

Music Perception in Elderly People with Hearing Aids

Experiences and Influencing Factors



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The Project *AutaRK_aktiv hören*

- “Autonomie-Ressource Information und Kommunikation_aktiv hören (AutaRK_aktiv hören)” (ZS/2019/07/99750)
- November 2019 to June 2022
- funding: European Union (EFRE) and federal state of Saxony-Anhalt
- part of the research network “Autonomy in Old Age (AiA)”
- aims to minimize the negative consequences of elderly hearing impaired people not using their hearing aids, with a focus on the use and influence of information and communication
- results: webpage with detailed data and results, information brochures for elderly people



find all *AutaRK*-results on:

<https://autark.fakten-zur-teilhabe.de>

Method and Data

- mixed-methods-design
- questionnaire:
 - based on the two Core Sets for Hearing Loss (CSHL-brief and CSHL comprehensive)¹
 - paper-pencil- (42 %) and online-questionnaire (58 %)
 - N = 170 participants
 - 50 % male, 49 % female
 - aged 55 to 94 (mean age 73)
- semi-structured interviews:
 - 17 face-to-face-interviews
 - 6 participants surveyed via email or messenger due to Covid-19, inspired by dialogue journaling method²
 - 3 people participated in both face-to-face and email interviews
 - 6 male, 14 female
 - aged 43 to 90 (mean age 71)

Music Perception Experiences

Table 1: “When wearing hearing aids, can you understand well in the following situations?”

	yes % (n)	no % (n)
listening to music	75,0 (123)	25,0 (41)

N=170, valid percent

Table 2: “When wearing hearing aids, can you understand well in the following situations?”

	yes % (n)	no % (n)	does not apply % (n)
in concerts	67,3 (72)	32,7 (35)	34,7 (59)

N=170, valid percent of “does apply”

“I went to a concert [...] and was pleasantly surprised. The sound seemed almost natural.”
(DJ01B2 pos. 68 | f | 74 y. | testing her first hearing aids)*

“I was so pleased when I realised with the [...] devices, oh, I can enjoy music again. If it clangs a bit, well, that can happen sometimes with organ or brass instruments [...]. But if the overall sound of the music is wonderful, that's what's so important to me.”
(Int12B8 pos. 89 | f | 77 y. | wears hearing aids regularly)*

“[I] went to an André Rieu concert once. It was an open-air concert and it was brilliant. It was very difficult for me at first, to get used to the volume of the people talking all around and to be able to deal with that, that was awful. But I got used to it, cause I wanted to be there.”
(Int19B20 pos. 70-71 | f | 71 y. | wears hearing aids regularly)*

“I knew that I wouldn't want to go to a classical concert any more. Because the sound of classical music is simply different. [...] It sounds all metallic. That's the way it is.”
(Int01B1 pos. 74 | f | 60 y. | wears hearing aids regularly)*

“We went to a concert once, it was great, [...] but it almost drove me crazy, it was too loud for me. [...] I can turn them [the hearing aids] down, I also have [...] sound filters [...], but it's just not the fun I used to have.”
(Int22B22 pos. 72 | m | 76 y. | wears hearing aids regularly)*

“If you go to classical concerts more often [...], then there's also some better [hearing aid] quality. But for me, you know, music is music, right? [...] I don't need all these finer details.”
(Int11B5 pos. 242 | f | 70 y. | wears hearing aids occasionally)*

*all quotes own translation

Personal Factors

- neither age nor gender correlated with music perception
- hearing loss:
 - little difference between participants with mild versus moderate hearing loss
 - significantly poorer music perception experiences in participants with severe hearing loss(consistent with Looi et al. 2019³)

Hearing Aid Use

- no correlation between music perception and length of daily hearing aid use
- non-significant tendency between the ability to manage different hearing aid programs and having a good music experience

Fitting Process

- no statistical significant correlation between music perception and...
 - ... describing hearing-situations to the audiologist
 - ... the frequency of visiting the audiologist
 - ... the information received
- interview data would seem to suggest that satisfying music perception is positively influenced by:
 - being determined to continue to listen to music
 - expecting hearing aids to provide good music perception
 - testing devices in music-specific situations
 - making the quality of music perception a decisive criterion

Discussion

- results showed that satisfying music perception and enjoyment in elderly people with hearing aids is possible
- still insufficient explanation why in several cases proper music perception is not achieved
- further research:
 - targeting systematic identification of determinants for satisfying music perception
 - surveying the effects of special implementations, e.g. training in using music-adapted hearing aid programs or participating in a structured, music-specific testing and fitting process

Literature

¹ICF Research Branch (2017): ICF Core Set for Hearing Loss. <https://www.icf-research-branch.org/icf-core-sets-projects2/other-health-conditions/icf-core-set-for-hearing-loss> (30.09.2022)

²Schlenker-Schulte, Christa (2005): Faszination Dialog – interaktional-kommunikatives (Sprach-)Lernen mit Dialog-Journalen. In: Kaul, Thomas / Jann, Peter (Hrsg.): Kommunikation und Behinderung. Festschrift für Heribert Jussen. Villingen-Schwenningen: Necker-Verlag. 229-246. Online via: https://www.fst-halle.de/fileadmin/downloads/AutaRK/Schlenker-Schulte_Christa_2005_Faszination_Dialog.pdf (30.09.2022)

³Looi, Valerie, Rutledge, Kate and Prvan, Tania (2019). Music Appreciation of Adult Hearing Aid Users and the Impact of Different Levels of Hearing Loss. *Ear and hearing*, 40 (3), 529–544. <https://doi.org/10.1097/AUD.0000000000000632> (30.09.2022)