

Results

EuroTrak Germany 2022

1. Introduction
2. Market overview
3. Analysis of hearing aid owners
4. Analysis of hearing impaired non-owners
5. Appendix

If you speak German, please go to

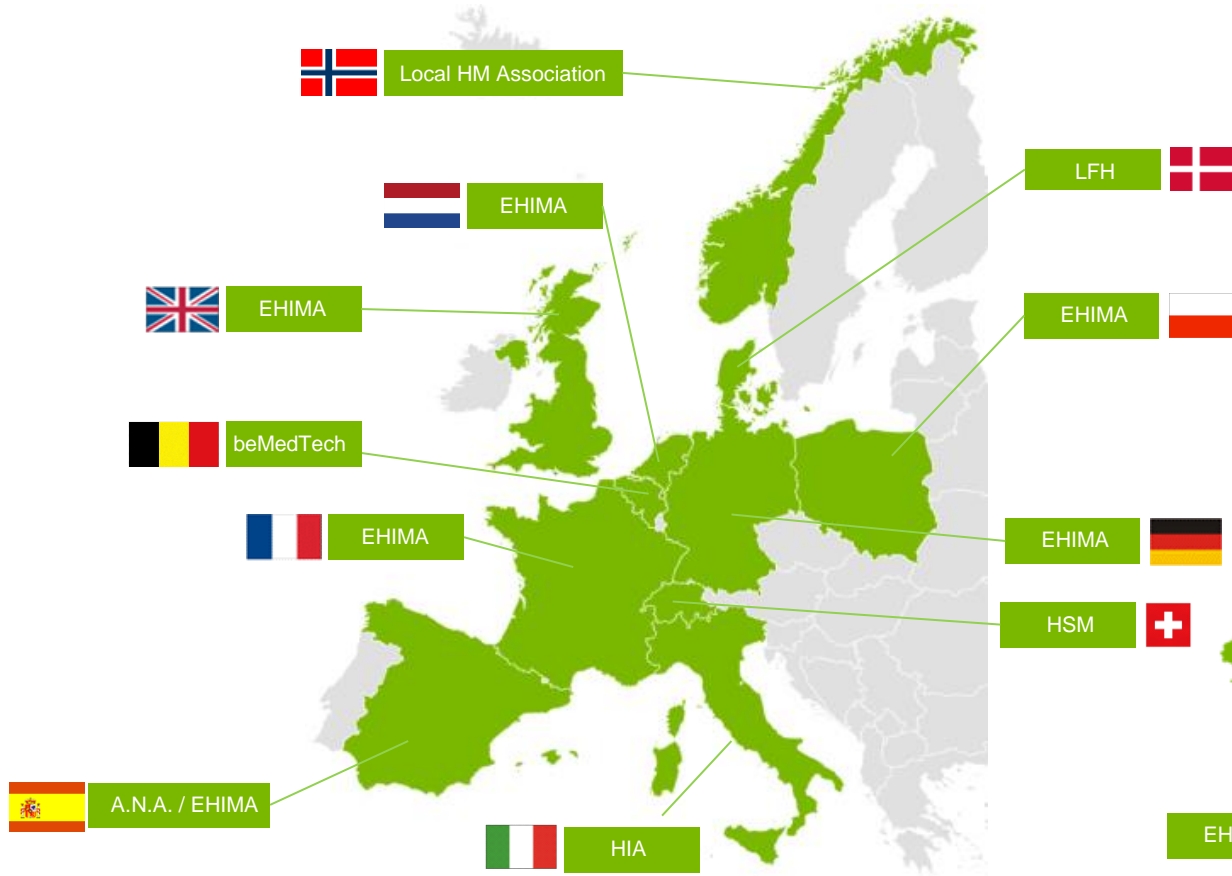
[initiative-hoergesundheit.de](https://www.initiative-hoergesundheit.de)

for a more in-depth analysis of the findings.

Summary

1. Introduction

EuroTrak Germany 2022 is part of the EuroTrak / APACTrak studies:



EuroTrak Germany 2022 was designed and executed by Anovum (Zurich) on behalf EHIMA.

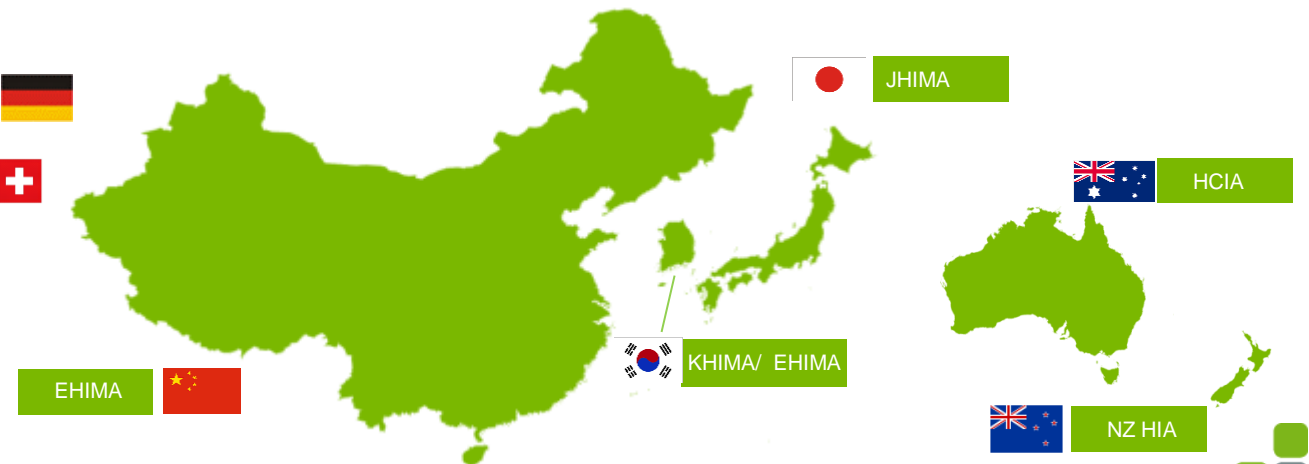
Sample sizes:

Representative sample (sample 1): n=13'556 people

Hearing impaired (sample 2): n=1'313 people

HA owners: n= 702 people

Hearing impaired non-owners: n= 611 people



Summary

2. Market overview

- Stated hearing loss prevalence
 - Total: 11.1%, 18+: 13.0% (2018: 12.2%, 18+: 14.1%).
 - Hearing Tests: 43% (2018: 45%) had a hearing test in the last 5 years, most tests done by ENTs.
- Hearing aid adoption rate (HA penetration)
 - 41.1% of those with self declared HL (2018: 36.9%).
 - 4.6% of total population (2018: 4.5%).
 - 74% of HA owners have binaural treatment (2018: 71%).
- The route to the hearing aid
 - 81% of the hearing impaired discussed hearing loss with an ENT doctor or family doctor.
 - 58% got hearing aids recommended from the ENT or family doctor (drop out rate=29% / 2018: 33%).
 - 68% of the GP consultations referred to an ENT, 41% to an Audiologist (2018: 33%). 8% recommended no action.
 - 37% of ENT consultations referred to an Audiologist, 43% recommended to get a hearing aid, 32% recommended no action.
- Potential social cost-savings due to the use of hearing aids
 - Hearing aids are believed to have a positive impact on the job.
 - Hearing aid owners have a lower risk of being depressed.
 - Quality of sleep seems to improve if hearing impaired use hearing aids.
 - Hearing aid owners are less exhausted in the evening.

Summary

3. Analysis of hearing aid owners

- Hearing aid ownership, usage and accessories
 - 53% of the currently owned HAs were bought in 2019 or later.
 - The average age of the currently owned HAs is 3.3 years.
 - The median age of hearing aids before replacement is 6 years.
 - On average, HAs are worn 8.9 hours a day.
 - RIC is the most often purchased type of HA.
 - Cochlear Implants: <1% of HA owners have a CI. 18% of the HA owners with severe/profound HL have been informed about CIs by a medical professional.
 - 25% of the HA owners use a hearing aid app, 76% of those are satisfied with it.
 - 20% of the hearing aid owners use some kind of accessory for better speech understanding.
 - 13% of the HAs are (to the knowledge of the owners) equipped with Telecoil. Main usage of Telecoil with phone.
- Importance of listening situations and satisfaction with HAs
 - 83% of the hearing aid owners say their hearing aid works better than or as expected
 - 77% of the HA owners are satisfied with their HAs (2018: 76%).
 - The more hours worn per day, the higher the satisfaction with the HA.
 - Satisfaction with newer hearing aids is higher than with older hearing aids.
 - Talking at home with family members, watching TV with others, talking on a phone and conversations are the most important listening situations.
- Positive impact of HAs
 - Significant positive impact of HAs on different aspects: Especially Communication effectiveness, sense of safety, ability to participate in group activities and social life improve with hearing aids.
 - 96% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes.
 - 71% of the hearing aid owners feel more confident moving in a city since wearing hearing aids. Also a majority of the hearing aid owners feel more confident when driving a car / riding a bicycle on their own, since wearing hearing aids.

Summary

4. Analysis of hearing impaired non-owners

- Reasons not to own/use HAs
 - The main reasons for not using hearing aids are that they think that hearing aids are uncomfortable, they hear well enough in most situations, hearing loss is not severe enough, hearing aids don't restore hearing to normal, they do not work well in noisy situations and the ENT's opinion.
 - 5% who own hearing aids don't use them at all (0 hours); 10% use them less than one hour/day (0-1 hour).
- Social rejection and triggers to buy
 - 74% of hearing aid owners feel that people never make fun of or reject them because of their hearing aids. It is more likely somebody makes fun or rejects a hearing impaired without hearing aid. (only 38% say they are never made fun of because of their hearing loss).
 - The most important triggers to get hearing aids are worsening hearing loss, followed by the ENT and audiologist/spouse.

Detailed Results: Roadmap

1. Introduction

- Organisation of EuroTrak Germany 2022
- Recruitment process: In search of hearing impaired people

2. Market overview

- Prevalence of hearing loss and hearing aid adoption rate
- Hearing tests and where hearing is tested
- The route to the hearing aid: Sources of information and drop-out rates
- Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities

3. Analysis of hearing aid owners

- Hearing aid ownership, awareness of hearing loss, lifetime of hearing aids and usage
- Reasons for getting hearing aids sooner
- Channels for getting hearing aids, recommendation of channel (NPS)
- Awareness and usage of hearing aid apps, Telecoil
- Satisfaction with hearing aids and drivers
- Importance of listening situations
- Positive impact of hearing aids, safety due to hearing aids, quality of life

4. Analysis of hearing impaired non-owners

- Reasons for not having hearing aids
- Social rejection because of hearing loss compared to the acceptance of hearing aids
- Most important triggers to buy

5. Appendix

- Demographics: Hearing instrument adoption rates and populations

1. Introduction

Organisation of EuroTrak Germany 2022

Organisation

- Principal of the project EuroTrak Germany 2022 is EHIMA.
- Anovum Zurich developed the concept of EuroTrak Germany, designed the questionnaire and conducted the fieldwork in cooperation with a panel company. Furthermore Anovum analyzed the data and prepared the report.
- The European Hearing Instrument Manufacturers Association [EHIMA] approved the questionnaire

Use of the data

- EHIMA may use the anonymous delivered tables, charts, reports and conclusions of the survey for further research projects, for archiving and publication in any form whatsoever.
- The raw dataset remains at Anovum. If the principal uses the anonymous data (delivered tables, charts, reports) and conclusions of the survey for publications the source of the data needs to be mentioned in the following way:
“**Source: Anovum – EuroTrak Germany/2022/n=[relevant sample size]”**
- Member companies of the principal can ask Anovum to further analyse the raw data in specific ways at their own expense.

Recruitment process: In search of hearing impaired people

Step 1: Screening interviews

Objective: Prevalence of hearing loss and hearing aid ownership

Process:

1. Representative sample with strict quotas that represent the overall population (Age/Gender interlocked; soft quota on region)
2. Contacts from large panelist pools
3. Screening questionnaire: Stated hearing loss and hearing aid usage + demographics
4. Result: Representative sample of **n=13'556** people based on census data.

Step 2: Target population interviews

Objective: Details about satisfaction with hearing aids and reasons for non-adoption

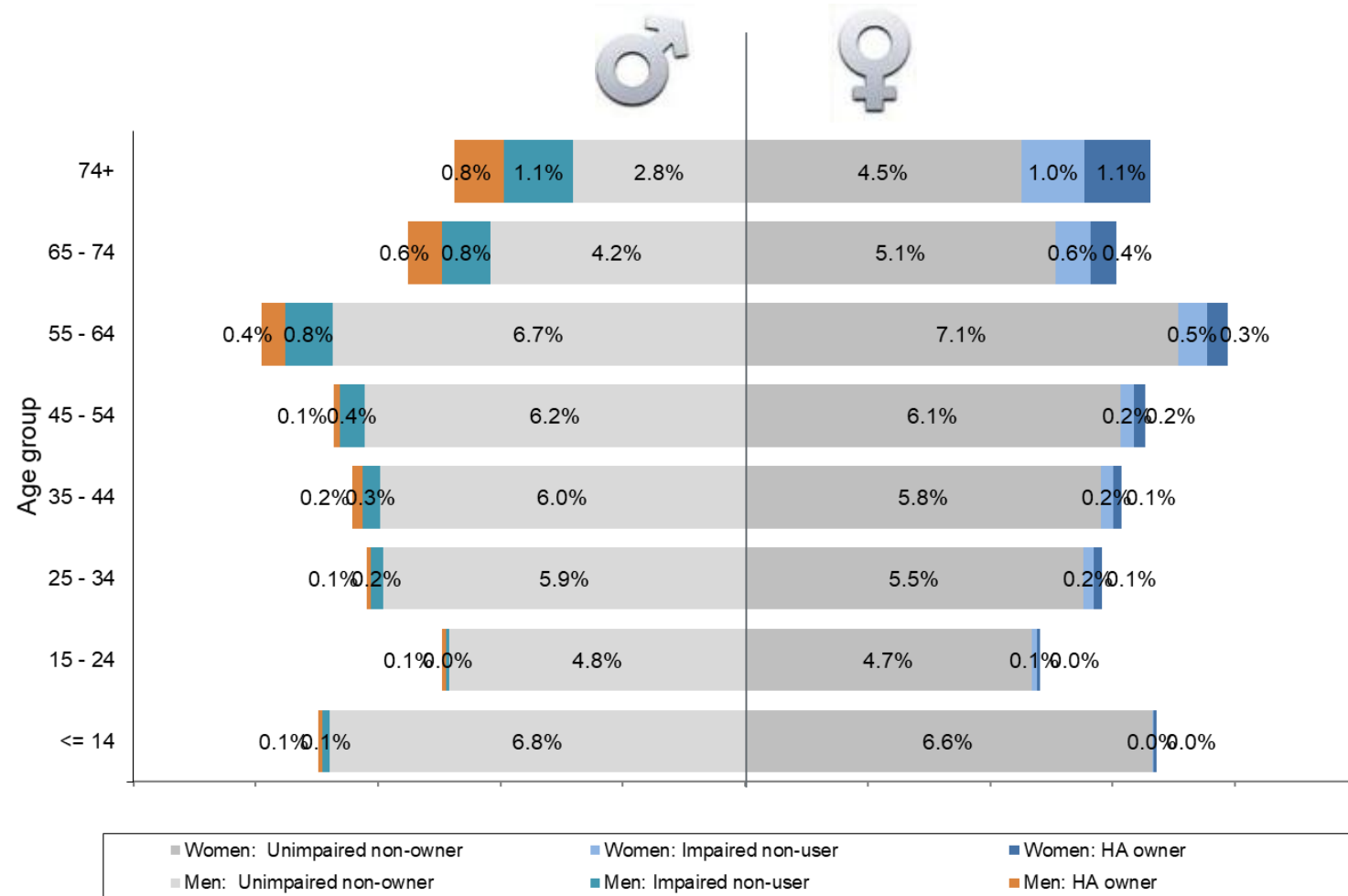
Process:

1. Main questionnaires: Owners and hearing impaired non-owners
2. Balancing through weighting according to representative screening interviews
3. Resulting sample: **n=702** hearing aid owners and **n=611** hearing impaired non-owners

2. Market overview

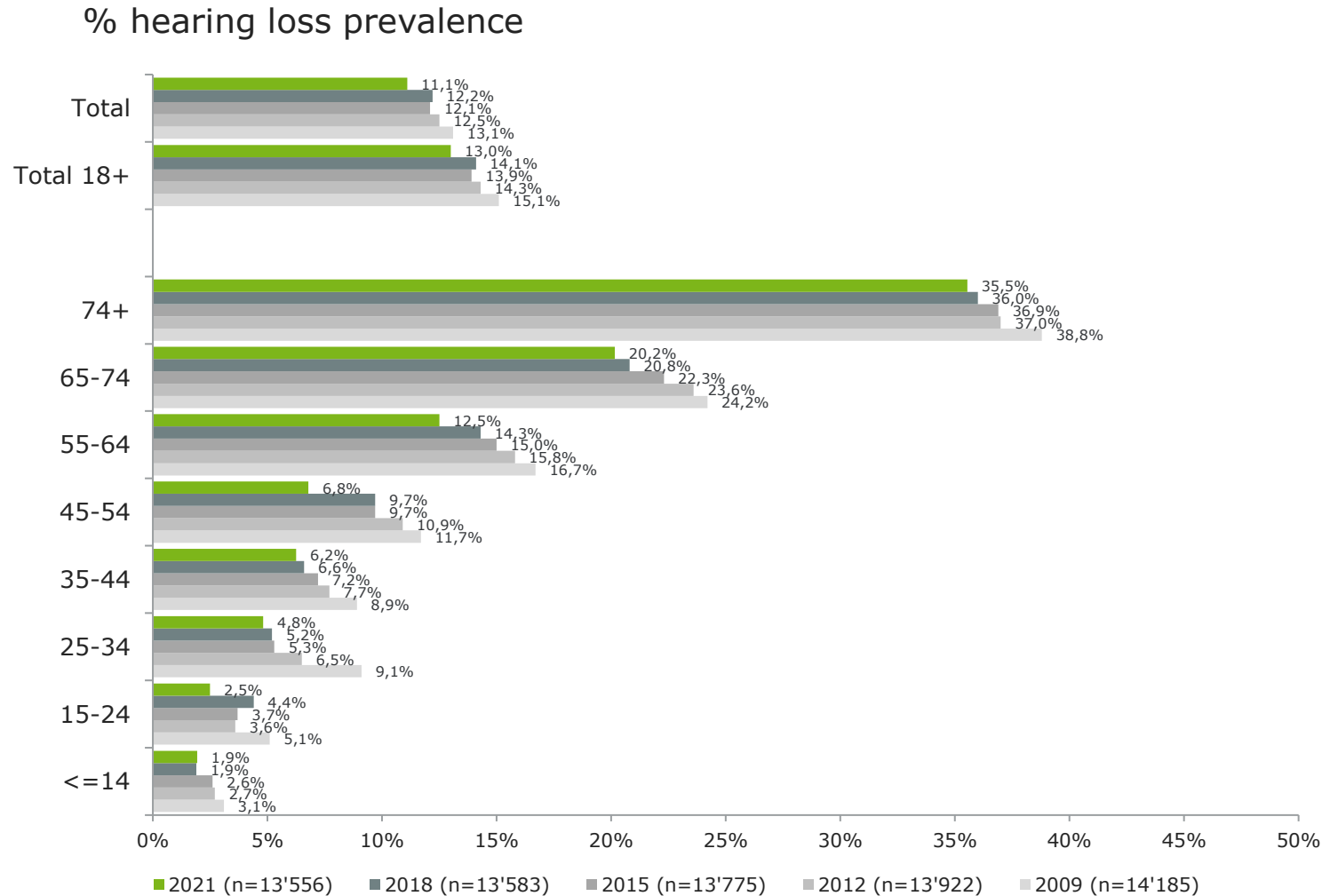
Prevalence of hearing loss and adoption rate

Hearing loss and hearing instrument ownership by gender/age

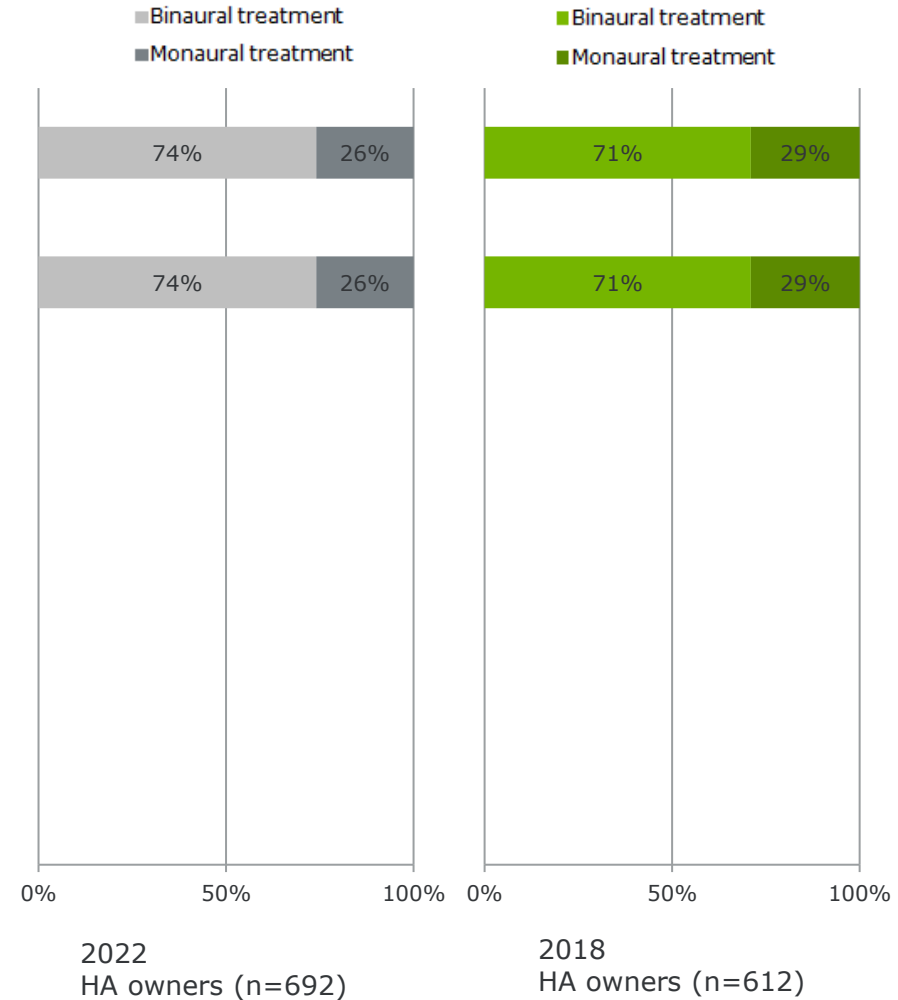
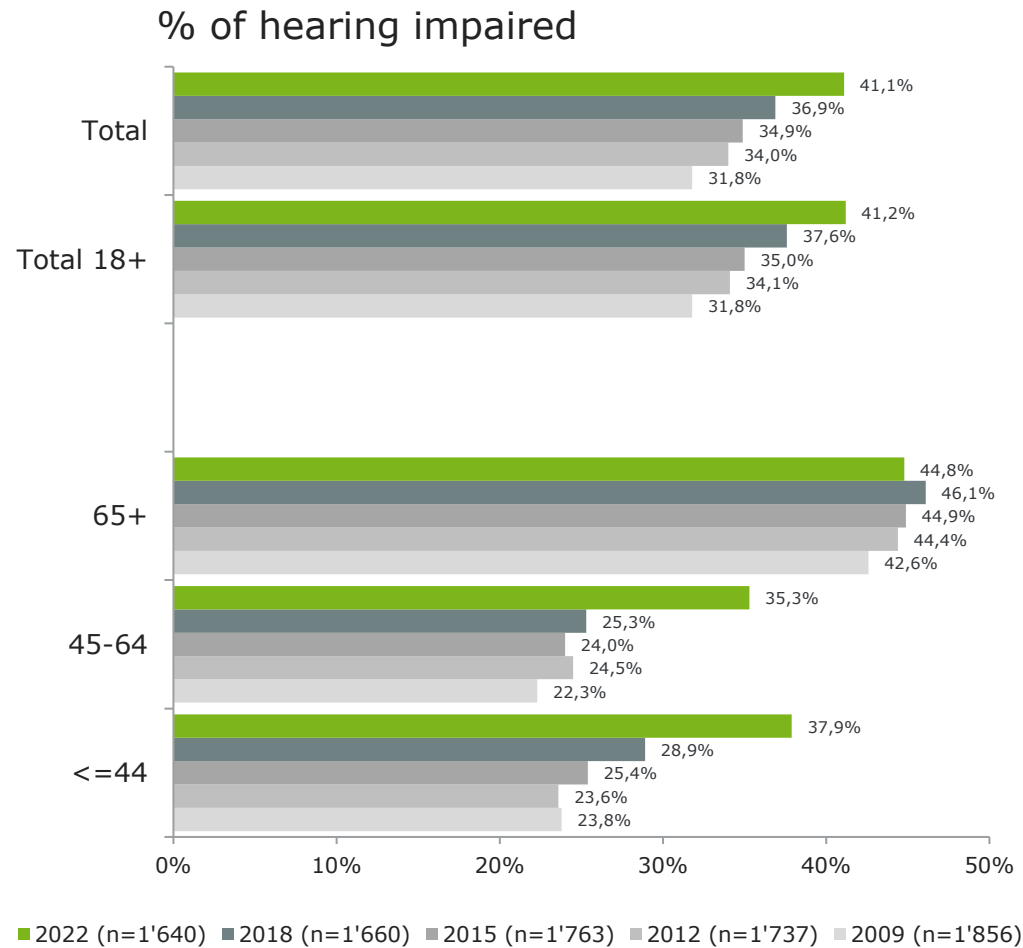


