

Personal Sound Amplification Products: A Study of Consumer Attitudes and Behavior



CEA Market Research Report

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The Authoritative Source for Consumer Technologies Market Research

research@CEA.org | 703-907-7600

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Methodology

The report described herein was designed and formulated by Consumer Electronics Association (CEA)[®]. It represents the findings of a quantitative study administered via Internet web form between June 3 and June 10, 2014 to an online national sample of 3,459 U.S. adults.

The report focuses on the 1,551 U.S. adults in our sample who have either been diagnosed with hearing loss by a medical or hearing health care professional, or who have at least a little trouble hearing. However, the entire sample was balanced and the data was weighted to reflect the known demographics of the U.S. adult population. Weights were established based on gender, age, race and education. As a result, this data can be generalized to the U.S. adult population with at least a little trouble hearing.

The margin of sampling error for the U.S. adult population with at least a little trouble hearing at 95% confidence for aggregate results is +/- 2.3%. Sampling error is larger for subgroups of the data. As with any survey, sampling error is only one source of possible error. While non-sampling error cannot be accurately calculated, precautionary steps were taken in all phases of the survey design, collection and processing of the data to minimize its influence.

The bases shown on all charts and tables are the number of respondents who answered a question (or unweighted bases). All percentages in the text, charts and tables included in this report are based on weighted data. Differences between subgroups that are significant at the 95% confidence level are denoted using letters that correspond to one or more other groups.

CEA is a member of the Marketing Research Association (MRA) and adheres to the MRA's Code of Marketing Research Standards.

Note: In the analysis and presentation of some data, the following figures were used in calculations.

Total U.S. Population: 320 million

Total U.S. Adult Population: 246 million

Total U.S. Occupied Households: 119 million

The above data are 2014 projections made by CEA. Projections are based on data from the U.S. Census Bureau 2012 American Community Survey (published September 2013) and the 2010 U.S. Census (published February 2011).

Percentage of U.S. Adults Online: 87%

Source: Pew Research Center, February 2014, "The Web at 25."

Percentage of U.S. Households with Internet Access: 71%

Source: U.S. Census Bureau, Current Population Survey School Enrollment and Internet Use Supplement, October 2010, and ESA Calculations

CEA designed this study in its entirety and is responsible for all content contained in this report. Any questions regarding the study should be directed to CEA Market Research staff at info@CEA.org.



Research Objectives

This research study was designed to demonstrate the addressable market for Personal Sound Amplification Products (PSAPs) and the various situations in which consumers can and do benefit from sound amplification. The specific research objectives are as follows:

- Objective 1:** Determine current ownership and use of PSAPs across a variety of situations and environments
- Objective 2:** Understand the portfolio of products consumers use for sound amplification (including both hearing aids and PSAPs)
- Objective 3:** Establish consumer interest in using PSAPs across a variety of situations and environments
- Objective 4:** Understand channels for exposure and purchasing of PSAPs



Market Background

According to CEA, almost half (46%) of online U.S adults (approximately 98 million Americans) report having some level of hearing loss, ranging from a little hearing difficulty to being diagnosed with hearing loss by a medical professional. When it comes to offerings that will help consumers improve their hearing ability, consumers have two main options (depending on degree of hearing difficulty and advice of a medical professional): hearing aids or personal sound amplification products (PSAPs). While both products provide consumers the opportunity to hear better in many scenarios, hearing aids are cost prohibitive for many with a pair of devices ranging in cost \$1,000 to \$6,000² in addition to the cost of medical appointments. PSAPs, on the other hand, offer consumers a lower entry point (with a range of \$100 to \$600² for each device) into a world of better hearing, especially for those with low degrees of hearing difficulty.

In 2009, the FDA attempted to clarify the differences between hearing aids and PSAPs, recognizing the products share core characteristics (e.g., wearable, assist user with hearing sounds). The 2009 Guidance defined a PSAP as a “wearable electronic product that is not intended to compensate for impaired hearing, but rather is intended for non-hearing impaired consumers to amplify sounds in the environment¹.” Further clarification was provided in the FDA’s 2013 Draft Guidance which states PSAPS “are intended to accentuate sounds in specific listening environments, rather than for everyday use in multiple listening situations” and are not intended “to address listening situations that are typically associated with and indicative of hearing loss.” The current definitions do not effectively differentiate the two products as both have legitimate uses in the various situations outlined.

In April 2014, CEA urged the FDA to take steps to ensure regulatory clarity between hearing aids and PSAPs to enable PSAP manufacturers to effectively market their products to Americans who could benefit from sound amplification.



