ASHA Audiology
Dedicated to Advancing the Profession of Audiology

2021 AUDIOLOGY SURVEY

Survey Methodology, Respondent Demographics, and Glossary

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Executive Summary

In Fall 2021, the American Speech-Language-Hearing Association (ASHA) conducted a survey of audiologists. This survey was designed to provide information about salaries, working conditions, and service delivery as well as to update and expand information gathered during previous *Audiology Surveys.*

Highlights

- The response rate was 31%.
- 81% of the audiologists worked full time.
- 76% received an annual salary.
- 80% were clinical service providers.
- 73% held an AuD degree.
- The mean number of years of experience was 21.
- 51% worked in a city/urban area.
- 34% worked in the South.

Survey Methodology

A stratified random sample of 5,000 ASHA-certified audiologists was selected for this survey from a population of 8,043 audiologists. They were stratified on the basis of type of facility and private practice.

Sample Design

The survey was mailed on October 15, 2021, to 5,000 ASHA-certified audiologists working in the United States, followed by electronic reminder on October 19. Individuals who returned their surveys were removed from second (November 12) and third (December 8) mailings. Each mailing consisted of a personalized cover letter, a numbered survey, and a #10 postage-paid business return envelope inserted into a #11 window envelope with an ASHA return address and postage at the full, first-class rate.

Weighting

Because facilities with fewer audiologists (e.g., universities) were oversampled and those with many (e.g., hospitals) were undersampled, weighting was used when presenting data to restore all groups to their actual proportion in the population of ASHA audiologists.

Response Rate

Of the original 5,000 audiologists in the sample, 43 had undeliverable addresses, 27 had retired, and 90 were no longer employed in audiology, leaving 4,840 possible respondents. The actual number of respondents was 1,487, resulting in a 30.7% response rate (see Table 1).

Table 1: Calculation of Response Rate, Unweighted

Disposition	Number
Original (gross) sample size	5,000
Undeliverable addresses	43
Retired	27
No longer employed in audiology	90
Net sample size	4,840
Number of respondents	1,487
1,487 / 4,840 = 30.7%	

Experimental Design

All surveys were printed on 25.5 in. × 11 in. paper folded to 8.5 in. × 11 in. and printed with two columns per page. The font was Arial, 11 pt. The survey was designed in Teleform to be scannable.

A methodological experiment was designed into the survey to test whether adding *owner* to one of the employment function response options would decrease the number of times it was added by respondents as an unsolicited open-ended response. Specifically, a randomly selected half of the sample was assigned to the experimental group and received a survey with *owner* included, and half were assigned to the control group without *owner* in the response option. The question with the response option that included *owner* is shown below.

Although you may perform more than one job function, select the one position that best describes how you spend most of your time. *Only one response can be accepted.*

- Clinical service provider (includes all individuals providing any direct service)
- College/university faculty/clinical educator
- Researcher
- Consultant
- Administrator/supervisor/director/owner
- Sales/training/technical support
- Other, specify:

Table 2: Choice of *Owner* as a Response (%)

Disposition	Control (*owner* not included)	Experimental (*owner* included)
Selected the response option as presented	5.7	5.4
Wrote in *owner* in function question	0	0
Wrote in *owner* in other location	0	0

Data entry

To ensure the highest quality data reasonably possible, each of the 1,487 completed surveys was checked, and erroneous responses were corrected or deleted by the ASHA staff member with primary responsibility for the project. The forms were then scanned with Teleform, and any additional corrections were made.

Nonresponse

Not only is it typically the case that some individuals who receive a survey do not complete it (unit nonresponse), but it is likewise true that some who return their surveys do not answer every question (item nonresponse) and thus do not qualify for inclusion in portions of a report. They may be excluded from analyses because they did not answer a question at all or because their answer disqualified them (such as stating that they were employed part time when a particular analysis was limited to full-time employees). For example, among the 1,487 audiologists who responded, only 1,472 were included in the analysis of primary employment facility because they were the only respondents who indicated that they were employed either full time or part time and identified the type of facility where they were employed. Comparable restrictions apply to other analyses in the report.

As is our practice, we did not report data for cells with fewer than 25 respondents. This both protects respondent confidentiality and increases data stability. Note, too, that some percentages total 99% or 101% because of rounding.

Respondents Versus Population

As a rule of thumb, the closer a sample approximates the characteristics of the population from which it is drawn—and which it is designed to represent—the greater the external validity or ability to generalize to that population. The population for this survey consisted of ASHA-certified audiologists whose primary employment facility was a college/university, hospital, audiology franchise/retail chain, nonresidential health care facility, or industry. Below are comparisons of characteristics of the survey respondents with the database population from which they came.

