

Ethical Dilemmas: Are Audiologists and Hearing Aid Users on the Same Side?

Les dilemmes déontologiques : Les audiologistes et les utilisateurs d'aides auditives sont-ils du même bord?

KEY WORDS

ETHICS

CONFLICTS OF INTEREST

INCENTIVES

HEARING AID
MANUFACTURERS

AUDIOLOGISTS

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Abstract

This study examined the opinions of audiologists and hearing aid users on ethical issues related to the provision of hearing aids and interactions with hearing aid manufacturers. With support from two national organizations, Canadian Association of Speech-Language Pathologists and Audiologists and Canadian Hard of Hearing Association, audiologists and hearing aid users from across Canada were recruited to participate in an online survey. A total of 302 respondents (109 audiologists and 193 hearing aid users) completed a questionnaire where they rated the ethicalness of 20 scenarios posing potential ethical dilemmas faced by audiologists. Results showed that, although hearing aid users and audiologists exhibited similar patterns of perception regarding the ethicalness of the scenarios, the actual ratings for the two groups were significantly different for the majority of the scenarios. When differences were observed, hearing aid users tended to consider the scenario more ethically problematic than did audiologists. In general, views were similar between private practice audiologists and public practice audiologists for most scenarios.

Abrégé

Cette étude a sondé les opinions d'audiologistes et d'utilisateurs d'aides auditives à propos des questions déontologiques touchant la fourniture d'aides auditives et les échanges avec leurs fabricants. Deux organisations nationales, l'Association canadienne des orthophonistes et audiologistes et l'Association des malentendants canadiens, ont aidé au recrutement des audiologistes et des utilisateurs d'aides auditives à l'échelle nationale pour participer à un sondage en ligne. Au total, 302 répondants (109 audiologistes et 193 utilisateurs d'aides auditives) ont rempli un questionnaire dans lequel ils ont évalué le caractère éthique de 20 scénarios soulevant des dilemmes déontologiques potentiels auxquels sont confrontés les audiologistes. Les résultats ont montré que, bien que les utilisateurs d'aides auditives et les audiologistes aient affiché des motifs de perception similaires quant au caractère éthique des scénarios, les évaluations réelles chez les deux groupes étaient significativement différentes dans la majorité des scénarios. Lorsque les résultats révélaient des différences, les utilisateurs d'aides auditives avaient tendance à estimer le scénario plus critique sur le plan éthique que ne le faisaient les audiologistes. En général, les perspectives étaient similaires entre les audiologistes en pratique privée et les audiologistes du secteur public dans la plupart des scénarios.

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Ethical issues in health care and the practices of health care professionals have been, and continue to be, a topic of much debate (Brennan et al., 2006; Dana & Loewenstein, 2003; Garner, 2010; Hawkins, Hamill, & Kukula, 2006; Katz, Caplan, & Merz, 2003; Margolis, 2007; nofreelunch, n.d.; Palmer, 2009; Wazana, 2000; Wazana & Primeau, 2002; Windmill, Freeman, Jerger, & Scott, 2010). Physicians, medical residents, and the public have raised ethical concerns over pharmaceutical marketing to physicians, which commonly includes gifts, sponsorship of educational activities, and recreational activities. Audiologists encounter similar ethical dilemmas in their interactions with hearing aid manufacturers; they often receive gifts from manufacturers attempting to influence their hearing aid recommendation practices. While the medical literature abounds with research examining the perceptions of physicians and patients regarding the provision of gifts from industry and the influence of interactions with pharmaceutical industry on drug prescribing practices and patient care (e.g., Blake & Early, 1995; Brett, Burr, & Molloo, 2003; Gibbons et al., 1998; Mainous, Hueston, & Rich, 1995; Steinman, Shlipak, & McPhee, 2001), few such studies exist in the audiology literature.

There is a presumption that small gifts such as pens and notepads do not influence behavior, and that only gifts of substantial value represent a conflict of interest (Katz et al., 2003). However, there is a large body of evidence from medical, pharmaceutical, and social sciences research that shows that even gifts of minimal value do influence behavior whether consciously or unconsciously (Cialdini, 2007; Wazana & Primeau, 2002). For example, fund raising by the Disabled American Veterans' organization via direct-mail solicitation showed that when an inexpensive gift was included (customized address labels), the response rate was 35%, compared to only 18% when no gift was included (Katz et al., 2003). Gifts, regardless of the value, create a sense of obligation or feeling of reciprocity towards the provider (Katz et al., 2003; Cialdini, 2007). Simply stated, if the provision of small gifts did not influence behavior, pharmaceutical or hearing aid manufacturers would not use it as a marketing strategy.

