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Self-fit vs audiologist-fit hearing aids

Abstract

The author believes that the optimum choice for patients with hearing loss is not the patient pursuing his/her own "do-it-yourself" diagnosis and self-selected treatment option, but rather pursue the audiologist-driven patient-centered approach using the long-held traditional "diagnosis first, treatment second" approach currently used in medicine and healthcare. In a recent research study to determine if significant differences would emerge using these two approaches in the provision of hearing aids, De Sousa, et al.,[1] reported equivalent outcomes between hearing aids fit by audiologists, when compared to self-fit Over the Counter (OTC) hearing aids. In their article, the authors provided numerous caveats to help explain the findings. Numerous "traditional" hearing aids can be successfully fit to every appropriate patient depending on factors as etiology; type, magnitude and configuration of hearing loss; desired improvement in aided signal-to-noise ratio; expertise of the provider regarding implementing best practices to address the goals of the patient. To the author, the most significant factor is the expertise (i.e., diagnosis, consultation, recommendation, selection, programming, verification, and validation services) of the provider.

Keywords: minor lower back pain, self-fit, self-adjusted, OTC/DTC device

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Douglas L Beck Au. D
Adjunct Professor, State University of New York at Buffalo, Host: Hearing matters podcast, USA

Correspondence: Douglas L Beck Au. D, Vice President of Academic Sciences, Adjunct Professor of Communication Disorders and Sciences, State University of New York at Buffalo, USA, Tel 210-380-3648, Email DouglasLBeck@gmail.com

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Introduction

When, however, a hearing aid is designed to be a self-fit OTC or DTC device the provision of audiologic care could be eliminated due to the premise that these hearing aids are self-fit and can be self-adjusted using a cell-phone application supplied by the manufacturer. This is markedly different from the traditional approach requiring an audiologist to fit the hearing aid. As will be explained below, the author cannot imagine why a different outcome would occur under these two different device/fitting approaches. If the product was designed with simplicity in mind and was engineered to be a self-fit OTC/DTC device the resulting outcomes should be equivalent. As such, it is felt that the limiting factor is the product and not the method of delivery.

The author will provide 3 analogies to help explain this conclusion

First, imagine 30 older patients reporting minor lower back pain (LBP), stiffness, and occasional headaches. Imagine 15 of them were seen by a neurologist who diagnosed LBP from L5-S1 disc attenuation, herniations, and osteoarthritis and treated the patients with prescription ibuprofen. Imagine the other 15 simply self-administered OTC ibuprofen. At twelve and eighteen months, imagine an outcomes-based questionnaire/assessment which would likely indicate that these 30 patients reported an equivalent relief from their symptoms. Would anyone conclude that the neurology-based management of LBP compared to the self-administered OTC ibuprofen management were essentially the same? Probably not.

Second, imagine 20 adult patients with presbyopia purchasing "cheaters" to read a newspaper and who wore the cheaters for 90 days with no professional interaction. Next, imagine an optometrist delivers the same eyeglasses to another 20 patients. Twelve to eighteen months later outcomes are measured on reading ability and satisfaction from the OTC delivery method versus the optometrist delivered method. It would not be surprising to find that the OTC and the optometrist-delivered glasses had relatively the same patient outcomes. Would anyone conclude that optometry-based versus OTC management for treatment of presbyopia were equivalent? Probably not.

Finally, consider driving an Aston Martin DB5 (1964, think James Bond). Imagine the car has been altered to provide a maximum speed of 35 miles per hour (mph). Imagine ten retired librarians and ten Formula One Race Car drivers drive the Aston Martin with a goal of racing around a one-mile-long track. The probable outcome is that the race car drivers and the librarians each achieve the same outcome! Would anyone conclude that race car drivers and retired librarians have the same driving skills? Probably not.

In the above self-service analogies, a professional was not consulted to provide their professional skills in a comprehensive way. The professional was not given the opportunity to choose a product thought to provide the best outcome while at the same time managing, counseling, and altering the treatment over time. The professional was assigned a pre-determined and limited tool. The author would not expect significant differences in the neurology/OTC, optometry/OTC or the Aston Martin/driver analogies as the tools remained the same.