Facility

- Small groups (e.g., colleges/universities) were oversampled to ensure sufficient respondents from that facility for reporting purposes. Likewise, large groups (e.g., hospitals) were undersampled. Therefore, where totals are reported, either in text or tables, they have been weighted to reflect the distribution of ASHA-certified audiologists in each type of facility. The number of respondents (*n*) shown in figures and tables is the weighted number who responded to the question.
- Because of stratification, comparing the distribution of the sample's facility to that of the population's would not be worthwhile and was not performed.

Employment Status (Full Time and Part time)

- Respondents: 81% full time, 19% part time
- Population: 83% full time, 16% part time

Function

- Respondents: 74% clinical service provider; 12% faculty; 6% administrator; 5% sales, training; 2% researcher; 1% consultant; 1% other
- Population: 81% clinical service provider; 5% faculty; 7% administrator; 2% researcher; 1% consultant; 4% other

Highest Degree

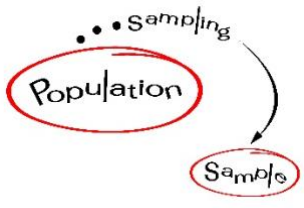
- Respondents: 20% master's, 80% doctorate
- Population: 42% master's, 58% doctorate

State

- Respondents: 20% Northeast, 29% Midwest, 34% South, 17% West
- Population: 21% Northeast, 26% Midwest, 36% South, 17% West

Years of experience, salary basis, and **population setting** are variables that are available only for the respondents to the survey, so those comparisons cannot be made. Additionally, *sales and training* as a function is only available as a response option on the survey, not in the membership database.

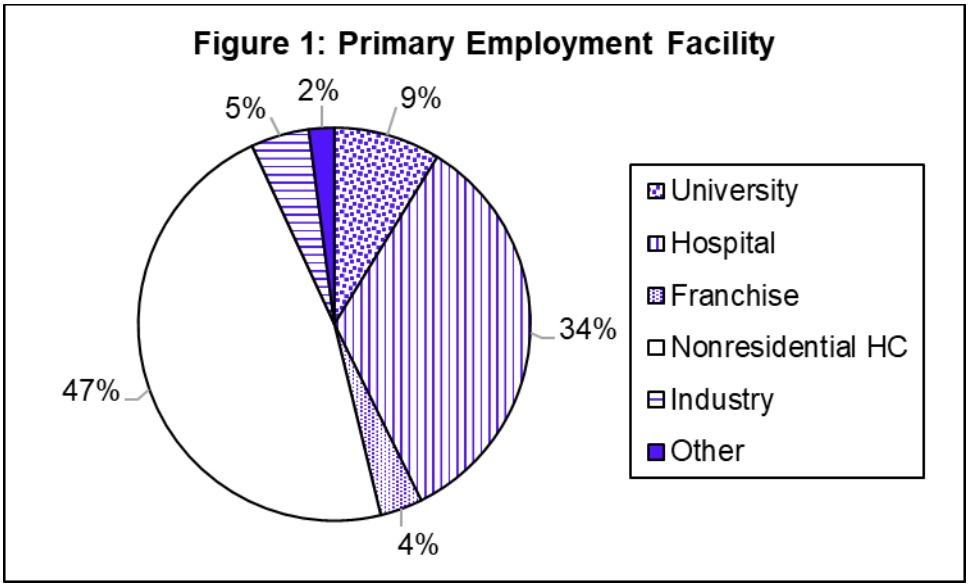
In conclusion, there was virtually no difference between the respondents and the population from which they came with regard to employment status and region of the country. However, there were fewer clinical service providers and more university faculty among the respondents than in the population from which they were drawn, and the respondents reported fewer master's and more doctoral degrees than did the population. The difference in highest degree may be because individuals who originally reported a master's degree have since earned a doctorate but have not updated their file in the membership database.



Demo-graphics

Nearly half of the respondents who were employed either full time or part time worked in nonresidential health care facilities, and one third worked in hospitals (see Figure 1).

Figure 1: Primary Employment Facility



Note. n = 1,472.

