

- Tinnitus presence
  - Tinnitus severity
  - Use of healthcare resources for tinnitus
  - Hearing loss
- Selection of questions and response options



Forward translation



Back translation



Review



Field testing



Constructive feedback for subsequent revision

- |   |   |  |   |
|---|---|--|---|
|  BULGARIAN |  GERMAN    |  LATVIAN      |  ROMANIAN  |
|  ENGLISH |  GREEK   |  POLISH     |  RUSSIAN |
|  FRENCH  |  ITALIAN |  PORTUGUESE |  SPANISH |

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**HIGHLIGHTS**

- We provide standardized questions on tinnitus and hearing difficulty.
- Good practice for translation and cross-cultural adaptation were implemented.
- Survey questions and response options are proposed in 12 languages.

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59 **Title**  
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62 Standardized questions in English for estimating tinnitus prevalence and severity, hearing  
63 difficulty and usage of healthcare resources, and their translation into 11 European languages  
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69 **Authors, affiliations, email address, ORCID code**  
70

71  
72 Roshni Biswas <sup>1, 2, 4</sup>, roshni.biswas@nottingham.ac.uk, ORCID iD: 0000-0003-1938-1256  
73  
74

75  
76 Alessandra Lugo <sup>1</sup>, alessandra.lugo@marionegri.it, ORCID iD: 0000-0002-4297-6496  
77

78  
79 Silvano Gallus <sup>1</sup>, silvano.gallus@marionegri.it, ORCID iD: 0000-0002-8967-0400  
80

81  
82 Michael A Akeroyd <sup>2, 3</sup>, michael.akeroyd@nottingham.ac.uk, ORCID iD: 0000-0002-7182-9209  
83

84  
85 Deborah A Hall <sup>2, 4, 5, 6</sup>, deborah.hall@nottingham.ac.uk, ORCID iD: 0000-0002-3804-1452  
86  
87  
88  
89

90 **Affiliation addresses**  
91

92  
93 <sup>1</sup> Department of Environmental Health Sciences, Istituto di Ricerche Farmacologiche Mario  
94 Negri IRCCS, Via Giuseppe La Masa, 19, Milan, 20156, Italy.  
95  
96

97  
98 <sup>2</sup> Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of  
99 Nottingham, Nottingham, NG7 2UH, United Kingdom.  
100

101  
102 <sup>3</sup> Medical Research Council Institute of Hearing Research, The University of Nottingham,  
103 University Park, Nottingham, NG7 2RD, United Kingdom.  
104  
105  
106  
107  
108  
109

113  
114  
115 <sup>4</sup> NIHR Nottingham Biomedical Research Centre, Ropewalk House, 113 The Ropewalk,  
116 Nottingham, NG1 5DU, United Kingdom.  
117  
118

119  
120 <sup>5</sup> Nottingham University Hospitals NHS Trust. Queens Medical Centre, Derby Road,  
121 Nottingham, NG7 2UH, United Kingdom.  
122  
123

124  
125 <sup>6</sup> University of Nottingham Malaysia, Jalan Broga, 43500 Semenyih, Selangor Darul Ehsan,  
126 Malaysia.  
127  
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129  
130  
131  
132 **Corresponding author contact details**

133 Name: Roshni Biswas

134  
135 Address: Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Via Giuseppe La Masa, 19,  
136 Milan, 20156, Italy.  
137  
138

139 Email address; roshni.biswas@nottingham.ac.uk

140  
141 Phone: +393389750838  
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171 **ABSTRACT**  
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174 INTRODUCTION: Prevalence estimates depend largely on the nature of the question asked to  
175 define the presence of the health condition, and the literature on the population burden of  
176 tinnitus and hearing difficulties is no different in this respect. The lack of standardized questions  
177 for data collection limits comparison across studies and across countries. The purpose of this  
180 short Technical Note is to report the first attempt to establish a set of standard questions  
181 developed for use in population-based surveys, and their adaptation and translation from  
182 English into 11 European languages.  
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188 METHODS: Four questions and their corresponding response options were adapted from  
189 existing population-based surveys to assess tinnitus prevalence, tinnitus symptom severity, use  
190 of healthcare resources for tinnitus and hearing difficulty. The translated versions (Bulgarian,  
191 French, German, Greek, Italian, Latvian, Polish, Portuguese, Romanian, Russian, and Spanish)  
192 were generated using recognized methods to achieve a “world-for-world” translation.  
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198 RESULTS: Translated versions were produced with acceptable functional equivalence to the  
199 original English-language version, as judged by a small panel of bilingual speakers who  
200 participated in the online field testing.  
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205 CONCLUSION: This work is the first of its kind to promote multi-national standardization by  
206 creating a set of tools that can readily be used across countries. These are currently being used  
207 in a European-wide study of tinnitus prevalence, and have wider application across English- and  
208 Spanish speaking countries including the Americas and Oceania.  
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**KEYWORDS**

Tinnitus classification; Hearing difficulty; Survey instrumentation; Translation

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283 **1. INTRODUCTION**  
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285 Tinnitus is a common symptom associated with the conscious perception of an auditory  
286 sensation in the absence of a corresponding external stimulus. For many people, it can  
287 severely impact everyday life (Hall et al., 2018a). From a public health perspective, it is  
288 important to work out effective prevention and intervention strategies and, for that, an  
289 understanding of the tinnitus population burden is required. Three issues are relevant to  
290 considerations of estimating population burden of tinnitus: i) wording of the question, ii)  
291 separating bothersome from non- bothersome tinnitus, and iii) understanding co-morbid  
292 hearing difficulties.  
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302 Prevalence studies of tinnitus have mostly been conducted in Western Europe or the USA, but  
303 many have had methodological limitations, especially in terms of the lack of an agreed definition  
304 of tinnitus and phrasing of appropriate questions asked of participants in population surveys  
305 (McCormack et al., 2016). A recent systematic review by McCormack and colleagues identified  
306 39 studies which had been conducted to estimate the prevalence of tinnitus in different  
307 countries (McCormack et al., 2016). They reported that the overall prevalence of any tinnitus  
308 ranged from 5% (Quaranta et al., 1996) to 43% (Gibrin et al., 2013). A widespread variability in  
309 the definition of tinnitus is believed to be an important factor in determining this large range in  
310 population estimates. Other authors (e.g. Gallus et al., 2015; Nondahl et al., 2004) have also  
311 attributed the wide variation in prevalence estimates, beyond what is expected due to  
312 demographic differences, to the lack of a standard definition of tinnitus. Indeed, McCormack and  
313 colleagues (2016) identified eight different types of definition of tinnitus, with few studies  
314 justifying their choice of wording. The most common wording describing the presence of tinnitus  
315 referred to “tinnitus lasting for more than five minutes at a time”. This form of tinnitus experience  
316 is arguably phenomenologically different from a “clinically significant” tinnitus where the  
317 condition hampers an individual’s quality of life (Hoekstra et al., 2014). Hence, many  
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339 epidemiological studies also ask a question about the severity or bothersomeness of tinnitus  
340 symptoms. McCormack et al. (2016) found that severity was assessed in under half of studies  
341 (16 out of the 39 studies) with the data indicating that the prevalence of bothersome tinnitus  
342 ranged from 3% (Michikawa et al., 2010) to 31% (Kim et al., 2015). Again, an important factor to  
343 this variability concerns the definition of tinnitus symptom severity. The most common concept  
344 of severity considered how bothered, annoyed or worried the person was by their tinnitus, and  
345 this wording was used in eight of the studies reviewed by McCormack et al (2016). However,  
346 other studies asked about severity in terms of impact on sleep, concentration, or ability to lead a  
347 normal life. Because of this lack of standardization for estimating tinnitus prevalence and  
348 severity, it is not possible to pool estimates to understand the global burden of tinnitus, nor to  
349 examine differences across countries or world regions. A call to resolve this problem was raised  
350 by Gallus et al. (2015) and McCormack et al. (2016).

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364 A second issue is that in population-based surveys it can be useful to distinguish tinnitus in the  
365 general population which does not lead to medical help-seeking from tinnitus which affects an  
366 individual enough to seek care. The latter has important socioeconomic implications. Martinez  
367 and colleagues (2015) specifically defined a 'clinically significant' tinnitus as a condition where  
368 the patient has a recording in a general practice or hospital setting of a specific diagnosis or  
369 procedure, or referral to a healthcare practitioner. In the absence of an efficient and effective  
370 healthcare system such patients can often make repeat appointments, creating a 'revolving  
371 door' pattern of healthcare (McFerran et al., 2018). Thus, a clinically significant tinnitus, in which  
372 people seek medical help, imposes personnel and financial resource burden on the healthcare  
373 system (Goldstein et al., 2015; Maes et al., 2013; Stockdale et al., 2017). This information can  
374 easily be captured by a question about the number of appointments for tinnitus-related problems  
375 in the past year.



