

# Workplace discrimination, deafness and hearing impairment: The national EEOC ADA research project

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**Abstract.** Data compiled by the US Equal Employment Opportunity Commission (EEOC), in its Integrated Mission System, provide documentation regarding the employment discrimination experience of Americans who are deaf or hard of hearing. This paper presents an analysis of 8,936 allegations filed by persons with hearing impairment and closed by EEOC between July 26, 1992 and September 30, 2003, as compared to 165,674 allegations filed by individuals with other physical or sensory disabilities. The investigators compare and contrast demographic characteristics of Charging Parties, characteristics of Respondents, the nature of allegations, and the outcomes of the allegations in order to illustrate how these variables differ between the two groups, herein referred to as HEARING (deaf, hard of hearing, or other hearing impairment) and GENDIS (general disability). Most allegations derived from both groups were filed against larger Respondents (those with 500+ workers). The most common allegation issues in the HEARING group involved matters of discharge, reasonable accommodation, and hiring. Outcomes derived from HEARING allegations were more likely to result in merit resolutions when compared to GENDIS, by a 25% to 21% margin.

## 1. Introduction

Title I of the Americans with Disabilities Act (ADA) outlaws discrimination in employment on the basis of disability. It applies to most Employers with 15 or more workers. Congress expressed concern during debate in 1989–1990 that Americans with disabilities were being victimized in employment, specifically in the areas of initial hire, training, placement, accommodations, and advancement. People who are deaf or hard of hearing are included in the protected group created by the ADA [4].

The US Equal Employment Opportunity Commission (EEOC) is the federal agency created by the 1964 Civil Rights Act and charged with enforcing ADA Ti-

tle I. EEOC may conduct investigations, recommend mediation, attempt conciliation, and/or pursue litigation. In doing its work, EEOC first assigns a priority to a complaint. High-priority allegations are those over which EEOC has jurisdiction, the Employer is a covered entity, and the complaint includes the information required to evaluate the allegation [9].

Between the effective date of ADA Title I (July 26, 1992) and the end of the 2003 federal fiscal year (September 30, 2003), EEOC resolved precisely 8,936 allegations of employment discrimination involving persons with hearing impairment. These records were secured from EEOC's Integrated Mission System (IMS) and its predecessor, the Charge Tracking System, by the second author through an Interagency Personnel Agreement and a Confidentiality Agreement involving EEOC and his Employer (a state university). Records were also obtained on 165,674 charges brought on the basis of known physical, neurological, or sen-

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sory disabilities other than hearing impairment. In all instances, records were limited to those “closed” by EEOC; i.e., whether or not the allegations were substantiated.

## 2. Background and problem statement

Deafness is the inability to understand conversational speech through the ear alone. A lesser level of hearing impairment involves a significant loss in both ears that makes it difficult, but not impossible, to understand speech, especially with hearing aids; the term “hard of hearing” is used for this degree of hearing impairment. Many more Americans are hard of hearing than are deaf. According to a July 2004 report from the National Health Interview Survey (HIS) [6], 18,540,000 persons aged 18 to 64 reported hearing losses. Respondents were asked: “Which statement best describes your hearing without a hearing aid: good, a little trouble, a lot of trouble, deaf?” The HIS combined the latter three into one category, “hearing trouble.” Accordingly, a large portion of persons identified with hearing loss have lesser degrees of hearing impairment.

The US Bureau of the Census, in its Survey of Income and Program Participation (SIPP) [5] found 227,000 persons with “severe” hearing impairment in the 21–64 age range, as compared to 3,189,000 whose hearing losses were “not severe.” The term “severe” includes persons who are deaf and those who are hard of hearing. The HIS and the SIPP surveys both verify that hearing impairment is much more common among persons age 65 and over than among those of “working age” (generally 18–64). The Census Bureau data further show that 59% of adults age 21–64 who had severe hearing impairments were employed in 1991–1992. The employment rate was 53% in 1993–1994, 60% in 1994–1995, and 48.5% in 1997. Those figures compare to rates among non-disabled adults, respectively, of 75%, 75%, 76% and 78%.