Executive Summary

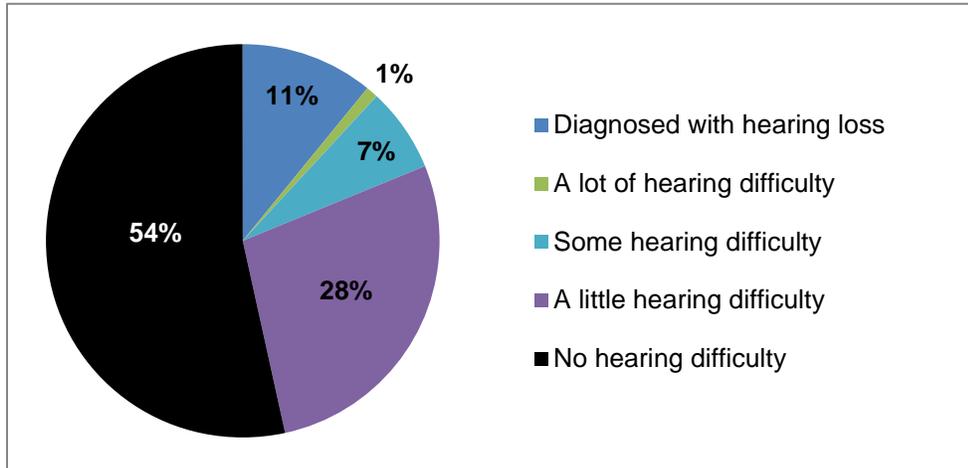
- **Nearly half of online U.S. adults have some degree of hearing difficulties;** this equates to 98 million Americans. While most of these consumers have only a little trouble hearing (28%), 11% have been diagnosed with hearing loss, and 8% have some or a lot of trouble hearing but have not yet been diagnosed.
- **Cost is a major barrier to consumers seeking help for their hearing difficulties and purchasing hearing aids but PSAPs may help overcome this.** Consumers are often deterred from getting help for their hearing by the cost of hearing devices and the cost of doctor appointments. Most consumers with hearing loss are not willing to pay the \$1,000² starting price for hearing aids. The average cost of PSAPs (averaging between \$100 and \$600²) is more in line with what consumers are willing to spend to hear better.
- **There is demand for PSAPs among consumers with trouble hearing.** While only a fraction of those diagnosed with hearing loss (6%) and those with some or a lot of trouble hearing (4%) currently own a PSAP, nearly two out of five would be interested in purchasing an over-the-counter product to help them hear better.
- **Most consumers with trouble hearing (84%) would go to a medical or hearing health care professional for advice on their hearing difficulties.** Fewer consumers would turn to other sources of information such as online (14%), family and friends (13%), and others with hearing difficulties (10%).
- **Retailers are the preferred purchase channel for non-prescription hearing devices.** Three-fourths (73%) of those interested or very interested in purchasing a non-prescription hearing device would be willing to purchase from a drug store; big-box or discount stores (e.g. Costco, Sam's Club, Wal-Mart) (55%) and online (48%) are also acceptable channels for many.
- **PSAPs owners tend to use them mostly for listening to TV, while non-owners who express interest in purchasing such a device would envision using them in a wider range of situations.** Half (51%) of those who own PSAPs use them to listen to TV, no more than a quarter use them in any other situations, and just a tenth (10%) use them every day, in any situation. Conversely, those interested in purchasing PSAPs would be likely to use them in several situations, with two in five (41%) being likely to use them every day, in any situation.
- **Consumers support the ability to purchase hearing assistance products the way they currently purchase reading glasses (e.g., through the mail or at a local drug store).** More than two-thirds (69%) of adult Americans with hearing difficulty, equating to sizable 68 million people, support this idea, and those with no hearing difficulty are only slightly less supportive (63%).

Detailed Findings

I. Level of Hearing and Medical Care Associated with Difficulty Hearing

Nearly half of online U.S. adults (46%) report having at least some degree of hearing difficulty. Of this group, most experience only a little hearing difficulty (28%), while 8% have some or a lot of hearing difficulty and 11% have been diagnosed with hearing loss by a medical or hearing health care professional. Men are more likely to have been diagnosed with hearing loss than women (28% male compared to 19% female).

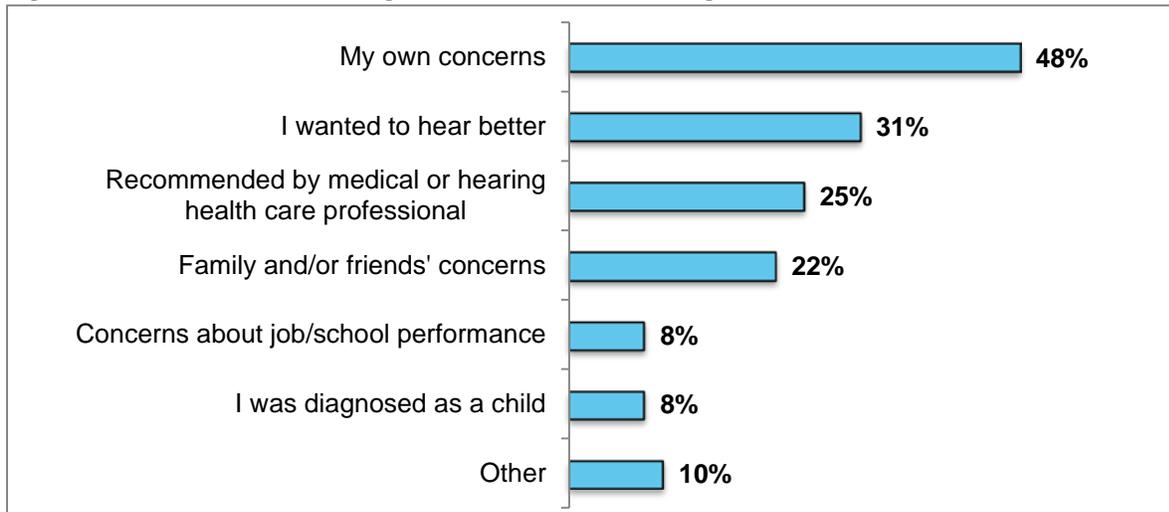
Figure 1 – Hearing Difficulties Among U.S. Adults



Base: Online U.S. Adults (n=3,424) Q1. Have you been diagnosed with a hearing loss by a medical or hearing health care professional, such as a doctor, audiologist, or hearing aid dispenser?
 Q2. Would you say that you:

The leading reasons those diagnosed with hearing loss sought medical care for their hearing loss are personal concerns (48%) and a desire to hear better (31%). However, recommendations from medical professionals (25%) and concerns from family or friends (22%) also play a role. Concerns from family and friends are more likely to influence males (26% compared to 15% for females)