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395 Third, hearing loss is a known major risk factor for developing tinnitus (Nondahl et al., 2002),  
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397 and hearing loss with tinnitus substantially increases the burden of disability (Salomon et al.,  
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399 2015). Like tinnitus, hearing loss is a common medical problem. The global prevalence of  
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401 hearing loss is about 5% (World Health Organization, 2012). Yet, few studies have reported  
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403 prevalence of hearing loss and tinnitus (and the overlap) in the same population; one example  
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405 in the UK assessed self-reported hearing difficulty and tinnitus, finding 41% of those reporting at  
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407 least a slight hearing difficulty also reported experiencing tinnitus (Moore et al., 2017). The  
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409 prevalence of hearing loss is known to vary across countries, with lower estimates in high-  
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411 income countries (5%) and higher estimates in middle- and low-income countries of Sub  
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413 Saharan Africa (16%) and South Asian region (17%) (Stevens et al., 2013). When examining  
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415 any tinnitus differences across countries, it would therefore be informative to assess prevalence  
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417 estimates in the context of individual hearing status. For simplicity, population-based surveys  
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419 would probably rely on self-reported hearing difficulty, rather than hearing loss measured using  
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421 pure tone audiometry.  
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## 426 **2. RATIONALE**

428 This Technical Note describes the methods we undertook to define a set of standardized  
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430 questions and corresponding response options suitable for use in population-based surveys for  
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432 assessing tinnitus, hearing difficulty, and the associated use of healthcare resources. We then  
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434 extended the international applicability of these questions by translating and adapting them from  
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436 English into 11 European languages, following good practice methods recently summarized by  
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438 Hall and colleagues (2018b). We have implemented these questions in a European-wide  
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440 population survey that is currently ongoing as a project within the European School on  
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442 Interdisciplinary Tinnitus Research (ESIT) (Schlee et al., 2017). ESIT seeks to promote multi-  
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444 national comparability of findings across all major relevant disciplines. The purpose of this  
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451 population survey is to characterize prevalence within a number of European countries<sup>1</sup> and to  
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453 conduct the first comparative evaluation across those same countries. The participating  
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455 countries were selected because of their varied cultural and socio-economic population  
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457 characteristics, across a reasonably constrained geographical region.  
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### 463 **3. DESCRIPTION OF THE METHODS**

#### 464 **3.1. Description of the original source items**

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466 The European-wide population survey comprised four self-report questions and corresponding  
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468 response options to assess the prevalence of tinnitus, hearing difficulty, tinnitus symptom  
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470 severity, and tinnitus-related healthcare resource use (Table 1). The questions were adapted  
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472 from existing survey questionnaires in English by the project team in consultation with two  
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474 independent academics with relevant experience. The survey included instructions for the  
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476 interviewer, questions and response options. Collectively, these are referred to as 'items'.  
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479 The (English) wording of questions and response options was informed by published work, as  
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481 far as possible. The four questions were introduced in the following way: "Now we ask you a few  
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483 questions on hearing problems and on the sensation of noise in the head or in one or both ears,  
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485 which is a symptom that medical doctors call tinnitus." (Table 1). The first item on **prevalence of**  
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487 **tinnitus** used the same core question as the published UK Biobank (question H11: "*Do you get*  
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489 *or have you had noises (such as ringing or buzzing) in your head or in one or both ears that*  
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491 *lasts for more than five minutes at a time?*") (UK Biobank, 2011). There was one modification.  
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493 Our question asked about experience 'over the past year'. The expected benefit from specifying  
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495 a fixed recall period was to reduce recall bias and to exclude those with just occasional  
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497 episodes occurring in the distant past. The resulting question therefore incorporated two

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499 <sup>1</sup> Bulgaria, England, France, Germany, Greece, Republic of Ireland, Italy, Latvia, Poland,  
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501 Portugal, Romania, and Spain.

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507 common aspects in published definitions of tinnitus reported by McCormack et al. (2016); those  
508 being “tinnitus lasting for more than five minutes at a time” and “experiencing in the last one  
509 year”. Response options were the same as the published UK Biobank, but with one  
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511 year”. Response options were the same as the published UK Biobank, but with one  
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513 modification. In the UK Biobank (2011), one response option is “Yes, but not now, but have in  
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515 the past”. By introducing a fixed one-year recall period into our survey question, this response  
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517 option no longer made sense and so our survey used the alternative version “No, not in the past  
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519 year.” **Tinnitus symptom severity** also used the same core question as the UK Biobank  
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521 (question H11a: “*How much do these noises worry, annoy or upset you when they are at their*  
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523 *worst?*”, UK Biobank. 2011), but again with the addition of ‘over the past year’. Response  
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525 options were identical to those in UK Biobank.  
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528 Regarding **use of healthcare resources for tinnitus**, published studies modelling population-  
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530 based health care costs have typically used the number of tinnitus-related general practitioner  
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532 visits and/or hospital visits as a basis for cost estimates of the burden on healthcare resources,  
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534 and this information has been obtained retrospectively from clinical records (Goldstein et al.,  
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536 2015; Maes et al., 2013). To our knowledge, there has been no published population survey  
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538 asking participants a question on use of healthcare resources for tinnitus. In the absence of a  
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540 published source, we turned to other sources. The Medical Research Council Study of Hearing  
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542 Difficulties has been partly published (Noble et al., 2012), but includes an unpublished question  
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544 asking “*Have you ever been to your family doctor or hospital about problems with noises in your*  
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546 *ears?*”, with response options of *No / Yes visited doctor (GP) only / Yes, visited GP and been*  
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548 *referred to hospital*. Our modified version again included the one-year recall period. Revised  
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550 wording also extended relevant medical specialists to include healthcare professionals at a  
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552 clinic or hospital. The thinking here was to consider relevance to countries where the distinction  
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554 between GP and hospital is less well defined than in the UK. To capture information about the  
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556 degree of resource usage, the response options were modified to specify the actual number of  
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563 visits. Note that only those respondents reporting tinnitus (be it 'most', 'a lot of' or 'some of the  
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565 time') were asked about severity and resource use.  
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569 All respondents were asked a question about **hearing difficulty**. This question was adapted  
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571 from an internet-based population study conducted by Moore et al. (2017). The original question  
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573 asked '*Do you currently have any difficulty with your hearing?*'. Our modified version added the  
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575 qualifying phrase '*listening to speech in a noisy situation*' to give a context to the self-report.  
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577 Listening to speech in a noisy situation is a common listening complaint in everyday situations  
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579 (Vas et al., 2017). Response options were maintained as per the original.  
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### 582 **3.2 Translation and cross-cultural adaptation of the survey items**

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585 The survey items were written in English and so needed to be translated into Bulgarian, French,  
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587 German, Greek, Italian, Latvian, Polish, Portuguese, Romanian, Russian and Spanish for use  
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589 by the interviewers in the population-based survey. The translation process followed the good  
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591 practice guidelines summarized in Hall et al. (2018b) and illustrated in Figure 1, and a template  
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593 document was created specifically for the purpose of recording all of the steps taken. These  
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595 guidelines were based on common elements among previous well-known guidelines (Acquadro  
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597 et al., 2008; Beaton et al., 2000; Guillemin et al., 1993; Wild et al., 2005; Wild et al., 2009). The  
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599 purpose was to produce a final set of items that preserved the same meaning as the original,  
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601 would be understood by the target population, and would adequately reflect any nuances of the  
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603 source or target languages. The first relevant step was that of translating the source-language  
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605 items into the target languages (Hall et al., 2018b). This forward translation was conducted by a  
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607 commercial market research company (DOXA, Italy), which has partners across all target  
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609 countries and in-house expertise in translating population-survey items.  
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612 \*\*\* insert Figure 1 about here \*\*\*  
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621 For the next stage of back translation, we recruited for each language at least one, and in some  
622 cases two, bilingual translators with in-country experience of the target language. The  
623 translators were not necessarily topic-specific experts, but they were all briefed on the clinical  
624 concepts underlying the health conditions of interest addressed by each item, using concept  
625 definitions written in plain language by DAH, with review by the project team (Supplementary  
626 Table 1). Each translator used both the target-language item and the corresponding concept  
627 definitions to independently create a written translation in English. The back translators were  
628 asked to write comments about any words or phrases that were particularly challenging and to  
629 suggest an alternative forward translation if necessary. One member of the research team then  
630 highlighted each word or phrase of the back translation and the source. The discrepancies were  
631 classified using an A–D scheme (e.g. Badia et al., 1994; Sanchez-Moreno et al., 2008). Ratings  
632 of ‘A’ or ‘B’ indicated acceptable conceptual and semantic equivalence between the back-  
633 translated and English version even if one or two different words had been used. Ratings of ‘C’  
634 were acceptable because the items preserved the meaning of the original, but not necessarily  
635 with the exact semantic equivalence. Ratings of ‘D’ indicated unacceptable equivalence, and so  
636 following (Hall et al., 2018b), these are the items that required further action. However, in this  
637 study, all discrepancies given a rating of ‘D’ or ‘C’ were discussed by the project team. Note that  
638 for the Latvian version, it proved challenging to find bilingual (Latvian-English) speakers and so  
639 the team had to rely on Google translate for the backward translation step. Some of the  
640 resulting Latvian back translations were rated ‘D’, but when these were cross-checked with one  
641 native Latvian speaker their opinion was that the original forward translation was  
642 understandable in Latvian without any further changes necessary. For all languages, we  
643 submitted the resulting set of recommendations to DOXA, who were asked to manage the  
644 necessary revisions in order to achieve a final version of the translated items that harmonized  
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675 with the source language version. One member of the project team coordinated with DOXA to  
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677 understand what suggested revisions had been incorporated.  
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### 681 **3.3 Confirmation that the translated versions are functionally equivalent**