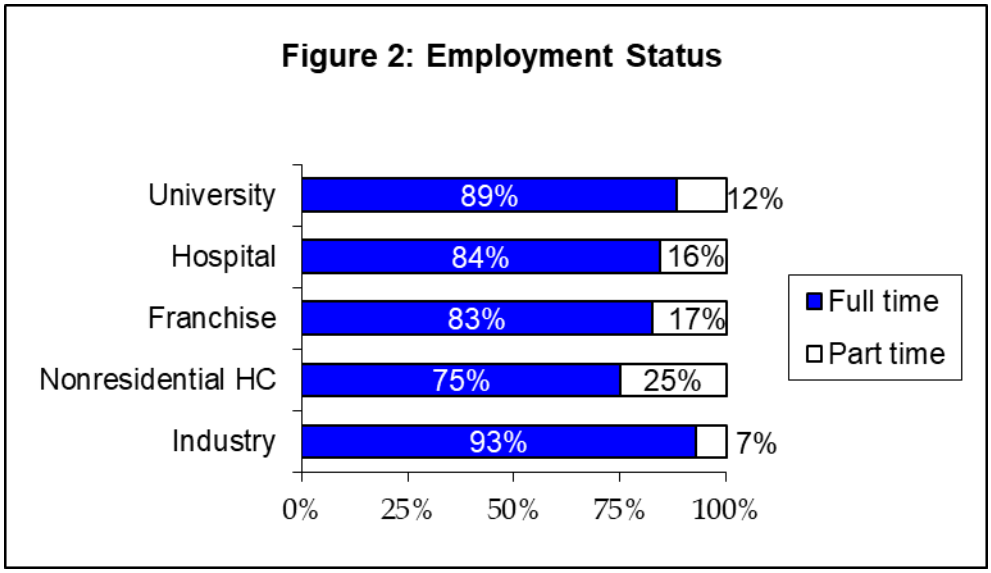
Excluding "Other"

The 31 individuals who worked in an *other* type of facility, either full time or part time, have been included in the *ASHA 2021 Audiology Survey Reports* only where totals are reported–not as a separate category of facility–because of the ambiguous nature of this small group of individuals. Also included in the *total* is the group of 10 respondents who were employed full time or part time but who did not answer the question about the type of facility in which they were employed.

Employment Status

More than three-fourths (81%) of the respondents were employed full time, and 19% were employed part time. A small number (n = 6) were not currently employed.

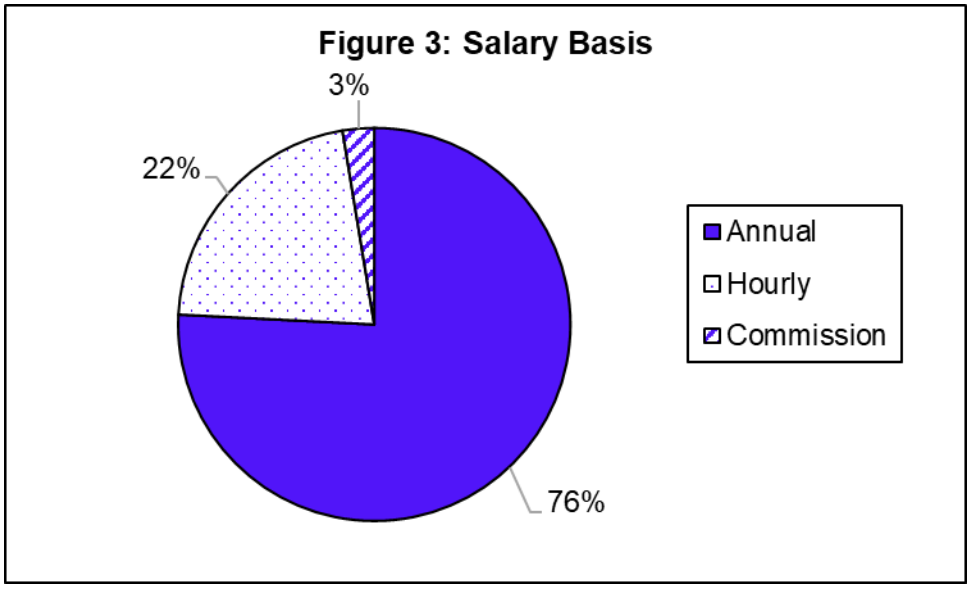
A closer look at the audiologists who were employed shows that full-time and part-time status varied significantly by the type of facility where they worked. Part-time audiologists were more likely to be found working in nonresidential health care facilities than in other types of facilities (p = .000; see Figure 2).



Note. n = 1,441.

Salary Basis

Three-fourths of the audiologists reported receiving primarily an annual salary (see Figure 3).

