Summary

EuroTrak GERMANY 2012

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

1. Introduction

- EuroTrak Germany 2012 was designed and executed by Anovum (Zurich) on behalf of the European Hearing Instrument Manufacturers Association (EHIMA).

- Sample sizes Germany 2012:
  - Representative sample (sample 1): n=13’922 people
  - Hearing impaired (sample 2):
    - Hearing impaired non-owners: n=864 people with hearing loss (HL)
    - HA owners: n=500 people with hearing aid (HA)

- EuroTrak Germany 2012 is part of the EuroTrak studies:
Summary

2. Market overview

• Stated hearing loss prevalence
  – Total: 12.5% (18+: 14.3%).
  – Binaural hearing loss: HA owners: 78%, HA non-owners: 58%.
  – Tinnitus prevalence 29% (self stated, sometimes or permanently).
  – Hearing Tests: 47% had a hearing test in the last 5 years.

• Hearing aid adoption rate (HA penetration)
  – Total: 34.0% (2009: 31.8%).
  – Total age group 18+: 34.1 % (2009: 31.8%).
  – 66% of HA owners have binaural treatment. Trend rising (2009: 60%).

• The route to the hearing aid
  – 80% of the hearing impaired discussed hearing loss with an ENT doctor or family doctor.
  – 48% got hearing aids recommended from the ENT or family doctor (drop out rate = 40%).
  – 73% of the GP consultations referred to an ENT. 11% recommended no action.
  – 31% of ENT consultations referred to a Hörgeräte-Akustiker, 31% recommended to get a hearing aid, 44% 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
  – People with hearing aids tend to have a higher personal income
  – Hearing aid owners have a much lower risk of being depressed and a lower risk of being forgetful compared to impaired non-owners
Summary

3. Analysis of hearing aid owners

- **Hearing aid ownership and usage**
  - 93% received some kind of 3rd party reimbursement.
  - 61% of the currently owned HAs were fitted in 2009 or later.
  - The average age of the currently owned HAs is 3.0 years.
  - The median age of hearing aids before replacement is 6 years.
  - On average, HAs are worn 8.0 hours a day.
  - 47% of hearing aid owners have never heard of wireless technology in connection with hearing aids. Only 18% of the older (65y+) rate wireless technology as very important but 28% of the younger (up to 44y).

- **Satisfaction with HAs**
  - 77% of the HA owners are satisfied with their HAs.
  - The more hours worn per day, the higher the satisfaction.
  - Satisfaction with HAs bought 2010 or after is higher than with HAs bought before.

- **Positive impact of HAs**
  - Significant positive impact of HAs on different aspects – especially communication and sense of safety.
Summary

4. Analysis of hearing impaired non-owners

• Reasons not to own/use HAs
  – Information deficit non-owners: 53% don’t know whether insurance would pay, 14% assume they don't pay.
  – The main reasons for not using hearing aids are that people say they do not restore hearing to normal, they hear well enough and that hearing aids do not work well in noisy situations.
  – 4% who own HAs don’t use them at all; 13% use them less than one hour/day. Main reasons for this are: “They do not work well in noisy situations”, “HAs do not restore hearing to normal” and “hearing loss is not severe enough”.

• Negative impact of hearing loss and buying intentions
  – Compared to impaired hearing aid non-owners with significant hearing loss (Top 50% hearing loss-group), hearing aid owners feel less exhausted in the evenings.
  – 13% of non-owners intend to get a hearing aid within the next year.
  – The most important influencing factors are worsening of hearing, ENT, significant others and Hörgeräte-Akustiker. Costs are also important, but only for the non-owners.
Results

EuroTrak Germany 2012

1. Introduction
2. Market overview
3. Analysis of hearing aid owners
4. Analysis of hearing impaired non-owners
Detailed Results: Roadmap

1. **Introduction**
   - Objectives and organisation
   - Field research specification

2. **Market overview**
   - Prevalence of hearing loss and hearing aid adoption rate
   - Hearing tests and prevalence of tinnitus *new in 2012*
   - The route to the hearing aid: Drop-out rates and reasons for drop-outs *new in 2012*
   - Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive and dementia symptoms *new in 2012*

3. **Analysis of hearing aid owners**
   - Hearing aid ownership, lifetime *new in 2012* and usage
   - Awareness and importance of wireless technology *new in 2012*
   - Satisfaction with hearing aids and drivers
   - Positive impact of hearing aids

4. **Analysis of hearing impaired non-owners**
   - Reasons for not having a hearing aid
   - Negative impact of hearing loss
   - Buying intentions

5. **Appendix**
   - Demographics: Hearing instrument adoption rates and populations
1. Introduction
Objectives and organisation
Organisation of EuroTrak 2012

Organisation

- Principal of the project EuroTrak is the European Hearing Instrument Manufacturers Association [EHIMA]. Members of EHIMA are: GN Resound, Oticon, Phonak, Siemens, Starkey and Widex [EHIMA Companies].
- Anovum Zurich developed the concept of EuroTrak, designed the questionnaire and conducted the fieldwork in cooperation with a panel company. Furthermore Anovum analysed the data and prepared the presentation.
- EHIMA approved the questionnaire in cooperation with Sergei Kochkin, Ph.D., Executive Director, Better Hearing Institute.