Conflicts of interest are not always readily apparent to health care professionals. As pointed out by Garner (2010), some clinicians accept gifts from industry because they do not recognize the conflict of interest of gift giving. Other professionals may view these gifts as standard or expected practice (Wazana & Primeau, 2002) and may believe that gifts will not influence their professional behavior (Steinman et al., 2001). As argued by Wazana and Primeau (2002), "It doesn't affect me" is a widely held belief among professionals, even though

the process of persuasion used by industry is a well-documented stratagem known to influence behavior (Cialdini, 2007). For example, research by Orłowski and Wateska (1992) examined hospital drug prescribing records before and after physicians attended an all-expenses-paid trip in a luxurious resort; physicians were found to significantly increase their recommendation for the sponsor's drug after attending the workshop. Interestingly, they denied that the trip had any influence on their prescribing practices. Steinman and colleagues (2001) further showed that medical residents think that they are not influenced by gifts from the industry; however, they also believe that their peers are influenced by such gifts.

Over the past few years, the American Academy of Audiology (AAA) and the Academy of Doctors in Audiology (ADA) have attempted to raise awareness about ethical issues and conflicts of interest related to the provision of hearing aids and interactions with hearing aid manufacturers. Their effort resulted in a jointly produced document entitled *Ethical Practice Guidelines on Financial Incentives from Hearing Instrument Manufacturers* (American Academy of Audiology, 2003). These guidelines suggest that gifts of minimal value that primarily benefit patients, and that are not linked to a product purchase, are acceptable. The codes of ethics of the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) and the Canadian Academy of Audiology (CAA) do not provide as specific guidelines with regards to incentives from hearing aid manufacturers. In the medical field, the Pharmaceutical Research and Manufacturers of America code (PhRMA, 2008) provides specific guiding principles for interactions between pharmaceutical manufacturers and physicians; the code stipulates that educational gifts (such as textbooks) or modest meals during a presentation are acceptable, but non-educational items such as pens or mugs with or without a manufacturer's logo are not appropriate.

What do clinicians think about industry marketing activities such as gift giving? Researchers have investigated physicians' perceptions by asking them to rate whether or not they thought that common marketing scenarios were ethically problematic. In one study, physicians and medical residents were asked to rate 18 scenarios on a 4-point Likert scale ranging from not ethically problematic, mildly problematic, moderately problematic, to very problematic (Brett et al., 2003). The scenarios described activities such as receiving pens and notepads, drug samples, textbooks, meals, and trips to a resort. Results showed that although recreational gifts were seen more problematic than educational gifts, on average most scenarios were

rated as either not problematic or mildly problematic. The scenario with the highest rating was a trip to a resort, with 59% of physicians indicating that this was moderately to very problematic. Similar results were obtained by Steinman and colleagues (2001) who found that most medical residents considered appropriate seven of the nine promotional gifts investigated.

If many physicians believe that most of industry marketing activities do not pose major ethical concerns, how do the opinions of patients measure up? Studies that have examined patients' perceptions of gifts from pharmaceutical companies show that generally patients are aware that physicians receive gifts for office use; however, many are unaware that they are also offered gifts for personal use (Blake & Early, 1995; Gibbons et al., 1998; Mainous et al., 1995). In the study by Blake and Early (1995), patients did not consider trivial gifts or gifts that could benefit patients to be problematic; however, disapproval rates were high for more expensive gifts that did not benefit patients. Moreover, about one third of patients disapproved of physicians accepting that a pharmaceutical company pays for their travel expenses to a medical conference.

Gibbons and colleagues (1998) compared the opinions of physicians and patients on the appropriateness of various gifts given by the pharmaceutical industry, and on whether they thought that each gift would influence prescribing practices. Results showed disagreement between physicians and patients on the degree to which each gift was ethically appropriate and influential, with patients rating most gifts as less appropriate, and more likely to influence prescribing, than did physicians. Gifts considered the least appropriate by patients and physicians included trips, dinners at fine restaurants, and pocketknives; while gifts such as textbooks, educational videos, and pens, were considered appropriate by most patients and physicians. Gibbons and colleagues further noted that about half of the patients were already aware of industry gift giving practices, and of those who were not aware, 24% said that participating in the study had changed their perception of the medical profession. The authors argued that the perception likely became more negative, based on the finding that patients who reported changes in perception were also more likely to disapprove of gift giving practices than patients who did not report changes in their perception of the medical profession.

A few comparable studies exist in the audiology literature. Kirkwood (2003) investigated the opinions of hearing health care providers by asking them to rate four scenarios: (1) receiving \$100 with each high-end hearing aid purchased, (2) accepting pens and notepads

with a manufacturer's logo, (3) attending an out-of-town conference with expenses paid by a manufacturer, and (4) receiving credits with hearing aid purchases that could be redeemable for a cruise. While the majority of respondents agreed that accepting pens and notepads did not pose any ethical concern, they rated the other three scenarios as less ethically appropriate, and their opinions differed based on their work settings. That is, hearing instrument specialists were less likely than audiologists to rate each scenario as unethical; and private practice audiologists were less likely than public practice audiologists to rate the scenarios as unethical. Kirkwood (2009) further showed that hearing health care providers with less than 10 years of practice, as well as female hearing health care providers, were more likely to view scenarios as ethically problematic.