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683 Next, we ran a field testing step to ensure that the translated questions and response options  
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685 were understood by the target population in the same way as the source English language  
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687 version and adequately reflected any nuances of the target language (Hall et al., 2018b). For  
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689 most languages, between three and seven bilingual speakers were recruited as participants  
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691 using purposive sampling. Participants were recruited from our network of colleagues and  
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693 collaborators, and their social and professional networks. We also reached out to some of the  
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695 European Federation of Audiology Society (EFAS) country chiefs for their assistance, and to  
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697 direct us potential participants. The final participant group comprised hearing researchers,  
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699 clinicians and members of the general public. All had the target language as their mother tongue  
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701 and none had previously been involved in the back translation process. Unfortunately, despite  
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703 repeated attempts we were unsuccessful in recruiting Latvian and Romanian bilingual speakers.  
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707 A structured short online survey presented the four translated questions and response options.  
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709 We asked the participants to summarize their interpretation of each question and response  
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711 option in their own words in English language. This enabled the project team to check  
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713 equivalence with the original English language version. Participants were also asked to note  
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715 words or phrases that were either difficult to understand or that might sound awkward  
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717 colloquially, and provide any recommendations that would make it more culturally appropriate or  
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719 more acceptable to the general public. The survey had a section where the participants could  
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721 rate the overall translation using a numerical rating scale from 0 to 100. We did not conduct any  
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723 field testing on the introductory sentence.  
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735 **4. RESULTS**  
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737 The set of standardized questions and response options in their source-language English  
738 version are reported in Table 1.  
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743 \*\*\*Insert Table 1 about here\*\*\*  
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749 **4.1 Translation and cross-cultural adaptation of the survey items**  
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751 From these, forward translations of each set of questions were created by the market research  
752 company and these were then evaluated by the back translators. Based on the comparison  
753 between the back translations and the original English-language version, the translated items  
754 which had an acceptable degree of equivalence to the original source were rated as A or B. For  
755 the translations of the item on presence of tinnitus, 8 out of 11 translated questions, and 10 out  
756 of 11 translated response options were given a rating of A or B. For the translations of the item  
757 on tinnitus symptom severity, 5 out of 11 translated questions, and 10 out of the 11 translated  
758 response options were rated A or B. For the translations of the item on use of healthcare  
759 resources for tinnitus, 10 out of 11 questions, and all of the 11 response options were rated A or  
760 B. For the translations of the item on hearing difficulty, 6 out of 11 translated questions and 10  
761 out of 11 response options were rated A or B.  
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774 Table 2 reports for the item on presence of tinnitus those cases where there appeared to be  
775 some sort of discrepancy between the source and target language versions (i.e., C or D  
776 ratings). Table 2 also lists any corresponding suggestions by the back translators and the  
777 actions taken; namely reasons for accepting or rejecting those suggestions. The discrepancy  
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787 related information (i.e., C or D ratings) for the three items on tinnitus symptom severity,  
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789 tinnitus-related resource use and hearing difficulty are reported in Supplementary Tables 2, 3,  
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791 and 4, respectively.  
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795 \*\*\*insert Table 2 about here\*\*\*  
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799 Most of the discrepancies arose due to difficulties in striking a balance between preserving the  
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801 meaning of the original words while at the same time having satisfactory conceptual  
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803 equivalence, as when developing the final translated versions, we tried to capture the nuances  
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805 of the target language. We noted that the C and D ratings were most commonly found for the  
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807 questions and response options on the severity of tinnitus symptoms and the question on  
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809 hearing difficulty (three translations were rated “D” for both questions). These questions and  
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811 response options, required further edits in the translated versions in seven and six languages,  
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813 respectively, out of the 11 translated languages. For example, in the question on tinnitus  
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815 severity, the three emotional descriptors used to assess tinnitus distress- “worry, annoy or  
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817 upset”, have subtly different meanings in English. A major point of discrepancy was conveying  
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819 the same emotion in the translated version while preserving the original meaning. For the  
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821 question on hearing difficulties, a key concept was listening and understanding speech, as  
822  
823 against simply hearing it. An important concern in this case was to keep the conceptual  
824  
825 alignment without straying excessively from the original wording and question structure.  
826  
827 The final versions of the translated items produced by the market research company are  
828  
829 reported in Supplementary Table 5. Some of the minor changes and slight conceptual  
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831 differences as recommended by the back translators (see Table 2 and Supplementary Tables 2,  
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833 3, 4), were not incorporated in the final versions.  
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## 4.2 Field testing

The main purposes of this step were to evaluate the likelihood that the translated versions would be understood by the target population in the same way as the source English language version, and how well they reflected any nuances of the source or target languages. Table 3 reports the overall rating scores for the language level and understandability of the translated versions. Although the numbers as such are not necessarily straightforward to interpret, the ratings show general agreement across raters on the quality of most of the translated versions. Nevertheless, there were wider differences of opinion across the Polish, Portuguese and Russian raters, with some of those raters giving a quality score of 60 or less. As data collection (for estimating prevalence) was already ongoing for some countries using the translated questionnaires, no edits were made after the field testing step. But the open-text comments for some of the languages are informative for future research.

\*\*\*insert Table 3 about here\*\*\*

**Polish:** The Polish language version was evaluated by three bilingual speakers, none of whom were hearing experts. For the response options in the tinnitus prevalence question, two participants suggested removing the comma after “Nie” in the response option (“*Nie, w ciągu ostatniego roku*”). This corresponds in English to “No, not in the past year”. Two participants found the word order of the question on use of healthcare resources rather awkward. One summarized the question as: “*If patient seek medical attention (general practitioner, specialist in clinic/hospital) in one-year period because of unpleasant feeling in head or ears*”, and noticed that in Polish context, a specialist could be available in ambulatory care as well, and not necessarily in hospital/clinic. The second person suggested changing the word order from “*W ciągu ostatniego roku czy był/a*” to “*Czy w ciągu ostatniego roku był/a*”, to better express the time period “over the last one year”. For the question on hearing difficulties, all three suggested

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899 changing the word "*problem*" to "*problemy*" which is the plural form. Two participants also  
900 queried whether the final question assessed difficulty in hearing in general or specifically in a  
901 loud environment, since this was not quite clear to them from the question.  
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907 **Portuguese:** The Portuguese language version was evaluated by four bilingual speakers all of  
908 whom were hearing experts. One of them thought that, the questions were awkwardly phrased  
909 and needed modifications based on whether they were being addressed to the Portuguese  
910 population in Portugal or in South American countries such as Brazil, since the translation was a  
911 mix of both versions. For example, for the question on tinnitus prevalence, "*ringing or buzzing*"  
912 was translated to "*toques ou zumbidos*". But according to the participant, "*toques*" does not  
913 directly translate to "*rings*" - "*toques*" also mean "*touches*". For the response options relating to  
914 the use of healthcare resources, two participants suggested changing "*Nada*" (meaning *nothing*)  
915 to "*Nenhuma vez*" (meaning *not a single time*). For the question on hearing difficulty, one  
916 participant commented: "*a person may hear but not understand. If you want to focus on*  
917 *understanding in noise, rephrasing is important*".  
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930 **Russian:** The Russian language version was evaluated by five bilingual speakers, four of whom  
931 were hearing experts. Three participants felt that the questions on tinnitus prevalence and  
932 severity of tinnitus symptoms did not sound natural in Russian and were awkwardly phrased.  
933 They either suggested alternative versions for the questions or recommended changing part of  
934 them. For example, for the prevalence question, the three suggested rephrased alternative  
935 versions are as follows:  
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942 "*В течение последнего года ощущали ли Вы в голове, одном или обоих ушах шум,*  
943 *напоминающий звон или свист, продолжительностью более пяти минут?* (meaning:  
944 "*During the past year, did you feel a noise resembling a ringing or whistling in the head, one or*  
945 *both ears, lasting more than five minutes?*"); "*В течении последнего года ощущали ли Вы*  
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955 *такие звуки, как шум или свист в голове, в одном или в обоих ушах, которые длились*  
956  
957 *более 5 минут?” (meaning: “During the past year, did you feel such sounds as noise or*  
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959 *whistling in your head, in one or both ears that lasted more than 5 minutes?”); and “В течение*  
960  
961 *последнего года возникали ли у Вас в голове или в ухе (или в обоих ушах) шумы,*  
962  
963 *похожие, например, на звон или свист, которые длились более пяти минут?” (meaning:*  
964  
965 *“During the past year, did you have noises in your head or in your ear (or both ears), similar to,*  
966  
967 *for example, ringing or whistling, which lasted more than five minutes?”).*  
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971 Although the ratings given for the other language translations indicated general overall  
972  
973 agreement on quality, there did remain some informative comments about how easy the items  
974  
975 were to interpret. These are summarized as follows:  
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978 **Bulgarian:** The Bulgarian language version was evaluated by three bilingual speakers, only one  
979  
980 of whom was a hearing expert. Two participants thought the question on the severity of tinnitus  
981  
982 symptoms could be misleading to some readers. One said: *“I would change the phrasing*  
983  
984 *“problems in your head and ears - (проблемите ви в главата или ушите) with problems*  
985  
986 *concerning your tinnitus or ringing in the ears (проблеми свързани със шума в ушите или*  
987  
988 *главата)”*.  
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991  
992 **French:** The French language version was evaluated by three bilingual speakers, two of whom  
993  
994 were hearing experts. Two participants queried whether the question on hearing difficulty was  
995  
996 intended to assess hearing per se or speech understanding. One commented: *“the word*  
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998 *“écouter” refers to hearing a conversation, if you want to assess if they can understand you*  
999  
1000 *should use the term “comprendre”*.  
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1011 **German:** The German language version was evaluated by seven bilingual speakers, four of  
1012 whom were hearing experts. The comments/feedbacks were mainly on the question on the use  
1013 of healthcare resources and its response options. Four out of the seven participants mentioned  
1014 that there was no use of the phrase “*hearing problems*” before this question. One participant  
1015 mentioned “*I think 'Hörprobleme' comes a bit out of the blue... maybe I would leave that out*”,  
1016 and another suggested ““*Hörprobleme*” instead of “*der Hörprobleme*” because no reference to  
1017 hearing problems before”.

1026  
1027 **Greek:** The Greek language version was evaluated by five bilingual speakers, two of whom  
1028 were hearing experts. In the English version, the final response option is always “*Do not know/*  
1029 *Prefer not to answer*”, but in the Greek version, this was abbreviated ( $\Delta\Xi / \Delta A$ ), and so three  
1030 participants recommended to use the full form.

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1035  
1036 **Italian:** The Italian language version was evaluated by five bilingual speakers, one of whom was  
1037 a hearing expert. For the question on severity of tinnitus symptoms, three participants  
1038 suggested using a different translation for the phrase “at their worst” than “*al loro peggio*”. There  
1039 was no consensus on the replacement phrase. The three suggested replacements were – “*nella*  
1040 *loro fase piu intensa*”, “*nella fase più acuta*” and “*al loro massimo grado di severità*”.