Hearing loss prevalence Germany

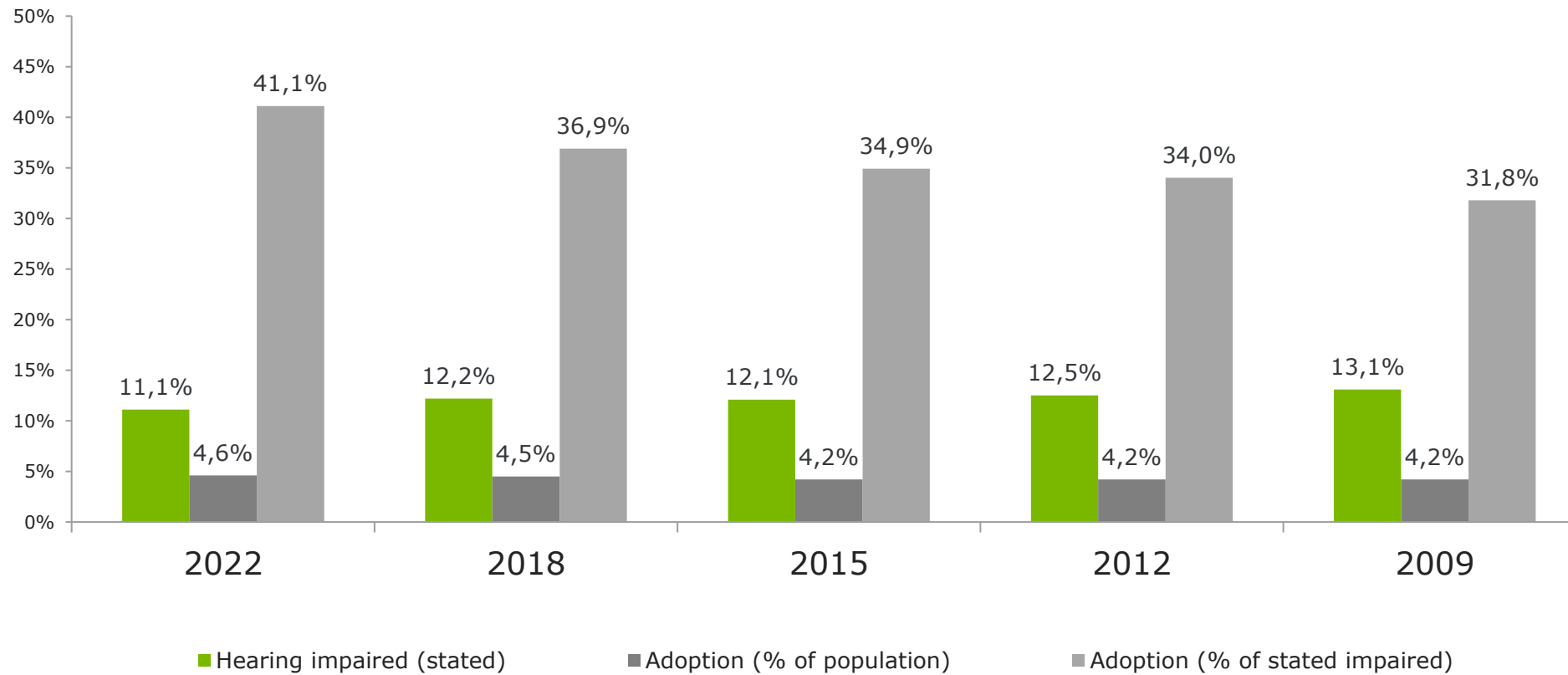
Self declared hearing loss



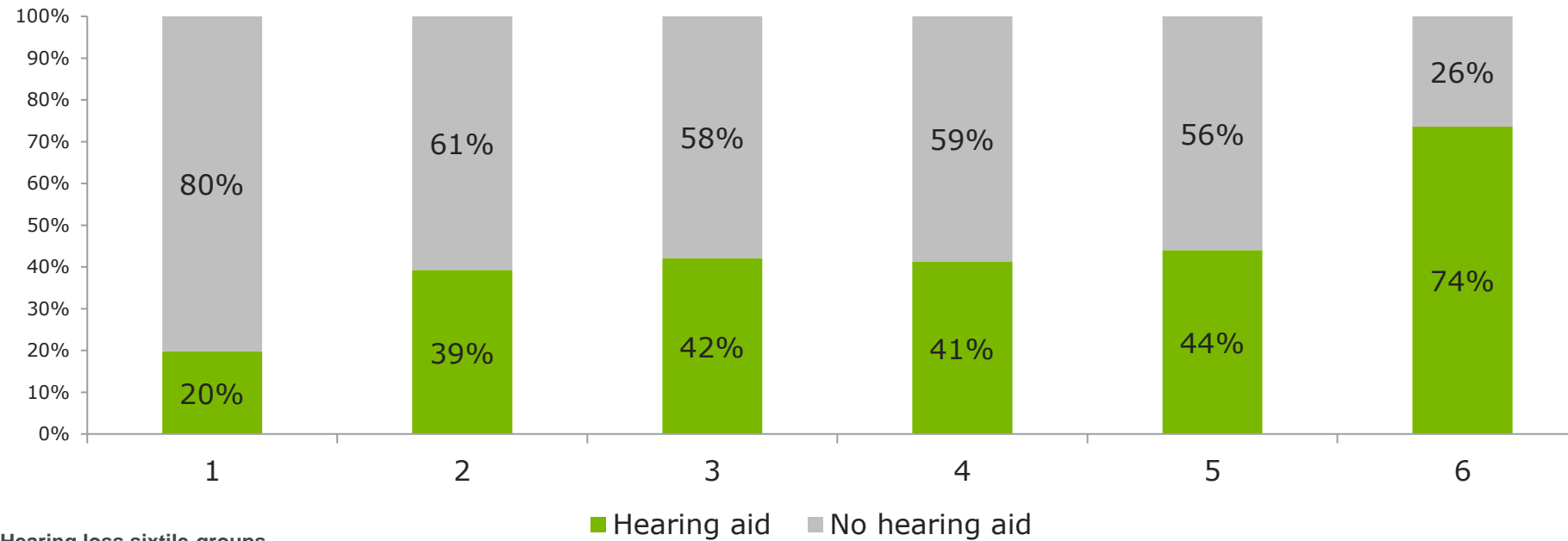
Hearing aid adoption rate: 41% of hearing impaired have hearing aid(s), 74% of them have binaural treatment



Overview hearing loss prevalence and hearing aid adoption



The more severe the hearing loss, the higher the adoption rate



HA-non-owner, n=611
HA-owner, n=702

* Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC - like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).



Hearing loss

Hearing loss characteristics: Owners compared to non-owners

	HA-Non-owner n=611	HA Owner n=702	Hearing Aid Adoption (%)
Ears impaired (stated)			
Unilateral loss	35%	16%	26%
Bilateral loss	65%	84%	50%
Perceived loss			
Mild	40%	12%	17%
Moderate	50%	57%	45%
Severe	8%	23%	70%*
Profound	2%	8%	

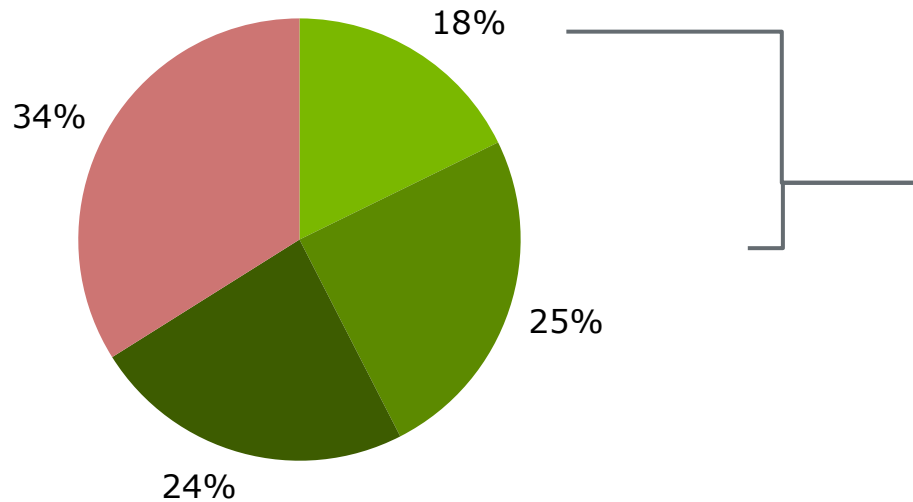
* combined "severe" and "profound" because n is too small

Hearing tests and where hearing is tested

Hearing Tests: 43% had a hearing test in the last 5 years (2018: 45%), most tests done by ENTs

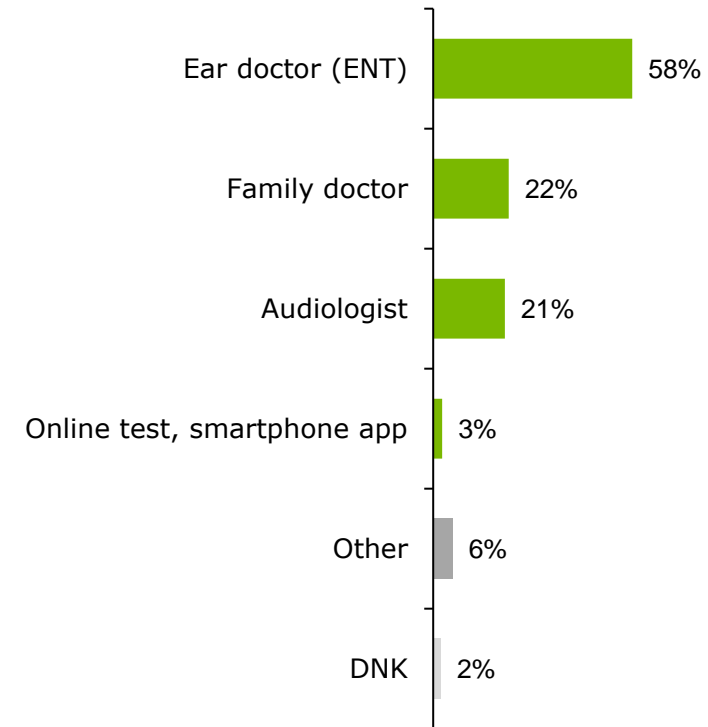
Have you ever taken a hearing test?

- Yes, in the last 12 months
- Yes, in the last 1-5 years
- Yes, more than 5 years ago
- No, never



Base=10'353

Where/how was your hearing tested?

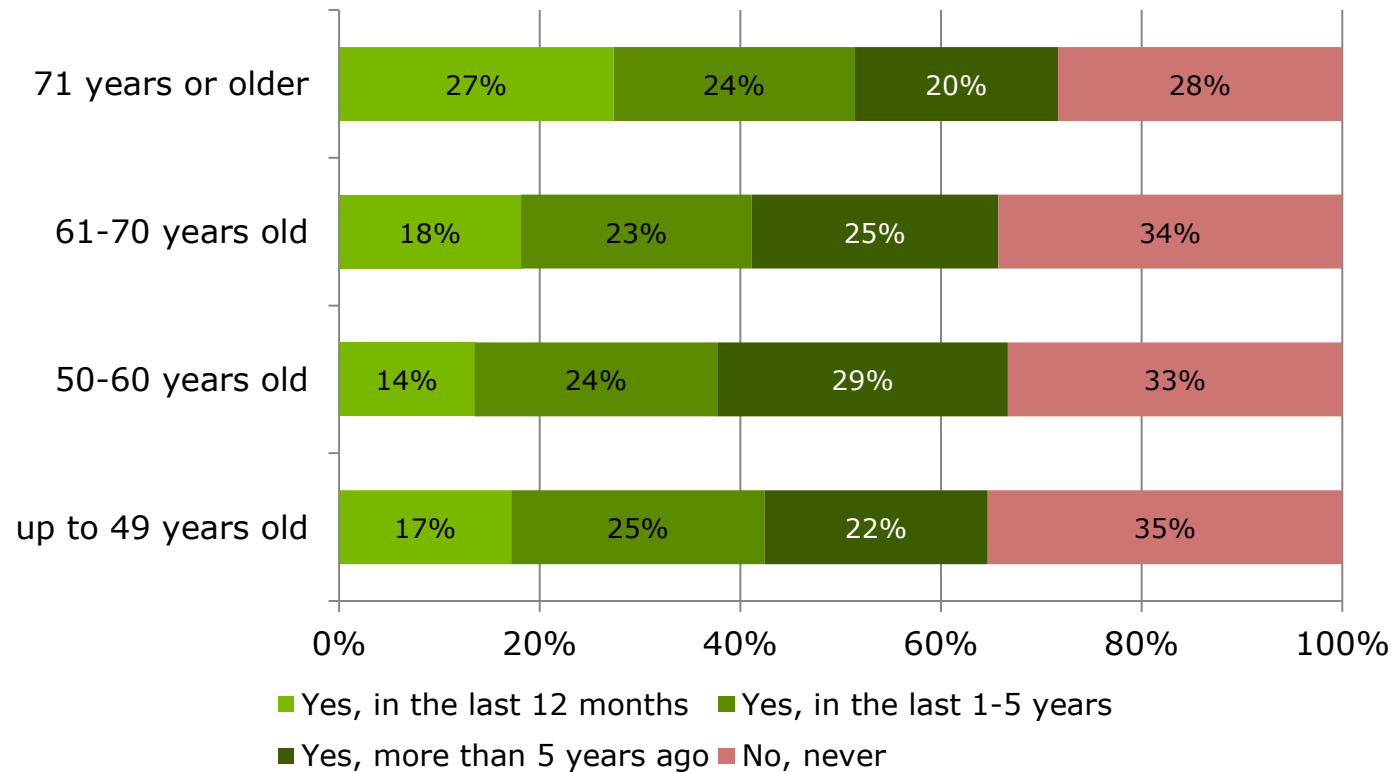


Base= 4'356



Hearing Tests by age group: 27% of the people over 70 have been tested within the last 12 months - but only 14% of the 50-60 y.o.

Have you ever taken a hearing test?



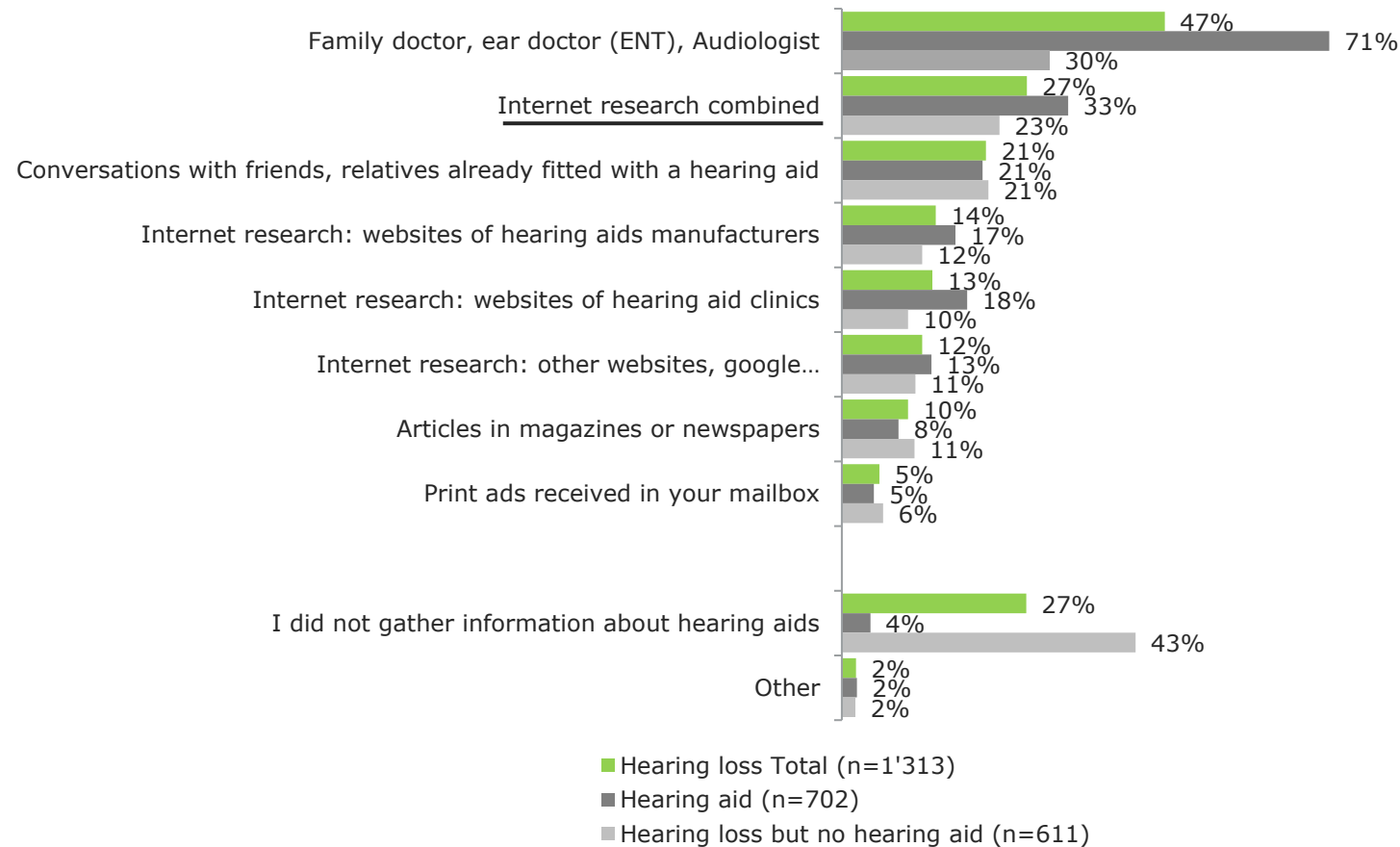
Base=10'353



The route to the hearing aid: Sources of information and drop-out rates

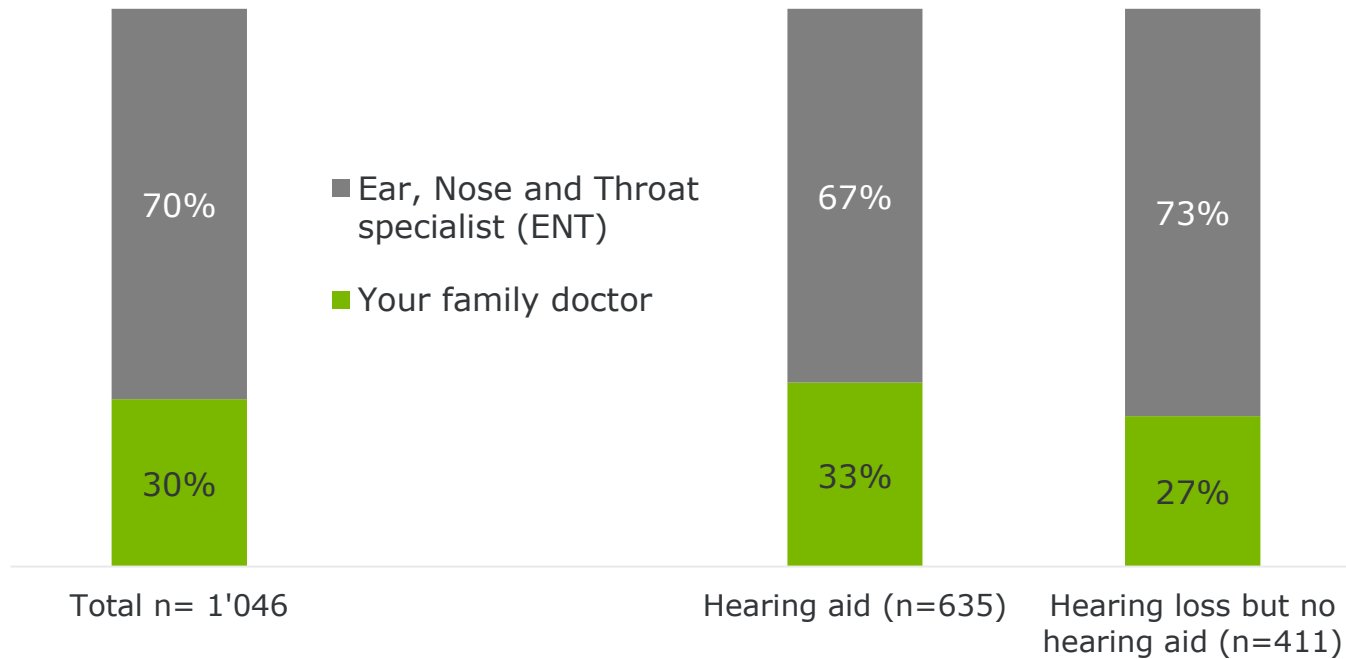
Doctors/HCPs are the most important sources of information and therefore the major gatekeepers.

Where did you gather information about hearing aids?