Figure 2 – Reasons for Seeking Medical Care for Hearing Loss



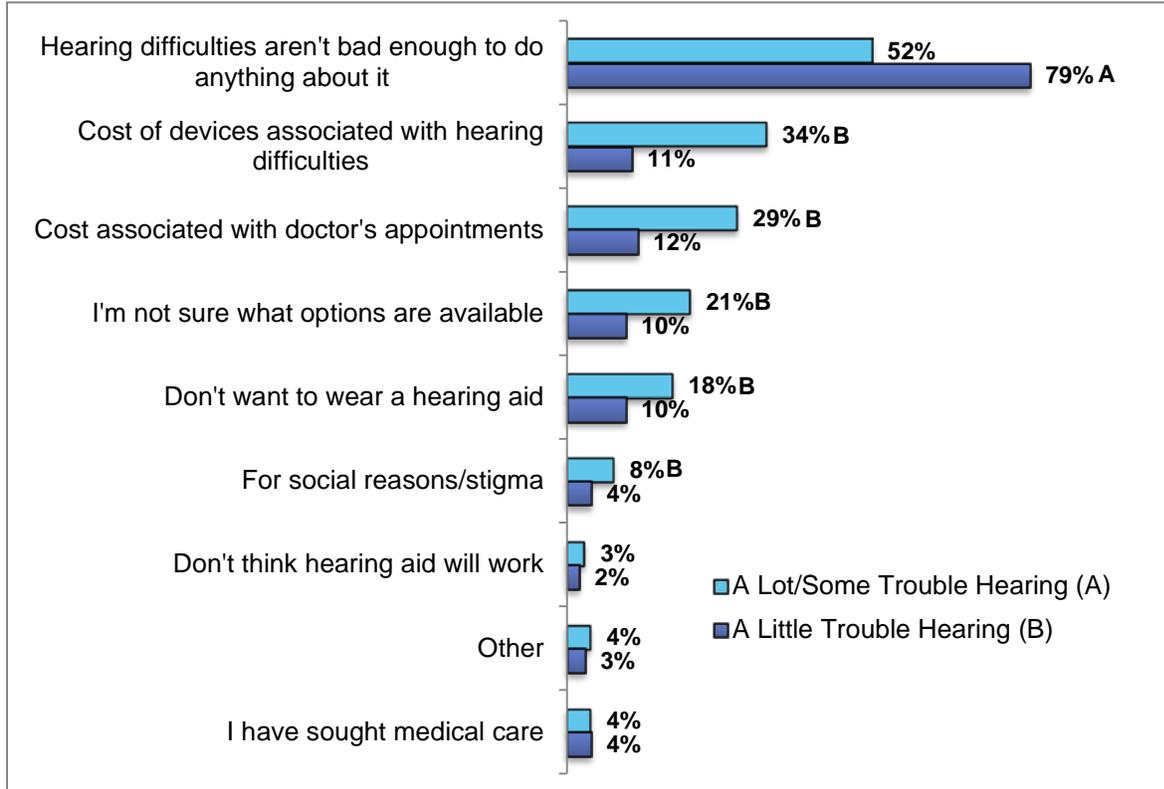
Base: Online U.S. adults diagnosed with hearing loss by a professional (n=362)
 Q3. Which of the following, if any, are reasons you sought medical care for your hearing loss?



The primary reason those with hearing difficulty do not seek medical care for their hearing difficulties is because they do not think their hearing is bad enough to warrant medical advice. Not surprisingly, this is especially true among those who have a little hearing difficulty (79%), while half (52%) of those with some or a lot of hearing difficulties share this sentiment.

Cost is also a deterrent to getting medical care for many of those with at least some hearing difficulty; a third (34%) cite the cost of devices, while 29% cite the cost of doctor appointments.

Figure 3 – Reasons for Not Seeking Medical Care for Hearing Difficulties



Base: Online U.S. adults not diagnosed with hearing loss who have (n=248) | A lot of trouble hearing; (n= 941) | A little trouble hearing

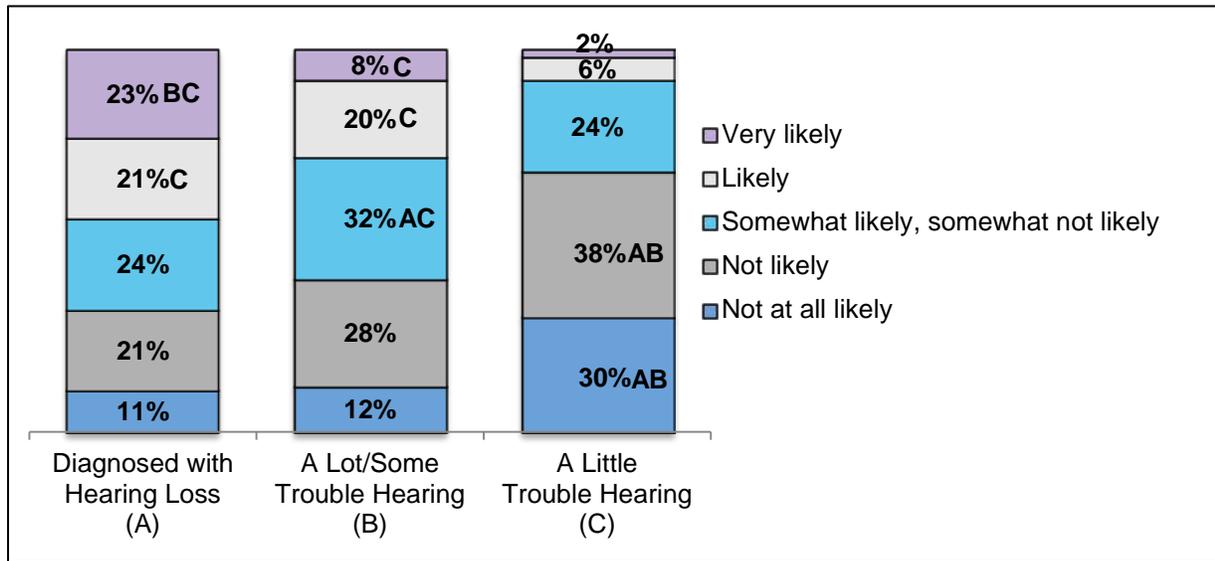
Letter denotes a significantly higher percentage compared to other group

Q4. Which of the following, if any, are reasons you have not sought medical care for your hearing difficulties?

More than two-fifths (44%) of those diagnosed with hearing loss are likely to seek help for their hearing difficulties in the next 12 months (e.g., have their hearing tested, search for information about devices that could help them hear better). More than a quarter (28%) of those with some or a lot of trouble hearing plan to seek help for their hearing difficulties, while about a third are on the fence about seeking help (32% are somewhat likely, somewhat unlikely). Most of those with a little trouble hearing (68%) are not planning to address their hearing issues in the near future.

Those currently using a device (e.g. hearing aid or PSAP) to help them hear better are most likely to seek help (e.g. hearing test, information about hearing devices) for their hearing difficulties in the next 12 months; two-thirds (63%) of those who own hearing aids and half (49%) of those who own PSAPs are likely to do so.