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1048 **Spanish:** The Spanish language version was evaluated by five bilingual speakers, including  
1049 four hearing experts. For the tinnitus prevalence question, four out of five participants suggested  
1050 changing “*como sonar o zumar*” (meaning “*like sound or buzz*”) to “*como sonidos o zumbidos*”  
1051 (meaning “*like sounds or buzzing*”), which is the plural form. The question on hearing difficulties  
1052 was translated well for three participants, but two of the hearing experts raised a similar query to  
1053 the one noted by the Polish and French speakers: for example, one said: “*The main problem in*

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1067 *patients with hearing loss is not hear in noisy environment but to understand in noisy*  
1068 *environment. In Spanish "hear" is "oir" and "understand" is "entender"*.  
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1073 This constructive feedback identifies further revisions that could potentially be made to the items  
1074 to enable further improvements towards functional equivalence.  
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## 1078 **5. CONCLUSIONS**

1081 We have developed and evaluated a set of four questions and corresponding response options  
1082 in 12 European languages to provide a standard for use in population-based surveys on tinnitus  
1083 and hearing loss. To our knowledge, this is the first attempt to create an international standard  
1084 by applying good practice in the translation and cross-cultural adaptation process that seeks to  
1085 promote equivalence across populations (Hall et al., 2018b).  
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### 1094 **5.1 Strengths and limitations**

1095 The four survey items closely correspond to well-established questions and response options as  
1096 used in previous large-scale population studies, and thus we expect that any findings obtained  
1097 from studies using these items should be broadly comparable to existing published studies. For  
1098 example, Spankovich et al (2017) studied the prevalence of tinnitus in the population of the  
1099 United States using National Health and Examination Survey (NHANES) data from 1999-2002.  
1100 The information derived from the two items on presence and frequency of tinnitus used in  
1101 NHANES (*"In the past 12 months, have you ever had ringing, roaring, or buzzing in your ears?"*  
1102 and *"How often did this happen?"*) could be roughly approximated to the information derived  
1103 from our item on tinnitus prevalence (Spankovich et al., 2017). Similarly, in the EuroTrak Survey  
1104 carried out across Germany, France and UK from 2009 to 2015, *"trouble hearing conversations*  
1105 *in a noisy background"* is a component of the degree of hearing loss (Bisgaard et al., 2017).  
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1125 We regard as a particular strength that our translation and adaptation process extended beyond  
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1127 a simple forward translation to include the further steps of defining the key concepts in each  
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1129 question, back translation, rating equivalence, revising the target language translations, and  
1130  
1131 field testing by native speakers. Our focus was on creating culturally appropriate and easily  
1132  
1133 comprehensible versions, rather than providing verbatim 'word-for-word' translations. The  
1134  
1135 evaluation scores derived from the field testing indicate the quality of the translated survey items  
1136  
1137 was high for Bulgarian, French, German, Greek, Italian, and Spanish. Further, in line with good  
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1139 practice guidelines, we report all comments and revisions made during the process in order to  
1140  
1141 provide transparency in reporting. Given that findings from the field testing indicated that some  
1142  
1143 of the translations could be further improved (especially for Portuguese and Russian),  
1144  
1145 transparency in reporting provides an important basis for other investigators to build on in this  
1146  
1147 regard. The recommendations provided during the field testing are included here to enable  
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1149 further improvements towards functional equivalence.  
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1154 Comments made during field testing by the French, Polish, and Spanish speakers indicate  
1155  
1156 some degree of uncertainty in how the question on hearing difficulties should be interpreted.  
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1158 Revisiting the source language version ("*Do you currently have any other difficulty with your*  
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1160 *hearing, such as listening to speech in a noisy situation?*") indicates that the uncertainty most  
1161  
1162 probably arises at source, not during translation. One possibility is that the target audience  
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1164 interprets the question in a way that limits it to only asking about listening to speech in a noisy  
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1166 situation. Some confusion was caused by the fact that 'listening to speech' is not necessarily the  
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1168 same as 'understanding speech'. Although not indicated during field testing, another inherent  
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1170 limitation of using a single question to assess hearing difficulty might be that respondents  
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1179 interpret this question in terms of *hearing difficulty due to tinnitus* rather than *hearing impairment*  
1180 *per se* (e.g. Henry et al., 2015).  
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1187 The main limitation of our work is in the recruitment of participants for the field testing stage.  
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1189 While there is no consensus on the desired sample size in the literature, a review indicates that  
1190 the sample size generally varies between 5 and 50 (Acquadro et al., 2008). Indeed, Hall and  
1191 colleagues (2018b) recommend at least eight native speakers, and up to 20 native speakers for  
1192 countries where there is regional variation. In the time scale available for the project, and with  
1193 limited resources, none of the samples reached the numbers recommended by Hall et al.  
1194 (2018b). Moreover, we could not recruit any Romanian or Latvian speakers, despite targeting  
1195 our widespread networks of international collaborators and colleagues. However, each  
1196 translated item was scrutinized and reviewed by multiple persons (the project team and bilingual  
1197 speakers) in more than one step of the translation process (namely the back-translation and the  
1198 field testing steps). Owing to this thoroughness of process and relatively high evaluation scores,  
1199 we can safely conclude that the resultant final versions produced from our work are reasonably  
1200 well adapted “world-for-world” translations. More extensive field testing is advised before any  
1201 revisions are made to the wording of the items in order to be confident that the suggestions  
1202 proposed by our bilingual speakers are acceptable to a reasonably large proportion of the  
1203 relevant target audience.  
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## 1222 **5.2 Future research**

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1224 While all of the survey items are acceptable in their English and translated versions, the findings  
1225 from the field testing indicate that there is still some room for improvement. As recommended  
1226 above, future research could consider extending the field testing stage, or as an alternative one  
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1235 could incorporate the comments suggested here, and then reassess participants' interpretation  
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1237 of these items using a larger field testing sample.  
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1241 Four of the languages selected (Spanish, English, Portuguese and Russian) represent some of  
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1243 the top ten languages which are spoken most across the world. These four languages alone  
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1245 account for more than 1 billion speakers across the globe (e.g. English= 378 million speakers,  
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1247 Spanish = 442 million speakers and Portuguese = 223 million speakers, Russian= 154 million  
1248  
1249 speakers). All the 12 languages combined account for 1.5 billion first-language speakers  
1250  
1251 worldwide (Simons et al., 2018). Although development and field testing was restricted to  
1252  
1253 mainland Europe, these translated versions could potentially be used in other countries, but only  
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1255 as long as investigators first conduct additional field testing to determine whether any revisions  
1256  
1257 are needed to account for national dialects or social and cultural differences. In particular,  
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1259 Spanish and Portuguese as spoken in the Americas differs from that spoken in mainland  
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1261 Europe and so our work presents an important potential for cultural adaptation for use in  
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1263 countries beyond mainland Europe.  
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### 1268 **5.3 Concluding remarks**

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1270 This work is a unique attempt to develop standardized survey items in many different  
1271  
1272 languages, using a rigorous translation process to develop good-quality versions of the  
1273  
1274 questions and response options with acceptable scores confirmed in most cases. The process  
1275  
1276 was somewhat challenging and time consuming given the detailed steps and the number of  
1277  
1278 translated languages. Nevertheless, we believe that the consistency of result made the effort  
1279  
1280 worthwhile. Since the same steps were applied to produce the 11 translated versions from the  
1281  
1282 English original, this work can provide new insights into translating other surveys and  
1283  
1284 questionnaires. Overall, this is an innovative endeavor on tinnitus and hearing difficulty  
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1290  
1291 prevalence that we hope will provide relevant results which can be pooled together to infer on  
1292  
1293 global prevalence and facilitate across-country comparisons.  
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#### 1357 DECLARATION OF INTEREST

1358

1359 All authors declare that there is no conflict of interest.  
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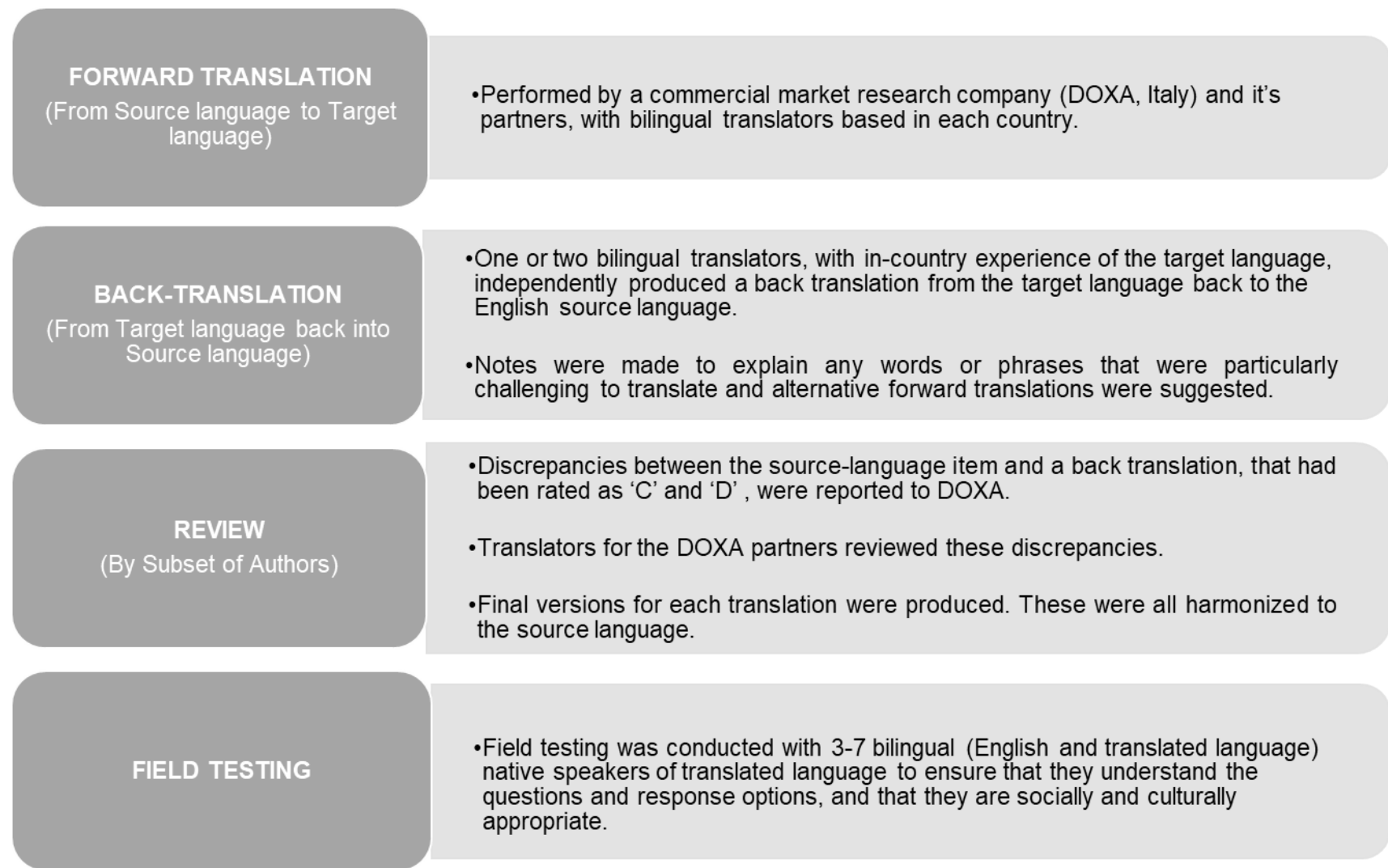
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**Figure 1: Steps of the Translation Process: The following scheme shows the order of the translation steps following the good practice guide by Hall et al 2018b.**



