



The Knowledge, Attitudes, Beliefs, and Prevalence of English as a Second Language Middle and High School Students Regarding Noise Exposure.

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BACKGROUND

- According to *Healthy Hearing* (2021), hearing loss is the third most common chronic physical condition in the United States that affects people of all ages. Being able to hear is important in order to communicate with others.
- According to the National Institute on Deafness and Other Communication Disorders (2015), 1 in 7 Latino adults have some type of hearing loss, which can impact their way of life because it can add additional stress.
- According to the National Institute on Deafness and Other Communication Disorders (2021), approximately 48 % of people in the United States report having difficulty hearing.
- Many Spanish-speaking college students already have trouble communicating in a different language, yet it adds more difficulty for those who also have hearing loss
- Out of the 58 million Hispanics in the United States, 72% of them consider Spanish as their primary language they utilize at home (Caballero et al., 2018). However, only 3.7% of the audiologists in the United States are bilingual in Spanish and English; this could cause miscommunication between the patient and the audiologist as well as struggles on efficient delivery of services due to the language barrier or lack of cultural understanding (Caballero et al., 2018).

PURPOSE

- To gain understanding on the knowledge, attitudes, and beliefs of Spanish-speaking middle and high school students regarding noise exposure.
- To explore whether ESL middle and high school students show a decrease in hearing sensitivity, with the greatest degree of hearing loss occurring at 3000-6000 Hz, to pure tones when measured with HAD 200 super-aural earphones.