Figure 4 – Likelihood of Seeking Help for Hearing Difficulties



Base: Online U.S. adults. (n=362) | diagnosed with hearing loss; (n= 248) | with a lot or some trouble hearing; (n=941) | with a little trouble hearing

Letter denotes a significantly higher percentage compared to other group

Q5. How likely are you to seek help for your hearing difficulties in the next 12 months, meaning have your hearing tested, search for more information about devices that could help you hear better, etc.?



About half (48%) of online consumers don't know how much they would be willing to spend on hearing health care and/or hearing devices over the next year. Among consumers who are able to estimate this cost, those diagnosed with hearing loss are willing to spend \$925 on average, while those with a lot or some trouble hearing and those with a little trouble are willing to spend considerably less; \$265 and \$211 respectively.

The price of hearing aids, which range from \$1,000 to \$6,000² (not including doctor appointments and other hearing health-care related costs), is more than the majority of consumers would be willing to spend. Only a third (32%) of those diagnosed with hearing loss would be willing to spend \$1,000 or more on hearing health care and/or devices, while only a tenth (10%) of those with some or a lot of trouble hearing would be willing to spend that amount.

For many consumers, PSAPs, which can cost anywhere from \$100 to \$600 for each device², are a more viable solution from a cost standpoint. Almost three-fourths (71%) of those diagnosed with hearing difficulty, 60% of those with some or a lot of hearing difficulty, and 43% of those with a little hearing difficulty would be willing to spend \$100 or more for hearing health care and/or devices.

Figure 5 – Amount Willing to Spend on Hearing Health Care or Devices

	Diagnosed w/ Hearing Loss (A)	A Lot/Some Hearing Difficulty (B)	A Little Hearing Difficulty (C)
\$0	21%	22%	43% AB
\$1–\$99	8%	18% A	14% A
\$100–\$299	16%	28% A	26% A
\$300–\$499	6% C	4%	3%
\$500–\$999	17% C	18% C	7%
\$1,000–\$2,499	16% C	10%	7%
\$2,500–\$4,999	12% BC	0%	1%
\$5,000+	4% BC	0%	0%
<i>Average</i>	<i>\$925 BC</i>	<i>\$265</i>	<i>\$211</i>
Don't know	48%	49%	50%

Percentages based on those that provided a dollar amount (i.e., did not answer "don't know")

Base: Online U.S. adults. (n= 362) | Diagnosed with hearing loss; (n= 248) | With a lot/some trouble hearing; (n=941) | With a little trouble hearing

Letter denotes significantly higher percentage compared to other group

Q6. How much would you be willing to spend on hearing health care or devices that help you hear better in the next 12 months?



The majority of consumers with hearing difficulty would rely on a medical or hearing health care professional for advice about their hearing difficulties. In addition those diagnosed with hearing loss are only slightly more likely to seek advice from a medical professional than those with hearing difficulty but not diagnosed with hearing loss (89% vs. 83%). Other sources for advice including online (10-15%), family and/or friends (8-15%), and someone they know with hearing difficulties (8-11%), would be used to a much lesser extent, especially among those diagnosed with hearing loss.

Figure 6 - Sources of Advice Regarding Hearing Difficulties

	Diagnosed w/ Hearing Loss (A)	A Lot/Some Hearing Difficulty (B)	A Little Hearing Difficulty (C)
A medical or hearing health care professional, such as a doctor, audiologist, or hearing aid dispenser	89% BC	83%	83%
Online	10%	13%	15% A
Family and/or friends	8%	15% A	15% A
Someone I know who has hearing difficulties	8%	11%	11%
A pharmacist at a drug store, grocery store, or mass merchant	4% B	1%	3%
Other	3%	3%	3%

Base: Online U.S. adults.(n= 362) | Diagnosed with hearing loss; (n=248) | With a lot/some trouble hearing;(n= 941) | With a little trouble hearing

Letter denotes significantly higher percentage compared to other group
 Q7. Where would you go for advice regarding your hearing difficulties?

II. Hearing Device Ownership

Among those diagnosed with hearing loss, only a third (30%) owns a hearing aid and a fraction (3%) have a cochlear implant. Those diagnosed with hearing loss and those with that have not been diagnosed but with some or a lot of hearing difficulty are similar in their ownership of other sound amplification products, including television amplifiers (11% and 9%, respectively), amplified telephones (11% and 7%), and PSAPs (6% and 4%); those with a little hearing difficulty are less likely to own these devices.

Figure 7 - Number of Devices Owned

	Diagnosed w/ Hearing Loss (A)	A Lot/Some Hearing Difficulty (B)	A Little Hearing Difficulty (C)
Hearing Aid			
None	62%	86% A	91% AB
1 or more	30% BC	1%	0%
Don't know	8%	12%	8%
Cochlear Implant / Other Implantable Hearing Device			
None	85%	87%	92% A
1 or more	3% C	1%	0%
Don't know	12%	12%	8%
Television Amplifier			
None	79%	80%	90% AB
1 or more	11% C	9% C	2%
Don't know	10%	11%	8%
Amplified Telephone			
None	79%	82%	90% AB
1 or more	11% C	7% C	1%
Don't know	10%	11%	8%
Other Sound Amplification Device (PSAP)			
None	83%	84%	90% AB
1 or more	6% C	4%	1%
Don't know	11%	12%	8%

Base: Online U.S. adults.(n= 362) | Diagnosed with hearing loss; (n=248) | With a lot/some trouble hearing;(n= 941) | With a little trouble hearing

