OBJECTIVE: To evaluate the effect of hearing loss (HL) on personal income for adults in the United States.

STUDY DESIGN: U.S. population-based cross-sectional study.

METHODS: The population of patients with a coded diagnosis of HL was extracted from the 2006 and 2008 Medical Expenditure Panel Survey linked household and medical conditions files and compared against the population of patients without HL. Differences in employment, wages, total income, social security income, and family income as a percentage of the poverty line associated with HL were evaluated in multivariate regression models after adjustment for demographic and Charlson comorbidity variables.

RESULTS: An estimated 1.87±0.18 million adult patients were identified with a diagnosis of HL, with a mean age of 51.0 years and male predominance (54.7%). Patients with HL were more likely to be unemployed than those without (adjusted odds ratio, 2.2; p<0.001). The HL population earned a mean wage of $23,481 ± 3,366, versus $31,272 ± 517 for the non-HL population (net decrease in wages, -$7791; p =0.02). Reported differences between those with and without HL in total income ($29,259 ± 3,333 vs. $34,490 ± 521; p=0.11), social security income ($918 ± 321 vs. $618 ± 35; p=.350), and family income as a percentage of the poverty line (odds ratio for below poverty line with HL, 1.3; p=0.137) did not reach statistical significance.

CONCLUSIONS: Adults with HL are more likely to be unemployed and on average earn significantly less wage income than adults without HL. Further work is needed to determine the potential impact of treatment on these differences.

INTRODUCTION

Hearing loss can profoundly affect a patient’s ability to interact with his/her surroundings. This may ultimately have economic implications for people affected with hearing loss and their families. Indeed, a recent study found that children with hearing impairment were more likely to live closer to the poverty level than children without such impairment. Hearing-impaired workers experience higher stress levels, expend increased effort in listening at work, and tend to take more time off work because of stress. However, no study to date has directly examined the effect of hearing loss on personal income for working-age adults.

An estimated 1.87±0.18 million adults in the United States were identified with a diagnosis of HL, with a mean age of 51.0±1.0 years. Table 1 further summarizes demographic differences between those patients reporting HL and not reporting HL.

As shown in Table 2, Patients with HL were more likely to be unemployed than those without HL, with an adjusted odds ratio (adjusted for age, sex, race, ethnicity, education, insurance, region, marital status and Charlson comorbidity index score) of 2.2 (95% CI, 1.4 to 3.4). Mean wage incomes were significantly lower for the HL population relative to the non-HL population (p=0.02). Differences between patients with and without HL in total income, social security income, and family income as a percentage of the poverty line were not significant (p=0.114, 0.350, 0.137, respectively).

In the United States, hearing loss is statistically significantly associated with a higher likelihood of unemployment and decreased wage income in adults. Future studies are needed to determine which treatments may best address these discrepancies, given their significant indirect costs to society.

REFERENCES