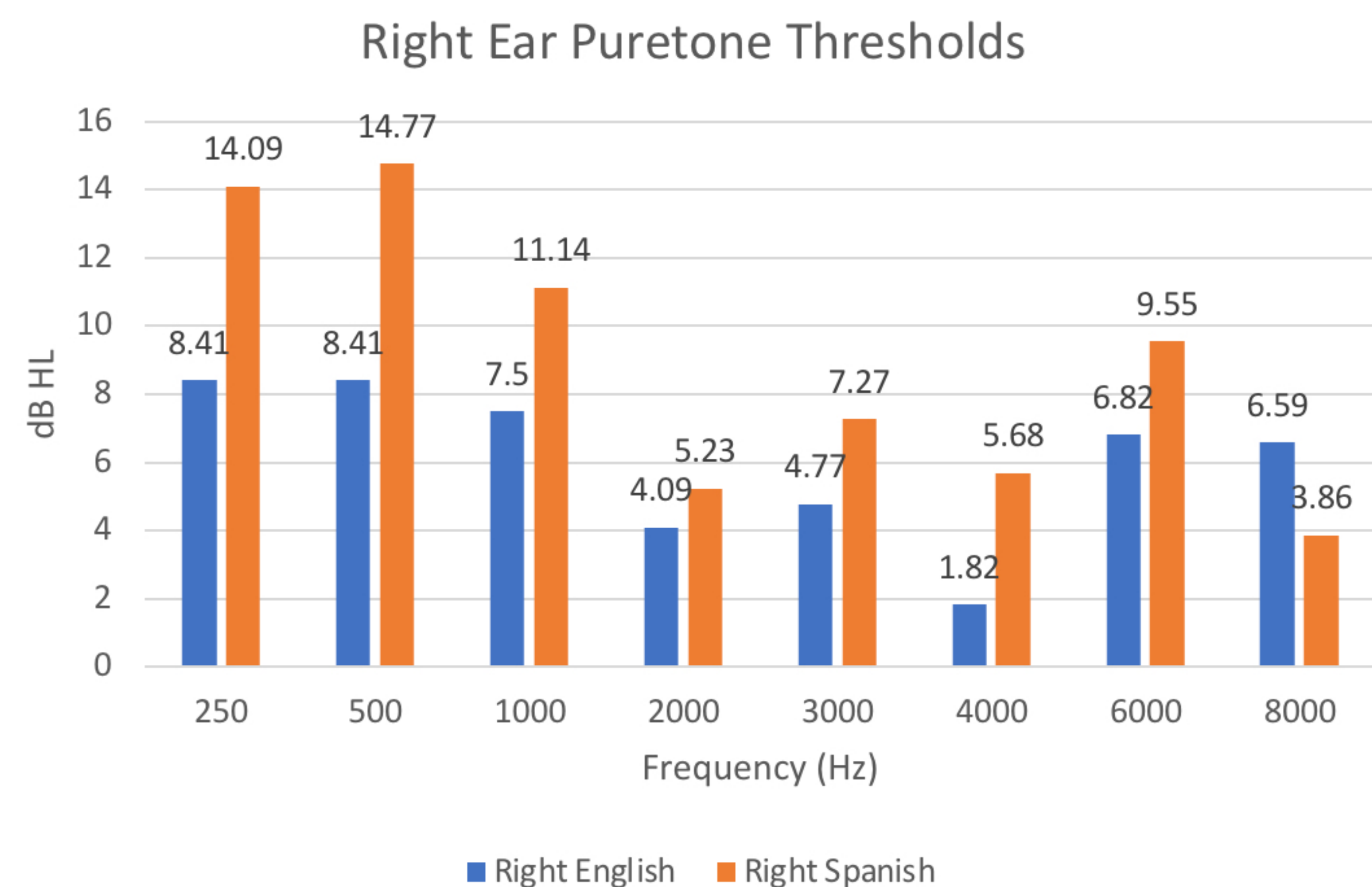
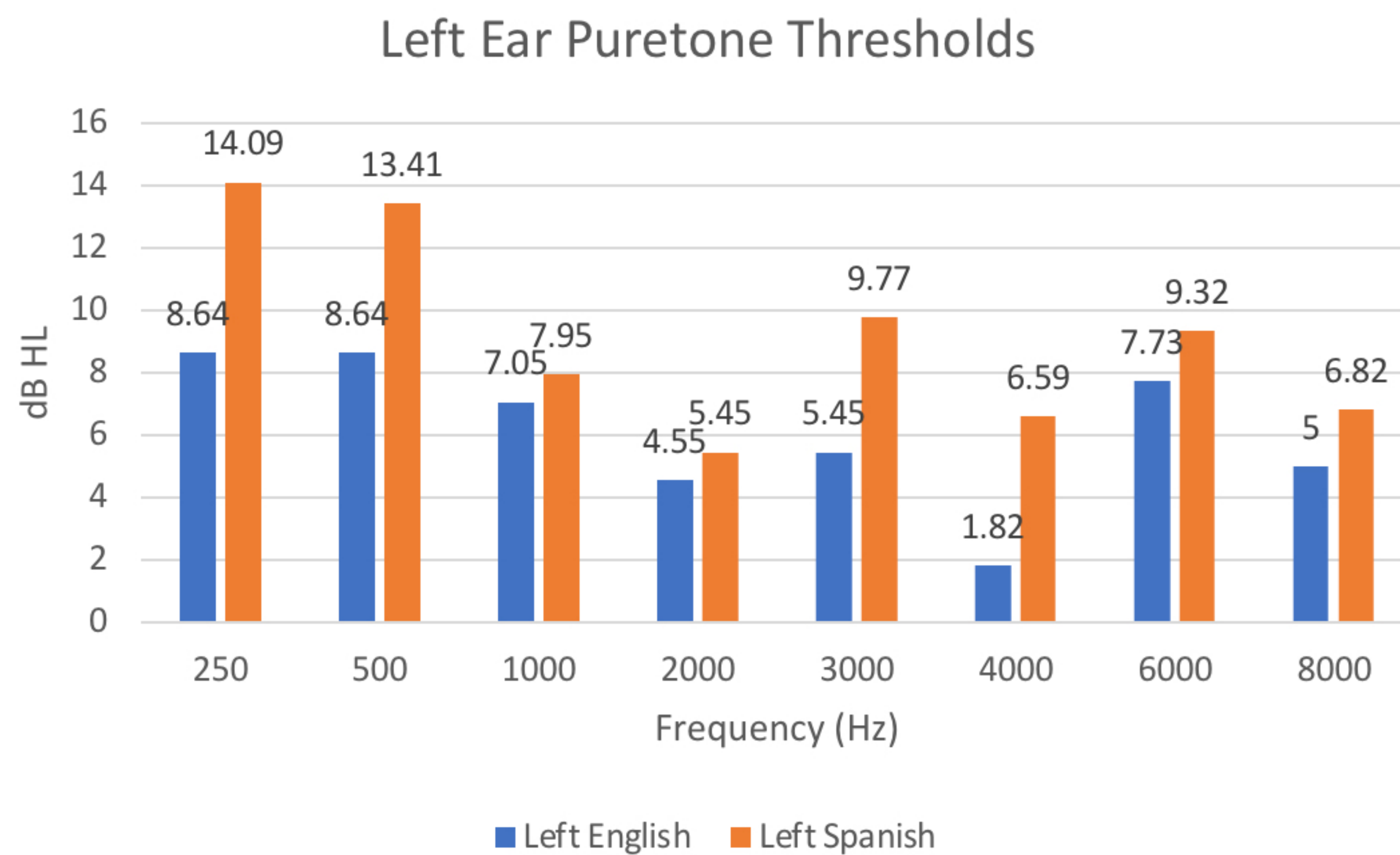
RESEARCH QUESTIONS

- What are the knowledge, attitudes, and beliefs of Spanish-speaking middle and high school students regarding noise exposure prevention/hearing health?
- Is there a higher-than-average prevalence of noise induced hearing loss (NIHL) among middle and high school ESL students who have Spanish as a first language?

