

# Hearing Aids improve Hearing - and a LOT more

Trends derived from the EuroTrak databases  
2009 - 2015

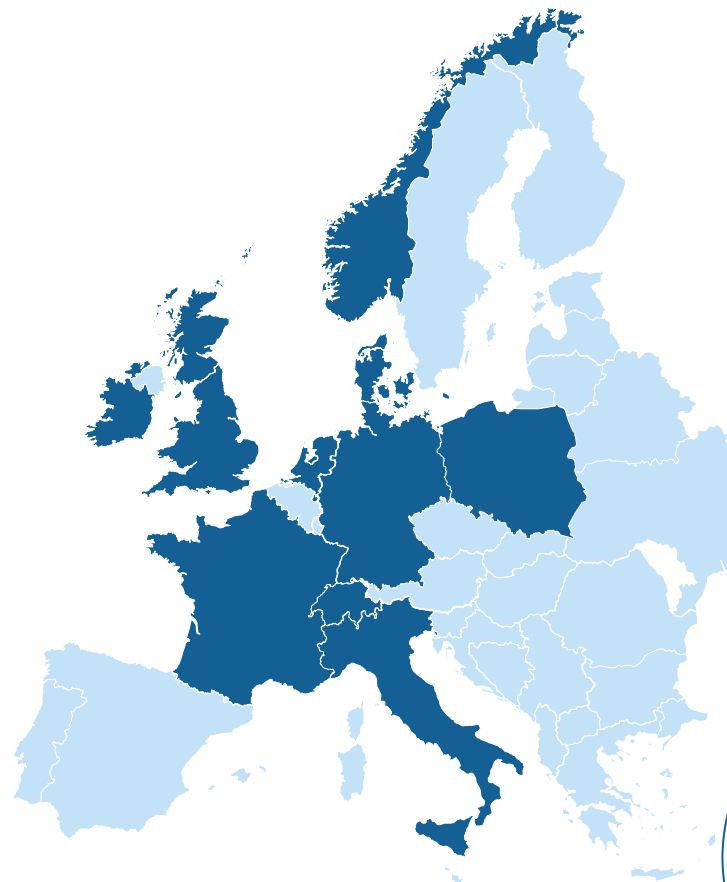
May, 2016

# EuroTrak



- Initiated by EHIMA in 2009
- Questionnaire designed to be compatible with U.S. MarkeTrak to secure cross continent comparisons
- On-line survey method
  - Surveys mailed to online panel members. Samples balanced, based on census information with respect to age, gender and region
- Focus on hearing status and hearing aid usage
  - Self assessment
- Issued in parallel in England, Germany and France
- Repeated every 3 years to generate trends over time

# Status 2015



Country	2009	2012	2015	2016
Germany	✓	✓	✓	
France	✓	✓	✓	
UK	✓	✓	✓	
Switzerland		✓	✓	
Italy		✓	✓	
Japan		✓	✓	
Norway		✓		?
Denmark		✓		✓
Poland				✓
Netherlands				✓

# Pooled data: Total sample sizes

## *Representative sample (sample 1)*

	EuroTrak I (2009)	EuroTrak II (2012)	EuroTrak III (2015)	Total
UK	14,980	14,896	14,473	<b>44,349</b>
Germany	14,183	13,922	13,775	<b>41,880</b>
France	15,545	15,430	14,824	<b>45,799</b>
<b>Total</b>	<b>44,708</b>	<b>44,248</b>	<b>43,072</b>	<b>132,028</b>

# Pooled data: Hearing impaired sample sizes

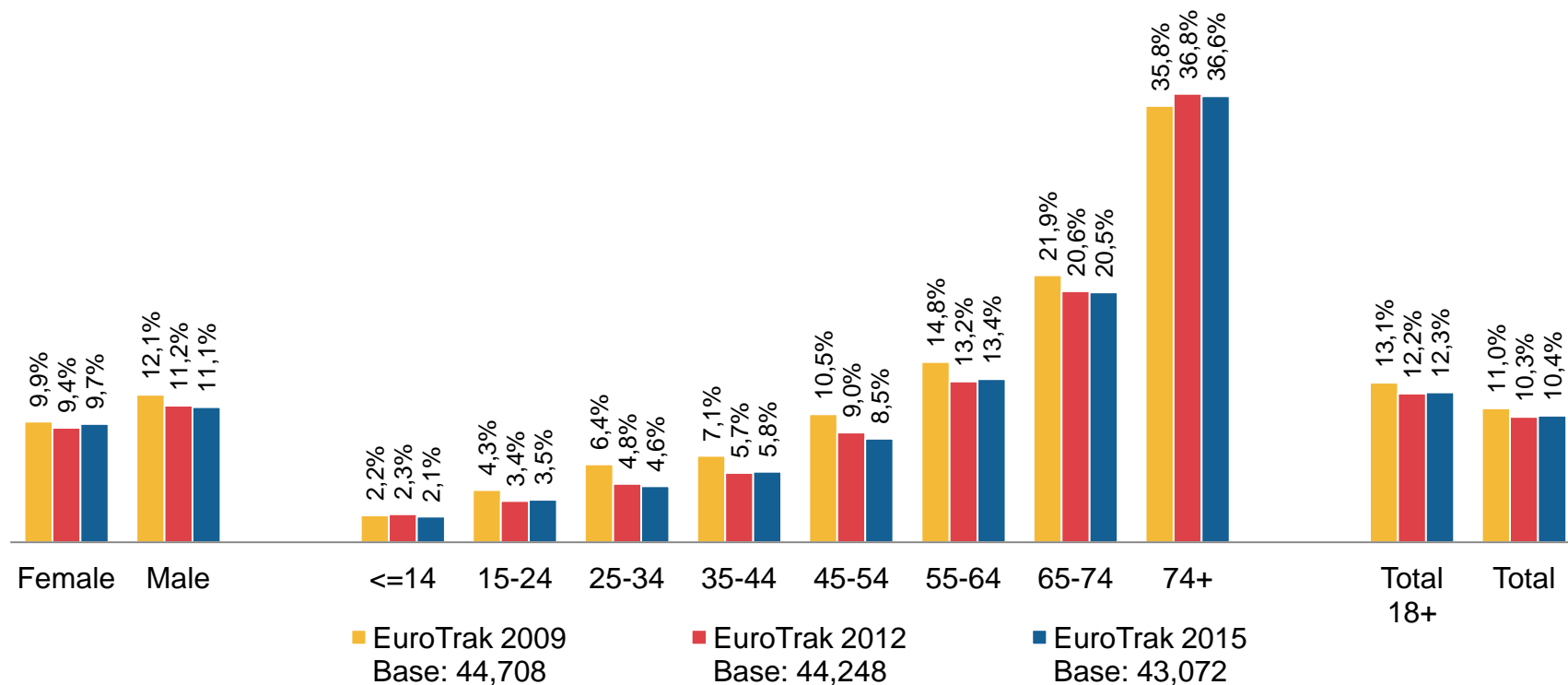


## *Hearing impaired (sample 2)*

		EuroTrak I (2009)	EuroTrak II (2012)	EuroTrak III (2015)	Total
HA owners	UK	513	501	605	<b>1,619</b>
	Germany	503	500	505	<b>1,508</b>
	France	501	502	501	<b>1,504</b>
Impaired non-owners	UK	822	795	720	<b>2,337</b>
	Germany	805	864	799	<b>2,468</b>
	France	803	809	819	<b>2,431</b>
HA owners	<b>Total</b>	<b>1,517</b>	<b>1,503</b>	<b>1,611</b>	<b>4,631</b>
Impaired non-owners	<b>Total</b>	<b>2,430</b>	<b>2,468</b>	<b>2,338</b>	<b>7,236</b>
All impaired	<b>Total</b>	<b>3,947</b>	<b>3,971</b>	<b>3,949</b>	<b>11,867</b>

# Hearing loss prevalence remains stable

*% hearing loss prevalence*

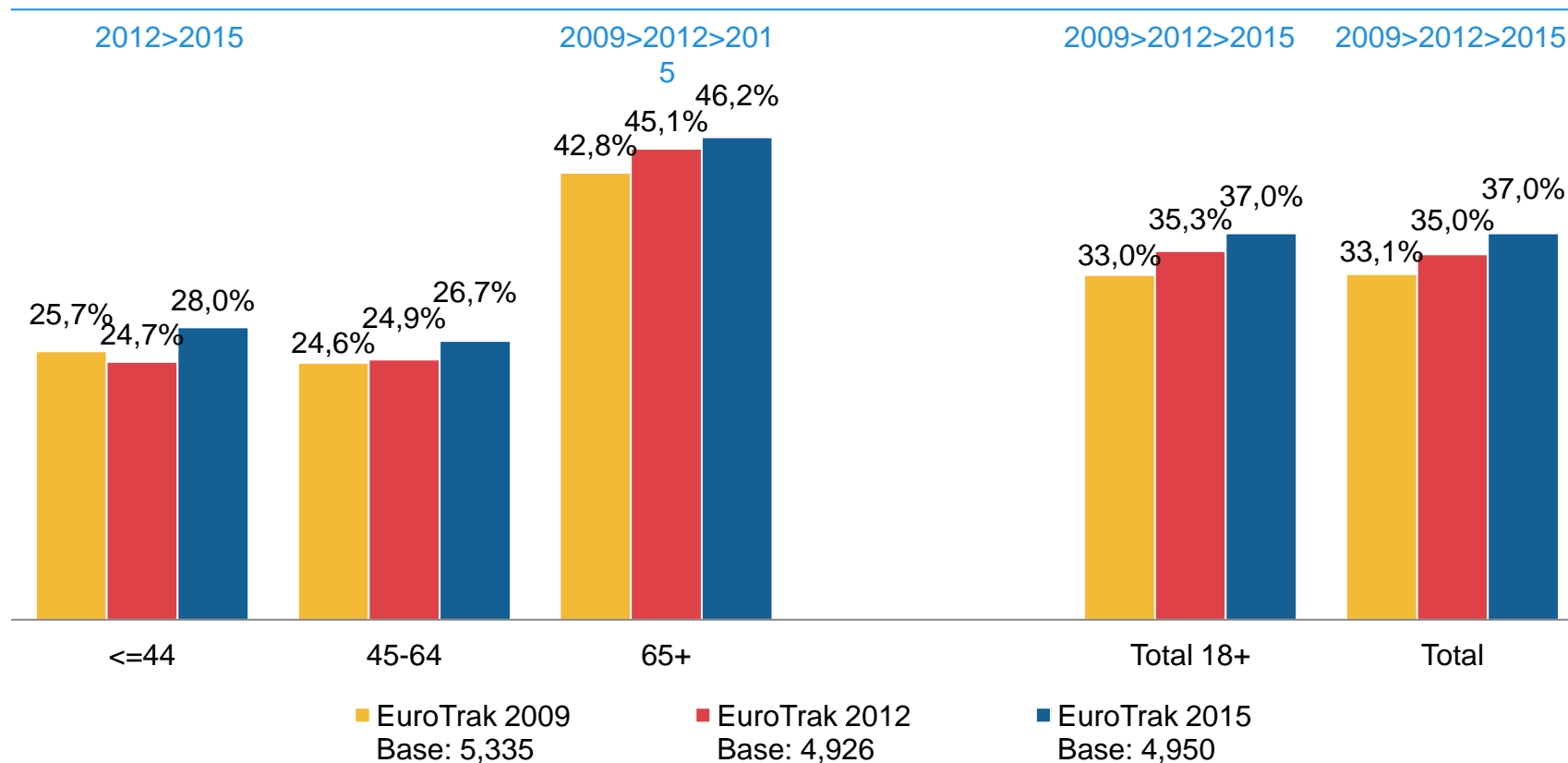


# Hearing aid adoption increases



*% of hearing impaired*

Statistical significance (90%)



# How is degree of hearing loss defined?

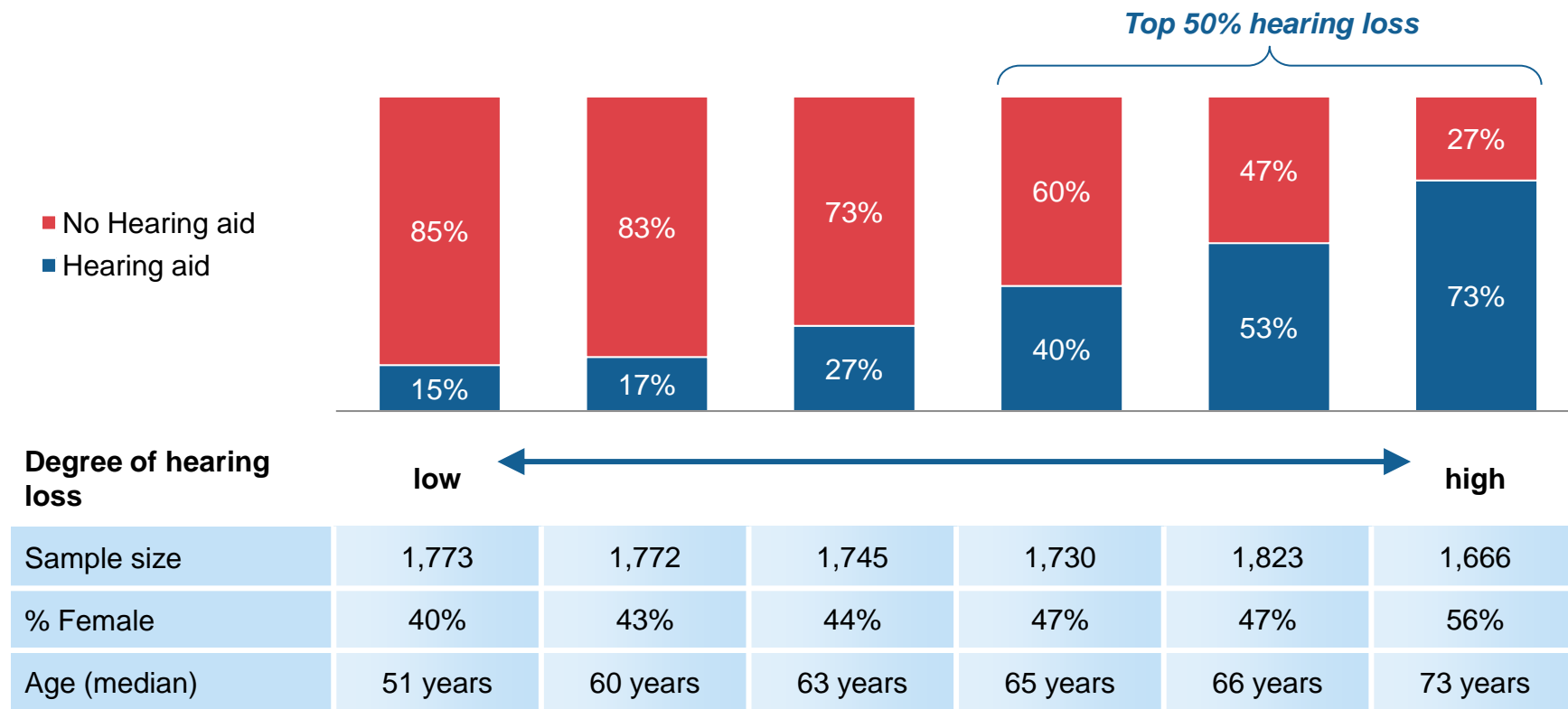
- Self-reported !!
- A factor analysis was performed to identify one factor “degree of hearing loss”
- The following questions were included in the factor:
  - Number of ears impaired (one or two)
  - Stated hearing loss (Mild, Moderate, Severe, Profound)
  - Scores on 6 APHAB-EC – like questions (Scaled 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 more severe the hearing loss, the higher the adoption rate



## Hearing loss 6-groups (6-tiles of equal size)



EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015.