Hawkins, Hamill, VanVliet, and Freeman (2002) compared the opinions of audiologists to those of consumers with hearing loss on 17 scenarios describing various incentives offered by hearing aid manufacturers. Respondents were asked to rate the ethicalness of the scenarios on a 4-point Likert scale, ranging from "I think that there is nothing wrong with this practice" to "I think that this business practice is clearly unethical." Similar to results obtained by Gibbons and colleagues (1998) with physicians, Hawkins et al.'s results showed that patients were more likely than audiologists to view several of the scenarios as ethically problematic. In 2006, Hawkins and colleagues re-administered the survey to audiologists and noted changes in the opinions of audiologists since the administration of the first survey in 2002. Generally, results suggested that audiologists were becoming increasingly cognizant of the notion that accepting gifts may constitute a conflict of interest. Similar changes in opinions were also observed by Kirkwood (2009). Hawkins and colleagues (2006) and Kirkwood (2009) pointed out that the observed changes in perspectives over time may have resulted from AAA's efforts to provide workshops aimed at increasing audiologists' awareness of ethical guidelines.

Within the Canadian context of health care delivery, there is a lack of research examining the perceptions of audiologists and hearing aid users regarding audiologists' interactions with hearing aid manufacturers and acceptance of gifts, meals, or business-related incentives. Moreover, in recent years, some hearing aid manufacturers have begun purchasing audiology private practices; and patients may not be aware that the clinic where they receive services is owned by a hearing aid manufacturer. Little is known about whether audiologists and patients regard this ownership arrangement as potentially ethically problematic. The main goal of the present study was

to provide a Canadian perspective on the opinions of audiologists and patients regarding ethics matters related to the provision of hearing aids and audiologists' interactions with industry. A secondary goal of the study was to compare the opinions of audiologists working in public versus private settings. In Canada, most audiologists working in private practice settings are responsible primarily for recommending, fitting, and dispensing hearing aids; therefore, they are more likely to have numerous contacts with hearing aid manufacturers than audiologists working in public settings who may be primarily involved in diagnostic audiology. Work by Kirkwood (2003) has suggested that opinions differ between private and public practice audiologists regarding incentives from industry. The current study sought to investigate potential differences in opinions within the Canadian health care context.

Methods

Participants

Canadian audiologists, and hearing aid users who were members of the Canadian Hard of Hearing Association (CHHA), were invited to participate in this study. More information on the demographic characteristics of each group may be found at the beginning of the results section. This study sought to recruit experienced hearing aid users, rather than new hearing aid users or individuals considering trying hearing aids for the first time, in order to mitigate potential risks for participants and audiologists. Based on Gibbons and colleagues' (1998) finding that 24% of patients said that participating in a study about gifts from pharmaceutical companies had changed their perception of the medical profession, we targeted recruitment of experienced hearing aid users. The purpose of this recruitment strategy was to reduce the risk that participating in the present study might negatively change the perception that some patients have about audiologists. It was believed that experienced hearing aid users would be more likely to have already established long-term relationships with audiologists, and therefore would be less likely to be negatively affected by participating in the study. It was speculated that hearing aid users who belong to CHHA would fall into this group, and hence CHHA was used as the means to recruit patients.

Materials

Two brief questionnaires were developed to gather demographic information relevant to each group. The background questionnaire for audiologists contained questions related to gender, number of years in practice, private versus public work setting, and whether they

recommend or dispense hearing aids. Geographical location was not sought in order to preserve the anonymity of respondents as the researchers might have been able to determine the identity of some of the respondents based on their geographic location coupled with their responses to other demographic questions (in particular for work settings where audiologists are not numerous such as school boards or universities). The background questionnaire for hearing aid users included questions pertaining to gender, age, length of time wearing hearing aids, and whether they visited an audiologist or a hearing instrument specialist (or both) regarding their hearing care needs.

The main questionnaire was a compilation of 20 scenarios that pertained to issues such as the acceptance of small gifts and incentives from hearing aid manufacturers or their sales representatives, substantial gifts or large business incentives offered by hearing aid manufacturers, and industry involvement in continuing education activities (see Appendix A). The scenarios were directly taken or adapted from Hawkins and colleagues (2002) and Kirkwood (2009). Some scenarios were modified to fit the Canadian context with regard to location (Scenario 13 and 14). One new scenario (Scenario 17) was added to seek the participants' opinions regarding hearing aid manufacturers purchasing private clinics. As in Hawkins and colleagues (2002, 2006), the following 4-point Likert scale was given so that the respondents could rate how ethical they believed the scenario to be:

- (1) I think there is nothing wrong with that practice.
- (2) While not unethical, that practice may not be in the patient's best interest. I would be more comfortable working with a professional who did not engage in that business practice.
- (3) I think this business practice is highly suspect and certainly borders on unethical.
- (4) I think this business practice is clearly unethical.