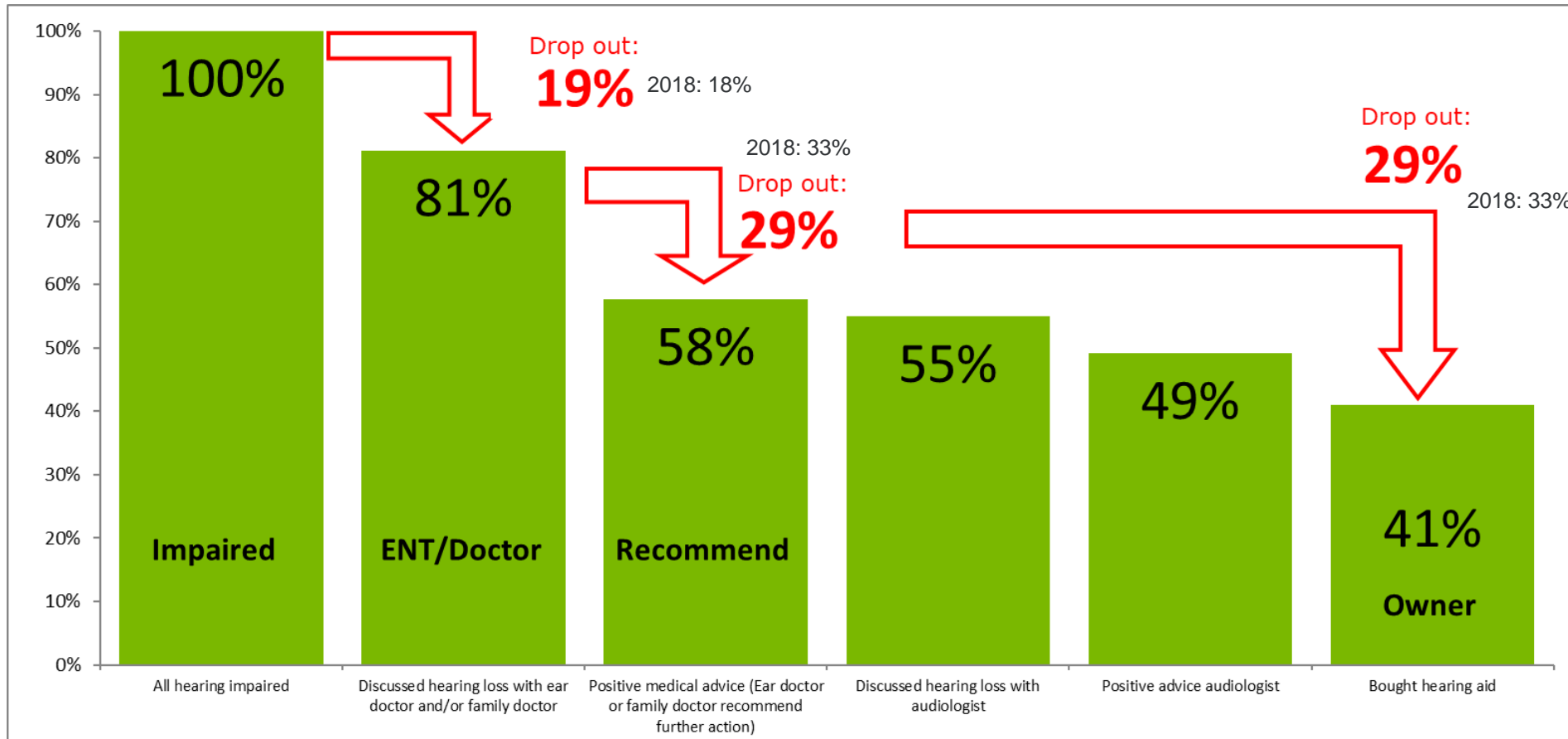


Of those who discussed the hearing loss with a doctor, 70% talked to an ENT first.

Those who discussed hearing loss with family doctor and/or ENT:
 Who was the doctor you discussed your hearing loss with for the **first time** – your family doctor or the Ear, Nose and Throat specialist (ENT)?



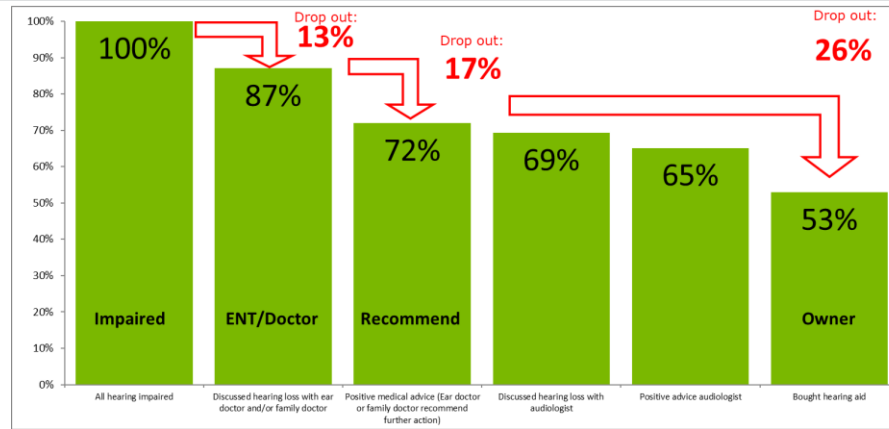
The route to the hearing aid



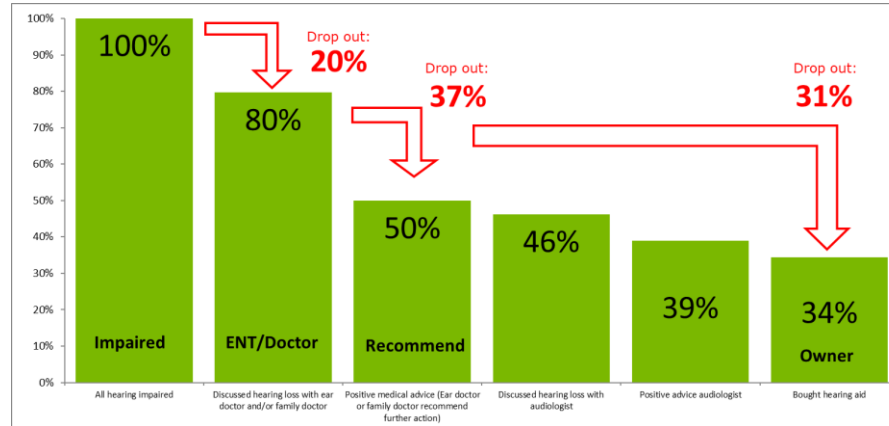
n=1'313

Much higher drop-out-rates for the lower hearing loss segments

Top 50% hearing loss*



Low 50% hearing loss*



n=1'313

* Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC - like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

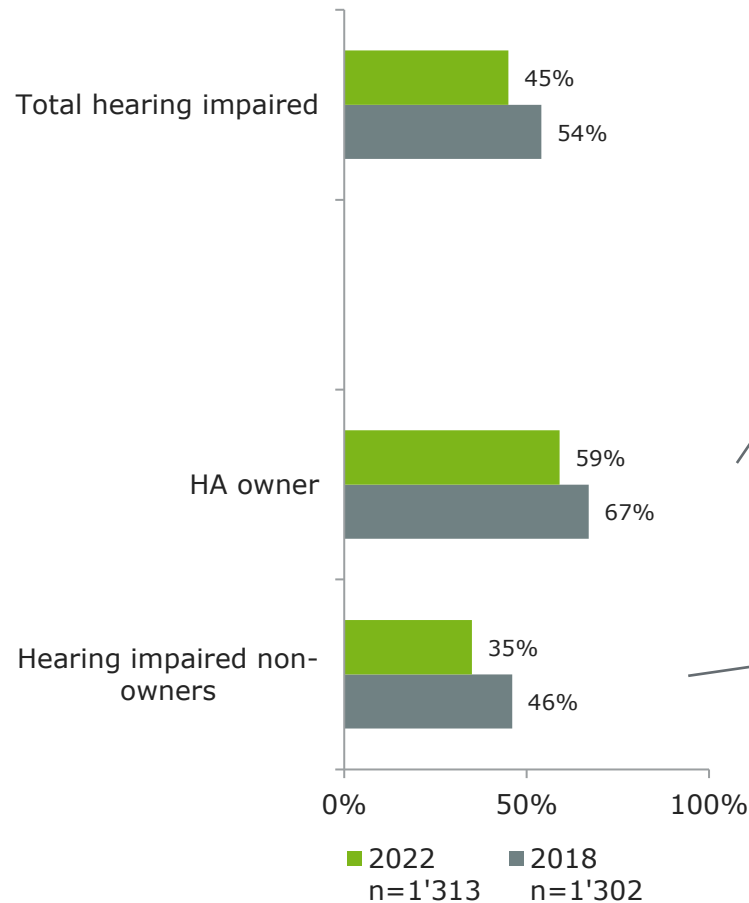
→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).



The route to the hearing aid: GP/Family doctor

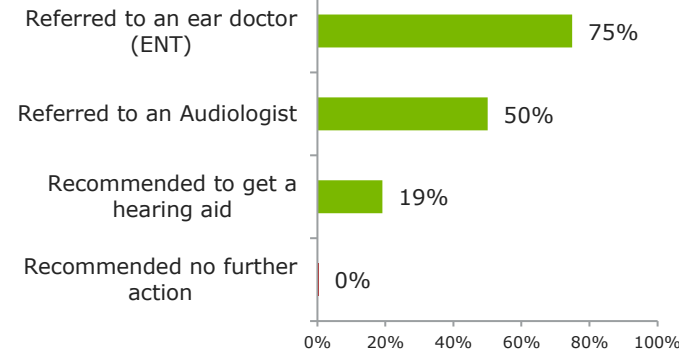
Have you discussed your hearing problem with your family doctor?

% Discussed with GP

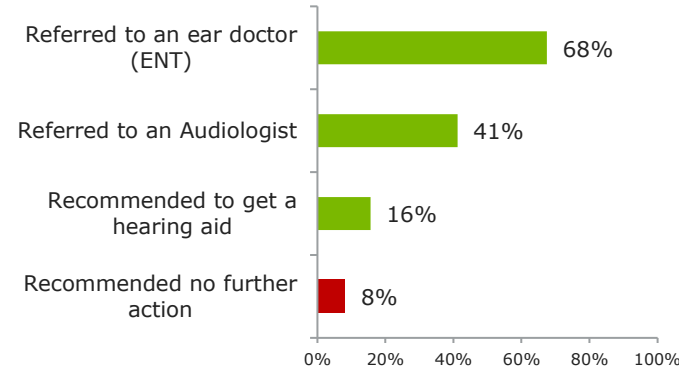


What did he/she recommend ?

HA owner (n=xxx)



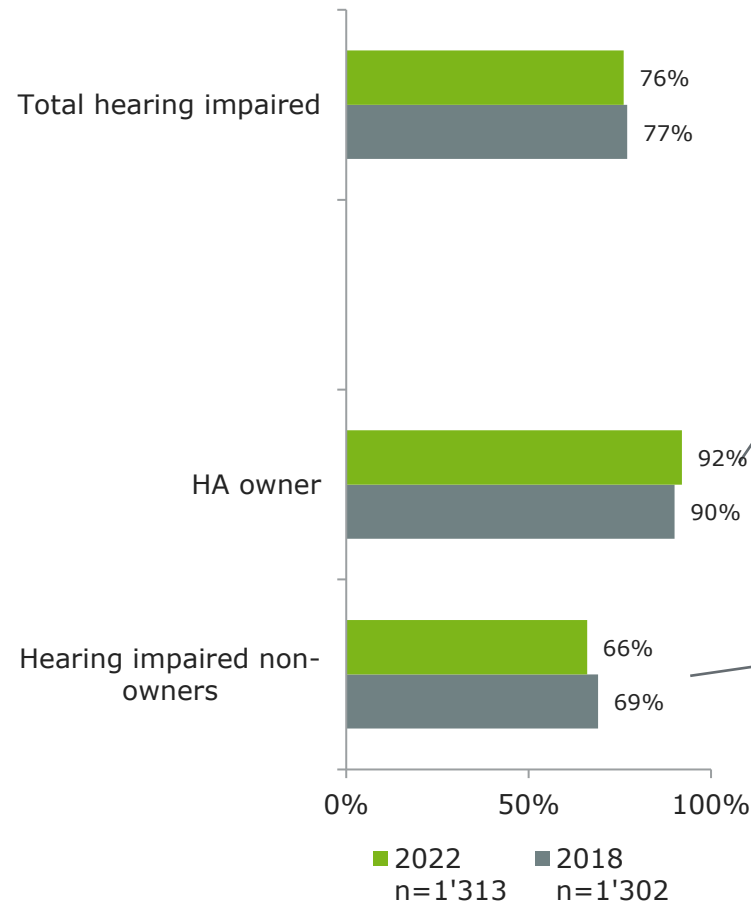
Impaired non-owner (n=xxx)



The route to the hearing aid: ENT

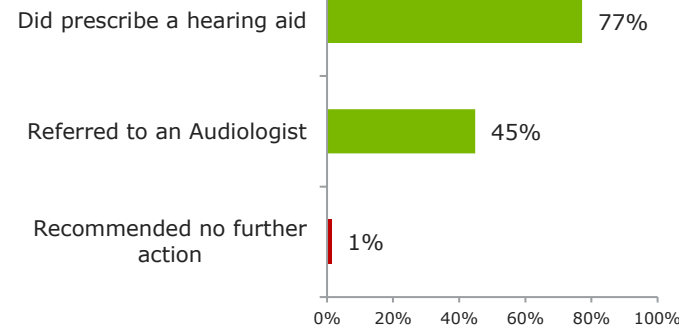
Have you ever discussed your hearing problem with an Ear, Nose and Throat specialist (ENT)?

% Discussed with ENT

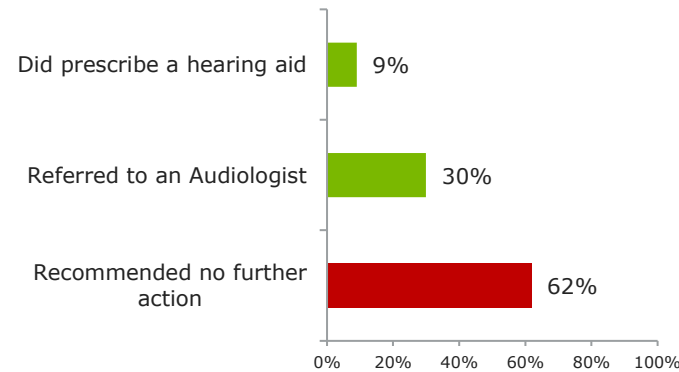


What did he/she recommend ?

HA owner (n=xxx)



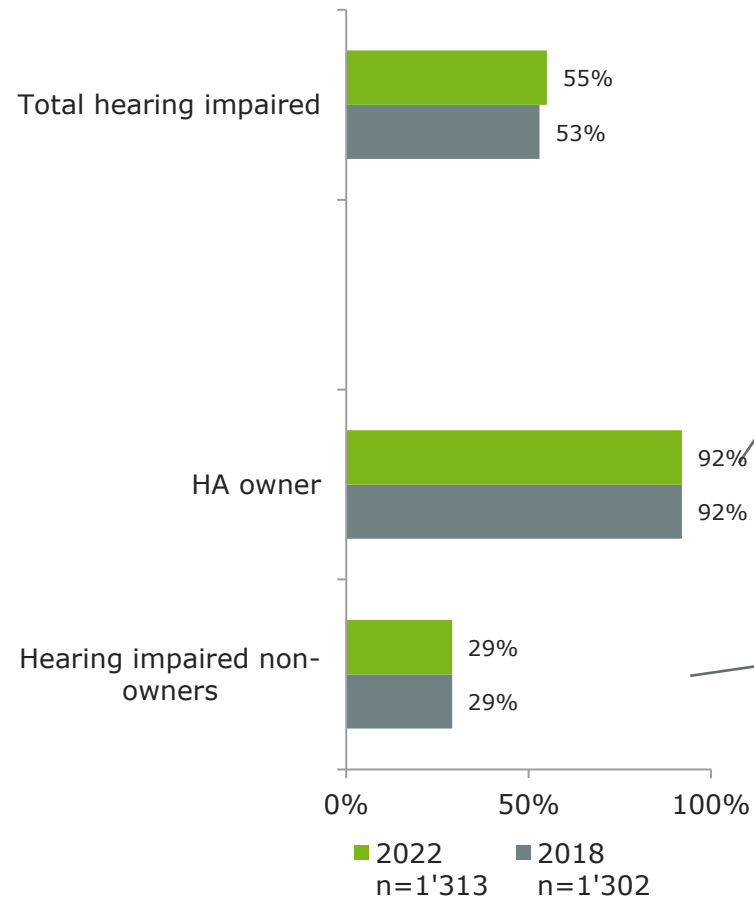
Impaired non-owner (n=xxx)



The route to the hearing aid: Audiologist

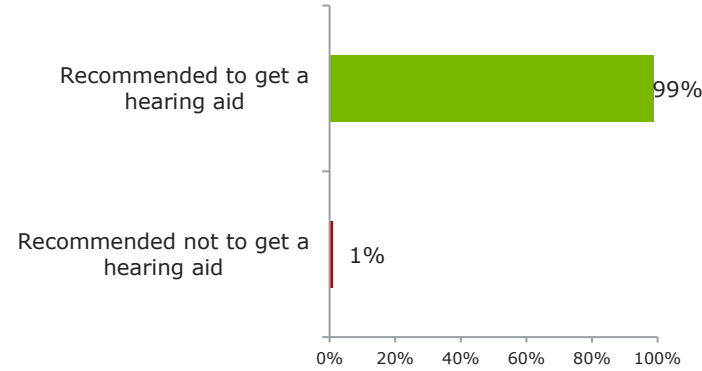
Have you ever discussed your hearing problem with an Audiologist?

% Discussed with Audiologist

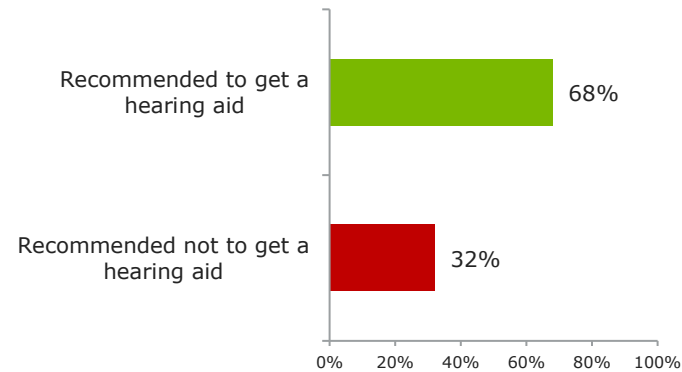


What did he/she recommend ?

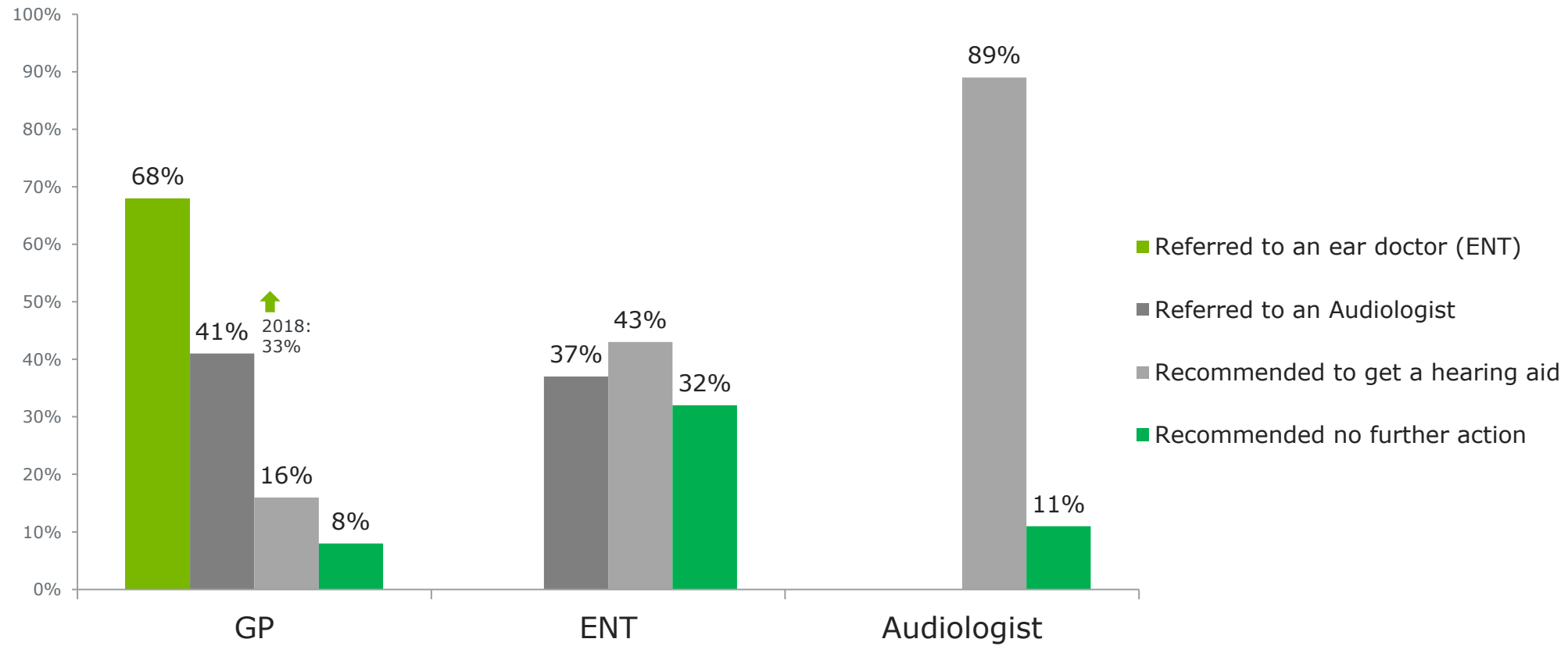
HA owner (n=649)



Impaired non-owner (n=174)



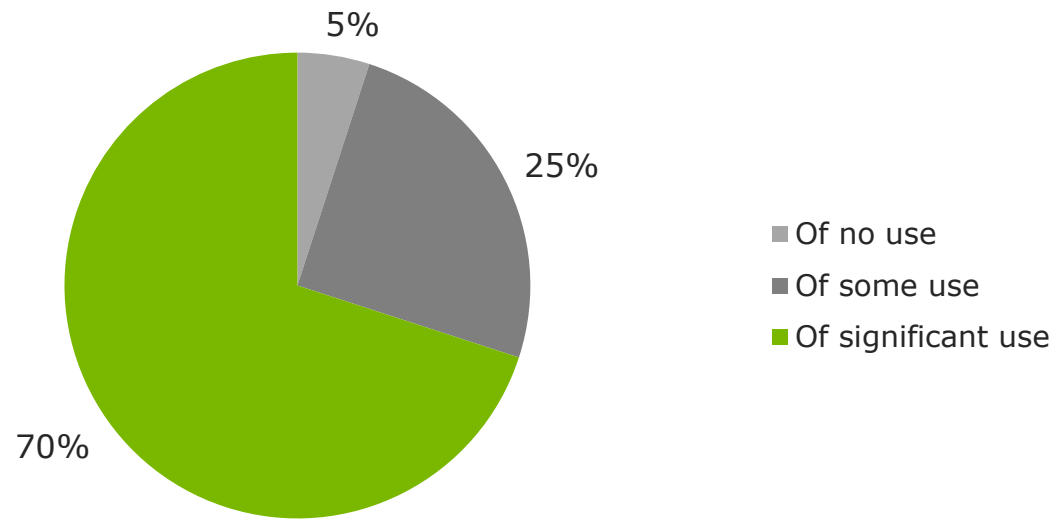
Recommendations by profession



Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities

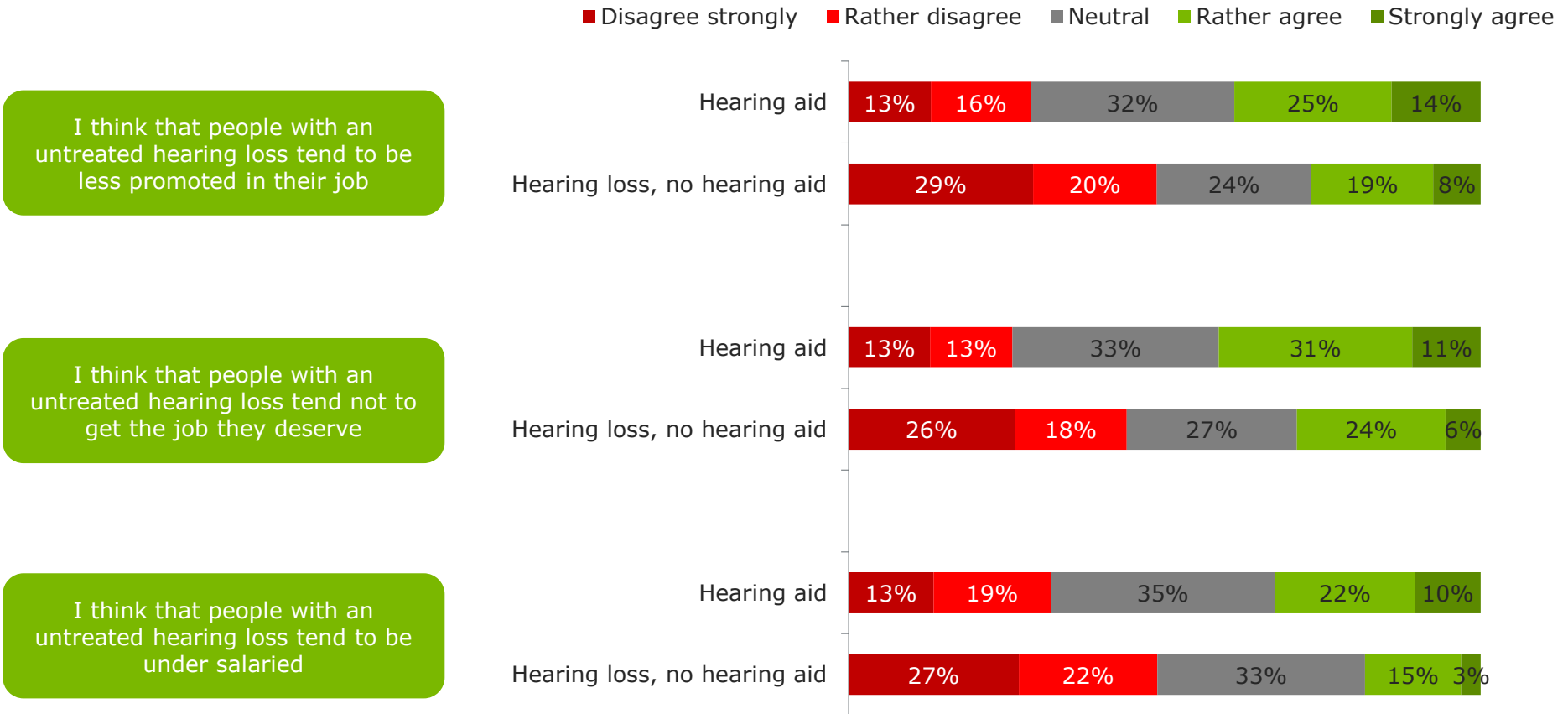
Work competitiveness: 95% of the working hearing aid owners state their hearing aid(s) are useful on their job.