Use of the data

- The principal as well as the EHIMA companies 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 or the EHIMA companies use 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/2012/n=[relevant sample size]"

- The principal and EHIMA companies can ask Anovum to further analyse the raw data in specific ways at their own expense.
Field research specification
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 a panellist pool of more than 100’000 people
3. Screening questionnaire: Stated hearing loss and hearing aid usage + demographics
4. Result: Representative sample of \( n=13'922 \) 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: \( n=500 \) hearing aid owners and \( n=864 \) 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 2012

% hearing loss prevalence

- Total: 12.5% (EuroTrak 2012), 15.1% (EuroTrak 2009)
- Total 18+: 14.3% (EuroTrak 2012), 15.1% (EuroTrak 2009)
- 74+: 37.0% (EuroTrak 2012), 38.8% (EuroTrak 2009)
- 65-74: 23.6% (EuroTrak 2012), 24.2% (EuroTrak 2009)
- 55-64: 15.8% (EuroTrak 2012), 16.7% (EuroTrak 2009)
- 45-54: 10.9% (EuroTrak 2012), 11.7% (EuroTrak 2009)
- 35-44: 7.7% (EuroTrak 2012), 8.9% (EuroTrak 2009)
- 25-34: 6.5% (EuroTrak 2012), 9.1% (EuroTrak 2009)
- 15-24: 3.6% (EuroTrak 2012), 5.1% (EuroTrak 2009)
- <=14: 2.7% (EuroTrak 2012), 3.1% (EuroTrak 2009)

© Anovum 2012 - EuroTrak Germany 2012
Hearing aid adoption rate Germany 2012
34% of hearing impaired have hearing aid(s), 66% of them have binaural treatment

% of hearing impaired

- Total
  - Binaural treatment: 34.0%
  - Monaural treatment: 31.8%

- Total 18+
  - Binaural treatment: 34.1%
  - Monaural treatment: 31.8%

- 65+
  - Binaural treatment: 44.4%
  - Monaural treatment: 42.6%

- 45-64
  - Binaural treatment: 24.5%
  - Monaural treatment: 22.3%

- <=44
  - Binaural treatment: 23.6%
  - Monaural treatment: 23.8%

EuroTrak 2012
Base: 1'737

EuroTrak 2009
Base: 1'856

EuroTrak 2012 HA owners (Base: 591)

EuroTrak 2009 HA owners (Base: 589)
The more severe the hearing loss, the higher the adoption rate

Hearing loss 6-groups*

* 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

© Anovum 2012 - EuroTrak Germany 2012
### Hearing loss characteristics: Owners compared to non-owners

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilateral loss</td>
<td>42% (43%)</td>
<td>22% (25%)</td>
<td>23% (22%)</td>
</tr>
<tr>
<td>Bilateral loss</td>
<td>58% (57%)</td>
<td>78% (75%)</td>
<td>43% (39%)</td>
</tr>
<tr>
<td>Perceived loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild*</td>
<td>42% (31%)</td>
<td>10% (6%)</td>
<td>11% (8%)</td>
</tr>
<tr>
<td>Moderate*</td>
<td>43% (50%)</td>
<td>45% (31%)</td>
<td>36% (22%)</td>
</tr>
<tr>
<td>Severe*</td>
<td>12% (15%)</td>
<td>29% (43%)</td>
<td>62% (62%)*</td>
</tr>
<tr>
<td>Profound*</td>
<td>3% (4%)</td>
<td>16% (21%)</td>
<td></td>
</tr>
</tbody>
</table>

n’s are unweighted whereas the shown results are weighted
* combined “severe” and “profound” because n is too small

© Anovum 2012 - EuroTrak Germany 2012
Overview hearing loss prevalence and hearing aid adoption

Euro Trak 2012: 12.5% hearing impaired (stated), 4.2% adoption (% of population), 4.2% adoption (% of stated impaired)

Euro Trak 2009: 13.1% hearing impaired (stated), 4.2% adoption (% of population), 4.2% adoption (% of stated impaired)
Hearing tests and prevalence of tinnitus
Close to one third of the population state their hearing has never been tested

- Yes, in the last 12 months: 29%
- Yes, in the last 1-5 years: 19%
- Yes, more than 5 years ago: 24%
- No, never: 28%

Base= 10'506

© Anovum 2012 - EuroTrak Germany 2012
Prevalence of tinnitus

Do you have tinnitus (ringing or other noises in the ears or head) in one or both ears?

- **71%** sometimes
- **22%** permanently in both ears
- **4%** permanently in one ear
- **3%** No

Have you ever thought about a treatment of your tinnitus?

- **47%** I have / have had a treatment
- **40%** I considered, but did not have treatment
- **13%** I have never considered a treatment

Base: 3'981
The route to the hearing aid:
Drop-out rates and reasons for drop-outs
The route to the hearing aid: Overview

Base: n=1'364

- All hearing impaired: 100%
- Discussed hearing loss with ear doctor and/or family doctor: 80%
- Positive medical advice (Ear doctor or family doctor recommend further action): 48%
- Discussed hearing loss with HA dispenser/audiologist: 42%
- Positive advice HA dispenser/audiologist: 38%
- Bought hearing aid: 34%

Drop out:
- Impaired ENT/Doctor: 20%
- Recommend: 40%
- Owner: 29%

© Anovum 2012 - EuroTrak Germany 2012
Much higher drop-out-rates for the lower hearing loss segments

Top 50% hearing loss*

Low 50% hearing loss*

* 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).
Recommendations by profession

- **GP (N=735)**
  - Referred to an ear doctor (ENT): 73%
  - Referred to a hearing aid dispenser / audiologist (Akustiker): 22%
  - Recommended to get a hearing aid: 9%
  - Recommended no further action: 11%

- **ENT (N=983)**
  - Referred to an ear doctor (ENT): 31%
  - Referred to a hearing aid dispenser / audiologist (Akustiker): 31%
  - Recommended to get a hearing aid: 44%
  - Recommended no further action: 11%

- **Akustiker (N=539)**
  - Referred to an ear doctor (ENT): 89%

(EuroTrak 2009: 87%)
The route to the hearing aid: GP/Family doctor
Have you discussed your hearing problem with your family doctor?