The above full statements were provided at the beginning of the questionnaire, and for simplicity, these categories were shortened after each scenario to the following statements: "Nothing wrong", "Better if not done", "Bordering on unethical", and "Clearly unethical".

Procedure

Email letters were sent to CHHA, CASLPA, and CAA to ask for their assistance in recruiting participants for the study. Upon further communication with each of these organizations, a website address and description of the study was provided to relay to each of their membership lists. This Uniform Resource Locator (URL) took respondents directly to Dalhousie University's

Opinio, a secured website used for surveys. CHHA and CASLPA sent the survey description and URL to their members and were successful in recruiting participants for the survey. However, due to circumstances beyond the control of the researchers, CAA did not take part in the distribution of the survey.

Audiologists and hearing aid users from across Canada received an email from their respective organization inviting them to participate in the study. Hearing aid users were required to be at least 18 years of age to participate in the study. Cochlear implant users, and normally hearing parents of children who wore hearing aids, were not eligible to participate in the study. The URL provided by CHHA and CASLPA brought respondents directly to the survey where they were greeted with an information letter in which the above inclusion and exclusion criteria were specified. This letter also contained information that is found in typical research consent forms. Participation was voluntary and informed consent was assumed based on the respondents' choice to abstain or complete the survey. At the end of the information letter, a link was provided to access the questionnaire.

Results

Respondents' characteristics

Demographic characteristics for the audiologists and hearing aid users are shown in Table 1. A total of 109 audiologists, 85 females (78%) and 24 males (22%), responded to the survey. Eighty percent of audiologists had at least 6 years of experience; 51% reported having more than 15 years of practice. Sixty-two audiologists (57%) worked in public practice settings (including hospitals, school boards, universities, and non-profit organizations) and 47 (43%) worked in private practice (private clinics and industry). The proportion of workload pertaining to hearing aids varied among audiologists; however, the majority of audiologists (91%) indicated that they recommended hearing aids, while 67% indicated that they also dispensed hearing aids. Of those audiologists who reported dispensing hearing aids, all but one also reported recommending hearing aids.

A total of 193 hearing aid users, 119 females (62%) and 72 males (37%), responded to the survey (two respondents did not provide an answer to the question about gender). Seventy-five percent of the hearing aid users were more than 50 years of age. The majority were experienced users of hearing aids, with 94% of them having used hearing aids for at least 3 years and 67% of them for more than 15 years. Over half of the hearing aid users (61%) reported seeing only an audiologist for their hearing care needs, while 15% reported seeing only

a hearing instrument specialist; most of the remaining respondents saw both types of professionals.

Although there was a greater female representation in both groups, gender distribution was comparable for hearing aid users and audiologists. A Mann-Whitney U-test, performed on perception ratings averaged over all scenarios, showed no significant difference between female and male respondents' opinions ($U = 9862.0$, $p = .85$). It should also be pointed out that 35% of hearing aid users were over 65 years of age, thus likely older than the group of audiologists. The hearing aid users' ratings averaged across all scenarios were compared for the different age groups using a Kruskal-Wallis test. Results showed that the respondents' age did not significantly influence their opinions ($X^2 = 5.63$, $p = .13$). Similarly, no significant difference was found when audiologists were compared based on years of practice ($X^2 = 3.26$, $p = .35$).

Ratings of scenarios

To determine if the mean ratings were significantly different between audiologists and hearing aid users, and between private practice audiologists and public practice audiologists, nonparametric Mann-Whitney U-Tests were performed on participants' ratings averaged across all scenarios, as well as on each individual scenario. A level of significance of 0.05 was retained for all comparisons.

When ratings averaged across all scenarios were examined, results showed a significant difference between audiologists and hearing aid users ($U = 6584.5$, $p < .0001$). Mean ratings for each scenario, and significance level values, are illustrated in Figure 1 (see Appendix A for the full description of the scenarios). Similar patterns of perception regarding the ethicalness of the scenarios were observed for audiologists and hearing aid users; however, the ratings values were statistically significantly different for 16 of the 20 scenarios. That is, on average both audiologists and hearing aid users gave ratings close to 1 (nothing wrong) for activities such as workshops or visits from manufacturer representatives, which might include small gifts or light meals (e.g., Scenarios 1, 6, 7, 9, 11, and 12), while both groups gave average ratings greater than 3 for scenarios involving more substantial gifts for personal use (e.g., Scenarios 2, 5, 14). However, the rating values for these scenarios were significantly different between the two groups. For example, although on average both audiologists and hearing aid users believed that it was appropriate for audiologists to accept pens, notepads, and lunch, hearing aid users rated these gifts significantly higher (more problematic) than did audiologists. Hearing aid users were also significantly more likely than audiologists to judge as less acceptable

scenarios that were related to continuing education paid by a hearing aid manufacturer (Scenario 13) or scenarios that pertained to business issues such as hearing aid sales in exchange of business-related expenses or equipment, volume discounts in exchange for primarily prescribing the manufacturer's brand of hearing aids, receiving a commission based on the number of hearing aids sold, or patients being unaware that a manufacturer owns a clinic (Scenarios 3, 4, 15, 17, 18).