HA-non-owner, n=6,168

HA-owner, n=4,341

# **Hearing aid satisfaction & usage**

## **Positive impacts**

# Perceived product performance is key driver for satisfaction



## Satisfaction

- Professionalism of dispenser
- Quality of dispenser's counselling
- Quality of service during hearing aid fitting period
- Quality of service after purchase

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

- Conversation in large groups
- Conversation in small groups
- Use in noisy situations
- Richness or fidelity of sound
- Clearness of tone and sound
- Natural sounding
- Leisure activities
- Watching TV
- Comfort with loud sounds
- On the telephone
- Conversation with one Person

## Factors identified by factor analysis

**Dispenser**

**Product features**

**Product performance**  
(Sound quality, signal process and listening situations)

## Betas from regression analysis

0.3

0.3

0.6

**Overall satisfaction**

***Rsq = 0.62***

n=4,605

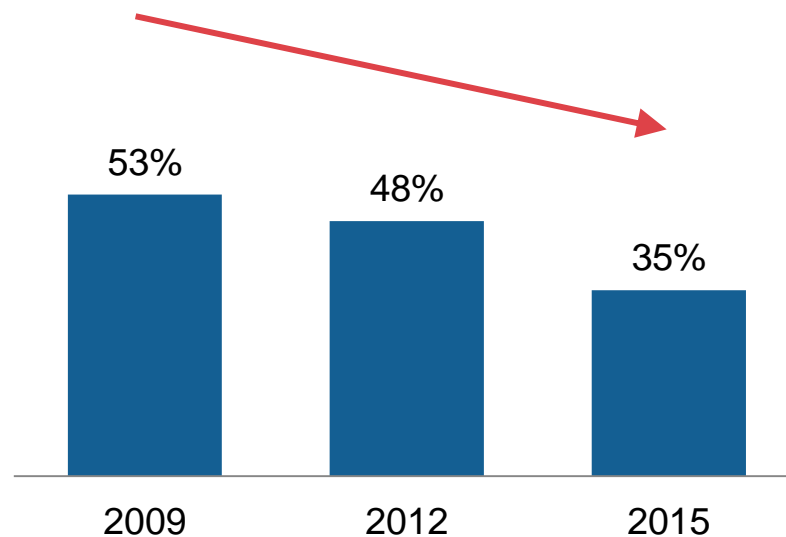
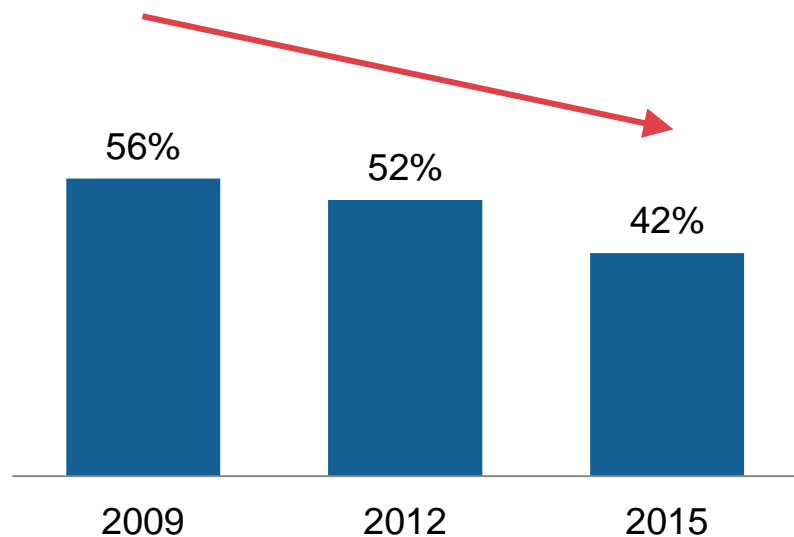
EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015: Hearing aid owners

# Image of hearing aids is improving

## Reasons for not having a HA (top 50% HL)

*Embarrassed to wear a hearing aid*

*Bad design*



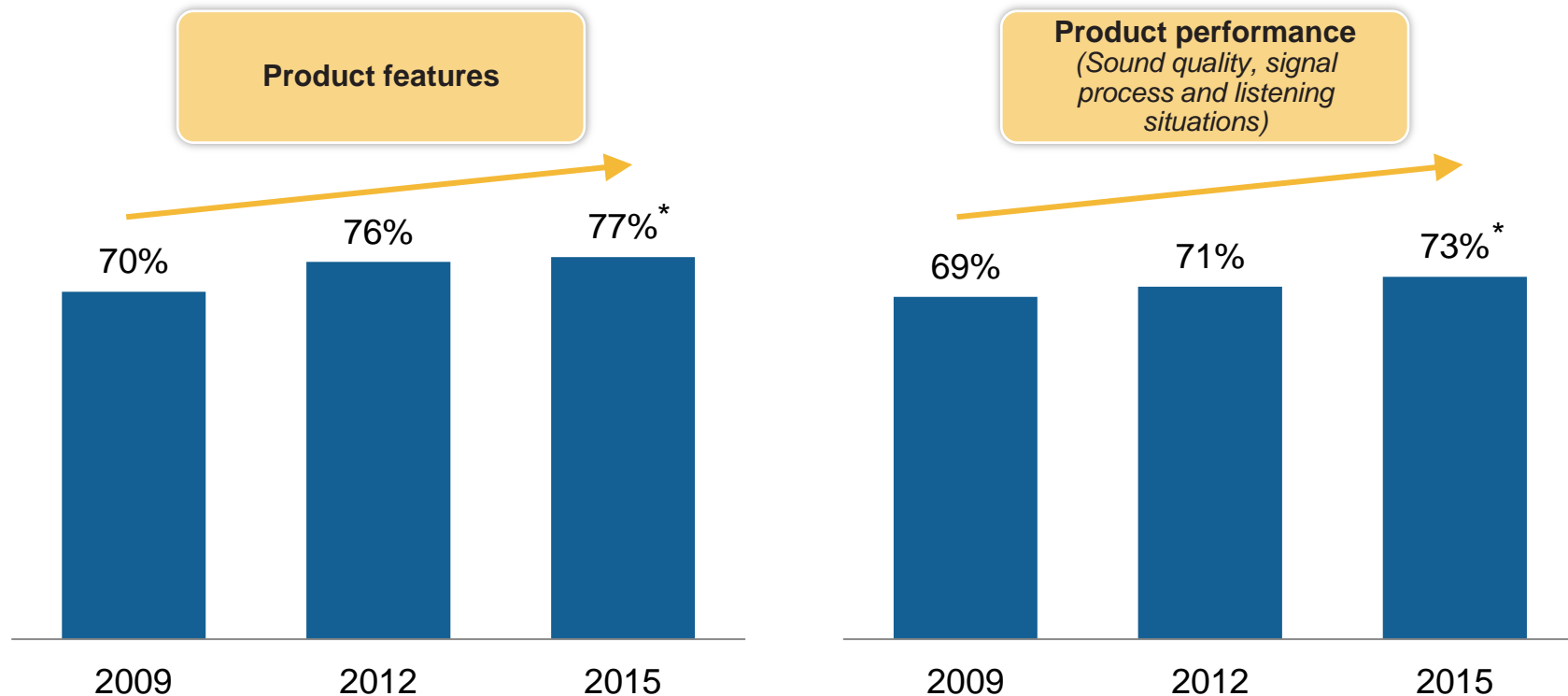
n=716/713/603  
EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# Satisfaction with HA features and performance increased



## Trends

% satisfied



\* Differences are statistically significant (95%)

2009 n=1,483

2012 n=1,488

2015 n=1,593

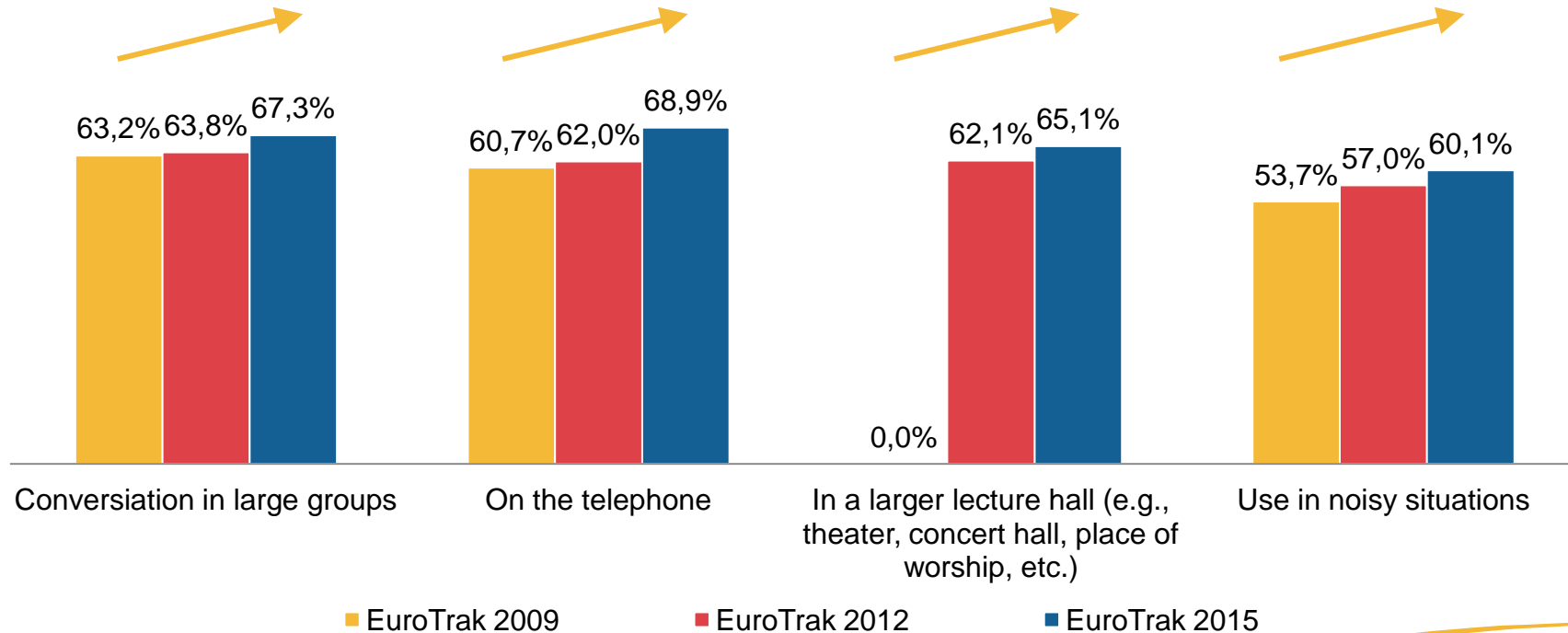
Source: EuroTrak pooled data GER, FRA, UK, **2009, 2012, 2015** Hearing aid owners

# Satisfaction with HA in difficult listening situations is improving



## Trends

% satisfied



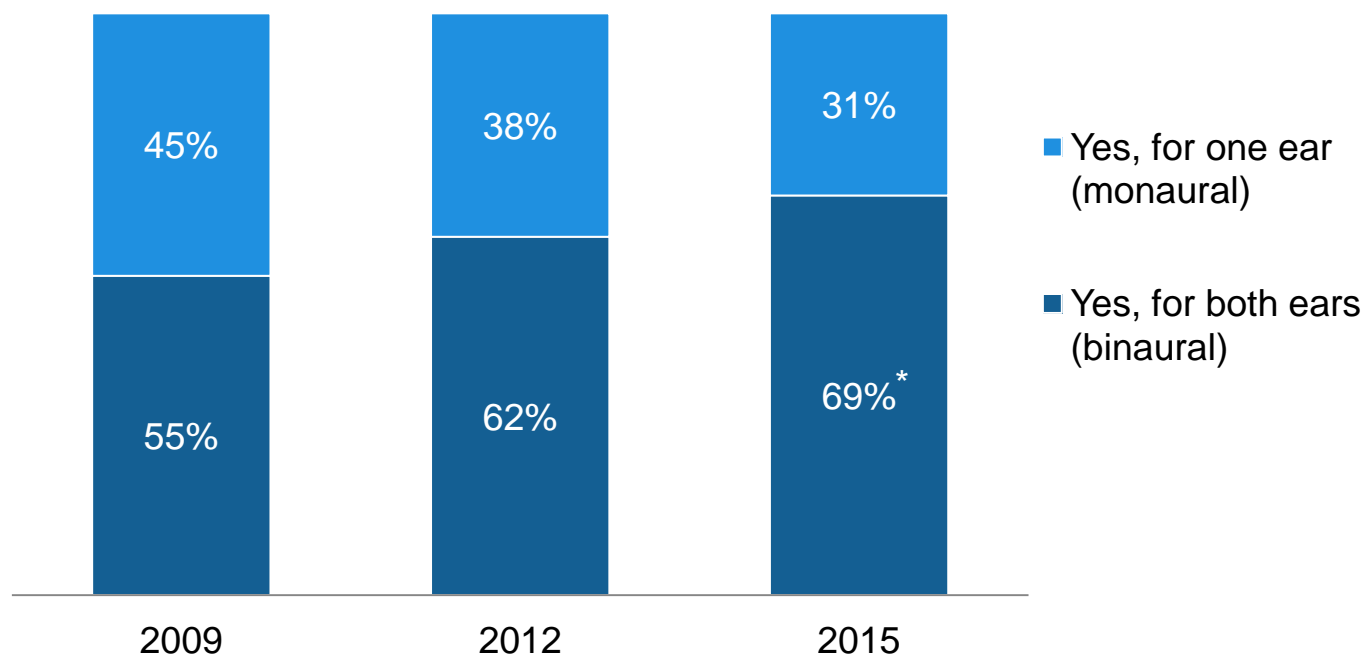
n=4,133

EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015: HA owners

# Binaural fitting rate increased



Do you own or use a hearing aid?



