2021).
- HA users experience similar listening fatigue as CI users, despite having presumably milder HL.
- Audiologists should be aware of the listening difficulties experienced by adolescents with all degrees of hearing loss, even when substantial classroom support is available.

REFERENCES


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