According to SIPP [5], higher proportions of Americans with severe hearing impairments work as compared to those with many other disabilities. For example, employment rates among persons with severe mobility impairments during the 1991–1997 timeframe ranged in the low 20% area and those with severe vision limitations in the low 30% range. The higher work participation among persons with severe hearing impairments may reflect the fact that people who are deaf or hard of hearing use instant messaging, e-mail and other low-cost computer-based communications tech-

nologies such as Telecommunications Relay Services (TRS) to communicate with others who do not have hearing losses [1]. However, for in-person meetings where interpreters are required, accommodation costs may be large. Per-hour interpreter fees exceed \$50 in many parts of the country.

Under ADA Title I, individuals with disabilities are regarded as qualified if they can perform the “essential functions” of a job. This requirement forbids companies from requiring people with disabilities to perform tasks that are only marginally related to job performance. Marginal job duties may not be used to screen out persons who are in fact qualified to do the job itself. EEOC guidance on accommodations such as sign-language interpreters explains that adjustments in the way a job is done are required if they enable a qualified employee to perform the job, and if the accommodation does not constitute a significant difficulty or expense to the Employer; i.e., if they are reasonable [8].

Employment discrimination litigation involving deaf or hard of hearing persons has involved a wide range of businesses. In 2004, a federal district court determined that a large parcel delivery company discriminated against more than 1,000 deaf workers across the country by refusing to consider them as potential drivers. In 2003, the same company paid \$10,000,000 to deaf employees in Oakland because of failure to offer reasonable accommodations, including interpreters [2]. In 2002, a federal appeals court found that a large internet service provider was wrong to contend that some job functions requiring the ability to hear were “essential.” [3] Also in 2002, a large retailer paid \$710,000 to seven workers who were deaf and who had been denied interpreters. In 2000, the same retailer was involved in a settlement regarding failure to offer reasonable accommodations in job training [7].

## 3. The research problem: A knowledge deficit

The knowledge deficit addressed in this study is the lack of specific information regarding the nature, scope, and dynamics of employment discrimination as it affects Americans who are deaf or hard of hearing. Previous research involving EEOC IMS related to allegations only, which may be construed as the perception of discrimination. The present study focuses also on closed cases, in which EEOC has rendered an actual determination of merit for each allegation. This difference is important because, in general, only 22% of allegations of employment discrimination on the basis of disability are found by EEOC to have merit. The key research questions are:

Table 1  
Characteristics of charging parties

	GENDIS		HEARING	
	Frequency	Percentage %	Frequency	Percentage %
<i>Gender</i>				
Male	<b>35253</b>	<b>53.8</b>	<b>5206</b>	<b>58.3</b>
Female	30228	46.2	3716	41.7
<i>Age</i>				
<50	<b>90148</b>	<b>54.4</b>	<b>5600</b>	<b>59.4</b>
>50	75358	45.6	2471	30.6
<i>Ethnicity</i>				
Africamer	34236	20.7	1103	12.3
Asian	1944	1.2	133	1.5
Hispmex	11919	7.0	627	7.0
Mixedethn	125	0.1	6	0.1
Natvamer	1130	0.7	65	0.7
Other	11656	7.0	671	7.5
Unknown	82	0.0	3	0.0
White	<b>102662</b>	<b>62.0</b>	<b>6201</b>	<b>69.4</b>

1. What are the demographic characteristics of individuals who file allegations with EEOC on the basis of hearing impairment vs. other disabilities? These persons are henceforth known as "Charging Parties."
2. What is the nature of discrimination alleged to occur? All allegations involve some specific type of adverse action by Employers, and these henceforth are known as "Issues."
3. What are the characteristics of Employers, e.g., industry designation, size and geographical location, against whom EEOC allegations are filed? These Employers (in rare instances they may be labor unions or employment agencies) are henceforth known as "Respondents."
4. What are the legal outcomes or resolutions of EEOC investigatory processes with respect to allegations brought by Charging Parties with hearing impairments? These resolutions may favor either the Charging Party (resolution with merit) or the Respondent (resolution without merit).