Likewise, the author would expect significant differences when race car drivers race around a racetrack in their Formula One cars versus retired librarians in their personal vehicles. The author would expect differences in outcomes and satisfaction when neurologists and optometrists diagnose and treat using Best Practices combine with using best treatments and protocols, versus simply applying OTC products. In the analogies above, the supplied products (glasses, ibuprofen and automobiles) are more-or-less "off the shelf" and designed to perform adequately for most consumers most of the time. The outcome was not limited by the delivery method or personnel, but apparently the product. The patient can only do as well as the product allows, and none can do better than the limit set by the OTC, aka "ceiling effect". If, however, 50 patients were fitted with self-selected OTC hearing aid products and another 50 patients were provided a comprehensive audiometric evaluation, counseled, identified rehabilitative outcomes and hearing aids selected and verified by a licensed professional, the author would expect a different outcome favoring professional intervention.

With specific regard to OTC hearing aids….

Access and affordability were the Food and Drug Administration FDA's foundational rationale for implementing OTC hearing aids.

The goal of access appears to have been more-or-less achieved, while affordability appears questionable.

Two years after the launch of OTC hearing aids, the more advanced OTC products cost $1000.00 to $2950.00 per pair (see National Council on Aging),[2] placing the advanced OTC hearing aids beyond the reach of those who OTC hearing aids were created to help. Sieber,[3] reports that Best Buy OTC hearing aid products range (per pair) from $200 to $2,550. Suzy Orman reported in Nasdaq,4 that 60% of Americans do not have $500 for an emergency. As such, it seems difficult to understand how most Americans can spend more than $500 on a pair of low-to-mid range OTC hearing aids. The hearing aids in the reports are about $700 each (Amazon, July 26, 2024) which is approximately the same price as many products delivered through big-box outlets. The big-box retailers, however, include a multi-month refund period, a standardized hearing test, a professional "free" test and consultation including otoscopy and unlimited adjustment/re-programming.

De Sousa et al (2024) acknowledged that their study was limited by using a single OTC hearing aid appropriate for the self-fit hearing loss category. The authors stated the "OTC market encompasses an increasingly diverse range of products, with varying levels of technology, features, and fitting processes and the exclusion of other OTC hearing aids meant that the study did not account for the diversity of options. Lower classes of devices could have produced outcomes with different levels of benefit and user satisfaction." The authors also reported their study did not include Speech in Noise assessment which is arguably the primary reason people seek hearing assistance. The authors reported "self-fitting OTC devices can provide outcomes comparable to audiologist-fit hearing aids." For their dedication and honesty this author applauds them. The author is concerned that many people will simply read the abstract or conclusion and are likely to draw an inference from the study, which is incomplete, misleading, and inaccurate. None of these errors are the fault of the authors, but this is the reason why the author felt compelled to comment here.

Discussion

The author believes OTC hearing aids have a role for the appropriate patient. Each OTC hearing aid (hundreds of models are available) is different and hearing healthcare providers should not label all "OTC" and presume aided outcome measures will be equivalent to each other, or to professionally dispensed products. Each OTC hearing aid is unique, and it is difficult for consumers to know which of the numerous available models to select for their own specific needs. The author's personal belief is that "diagnosis first and treatment second" is the better choice. This was recommended to the FDA years ago. Consultants and experts recommended that the FDA should suggest or mandate a comprehensive audiometric evaluation and consultation from a licensed hearing professional to better understand their hearing and listening needs and then let the consumer/patient purchase their preference.

OTC hearing aids are here to stay, and their presence should be embraced by all hearing healthcare professionals. If OTC hearing aids are all a patient has access to due to distance or limited funds, then that is fine. If a person can obtain professional guidance prior to purchasing a product (OTC or traditional) that would almost always provide a better outcome.

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Conflicts of interest

The author declares that there is no conflict of interest to disclose.

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