How useful are your hearing aids on your job?



n=197

Work competitiveness: People with hearing aids recognize that hearing aids increase the chance of hearing impaired to get promoted, to get the right job and to get more salary.



Base: Hearing loss, no hearing aid n=486/ hearing aid n=528



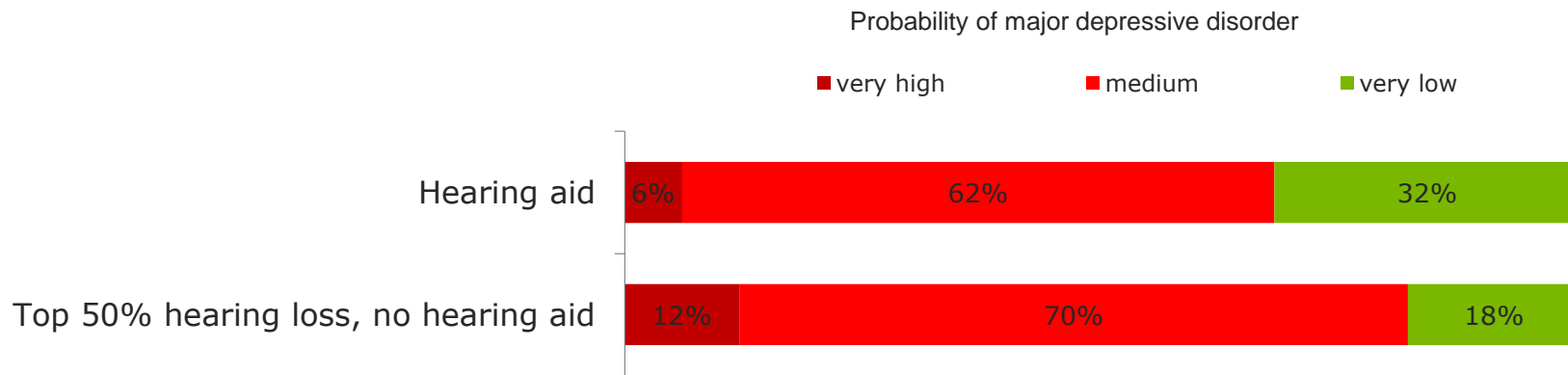
General health problems: Hearing aid owners have a lower risk of being depressed (PHQ-2 Screening) compared to impaired non-owners with comparable hearing loss (Top50% hearing loss group*).

Depression symptoms:

PHQ-2 Screening:

In the last 2 weeks:

- Little interest or pleasure
- Feeling down, depressed, hopeless

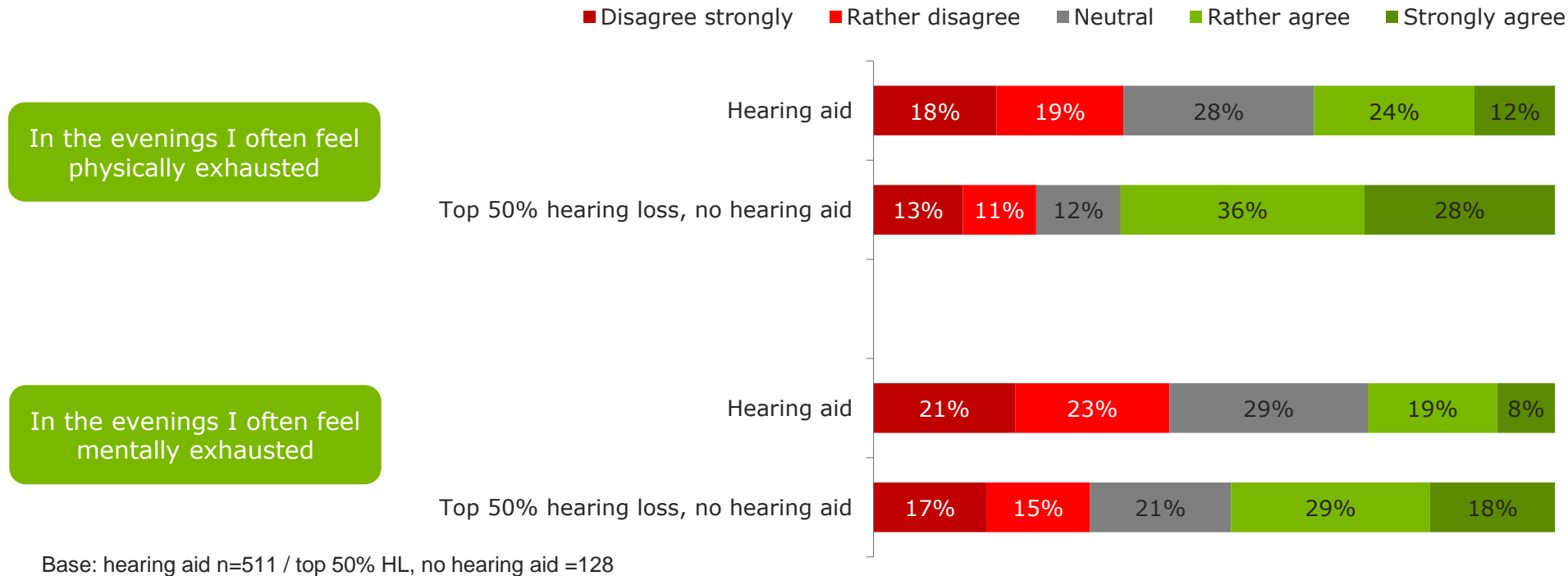


Base: hearing aid n=514 / top 50% HL, no hearing aid =130

*Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

- Number of ears impaired (one or two)
 - Stated hearing loss (Mild to Profound)
 - Scores on 6 APHAB-EC - like questions (Scaled 1-5)
 - When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise
- People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).

General health problems: Compared to impaired hearing aid non-owners with significant hearing loss (Top50% hearing loss group*), hearing aid owners feel less exhausted in the evenings



*Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

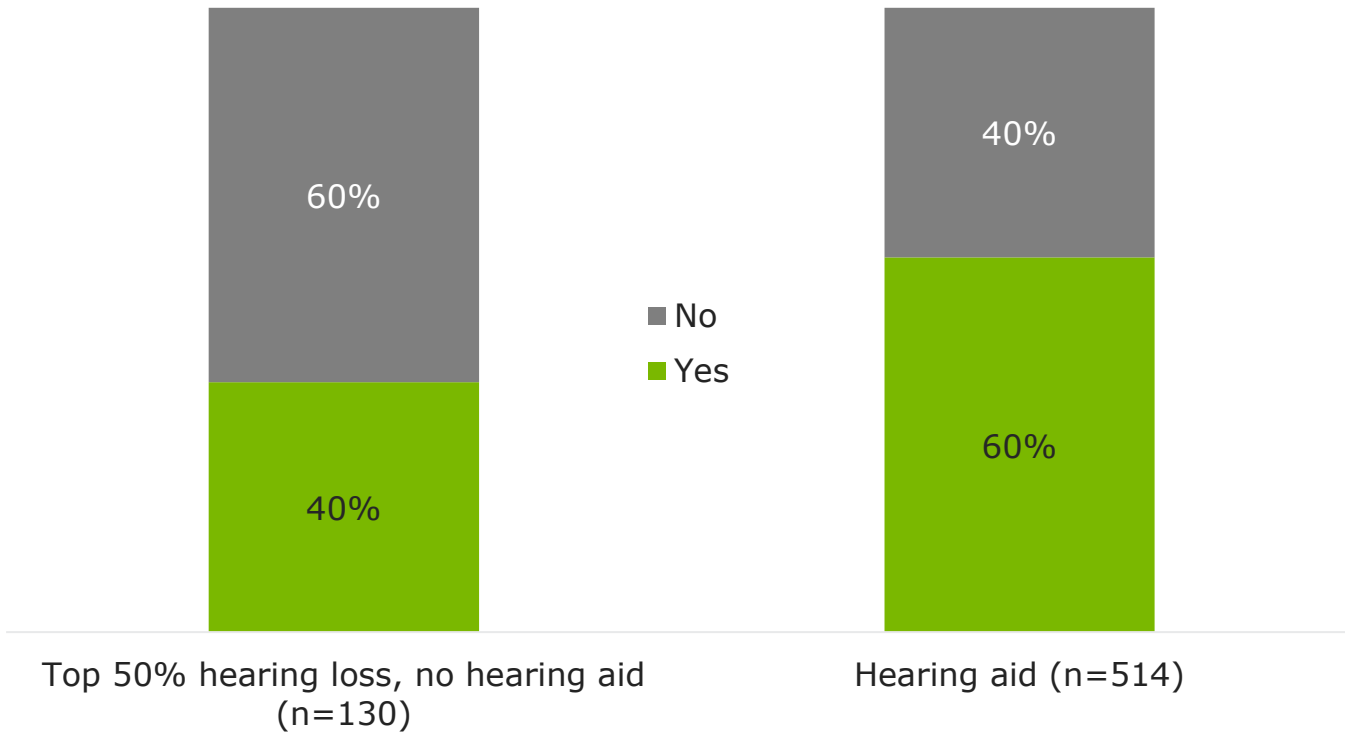
- Number of ears impaired (one or two)
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→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).



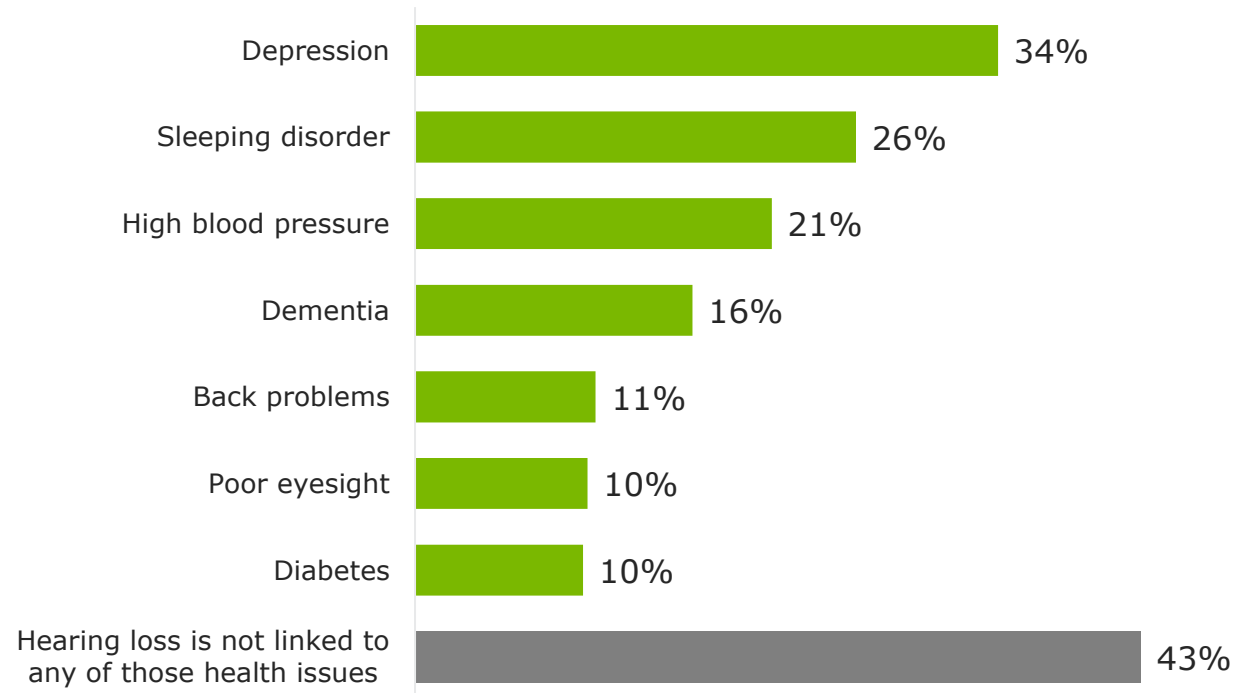
General health problems: Quality of sleep seems to improve if hearing impaired use hearing aids

Are you generally satisfied with the quality of your sleep?



34% of all hearing impaired think that hearing loss could be linked to depression

Please tick all of the health issues below which you think could be linked to one's hearing loss.

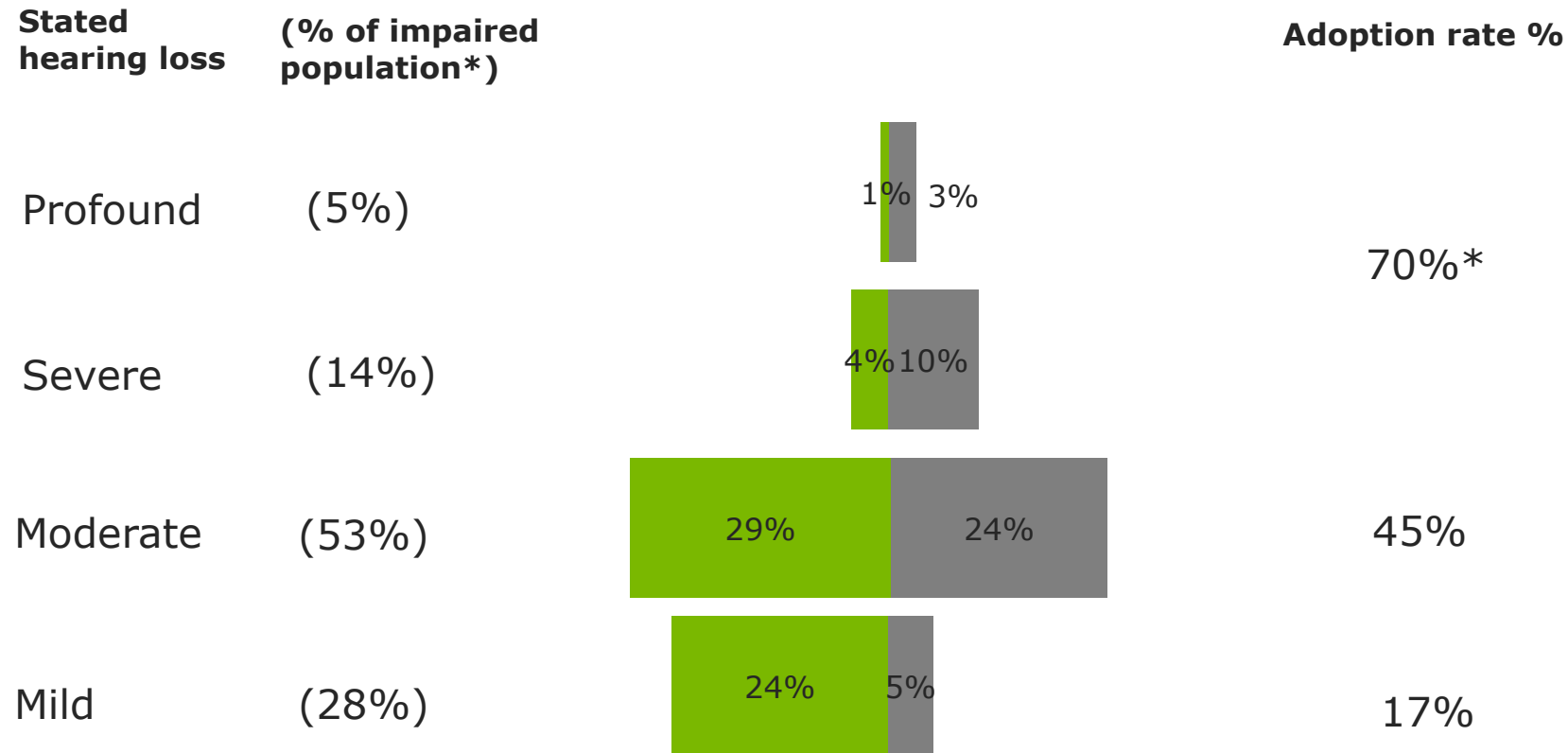


Hearing impaired, n=1'313

3. Analysis of hearing aid owners

Hearing aid ownership, awareness of hearing loss before getting hearing aids, lifetime of hearing aids and usage

Low adoption rates within mild hearing loss



n=1'313

Sums can differ from 100% due to rounding

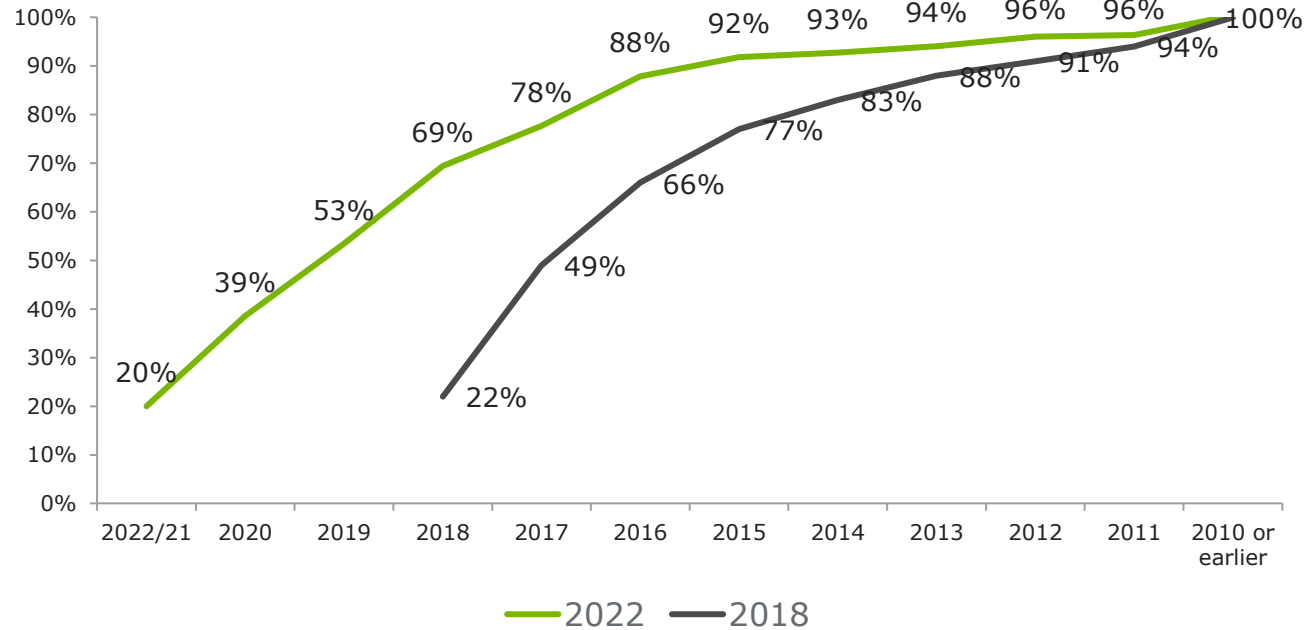
* combined "severe" and "profound" because n is too small

■ No hearing aid
■ Hearing aid



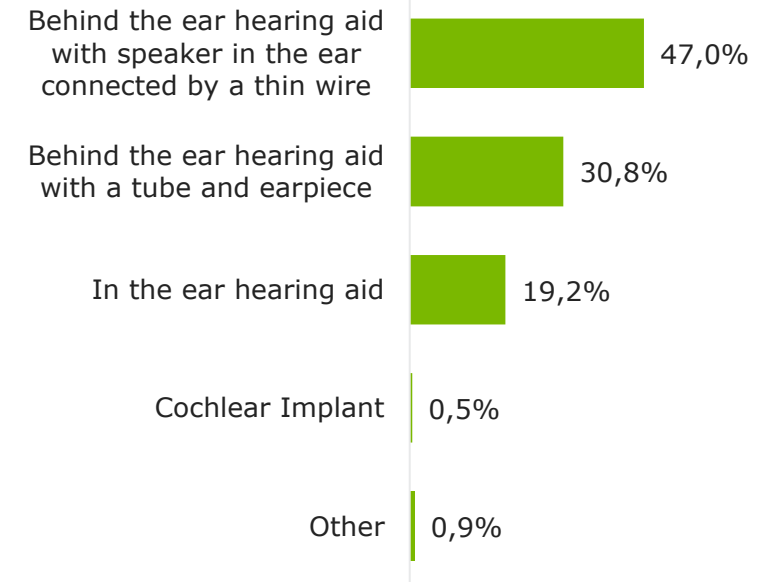
53% of the currently owned HAs were acquired in 2019 or later - RIC is the most often purchased type of HA.

