

## INTEGRATING PLACEBO IN CONVENTIONAL HEARING AID PRESCRIPTION PRACTICES FOR BETTER ACCEPTANCE

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**Paper Received On:** 21 JULY 2021

**Peer Reviewed On:** 31 JULY 2021

**Published On:** 1 SEPT 2021

**Keywords:** *Placebo, Digital Hearing aid, NIDCD, APHAB, Shared Decision making,*



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The placebo effect is the reduction of a symptom or a change in the psychological parameters when an inert treatment is administered to a subject who is told that it is an active therapy with specific properties.

The use of placebo is not equivalent to the absence of treatment, for example, placebo could be used in addition to standard care. In all cases, its use should be associated with measures to minimize exposure and avoid irreversible harm. (Placebo in clinical trials U. Gupta and M. Verma , 2013)

Placebo effect is not a novel concept as it has been around and has been used often in medical procedures and researches, though its efficacy, control, advantages and disadvantages are yet to be completely explored in other parallel fields.

Audiology is one such field where placebo effect has been explored upon, as prescription of appropriate amplification device is an important step in the rehabilitation of an individual, the major focus of the conducted researches was on exploring placebo in hearing aid trials.

P. Dawes, S. Powell, K. J. Munro 2011 investigated the influence of participant expectations on the outcome of a trial comparing two behind-the-ear hearing aids with identical electro-acoustic performance, one of which was called a "new" hearing aid and the other a "conventional" hearing aid. The new hearing aid performed better than the so called old hearing aid and slightly better test scores were observed, it was also consistently rated more highly on all sound quality ratings and this difference was statistically significant 75% participants expressed an overall personal preference for the new hearing aid with the remainder expressing no preference

P. Dawes, R. Hopkins, K. J. Munro 2013 the same experiment was carried out again and similar results were observed Participants had significantly better mean speech-in-noise performance and sound quality ratings for the "new" hearing aid. A significant proportion of participants expressed an overall preference for the "new" hearing aid.

All these studies concluded that, placebo effects reliably impact on hearing-aid trials. And it needs to be controlled, in hearing aid trials and to interpret cautiously any hearing aid trial that did not control for this effect.

It is however seen in certain medical researches that placebo can and should be used to optimize patient outcome, in clinical medicine placebo effects could be (and are) ethically utilized to optimize the outcome for patients (Turner et al, 1994; Thompson, 2000; Price et al, 2008)

In one survey, only three percent of U.S. physicians reported using actual sugar pills as placebos, but 41% used over-the-counter painkillers, 38% said they had used vitamins as placebos for their patients. 68% of physicians described the placebo as a potentially beneficial medicine, and roughly 66% of the doctors felt the practice was ethical J.C. Tilburt, E. J. Emanuel, T. J. Kaptchuk, F.A. Curlin, F. G. Miller.(2008)

Prescription of hearing aid and its appropriate use, is mostly the fundamental step in rehabilitation of any hearing impaired individual although, based on calculations by National Institute on Deafness and other Communication Disorders (NIDCD) Epidemiology and Statistics Program, among adults aged 70 and older with hearing loss who could benefit from

hearing aids, fewer than one in three (30 percent) has ever used them. Even fewer adults aged 20 to 69 (approximately 16 percent) who could benefit from wearing hearing aids have ever used them.

It is estimated that by 2050 over 700 million people – or one in every ten people – will have disabling hearing loss. (World Health Organization).

The NIDCD statistics coupled with the data from World Health Organization is not a good site for aural rehabilitation on the whole.

R. A. Bentler, D. P. Niebuhr, T. A. Johnson, and G. A. Flamme 2003 found that labeling similar hearing aids as digital v/s conventional had significant affects on Abbreviated Profile of Hearing Aid Benefit (APHAB), Reverberation and Background noise scales, the group of tests used in this study showed a significant labeling effect as a whole.

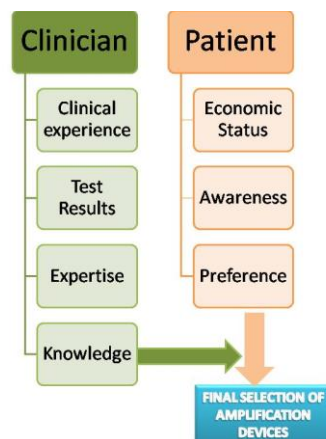
The APHAB is a 24-item self-assessment inventory in which patients report the amount of trouble they are having with communication or noises in various everyday situations. Benefit is calculated by comparing the patient's reported difficulty in the unaided condition with their amount of difficulty when using amplification.