#### 4. The national EEOC ADA research project

In this study, the research questions are answered by comparing and contrasting the employment discrimination experience of Americans with hearing impairments to that of Americans with other known physical, sensory, and neurological impairments. The EEOC's IMS contains more than two million charge records involving allegations of employment discrimination. From these data, a "study dataset" was extracted to include only those files related to the research questions and to

maximize consistency, parsimony, and confidentiality; i.e. to protect the identity of specific Charging Parties or Respondents. The extraction process was guided by considerations detailed in the introductory article, and summarized as follows:

- The unit of study is an allegation, not a Charging Party.
- Only unique allegations that do not involve recording errors or duplications are included in the study dataset.
- To protect confidentiality, all information regarding Charging Parties or Respondents was purged except for the characteristics described herein.
- Study data are strictly limited to allegations brought under ADA Title I.
- Allegations brought under other federal or state employment statutes were excluded.
- To maintain consistency in definitions and procedures among the study variables, only allegations received, investigated, and closed by EEOC during the study period were included.
- Open allegations (still under investigation) were excluded from the study.
- Missing data is an issue only in a few fields (age, sex, race/ethnicity, SIC code, number of employees), but in no instance does it exceed 3%.

The resulting study dataset includes 174,610 allegations of employment discrimination under ADA Title I that were received, investigated and closed by EEOC during the study period (11.2 years). These were divided into several comparison groups on the basis of disability status including the following two:

Table 2  
Characteristics of respondents, I: Number of employees

	< 15	15–100	101–200	200–500	500+
HEARING	10 0.1%	2954 33.1%	941 10.5%	908 10.2%	3688 41.3%
GENDIS	137 0.1%	53240 32.1%	19780 11.9%	17608 10.6%	68643 41.4%

Table 3  
Characteristics of respondents, II: Geographical region

	Northeast	Midwest	South	West	Other
HEARING	905 10.1%	2337 26.2%	3581 40.1%	2093 23.4%	20 0.2%
GENDIS	17769 10.7%	49701 30.0%	66870 40.4%	30709 18.5%	625 0.4%

1. Hearing: 8,936 allegations involving hearing, although the severity of the impairment is unknown. Referred to as HEARING, this is the target study group for this research.
2. General Disability: 165,674 allegations involving other known physical, sensory or neurological impairments. This study group, known as GENDIS (for “general disability”), serves as the comparison group for this study.

## 5. Project design and methods

The charge data were transferred by EEOC to the researchers via zip disk. Data needed to answer the research questions were extracted, coded, refined, and formatted in Microsoft Access using the aforementioned criteria. The result was a study-specific dataset in which the underlying unit of measure is the frequency of allegations, a ratio level of measurement. The design includes a number of variables:

- Characteristics of the Charging Party include disability status (HEARING or GENDIS) as well as information for age, gender, and ethnicity. All are nominal measures except for age, which is a ratio measure.
- Characteristics of the Respondent include the jurisdiction (region) [nominal], industry designation (SIC code) [nominal], and number of employees [interval].
- Issues [nominal] include 23 specific Respondent behaviors that can constitute discrimination.
- Resolutions [nominal] describe a final EEOC determination as to whether or not discrimination actually occurred.

## 6. Analysis

The initial level of analysis included descriptive statistics and computations of proportion on both allegations and merit resolutions using SPSS (Statistical Package for the Social Sciences). SPSS was also employed to compare HEARING to GENDIS on a number of outcome variables. Given the number of allegations (174,610), many differences between the two groups reached statistical but not practical significance.

## 7. Findings regarding allegations

All allegations, although resolved, are not merit resolutions. Only about one in five allegations are resolved with merit. Although researchers typically interpret allegations as a perception of discrimination, the perception was strong enough to move the Charging Party to file a formal complaint. Still, it is imperative to be mindful that approximately 4/5 of allegations are resolved without merit.

### 7.1. Characteristics of charging parties

Relative to GENDIS, proportionately more allegations appear in HEARING involving Charging Parties who are male,  $\chi^2(2, N = 174610) = 53.94, p < 0.001$ . There was also a statistically significant difference between the two groups with respect to race/ethnicity of the Charging Parties,  $\chi^2(2, N = 174610) = 380.99, p < 0.001$ , with HEARING allegations coming from proportionally more White and fewer African American Charging Parties. A t test to examine differences in age between HEARING (Median = 43,  $SD = 12$ ) and GENDIS (Median = 44,  $SD = 10$ ) resulted in a statistically significant difference,  $t(8781) = 7.52, p < 0.001$  (two-tailed). These findings are summarized in Table 1.