Year of purchase



Age of currently owned HAs (Mean):
2022: 3.4 years
2018: 2.9 years

Type of HA

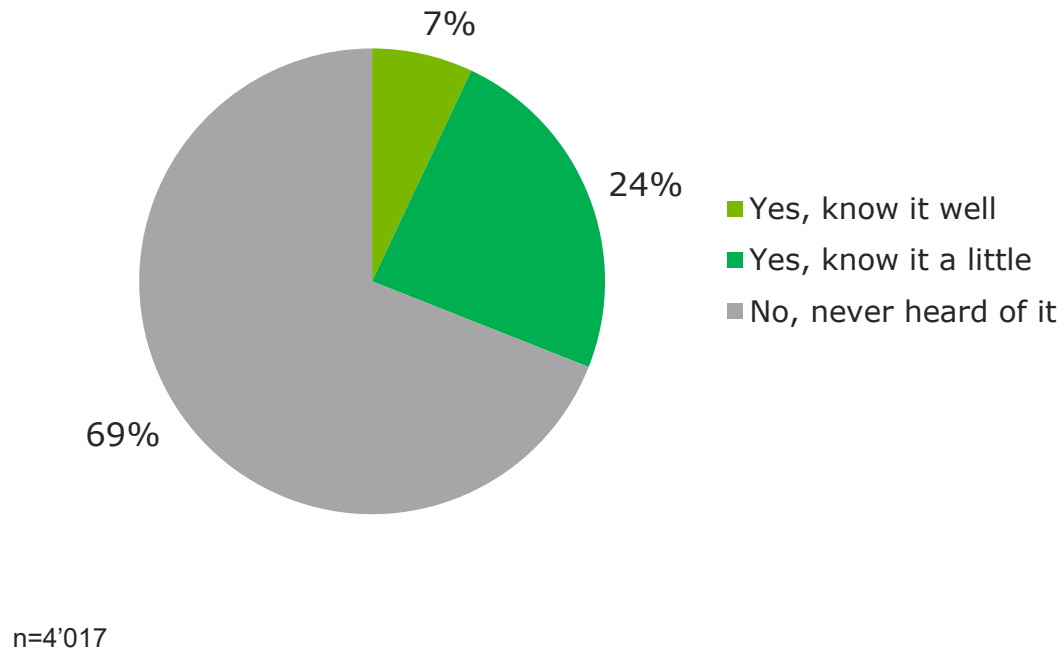


HA-owner, n=702

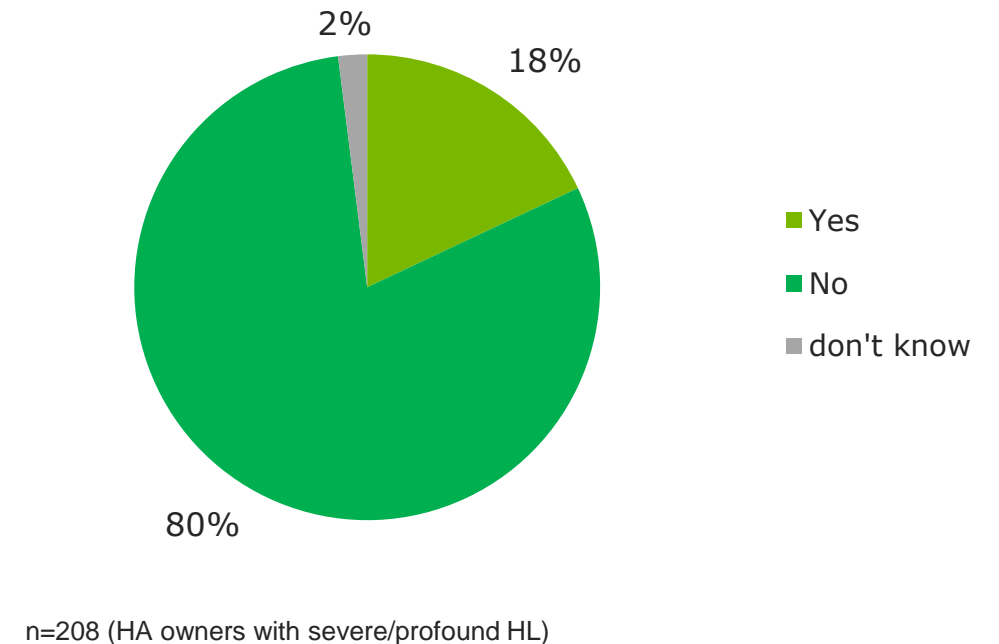


69% of the population in Germany have never heard of Cochlear Implants. 18% of the HA owners with severe/profound HL have been informed about CIs by a medical professional.

Do you know what a cochlear implant (CI) is?

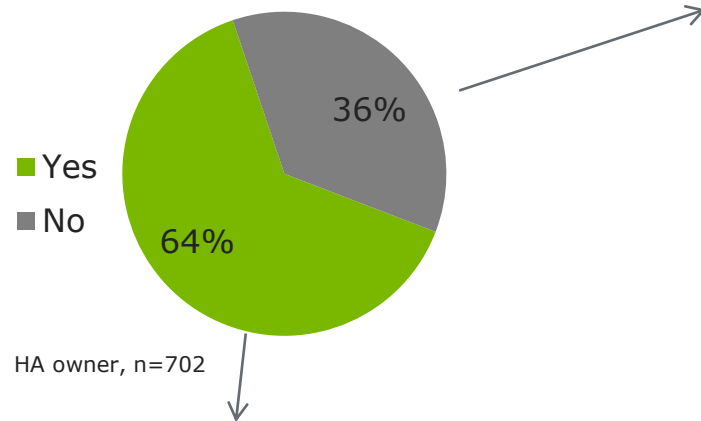


Have you been informed about cochlear implants by a medical professional?

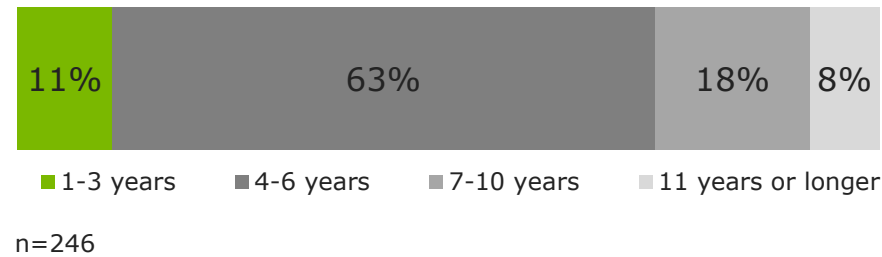


Hearing aids are used for 6 years before they are being replaced. On average 3 years pass between becoming aware of the hearing loss and the purchase of hearing aids.

Current HAs = first HAs?



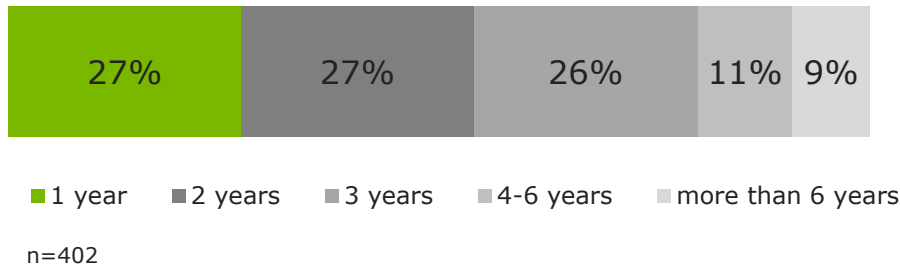
How many years did you own your previous HAs?



Age of HA before it has been replaced:
 2022: 6 years (median)
 2018: 6 years (median)

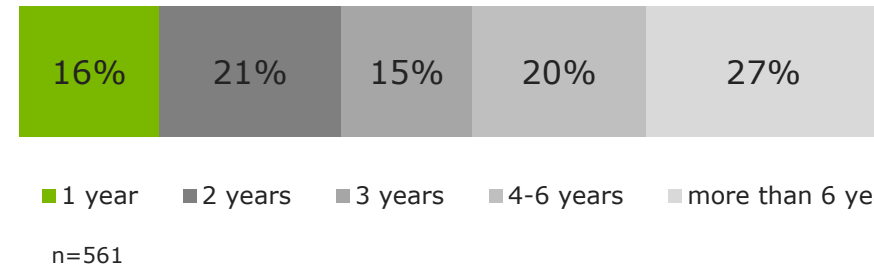
HA owners (1st HA):

Thinking back before you acquired your first hearing aid: How many years have passed since you became aware of your hearing loss until you acquired a hearing aid?



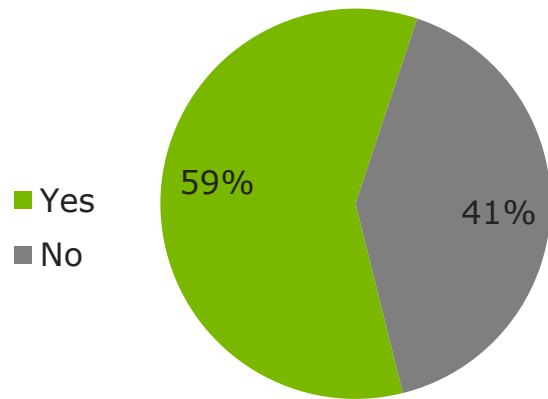
HA non owners:

How many years had passed since you became aware of your hearing loss?



59% of all HA owners think they should have gotten their HAs sooner! Main reason is missing out on social life.

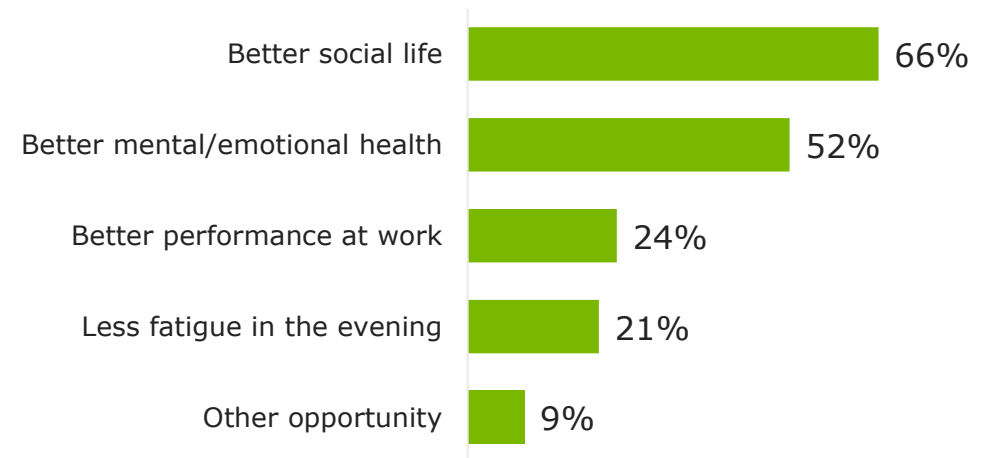
Thinking back before you obtained your first hearing aid(s): do you think, you should have gotten them sooner?



HA-owner, n=702

IF YES:

What are the reasons why you think you should have gotten your hearing aid(s) sooner? What are the opportunities you think you have missed because of this? Please tick all that apply

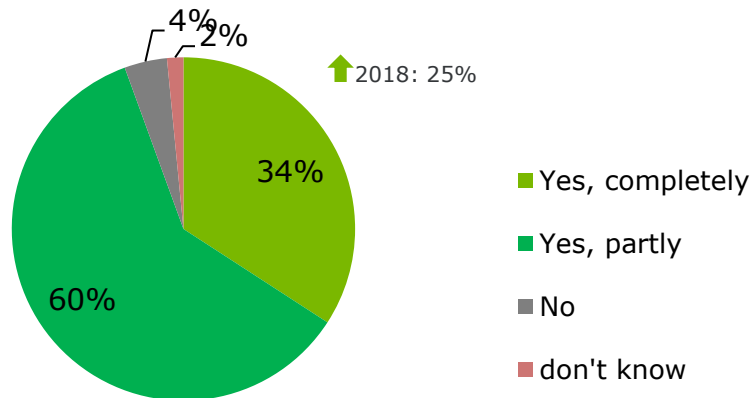


n=430



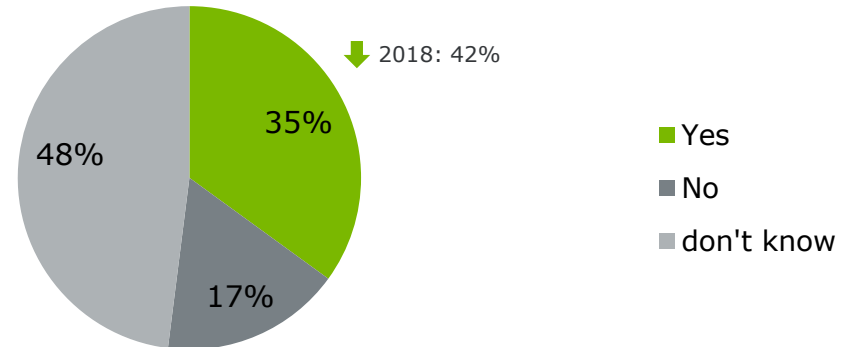
94% received 3rd party payment – share of fully reimbursed has increased since 2018!

Owners: Was any part or all of your hearing aid(s) paid for by a third party? (Insurance, Government, ...)



HA-owner, n=702

Non-owners: Based on your current knowledge, would any part or all of your hearing aid(s) be paid for by a third party? (Insurance, Government, ...)



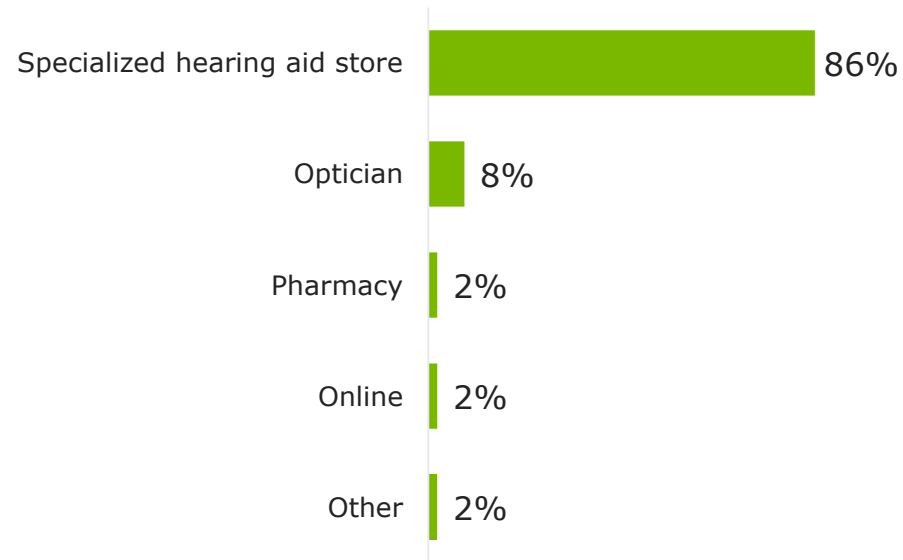
HA-non-owners, n=611



Specialized hearing aid store is by far the preferred place for obtaining hearing aids (both for owners and non owners).

OWNERS:

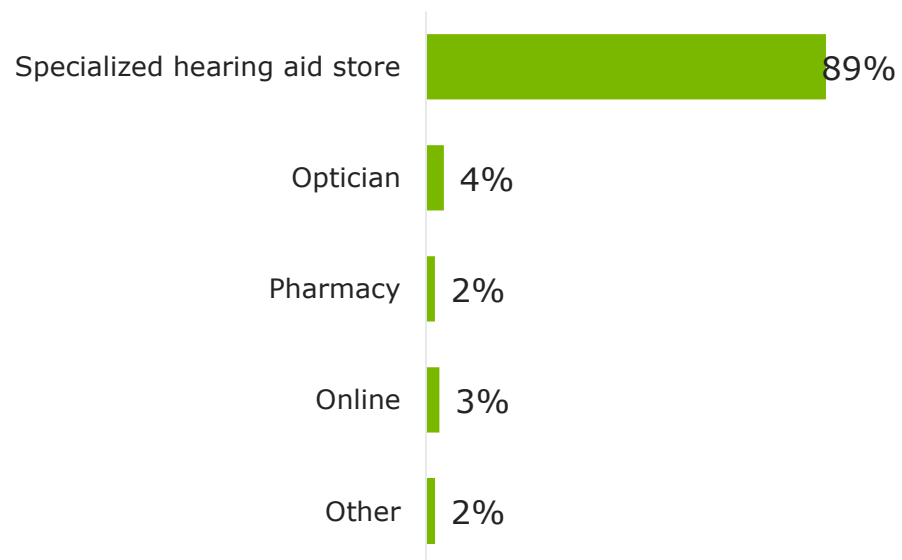
Where was your most current hearing aid obtained?



HA-owner, n=702

NON OWNERS:

If you were to get hearing aids, where would you go?

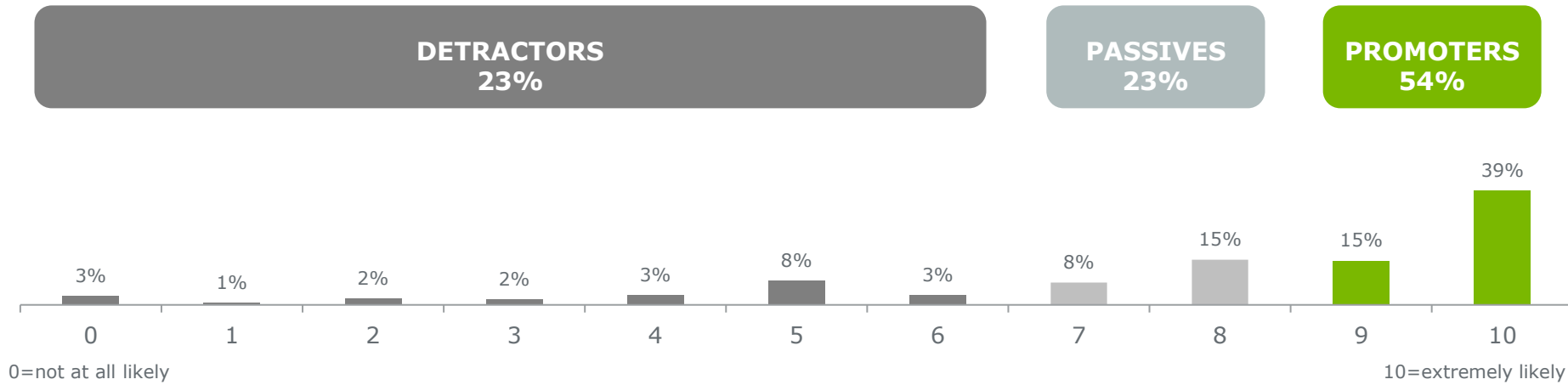


HA-non-owner, n=611



Recommendation intention of the place where the hearing aid(s) have been obtained is high, with a positive NPS score of 31.

Considering your complete experience, how likely would you be to recommend the place where you obtained your hearing aids to a friend or colleague?



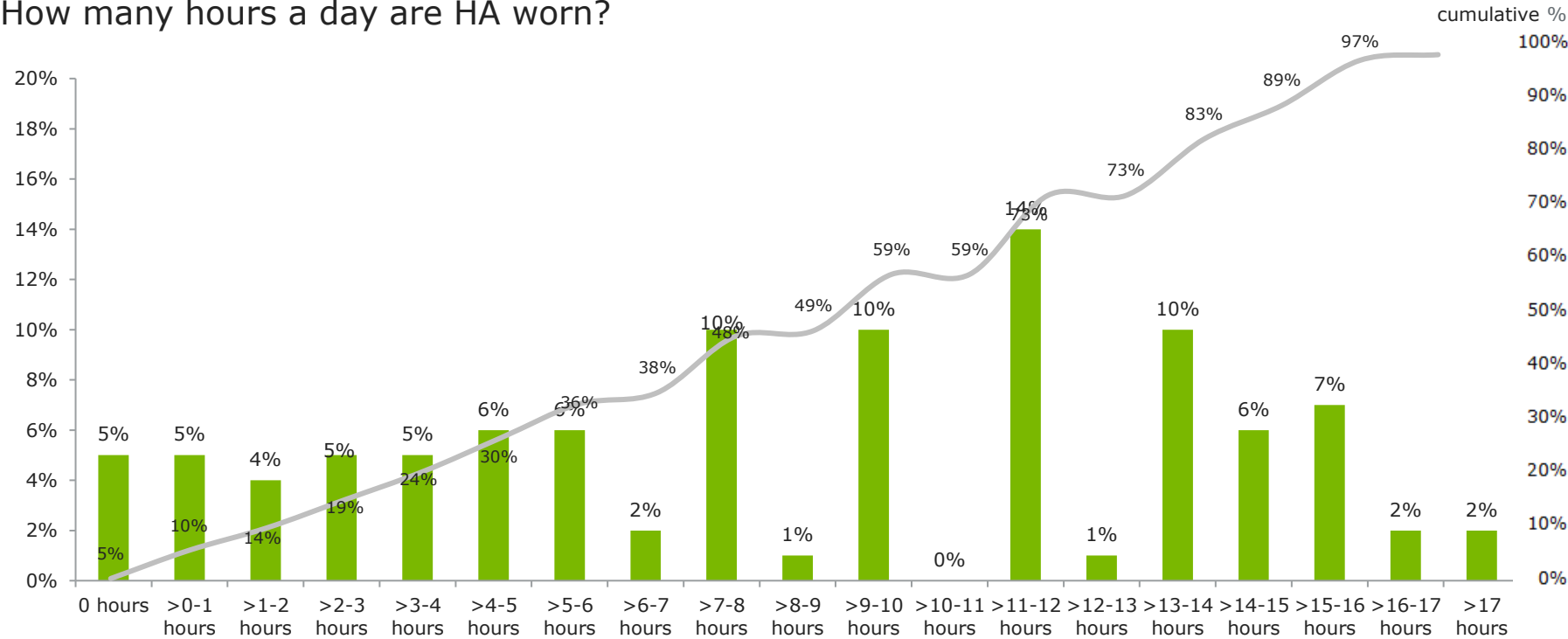
NPS = PROMOTERS – DETRACTORS = 31

HA-owner, n=702



On average, HAs are worn 8.9 hours a day

How many hours a day are HA worn?



HA worn:
 2022 Mean: 8.9 hours/day
 2018 Mean: 9.0 hours/day

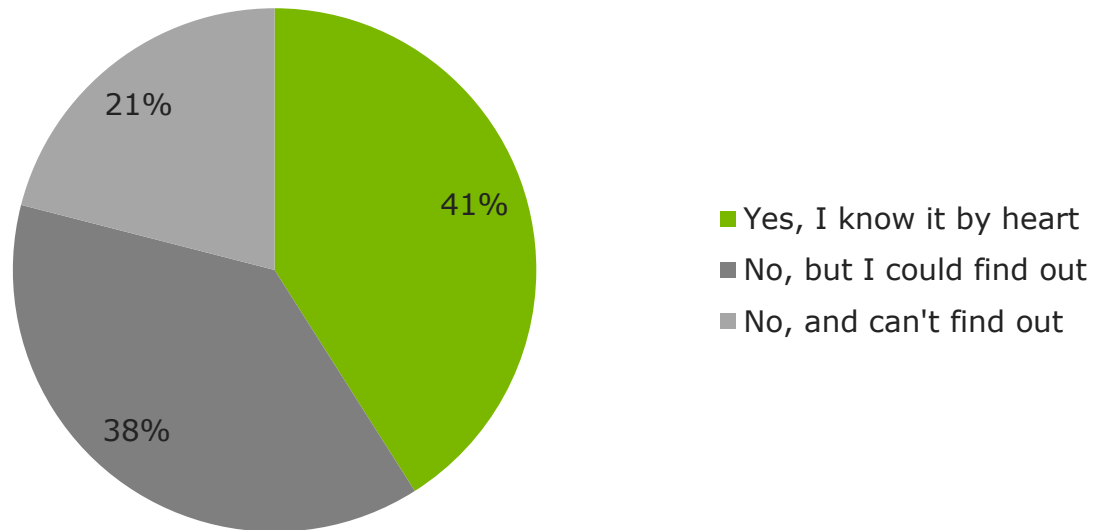
In the drawer (0 hours):
 2022: 5%
 2018: 6%

HA-owner, n=702



41% of today's hearing aid owners are aware of their hearing aid brand

Are you aware of the brand of your hearing aid(s)?



HA-owner, n=702

25% of the HA owners use a hearing aid app, 76% of those are satisfied with it.

Have you been informed by your hearing care professional about hearing aid apps?
(HA owners, n=702)



Do you personally use apps for your hearing aids?
(HA owners, n= 702)

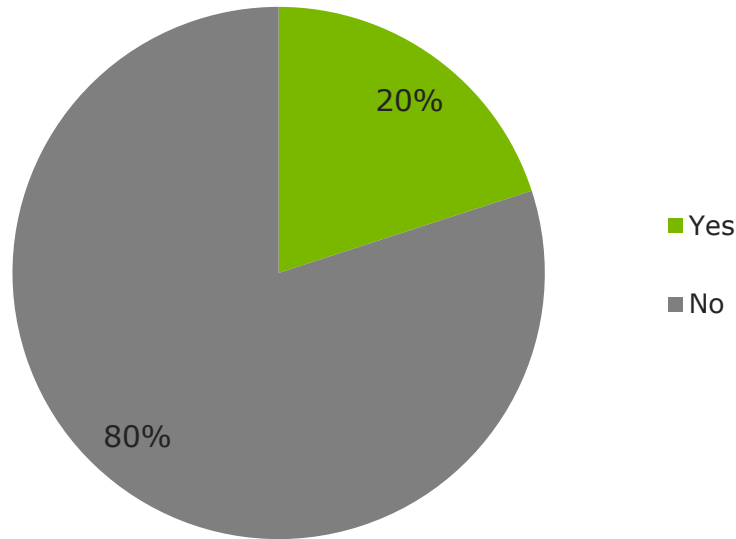


IF APPS USED (n=177):
Overall, how satisfied with the performance of your accessorie(s)?