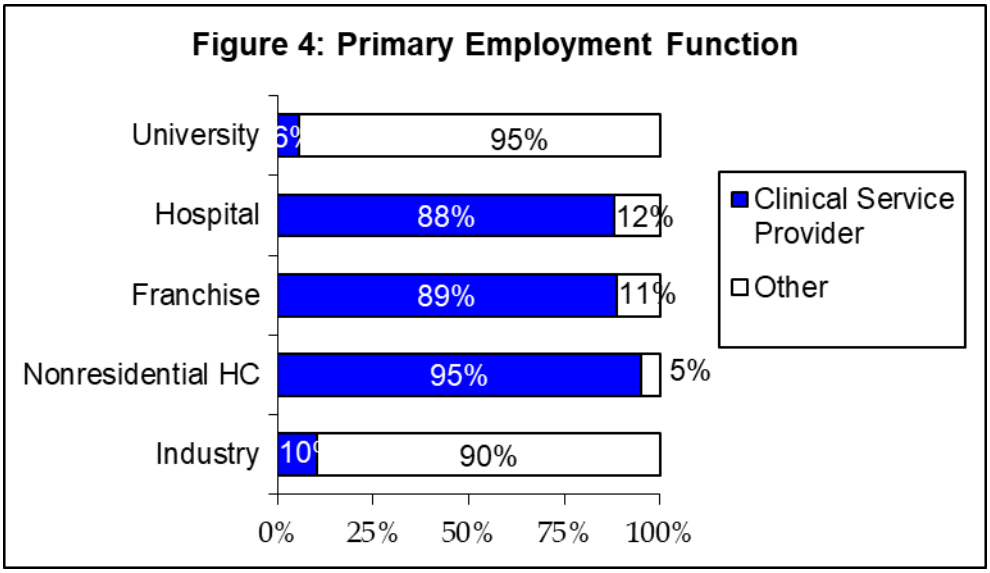


Note. n = 1,464.

Primary Employment Function

The vast majority of respondents who were employed full time or part time were clinical service providers (80%). Clinicians were more likely to be employed in hospitals, franchises and retail chains, and nonresidential health care facilities than in colleges and universities or industry (p = .000; see Figure 4).

Figure 4: Primary Employment Function

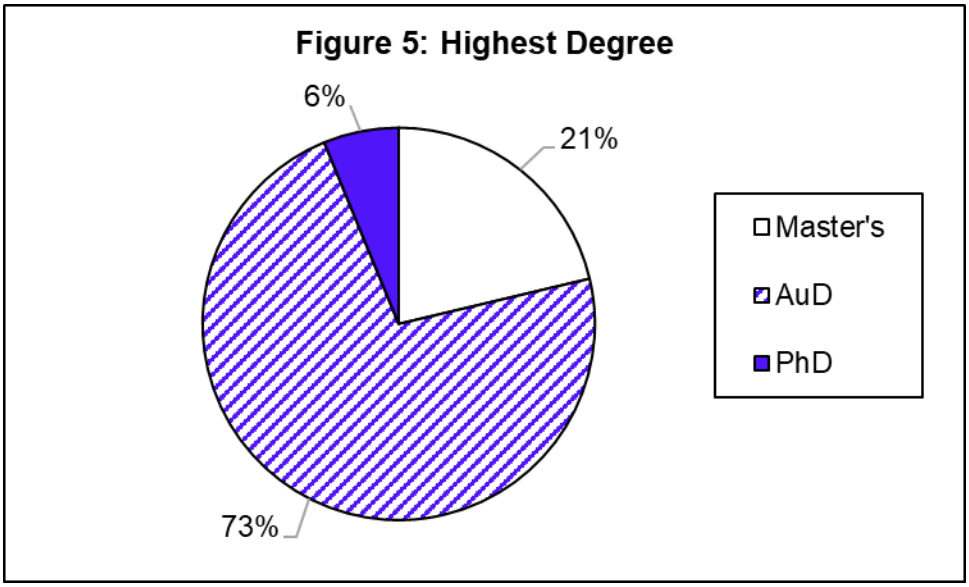


Note. n = 1,421.

Highest Degree

Recipients of doctoral degrees included 73% of the respondents who held only an AuD Degree and 6% who held only a PhD (see Figure 5).

