

Hearing Aid User Perspectives: Reasons and Recommendations for Prescription and Over-The-Counter Device Uptake

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Introduction

Despite the prevalence of hearing loss⁽¹⁾, people often delay seeking hearing help⁽²⁾ and taking up hearing aids⁽³⁾. This is partly due to limited access to hearing healthcare services and the high cost of hearing devices⁽¹⁾. Newer service-delivery models like over-the-counter (OTC) hearing aids and decentralized community-based models are intended to make hearing healthcare more accessible and affordable⁽⁴⁾. However, there is a wide range of other factors influencing hearing aid uptake.

A recent systematic review reported audiological and non-audiological factors influencing hearing aid uptake, including the severity of hearing loss, self-reported hearing disability, access to financial support, attitudes towards hearing aids and understanding of hearing aid function⁽⁵⁾. A few qualitative studies have also explored certain factors affecting hearing aid uptake (e.g., factors in the client-clinician interaction) as well as barriers to uptake (e.g., stigma and readiness to change)⁽⁶⁻⁹⁾. However, these qualitative studies are of relatively small sample size, and they did not specifically explore the main reasons for hearing aid uptake from the hearing aid users' perspective. Additionally, we are not aware of any study that has compared the reasons for hearing aid uptake in users from different service delivery models. This information is important, especially considering the release of the new OTC hearing aids in the United States⁽¹⁰⁾. These findings can be used to guide audiological rehabilitation as well as to inform OTC service-delivery models that promote earlier and more successful hearing aid uptake.

In our recent study⁽¹¹⁾, we examined the reasons people with hearing loss (n=642) take up hearing aids and their suggestions to others with hearing loss using qualitative content analysis. The study identified three domains (i.e., personal impact, social difficulties, and auditory difficulties) containing 11 main categories (i.e., barriers removed, auditory-related impact, impact on education/work, emotional impact, social support and encouragement,

communication, social interactions, social withdrawal, hearing difficulty, contextual, entertainment) and 48 sub-categories, regarding the reasons for hearing aid uptake. Furthermore, 8 main categories (i.e., timely help, trial period, support, affordability, technology, direct-to-consumer hearing aids, adjustments, and advocacy) and 32 sub-categories were recommendations to others with hearing difficulties. The study sample included individuals with hearing loss who obtained prescription hearing aids from hearing care professionals (HCPs) as well as those who obtained self-fitting OTC hearing aids with remote clinical services via the OTC service delivery model. We report on the user perspectives related to reasons and recommendations for using hearing aids for prescription and self-fitting OTC devices.

User Perspectives on Prescription and OTC devices

Findings of our recent qualitative study were analyzed further to compare user perspectives for prescription and OTC hearing aid service delivery models⁽¹¹⁾. The cross-sectional survey study used a single open-ended question on reasons for hearing aid uptake and recommendations to others with hearing difficulties. Participants included 415 users from the Hearing Tracker (www.hearingtracker.com) community who obtained prescription hearing aids from HCPs (i.e., audiologists or hearing aid dispensers) and 227 individuals from the Lexie Hearing (www.lexiehearing.com) user database who obtained self-fitting OTC hearing aids with remote clinical services via an OTC service delivery model. Qualitative content analysis^(12,13) was used to identify categories and sub-categories. In this article, we include categories where either the prescription or OTC hearing aid individuals reported a category more often by at least 1.8 times.

Characteristics of Prescription and OTC Hearing Aid Users

Demographic and audiological variables for the prescription and OTC hearing aid users are compared in Table 1. The two groups had significant differences in age, duration of hearing loss, hearing aid style, and self-reported hearing difficulty. OTC hearing aid users were significantly younger, had a shorter duration of hearing loss and had milder self-reported hearing difficulties compared to prescription hearing aid users.

Table 1. Comparison of demographic and audiological variables between prescription and OTC hearing aid users

	Prescription users (415)	OTC users (227)
Age (mean; SD)	66.4 years (14.2)	63.7 years (12.4)
Gender (n; %)		
Male	247 (59.5%)	150 (66.1%)
Female	166 (40%)	76 (33.5%)
Other	2 (0.5%)	1 (0.4%)
Duration of hearing loss (mean; SD)	20.9 (16.9)	14.4 (14.1)
Hearing aid style (n; %)		
ITE	48 (11.6%)	-
BTE	367 (88.4%)	227 (100%)
Self-reported hearing difficulty (n; %)		
Almost never hear	108 (26%)	31 (13.7%)
Regularly don't hear	203 (48.9%)	132 (58.1%)
Sometimes don't hear	102 (24.6%)	61 (26.9%)
Hear everything	2 (0.5%)	3 (1.3%)