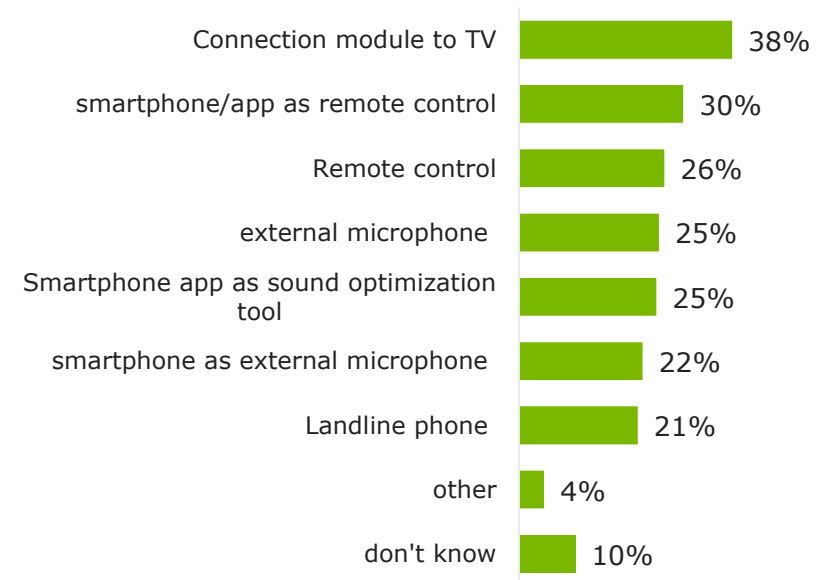
20% of the hearing aid owners use some kind of accessory for better speech understanding.

Do you use accessories for your hearing aids for better speech understanding?



HA-owner, n=702

What accessories for for better speech understanding do you use with your hearing aids?

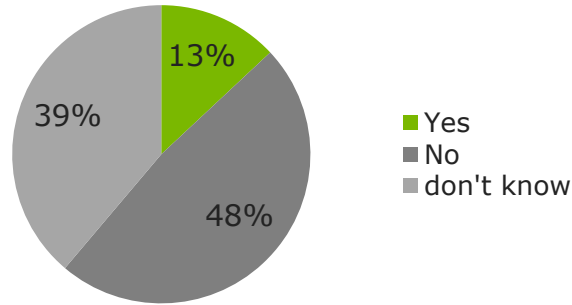


HA-owner (use accessories for SU), n=138



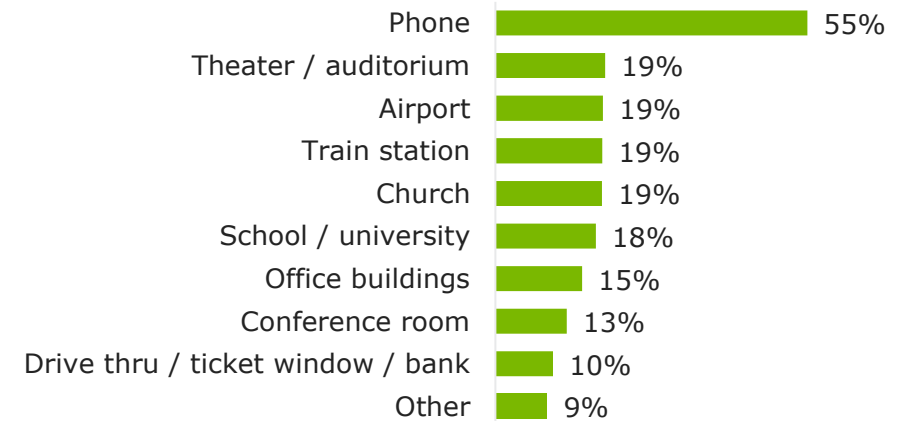
13% of the HAs are (to the knowledge of the owners) equipped with Telecoil. Main usage of Telecoil with phone.

Are your hearing aids equipped with Telecoil?



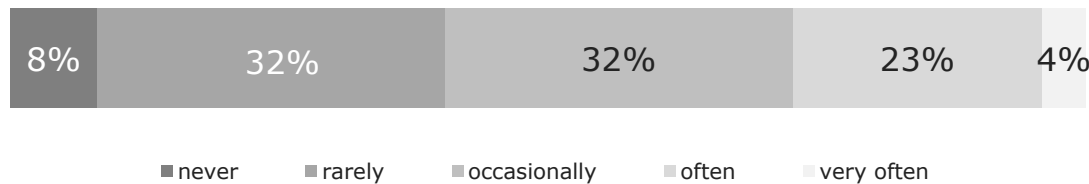
HA-owner, n=702

Where do you use your telecoil to improve your hearing?



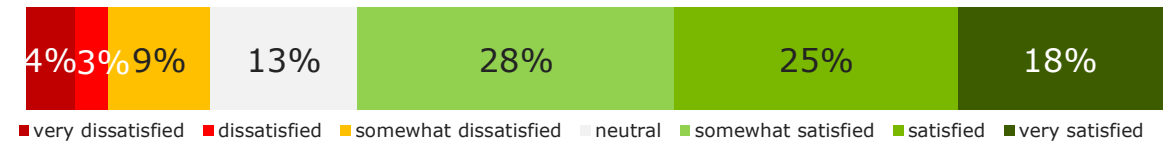
HA-owner (use Telecoil), n=79

How often do you use the telecoil to improve your hearing?



HA-owner (equipped with Telecoil), n=87

How satisfied are you with the telecoil option?

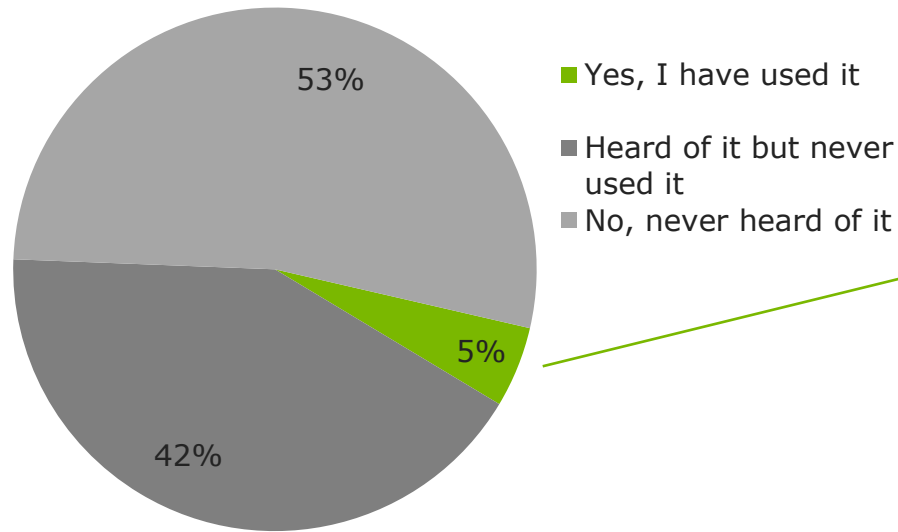


HA-owner (use Telecoil), n=79



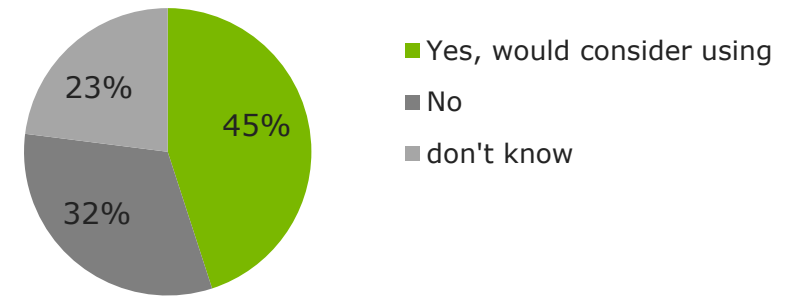
5% of the HA owners have already used remote fitting – but 45% of those who haven't would consider using it!

Have you ever heard of online remote fitting and/or remote maintenance of hearing aids by a hearing care professional?
 (A compatible hearing aid can be checked and adjusted as desired at any time using a secure online connection via PC, laptop, tablet or smarthone app, independently of a visit to the hearing care professional's store).



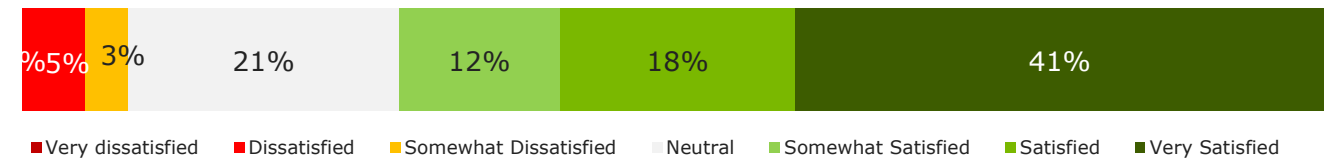
HA-owner, n=702

Would you use such online remote fitting and/or remote maintenance of hearing aids by a hearing care professional?



HA-owners currently not using remote fitting, n=675

Satisfaction with remote fitting of hearing aids:



have used remote fitting, n=27 (low sample)

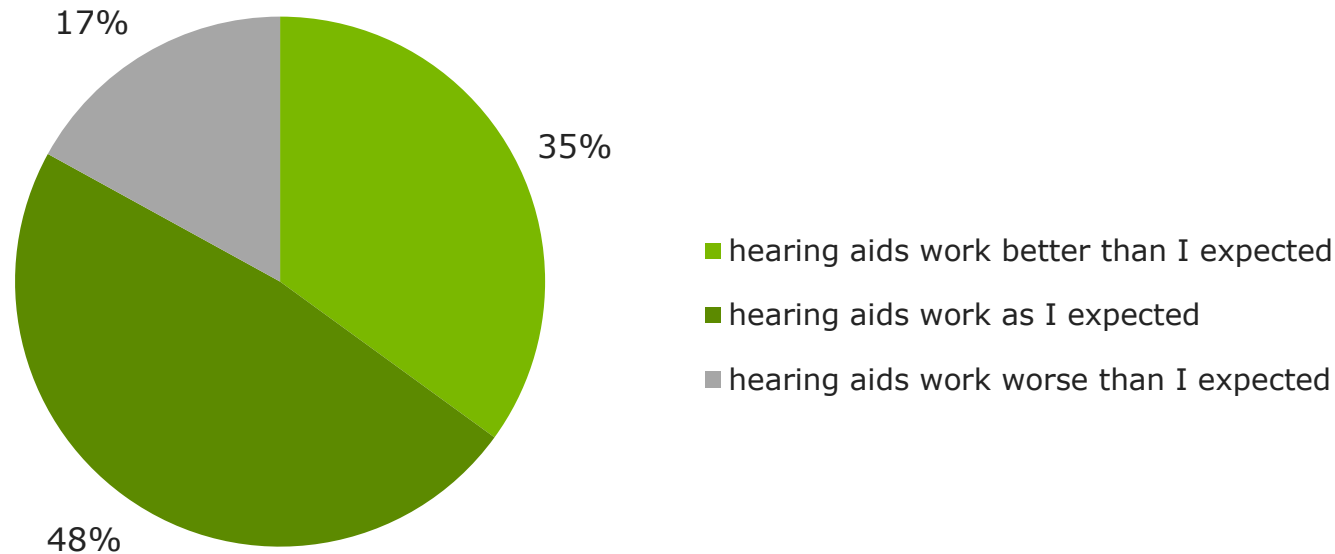
Country specific questions



Satisfaction with hearing aids and drivers

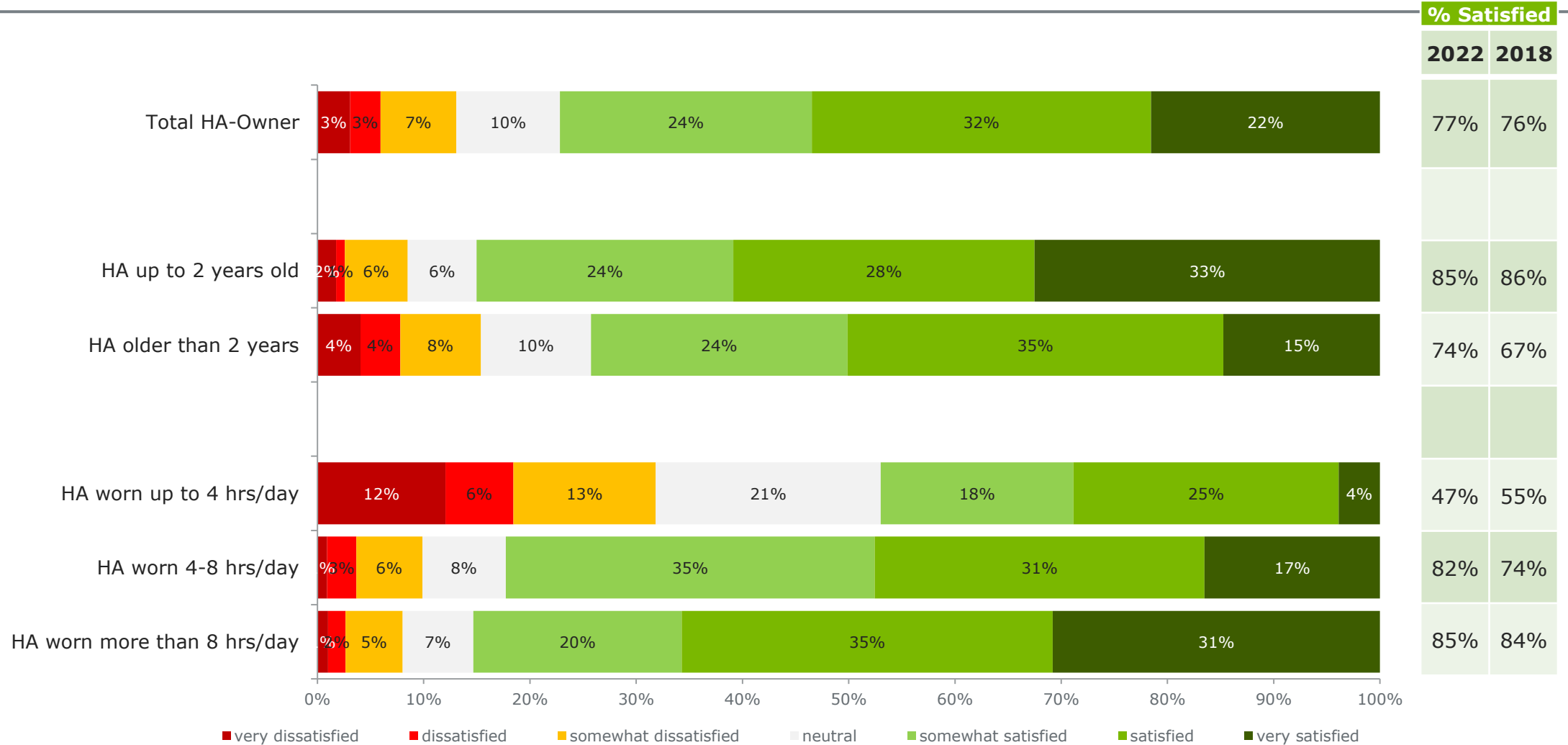
83% of the hearing aid owners say their hearing aid works better than or as expected

How have the expectations you had towards hearing aids before trying them on for the first time been met?

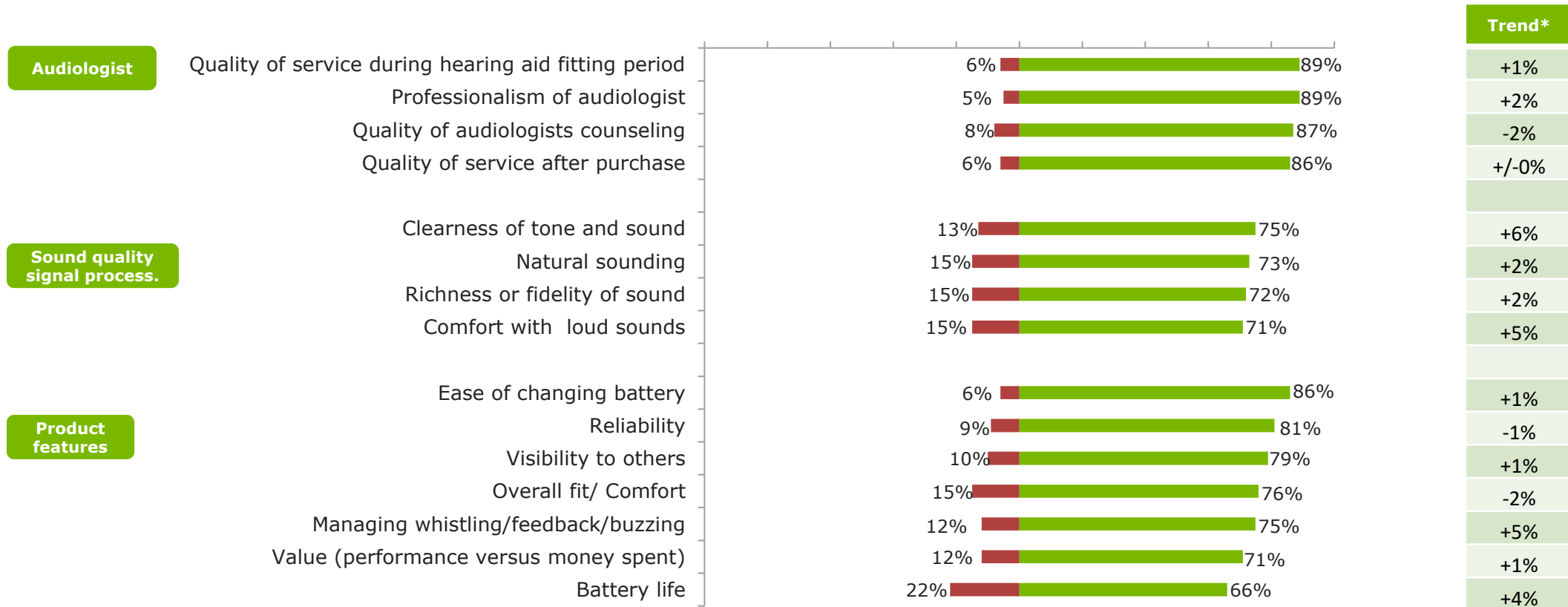


n=702

Overall satisfaction with HA: 77% of hearing aid owners are satisfied with their hearing aid(s)



Satisfaction with current hearing aids



%dissatisfied = % very dissatisfied + % dissatisfied + % somewhat dissatisfied
%satisfied = % somewhat satisfied + % satisfied + % very satisfied

■ dissatisfied ■ satisfied

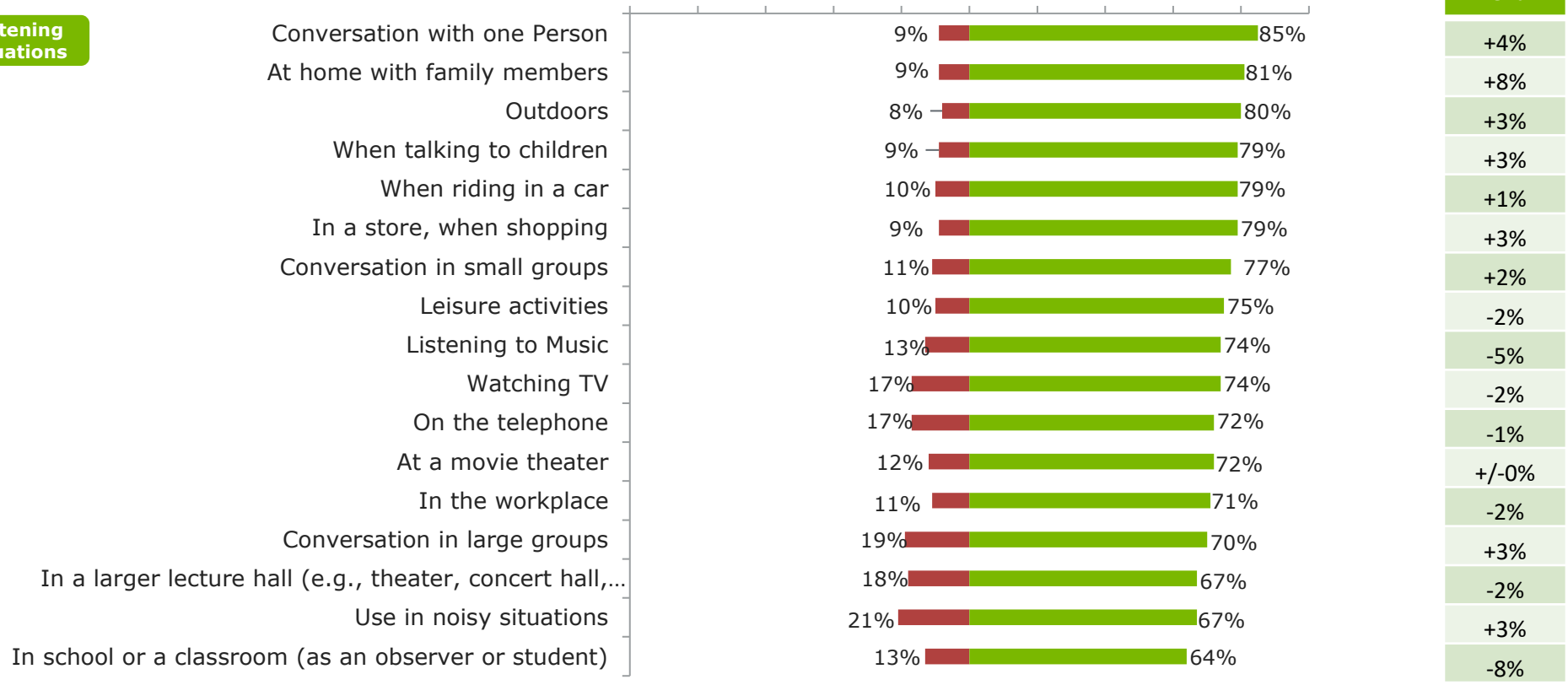
HA-owner, n=702

*% of satisfied HA owners compared to 2018



Satisfaction with current hearing aids

Listening situations



%dissatisfied= % very dissatisfied + % dissatisfied + % somewhat dissatisfied
%satisfied= % somewhat satisfied + % satisfied + % very satisfied