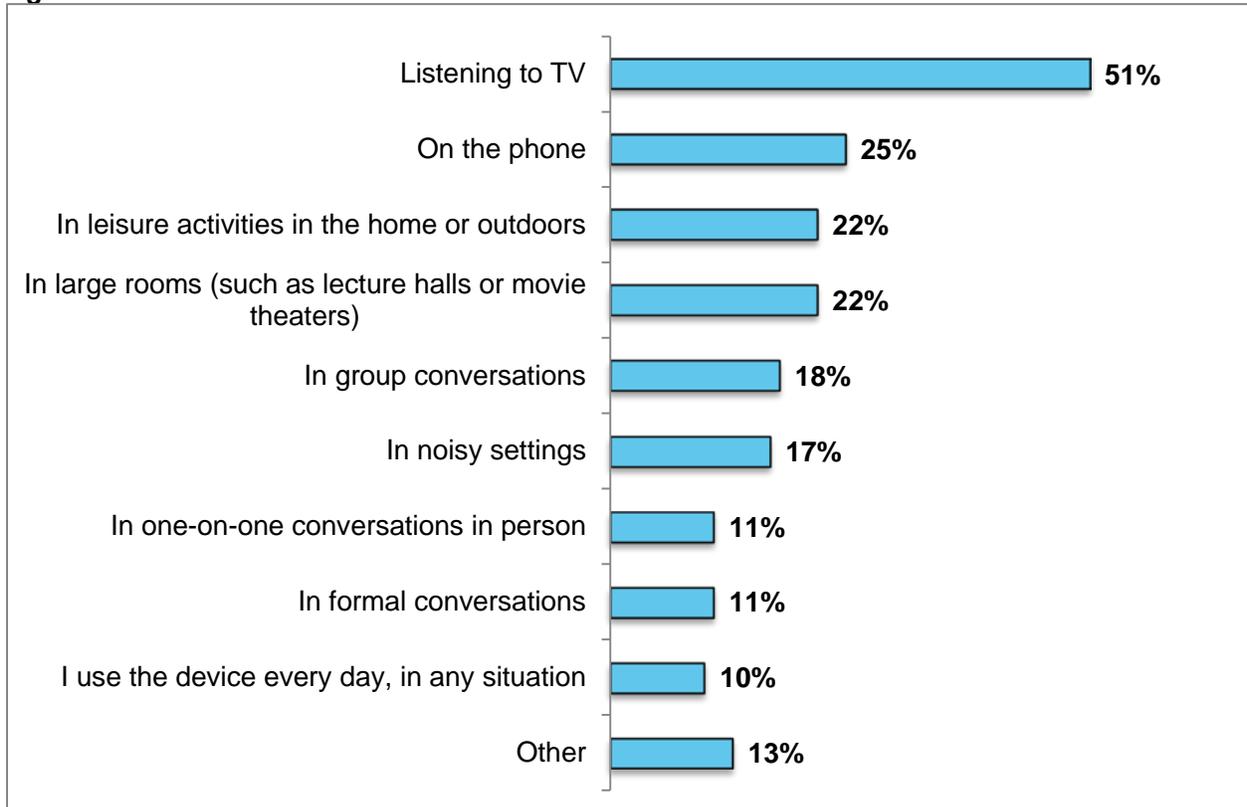
Letter denotes a significantly higher percentage compared to other group

Q8. How many of the following products do YOU personally own to help you hear better?



PSAP owners tend to use their devices in specific situations rather than universally in all environments/situations. Consumers who currently own PSAPs most commonly use their sound amplification devices to help listen to TV (51%). Other situations in which PSAPs are used include using the phone (25%), during leisure activities (22%), in large rooms (22%), in group conversations (18%), and in noisy settings (17%).

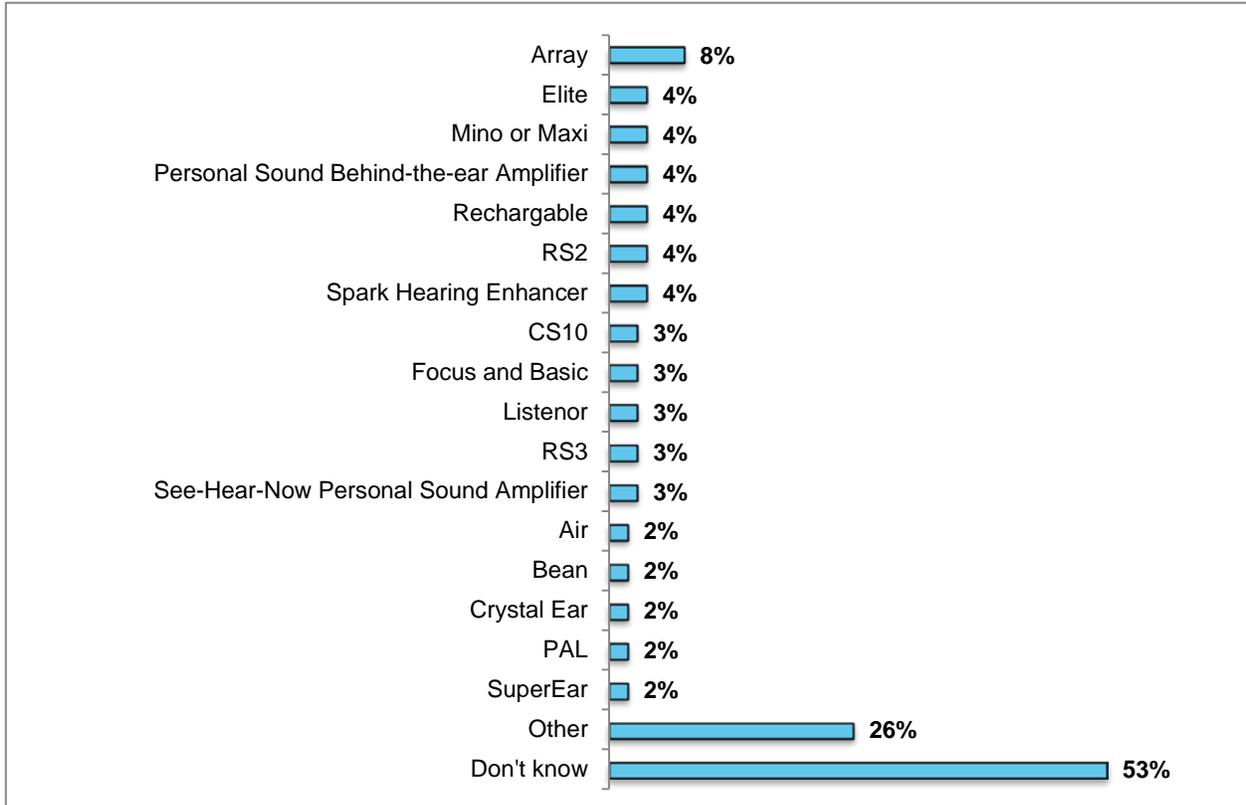
Figure 8 - Situations in Which PSAPs are Used



Base: Online U.S. adults with some degree of hearing loss who own a PSAP (n=44)
 Q14. In which situations do you use your sound amplification device?

