

# Listening Breaks and Listening Fatigue in Adolescents with Hearing Loss

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## 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 lead to listening-related fatigue (Sindhar et al., 2021)
- Children with HL experience higher listening fatigue than peers with normal hearing (Bess et al., 2020)
- Listening breaks (short periods during which a listener takes a “break” from using hearing devices) have been reported as a common coping strategy for dealing with listening fatigue (Davis et al., 2021). However, the role of listening breaks in alleviating listening fatigue remains unknown

## RESEARCH GOALS

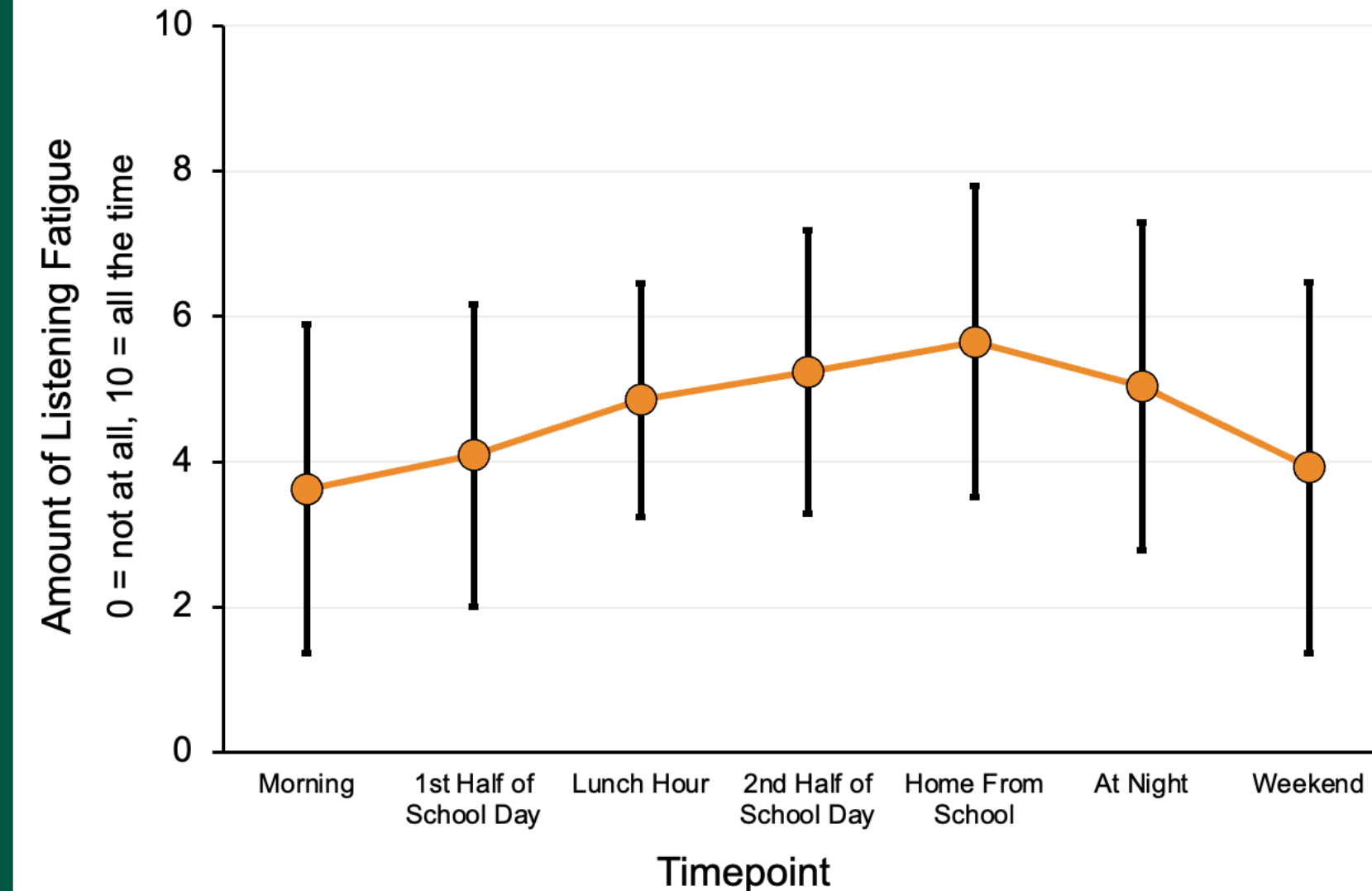
1. Identify the association between listening breaks and listening fatigue among adolescents with hearing loss.
2. Identify characteristics, such as device configuration, that may make an individual more likely to utilize listening breaks.
3. Characterize the extent to which listening fatigue changes over the course of a school day among adolescents with hearing loss.