**Table 1.** Standardized survey instructions, questions and response options in the source language (English)

<b>General instruction to participants</b>	“Now we ask you a few questions on hearing problems and on the sensation of noise in head or in one or both ears, which is a symptom that medical doctors call “tinnitus””		
	<i>Question-specific instruction to the interviewer</i>	<i>Question</i>	<i>Response options</i>
<b>Presence of tinnitus</b>	To all adults (i.e., aged ≥ 18 years)	Over the past year, have you had noises (such as ringing or buzzing) in your head or in one or both ears that lasts for more than five minutes at a time?	<ul style="list-style-type: none"> <li>• Yes, most or all of time</li> <li>• Yes, a lot of the time</li> <li>• Yes, some of the time</li> <li>• No, not in the past year</li> <li>• No, never</li> <li>• Do not know/ Prefer not to answer</li> </ul>
<b>Tinnitus severity</b>	To participants with current tinnitus	Over the past year, how much do these noises in your head or ears worry, annoy or upset you when they are at their worst?	<ul style="list-style-type: none"> <li>• Severely</li> <li>• Moderately</li> <li>• Slightly</li> <li>• Not at all</li> <li>• Do not know/ Prefer not to answer</li> </ul>
<b>Use of healthcare resources for tinnitus</b>	To participants with current tinnitus	Over the past year, have you seen your family doctor, or seen a healthcare professional at a clinic or hospital about problems with noises in your head or ears?	<ul style="list-style-type: none"> <li>• Yes, 5 or more visits</li> <li>• Yes, from 2 to 4 visits</li> <li>• Yes, just one visit</li> <li>• Not at all</li> <li>• Do not know/ Prefer not to answer</li> </ul>
<b>Presence of hearing difficulty</b>	To all adults (i.e., aged ≥ 18 years)	Do you currently have any other difficulty with your hearing, such as listening to speech in a noisy situation?	<ul style="list-style-type: none"> <li>• Yes, cannot hear at all</li> <li>• Yes, severe difficulty</li> <li>• Yes, moderate difficulty</li> <li>• Yes, slight difficulty</li> <li>• No difficulty</li> <li>• Do not know/ Prefer not to answer</li> </ul>

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**Table 2.** Discrepancies and recommendations for question on presence of tinnitus

TRANSLATIONS OF QUESTION					
Language of translation	Forward Translation	Rating based on discrepancy	Change recommended	Change implemented	Reasoning
FRENCH	Au cours de l'année passée, avez-vous expérimenté ce type de bruits (sonneries ou bourdonnements) dans votre tête, du côté d'une oreille ou des deux oreilles, qui durent plus de cinq minutes à chaque fois ?	C	Recommend changing 'ce type de bruits' (meaning: this type of noises) to 'un acouphène' (meaning: a tinnitus).	No	Since the original English version question used the term 'noises' not 'tinnitus', the researchers believed the forward translation was good enough.
GREEK	Κατά το περασμένο έτος, αισθανόσασταν θορύβους (όπως κουδούνισμα ή βουητό) στο κεφάλι σας ή σε ένα ή και στα δύο αυτιά που διήρκησε για περισσότερο από πέντε λεπτά τη φορά;	C	The term 'Last year' does not adequately stress the period of time over which participants should consider their response.	Yes	The term 'Over the last year' implies the time frame. In the back-translation, the translator used the term 'last year' which we agreed did not capture the duration of the condition.
PORTUGUESE	No último ano, ouviu ruídos (como campainhas ou zumbidos) dentro da cabeça, ou em um, ou nos dois ouvidos que tenham durado mais de 5 minutos de cada vez?	C	The term 'ringing' seems substituted for 'buzzers'	Yes	The back-translator translated "[...]" (como campainhas ou zumbidos) as "[...]" (such as buzzers or buzzing)]. This is slightly different from the original English word "ringing". A closer term



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					in Portuguese was sought.
<b>TRANSLATIONS OF RESPONSE OPTIONS</b>					
<b>Language of translation</b>	<b>Forward Translation</b>	<b>Rating based on Discrepancy</b>	<b>Change recommended</b>	<b>Change implemented?</b>	<b>Reasoning</b>
ITALIAN	1. Sì, quasi sempre o sempre 2. Sì, buona parte del tempo 3. Sì, qualche 4. No, non nell'ultimo anno 5. No, mai 6. Non so/Preferisco non rispondere	C	"Most or all of time" in Italian should be "La maggior parte del tempo o tutto il tempo". The researchers preferred to translate it using "quasi sempre o sempre" which means "almost always or always", since this is more comprehensible. The third option in Italian is actually different... in the last version of the questionnaire, it is "Si, qualche volta".	Yes	It was a typing error where some part of the sentence was missed.

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**Table 3.** Evaluation scores of field testing. Scores are between 0 and 100. 'ND' denotes that the field testing was not done.

Languages	Number of individual field testers	Median score	Score range	
			Minimum	Maximum
Bulgarian	3	100	90	100
French	3	80	75	99
German	7	85	70	100
Greek	5	94	75	97
Italian	5	90	85	100
Latvian	0	ND	ND	ND
Polish	3	85	60	90
Portuguese	4	77.5	25	98
Romanian	0	ND	ND	ND
Russian	5	70	60	100
Spanish	5	89	70	89

**Supplementary Table 1.** Survey introduction and concept definitions

	<b>Intro</b>	<b>Tinnitus occurrence</b>	<b>Tinnitus severity</b>	<b>Tinnitus diagnosis</b>	<b>Hearing difficulty</b>
<b>Concept Definitions</b>	<p><i>These are the words to be spoken to the participant by the interviewer:</i></p> <p>"I'll ask you some questions about hearing problems and about tinnitus. Tinnitus is when you experience a noise in your head or in your ears"</p>	<p><i>[This is an instruction to the interviewer, to ask these questions to all adults aged 18 or over]</i></p> <p>Thinking back over the past 12 months, the participant's experience of any episode(s) of tinnitus, which has lasted longer than 5 minutes, is to be selected from the following 6 response options:</p> <p>Response options 1-3 record those who have experienced tinnitus with varying degrees of frequency.</p> <ol style="list-style-type: none"> <li>1. almost constantly</li> <li>2. a lot of the time but not constantly</li> <li>3. some of the time.</li> </ol> <p>Response options 4-5 record those who have not experienced tinnitus either</p> <ol style="list-style-type: none"> <li>4. in the past 12 months</li> <li>5. Never.</li> </ol> <p>Option 6. is for those who cannot remember or who do not want to respond</p>	<p><i>[This is an instruction to the interviewer, to ask these questions only to those who have experienced tinnitus in the past year]</i></p> <p>Thinking back over the past 12 months, the perceived severity of the tinnitus is to be selected from the following 5 response option.</p> <p>Severity can be judged according to a range of emotional impacts</p> <p>Response options 1-4 record the degree of distress.</p> <ol style="list-style-type: none"> <li>1. Severe emotional distress</li> <li>2. Moderate level of emotional distress</li> <li>3. Slight distress</li> <li>4. Not distressing at all.</li> </ol> <p>Option 5. is for those who cannot remember or who do not want to respond</p>	<p><i>[This is an instruction to the interviewer, to ask these questions only to those who have experienced tinnitus in the past year]</i></p> <p>Thinking back over the past 12 months, the perceived severity of the tinnitus is to be selected from the following 5 response options.</p> <p>Response options 1-3 record the frequency of medical appointments in the past year because of the tinnitus.</p> <ol style="list-style-type: none"> <li>1. 5 or more appointments</li> <li>2. between 2 and 4 appointments</li> <li>3. only one appointment</li> <li>4. No appointments at all.</li> </ol> <p>Option 5. is for those who cannot remember or who do not want to respond</p>	<p><i>[This is an instruction to the interviewer, to ask these questions to all adults aged 18 or over]</i></p> <p>Thinking about the present moment in time, the degree of hearing difficulty is to be selected from the following 6 response options. 'Degree of hearing difficulty' can mean the amount of difficulty or the frequency of difficult experiences, or a combination of the two.</p> <p>Response options 1-5 record the amount of difficulty (or frequency of difficulty).</p> <ol style="list-style-type: none"> <li>1. Hearing difficulty which prevents communicating in noisy situations (or always interferes)</li> <li>2. Hearing difficulty that significantly interferes with communicating in noisy situations (or often interferes)</li> <li>3. Hearing difficulty that moderately interferes with communicating in noisy situations (or sometimes interferes)</li> <li>4. Hearing difficulty that slightly interferes with communicating in noisy situations (or only occasionally interferes)</li> <li>5. No hearing difficulty.</li> </ol> <p>Option 6. is for those who cannot remember or who do not want to respond</p>



