



Background

The average cost of a hearing aid in the United States is **\$2,500** which represents a barrier to those with hearing loss who need amplification (Bailey, 2024a). The average consumer reported receiving \$1,257 for insurance coverage per hearing aid (Bailey, 2024b). To increase the accessibility of amplification, the US Food and Drug Administration created a new class of over-the-counter (OTC) hearing aids for those with mild and moderate hearing losses. Recently, Jilla and colleagues (2024) investigated experienced, private pay hearing aid wearers' willingness to pay (WTP) for an advanced digital technology (ADT) hearing aid, services, and one OTC device. It would be important to repeat the study from the perspective of disadvantaged hearing help seekers. The State of Oklahoma Medicaid program does not provide hearing aids to these individuals, resulting in them having to rely on "safety-net" programs like the United Way Hearing Aid Bank (UWHAB). The UWHAB is a specialty clinic in the John W. Keys Speech and Hearing Center at the University of Oklahoma Health Sciences Center in Oklahoma City, Oklahoma (see Figures 1 and 2) which provides hearing aids and services at a reduced cost for adults who have annual incomes of  $\leq 170\%$  of the United States Federal Poverty Level when accounting for household size.



Figure 1. State of Oklahoma (red) in the United States



Figure 2. Cities and towns in Oklahoma

Results and Discussion

Forty-eight surveys were returned for a **51%** response rate (48/[106 - 12 return-to-sender]) with mean age of 71.2 y (SD = 11.6 y) and mean monthly income of \$1,282.80 (SD = \$488.10).

Table 1. Other Sociodemographic Information for Sample

	N	%
<b>Gender (N = 48)</b>		
•Male	10	20.83
•Female	38	79.17
<b>Race (N = 46)</b>		
•White	32	69.57
•Non-white	14	30.43
<b>Education (N = 47)</b>		
•High School or less	26	55.32
-> College	21	42.55
<b>Employment (N = 48)</b>		
•Unemployed	26	69.57
•Employed/ Retired	21	30.43
<b># Household (N = 47)</b>		
•One other person	27	57.45
-> One other person	20	42.55
<b>Hearing w/o Aid (N = 47)</b>		
•Mild to Moderate	15	31.91
•Severe	32	68.09
<b>Hours/Day Aid Use (N = 46)</b>		
•<4 hours	12	26.09
•>4 hours	34	73.91
<b>Satisfaction (N = 47)</b>		
•Dissatisfied or Neutral	8	17.02
•Satisfied	39	82.98

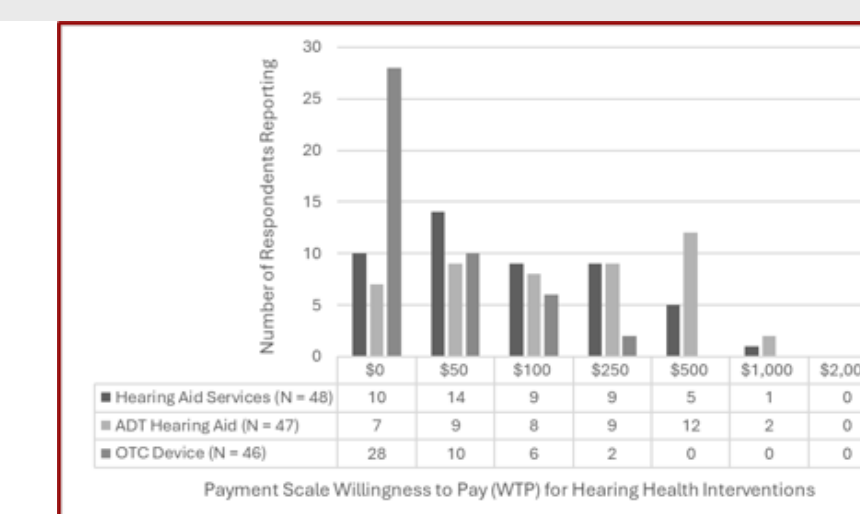


Figure 4 shows the number of LIHSSs that would be WTP for services, one ADT hearing aid, and one OTC device. WTP for:

- one ADT hearing aid ranged from \$0 to \$1,000, with **\$500** being the most common response
- hearing aid services ranged from \$0 to \$1,000, but WTP of **\$50** was most observed.
- OTC devices' WTP was rated lowest (range: \$0 to \$250). Indeed, **60%** of the sample (N = 28/46) reported **\$0 WTP (not willing to pay)** for an OTC device

Table 2. Regression Results for WTP

	ADT Hearing Aid	Services	OTC Device
<b>Age</b>	X	p=0.0156 (95%CI: 1.8%, 15.6%)	X
<b>Monthly Income</b>		p=0.0329(95%CI: 0.1%, 0.5%)	X
<b>Gender</b>	X	X	X
<b>Race</b>	X	X	X
<b>Education</b>	X	X	X
<b>Employment</b>	X	X	X
<b>#Household</b>	X	X	X
<b>Hearing w/o Aid</b>	X	X	X
<b>Hours Aid Use</b>	X	X	X
<b>Satisfaction</b>	X	X	X

•**Monthly income** was the only variable that was significantly associated with **WTP for one ADT hearing aid**. After adjusting for covariates, the odds of WTP **\$500 or more** for one ADT hearing aid **increased 0.3%** (95%CI: 0.1%, 0.5%) **for every dollar** of increased monthly income (p=0.0329).  
•**Age** was the only variable that was significantly associated with **WTP for hearing aid services**. The odds of willingness to pay **\$100 or more** for all hearing aid services were **8.9%** (95%CI: 1.8%, 15.6%) lower for **each increased year of age** (p=0.0156).

Objectives

The purpose of this study was to assess low-income hearing help seekers' (LIHSSs) WTP for one ADT hearing aid, services, and an OTC device. Another aim was to determine what factors (age, monthly income, gender, race, educational level, employment status, number in household, self-reported hearing difficulty without amplification [quiet and noise], hours/day hearing aid use, and satisfaction with services) predict WTP for hearing aids and services.

Conclusion

- Most LIHSSs would be WTP **\$500** for an ADT hearing aid and **\$50** for hearing aid services. The majority would not be WTP anything for an OTC device.
- Medicare, Medicaid, and third-party payers should provide hearing aids and associated services for LIHSSs.

Methods

A cross-sectional postal survey of 106 LIHSSs who received hearing aids at **\$400/aid** bundled with services (many also received grants to purchase their devices) was conducted. Participants read short descriptions of ADT hearing aids, services, and OTC devices and indicated their WTP for them on a worksheet (see Figure 3). Univariate models were created for each outcome and the explanatory variables. Significant and near significant variables (p<0.10) from univariate models were used in a multivariate model



Figure 3. WTP Worksheet

References

- Bailey, A. (2024a, January 3, 2024). How much do hearing aids cost in 2024?. Retrieved from <https://www.hearingtracker.com/how-much-do-hearing-aids-cost>
- Bailey, A., (2024b, September 5). Paying for hearing aids with health insurance. Hearing Tracker. Retrieved from <https://www.hearingtracker.com/hearing-aid-insurance-coverage>
- Jilla, A.M., Johnson, C.E., Baldwin, J.D., & Huntington-Klein, N. (Accepted for Publication). Benefit-cost analyses of hearing aids, over-the-counter hearing devices, and hearing care services. American Journal of Audiology.
- United States Census Bureau (2023). Poverty thresholds by Size of Family and Number of Children Retrieved from: Poverty thresholds by Size of Family and Number of Children. Retrieved from: <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>