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## METHOD

- Qualtrics survey administered via social media to adolescents ages 12 to 19 years with any degree of HL, unilaterally or bilaterally
- Participants included 144 adolescents in 5<sup>th</sup> through 12<sup>th</sup> grade (mean age = 15.4 years)
- Participants provided information about use of hearing devices, experience with listening fatigue, and experiences with taking listening breaks
- Device configuration included various combinations of hearing aids (HAs), cochlear implants (CIs), bone conduction devices (BCDs), and CROS devices
- Participants reported how often they take listening breaks, and how comfortable they feel asking for listening breaks at school
- Listening fatigue was quantified using the Vanderbilt Fatigue Scale-Child (Hornsby et al., 2022)

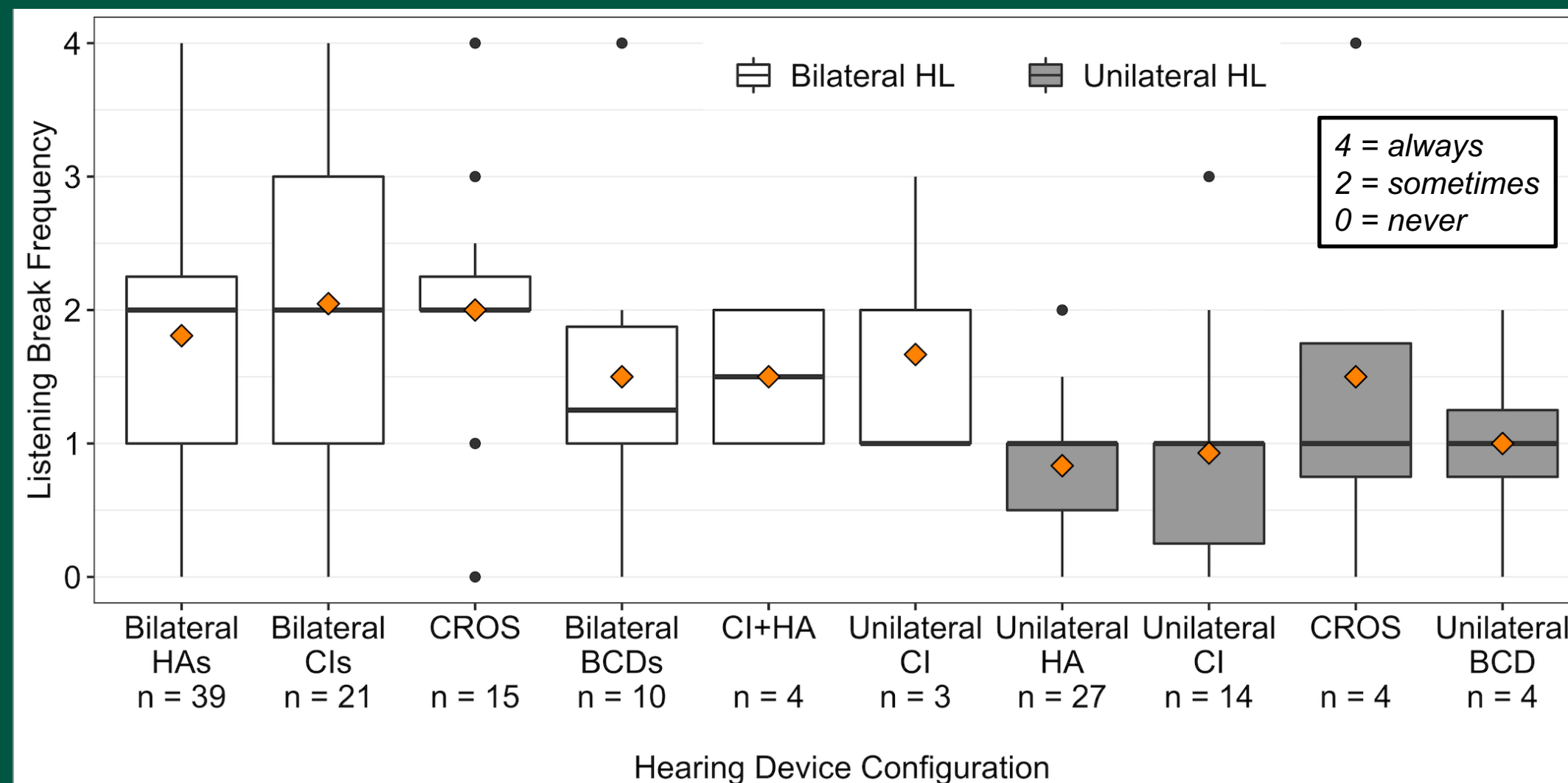


Amount of listening fatigue differed significantly according to time of day,  $p < .001$