% Discussed with GP

<table>
<thead>
<tr>
<th>Category</th>
<th>EuroTrak 2012 (Base: 1'364)</th>
<th>EuroTrak 2009 (Base: 1'308)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hearing impaired</td>
<td>56%</td>
<td>63%</td>
</tr>
<tr>
<td>HA owner</td>
<td>69%</td>
<td>80%</td>
</tr>
<tr>
<td>Hearing impaired non-owners</td>
<td>50%</td>
<td>56%</td>
</tr>
</tbody>
</table>

What did he/she recommend?

**HA owner (Base: 313)**
- Referred to a hearing aid dispenser / audiologist (Akustiker): 32%
- Referred to an ear doctor (ENT): 76%
- Recommended to get a hearing aid: 11%
- Recommended no further action: 1%

**Impaired non-owner (Base: 422)**
- Referred to a hearing aid dispenser / audiologist (Akustiker): 15%
- Referred to an ear doctor (ENT): 70%
- Recommended to get a hearing aid: 7%
- Recommended no further action: 17%
Die Art der Beeinträchtigung verlangt ein hochwertiges Hörgerät, das von der Kasse nicht bezahlt wird. Ich kann es mir nicht leisten.

Hatte noch keine Zeit einen Termin zu machen, da ich meinen Nachfolger im Beruf anlern.

Da meine Hörprobleme auf einer chronischen neurologischen Erkrankung beruhen, die durch ein Hörgerät nicht behoben werden können.

Die Hörbeeinträchtigung soll nicht so massiv sein, so dass kein Hörgerät benötigt wird.

Ich mag Hörgeräte einfach nicht, die sind störend.

Hatte noch keine Zeit einen Termin zu machen, da ich meinen Nachfolger im Beruf anlern.

Die Art der Beeinträchtigung verlangt ein hochwertiges Hörgerät, das von der Kasse nicht bezahlt wird. Ich kann es mir nicht leisten.

Non-owners: Reasons for not owning a HA
If GP recommended further action (open ended question)
The route to the hearing aid: ENT
Have you discussed your hearing problem with an ear doctor (ENT)?

% Discussed with ENT

- Total hearing impaired: 75% (EuroTrak 2012), 72% (EuroTrak 2009)
- HA owner: 89% (EuroTrak 2012), 92% (EuroTrak 2009)
- Hearing impaired non-owners: 68% (EuroTrak 2012), 63% (EuroTrak 2009)

What did he/she recommend?

HA owner (Base: 425)
- Did prescribe a hearing aid: 68%
- Referred to a hearing aid dispenser / audiologist (Akustiker): 42%
- Recommended no further action: 5%

Impaired non-owner (Base: 558)
- Did prescribe a hearing aid: 7%
- Referred to a hearing aid dispenser / audiologist (Akustiker): 24%
- Recommended no further action: 71%

© Anovum 2012 - EuroTrak Germany 2012
Ich finde, ich bin noch zu jung dafür. Ich fühle mich nicht so stark beeinträchtigt, dass es unbedingt nötig wäre.
Arbeitsbedingt bin ich im ganzen Land auf Montage, mir fehlt an den wenigen Wochenenden einfach die Zeit und Lust dazu, auch wenn meine Frau mir immer wieder dazu anrät und mich auffordert.
Ich sollte beide Ohren mit einem Gerät versehen, es ist aber der Anfang einer Hörschwierigkeit. Er meinte je eher, umso besser für mich. Ich habe dafür gar kein Geld, und die Geräte sind doch so teuer!
Der Test mit mehreren Hörgeräten hat meine Hörprobleme nicht gelöst.

Non-owners: Reasons for not owning a HA
If ENT recommended further action (open ended question)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>costs</td>
<td>25%</td>
</tr>
<tr>
<td>tried HA, didn't help</td>
<td>17%</td>
</tr>
<tr>
<td>still in the process of getting HAs, no time yet, waiting for appointment</td>
<td>16%</td>
</tr>
<tr>
<td>don't need HA, don't want HA, used to HL</td>
<td>15%</td>
</tr>
<tr>
<td>vanity, looks of HA</td>
<td>11%</td>
</tr>
<tr>
<td>HL not severe enough</td>
<td>10%</td>
</tr>
<tr>
<td>HA don't help, other problem (glue ear, inverted ear drums, tinnitus, ...)</td>
<td>7%</td>
</tr>
<tr>
<td>cochlea implant</td>
<td>1%</td>
</tr>
<tr>
<td>other</td>
<td>0%</td>
</tr>
<tr>
<td>no answer</td>
<td>3%</td>
</tr>
</tbody>
</table>

Base: 144
The route to the hearing aid: Akustiker
Have you discussed your hearing problem with a Hearing Aid Dispenser/Audiologist?

% Discussed with Audiologist

<table>
<thead>
<tr>
<th>Total hearing impaired</th>
<th>HA owner</th>
<th>Impaired non-owners</th>
</tr>
</thead>
<tbody>
<tr>
<td>42%</td>
<td>85%</td>
<td>21%</td>
</tr>
<tr>
<td>40%</td>
<td>86%</td>
<td>19%</td>
</tr>
</tbody>
</table>

What did he/she recommend?