*% of satisfied HA owners compared to 2018

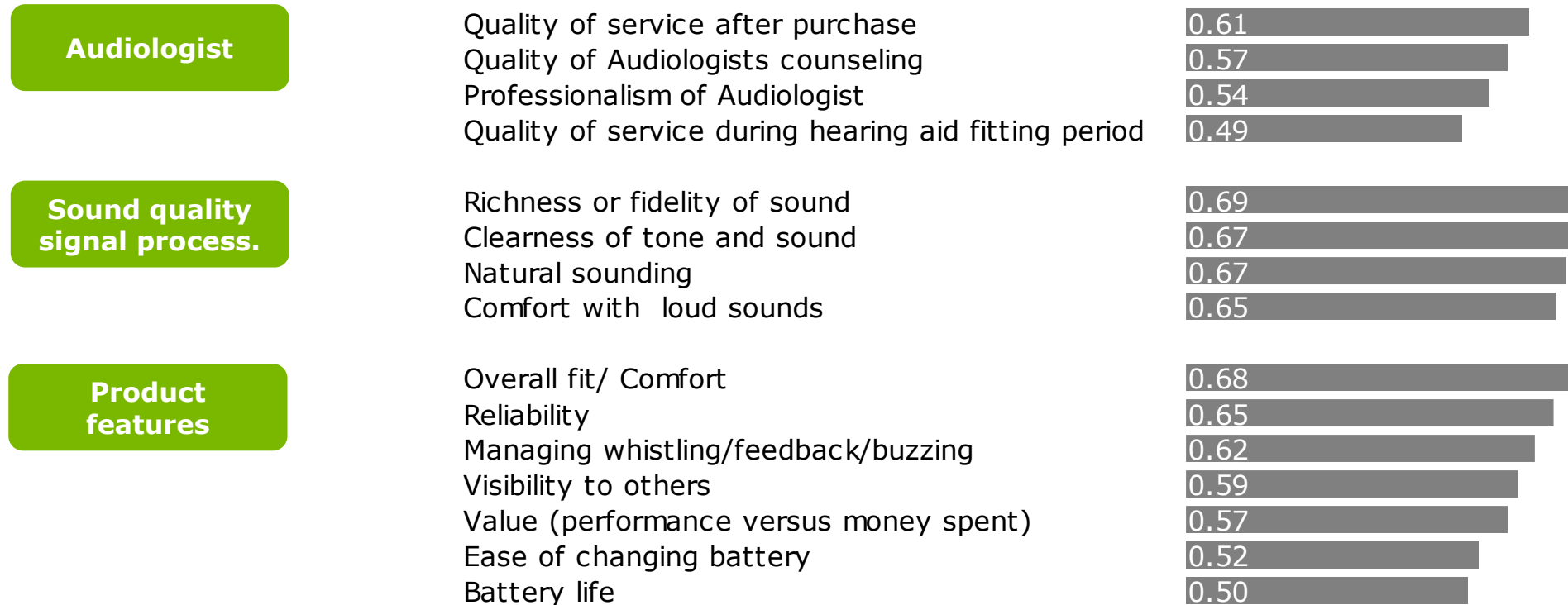
■ dissatisfied ■ satisfied

HA-owner, n=702



Factors influencing satisfaction with current HA: Sound quality/signal processing and overall fit are most important for overall satisfaction with HA

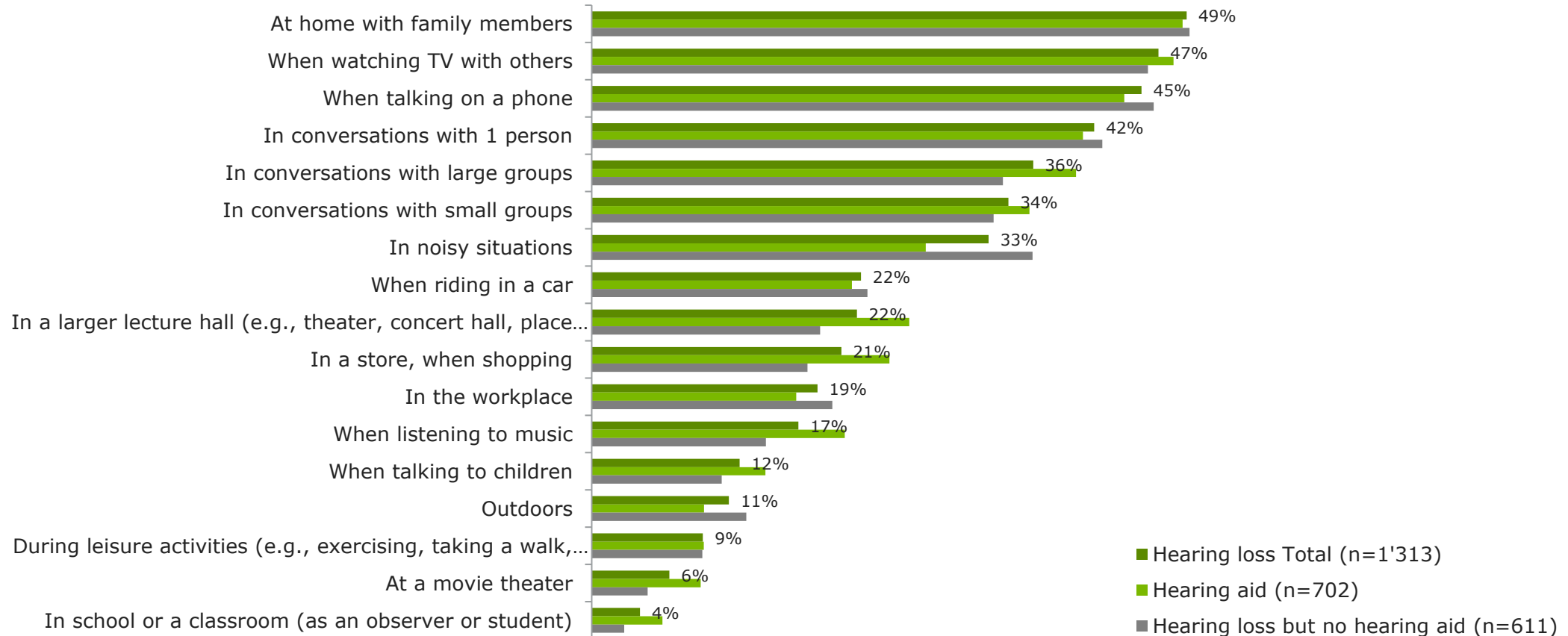
Influence on overall satisfaction with HA*



*The Influence has been calculated with a correlation: 0 means no relation between a criterion and overall satisfaction, 1 means a maximal relationship. **Read:** Richness or fidelity of sound is the most important criteria for satisfaction.

Important listening situations

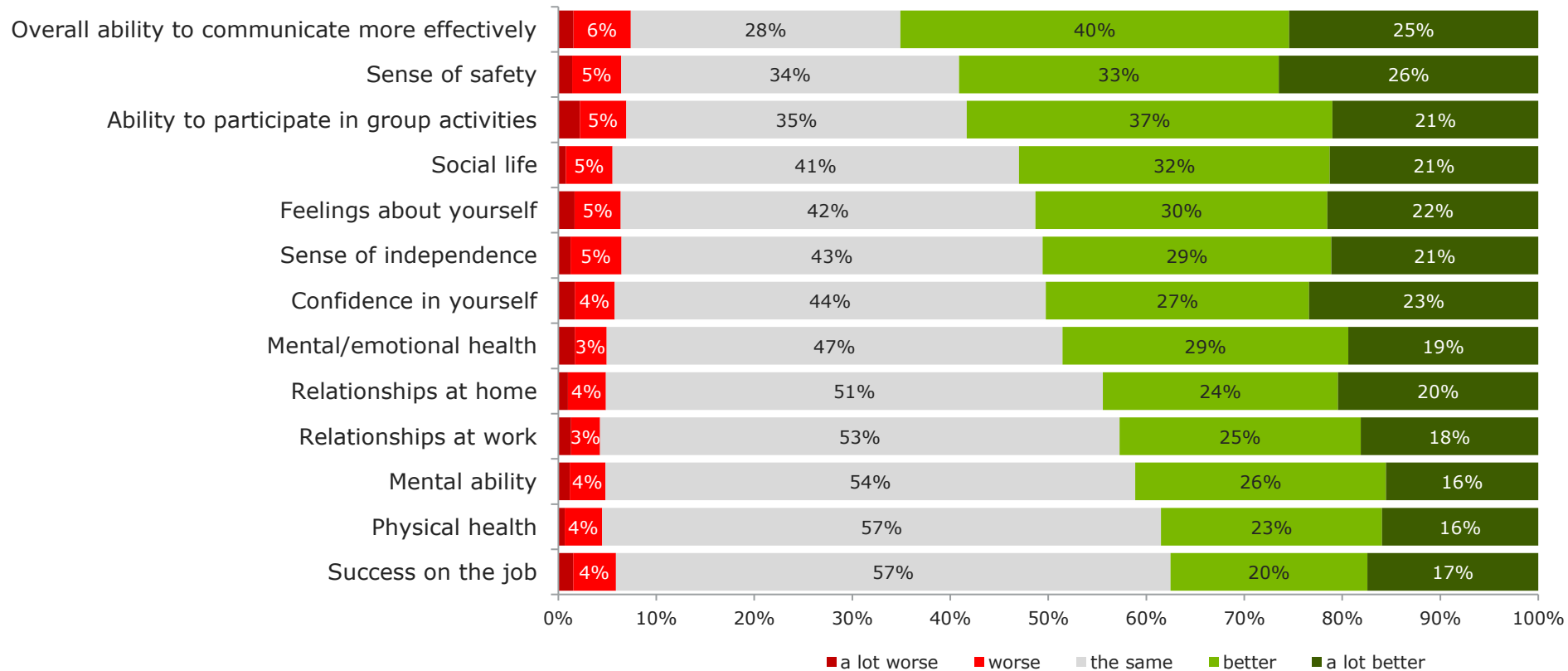
In which of these situations is it most important for you to hear well?
(choose up to 5)



Positive impact of hearing aids, quality of life

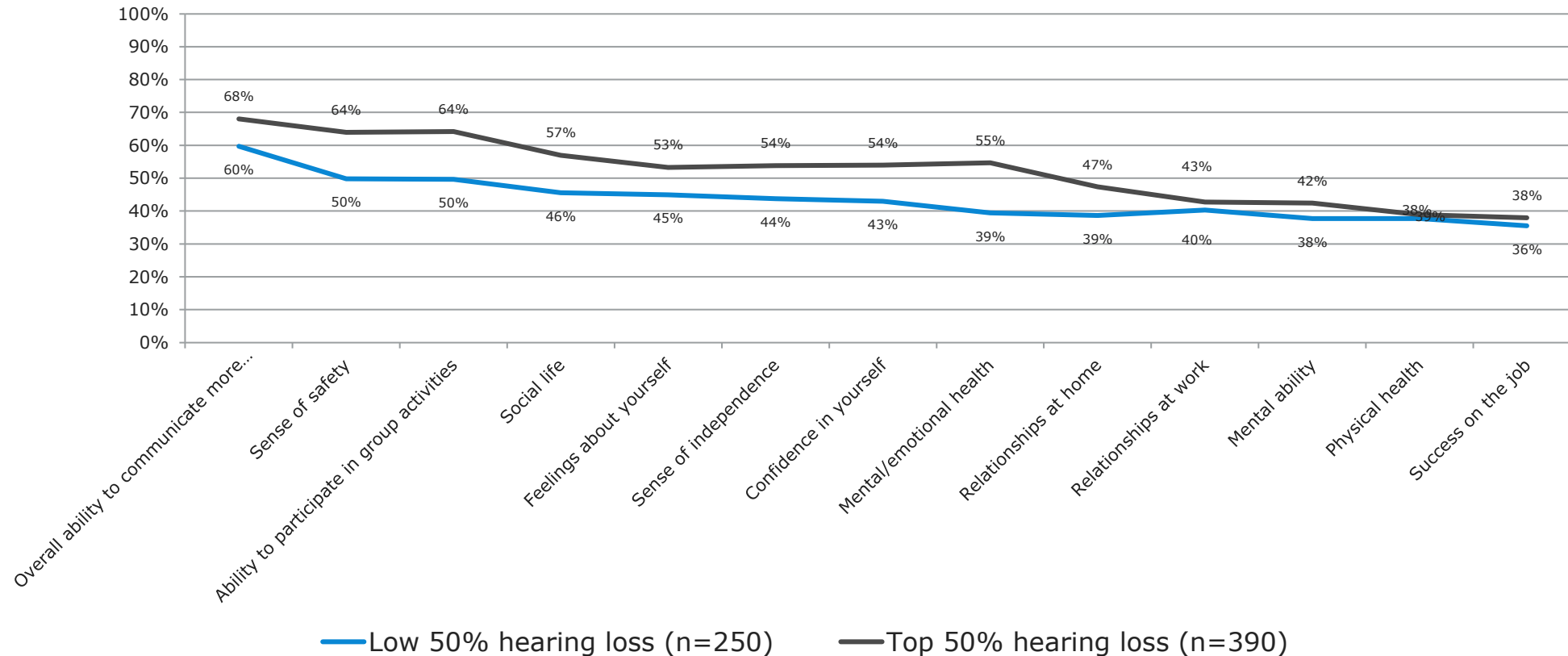
Significant positive impact of HAs on different aspects: Especially Communication effectiveness, sense of safety, ability to participate in group activities and social life improve with hearing aids.

Since you started using your hearing aid(s), please rate the changes you have experienced in each of the following areas, that you believe are due to your hearing aid(s).



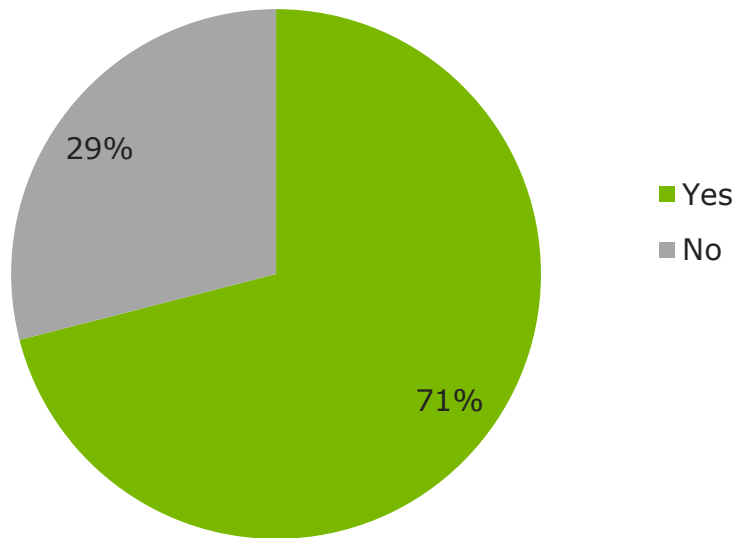
Impact of HAs is perceived more positive by patients with a Top 50% hearing loss in almost all aspects

% of HA owners feeling better/a lot better



71% of the hearing aid owners feel more confident moving in a city since wearing hearing aids.

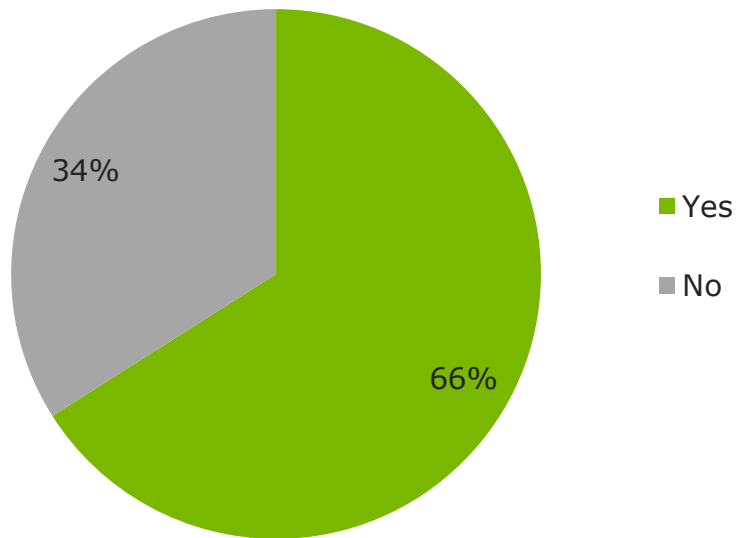
Since wearing a hearing aid, do you feel more confident moving in a city, e.g. because you hear traffic signals/vehicles approaching?



n=702

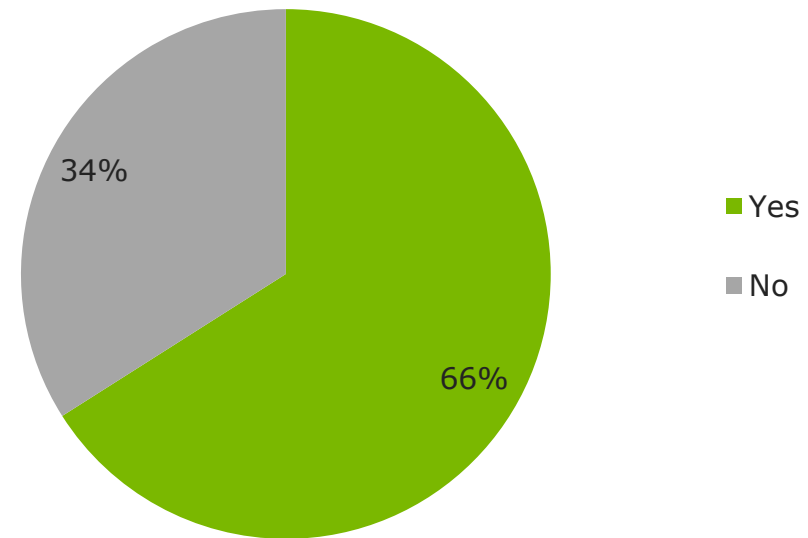
... a majority of the hearing aid owners also feel more confident when driving a car / riding a bicycle on their own, since wearing hearing aids.

Since wearing a hearing aid, do you feel more confident driving your car?



HA owners who drive a car, n=585

Since wearing a hearing aid, do you feel more confident riding a bicycle or E-Bike?

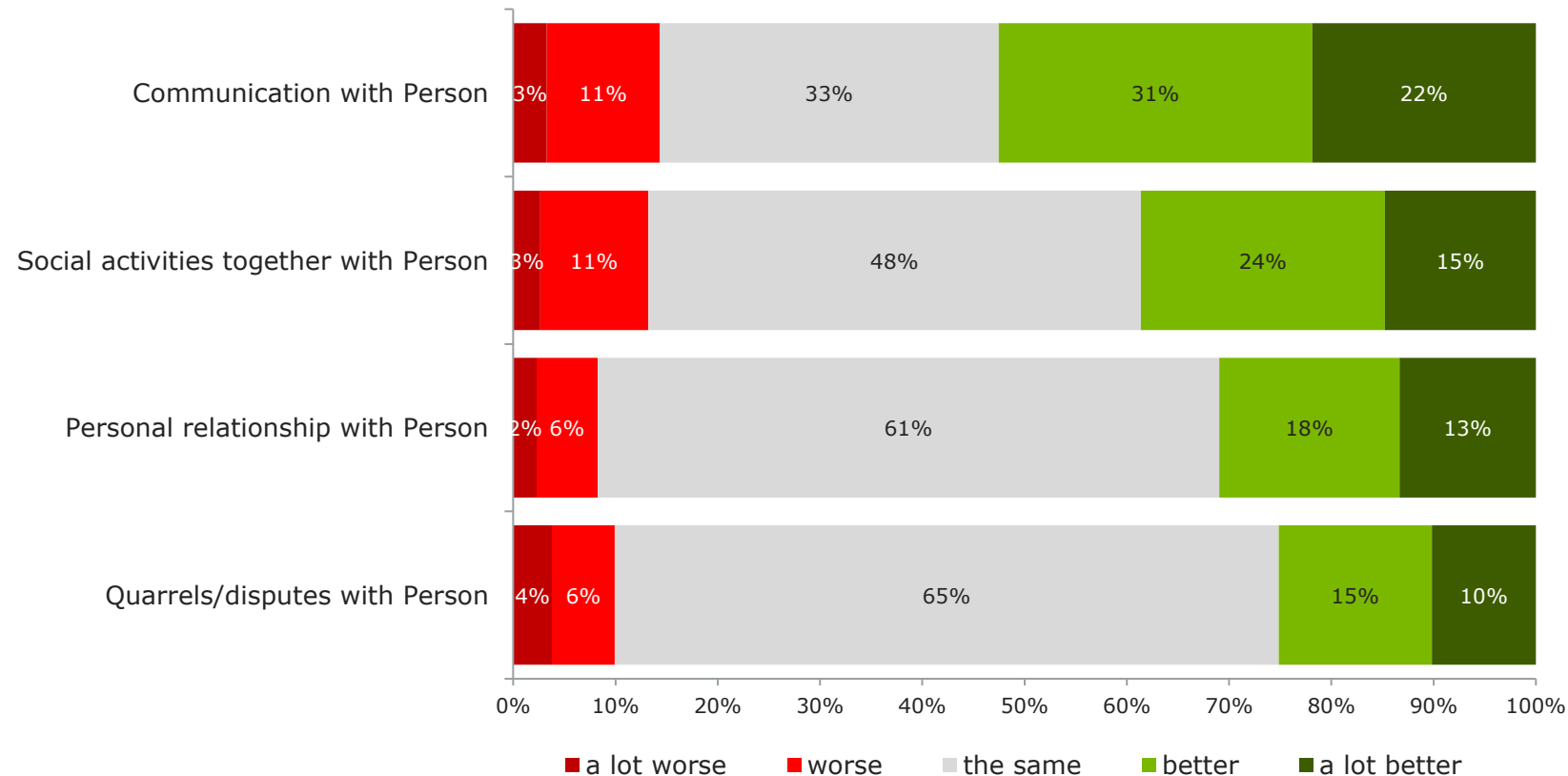


HA owners who ride a bicycle or E-Bike, n=405



Also for other people in the household/relatives, the situation improves when the person with hearing loss starts wearing hearing aids

How did the following aspects change since person X is wearing hearing aids?