Among those who own PSAPs, no brand has a considerable market share suggesting a fragmented market. The Array was the most commonly mentioned brand, but still accounts for less than a tenth (8%) of ownership. Other brands are used by 2-4% of PSAP owners. Over half of PSAP owners (53%) do not know what brand of PSAP they own.

Figure 9 – Brand of PSAPs Used



Base: Online U.S. adults with some degree of hearing loss who own a PSAP (n=44)
 Q13. You indicated you own a sound amplification device that is not a hearing aid. Can you tell me the manufacturer or the brand that you own?

III. Hearing Device Interest

The leading reason consumers with hearing difficulty do not own a hearing aid is they are not concerned enough with their hearing difficulties to purchase one. This is especially true for those with just a little hearing difficulty (71%), while those diagnosed with hearing loss and those with some or a lot of hearing difficulty are often deterred by other reasons, mainly cost.

The cost of the medical devices associated with hearing loss is a leading detractor among those diagnosed with hearing loss (31%) and those with at least some hearing difficulty (35%). The cost not being covered by medical insurance also is a common concern among those diagnosed with hearing loss (23%), while cost of medical appointments is a deterrent among a fifth (21%) of those with at least some hearing difficulty.

Figure 10 - Reasons for Not Owning a Hearing Aid

	Diagnosed w/ Hearing Loss (A)	A Lot/Some Hearing Difficulty (B)	A Little Hearing Difficulty (C)
Not concerned enough about hearing difficulties to purchase a hearing aid	33%	45% A	71% AB
Cost of medical devices associated with hearing difficulties	31% C	35% C	12%
Not covered by medical insurance or Medicare	23% BC	13% C	5%
I don't want to be bothered with hearing aids	15% C	17% C	8%
I don't care for the look of hearing aids	11%	12%	7%
I think hearing aids don't work well	7%	5%	3%
Cost of medical appointments	6%	21% AC	9%
Unaware of hearing aid option	5%	10% C	4%
Other	24% BC	13%	16%

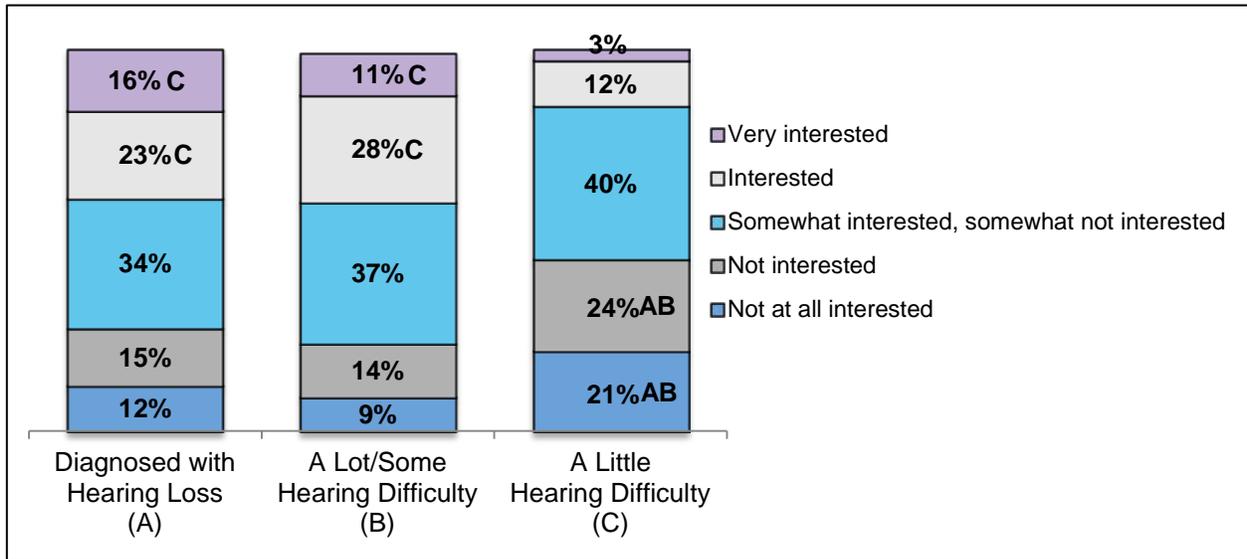
Base: Online U.S. adults who do not own a hearing aid and (n=229) | Have been diagnosed with hearing loss; (n=215) | Have a lot/some trouble hearing; (n=864) | Have a little trouble hearing
 Letter denotes significantly higher percentage compared to other group
 Q9. You indicated you do not own a hearing aid. Which of the following, if any, are reasons you do not own a hearing aid?



Among those that do not currently own a PSAP, over a third of those either diagnosed with hearing loss or with a lot or some hearing difficulty (39% each) are interested or very interested in purchasing a non-prescription option to hear better.

Technology adoption plays a role with early adopters (32%) being significantly more likely to be interested or very interested in over-the-counter options for hearing products compared to late adopters (15%).