\* Differences are statistically significant (95%)

2009 n=1,744

2012 n=1,719

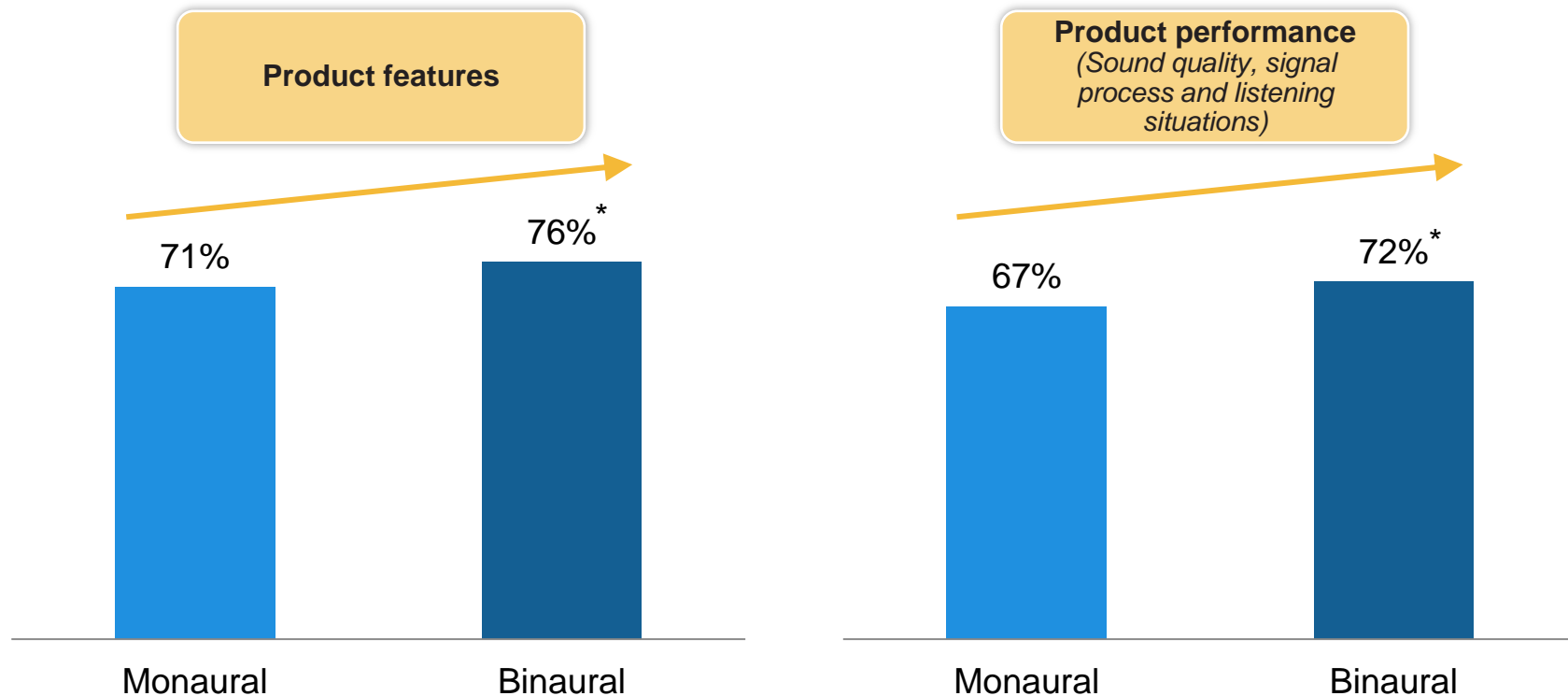
2015 n=1,826

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015 Hearing aid owners

# Binaurally fitted users are more satisfied



% satisfied



\* Differences are statistically significant (95%)

Monaural n=1,304

Binaural n=3,212

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015: Hearing aid owners



# Binaural fitting outperforms monaural fitting for all degrees of hearing loss



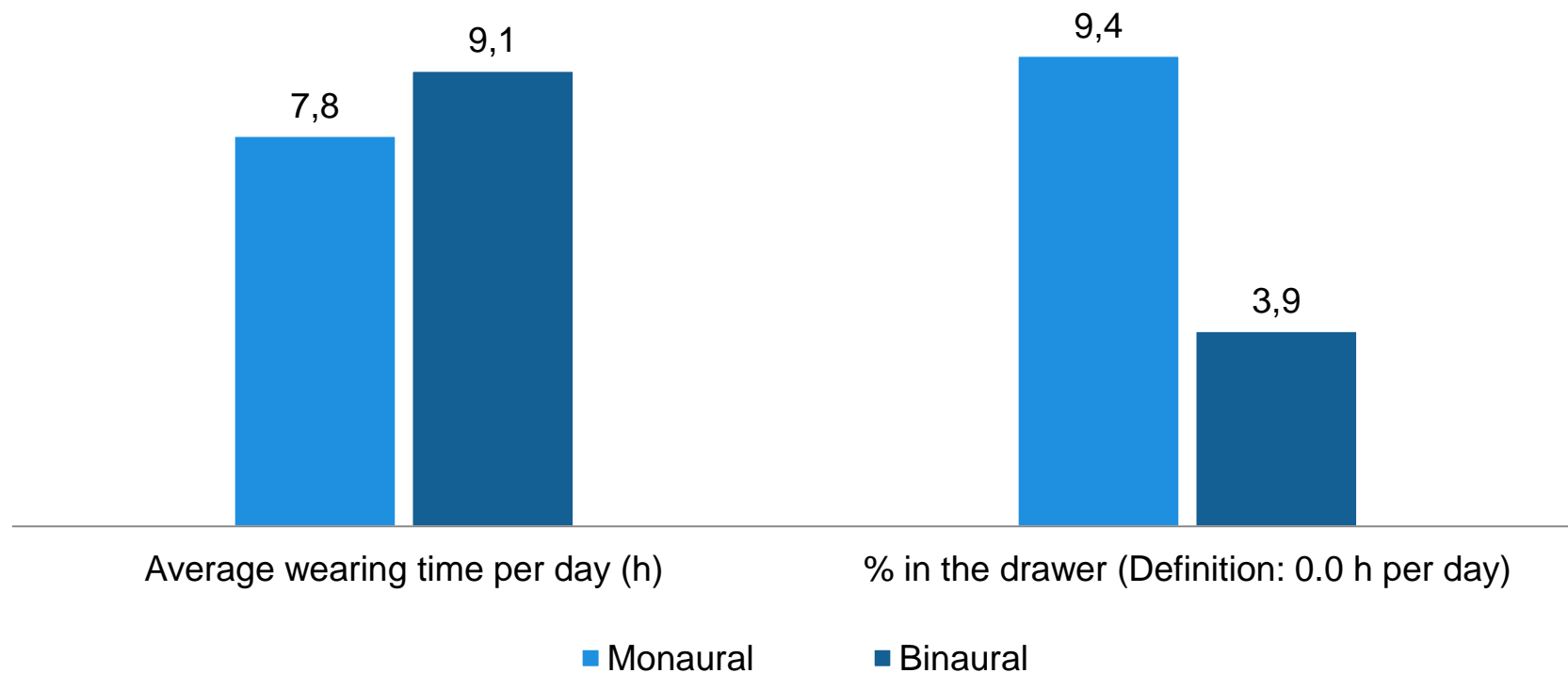
Degree of hearing loss (self stated)	Binaural fitting % satisfied	Monaural fitting % satisfied
<b>Mild</b>	<b>72%</b> n=183	59% n=39
<b>Moderate</b>	<b>83%</b> n=1,315	75% n=233
<b>Severe</b>	<b>77%</b> n=955	67% n=181
<b>Profound</b>	78% n=237	76% n=69

EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015: Hearing aid owners with binaural hearing loss.

# Binaurally fitted use their hearing aids more



Approximately how many hours a day do you wear your hearing aids?



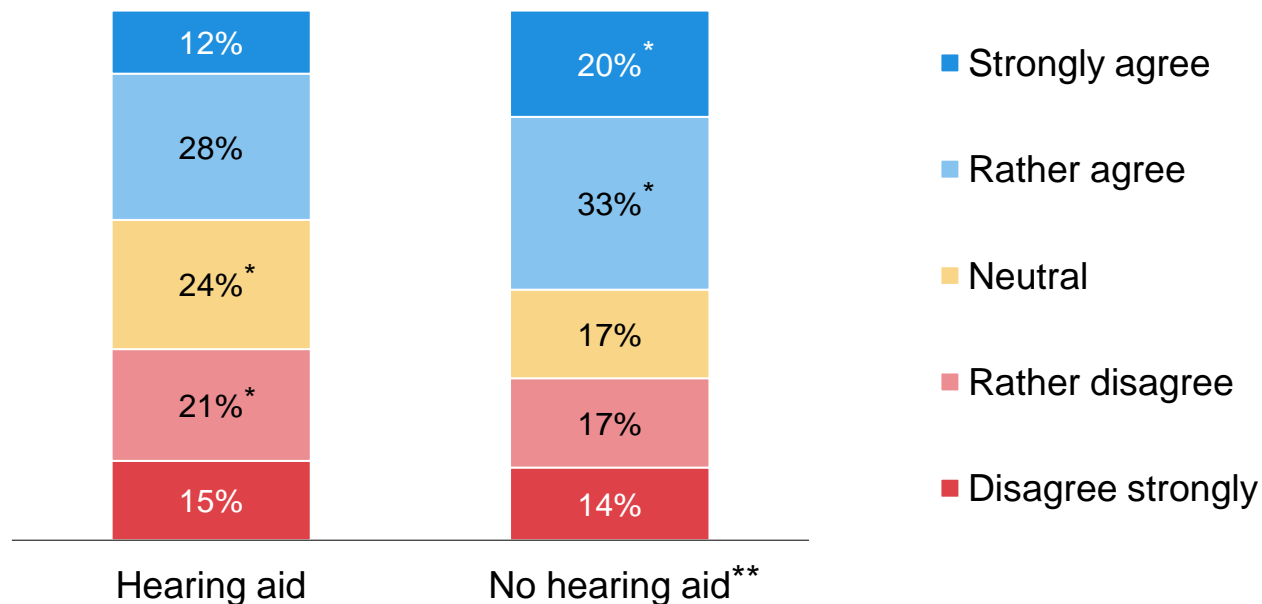
Monaural n=525  
Binaural n=2,713

Source: EuroTrak pooled data GER, FRA, UK, **2009, 2012, 2015** Hearing aid owners with binaural hearing difficulty

# Positive impact of HA's on physical stress



In the evenings I often feel physically exhausted



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

Hearing aid n=2,923

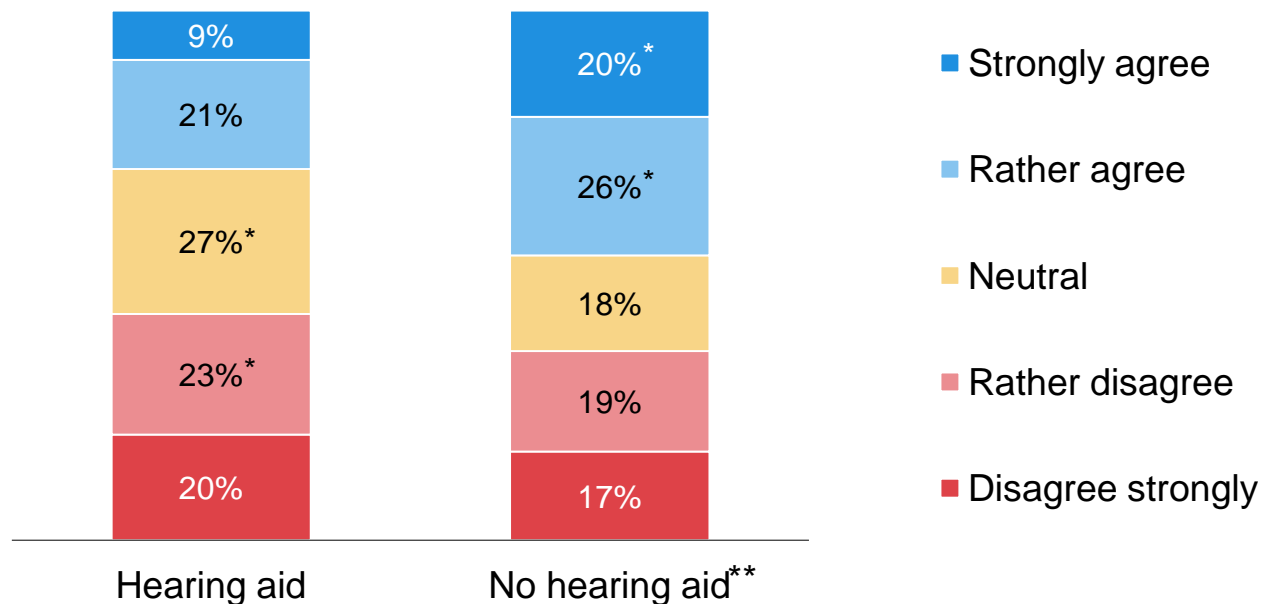
No hearing aid n=2,085

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# Positive impact of HA's on mental stress



In the evenings I often feel mentally exhausted



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

Hearing aid n=2,923

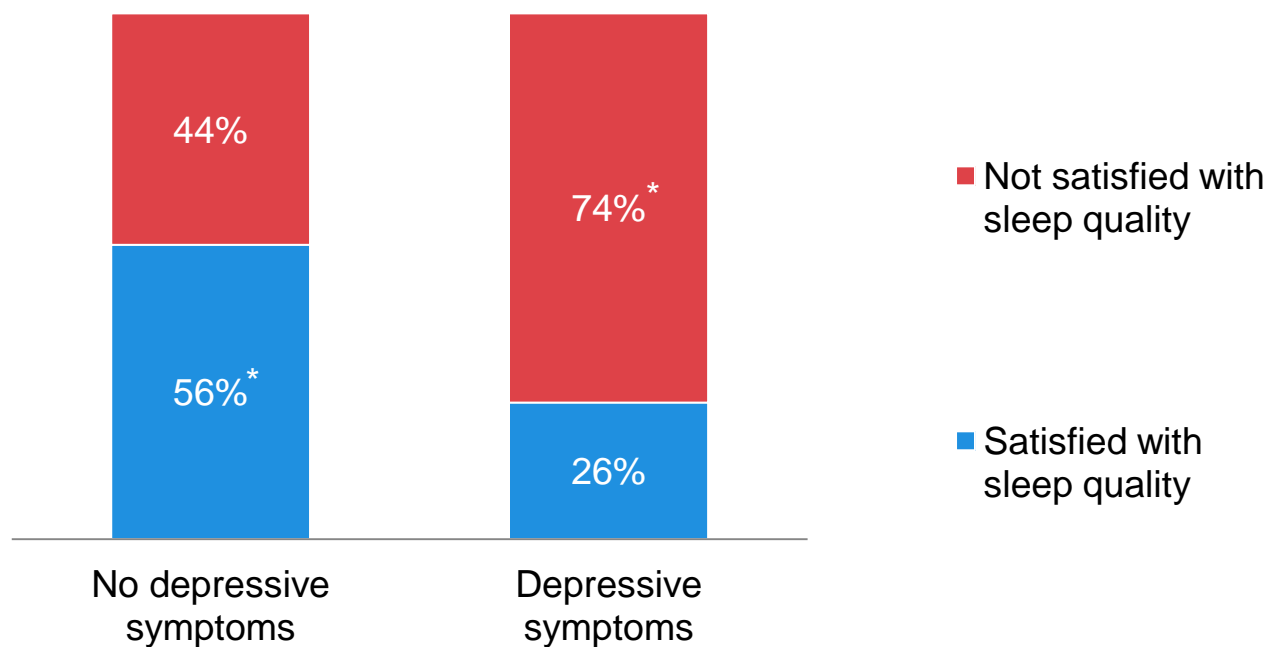
No hearing aid n=2,085

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# Sleep problems: an indicator of depressive symptoms



Are you generally satisfied with the quality of your sleep?