It is evident that placebo effect is used and can positively affect the satisfaction of the person it is administered on, which will in turn aid the acceptance and usage of hearing aids and help in the process of rehabilitation.

Recently, there has been increased interest in interventions that optimize placebo effects to improve clinical outcomes in routine medical care. Given that expectancy interventions have been shown to improve symptoms, one could argue that there is an ethical obligation to encourage their widespread implementation and application. (P. Gruszka, C. Burger and M. P. Jensen 2019)

The concerns of unethical interference of placebo can be negated easily by a double blind method in an experiment or research however in the process of hearing aid selection in a clinical setup the implementation of a double blind strategy is not justifiable as it will be a time taking process for each and every client's trial.

The model of Shared decision making which is widely acceptable in the prescription of hearing aid, Shared decision making is a joint process in which a healthcare professional works together with a person to reach a decision about care.



It involves choosing tests and treatments based both on evidence and on the person's individual preferences, beliefs and values. It makes sure the person understands the risks, benefits and possible consequences of different options through discussion and information sharing. (National Institute for Health and Care Excellence)

Research indicates, that both the content and manner in which information is shared with the patient, and the patient's experience of being involved in the decision, can directly alter therapeutic outcomes via placebo responses. (H. Brody, L. Colloca, F. G. Miller 2012)

It is evident that the interference of placebo cannot be negated completely from a hearing aid trial and hence instead of trying to eliminate it we should try and use it to aid the process of aural rehabilitation.

To ethically minimize the effect of placebo the placebo about the amplification device can be introduced once the Shared decision making process has been completed, i.e. once the client has selected a hearing aid only then should the labeling placebo be introduced.

Placebo effect is and always will be a part of a hearing aid trial and hence we should accept it rather than avoid it, instead of looking at the negative effects of placebo it will be useful to accept the positives and use it in a proper manner and this can be an add-on to the standard procedure of hearing aid trial and fitting which will in turn increase hearing aid satisfaction.

## References

- Gupta, U., & Verma, M. (2013). Placebo in clinical trials. *Perspectives in clinical research*, 4(1), 49–52. <https://doi.org/10.4103/2229-3485.106383>
- Dawes P, Powell S, Munro KJ.(2011) The placebo effect and the influence of participant expectation on hearing aid trials. *Ear Hear.* 2011 Nov-Dec;32(6):767-74. doi: 10.1097/AUD.0b013e3182251a0e. PMID: 21730857.
- Dawes P, Hopkins R, Munro KJ.(2013) Placebo effects in hearing-aid trials are reliable. *Int J Audiol.* 2013 Jul;52(7):472-7. doi: 10.3109/14992027.2013.783718. Epub 2013 Apr 18. PMID: 23594421.

- Tilburt JC, Emanuel EJ, Kaptchuk TJ, Curlin FA, Miller FG.(2008) Prescribing "placebo treatments": results of national survey of US internists and rheumatologists. *BMJ*. 2008 Oct 23;337:a1938. doi: 10.1136/bmj.a1938. PMID: 18948346; PMCID: PMC2572204.
- Bentler RA, Niebuhr DP, Johnson TA, Flamme GA.(2003) Impact of digital labeling on outcome measures. *Ear Hear*. 2003 Jun;24(3):215-24. doi: 10.1097/01.AUD.0000069228.46916.92. PMID: 12799543.
- Gruszka, P., Burger, C., & Jensen, M. P. (2019). Optimizing Expectations via Mobile Apps: A New Approach for Examining and Enhancing Placebo Effects. *Frontiers in psychiatry*, 10, 365. <https://doi.org/10.3389/fpsyt.2019.00365>
- Brody, H., Colloca, L., & Miller, F. G. (2012). The placebo phenomenon: implications for the ethics of shared decision-making. *Journal of general internal medicine*, 27(6), 739–742. <https://doi.org/10.1007/s11606-011-1977-1>