**Supplementary Table 2:** Discrepancies in question on tinnitus severity and response options

TRANSLATIONS OF QUESTION					
Language of translation	Forward Translation	Rating based on Discrepancy	Change recommended	Change implemented?	Reasoning
BULGARIAN	През изминалата година, доколко тези шумове в главата или ушите ви притесняваха, дразнеха или тревожеха, когато бяха най-силни?	C	Worried/ bothered in Bulgarian mean the same thing.	Yes	The English version refers to how much these noises in your head or ears “worry, annoy or upset you”. These are three different emotions which are subtly different from one another in English. Our two back-translators translated “upset” in different ways. One translator suggested that the best fitting word for ‘upset’ might be ‘разтроен’ (which is to do with being emotional and sad almost to the point of crying; literally ‘upset’).
FRENCH	Au cours de l’année passée, dans quelle mesure ces bruits dans votre tête ou vos oreilles vous ont-ils inquiété, ennuyé ou obsédé quand ils sont à leur maximum ?	D	The back translator highlighted that the French translation for the term “upset” (i.e., obsédé) did not	Yes	Based on the response options provided in English, the translator felt the French question as formulated was not well adapted.

			perfectly catch the concept.		
POLISH	W ciągu ostatniego roku jak bardzo ten dźwięk w Pana/i głowie lub uszach martwił, irytował Pana/ a, kiedy osiągnął najgorsze stadium?	D	one of the emotional descriptors was missing from the Back translation	Yes	The descriptor 'upset you' was missing in the Polish translation. This was added in the final version.
PORTUGUESE	Durante o último ano, quanto é que esses ruídos o preocuparam, incomodaram, ou aborreceram quando estavam a afetá-lo/a?	D	Portuguese-English translation does not convey the first emotional descriptor, nor does it qualify the statement 'when the noises are at their worst'.	Yes	A different translation was used that expressed the meaning same as that of the original version.
ROMANIAN	În ultimul an, cât de mult vă îngrijorează, deranjează □i supără aceste sunete când sunt în cea mai rea manifestare?	C	The back translation from Romanian was not exactly the same as the English version.	No	The researchers decided that Forward translation is conceptually similar to the original English version.
SPANISH	Durante el año pasado, ¿Le ha preocupado, molestado o trastocado ese ruido en su cabeza u oídos cuando ha estado en su peor momento?	C	The back translator highlighted that the Spanish translation for the term "upset" (i.e., trastocado) did	Yes	The term "trastocado" was changed to "trastornado" to keep the conceptual meaning in

			not perfectly catch the concept.		alignment with the English version.
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**TRANSLATIONS OF RESPONSE OPTIONS**

<b>Language of Translation</b>	<b>Forward Translation</b>	<b>Rating based on Discrepancy</b>	<b>Changes recommended</b>	<b>Changes resolved</b>	<b>Reasoning</b>
PORTUGUESE	1. Muito 2. Moderadamente 3. Ligeiramente 4. Nada 5. Não sabe/Não responde	C	Portuguese version indicates 'do not respond' instead of 'prefer not to respond' which means something slightly different	No	The same response option was categorized as "B" (items show satisfactory conceptual equivalence, but have used one or two different words) for other questions. So no changes were made as the researchers assumed that's the convention in Portuguese.

**Supplementary Table 3:** Discrepancies in question on use of healthcare resources for tinnitus and response options

<b>TRANSLATIONS OF QUESTION</b>					
<b>Language of Translation</b>	<b>Forward Translation</b>	<b>Rating based on Discrepancy</b>	<b>Changes recommended</b>	<b>Changes resolved</b>	<b>Reasoning</b>
POLISH	W ciągu ostatniego roku czy był/a Pan/i na wizycie u swojego lekarza rodzinnego lub specjalisty w klinice/ szpitalu w sprawie swojego problemu z przykrymi doznaniem słuchowymi w Pana/i głowie lub uszach?	C	The phrase "in a clinic or hospital" was omitted in the forward translation.	Yes	In the final version this was added since we only considered hospital/clinic visits with the doctor in the question.



**Supplementary Table 4:** Discrepancies in Question on presence of hearing difficulty and response options

<b>TRANSLATIONS OF QUESTION</b>					
<b>Language of Translation</b>	<b>Forward Translation</b>	<b>Rating based on Discrepancy</b>	<b>Changes recommended</b>	<b>Changes resolved</b>	<b>Reasoning</b>
BULGARIAN	В последно време имате ли други проблеми със слуха, като нечуване на говорящ в шумна среда?	D	The back translation doesn't have the same meaning as the forward translation or the concept definition. An important aspect of the source language English version is that the example given explicitly describes 'listening to a talker who is speaking in a situation that has background noise'. A key concept is that the listener is trying to understand what the speaker is saying. It is more than simply 'hearing' the talker. The sentence also describes a specific listening scenario which is when there is loud background noise such as in a restaurant or bar. In English, simply saying "listening in a loud situation" does not discriminate whether it's	Yes	A second forward translation from English to Bulgarian was required to incorporate the key concept of trying to listen and understand speech.

			the speech or the background noise which is loud.		
GREEK	Αντιμετωπίζετε αυτή την περίοδο οποιαδήποτε άλλη δυσκολία με την ακοή σας, όπως η ακρόαση της ομιλίας σε θορυβώδη κατάσταση?	C	Environment instead of situation is better in Greek.	Yes	The translation and recommendations suggested by the back translator was accepted since it was conceptually equivalent to the English version.
POLISH	E4. Czy ma Pan/ Pani inne problem za słuchem, takie jak trudności ze słuchaniem czyjejs wypowiedzi w hałasie?	C	There is slight conceptual difference between the Polish and English versions. The Polish version say "understanding in noise" which is not exactly the same as "noisy situation".	No	This was a very minor change in concept and was thus, not included in the final version. Moreover, one of the field testing participants interpreted this as "noisy situation".
ROMANIAN	În prezent, aveți oricare alte probleme cu auzul, cum ar fi auzitul atunci când e zgomot	D	The forward translation doesn't match the concept definition.	Yes	A key concept of this question in English is that the listener is trying to understand what the speaker is saying when there is loud background noise. It is more than simply 'hearing' the speaker", and in English relates more to being able to detect sound. The back-translators translated the Romanian version of the question with "At

					present, do you experience any other hearing problems like hearing when there is background noise". A second forward translation from English to Romanian was required to incorporate the key concept of trying to listen and understand speech.
SPANISH	¿Tiene usted actualmente alguna otra dificultad con su audición, como oír en una situación ruidosa?	C	The back translator's suggested to clarify that 'not hearing well in a noisy situation' corresponds to the 'difficulty' being asked about, rather than simply describing the situation (i.e. 'hearing in a noisy situation').	No	The query and the changes were not sent to DOXA. The researchers believed that since the original English version did not have the phrase "not able to hear" (specifically the word "not" was absent in the original version); "como oír" is a more appropriate translation than "como no air bien". While the suggestion make it a bit easier for the lay person to understand, it does take the Spanish translation a bit further away from the original

					English on conceptual grounds.
<b>TRANSLATIONS OF RESPONSE OPTIONS</b>					
<b>Language of Translation</b>	<b>Forward Translation</b>	<b>Rating based on Discrepancy</b>	<b>Changes recommended</b>	<b>Changes resolved</b>	<b>Reasoning</b>
GERMAN	1. Ja, ich kann überhaupt nichts verstehen 2. Ja, starke Schwierigkeiten 3. Ja, mäßige Schwierigkeiten 4. Ja, geringe Schwierigkeiten 5. Nein, keine Schwierigkeiten· Weiß nicht/ keine Angabe	D	The back translator's recommended using 'Ja, ich kann überhaupt nichts hören/verstehen' for option 1 or revise response options (2-5) to clarify that we want to know about difficulties with following conversations.	Yes	Option 1 'Ja, ich kann überhaupt nichts verstehen' translated to 'Yes, I cannot understand anything'. The other options (2-5) says 'Schwierigkeiten'- which refers to difficulties in general. Hence option 1 was changed to 'Ja, ich kann überhaupt nichts hören' to align it with the original English version.



**Supplementary Table 5:** Standardized survey instructions, questions and response options in the target languages

Bulgarian, French, German, Greek, Italian, Latvian, Polish, Portuguese, Romanian, Russian and Spanish. These are the versions used in the European-wide study of tinnitus prevalence, prior to any field testing.

	<b>General instruction to participants</b>	<b>Presence of tinnitus</b>	<b>Tinnitus severity</b>	<b>Use of healthcare resources for tinnitus</b>	<b>Presence of hearing difficulty</b>
<b>Bulgarian</b>	<p>Сега ще ви задам няколко въпроса за проблеми със слуха и усещане за шум в главата, в едното или двете уши, което е симптом, който лекарите наричат “Шум в ушите” или тинитус</p>	<p><i>[Към всички респонденти на възраст 18+]</i></p> <p>През изминалата година, усещахте ли шум (звънене или бучене) в главата или в едното или двете уши, който шум продължаваше повече от пет минути?</p> <ul style="list-style-type: none"> <li>• Да, през повечето или цялото време</li> <li>• Да, често</li> <li>• Да, понякога</li> <li>• Не, не и през изминалата година</li> <li>• Не, никога</li> <li>• Не знам/ Предпочитам да не отговоря</li> </ul>	<p><i>[Към респондентите, които имат шум в ушите]</i></p> <p>През изминалата година, доколко тези шумове в главата или ушите ви притесняваха, дразнеха или разстройваха, когато бяха най-силни?</p> <ul style="list-style-type: none"> <li>• Силно</li> <li>• Умерено</li> <li>• Леко</li> <li>• Никак</li> <li>• Не знам/ Предпочитам да не отговоря</li> </ul>	<p><i>[Към респондентите, които имат шум в ушите]</i></p> <p>През изминалата година, посещавали ли сте вашия Общопрактикуващ лекар или специалист в клиника или болница за проблемите ви в главата или ушите?</p> <ul style="list-style-type: none"> <li>• Да, 5 или повече пъти</li> <li>• Да, между 2 и 4 пъти</li> <li>• Да, веднъж</li> <li>• Не</li> <li>• Не знам/ Предпочитам да не отговоря</li> </ul>	<p><i>[Към всички респонденти на възраст 18+]</i></p> <p>В последно време имате ли други затруднения с вашия слух, като например опитване да чуете и разберете реч в шумна среда?</p> <ul style="list-style-type: none"> <li>• Да, не чувам изобщо</li> <li>• Да, силно затруднение</li> <li>• Да, умерено затруднение</li> <li>• Да, леко затруднение</li> <li>• Без затруднение</li> <li>• Не знам/ Предпочитам да не отговоря</li> </ul>