### 7.2. Characteristics of respondents

Allegations were brought against larger Respondents (those with 500+ workers) in both HEARING and GENDIS. Relative to GENDIS, proportionately more allegations appear in HEARING against Respondents that are smaller (15 to 100 workers), located in the West, or in the industries of retail trade, public administration, or finance/insurance/real estate. Proportionately fewer allegations appear in HEARING than in GENDIS involving Respondents that have 100–200

Table 4  
Characteristics of respondents, III: SIC (Industry)

	Agriculture forestry fishing	Construction	Finance insurance real estate	Manufacturing	Mining	
HEARING	43 0.5%	142 1.6%	485 5.6%	1401 16.1%	68 0.8%	
GENDIS	1115 0.7%	3340 2.1%	3340 4.0%	31154 19.3%	1322 0.8%	
	Non-classifiable	Public admin	Retail	Services	Transpo & utilities	Wholesale
HEARING	1111 12.8%	874 10.1%	1165 13.4%	2603 29.9%	690 7.9%	114 1.3%
GENDIS	20379 12.6%	15185 9.4%	16986 10.5%	46940 29.1%	15061 9.3%	3136 1.9%

Table 5  
Allegations

	Hiring	Promotion	Testing	Training	Harassment	Conditions discharge
HEARING	1051 11.8%	373 4.2%	26 0.3%	112 1.3%	802 9.0%	288 3.2%
GENDIS	8296 5.0%	704 2.3%	152 0.1%	901 0.6%	12227 7.4%	3790 2.3%
	Benefits	Discharge	Reasonable Accommodations	Recall	Resinstatement	
HEARING	95 1.0%	2105 23.6%	1543 17.3%	31 0.3%	36 0.4%	
GENDIS	3806 2.3%	51080 30.8%	33930 20.5%	1059 0.6%	2627 1.6%	

employees, are located in the Midwest, or involve industries of transportation or utilities, wholesale trade, construction, or manufacturing.

With respect to Respondent size, there was a statistically significant difference between the two groups with respect to charges against relatively small Respondents (15 to 100 workers),  $\chi^2(6, N = 174610) = 45.997$ ,  $p < 0.001$ . Differences in SIC code (industry) were statistically significant,  $\chi^2(10, N = 169829) = 207.992$ ,  $p < 0.001$ . With respect to geographical region, a statistically significant difference was found between HEARING and GENDIS,  $\chi^2(5, N = 174610) = 158.347$ ,  $p < 0.001$ . These findings are summarized in Tables 2–4.

### 7.3. Discrimination issues

A list of EEOC definitions of Issues, which are alleged discriminatory behaviors by Respondents, is provided in Table 5 of the introductory article. EEOC recognizes a large number of discrete types of allegations. Relative to GENDIS, proportionately more allegations in HEARING involve hiring, promotion, testing, training, harassment, and conditions of discharge. Proportionately fewer relate to benefits (including insurance

and pensions), discharge, reasonable accommodations, recall and reinstatement. The differences were statistically significant,  $\chi^2(41, N = 174610) = 1498.8333$ ,  $p < 0.001$ . These findings are summarized in Table 5. Other allegations, in which group differences were relatively minor, were: advertising, apprenticeship, assignment, demotion, discipline, early retirement incentives, intimidation, involuntary retirement, severance pay, suspension, tenure, terms and conditions of employment, union representation, wages, and waiver of age discrimination rights.

### 7.4. Findings regarding resolutions

Merit Resolutions in HEARING (25.1%) were significantly more common than in GENDIS (21.4%),  $\chi^2(1, N = 174610) = 231.975$ ,  $p < 0.001$ . Part of the difference is accounted for by a higher proportion of conciliation failures in the HEARING group, 7.2% v. 4.9% in GENDIS. These findings are summarized in Table 6.

## 8. Discussion

With a few notable exceptions, allegations and their resolutions are similar for Charging Parties in both

Table 6  
Resolutions

	Merit resolution	Not merit resolution
HEARING	2243 25.1%	6693 74.9%
GENDIS	35449 21.4%	130225 78.6%

HEARING and GENDIS groups. This is not surprising when one considers that hearing impairment is a subset of the larger body of sensory and physical disabilities that comprise GENDIS.