\* Differences are statistically significant (95%)

No depressive symptoms n=2,137

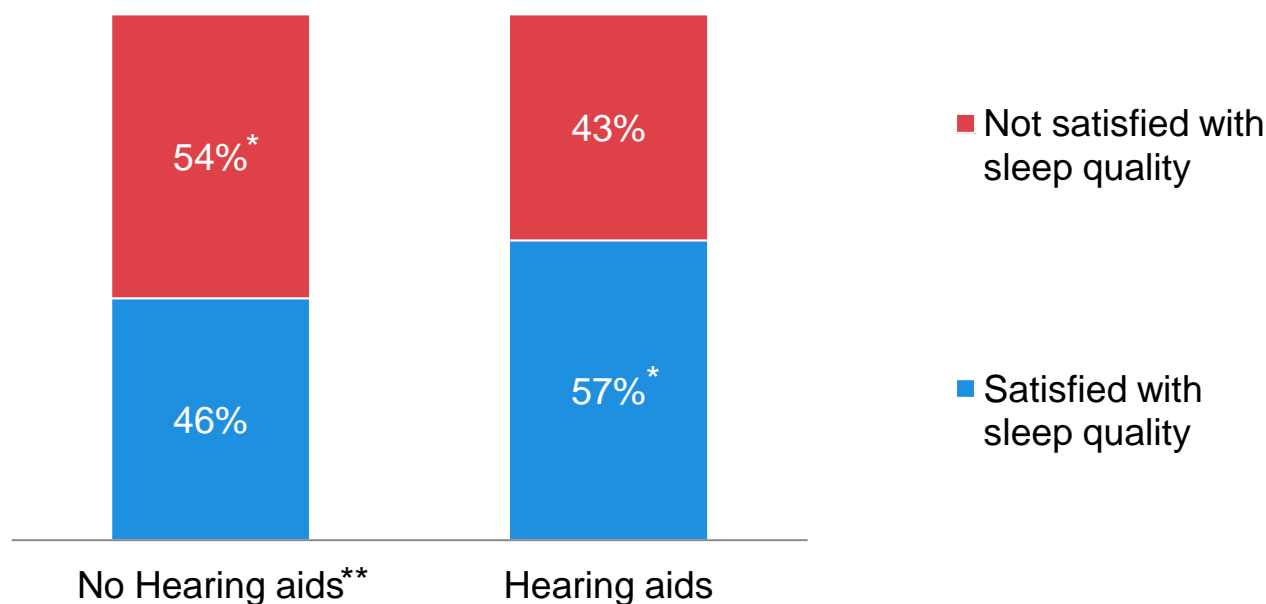
Depressive symptoms n=527

Source: EuroTrak pooled data GER, FRA, UK, 2015

Depressive symptoms are measured here using the PHQ-2 Scale  $\geq 3$

# People with hearing aids sleep better

Are you generally satisfied with the quality of your sleep?



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group)

No Hearing aids n=1,122

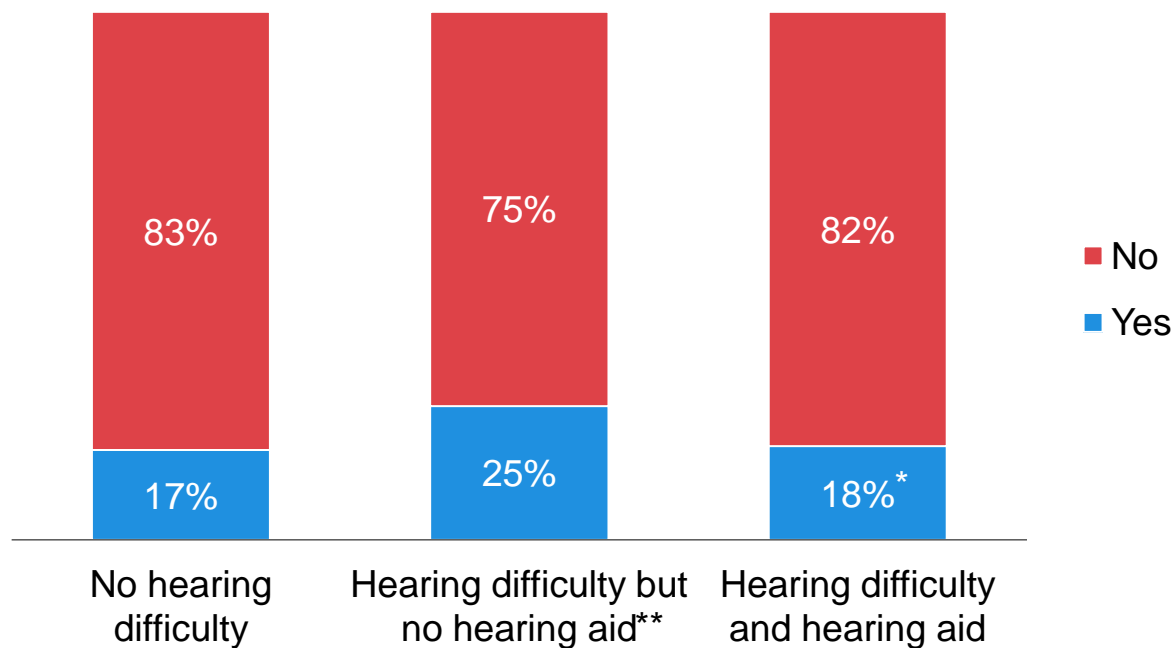
Hearing aids n=396

Source: EuroTrak pooled data GER, FRA, UK, 2015

# The positive impact of HA's on depressive symptoms



## Depressive symptoms (PHQ-2)



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

No hearing difficulty n=21,922 (based on rep sample)

No hearing aid n=857

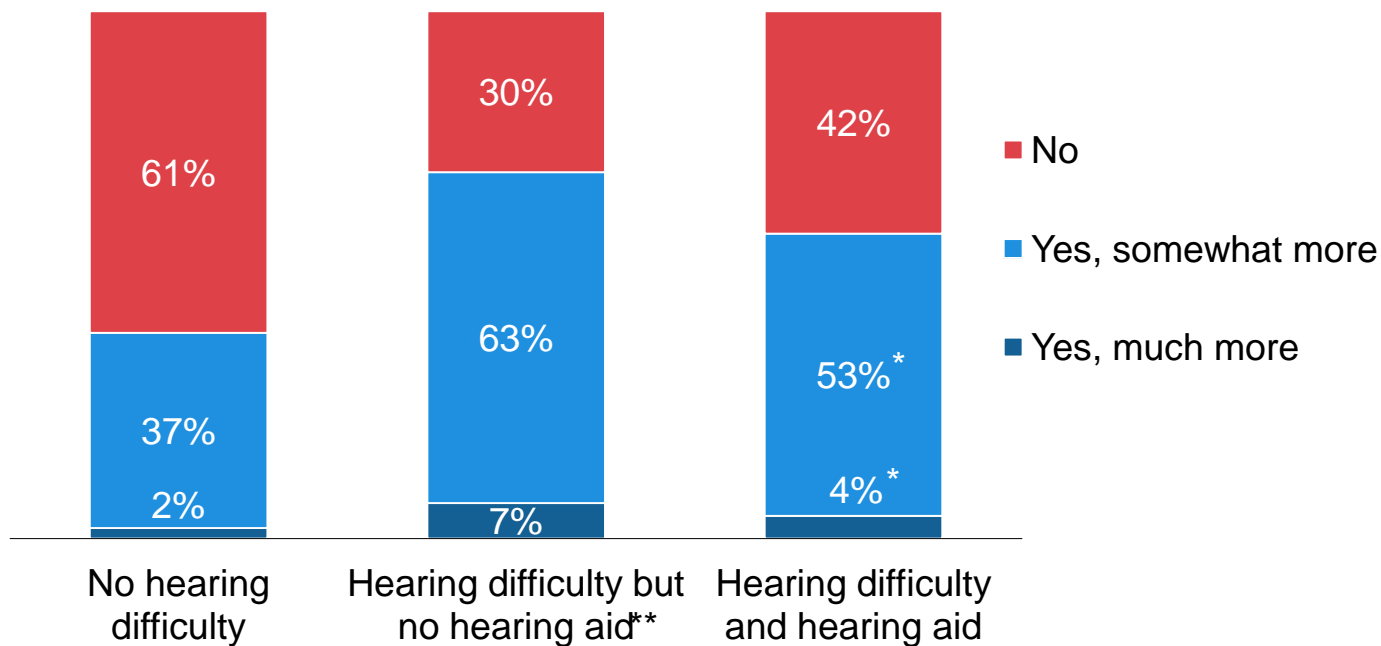
Hearing aid n=2126

Source: EuroTrak pooled data GER, FRA, UK, 2012, 2015

# The positive impact of HA's on dementia symptoms



**Dementia symptom: Getting more forgetful in the last year?**



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

No hearing difficulty n=21,923 (based on rep sample)

No hearing aid n=857

Hearing aid n=2,126

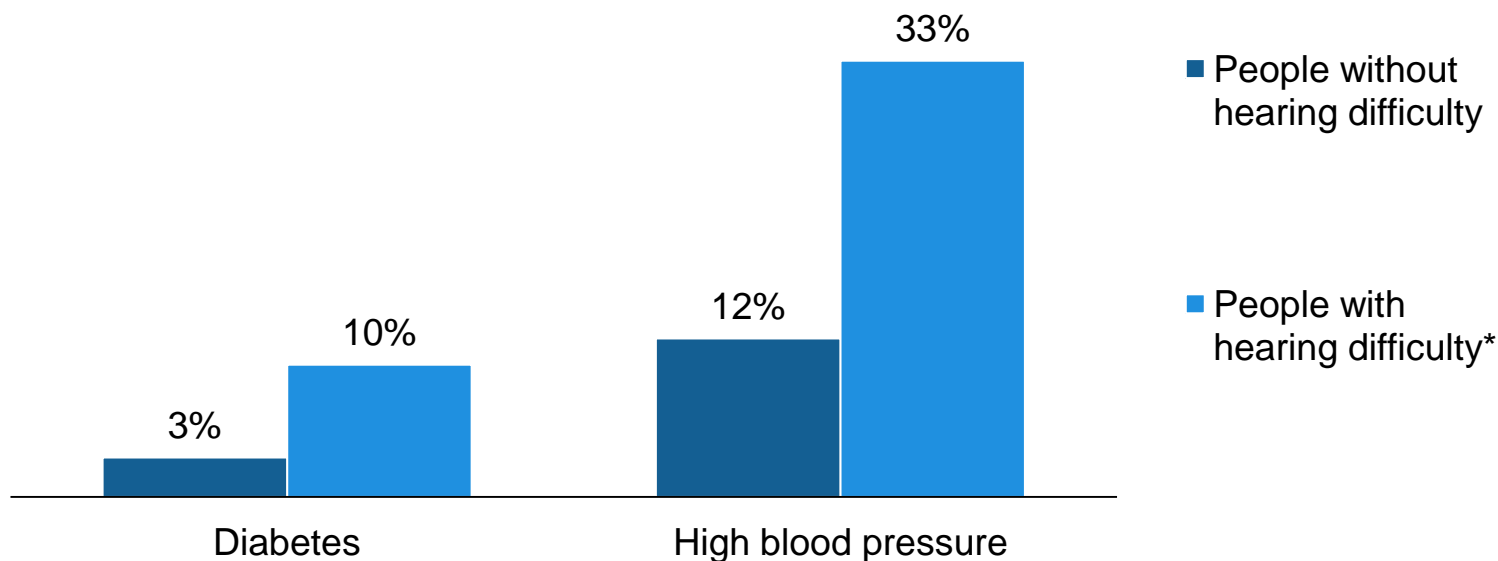
Source: EuroTrak pooled data GER, FRA, UK, 2012, 2015



# People with hearing difficulty more often have high blood pressure and diabetes



Which of the following apply to you?