HA owner (Base: 403)
- Recommended to get a hearing aid: 98%
- Recommended not to get a hearing aid: 2%

Impaired non-owner (Base: 155)
- Recommended to get a hearing aid: 70%
- Recommended not to get a hearing aid: 30%
Non-owners: Reasons for not owning a HA
If Audiologist recommended to get HA (open ended question)

Audiologist recommended to get HA

- Costs: 32%
- Tried HA, didn't help: 31%
- Don't need HA, don't want HA, used to HL: 16%
- Still in the process of getting HAs, no time yet, waiting for appointment: 10%
- HA don't help, other problem (glue ear, inverted ear drums, tinnitus, ...): 7%
- Vanity, looks of HA: 7%
- HL not severe enough: 6%
- Only interested in sale: 3%
- Cochlea implant: 1%
- Other: 1%
- No answer: 1%

For example:

- Er überließ die Entscheidung mir. Die empfohlenen Geräte sind mir zu teuer.
- Der Test mit mehreren Hörgeräten hat meine Hörprobleme nicht nennenswert behoben.
- Es gibt Dinge die dringlicher sind in der Anschaffung. Habe mich an den Zustand gewöhnt und damit abgefunden.
- Ich habe mich doch noch dazu entschlossen, es muss nur z. Z. ausprobiert werden, welches für mich geeignet ist.
Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive and dementia symptoms
**Work competitiveness:** 92% 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?

- 8% of no use
- 30% of some use
- 62% of significant use

**Base:** N=209
Work competitiveness: 34% of impaired people without hearing aid tend to think they receive a worse compensation for their jobs than their peers (23% of hearing aid owners).

Compared to your peers of equal age, education and skill how would you rate the compensation that you receive for the job you perform?

Base: Employed (full/part time)

Unweighted Sample Size = 716
Work competitiveness: People with hearing aid(s) tend to have a little higher personal income compared to impaired non-owners. Exception: There are a bit more in the lowest income category.

Personal income
Base: Employed (full/part time)

Unweighted Sample Size = 658
**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.

- I think that people with an untreated hearing loss tend to be less promoted in their job.
- I think that people with an untreated hearing loss tend not to get the job they deserve.
- I think that people with an untreated hearing loss tend to be under salaried.

**Chart:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Hearing Aid</th>
<th>Hearing Loss, No Hearing Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree strongly</td>
<td>9% 6%</td>
<td>25% 18%</td>
</tr>
<tr>
<td>Rather disagree</td>
<td>35%</td>
<td>37%</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td>37%</td>
</tr>
<tr>
<td>Rather agree</td>
<td>31%</td>
<td>15%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>19%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Base: Hearing loss, no hearing aid =648/ hearing aid n=415
Health problems: Hearing aid owners have a lower risk of being depressed (PHQ-2 Screening) and a lower risk of being forgetful 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

Dementia symptom:
Getting more forgetful in the last year?

Base: hearing aid n=341 / no hearing aid =151

*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).
3. Analysis of hearing aid owners
Hearing aid ownership and usage
Low adoption rates within mild and moderate hearing loss

<table>
<thead>
<tr>
<th>Stated hearing loss</th>
<th>(% of impaired population*)</th>
<th>Adoption rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profound</td>
<td>(8%)</td>
<td>2% 5%</td>
</tr>
<tr>
<td>Severe</td>
<td>(18%)</td>
<td>8% 10%</td>
</tr>
<tr>
<td>Moderate</td>
<td>(44%)</td>
<td>28% 16%</td>
</tr>
<tr>
<td>Mild</td>
<td>(30%)</td>
<td>27% 3%</td>
</tr>
</tbody>
</table>

Adoption rate %

2012 | 2009
---|---
62%* | 62%*
36% | 22%
11% | 8%

Base: n=1'364
Sums can differ from 100% due to rounding
* combined "severe" and "profound" because n is too small

© Anovum 2012 - EuroTrak Germany 2012
61% of the currently owned HAs were fitted in 2009 or later

Age of currently owned HAs (Mean):
2012: 3.0 years
2009: 3.4 years
54% are first time HA users – non first time users kept their HAs for 6 years on average

Current HAs = first HAs?

- Yes: 62%
- No: 38%

Base: n=500

How many years did you own your previous HAs?

- 18%: 1-3 years
- 41%: 4-6 years
- 28%: 7-10 years
- 13%: 11 years or longer

Base: n=167

Age of HA before it has been replaced:
2012: 6 years (median)
Monaural-binaural treatment by purchase date

© Anovum 2012 - EuroTrak Germany 2012
93% received some kind of 3rd party reimbursement

Information deficit non-owners: only 33% know whether insurance would pay

**2012**

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

  - Yes, completely: 6%
  - Yes, partly: 27%
  - No: 6%
  - don't know: 66%

  HA-owner, n=500

- **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, ...)

  - Yes: 33%
  - No: 14%
  - don't know: 53%

  HA-non-owners, n=864

**2009**

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

  - Yes: 6%
  - No: 30%
  - don't know: 64%

  HA-owner, n=503

- **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, ...)

  - Yes: 17%
  - No: 61%
  - don't know: 22%

  HA-non-owners, n=805
On average, HAs are worn 8.0 hours a day

HA worn:
2012: Mean: 8.0 hours/day
2009: Mean: 7.7 hours/day

HA-owner:
2012: n=500
2009: n=503
67% of the currently owned HAs either had no repair need or only once

How often has your current hearing aid required a repair because it was not working properly?

- 2012: 43% never, 24% once, 27% 2-3 times, 2% 4-5 times, 2% more often
- 2009: 46% never, 23% once, 21% 2-3 times, 8% 4-5 times, 3% more often

HA-owner:
2012: n=500
2009: n=503

© Anovum 2012 - EuroTrak Germany 2012
Awareness and importance of wireless technology
Younger HA owners use wireless technology with their HAs more often and it’s more important to them.