Figure 5: Highest Degree

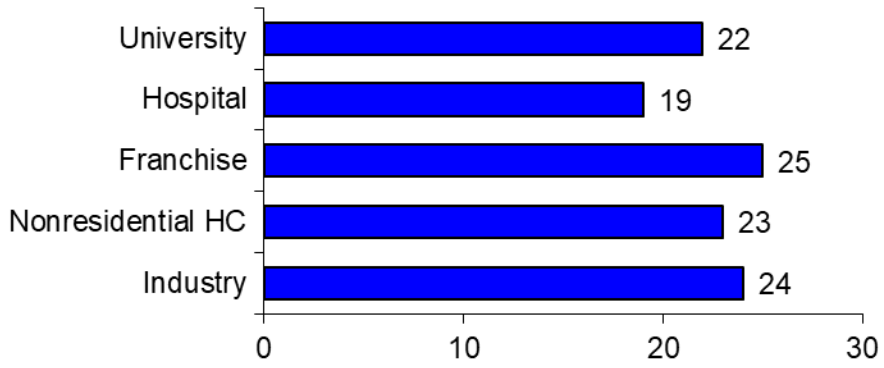


Note. n = 1,446.

Years of Experience

The median number of years of experience was 21. It was lowest in hospitals (18 years) and highest in audiology franchises and retail chains (27 years; median numbers are not shown in any figure). The mean number of years of experience was 22 and varied by type of facility (p = .000; see Figure 6).

Figure 6: Mean Years of Experience

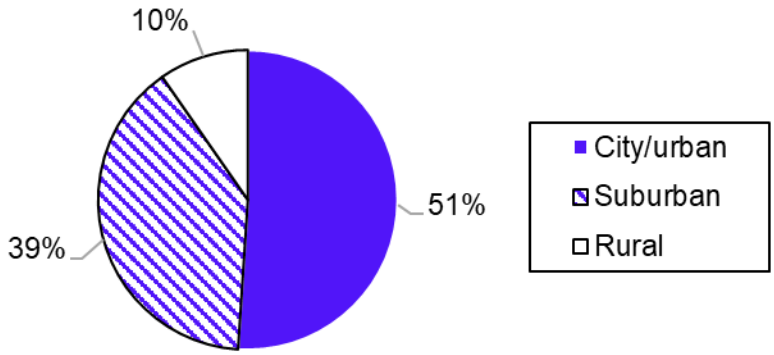


Note. n = 1,440.

Population Setting

Half of the audiologists who were employed either full time or part time worked in a city/urban area (see Figure 7).

Figure 7: Population Setting



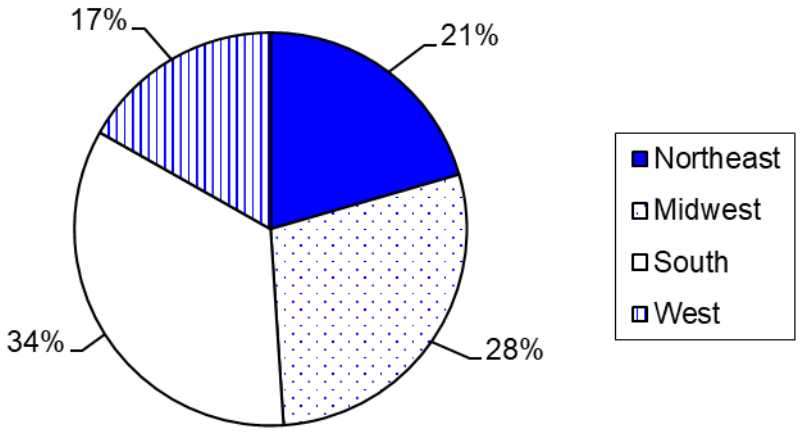
Note. n = 1,460.

Audiologists employed in hospitals were more likely than those employed in other types of facilities to work in a city/urban area (65%). Audiologists employed in nonresidential health care facilities (49%) or in audiology franchises and retail chains (50%) were more likely than those in other types of facilities to work in a suburban area. Finally, the group more likely than other groups to work in a rural area were those employed in audiology franchises and retail chains (14%; p = .000; not shown in any figure).

Region of the Country

Overall, more of the audiologists who completed the survey worked in the South and Midwest than in other regions of the country (see Figure 8).

Figure 8: Region of the Country



Note. *n* = 1,481.
Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT
Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

The type of facility in which they worked was related to the region of the country where audiologists were employed (*p* = .025; not shown in any figure).

- Audiologists who worked in hospitals (31%) and industry (28%) were more likely to work in the Midwest than in other regions.
- Audiologists who worked in audiology franchises and retail chains (40%), nonresidential health care facilities (38%), and colleges and universities (32%) were more likely to work in the South than in other regions.