The percentage of audiologists and hearing aid users who answered either "Nothing wrong with that practice" or "Clearly unethical" is displayed in Table 2. When the scenario did not involve any gifts or food (Scenarios 6 and 11), the vast majority of hearing aid users and audiologists (over 90%) thought that there was nothing wrong with that practice. When small gifts or meals were included (Scenarios 1, 7, 12), over 80% of audiologists continued to believe that the behavior was acceptable, compared to only 53 to 66% of hearing aid users. Four scenarios were rated as "Clearly unethical" by more than half of the hearing aid users. These included the audiologist receiving a traveler's cheque for each high-end hearing aid sold, a manufacturer paying for a spouse's travel, volume discounts in exchange for primarily prescribing the manufacturer's brand of hearing aids, and the patient being unaware that a clinic was owned by a hearing aid manufacturer (Scenarios 5, 14, 15, and 17). In general, a smaller proportion of audiologists rated these same scenarios as "Clearly unethical".

The current study also investigated any differences in opinions between audiologists working in private practice versus those working in public settings (see Figure 2 and Table 2). When ratings were averaged across all scenarios, a significant difference was observed between audiologists in public and private practice ($U = 927.0$, $p = .001$). However, when each scenario was analyzed separately, the two groups showed significantly different ratings for only 6 out of the 20 scenarios. For those scenarios where differences were observed, public setting audiologists generally gave higher ratings (i.e., they viewed scenarios as more problematic) than private practice audiologists. Significant differences between the two groups were observed for scenarios related to business practices, such as hearing aid sales in exchange of business-related expenses or equipment, and volume discounts in exchange for primarily prescribing the manufacturer's brand of hearing aids (Scenarios 3, 4, and 15). Although many private practice and public practice audiologists believed that it was unethical to receive a traveler's cheque for each high-end hearing aid sold or accept that a manufacturer pays for a spouse's travel (Scenarios 5 and 14), public setting

audiologists rated these scenarios significantly higher than private practice audiologists. Finally, public setting audiologists were significantly more likely than private practice audiologists to view as ethically problematic a manufacturer paying an audiologist's travel expenses to attend an out-of-town conference (Scenario 13).

Table 2 shows that only one scenario was rated as "Clearly unethical" by slightly more than half (53%) of private practice audiologists (Scenario 2); less than one third of private practice audiologists rated any of the remaining scenarios as "Clearly unethical". In comparison, four scenarios were rated as "Clearly unethical" by more than half of public practice audiologists (Scenarios 2, 5, 14, and 15).

Discussion

This study was conducted to compare the opinions of audiologists and hearing aid users from across Canada regarding ethical dilemmas surrounding the provision of hearing aids and interactions with hearing aid manufacturers. Results showed that hearing aid users are significantly more likely than audiologists to view gift giving and incentives from hearing aid manufacturers as ethically problematic. This finding is consistent with results obtained by Hawkins and colleagues (2002), and by Gibbons and colleagues (1998) with physicians and patients regarding gift giving from pharmaceutical industry. The current study also showed that hearing aid users and audiologists nevertheless agree on the types of behavior that they consider ethically appropriate versus those that they consider problematic. For example, although hearing aid users were more likely than audiologists to have some level of discomfort about audiologists accepting pens, notepads, and small meals, both groups believed that these activities do not pose any major ethical concern. On the other hand, the majority of audiologists and hearing aid users agreed that activities involving more substantial gifts for personal use are unethical; however, hearing aid users showed a greater level of discomfort with such activities than audiologists.

In general, hearing aid users were less comfortable than audiologists with incentives or gifts that were tied to hearing aid sales (such as getting either personal or business-related goods in exchange for hearing aid sales or receiving a commission) or incentives that encouraged audiologists to recommend one manufacturer's products almost exclusively. Moreover, it appears that opinions about hearing aid manufacturers being involved in the management of hearing care clinics depend on whether patients are aware of such involvement. That is, many hearing aid users and audiologists see nothing wrong with an audiologist owning a hearing aid manufacturer's

franchise and making the brand name of the product obvious to patients, even though that product brand is used almost exclusively. In contrast, they have ethical concerns when patients are not aware that a hearing aid manufacturer has purchased a hearing care clinic and that the manufacturer's products are used almost exclusively. Indeed, 56% of hearing aid users viewed this latter ownership arrangement as clearly unethical compared to only 14% when they were aware of the industry's involvement in the clinic.