### Wireless Technology

#### Have you ever heard of wireless technology in connection with hearing aids?

- **All HA owners (n=500)**
  - Yes, I use wireless technology on my hearing aids: 13%
  - Yes have heard of it but don't use it: 40%
  - No, have never heard of wireless technology: 47%

- **up to 44 y.o. (n=86)**
  - Yes, I use wireless technology on my hearing aids: 22%
  - Yes have heard of it but don't use it: 52%
  - No, have never heard of wireless technology: 26%

- **45-64 y.o. (n=275)**
  - Yes, I use wireless technology on my hearing aids: 10%
  - Yes have heard of it but don't use it: 45%
  - No, have never heard of wireless technology: 45%

- **65+ y.o. (n=139)**
  - Yes, I use wireless technology on my hearing aids: 11%
  - Yes have heard of it but don't use it: 36%
  - No, have never heard of wireless technology: 53%

#### Importance of wireless technology in connection with hearing aids?

- **All HA owners (n=500)**
  - Very important: 20%
  - Somewhat important: 40%
  - Rather unimportant: 30%
  - Very unimportant: 10%

- **up to 44 y.o. (n=86)**
  - Very important: 28%
  - Somewhat important: 44%
  - Rather unimportant: 23%
  - Very unimportant: 5%

- **45-64 y.o. (n=275)**
  - Very important: 22%
  - Somewhat important: 41%
  - Rather unimportant: 32%
  - Very unimportant: 5%

- **65+ y.o. (n=139)**
  - Very important: 18%
  - Somewhat important: 39%
  - Rather unimportant: 31%
  - Very unimportant: 12%
Satisfaction with HA and drivers
Overall satisfaction with HA is highest among users who wear them more than 8 hrs/day, bought them in 2010 or after and have BTEs.

<table>
<thead>
<tr>
<th>Category</th>
<th>2012</th>
<th>2009</th>
<th>% Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total HA-user (n=500)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA worn more than 8 hrs/day (n=221)</td>
<td>201</td>
<td>10</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn 4-8 hrs/day (n=144)</td>
<td>12</td>
<td>29</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn up to 4 hrs/day (n=135)</td>
<td>5</td>
<td>28</td>
<td>51%</td>
</tr>
<tr>
<td>2010 or after (n=236)</td>
<td>111</td>
<td>10</td>
<td>87%</td>
</tr>
<tr>
<td>2009 or earlier (n=249)</td>
<td>3</td>
<td>5</td>
<td>68%</td>
</tr>
<tr>
<td>BTE (n=297)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA worn more than 8 hrs/day (n=221)</td>
<td>201</td>
<td>10</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn 4-8 hrs/day (n=144)</td>
<td>12</td>
<td>29</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn up to 4 hrs/day (n=135)</td>
<td>5</td>
<td>28</td>
<td>51%</td>
</tr>
<tr>
<td>2010 or after (n=236)</td>
<td>111</td>
<td>10</td>
<td>87%</td>
</tr>
<tr>
<td>2009 or earlier (n=249)</td>
<td>3</td>
<td>5</td>
<td>68%</td>
</tr>
<tr>
<td>ITE (n=108)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA worn more than 8 hrs/day (n=221)</td>
<td>201</td>
<td>10</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn 4-8 hrs/day (n=144)</td>
<td>12</td>
<td>29</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn up to 4 hrs/day (n=135)</td>
<td>5</td>
<td>28</td>
<td>51%</td>
</tr>
<tr>
<td>2010 or after (n=236)</td>
<td>111</td>
<td>10</td>
<td>87%</td>
</tr>
<tr>
<td>2009 or earlier (n=249)</td>
<td>3</td>
<td>5</td>
<td>68%</td>
</tr>
<tr>
<td>ITC (n=74)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HA worn more than 8 hrs/day (n=221)</td>
<td>201</td>
<td>10</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn 4-8 hrs/day (n=144)</td>
<td>12</td>
<td>29</td>
<td>86%</td>
</tr>
<tr>
<td>HA worn up to 4 hrs/day (n=135)</td>
<td>5</td>
<td>28</td>
<td>51%</td>
</tr>
<tr>
<td>2010 or after (n=236)</td>
<td>111</td>
<td>10</td>
<td>87%</td>
</tr>
<tr>
<td>2009 or earlier (n=249)</td>
<td>3</td>
<td>5</td>
<td>68%</td>
</tr>
</tbody>
</table>
Factors influencing satisfaction with current HA: Sound quality/signal processing is most important for overall satisfaction with HA

| Dispenser | Quality of service during hearing aid fitting period | 0.64 | → |
| Dispenser | Professionalism of dispenser | 0.61 | → |
| Dispenser | Quality of service after purchase | 0.60 | → |
| Dispenser | Quality of dispenser’s counselling | 0.60 | → |
| Listening situation | Conversation with one person | 0.67 | ↑ |
| Listening situation | Conversation in small groups | 0.66 | → |
| Listening situation | Conversation in large groups | 0.65 | → |
| Listening situation | Use in noisy situations | 0.65 | → |
| Listening situation | Understanding a lecture in a large public place | 0.63 | → |
| Listening situation | Leisure activities | 0.62 | → |
| Listening situation | Watching TV | 0.61 | → |
| Listening situation | On the telephone | 0.57 | → |
| Listening situation | Listening to Music | 0.56 | → |
| Sound quality | Clearness of tone and sound | 0.75 | → |
| Sound quality | Richness or fidelity of sound | 0.75 | → |
| Sound quality | Comfort with loud sounds | 0.73 | → |
| Sound quality | Natural sounding | 0.73 | → |
| Product features | Reliability | 0.71 | ↑ |
| Product features | Overall fit/ Comfort | 0.67 | → |
| Product features | Managing whistling/feedback/buzzing | 0.67 | → |
| Product features | Ease of changing battery | 0.61 | ↑ |
| Product features | Visibility to others | 0.59 | ↓ |
| Product features | Value (performance versus money spent) | 0.57 | ↓ |
| Product features | Battery life | 0.46 | ↓ |

