

Hearing aid performance in the real world: Customer dissatisfaction with loudness comfort

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We live in a noisy world. Most of us with normal hearing accept the wide range of loudness of everyday sounds, including some that are very loud indeed. But when hearing loss develops, the dynamic range of listening comfort often becomes restricted. This fact needs to be accommodated when hearing aids are fitted. Amplification must be provided to ensure as much of the speech frequency range as possible is audible, but the hearing aid output needs to be controlled so that loud sounds do not become *too loud*. The acoustician also needs to counsel hearing aid users about the need to gradually adapt to their new world of sound.

Many studies have reported 20 to 30% hearing aid users are uncomfortable with loud sounds (*Kochkin, 2000; Northern, 2000; Office of Hearing Services, 2001*). MarkeTrak research has not indicated any significant improvement in this problem over the past ten years, despite the rapid take up of digital processing technology. Manufacturers report their devices can be adjusted to ensure loud sounds are kept within the hearing aid users' range of listening comfort. So why are so many aid users in the “real world” telling us that loud sounds are *too loud*?

This paper reports the results from an on-going project measuring client satisfaction with hearing aids and service delivery. Surveys are mailed to customers by their acoustician six months after the hearing aid fitting. Customers return their completed surveys to an independent data consultant, who combines the customers' opinions with data describing the client and the fitting. The survey seeks client opinions on a wide range of measures, but the question we are interested in today is “When wearing your hearing aids, how satisfied are you with the comfort of loud sounds?”

This study examined customer dissatisfaction with loud sounds across three countries – Germany, Australia and New Zealand. Surveys were received from 4,555 hearing aid users. All countries had dissatisfaction levels of around 20%. No significant differences were found between the results for each country, so the data were combined. Factors relating to the client, the technology and the acoustician were examined.

No significant differences were found for gender, fitting status (monaural vs binaural), style, number of microphones, technology (digital vs analogue), or client experience (new vs replacement). There were no significant differences with age, except for the upper and lower age groups (those in their 20s and those more than 90 years of age). There were no significant differences with different hearing loss configurations, except for the extremes of loss – those with normal hearing in the low to middle frequencies, sloping to a loss in the higher frequencies, and those with only some residual hearing in the severe to profound low-frequency range.

There were significant differences between manufacturers, with a range from 14.8% to 29% dissatisfaction with comfort for loud sounds. Eight out of the ten manufacturers were within the 20 to 30% dissatisfaction range. There were also significant differences between individual businesses, with a range between 12.7% and 35.7% dissatisfaction with comfort of loud sounds. So the most significant factors relating to client dissatisfaction were *what was fitted* (manufacturer) and *who did the fitting* (acoustician).

If we send our customers out of our offices with problems with comfort of loud sounds, what do they say about hearing aids and the service they received?

- 61.2% of those customers who would *not* recommend hearing aids to a friend or relative with a hearing problem are dissatisfied with the comfort of loud sounds (fig. 1).
- 46.4% of customers who would *not* recommend their service provider to a friend or relative with a hearing problem are dissatisfied with the comfort of loud sounds (fig. 2).

Recommendations:

1. Do not rely on the manufacturer's algorithm to ensure that the hearing aid will keep our customers comfortable with loud sounds – we must verify loudness tolerance *before* we send them out of our offices.
2. Improve our counselling and rehabilitation programmes to assist our customers to adjust to the "normal" loudness of sounds.
3. Systematically measure our outcomes to ensure that our verification and counselling procedures are effective, and that we are achieving good results for our customers.

Fig. 1: Hearing aid recommendation from dissatisfied customers

Fig. 2: Service recommendation from dissatisfied customers

References:

Kochkin S (2000) MarkeTrak V: "Why my hearing aids are in the drawer": The consumer's perspective. *Hear J* 53(2): 34-42.
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