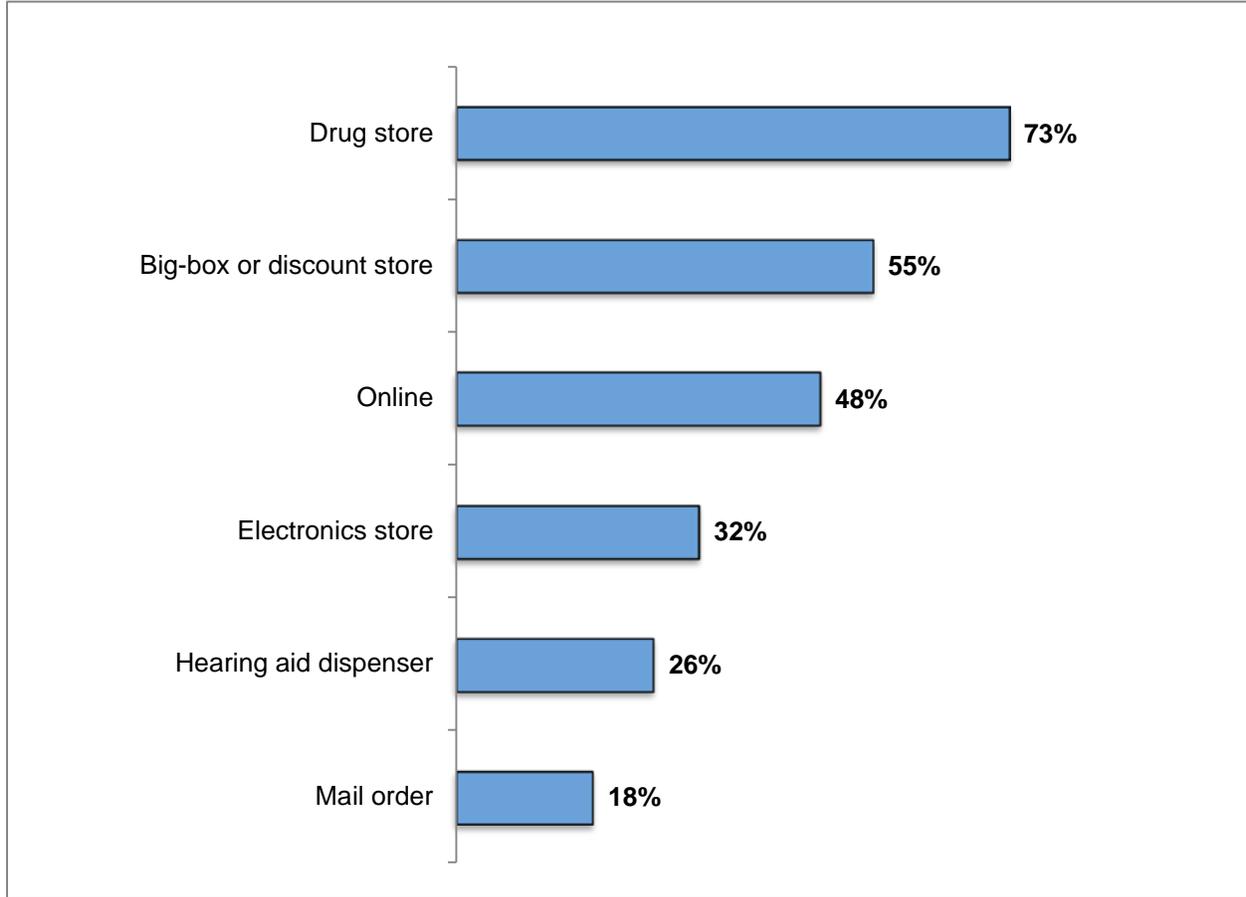
Figure 11 - Interest in Over-the-Counter Hearing Devices



Base: Online U.S. adults who do not own a PSAP and (n=302) | Have been diagnosed with hearing loss; (n=209) | Have a lot/some trouble hearing; (n=855) | Have a little trouble hearing
 Letter denotes a significantly higher percentage compared to other group
 Q10. If you could PURCHASE a device to help you hear better without going to a doctor or other professional, in other words, a non-prescription or "over the counter" option for yourself, how interested would you be in purchasing that device?

Consumers who do not currently own PSAPs but are interested in purchasing them would be open to purchasing them from a variety of retail channels. Drug stores are the most popular option, with three-fourths (73%) of consumers willing to purchase from this channel. Big-box or discount stores (e.g. Costco, Sam’s Club, Wal-Mart) (55%), online (48%), and electronic stores (32%) are also common channels through which consumers would be willing to purchase PSAPs. A third (32%) of those diagnosed with hearing loss would be open to purchasing a device from a hearing aid dispenser, while those with some or a lot of hearing difficulty (26%) and those with a little hearing difficulty (19%) are less likely to do so.