Given that audiologists working in private practice settings generally have more frequent interactions with hearing aid manufacturers, the current research examined whether the opinions of private practice audiologists differed from those of public practice audiologists. The results showed more similarities than differences between private practice and public practice audiologists. That is, no significant differences were found for the majority of the scenarios. The differences observed were mostly for scenarios related to business expenses, with public practice audiologists rating the scenarios as more ethically problematic than private practice audiologists.

Overall, the perceptions of Canadian audiologists and hearing aid users were found to be similar to those of American audiologists and consumers (Hawkins et

al., 2002, 2006; Kirkwood, 2003). However, results of the current study did not show a generation gap or a gender gap in the respondents' opinions. This was in contrast with Kirkwood (2009) who found that female hearing care providers and providers with less than 10 years of experience were more likely to view scenarios as ethically problematic. The reason for the disagreement between American and Canadian hearing care providers is unclear; however it should be pointed out that statistical analysis of the results was not performed in Kirkwood's study, which may account for the observed disagreement.

It should be noted that the majority of hearing aid users sampled in this study had more than 15 years of experience with hearing aids. Hearing aid users who have achieved long term relationships with audiologists might be less likely to see some activities as unethical. It is possible that hearing aid users with less experience would rate the scenarios as less ethical, however there is no reason to expect a different pattern of responses. Nevertheless, it is recognized that the results of this study reflect primarily the opinions of experienced hearing aid users rather than those who are new users of hearing aids.

Research shows that hearing aid users are generally less tolerant of ethically questionable practices than

Table 1. Respondents' demographic characteristics.

Audiologists (n=109)	Percentage of respondents	Hearing aid users (n=193)	Percentage of respondents
<i>Years in practice:</i>		<i>Age:</i>	
2 years or less	10	18-30 years	9
3-5 years	9	31-50 years	15
6-15 years	29	51-65 years	40
More than 15 years	51	66+ years	35
<i>Work settings:</i>		<i>Length of hearing aid use:</i>	
Hospital/clinic	53	2 years or less	6
Private clinic	41	3-5 years	9
School board	1	6-15 years	18
University	3	More than 15 years	67
Hearing aid manufacturer/industry	2		
<i>Proportion of total workload related to hearing aids:</i>		<i>Who do you see about your hearing aids?</i>	
0-25 %	34	Audiologist only	61
26-50%	18	Hearing instrument specialist only	15
51-75%	21	Both audiologist and hearing instrument specialist	22
76-100%	27	Other	2

Table 2. Percentage of respondents who answered either “Nothing wrong with that practice” or “Clearly unethical” to each scenario.

Scenarios	“Nothing Wrong”			“Clearly Unethical”		
	HA users	Public Audiol.	Private Audiol.	HA users	Public Audiol.	Private Audiol.
1. Rep visit with pens and notepads provided	64	92	94	4	0	0
2. Credit redeemable towards clothing or cruise with HA sale	8	3	2	43	60	53
3. Credit redeemable for business-related expenses with HA sale	19	31	53	33	24	6
4. HA manufacturer offers equipment in exchange of HA sale quota per year	10	15	11	49	47	23
5. \$100 travel cheque for each high-end HA sold	5	6	15	64	68	32
6. Rep visit to discuss products	92	98	100	1	0	0
7. Rep visit to discuss products with lunch provided	53	81	87	4	0	2
8. Rep takes clinician and spouse for dinner; only briefly discuss products	18	23	32	24	16	9
9. Party sponsored by manufacturer at convention; open to all delegates	77	92	94	2	2	0
10. Dinner party by invitation only at a conference	40	53	68	5	8	0
11. Manufacturer seminar to cover product updates; held in town	94	97	100	0	0	0
12. Manufacturer seminar with breakfast and lunch	66	87	89	2	0	0
13. Travel to attend conference in Vancouver is paid by manufacturer	25	48	70	18	7	2
14. Manufacturer also pays travel for spouse	4	7	6	52	57	30
15. Volume discount in exchange of clinician using the manufacturer for most patients	9	13	22	54	51	20
16. Clinician purchases franchise, sign of brand name is on door; this brand used almost exclusively	41	39	57	14	15	9
17. Manufacturer owns a private clinic; patient unaware that manufacturer owns the clinic	6	11	15	56	44	26
18. Clinician receives salary and commission on HA sold	15	32	47	31	15	13
19. Clinician does research for manufacturer; manufacturer decides if research is published	11	11	21	45	44	26
20. Get a \$50 camera after listening to a demonstration at a conference	29	43	53	15	10	6

Abbreviations: rep: manufacturer sales representative; HA: hearing aids.

audiologists. Given these differences, audiologists may want to consider the perception of the public when deciding whether to accept promotional gifts or incentives from hearing aid manufacturers. In today's public demands for more transparency and accountability of business practices, uncovering the views of patients and audiologists on ethical issues may be an essential step towards maintaining the integrity of the audiology profession and its services. The results of this study may help elicit discussion, promote education regarding the importance of maintaining

ethical practice among audiologists in Canada, and lead to an advance of policies on ethical standards specifically related to the provision of hearing aids and relationships with manufacturers. Future guidelines should consider the different viewpoints of patients and audiologists. Apart from this, findings of this study may be used as a reference with which to compare future research, enabling other investigators to explore changes in the perceptions of audiologists and patients over time.