*The influence has been calculated with a correlation: 0 means no relation between a criterion and overall satisfaction; 1 means a maximal relationship. Read: clearness of tone and sound is the most important criterion for satisfaction.*
Satisfaction with current HA

Dispenser
- Quality of dispenser’s counseling
- Professionalism of dispenser
- Quality of service after purchase
- Quality of service during hearing aid fitting period

Listening situation
- Conversation with one person
- Watching TV
- Conversation in small groups
- Listening to Music
- Leisure activities
- Understanding a lecture in a large public place
- Conversation in large groups
- On the telephone
- Use in noisy situations

Sound quality signal process
- Clarity of tone and sound
- Richness or fidelity of sound
- Natural sounding
- Comfort with loud sounds

Product features
- Ease of changing battery
- Reliability
- Visibility to others
- Overall fit/ Comfort
- Managing whistling/feedback/buzzing
- Value (performance versus money spent)
- Battery life

Trend*

<table>
<thead>
<tr>
<th></th>
<th>%satisfied</th>
<th>%dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispenser</td>
<td>84%</td>
<td>8%</td>
</tr>
<tr>
<td>Listening situation</td>
<td>84%</td>
<td>8%</td>
</tr>
<tr>
<td>Use in noisy situations</td>
<td>84%</td>
<td>8%</td>
</tr>
<tr>
<td>Sound quality signal process</td>
<td>84%</td>
<td>8%</td>
</tr>
<tr>
<td>Product features</td>
<td>84%</td>
<td>8%</td>
</tr>
</tbody>
</table>

* % of satisfied HA owners compared to EuroTrak 2009

© Anovum 2012 - EuroTrak Germany 2012

HA-owner, n=500
Positive impact of HAs
Significant positive impact of HAs on different aspects – especially communication effectiveness and sense of safety have improved

<table>
<thead>
<tr>
<th>Category</th>
<th>A lot worse</th>
<th>Worse</th>
<th>The same</th>
<th>Better</th>
<th>A lot better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate more effectively</td>
<td>1</td>
<td>6</td>
<td>26</td>
<td>47</td>
<td>20</td>
</tr>
<tr>
<td>Sense of safety</td>
<td>1</td>
<td>6</td>
<td>32</td>
<td>36</td>
<td>25</td>
</tr>
<tr>
<td>Participate in group activities</td>
<td>1</td>
<td>8</td>
<td>31</td>
<td>42</td>
<td>18</td>
</tr>
<tr>
<td>Social life</td>
<td>1</td>
<td>5</td>
<td>35</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>Confidence in yourself</td>
<td>1</td>
<td>5</td>
<td>38</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>Feelings about yourself</td>
<td>1</td>
<td>4</td>
<td>40</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td>Mental/emotional health</td>
<td>1</td>
<td>4</td>
<td>41</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>Sense of independence</td>
<td>1</td>
<td>6</td>
<td>39</td>
<td>34</td>
<td>20</td>
</tr>
<tr>
<td>Relationships at home</td>
<td>2</td>
<td>4</td>
<td>41</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>Mental ability</td>
<td>1</td>
<td>4</td>
<td>53</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Relationships at work</td>
<td>4</td>
<td>5</td>
<td>49</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>Physical health</td>
<td>1</td>
<td>5</td>
<td>54</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>

HA-owner, n=500
Impact of HAs is perceived more positive by patients with top 50% hearing loss in all aspects

% of HA owners feeling better/a lot better

- Communicate more effectively
- Sense of safety
- Participate in group activities
- Social life
- Confidence in yourself
- Feelings about yourself
- Mental/Emotional health
- Sense of independence
- Relationships at home
- Mental ability
- Relationships at work
- Physical health

Low 50% hearing loss (n=140)  Top 50% hearing loss (n=325)
For the significant others, the situation has improved, since person in household/parent is wearing hearing aids.

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

- Communication with Person X:
  - A lot worse: 3
  - Worse: 12
  - The same: 29
  - Better: 31
  - A lot better: 25

- Social activities together with Person X:
  - A lot worse: 4
  - Worse: 10
  - The same: 45
  - Better: 26
  - A lot better: 15

- Personal relationship with Person X:
  - A lot worse: 3
  - Worse: 7
  - The same: 52
  - Better: 22
  - A lot better: 15

- Quarrels/disputes with Person X:
  - A lot worse: 3
  - Worse: 11
  - The same: 53
  - Better: 22
  - A lot better: 11

Someone in HH / parent have HA, n=579
4. Analysis of hearing impaired non-owners
Reasons for not having a hearing aid
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

<table>
<thead>
<tr>
<th>Ears impaired</th>
<th>% HA Owner (n=500)</th>
<th>%HA-Non-owner Low 50% HL</th>
<th>%HA-Non-owner Top 50% HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilateral loss</td>
<td>22%</td>
<td>47%</td>
<td>31%</td>
</tr>
<tr>
<td>Bilateral loss</td>
<td>78%</td>
<td>53%</td>
<td>69%</td>
</tr>
</tbody>
</table>

Perceived loss:

- More similar hearing loss-structure
- Mild: 10% (HA owner), 53% (Non-owner Low 50% HL), 12% (Non-owner Top 50% HL)
- Moderate: 45% (HA owner), 38% (Non-owner Low 50% HL), 60% (Non-owner Top 50% HL)
- Severe: 29% (HA owner), 6% (Non-owner Low 50% HL), 23% (Non-owner Top 50% HL)
- Profound: 16% (HA owner), 2% (Non-owner Low 50% HL), 4% (Non-owner Top 50% HL)
Top 10 reasons for not having a hearing aid (I/II)