SD = Standard deviation; BTE = behind-the-ear; ITE = in-the-ear

Reasons for Uptake of Hearing Aids

Differences between prescription and OTC hearing aid users could be seen in all three domains related to hearing aid uptake (see Table 2). Table 2 shows how much more often prescription hearing aid users reported a specific category compared to OTC hearing aid users and vice versa. OTC hearing aid users reported taking up hearing aids because of difficulty interacting socially with friends 3 times more often compared to prescription hearing aid users. OTC hearing aid users were significantly younger, so therefore they may typically be more socially active compared to prescription hearing aid users. Interestingly, OTC hearing aid users also reported taking up hearing aids because of listening fatigue 2.3 times more often. Prescription hearing aid users reported consequences of untreated hearing loss as a motivating factor for hearing aid uptake 5.5 times more often. Most of the time, participants referred to cognitive decline and dementia. Prescription hearing aid users were significantly older and, therefore, were possibly more aware of cognitive decline or their HCPs may have informed them about the consequence of untreated hearing loss as a potential risk factor for cognitive decline during clinical consultation sessions.

Table 2. Relationship of content-analysis category prevalence regarding reasons for hearing aid uptake between prescription and OTC service-delivery models

Category	Sub-category	Ratio of more often reported categories	
		Prescription users	OTC users
Domain 1: Personal impact factors			
Auditory-related impact	Listening fatigue	-	2.3
	Consequences of untreated HL	5.5	-
Impact on work	Ability to work	2.2	-
	Working as a teacher	3.0	-
	Meetings at work	3.3	-
Barriers removed	Availability of finances	4.7	-
	Appearance not a concern	1.9	-
	Hearing aids not visible	7.1	-
Domain 2: Social difficulties			
Social interactions	Friends	-	3.0
	Children	2.5	-
	Impact on relationships	4.6	-
Social withdrawal	Social difficulties	5.7	-
	Social isolation	4.9	-
Domain 3: Auditory difficulties			
Hearing difficulty	Clarity desired	2.7	-
Entertainment	Listening to music	2.5	-

Recommendations for Others with Hearing Difficulties

Differences between prescription and OTC hearing aid users regarding recommendations to others with hearing difficulties could be seen in several categories and sub-categories (see Table 3). In terms of recommendations to others with hearing difficulties, prescription hearing aid users recommended that one should not delay seeking help 1.8 times more often and recommended getting a hearing test 5.7 times more often. This is not surprising since OTC hearing aids do not require a hearing test since it is based on self-perceived hearing loss⁽¹⁰⁾. Prescription hearing aid users had significantly worse self-reported hearing difficulties and longer duration of hearing loss compared to OTC hearing aid users, which may also have contributed to them being more likely to recommend prioritizing timely help. Prescription hearing aid users recommended changing the hearing aid style 9.3 times more often. This makes sense as prescription hearing aids come in various styles, whereas the options for the OTC hearing aids in this study (Lexie Hearing) were limited to BTE hearing aids.

Table 3. Relationship of content-analysis category prevalence regarding recommendations to others with hearing difficulties between prescription and OTC service-delivery models

Category	Sub-category	Ratio of more often reported categories	
		Prescription users	OTC users
Timely help	Don't delay	1.8	-
	Get tested	5.7	-
Trial period	Change the hearing aid style	9.3	-
	Persist	4.9	-
	Hearing aid trial	2.5	-
	Adjustment time	5.0	-
Adjustments	Get adjustments	2.0	-
Technology	Get the latest technology	3.6	-
	Get Bluetooth hearing aids	7.1	-
Advocacy	Make people aware	2.5	-
	Don't worry about what others think	2.2	-

Conclusions

These findings provide insights from prescription and OTC hearing aid user perspectives on reasons for hearing aid uptake and recommendations to others with hearing difficulties. OTC hearing aid users more often reported taking up hearing aids because of difficulty interacting with friends and experiencing listening fatigue, whereas prescription hearing aid users more often reported several other reasons for hearing aid uptake, for example, the consequences of untreated hearing loss and social difficulties. Raising awareness regarding the benefits of hearing aids, such as reducing the risk of cognitive decline⁽¹⁴⁾ and listening fatigue⁽¹⁵⁾ and improving psycho-social functioning⁽¹⁶⁾ may promote hearing aid uptake in both prescription and OTC service delivery models as these were reported to contribute to hearing aid uptake. Focusing on why people seek help and take up hearing aids is important to inform strategies and approaches to promote hearing rehabilitation uptake. A limitation of this study was that the HCP group had a minimum word count (20 words) for the open-ended question, while the OTC group did not. Future research is required to provide in-depth insights into the differences in hearing aid uptake behaviors between prescription and OTC hearing aid users.

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