Glossary

Types of Facilities

Terms used in the *ASHA 2021 Audiology Survey Reports:*

College/university:
- College/university
- Medical school

Hospital:
- General medical hospital
- Psychiatric hospital
- Rehabilitation hospital
- Pediatric hospital
- VA Hospital/medical center
- University hospital
- Military hospital
- All other hospitals

Nonresidential health care facility:
- Home health agency/client's home
- Health Maintenance Organization (HMO)
- Private physician's office
- SLP's or Audiologist's office
- Outpatient rehabilitation center
- Ambulatory care center
- Eye/ear institute
- Audiology/Hearing Clinic
- Speech/Language clinic
- All other nonresidential facilities

Audiology franchise or retail chain

Industry:
- Industry
- Manufacturer–audiology related

Stratified Random Sample

A stratified random sample was used to select 5,000 ASHA certified audiologists for this survey from a population of 8,043 audiologists. They were stratified on the basis of type of facility and private practice. A random sample is a probabilistic sample in which each person has an equal chance of being selected. This is a requirement for generalizing responses from a sample to the broader population from which the members were selected.

Response Rate

The response rate was calculated using the following equation:

$$RR = \frac{(C + P)}{S - (Ret + I)}$$

where

RR	=	Response rate
C	=	Number of completed surveys
P	=	Number of partial surveys
S	=	Sample size
Ret	=	Ineligible because of retirement
I	=	Ineligible for other reasons (e.g., does not work in audiology, no longer in the field)

$$RR = \frac{(1{,}487)}{5{,}000 - (27 + 133)} = 30.7\%$$

Measures of Central Tendency

n The number of items in a set

Mean: Add the total of all values and divide by *n*.

Median: Arrange the values in order, from lowest to highest. Select the value in the middle position.

Mode: The value that occurs more often than any other.

Example: Sample data set

1, 1, 7, 34, 88

Mean: (1 + 1 + 7 + 34 + 88) / 5 = 26.2

Median: 7

Mode: 1

Because medians are more stable and less sensitive to extreme values than are means, we use medians as the most commonly presented statistic in the *ASHA 2021 Audiology Survey Reports.*

Survey Notes and Methodology

The *ASHA Audiology Survey* has been fielded in even-numbered years between 2004 and 2018 to gather information of interest to the profession. The 2020 version was postponed by 1 year because of the COVID-19 pandemic. Members, volunteer leaders, and staff rely on data from the survey to better understand the priorities and needs of audiologists.

The survey was fielded via postal mail in October, November, and December 2021 to a random sample of 5,000 ASHA-certified audiologists who were employed in the United States. Half of each group was assigned to a random sample to receive an additional response option on the primary employment function question, i.e., *owner* was added to the option of *administrator/supervisor/director* for half of the sample.

The sample was a random sample, stratified by both type of facility and private practice. Small groups, such as industry, were oversampled. Weighting was used when presenting data to reflect the actual distribution of audiologists in each type of facility.

Response Rate

Of the original 5,000 audiologists in the sample, 27 were retired, 90 were not currently employed in the profession, and 43 had undeliverable mail addresses. The actual number of respondents was 1,487, resulting in a 30.7% response rate. The results presented in this report are based on responses from those 1,487 individuals.

Survey Reports

Results from the *ASHA 2021 Audiology Survey* are presented in a series of reports:

- Survey Summary
- Annual Salaries
- Hourly Wages
- Clinical Focus Patterns
- Private Practice
- Survey Methodology, Respondent Demographics, and Glossary

Suggested Citation

American Speech-Language-Hearing Association. (2022) *ASHA 2021 Audiology Survey: Annual Salaries.* www.asha.org

Resources

Agresti, A., & Finlay, B. (2008). *Statistical methods for the social sciences* (4th ed.). Pearson.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed.). Wiley.

Consultation

For a free consultation with an ASHA staff audiologist, please contact audiology@asha.org.

Additional Information

For additional information regarding the *2021 Audiology Survey,* please contact ASHA's audiology practices unit at audiology@asha.org. To learn more about how the Association is working on behalf of ASHA-certified audiologists, visit ASHA's website at www.asha.org/aud/.

Thank You!

ASHA would like to thank the audiologists who completed the *ASHA 2021 Audiology Survey.* Reports like this one are possible only because people like *you* participate.

Is this information valuable to you? If so, please accept invitations to participate in other ASHA-sponsored surveys and focus groups. You are the experts, and we rely on you to provide data to share with your fellow members. ASHA surveys benefit *you.*

5/13/22