Figure 12 – Preferred Channel for Purchasing Non-Prescription PSAPs

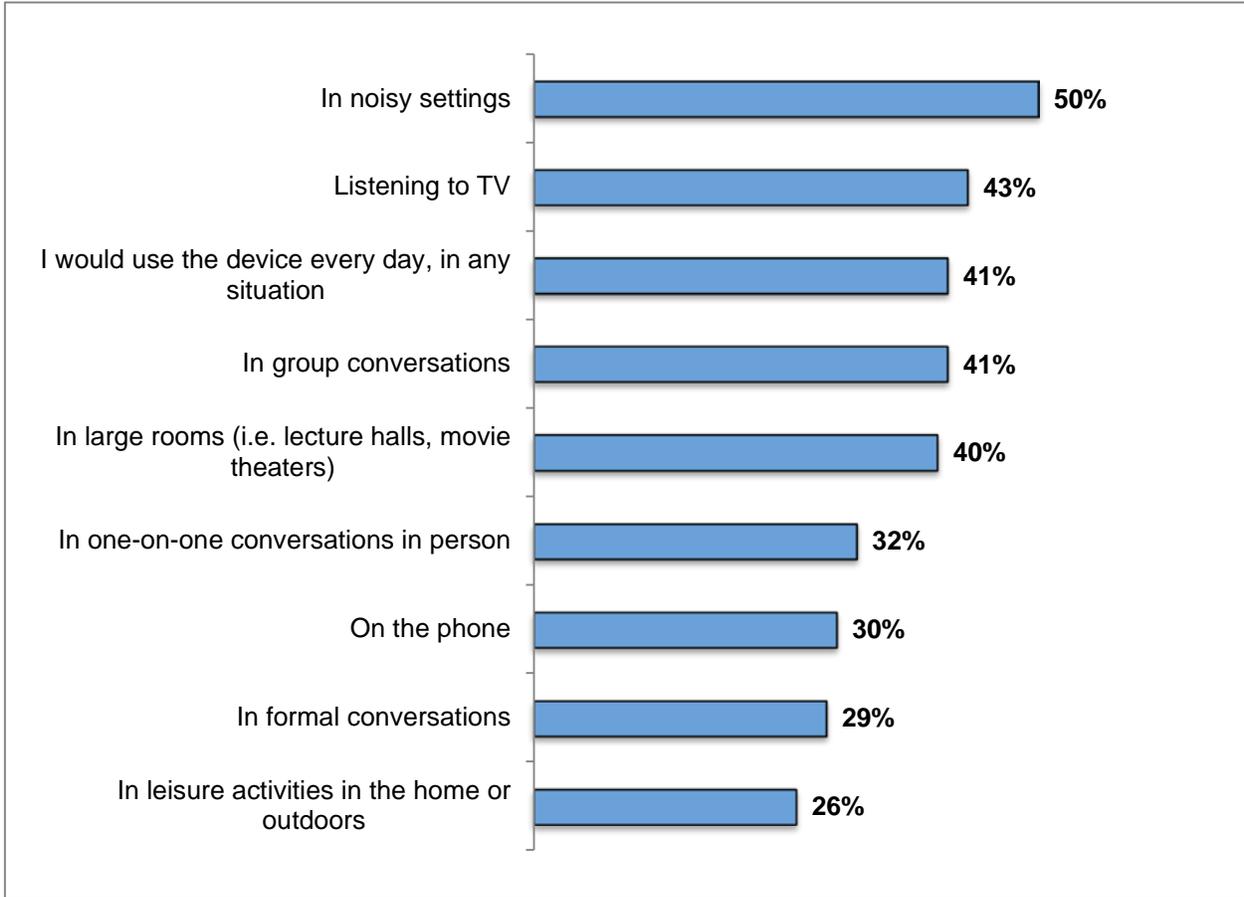


Base: Online U.S. adults with some degree of hearing loss who do not own a PSAP but are interested/very interested in purchasing one (n=334)

Q11. If you were to purchase a non-prescription or ‘over the counter’ device for yourself to help you hear better, where would you be willing to purchase that device?

Consumers who do not currently own PSAPs but are interested in purchasing them would anticipate using non-prescription hearing devices in a greater variety of settings and situations than current owners. Top scenarios include, noisy settings (50%), listening to TV (43%), group conversations (41%) and in large rooms (40%). Additionally, nearly half of those diagnosed with hearing loss (47%) and those who have a lot or some hearing difficulty (49%) would use a device every day, in any situation; those who only have a little hearing difficulty are less likely to do so (30%).

Figure 13 – Situations in Which Consumers Would Be Likely to Use PSAPs

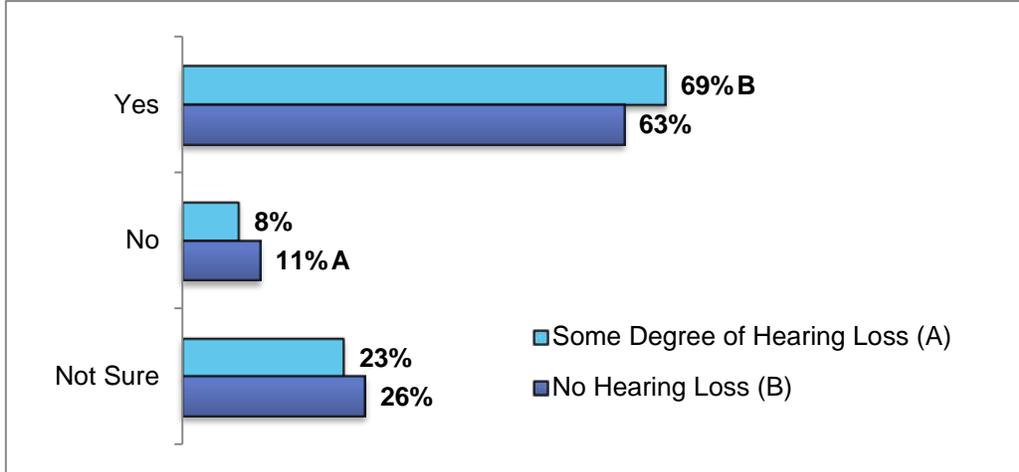


Base: U.S. adults with some degree of hearing loss who do not own a PSAP but are very interested/interested in purchasing one (n=334)

Q12. In which situations would you be likely to use a non-prescription or “over the counter” device that helps you hear better?

Over two-thirds (69%) of adults Americans with hearing difficulty, equating to a sizable 68 million people, feel they should be able to buy hearing assistance products the same way they purchase reading glasses, while 63% of those without hearing loss feel the same. Furthermore, just a tenth are opposed to the idea, and a quarter are not sure how they feel about it.

Figure 14 – Support for Non-Prescription Hearing Assistance Products



Base: Online U.S. adults with some degree of hearing loss (n= 1,554); Online U.S. adults with no hearing loss (n=1,870)
 Q15. Do you think consumers should be allowed to buy hearing assistance products the way they can now buy reading glasses (e.g., through the mail or at a local drug store)?

Conclusions

Personal Sound Amplification Products (PSAPs) offer a viable solution to hearing difficulties for consumers who have hearing difficulty. While consumers who have more severe hearing difficulties may still require hearing aids, PSAPs offer a simpler and often less expensive alternative for those with some or a little hearing difficulty.

The price for hearing aids (not including the added costs for doctor appointments, testing, etc.) is higher than what most consumers, especially those with lesser degrees of hearing difficulties, are willing to spend for hearing health care and devices. PSAPs, which generally sell for about one-tenth of the price of hearing aid, could offer a gateway for consumers who may struggle with their hearing but don't struggle enough to warrant spending \$1,000 or more on a pair of hearing aids at this time.

PSAP use allows consumers to self-treat their hearing difficulties creating a valid concern that serious conditions might go untreated by a professional. However, the vast majority of those interested in using PSAPs would prefer to go to a medical or hearing health care professional for advice regarding their hearing difficulties. Additionally, consumers may even be more likely to seek out medical advice knowing that these more affordable options for helping them hear better are available and enable them to hear better in the near-term.



Sources

1. "Medical Devices." *Regulatory Requirements for Hearing Aid Devices and Personal Sound Amplification Products*. U.S. Food and Drug Administration, 7 Nov. 2013. Web. 21 July 2014. <http://www.fda.gov/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm373461.htm>
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