<p style="text-align: center;"><b>French</b></p>	<p>Nous allons maintenant vous poser quelques questions sur les problèmes d'audition et la sensation de bruit dans la tête ou dans une oreille ou dans des deux oreilles, qui est un symptôme que les médecins appellent «acouphènes»</p>	<p><i>[A tous les adultes de 18 ans et +]</i></p> <p>Au cours de l'année passée, avez-vous expérimenté ce type de bruits (sonneries ou bourdonnements) dans votre tête, du côté d'une oreille ou des deux oreilles, qui durent plus de cinq minutes à chaque fois?</p> <ul style="list-style-type: none"> <li>• Oui la plupart du temps ou tout le temps</li> <li>• Oui, souvent</li> <li>• Oui, parfois</li> <li>• Non, pas au cours de l'année passée</li> <li>• Non, jamais</li> <li>• Ne sait pas/ Préfère ne pas répondre</li> </ul>	<p><i>[Aux participants qui ont des acouphènes actuellement]</i></p> <p>Au cours de l'année passée, dans quelle mesure ces bruits dans votre tête ou vos oreilles vous ont-ils inquiété, ennuyé ou agacé quand ils sont à leur maximum?</p> <ul style="list-style-type: none"> <li>• Gravement</li> <li>• Modérément</li> <li>• Légèrement</li> <li>• Pas du tout</li> <li>• Ne sait pas/ Préfère ne pas répondre</li> </ul>	<p><i>[Aux participants qui ont des acouphènes actuellement]</i></p> <p>Au cours de l'année passée, avez-vous vu votre médecin généraliste, ou vu un professionnel de santé en clinique ou à l'hôpital au sujet des problèmes de bruits dans votre tête ou vos oreilles?</p> <ul style="list-style-type: none"> <li>• Oui, 5 visites ou plus</li> <li>• Oui, de 2 à 4 visites</li> <li>• Oui, seulement une visite</li> <li>• Pas du tout</li> <li>• Ne sait pas / Préfère ne pas répondre</li> </ul>	<p><i>[A tous les adultes de 18 ans et +]</i></p> <p>Avez-vous actuellement d'autres difficultés d'audition, par exemple avez-vous du mal à écouter un discours quand il y a du bruit autour de vous?</p> <ul style="list-style-type: none"> <li>• Oui, ne peut rien entendre du tout</li> <li>• Oui, une grande difficulté</li> <li>• Oui, une difficulté moyenne</li> <li>• Oui, un peu de difficulté</li> <li>• Aucune difficulté</li> <li>• Ne sait pas/ Préfère ne pas répondre</li> </ul>
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<b>German</b>	<p>Der Interviewer bestätigt, dass das Teilnehmer- Informationsblatt übergeben wurde und vom Befragten gelesen wurde, und dieser zustimmt an dieser Studie teilzunehmen.</p>	<p><i>[An alle Befragten, die 18 Jahre und älter sind]</i></p> <p>Haben Sie im Laufe des letzten Jahres Geräusche, auch ein Klingeln oder Summen, in Ihrem Kopf oder in einem oder beiden Ohren bemerkt, die jeweils länger als fünf Minuten andauerten?</p> <ul style="list-style-type: none"> <li>• Ja, sehr häufig oder ständig</li> <li>• Ja, häufig</li> <li>• Ja, gelegentlich</li> <li>• Nein, nicht im Laufe des letzten Jahres</li> <li>• Nein, noch nie</li> <li>• Weiß nicht/ keine Angabe</li> </ul>	<p><i>[An Befragte mit einem Tinnitus]</i></p> <p>Wie sehr haben Sie diese Geräusche in Ihrem Kopf oder in Ihren Ohren im Laufe des letzten Jahres beunruhigt, gestört oder geärgert, wenn diese besonders stark auftraten?</p> <ul style="list-style-type: none"> <li>• Stark</li> <li>• Mäßig</li> <li>• Gering</li> <li>• Überhaupt nicht</li> <li>• Weiß nicht/ keine Angabe</li> </ul>	<p><i>[An Befragte mit einem Tinnitus]</i></p> <p>Haben Sie im Laufe des letzten Jahres Ihren Hausarzt oder einen Gesundheits-Experten in einer Klinik oder in einem Krankenhaus wegen der Hörprobleme, bzw. der Geräusche in Ihrem Kopf oder in Ihren Ohren aufgesucht?</p> <ul style="list-style-type: none"> <li>• Ja, und dort 5 oder mehr Besuche</li> <li>• Ja, und dort 2 bis 4 Besuche</li> <li>• Ja, und 1 Besuch</li> <li>• Nein, überhaupt kein Besuch</li> <li>• Weiß nicht/ keine Angabe</li> </ul>	<p><i>[An alle Befragten, die 18 Jahre und älter]</i></p> <p>Haben Sie momentan überhaupt Schwierigkeiten mit dem Hören, wie beispielsweise beim Zuhören bei einer Rede oder beim Hören in einer geräuschvollen Umgebung?</p> <ul style="list-style-type: none"> <li>• Ja, ich kann überhaupt nichts hören</li> <li>• Ja, starke Schwierigkeiten</li> <li>• Ja, mäßige Schwierigkeiten</li> <li>• Ja, geringe Schwierigkeiten</li> <li>• Nein, keine Schwierigkeiten</li> <li>• Weiß nicht/ keine Angabe</li> </ul>
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<b>Greek</b>	<p>Τώρα θα σας κάνω μερικές ερωτήσεις σχετικά με προβλήματα ακοής και για την αίσθηση του θορύβου (βουητού) στο κεφάλι στο ένα ή και στα δύο αυτιά, το οποίο είναι ένα σύμπτωμα που οι γιατροί αποκαλούν «εμβοή»</p>	<p><i>[Όλοι οι ενήλικες 18+]</i></p> <p>Μέσα στον τελευταίο χρόνο, αισθανόσασταν θορύβους (όπως κουδούνισμα ή βουητό) στο κεφάλι σας ή σε ένα ή και στα δύο αυτιά που διήρκεσε για περισσότερο από πέντε λεπτά τη φορά;</p> <ul style="list-style-type: none"> <li>• Ναι, τον περισσότερο καιρό ή όλο το χρόνο</li> <li>• Ναι, πολλές φορές</li> <li>• Ναι, μερικές φορές</li> <li>• Όχι, όχι κατά το τελευταίο έτος</li> <li>• Όχι, ποτέ</li> <li>• ΔΞ/ΔΑ</li> </ul> <p>.....</p>	<p><i>[Για συμμετέχοντες με τρέχουσες εμβοές - κωδικός]</i></p> <p>Μέσα στον τελευταίο χρόνο, πόσο αυτοί οι θόρυβοι στο κεφάλι ή τα αυτιά σας ανησύχησαν, ενόχλησαν ή αναστάτωσαν όταν ήταν στα χειρότερά τους;</p> <ul style="list-style-type: none"> <li>• Σοβαρά</li> <li>• Μέτρια</li> <li>• Ελάχιστα</li> <li>• Καθόλου</li> <li>• ΔΞ/ΔΑ</li> </ul> <p>.....</p> <p>.....</p>	<p><i>[Για συμμετέχοντες με τρέχουσες εμβοές - κωδικός]</i></p> <p>Μέσα στον τελευταίο χρόνο, έχετε επισκεφτεί τον οικογενειακό γιατρό σας, ή έναν επαγγελματία του τομέα της υγείας σε μια κλινική ή νοσοκομείο για τα προβλήματα με τους θορύβους στο κεφάλι ή τα αυτιά σας;</p> <ul style="list-style-type: none"> <li>• Ναι, 5 ή περισσότερες επισκέψεις</li> <li>• Ναι, από 2 έως 4 επισκέψεις</li> <li>• Ναι, απλά μία επίσκεψη</li> <li>• Καθόλου</li> <li>• ΔΞ/ΔΑ</li> </ul> <p>.....</p>	<p><i>[Όλοι οι ενήλικες 18+]</i></p> <p>Αντιμετωπίζετε αυτή την περίοδο οποιαδήποτε άλλη δυσκολία με την ακοή σας, όπως η ακρόαση μιας ομιλίας σε θορυβώδες περιβάλλον;</p> <p>-Ναι, δεν μπορώ να ακούσω καθόλου</p> <ul style="list-style-type: none"> <li>• Ναι, έχω σοβαρή δυσκολία να ακούσω</li> <li>• Ναι, μέτρια δυσκολία</li> <li>• Ναι, ελαφριά δυσκολία</li> <li>• Καμία δυσκολία</li> <li>• ΔΞ/ΔΑ</li> </ul> <p>.....</p>