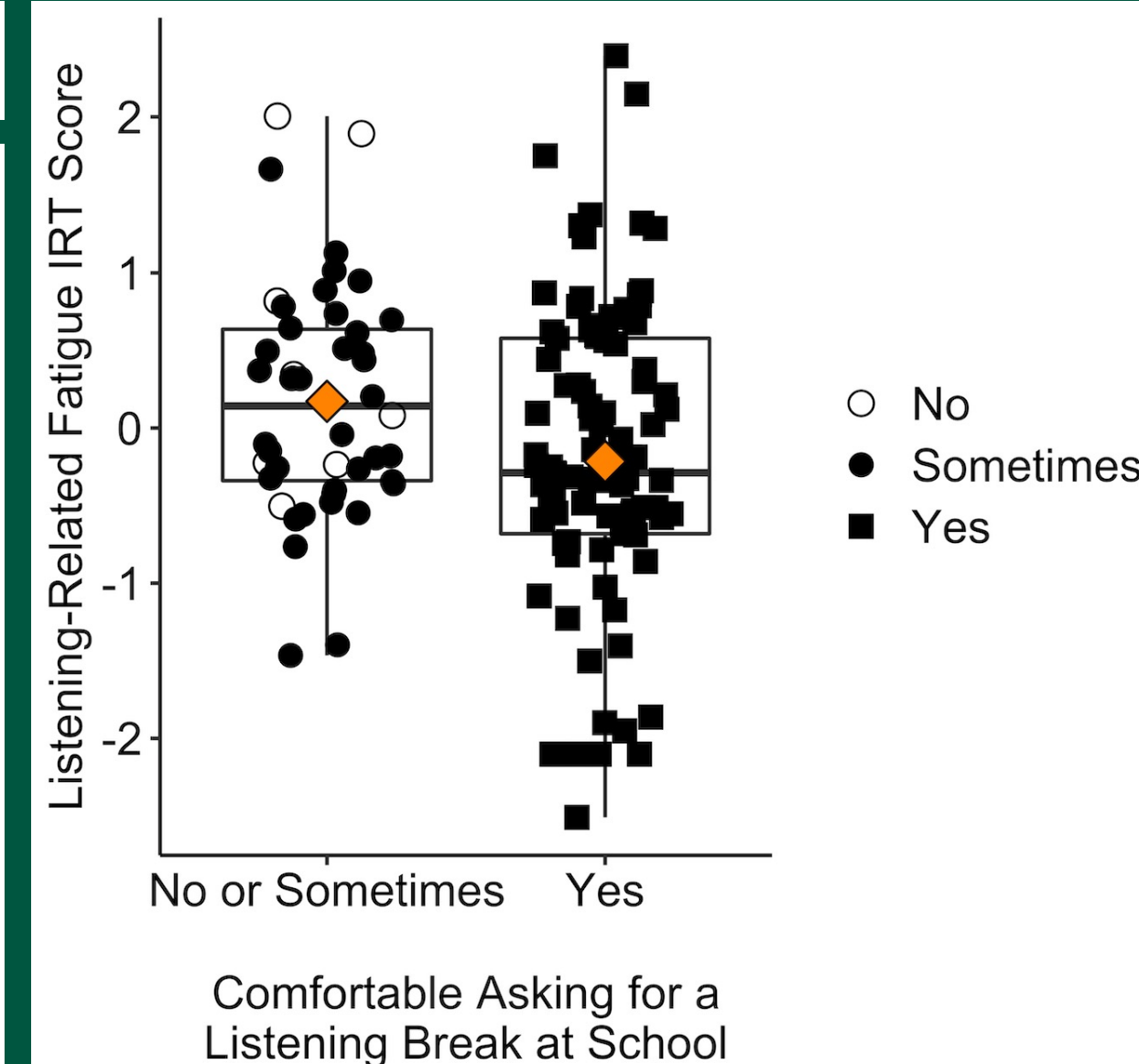
## CONCLUSIONS

- Adolescents who experience greater listening fatigue utilize listening breaks more frequently.
- Feeling comfortable asking for a listening break may help alleviate listening fatigue in adolescents with HL.
- Building self-advocacy skills and helping adolescents become more comfortable advocating for their needs may help reduce listening fatigue.
- Adolescents with unilateral HL took listening breaks less frequently than those with bilateral HL.
- Bilateral HA users use listening breaks just as frequently as bilateral CI users.
- Educators should be aware that listening fatigue is more prominent in the afternoon. Scheduling quiet activities during the afternoon may help address adolescents' fatigue.
- Audiologists should be aware of possible listening fatigue in adolescents with HL and counsel patients on management strategies (like listening breaks) to use during high-fatigue times, like the afternoons.

## RESULTS



- Device configuration was significantly associated with the use of listening breaks,  $p = .015$ .
  - Adolescents with unilateral hearing loss who used a hearing aid took listening breaks less often than adolescents with bilateral HAs, CIs, and CROS systems
  - Adolescents with unilateral CIs used listening breaks less often than those with bilateral CIs



- Adolescents who were comfortable asking for listening breaks at school reported lower listening fatigue,  $p = .022$
- Adolescents who used more listening breaks showed higher listening fatigue,  $r = .48$ ,  $p < .001$

## REFERENCES

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