\* Differences are statistically significant (95%)

People with Hearing difficulty n=15,211

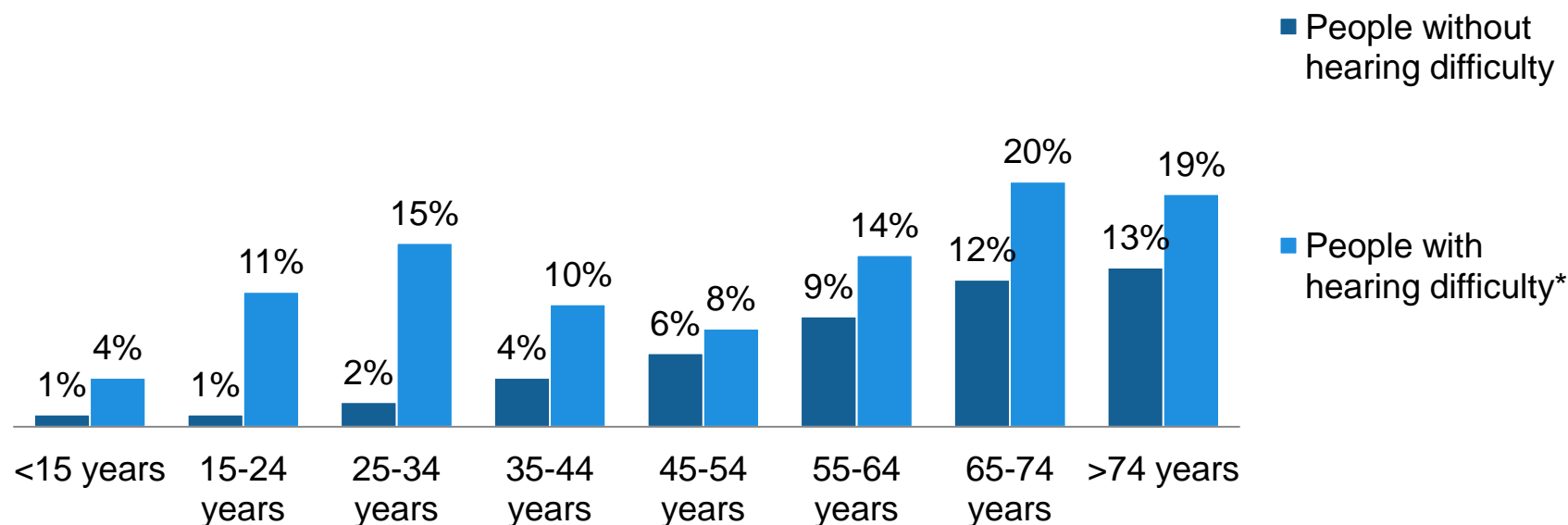
People without hearing difficulty n=116,817

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# People with hearing difficulty more often have diabetes – across all age groups



Which of the following apply to you? **“Diabetes”** by Age group



\* Differences are statistically significant (95%)

People without Hearing difficulty n=15,211

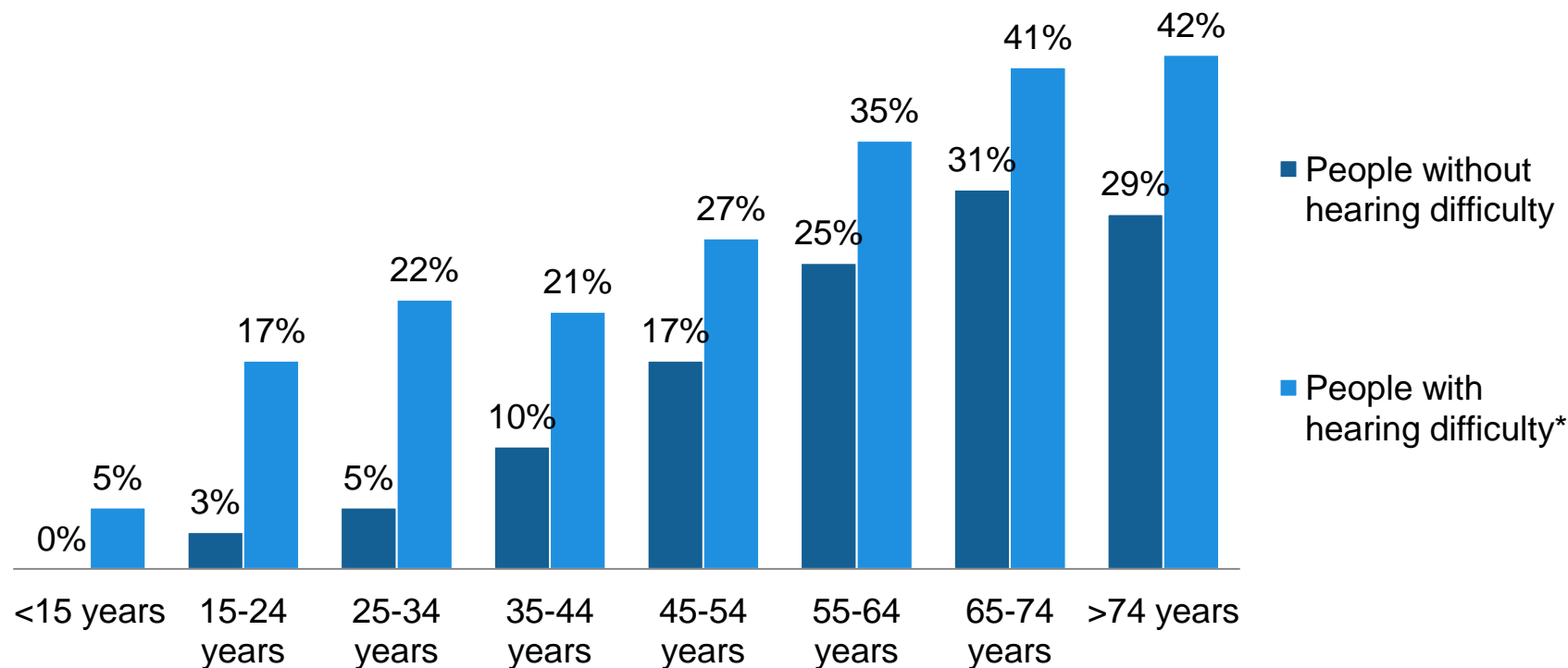
People with hearing difficulty n=116,817

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# People with hearing difficulty more often have high blood pressure – across all age groups



Which of the following apply to you? “High blood pressure” by Age group



\* Differences are statistically significant (95%)

People without Hearing difficulty n=15,211

People with hearing difficulty n=116,817

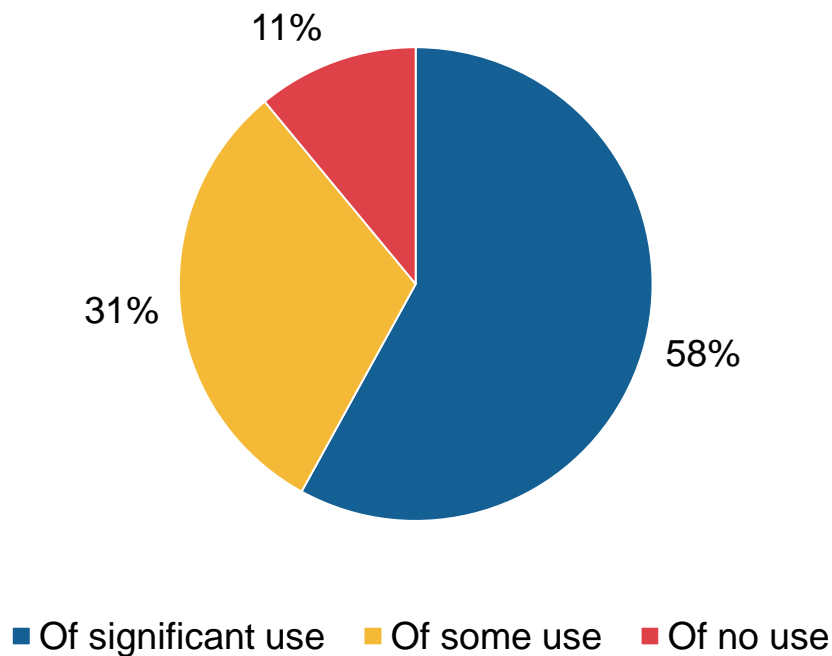
Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015

# Labour market

# Hearing aids are useful on the job

How useful are your hearing aids on your job?

---



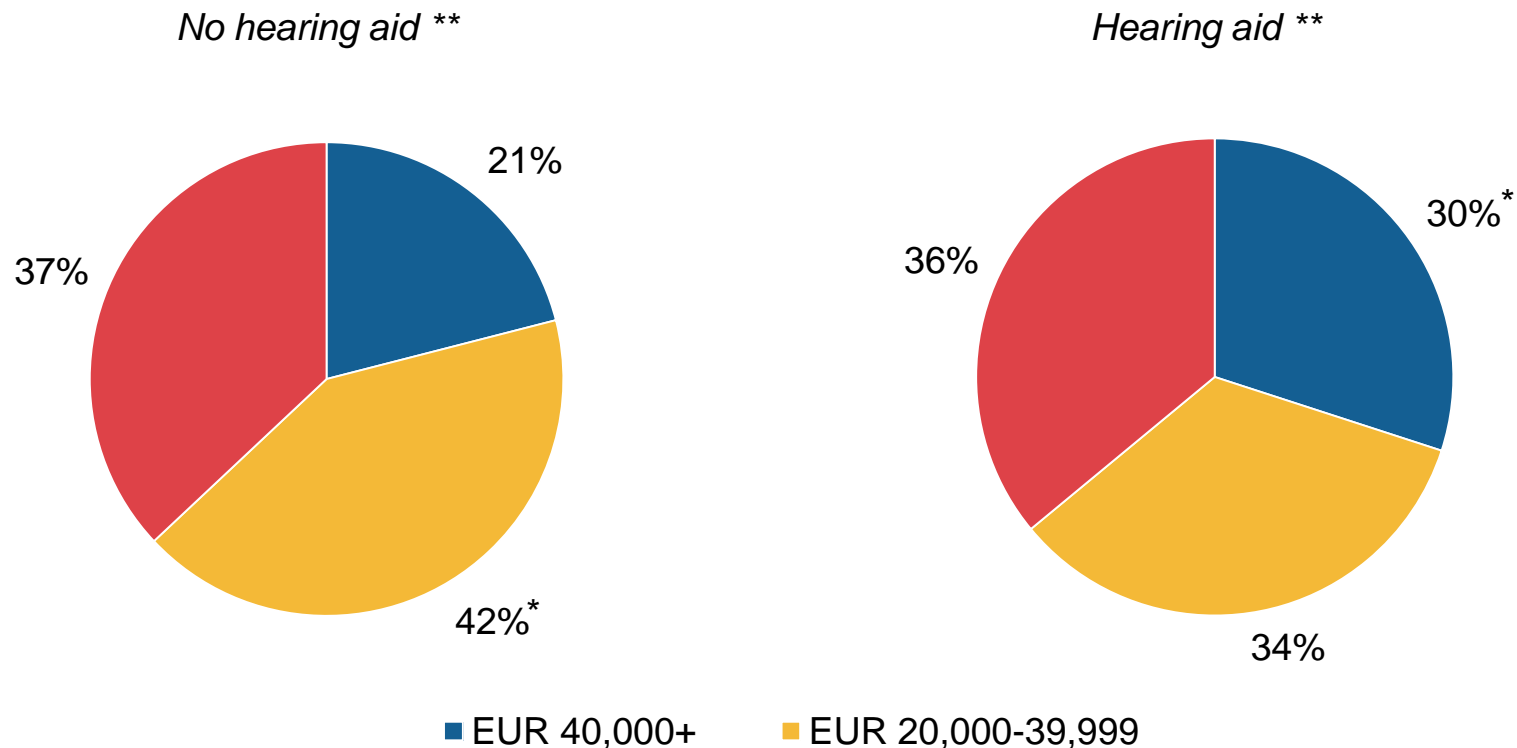
n=1,060

Source: EuroTrak pooled data GER, FRA, UK, 2012, 2015 fulltime or part time employed

# Employed HA users more often earn a higher salary



What is your annual **PERSONAL** income before tax etc. ?



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

Hearing aid n=1,615

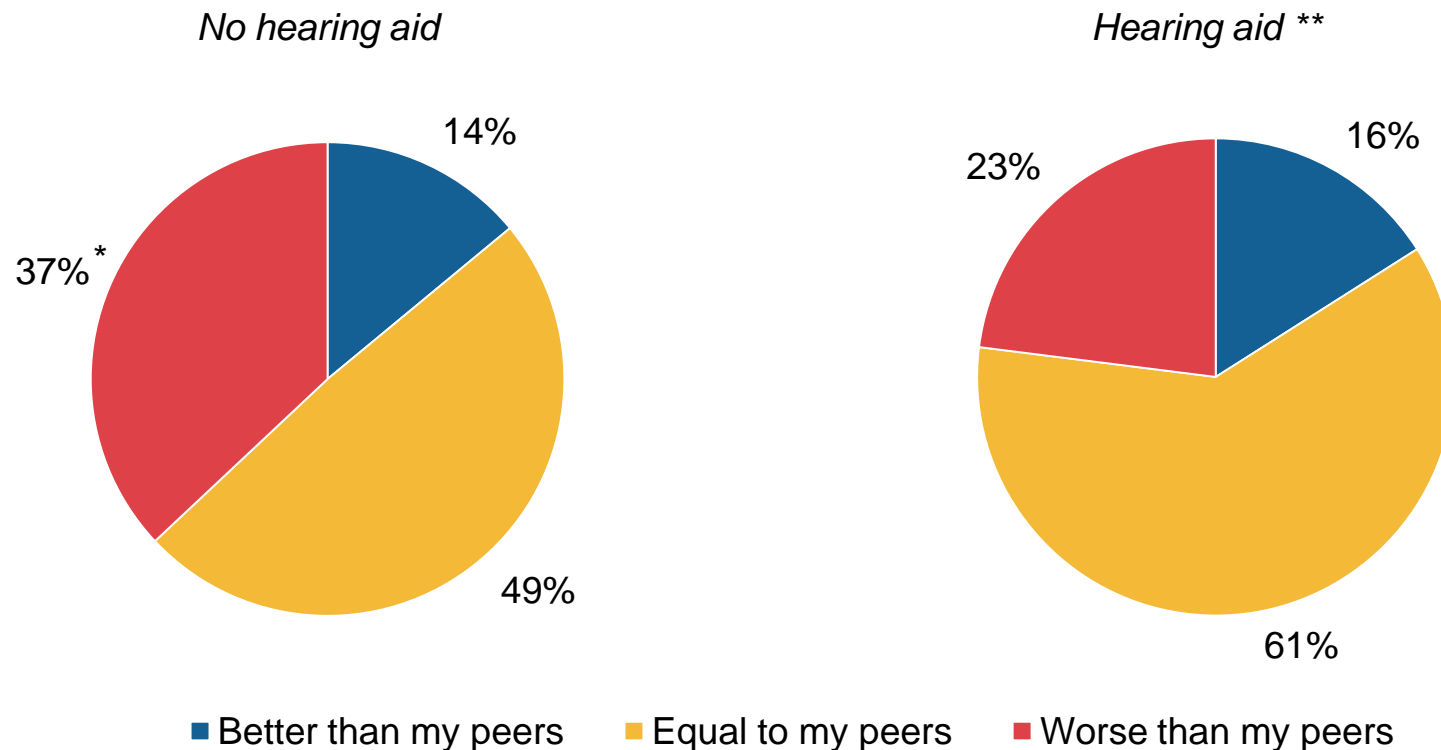
No hearing aid n=949

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015 fulltime or part time employed

# Employed HA users less often feel under-salaried



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



\* Differences are statistically significant (95%)

\*\* Refers to a group with a similar degree of hearing loss as hearing aid owners (the top 50% group).