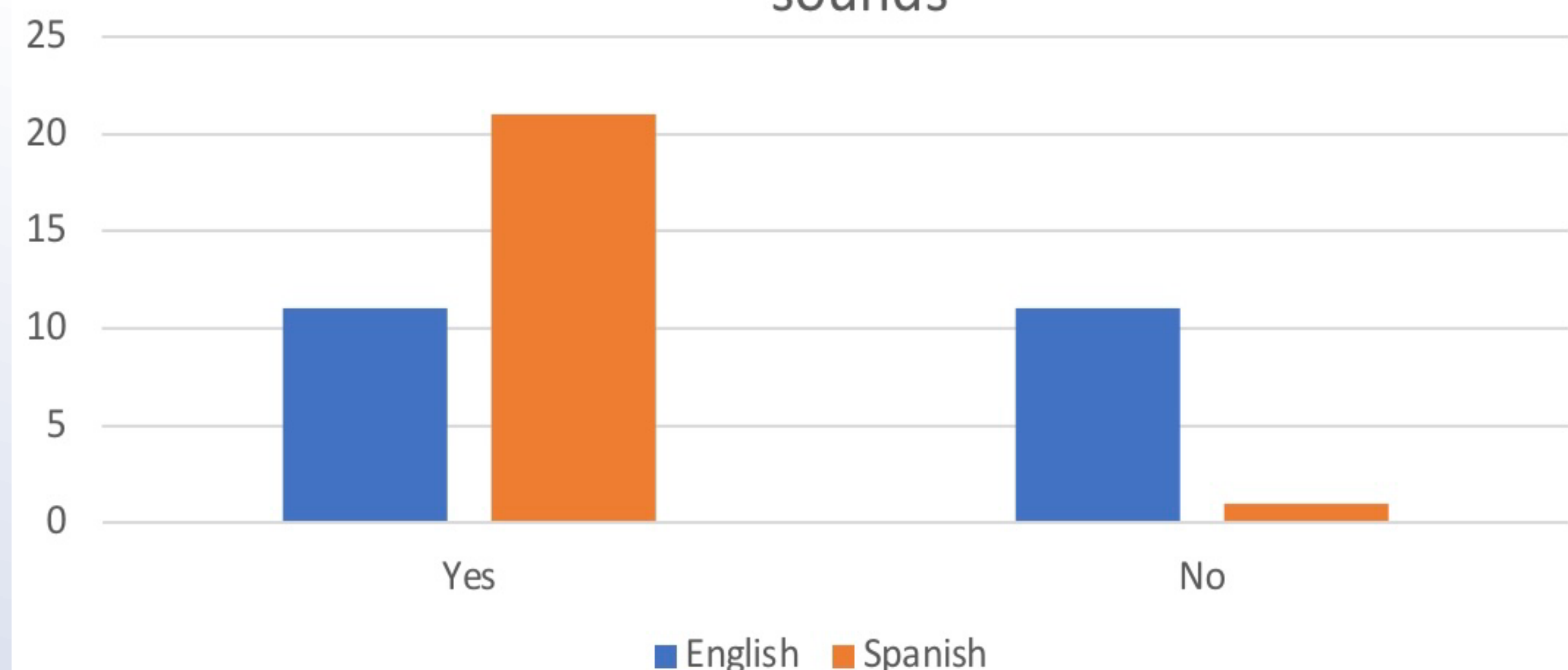
METHODS

- A total of 44 middle and high school students who ranged in age from 11-18 years (mean age of 15.52) participated in the study. Twenty-two of the participants were Spanish-speaking middle and high school students, while the other twenty-two participants were English-speaking middle and high school students from Arcola, Illinois.
- Participants were assessed with a pure tone audiometry test.
- After the participants were finished with the pure tone audiometry test, the participants were asked to complete a 32-question survey (offered in either Spanish or English) in the hopes to gain insight into their perceptions of hearing loss and whether hearing loss is an issue they are concerned about.
- Data were entered into SPSS and descriptive statistics were reported.

RESULTS



I attend festivities (weddings, birthday parties, family reunions, etc.,) where I am exposed to loud sounds



CONCLUSIONS

- There is a presence of low-frequency hearing loss in the left and right ear at 250 and 500 Hz in the Spanish-speaking middle and high school students which is considered to be abnormal.
- The Spanish-speaking middle and high school students had a notch at 3000 and 4000 Hz in the left and right ear.
- NIHL at 3000 and 4000 Hz is more prevalent in the Spanish-speaking middle and high school students as opposed to the English-speaking middle and high school students.
- The Spanish-speaking students tended to reply with answers that suggested that hearing loss affects one's ability to live as well as one's mental health. Meanwhile, the English-speaking middle and high school students tended to reply with answers that suggested that hearing loss tends to affect us as we get older and that it is common.
- The English-speaking middle and high school students did significantly better on the knowledge questions compared to the Spanish-speaking middle and high school students.
- A significant difference in the behavior questions within Spanish-speaking middle and high school students and English-speaking middle and high school students was the exposure they had to loud sounds whenever attending festivities .

FUTURE DIRECTIONS

- It would be beneficial to use a larger sample of ESL middle and high school students from the same population.
- It is recommended to also perform hearing evaluation on the parents in the Arcola population to eliminate the doubt if they also have low-frequency hearing loss.
- Offer workshops or refresher courses to users that feel as though their health could benefit from the extra knowledge regarding hearing loss.
- Do the pure tone audiometry tests at a clinic in a soundproof room.

REFERENCES

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