- They do not restore your hearing to normal: 36%
- Hear well enough in most situations: 36%
- They do not work well in noisy situations: 46%
- Uncomfortable: 34%
- Cannot afford a hearing aid: 29%
- Hearing loss not severe enough: 29%
- Ear doctors opinion (ENT): 31%
- Would be embarrassed to wear a hearing aid: 29%
- Have more serious priorities: 36%
- Another hearing aid owners opinion: 33%

© Anovum 2012 - EuroTrak Germany 2012
Less important reasons for not having a hearing aid (II/II)

- Had surgery - hearing aids won't help
- Do not admit I have a hearing loss in public
- Hörgeräte-Akustiker opinion
- Social / Family opinion such as child, spouse, friend
- Have hearing loss in only one ear
- Family doctors opinion (GP)
- Have tinnitus (ringing in ears)
- Have hearing loss only with high pitch sounds
- I have vision or dexterity problems
- Have tried hearing aid and they do not work
- Have Sensor-neural hearing loss (nerve deafness)
- Have hearing loss only with low frequency sounds
- Do not trust Hörgeräte-Akustiker
- Have not had hearing tested yet
- Hearing problem requires surgery
- Do not know where to get hearing aids
- Had surgery - hearing aids won't help

Base: non owners Top 50% HL: n=234
Top 10 reasons for HA owners NOT using them

1. They do not work well in noisy situations
2. They do not restore your hearing to normal
3. Hearing loss not severe enough
4. Hear well enough in most situations
5. Uncomfortable
6. Have hearing loss only with high pitch sounds
7. Have more serious priorities
8. Have hearing loss in only one ear
9. Have tried hearing aid and they do not work
10. Bad design

Owners who don't use, n=33
Negative impact of hearing loss
Compared to impaired hearing aid non-owners with significant hearing loss (Top 50% hearing loss*), hearing aid owners feel less exhausted in the evenings.

---

**In the evenings I often feel physically exhausted**

- **Hearing aid**:
  - Disagree strongly: 11%
  - Rather disagree: 14%
  - Neutral: 30%
  - Rather agree: 30%
  - Strongly agree: 15%

- **Top 50% hearing loss, no hearing aid**:
  - Disagree strongly: 8%
  - Rather disagree: 11%
  - Neutral: 19%
  - Rather agree: 47%
  - Strongly agree: 15%

**In the evenings I often feel mentally exhausted**

- **Hearing aid**:
  - Disagree strongly: 14%
  - Rather disagree: 15%
  - Neutral: 37%
  - Rather agree: 24%
  - Strongly agree: 11%

- **Top 50% hearing loss, no hearing aid**:
  - Disagree strongly: 9%
  - Rather disagree: 20%
  - Neutral: 23%
  - Rather agree: 35%
  - Strongly agree: 14%

Base: Top 50% n=244/ hearing aid n=490

*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).
Buying intentions
13% of non-owners intend to get a hearing aid within the next year. Re-buying intention is higher than first-buying intention.
The most important influencing factors are worse hearing loss, ENT, spouse/relatives and Hörgeräte-Akustiker

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

**Non-owner:** Think about the option to obtain / purchase a hearing aid. What do you think would influence you to obtain / purchase a hearing aid?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Owner (%)</th>
<th>Non-owner (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing loss got worse</td>
<td>61%</td>
<td>74%</td>
</tr>
<tr>
<td>ENT/ Ear Doctor</td>
<td>51%</td>
<td>54%</td>
</tr>
<tr>
<td>Spouse, relative, child, friend</td>
<td>30%</td>
<td>33%</td>
</tr>
<tr>
<td>Free (Insurance, hearing aid free of charge)</td>
<td>30%</td>
<td>33%</td>
</tr>
<tr>
<td>Hörgeräte-Akustiker</td>
<td>30%</td>
<td>48%</td>
</tr>
<tr>
<td>Price of hearing aid</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>GP /Family doctor</td>
<td>23%</td>
<td>28%</td>
</tr>
<tr>
<td>Financial Situation improved</td>
<td>22%</td>
<td>28%</td>
</tr>
<tr>
<td>Another hearing aid owner (word of mouth)</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>Safety concerns</td>
<td>9%</td>
<td>8%</td>
</tr>
</tbody>
</table>

=Top 5 influences for non owners in EuroTrak 2009
=Top 5 influences for owners in EuroTrak 2009
Stefan Ruf lic. rer. pol.
Anovum GmbH
Sumatrastrasse 25
CH-8006 Zürich
Telefon +41 (0)44 576 76 77
Mobil +41 (0)78 717 88 01
Email stefan.ruf@anovum.com
www.anovum.com

Christian Egger lic. phil.
Anovum GmbH
Sumatrastrasse 25
CH-8006 Zürich
Telefon +41 (0)44 576 76 78
Mobil +41 (0)76 318 57 51
E-Mail christian.egger@anovum.com
www.anovum.com
Demographics (1): Hearing instrument adoption rates and populations