Hearing aid n=1,591

No hearing aid n=951

Source: EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015 fulltime or part time employed

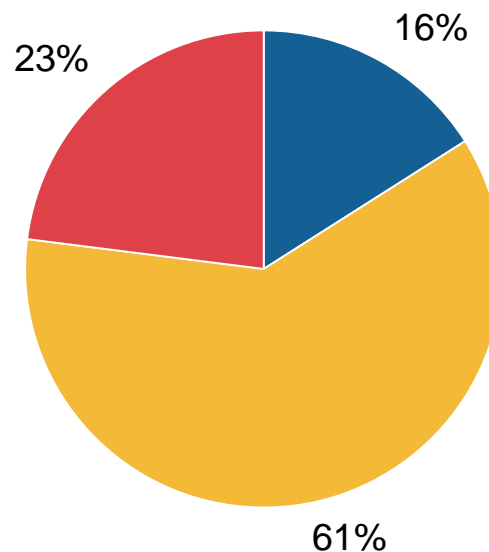
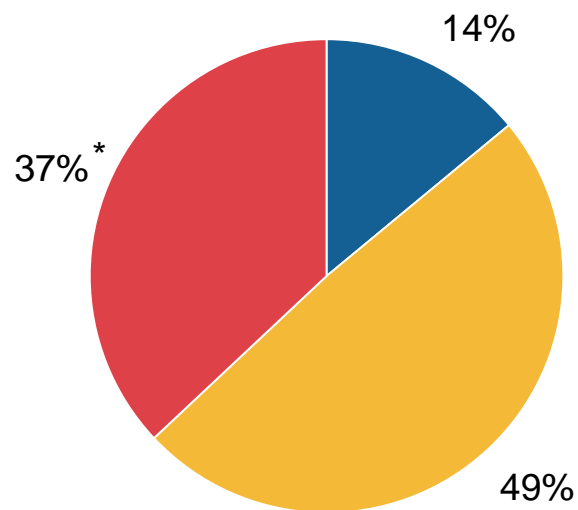
# Hearing impaired non-users declare more often to receive a worse salary than their peers



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

*Top 50% hearing loss, no hearing aid n=951*

*HA n=1,591*



■ Better than my peers   ■ Equal to my peers   ■ Worse than my peers

\* Differences are statistically significant (95%).

Top 50% hearing loss refers to a group with a similar degree of hearing loss as hearing aid owners.

EuroTrak pooled data GER, FRA, UK, 2009, 2012, 2015.  
fulltime or part time employed



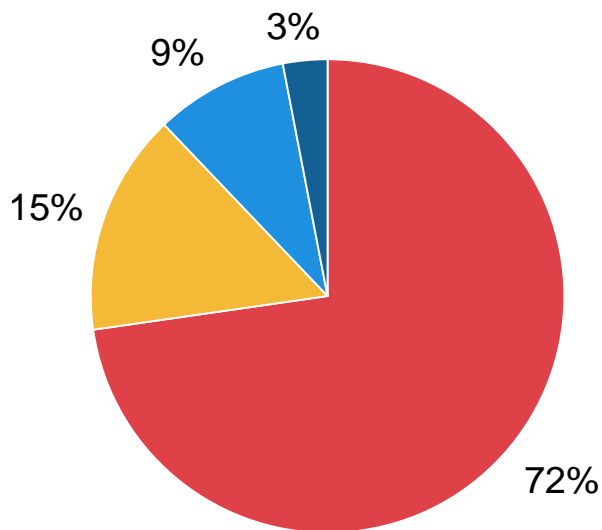
# 87% of all users do not feel they're made fun of. Non-users often feel made fun of (36%)



## HA users:

How often do people make fun of you because of your HA's?

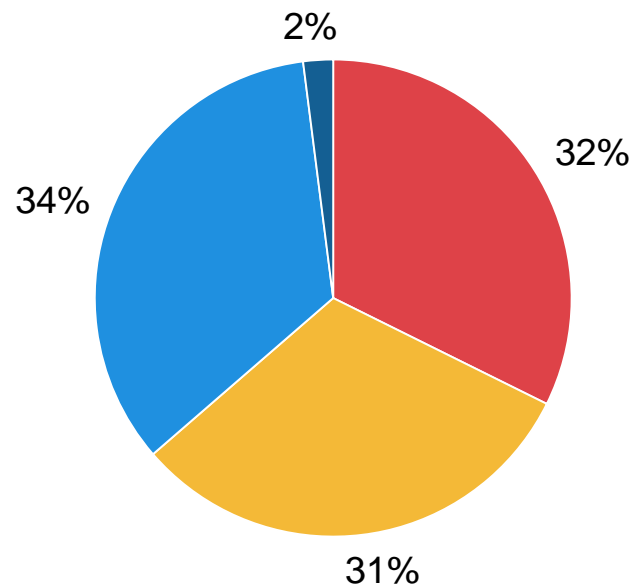
Base: n=501



## Non-users:

How often do people make fun of you because of your hearing loss?

Base: Top 50% hearing loss, no hearing aid n=219



■ Never ■ Rarely ■ Occasionally ■ Regularly

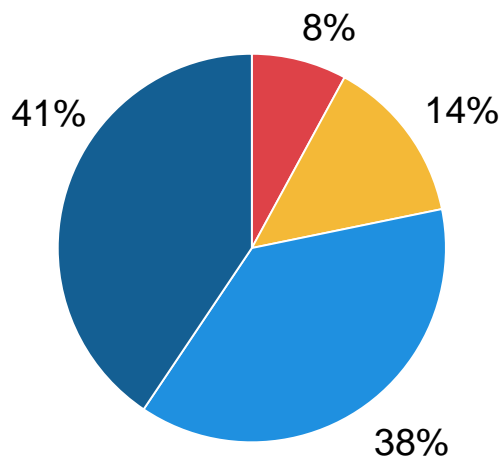
# Vast majority declare that their hearing aids improve their quality of life



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

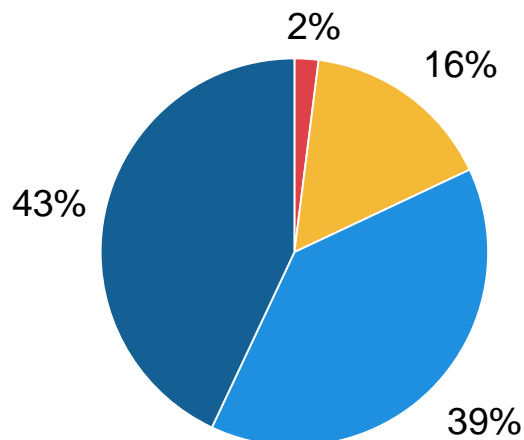
United Kingdom

Base: n=605



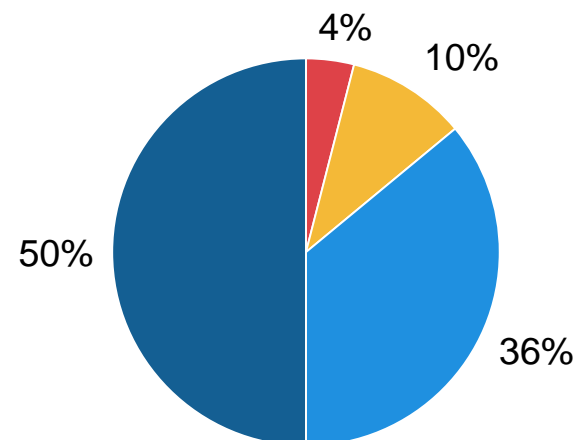
Germany

Base: n=505



France

Base: n=501



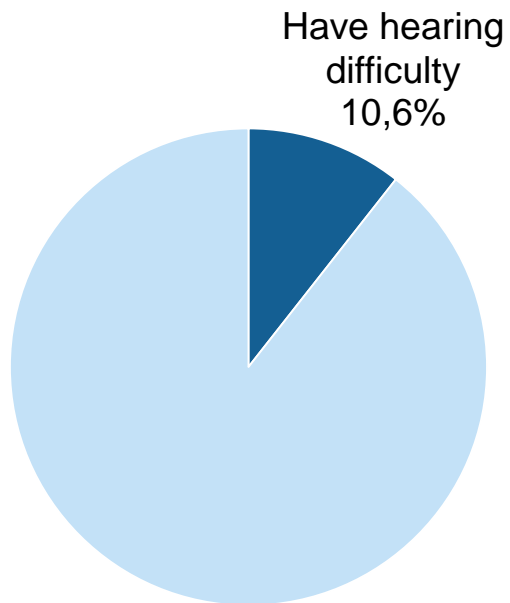
■ Never ■ Rarely ■ Occasionally ■ Regularly

# USA: MT9 2015

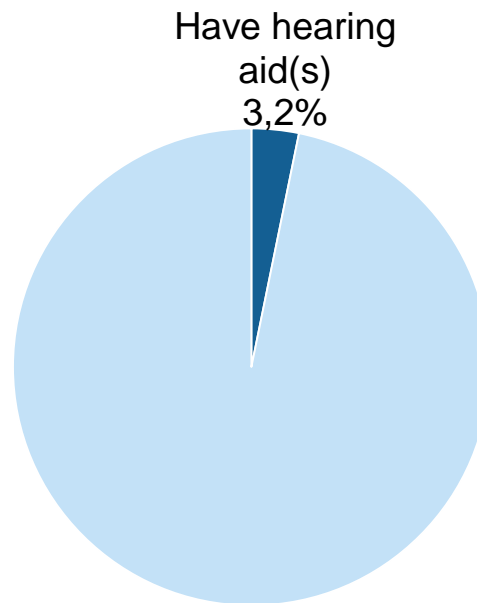
# Hearing difficulty & hearing aid rates



## Hearing difficulty rate



## Hearing aid rate

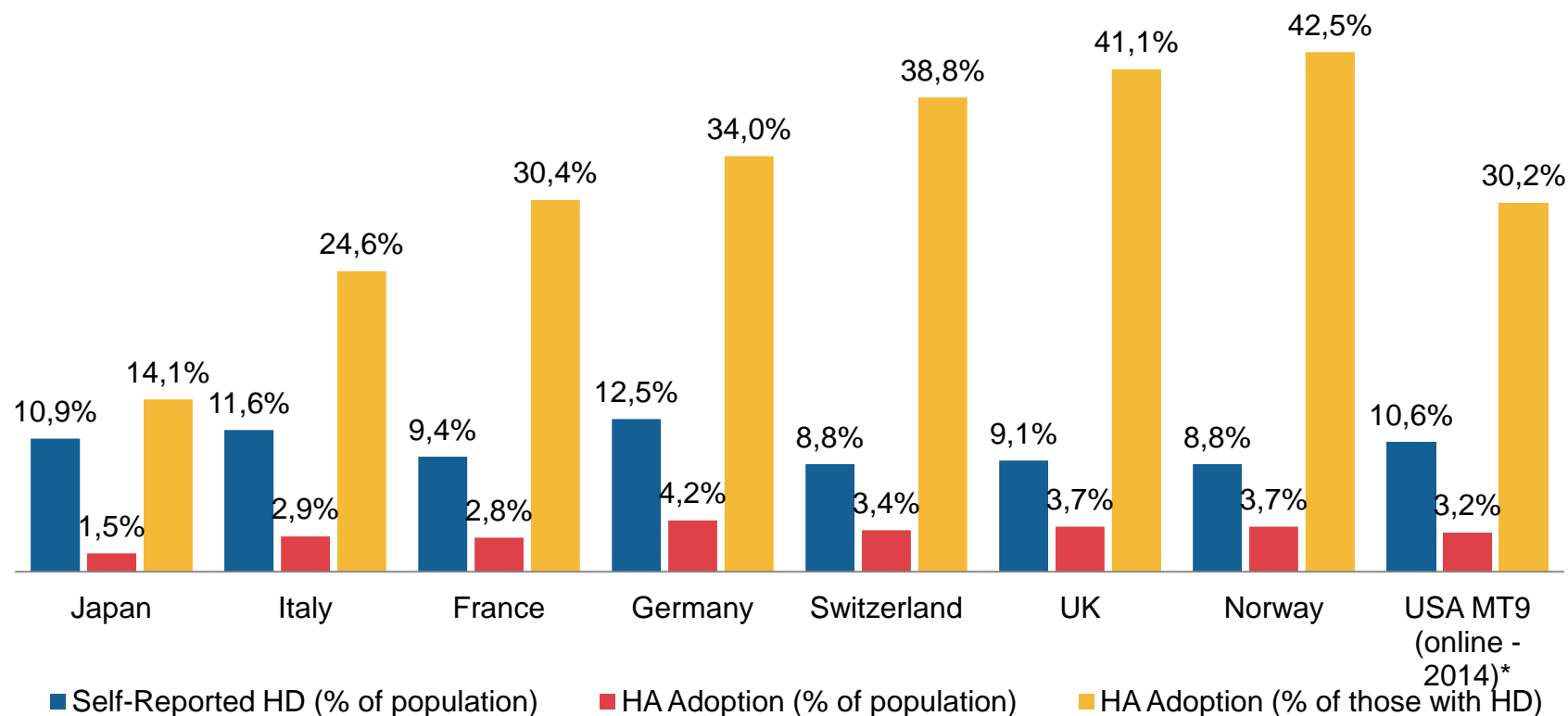


Rates are based upon n=13,018 individuals. See appendix for details.

# Rates over time and across countries



## HD, HA & HA Adoption rates

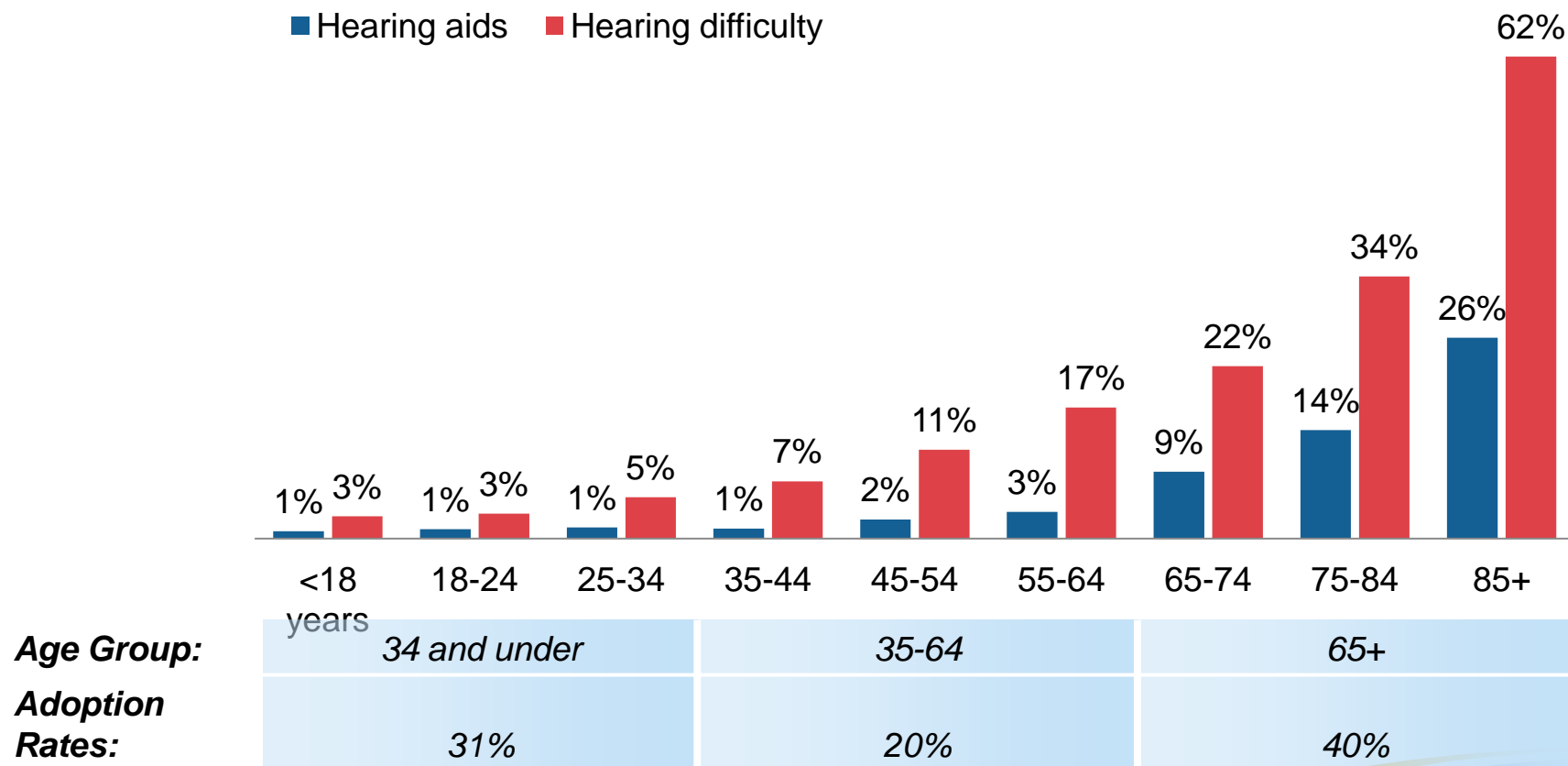


\* Some of the slight differences in the component rates between MT VIII and MT9 may be due to the method change and the masked objective. The MT9 rates represent the online baseline estimates.