Nonetheless, there do exist specific differences in the nature of discrimination that are worthy of note. In this study, large numbers of subjects and very stringent alpha levels make it extremely unlikely that these results occurred by chance alone. Hearing losses, especially severe conditions, are noticeable enough to precipitate some initial resistance in hiring as compared to less-visible impairments such as diabetes or cardiac conditions. Similarly, some Respondents may view hearing loss as a disqualifying factor in promotions. The need for interpreters may be related to allegations related to training and to reasonable accommodations. On the other hand, allegations involving hearing impairments of hearing are less likely than other conditions to involve matters of health insurance or benefits. Other differences, although statistically significant, do not appear to be practically significant.

With respect to gender, hearing loss is more common among males than females. In addition, deaf or hard of hearing males are more likely than are females to participate in the labor force. These facts are documented in both HIS and SIPP data [5,6]. For this reason, gender differences between HEARING and GENDIS are not surprising. One can only speculate why proportionately more allegations derive from White Charging Parties than from African Americans. The one-year difference in median age between HEARING and GENDIS, although statistically significant, appears to lack practical significance.

With respect to Respondent size, it may be that members of both groups were more likely to find, or seek, employment in larger organizations. Big companies are better-positioned than are small ones with respect to human resources staff, disability non-discrimination policies, and the resources necessary for providing reasonable accommodations. Thus, we may speculate that the greater proportions of allegations in both groups that were brought against large Respondents than against smaller ones are, at least in part, a function of the greater likelihood that persons with disabilities would look for

employment in larger organizations. Supporting this interpretation is the finding that allegations against relatively small companies (those with 15 to 100 workers) were more common in HEARING than in GENDIS. Small firms and agencies may not be as willing as are larger ones to provide accommodations such as sign-language interpretation for meetings and for training, or may experience more undue hardship doing so.

That allegations involving reasonable accommodations were less common in HEARING (17.3% of all instances) than in GENDIS (20.5%) was somewhat surprising. We may speculate that Respondents today generally recognize the need for such accommodations when job-seekers or employees are deaf or hard of hearing. They may not as readily acknowledge such needs with respect to less obvious impairments such as cardiac conditions or diabetes. On the other hand, that allegations involving harassment were more common in HEARING than in GENDIS may relate to the communication issues involved. Specifically, co-workers may "tease" about the speech patterns voices of deaf or hard of hearing workers. The targets of that 'teasing' may take offense, resulting in some allegations of harassment. Of course, more serious harassment on the basis of disability may also occur.

The higher rate of merit resolution for HEARING as compared to GENDIS appears to be in large part a function of conciliation failures. When EEOC completes its investigation of an allegation, it typically seeks voluntary action by the Respondent to resolve a merit resolution. We may speculate that when merit resolutions derive from persons with hearing impairment, many of which involve hiring or promotion, the corrective action or penalties required of Respondents may involve greater cost than in matters of benefits or discipline. Such disincentives may make Respondents less open to conciliation.

It is worth noting that non-merit resolutions were most common in both groups. Although HEARING had a 25% merit Resolution rate as compared to 21% in GENDIS, the flip side the coin shows 75% and 79%, respectively, for non-merit resolutions. When EEOC completes the full investigatory process, Respondents prevail significantly more often than not. However, when Charging Parties have a strong allegation, early settlements with Respondents may be more likely. Stated differently, stronger allegations may be less likely than weaker ones to proceed to final resolution, whether resolved by EEOC or in court.

Proportionately more allegations in HEARING than in GENDIS involved Respondents in the West and

fewer in the Midwest. We can only speculate on the reasons. It is worth noting in this connection that federally supported postsecondary institutions serving deaf and hard of hearing individuals are located in California, in New York, in Washington, DC, and in Tennessee. There are none in the Midwest other than a relatively small vocational-technical program in Minneapolis. It is possible that the geographical disparities noted are related to the location of accessible educational opportunities.

With respect to industry classification, it may be that retail trade poses difficult accommodation problems for Respondents, given the need for ongoing employee-customer communication. Similarly, persons with hearing impairments may be less likely to face discrimination in manufacturing, where little worker-customer communication occurs. However plausible, these remain speculations.

## 9. Conclusion

These findings contain some clues with respect to specific barriers to employment. They suggest that young people who are deaf or hard of hearing may be advised to anticipate some resistance from employers with respect to initial hire, training, promotion and reasonable accommodation. Applicants who are well-prepared to make articulate their qualifications, and to point out the ready availability of low-cost accommodations such as e-mail and instant messaging, may be more likely than others to find success in the world of work.

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