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6831</td>
<td>85.4%</td>
<td>35.0%</td>
<td>48.6%</td>
<td>51.8%</td>
<td>54.1%</td>
</tr>
<tr>
<td>Female</td>
<td>7090</td>
<td>87.3%</td>
<td>32.9%</td>
<td>51.4%</td>
<td>48.2%</td>
<td>45.9%</td>
</tr>
<tr>
<td>Age recoded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 14</td>
<td>1863</td>
<td>95.9%</td>
<td>27.8%</td>
<td>14.9%</td>
<td>3.1%</td>
<td>2.3%</td>
</tr>
<tr>
<td>15 - 24</td>
<td>1556</td>
<td>95.2%</td>
<td>34.4%</td>
<td>12.3%</td>
<td>3.2%</td>
<td>3.3%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>1668</td>
<td>92.3%</td>
<td>27.0%</td>
<td>12.8%</td>
<td>6.9%</td>
<td>4.9%</td>
</tr>
<tr>
<td>35 - 44</td>
<td>1974</td>
<td>91.6%</td>
<td>15.8%</td>
<td>15.0%</td>
<td>11.2%</td>
<td>4.1%</td>
</tr>
<tr>
<td>45 - 54</td>
<td>2270</td>
<td>88.2%</td>
<td>18.5%</td>
<td>16.6%</td>
<td>17.7%</td>
<td>7.8%</td>
</tr>
<tr>
<td>55 - 64</td>
<td>1722</td>
<td>83.3%</td>
<td>30.0%</td>
<td>11.9%</td>
<td>16.6%</td>
<td>13.8%</td>
</tr>
<tr>
<td>65 - 74</td>
<td>1583</td>
<td>74.9%</td>
<td>40.6%</td>
<td>9.9%</td>
<td>19.4%</td>
<td>25.6%</td>
</tr>
<tr>
<td>74+</td>
<td>1284</td>
<td>61.0%</td>
<td>47.4%</td>
<td>6.6%</td>
<td>21.8%</td>
<td>38.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of household</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>single household</td>
<td>1898</td>
<td>78.7%</td>
<td>38.0%</td>
<td>12.5%</td>
<td>20.6%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Couple, no kids</td>
<td>4269</td>
<td>82.3%</td>
<td>35.6%</td>
<td>29.3%</td>
<td>39.5%</td>
<td>42.2%</td>
</tr>
<tr>
<td>Couple with kid(s)</td>
<td>5573</td>
<td>91.5%</td>
<td>24.1%</td>
<td>42.3%</td>
<td>27.8%</td>
<td>17.1%</td>
</tr>
<tr>
<td>Single mom/dad with kid(s)</td>
<td>794</td>
<td>92.3%</td>
<td>33.8%</td>
<td>6.1%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Retirement home, hospital</td>
<td>166</td>
<td>53.2%</td>
<td>52.7%</td>
<td>0.8%</td>
<td>3.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Other</td>
<td>1222</td>
<td>89.6%</td>
<td>36.4%</td>
<td>9.1%</td>
<td>6.3%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

Profiles: Categories add to 100%*

* Small sample sizes in some categories
## Demographics (2) Hearing instrument adoption rates and populations

Profiles: Categories add to 100% *

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>The head of the household (alone or together with someone)</td>
<td>6490</td>
<td>82.2%</td>
<td>34.6%</td>
<td>44.8%</td>
<td>64.2%</td>
<td>68.2%</td>
</tr>
<tr>
<td>The spouse of the head of the household</td>
<td>3381</td>
<td>86.4%</td>
<td>30.9%</td>
<td>24.6%</td>
<td>25.4%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Daughter/son of head of household</td>
<td>2915</td>
<td>96.3%</td>
<td>28.8%</td>
<td>23.4%</td>
<td>5.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other Person</td>
<td>942</td>
<td>89.8%</td>
<td>31.7%</td>
<td>7.2%</td>
<td>4.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time employed</td>
<td>4626</td>
<td>89.5%</td>
<td>21.1%</td>
<td>40.7%</td>
<td>32.1%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Part time employed</td>
<td>1595</td>
<td>89.6%</td>
<td>20.4%</td>
<td>14.1%</td>
<td>10.8%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Unemployed / not working</td>
<td>893</td>
<td>90.3%</td>
<td>23.2%</td>
<td>8.0%</td>
<td>4.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Retired under a disability pension scheme (fully or partly)</td>
<td>235</td>
<td>80.0%</td>
<td>41.1%</td>
<td>1.9%</td>
<td>1.9%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Early retired under an early retirement benefit scheme</td>
<td>1391</td>
<td>72.8%</td>
<td>40.1%</td>
<td>10.1%</td>
<td>19.3%</td>
<td>24.9%</td>
</tr>
<tr>
<td>Retired (at the official retirement age)</td>
<td>2013</td>
<td>69.2%</td>
<td>45.5%</td>
<td>13.9%</td>
<td>28.8%</td>
<td>46.3%</td>
</tr>
<tr>
<td>Student / pupil / in training</td>
<td>1192</td>
<td>96.9%</td>
<td>26.6%</td>
<td>11.3%</td>
<td>2.2%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hauptschule</td>
<td>2084</td>
<td>79.4%</td>
<td>37.0%</td>
<td>16.3%</td>
<td>23.2%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Mittlere Reife (Realschule)</td>
<td>2558</td>
<td>87.0%</td>
<td>34.6%</td>
<td>21.9%</td>
<td>18.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Abitur/Fachabitur</td>
<td>1697</td>
<td>91.0%</td>
<td>28.0%</td>
<td>15.3%</td>
<td>8.5%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Lehrabschluss/Anlehre</td>
<td>2271</td>
<td>84.1%</td>
<td>31.3%</td>
<td>18.8%</td>
<td>20.9%</td>
<td>18.3%</td>
</tr>
<tr>
<td>Höhere Berufsausbildung (Techniker, Meister o.Ä.)</td>
<td>766</td>
<td>79.0%</td>
<td>32.4%</td>
<td>6.0%</td>
<td>9.1%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Fachhochschulabschluss</td>
<td>871</td>
<td>83.6%</td>
<td>34.5%</td>
<td>7.2%</td>
<td>7.9%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Universitätabschluss</td>
<td>1202</td>
<td>86.2%</td>
<td>37.6%</td>
<td>10.3%</td>
<td>8.4%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Anderes</td>
<td>497</td>
<td>85.1%</td>
<td>37.9%</td>
<td>4.3%</td>
<td>3.5%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

* Small sample sizes in some categories