# Hearing difficulty & hearing aid rates by age group



## Hearing difficulty & hearing aid by age

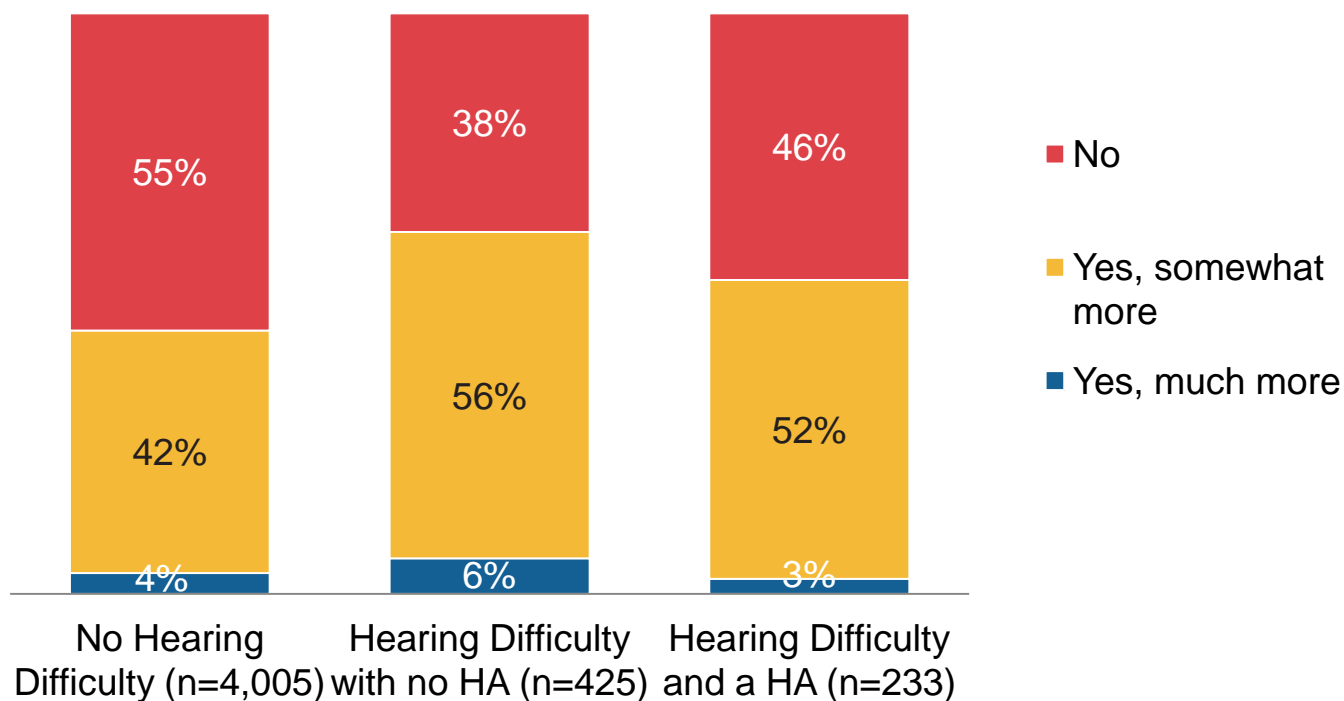


(n=13,018 individuals)

# Relationship with memory loss



In the last year, have you found yourself getting more forgetful?

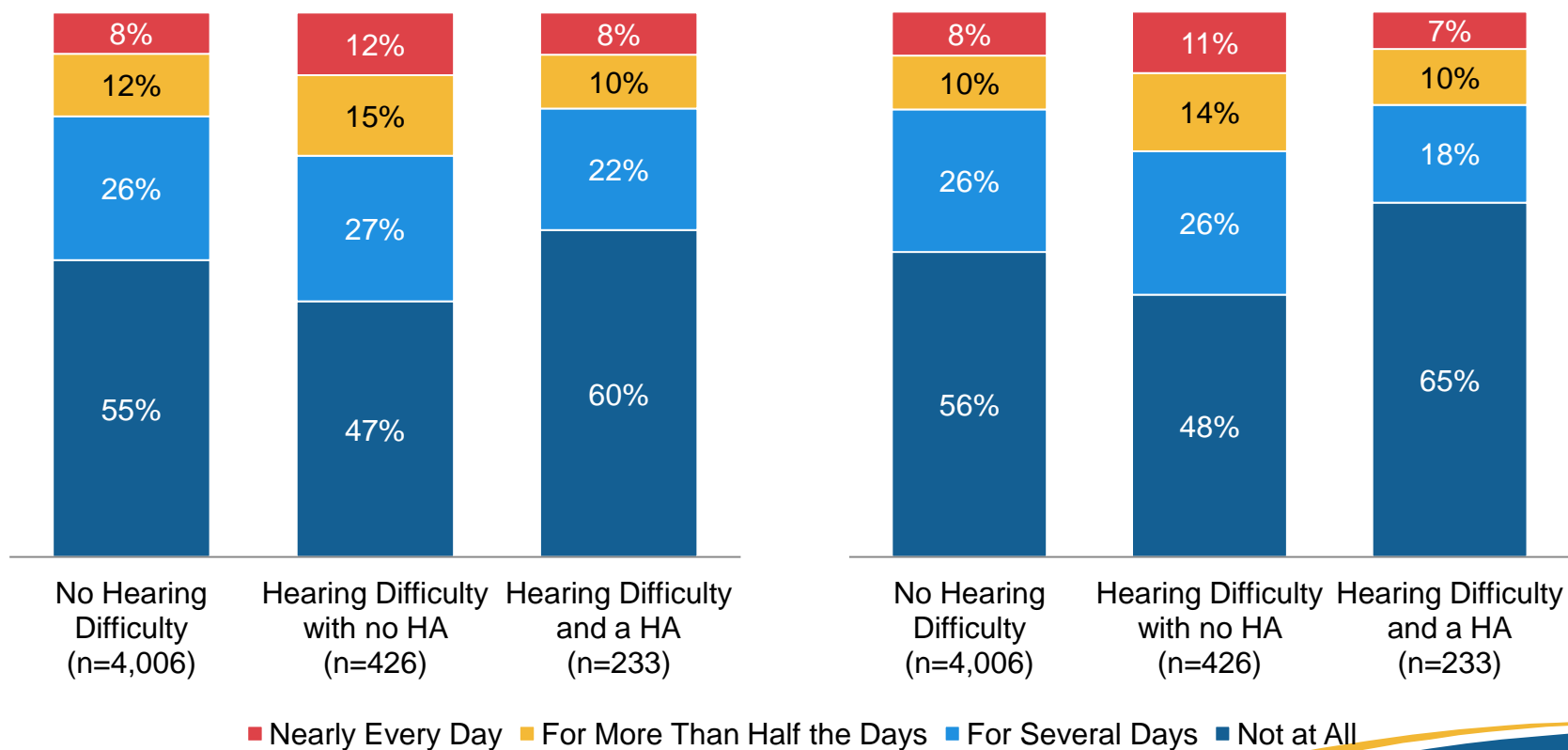


# Relationship with depression



Over the last 2 weeks, how often have you been bothered by: “Little interest or pleasure in doing things?”

Over the last 2 weeks, how often have you been bothered by: “Feeling down, depressed or hopeless”?





# Screening (among all)

## Hearing loss assessments at physical in last year

*Among all individuals (with and without hearing difficulty)*

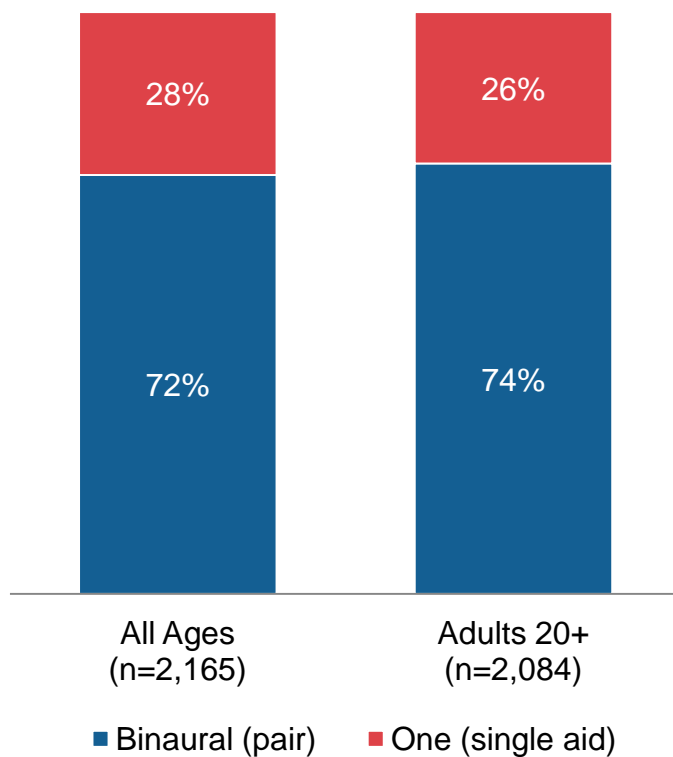
	All Ages (n=47,593)	Adults 20+ (n=36,477)
Screened at physical	26%	23%
Discussed hearing level at physical (but not “screened”)	11%	11%
Had physical, but no screen or discussion	39%	40%
Did not have physical	24%	27%