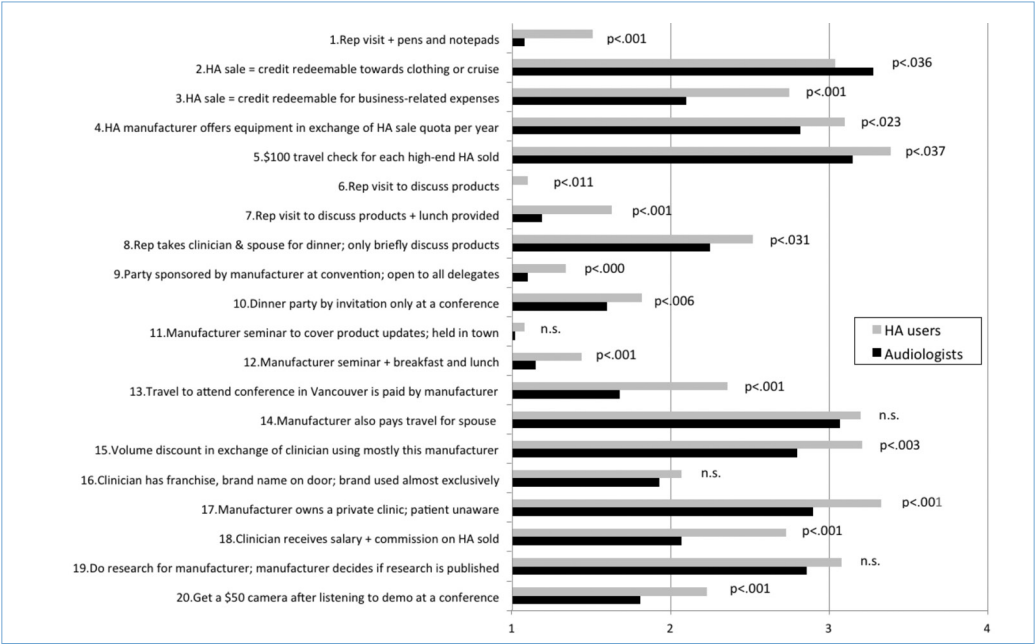


Figure 1. Average ratings for audiologists and hearing aid users for each scenario.

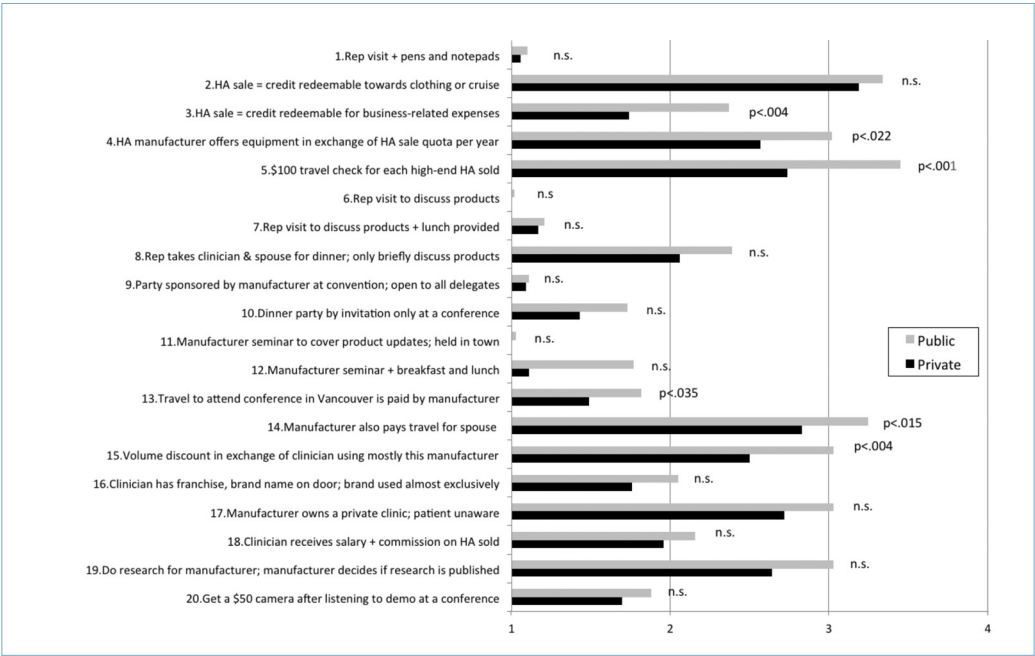


Figure 2. Average ratings for private practice audiologists and public practice audiologists, for each scenario.