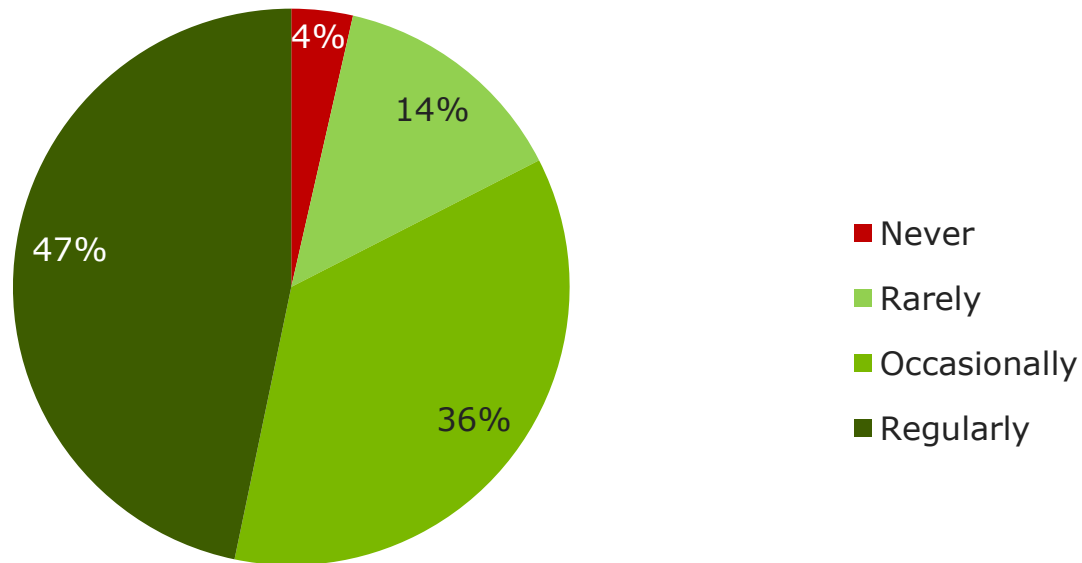


Someone in HH / parent has HA, n=517



96% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes

How often do your hearing aids improve your quality of life?



n=702

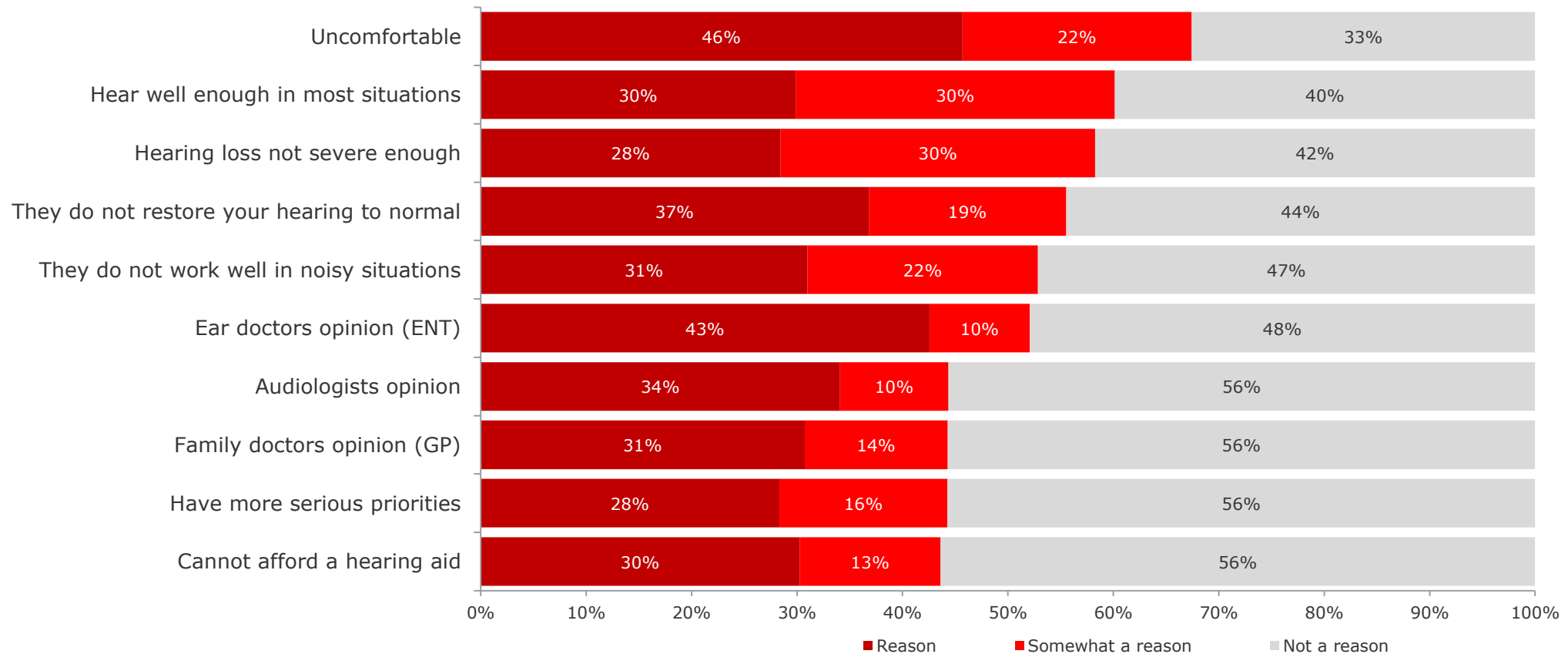
4. Analysis of hearing impaired non-owners

To analyse reasons of non-adoption we look at the Top 50% HL group, as the structure of hearing loss is more similar to that of HA owners

Hearing loss characteristics: Owners compared to non-owners

	HA Owner n=702	HA-Non-owner Low 50% HL n=326	Non-owner Top 50% HL n=198
Ears impaired (stated)			
Unilateral loss	16%	36%	33%
Bilateral loss	84%	64%	67%
		More similar hearing loss-structure	
Perceived loss			
Mild	12%	56%	13%
Moderate	57%	39%	69%
Severe	23%	3%	16%
Profound	8%	2%	3%

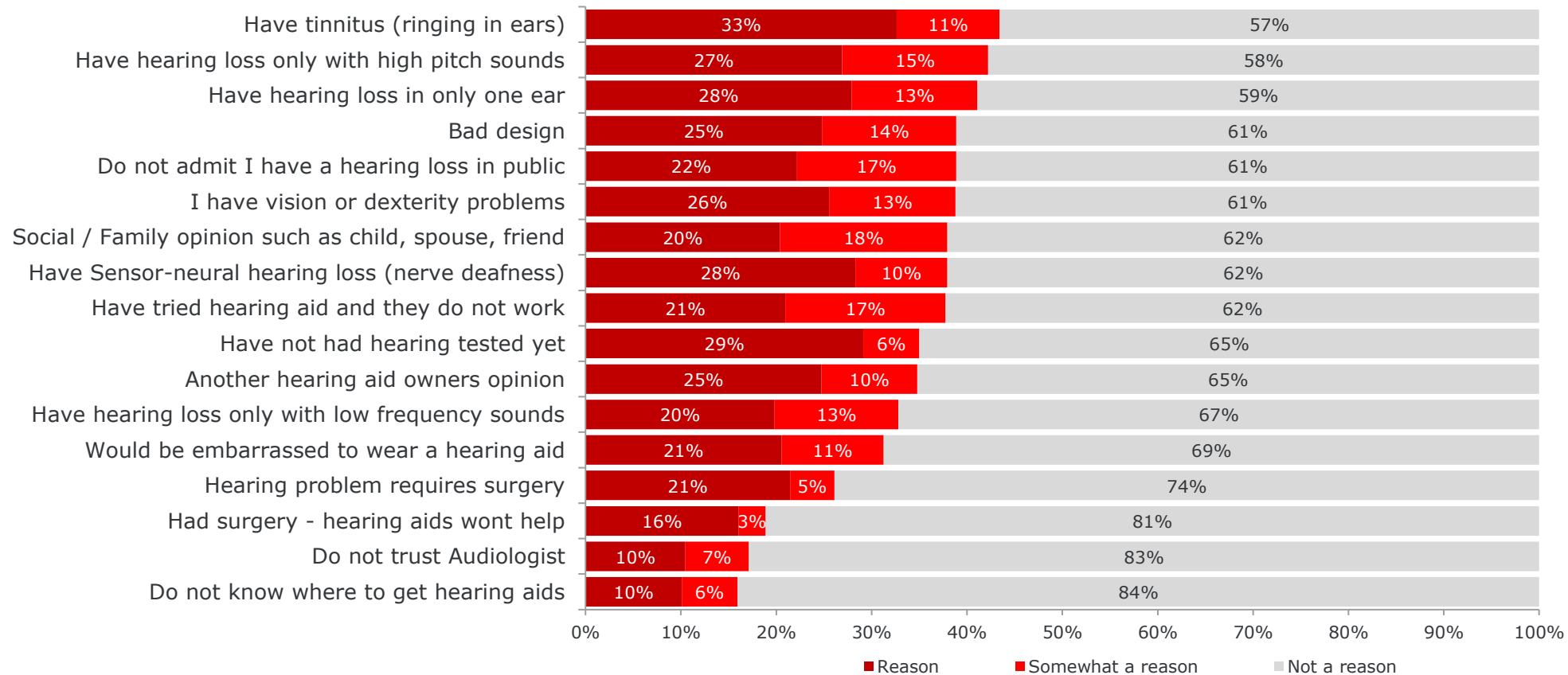
Top 10 reasons for not having a hearing aid (I/II)



Base: non owners Top 50% HL: n=198



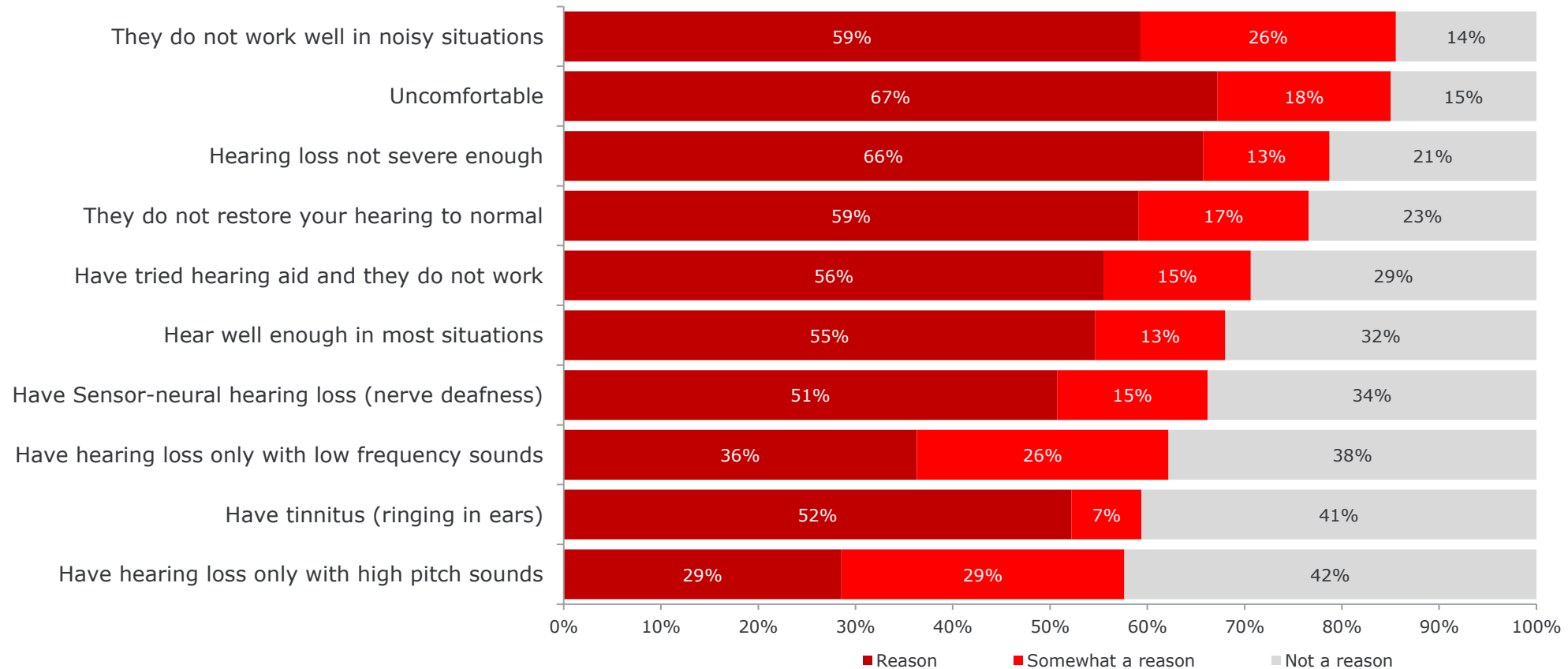
Less important reasons for not having a hearing aid (II/II)



Base: non owners Top 50% HL: n=198



Top 10 reasons for HA owners NOT using them



Owners who don't use, n=35 (low sample!)

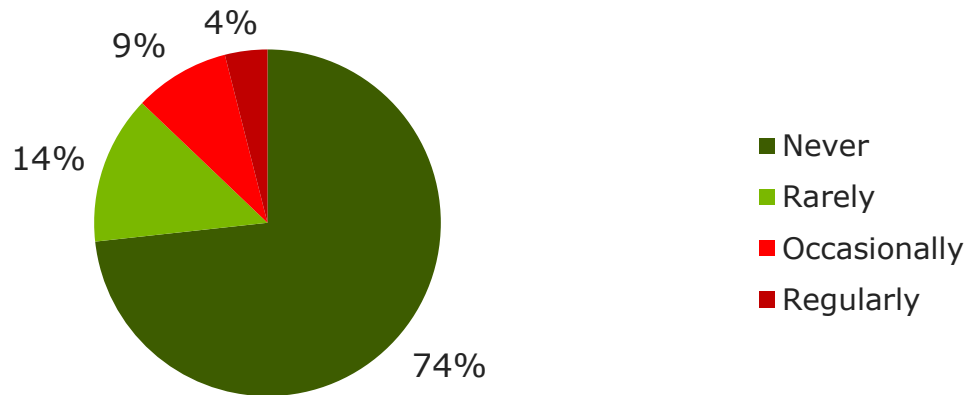


Social rejection because of hearing loss compared to the acceptance of hearing aids

74% of hearing aid owners feel that people never make fun of or reject them because of their hearing aids. It is more likely somebody makes fun or rejects a hearing impaired without hearing aids.

Hearing aid owners:

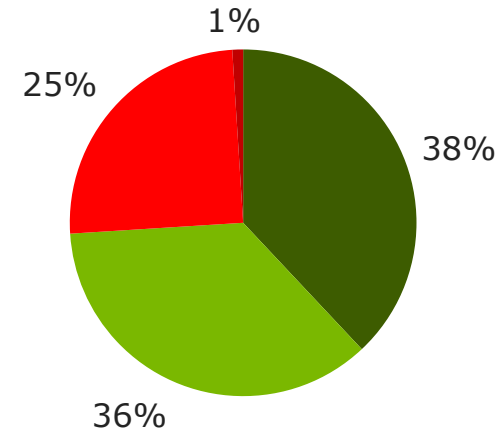
How often do you feel you are made fun of or rejected because you are wearing a hearing aid?



n=702

Hearing impaired non-owners:

How often do you feel you are made fun of or rejected because your hearing loss?



Base: Top 50% hearing loss, no hearing aid n=198

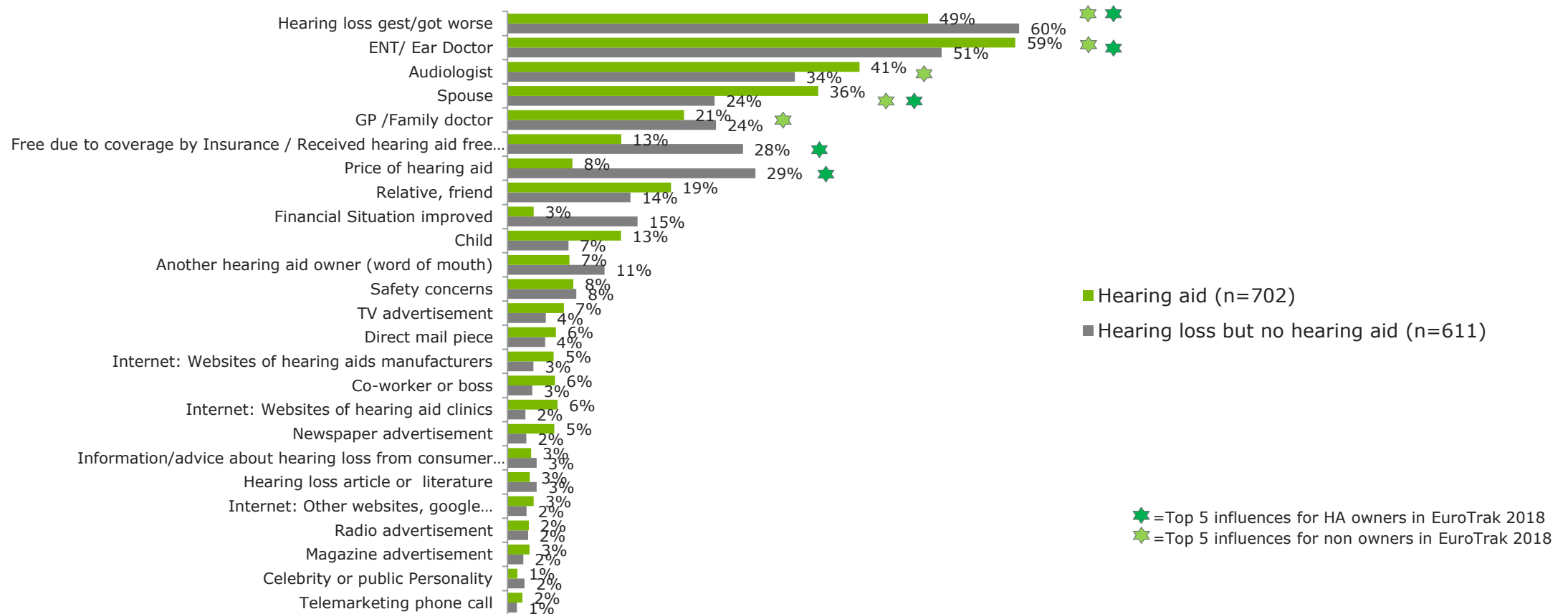


Most important triggers to buy

The most important influencing factors for getting hearing aids are worsening hearing loss, ENT, audiologists, spouse and GPs (+price, insurance coverage for the non owners).

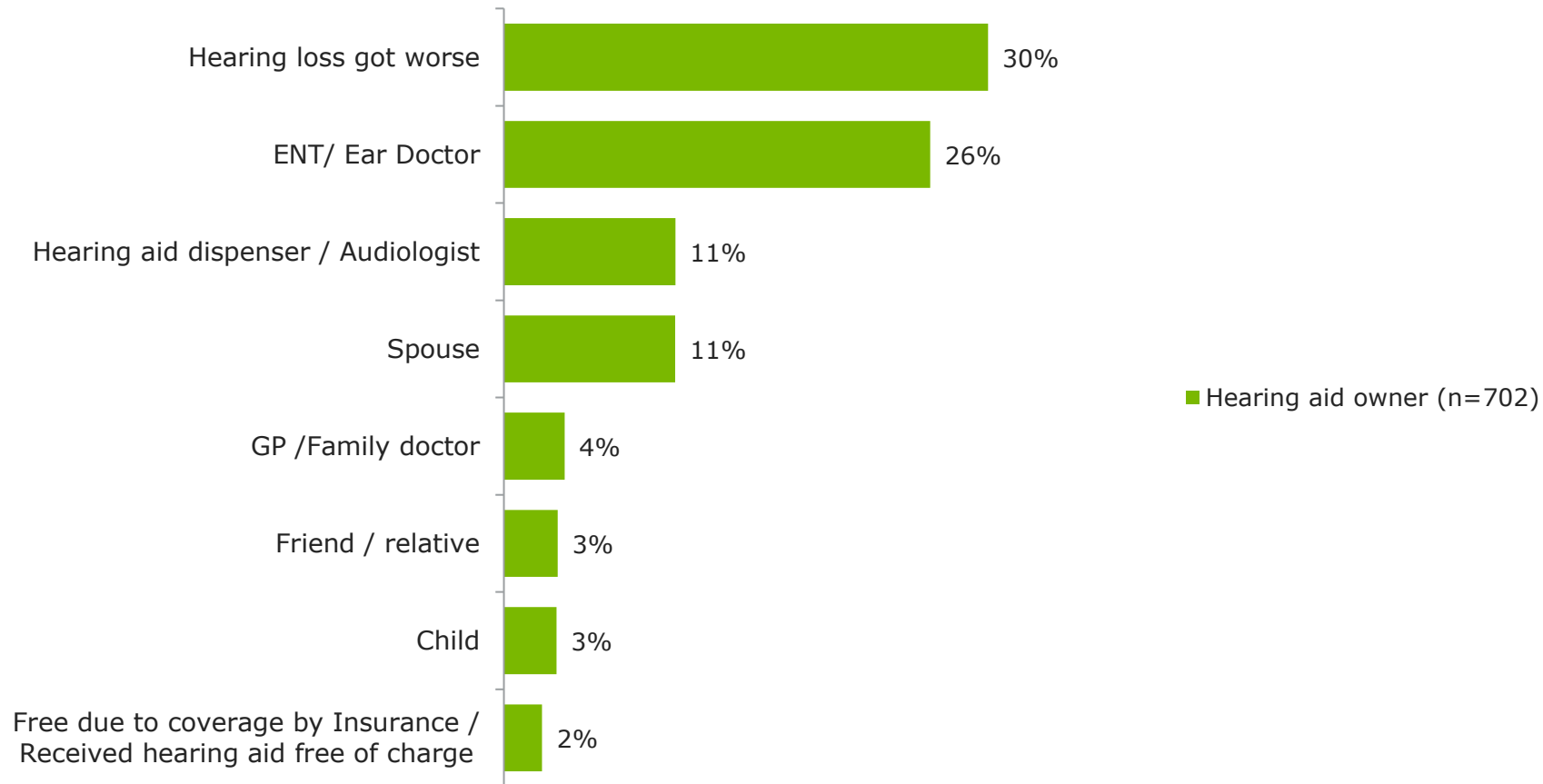
Owner: Thinking back to when you obtained your first hearing aid(s), what influenced you to obtain /purchase the hearing aid(s)?

Non-owner: What do you think would influence you to obtain / purchase a hearing aid ?



The most important triggers to get hearing aids are worsening hearing loss, followed by the ENT and audiologist/spouse.

What made you finally decide to get your actual hearing aid(s)?





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Demographics (1) Hearing instrument adoption rates and populations

					Profiles: Categories add to 100%*		
		Count	Hearing difficulty	Hearing aid adoption rate % (Base=hearing impaired)	No hearing loss	Hearing loss but no hearing aid	Hearing aid
Gender							
	Male	6'700	12.1%	37.3%	48.9%	57.4%	48.8%
	Female	6'856	10.1%	45.6%	51.1%	42.6%	51.2%
Age recoded							
	1 - 14	1'856	1.9%	39.5%	15.1%	2.4%	2.3%
	15 - 24	1'324	2.5%	47.8%	10.7%	1.9%	2.5%
	25 - 34	1'628	4.8%	33.6%	12.9%	5.9%	4.2%
	35 - 44	1'703	6.2%	37.4%	13.3%	7.5%	6.4%
	45 - 54	1'796	6.8%	32.4%	13.9%	9.3%	6.4%
	55 - 64	2'140	12.5%	36.6%	15.5%	19.1%	15.8%
	65 - 74	1'567	20.2%	41.5%	10.4%	20.8%	21.2%
	74+	1'541	35.5%	46.6%	8.2%	33.0%	41.2%
Type of household							
	single household	2'044	17.0%	46.0%	14.1%	21.1%	25.7%
	Couple, no kids	3'964	15.7%	43.2%	27.7%	39.9%	43.3%
	Couple with kid(s)	5'271	5.4%	35.9%	41.4%	20.6%	16.5%
	Single mom/dad with kid(s)	824	5.4%	30.4%	6.5%	3.5%	2.2%
	Retirement home, hospital etc.	218	33.7%	52.0%	1.2%	4.0%	6.2%
	Other	1'236	10.9%	28.0%	9.1%	10.9%	6.1%

Demographics (2) Hearing instrument adoption rates and populations

	Count	Hearing difficulty	Hearing aid adoption rate % (Base=hearing impaired)	Profiles: Categories add to 100%*		
				No hearing loss	Hearing loss but no hearing aid	Hearing aid
Status						
Head of the household (alone or together with someone)	6'752	14.4%	41.4%	48.0%	64.2%	64.9%
The spouse of the head of the household	3'067	10.4%	44.2%	22.8%	20.1%	22.7%
Daughter/son of head of household	2'565	2.1%	29.5%	20.8%	4.2%	2.5%
Other person	1'172	13.9%	37.4%	8.4%	11.5%	9.8%
Employment						
Full time employed	4'790	7.8%	30.3%	43.6%	30.1%	18.7%
Part time employed	1'467	8.2%	43.8%	13.3%	7.8%	8.7%
Unemployed / not working	862	5.5%	32.6%	8.0%	3.7%	2.6%
Retired under a disability pension scheme (fully or partly)	271	9.7%	40.8%	2.4%	1.8%	1.8%
Early retired under an early retirement benefit scheme	1'405	22.6%	44.9%	10.7%	20.2%	23.6%
Retired (at the official retirement age)	1'996	28.3%	47.1%	14.1%	34.5%	44.0%
Student / pupil / in training	807	2.6%	21.1%	7.8%	1.9%	0.7%
Education						
Hauptschule	1'448	17.4%	39.4%	11.8%	17.7%	16.4%
Mittlere Reife (Realschule)	2'267	9.4%	43.2%	20.3%	14.0%	15.2%
Abitur/Fachabitur	1'569	8.0%	38.8%	14.3%	8.9%	8.1%
Lehrabschluss/Anlehre	2'754	14.7%	41.9%	23.2%	27.2%	28.0%
Höhere Berufsausbildung (Techniker, Meister o.Ä.)	924	16.5%	39.8%	7.6%	10.6%	10.0%
Fachhochschulabschluss	766	13.0%	41.6%	6.6%	6.7%	6.8%
Universitätsabschluss	1'378	12.0%	45.5%	12.0%	10.4%	12.4%
Anderes	490	11.6%	31.3%	4.3%	4.5%	2.9%

Sample size and random sample error: Rules of thumb

READ: At a sample size of $n=500$ and a value of 15% we would expect the real value in an interval ± 3.1 around 15% - which means between 11.9% and 18.1% (Conservative assumption: 95% confidence level)

Sample size	Random sample error	
	Level of proportion: 50%/50%	Level of proportion: 15%/85%
	Real value is within interval:	
	Level of proportion: 50%/50%	Level of proportion: 15%/85%
50	± 13.9	± 9.9
100	± 9.8	± 7.0
250	± 6.2	± 4.4
500	± 4.4	± 3.1
1'000	± 3.1	± 2.2
5'000	± 1.4	± 1.0
10'000	± 1.0	± 0.7