# Hearing aid details

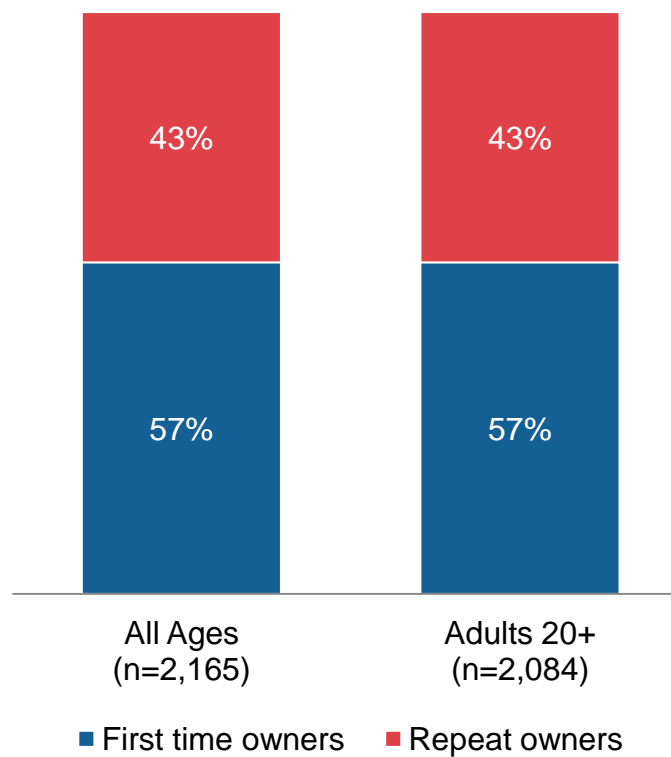


## Among individuals with hearing aids

*Number of current hearing aids*



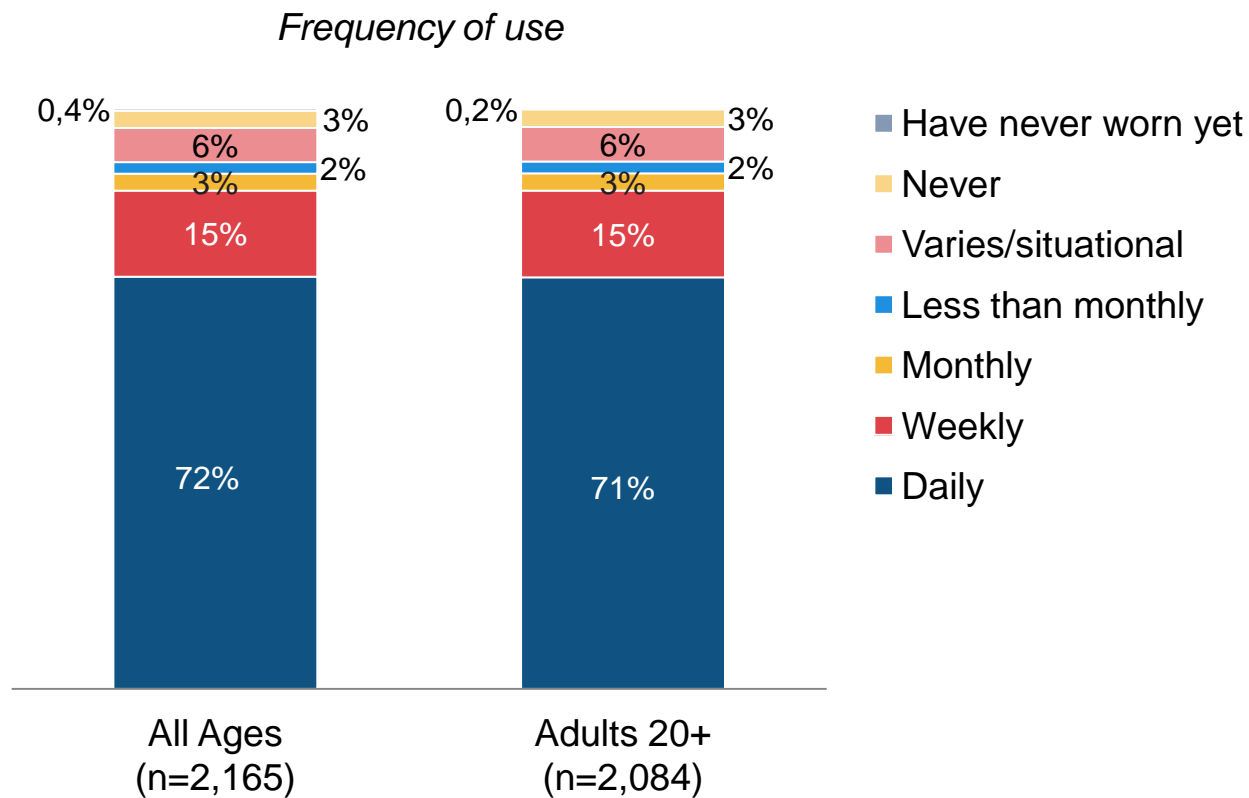
*First-time vs. repeat owners*



# Hearing aid details



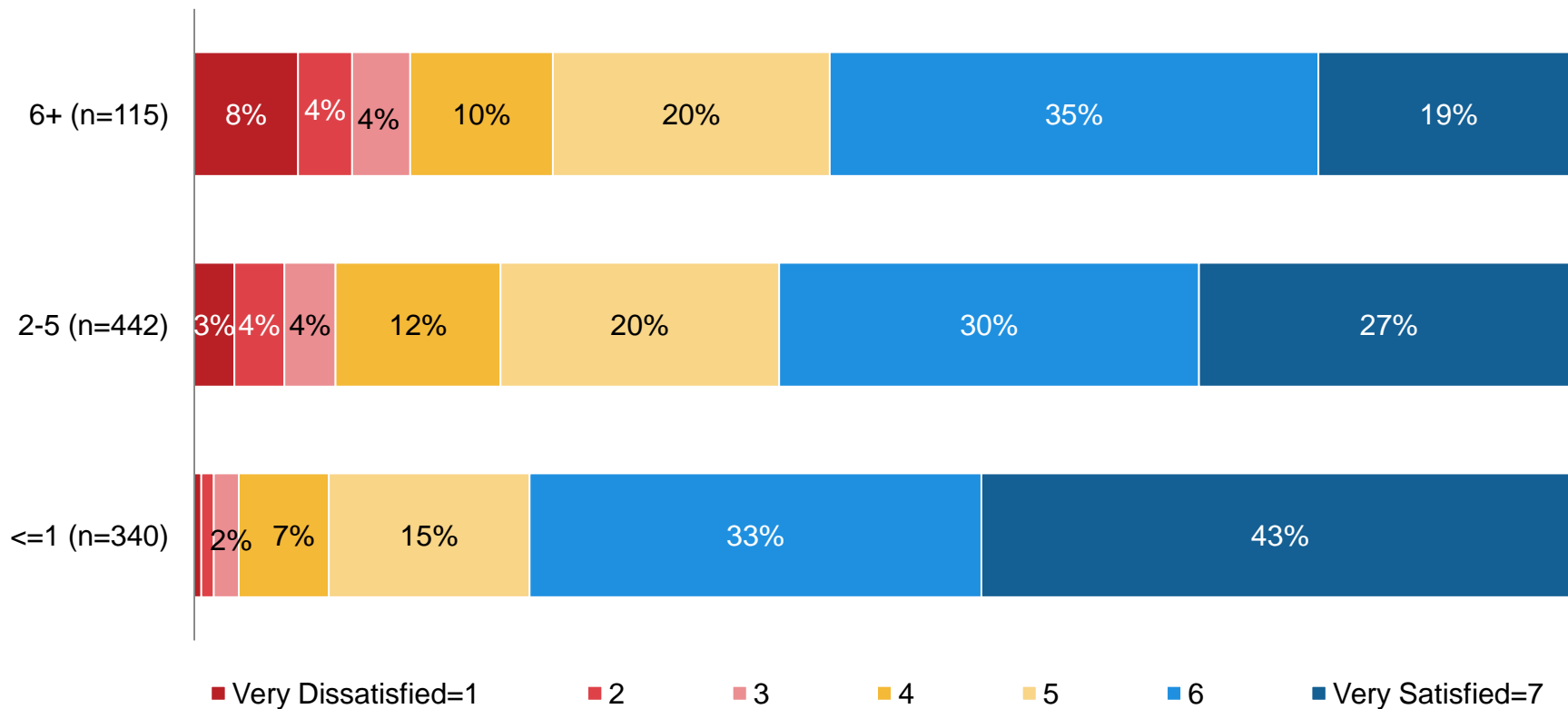
## Among individuals with hearing aids



# Satisfaction with current hearing aid



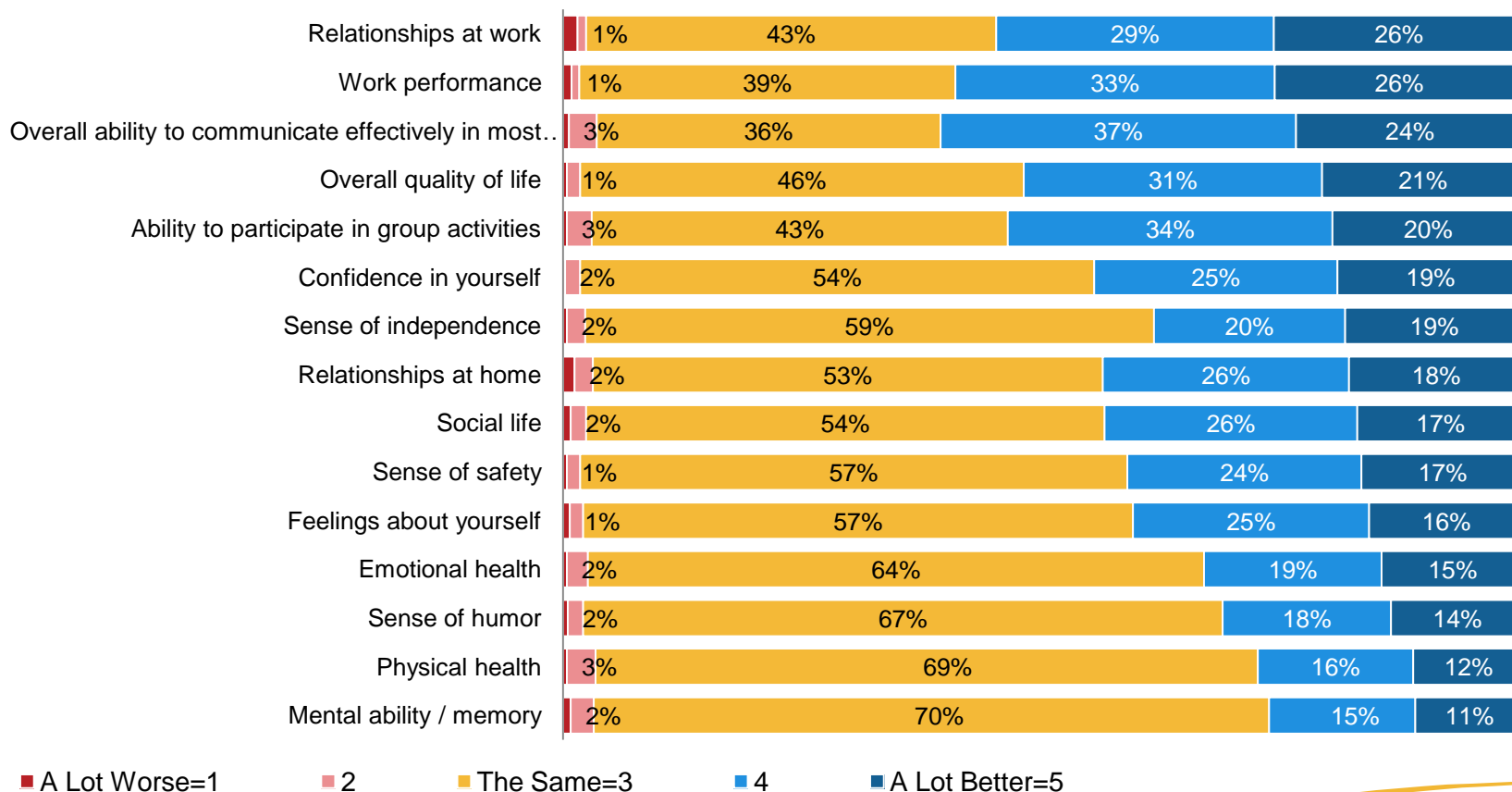
## Level of Satisfaction by Age of Hearing Aid



# Changes due to HAs



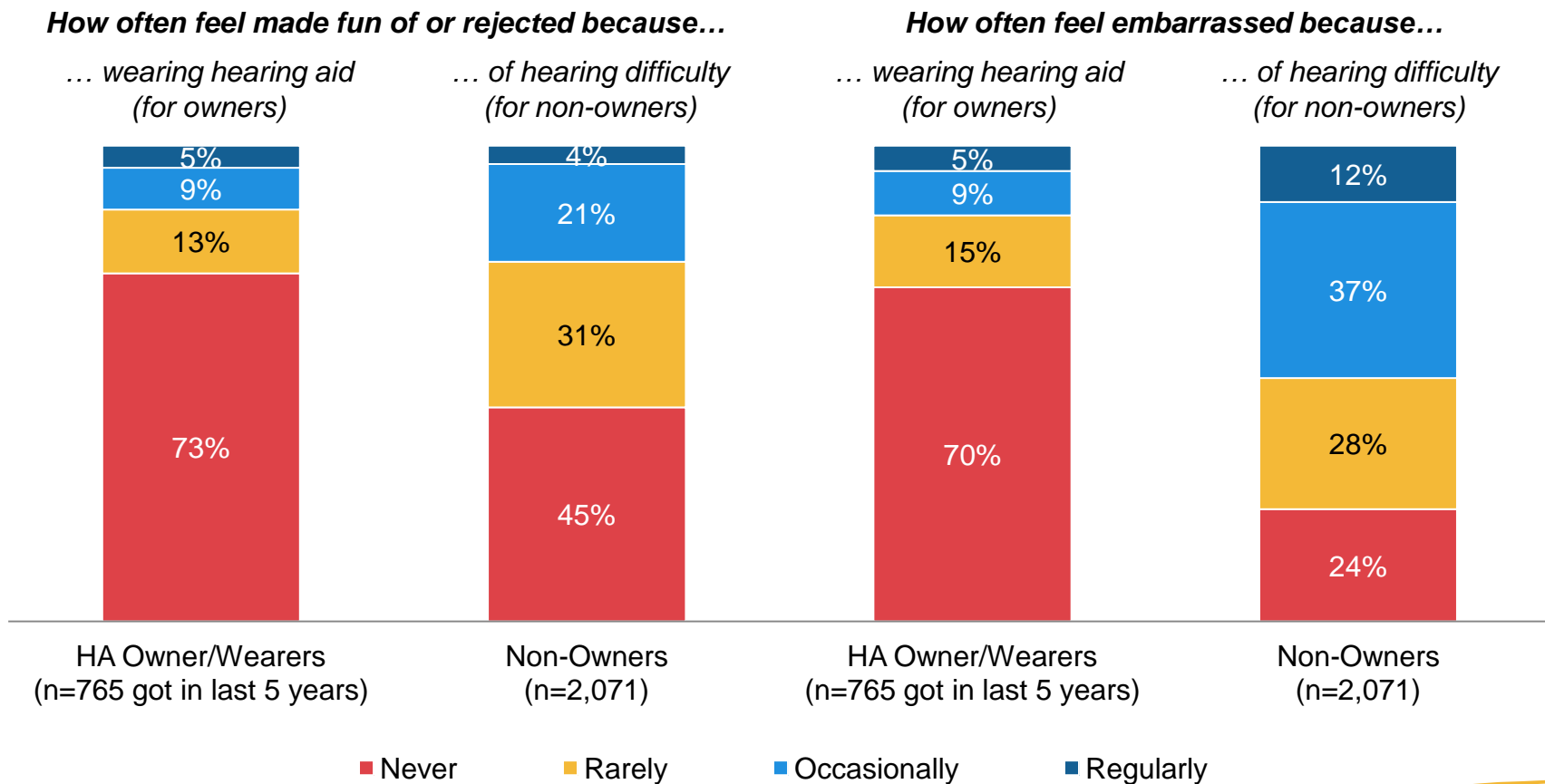
## Observed changes attributed to Hearing Aids (Owners who got HA(s) in last 5 years)



# Rejection & embarrassment due to HD



## Frequency of negative reactions/experiences

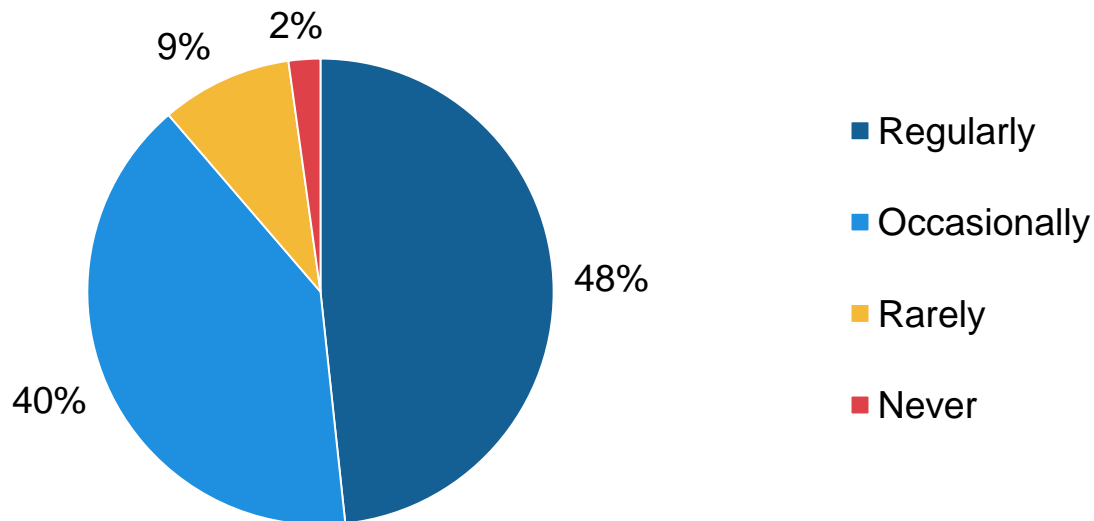


# How often hearing aids improve quality of life



## Improves quality of life

*n=765 Owners/Users who got HA in the last 5 years*





**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](http://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](http://www.anovum.com)



EHIMA  
European Hearing Instrument  
Manufacturers Association

**EHIMA**

Soeren Hougaard

EHIMA secretary general

Phone: (+45) 4045 7135

Email: [sh@ehima.com](mailto:sh@ehima.com)



[sh@ehima.com](mailto:sh@ehima.com)





Thanks for your attention!