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APPENDIX A

Ethics Survey

This section of the questionnaire includes 20 hypothetical scenarios. Please rate each scenario based upon one of the four categories listed below:

1. "I think there is nothing wrong with that practice."
2. "While not unethical, that practice may not be in the patient's best interest. I would be more comfortable working with a professional who did not engage in that business practice."
3. "I think this business practice is highly suspect and certainly borders on unethical."
4. "I think this business practice is clearly unethical."

Each of these categories has been shortened for convenience to the following descriptions:

1) Nothing Wrong, 2) Better If Not Done, 3) Borders on Unethical, 4) Clearly Unethical.

Note: The term hearing care provider is used to refer to either an audiologist or a hearing aid dispenser.

1. A hearing aid manufacturer sales representative visits the hearing care provider's office and brings pens, pencils, and notepads with the name of the new product on it. The hearing care provider accepts.
2. A hearing aid manufacturer has a new promotion. For every hearing aid sold, the hearing care provider will earn one "credit". The hearing care provider can redeem credits for products ranging from those offered in a clothing catalogue to a cruise to the British Virgin Islands.
3. A hearing aid manufacturer has what it calls a "professional development plan." For each hearing aid sold, the manufacturer places money into an investment account that is redeemable for the purchase of equipment, books, continuing education workshops or other business-related expenses. The hearing care provider joins the plan.
4. A hearing care provider needs a new piece of hearing aid equipment. He or she could borrow the money and arrange a plan through a bank. Instead, the hearing care provider accepts a hearing aid manufacturer's offer of this equipment in exchange for buying a defined number of hearing aids within a year.
5. A hearing aid manufacturer offers a promotion whereby the hearing care provider receives a \$100 traveler's cheque for each high-technology hearing aid that is purchased. The hearing care provider takes advantage of this offer.
6. A hearing aid manufacturer sales representative makes a personal visit to the hearing care provider to discuss the hearing aids that the manufacturer sells. The hearing care provider listens to the salesperson.
7. A hearing aid manufacturer sales representative visits the hearing care provider over the noon hour and takes him or her to lunch, or the representative brings in lunch for the hearing care provider and staff. They discuss the manufacturer's line of products.
8. A hearing aid manufacturer sales representative takes the hearing care provider and his/her spouse out for dinner. The sales representative only briefly discusses the manufacturer's products.
9. A hearing care provider goes to a party at a professional convention sponsored by a hearing aid manufacturer. The party is open to all hearing care providers regardless of whether they dispense that brand of product.
10. At an annual professional conference, the hearing care provider attends a dinner party that is by invitation only. The hearing care provider was given the invitation by the area hearing aids sales representative.

11. A hearing care provider goes to a free continuing education seminar offered by a hearing aid manufacturer. The seminar covers the features of the manufacturer's new products, and instructions on fitting the hearing aid. The seminar is held in town.
12. A manufacturer offers a free continental breakfast and buffet lunch in addition to a continuing education course. The hearing care provider attends and accepts the offered meals.
13. A hearing aid manufacturer sponsors a continuing education conference in Vancouver. The conference discusses the fitting of the manufacturer's line of hearing aids, and how to determine which product will help which patient. A hearing care provider from Toronto is invited and attends. The hearing aid manufacturer pays the hearing care provider's travel expenses.
14. For the same continuing education conference in Vancouver, the hearing aid manufacturer pays the expenses of the hearing care provider's spouse, who is not a hearing health care professional. The hearing care provider and the hearing care provider's spouse attend.
15. A hearing care provider is offered a substantial volume discount by a hearing aid manufacturer provided that he / she selects this manufacturer's brand of hearing aids for most of his or her patients. The hearing care provider accepts.
16. A hearing care provider has purchased a franchise from a hearing aid manufacturer with a well-known name, one that advertises nationally, and one that consumers easily recognize. The sign on the door indicates the brand name. The hearing care provider dispenses this product line almost exclusively. The hearing care provider only uses another manufacturer's product when there is no franchise product that can meet the client's needs.
17. A hearing aid manufacturer has purchased a private hearing care clinic. The hearing care provider dispenses hearing aids from this manufacturer almost exclusively. There are no obvious signs appearing to patients which indicate that the hearing aid manufacturer owns the clinic (i.e., patients may be unaware).
18. A hearing care provider is an employee for a clinic. The hearing care provider receives a salary, plus a commission based upon the dollar amount of hearing aids sold.
19. A hearing care provider is offered \$25,000 by a manufacturer to research the effectiveness of a newly released high-technology hearing aid. The hearing care provider is asked to sign a contract stipulating that the company will decide how and if the results of the research are made public.
20. In the exhibit hall at a professional conference, a hearing aid manufacturer is offering a digital camera (wholesale price of \$50) to any hearing care provider who watches a demonstration of the manufacturer's latest product. The hearing care provider watches the demo and accepts the gift.