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<p style="text-align: center;"><b>Italian</b></p>	<p>Ora le faremo alcune domande sui problemi di udito e sulla sensazione di suoni in testa o in una o entrambe le orecchie. Si tratta di un sintomo che i medici chiamano "acufene" o "tinnito"</p>	<p><i>[A tutti gli adulti (età ≥ 18 anni)]</i></p> <p>Nel corso dell'ultimo anno, ha sentito dei suoni (come fischi o ronzii) in testa o in una o entrambe le orecchie che durassero per più di 5 minuti?</p> <ul style="list-style-type: none"> <li>• Sì, quasi sempre o sempre</li> <li>• Sì, buona parte del tempo</li> <li>• Sì, qualche volta</li> <li>• No, non nell'ultimo anno</li> <li>• No, mai</li> <li>• Non so/Preferisco non rispondere</li> </ul>	<p><i>[Solo ai partecipanti che attualmente hanno l'acufene]</i></p> <p>Nel corso dell'ultimo anno, quanto questi suoni in testa o nelle orecchie la preoccupano, infastidiscono o disturbano quando sono nella loro fase più intensa?</p> <ul style="list-style-type: none"> <li>• Fortemente</li> <li>• Abbastanza</li> <li>• Leggermente</li> <li>• Per niente</li> <li>• Non so/Preferisco non rispondere</li> </ul>	<p><i>[Solo ai partecipanti che attualmente hanno l'acufene]</i></p> <p>Nel corso dell'ultimo anno, si è rivolto al suo medico di famiglia, o a un professionista sanitario presso una clinica o un ospedale, per i problemi legati a questi suoni in testa o nelle orecchie?</p> <ul style="list-style-type: none"> <li>• Sì, per un totale di 5 o più visite</li> <li>• Sì, per un totale di 2-4 visite</li> <li>• Sì, solo una volta</li> <li>• No, mai</li> <li>• Non so/Preferisco non rispondere</li> </ul>	<p><i>[A tutti gli adulti (età ≥ 18 anni)]</i></p> <p>Ha attualmente qualche altro disturbo di udito, come ad esempio difficoltà ad ascoltare chi parla in un ambiente rumoroso?</p> <ul style="list-style-type: none"> <li>• Sì, non sento niente</li> <li>• Sì, una notevole difficoltà</li> <li>• Sì, una media difficoltà</li> <li>• Sì, una lieve difficoltà</li> <li>• Nessuna difficoltà</li> <li>• Non so/Preferisco non rispondere</li> </ul>
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<b>Latvian</b>	<p>Tagad Jums tiks uzdoti daži jautājumi par dzirdes problēmām un trokšņu sajūtām galvā vai vienā vai abās ausīs. Medicīnā šādus simptomus dēvē par „<i>tinnitus</i>”.</p>	<p><i>Uzdot visiem pieaugušajiem (18+)</i></p> <p>Vai pēdējā gada laikā Jūs esat dzirdējis/-usi trokšņus, tādus, kā zvanīšana vai sīkšana, savā galvā vai vienā vai abās ausīs, kas ilgst vairāk nekā piecas minūtes vienā reizē? Viena atbilde</p> <ul style="list-style-type: none"> <li>• Jā, ļoti bieži vai visu laiku</li> <li>• Jā, diezgan bieži</li> <li>• Jā, dažkārt</li> <li>• Nē, ne pēdējā gada laikā</li> <li>• Nē, nekad</li> <li>• Nezinu/ Nevēlos atbildēt</li> </ul>	<p><i>E2 un E 3 uzdot</i></p> <p>Cik ļoti, pēdējā gada laikā, šie trokšņi ir Jūs uztraukuši, kaitinājuši, apbēdinājuši, kad tie ir bijuši visizteiktākie?</p> <ul style="list-style-type: none"> <li>• Ļoti stipri uztrauca</li> <li>• Drīzāk uztrauca</li> <li>• Nedaudz uztrauca</li> <li>• It nemaz neuztrauca</li> <li>• Nezinu/ Nevēlos atbildēt</li> </ul>	<p><i>E2 un E 3 uzdot</i></p> <p>Vai pēdējā gada laikā Jūs esat vērsies/-usies pie ģimenes ārsta vai sertificēta speciālista kādā no veselības aprūpes iestādēm ar trokšņiem galvā vai ausīs?</p> <ul style="list-style-type: none"> <li>• Jā, apmeklēju 5 un vairāk reizes</li> <li>• Jā, apmeklēju no divām līdz četrām reizēm</li> <li>• Jā, apmeklēju tikai vienu reizi</li> <li>• Neapmeklēju nevienu reizi</li> <li>• Nezinu/ Nevēlos atbildēt</li> </ul>	<p><i>Uzdot visiem pieaugušajiem (18+)</i></p> <p>Vai Jums pašreiz ir dzirdes problēmas, piemēram, sadzirdēt teikto trokšņainā situācijā? Viena atbilde</p> <ul style="list-style-type: none"> <li>• Jā, nevaru neko sadzirdēt</li> <li>• Jā, smagas problēmas</li> <li>• Jā, mērenas problēmas</li> <li>• Jā, nelielas problēmas</li> <li>• Nav problēmu</li> <li>• Nezinu/ Nevēlos atbildēt</li> </ul>
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<p style="text-align: center;"><b>Polish</b></p>	<p>Teraz zadamy Pani/ Panu parę pytań dotyczących problemów ze słuchem i wrażeniu słyszenia dźwięku w głowie lub w uchu/ obu uszach, co jest symptomem tego co lekarze nazywają szumami usznymi.</p>	<p><i>[To all adults 18+ ]</i></p> <p>Czy w ciągu ostatniego roku miał/a Pan/i przykre doznania dźwiękowe (np. dzwonienie/ bzyczenie) w głowie lub w uchu/ obu uszach, które trwało więcej niż 5 minut?</p> <ul style="list-style-type: none"> <li>• Tak, prawie cały czas</li> <li>• Tak, bardzo często</li> <li>• Tak, czasami</li> <li>• Nie, w ciągu ostatniego roku</li> <li>• Nie, nigdy</li> <li>• Nie wiem/ Wolę nie odpowiadać</li> </ul>	<p><i>[To participants with current tinnitus - code 1-3 at E1]</i></p> <p>W ciągu ostatniego roku jak bardzo ten dźwięk w Pana/i głowie lub uszach martwił, irytował albo niepokoił Pana/ią, kiedy osiągnął najgorsze stadium?</p> <ul style="list-style-type: none"> <li>• Bardzo mocno</li> <li>• Umiarkowanie</li> <li>• Trochę</li> <li>• W ogóle</li> <li>• Nie wiem/ Wolę nie odpowiadać</li> </ul>	<p><i>[To participants with current tinnitus - code 1-3 at E1]</i></p> <p>W ciągu ostatniego roku czy był/a Pan/i na wizycie u swojego lekarza rodzinnego lub specjalisty w klinice/ szpitalu w sprawie swojego problemu z przykrymi doznaniem słuchowymi w Pana/i głowie lub uszach?</p> <ul style="list-style-type: none"> <li>• Tak, byłem/ am na 5 lub więcej wizytach</li> <li>• Tak byłem/am na 2 – 4 wizytach</li> <li>• Tak, byłem/ am na jednej wizycie</li> <li>• Nie, nie byłem/ am na żadnej wizycie</li> <li>• Nie wiem/ Wolę nie odpowiadać</li> </ul>	<p><i>[To all adults 18+]</i></p> <p>Czy ma Pan/ Pani inne problem za słuchem, takie jak trudności ze słuchaniem czyjejs wypowiedzi w hałasie?</p> <ul style="list-style-type: none"> <li>• Tak, w ogóle nic nie słyszę</li> <li>• Tak, mam duże problemy</li> <li>• Tak, mam umiarkowane problemy</li> <li>• Tak, mam małe problemy</li> <li>• Nie mam żadnych problemów</li> <li>• Nie wiem/ Wolę nie odpowiadać</li> </ul>
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Portuguese	<p>Algumas perguntas sobre problemas de audição e uma sensação de ruído na cabeça, ou em um, ou nos dois ouvidos, sintoma de uma doença conhecida clinicamente como "tinnitus"</p>	<p><i>[Para todos os adultos (18+)]</i></p> <p>No último ano, teve ruídos (como toques ou zumbidos) na cabeça, em um ou nos dois ouvidos, que tenham durado mais de 5 minutos de cada vez?</p> <ul style="list-style-type: none"> <li>• Sim, sempre ou na maior parte do tempo</li> <li>• Sim, muitas vezes</li> <li>• Sim, algumas vezes</li> <li>• Não, não no último ano</li> <li>• Não, nunca</li> <li>• Não sabe/Não responde</li> </ul>	<p><i>[Para participantes com sintomas atuais de tinnitus]</i></p> <p>Durante o último ano, quanto é que esses ruídos o deixaram tenso, incomodaram, ou o aborreceram quando estavam a afetá-lo/a mais?</p> <ul style="list-style-type: none"> <li>• Muito</li> <li>• Moderadamente</li> <li>• Ligeiramente</li> <li>• Nada</li> <li>• Não sabe/Não responde</li> </ul>	<p><i>[Para participantes com sintomas atuais de tinnitus]</i></p> <p>No último ano, consultou o seu médico de família ou outro profissional de saúde acerca desses ruídos na cabeça ou ouvidos?</p> <ul style="list-style-type: none"> <li>• Sim, 5 ou mais consultas</li> <li>• Sim, de 2 a 4 consultas</li> <li>• Sim, apenas 1 consulta</li> <li>• Nada</li> <li>• Não sabe/Não responde</li> </ul>	<p><i>[Para todos os adultos (18+)]</i></p> <p>Presentemente, sente algum outro problema na sua audição, tal como dificuldade em ouvir alguém a falar num ambiente ruidoso?</p> <ul style="list-style-type: none"> <li>• Sim, não consigo ouvir de todo</li> <li>• Sim, muita dificuldade</li> <li>• Sim, dificuldade moderada</li> <li>• Sim, sem grande dificuldade</li> <li>• Sem dificuldade alguma</li> <li>• Não sabe/Não responde</li> </ul>
Romanian	<p>Acum urmează câteva întrebări despre probleme de auz și despre senzația de zgomot în cap ori în una sau ambele urechi, care este un simptom medical pe care doctorii îl numesc "tinitus"</p>	<p><i>[Pentru toți adulții]</i></p> <p>În ultimul an ați auzit zgomote, cum ar fi sunete sau bâzâit, în cap ori în una sau ambele urechi, care să dureze mai mult de 5 minute de fiecare dată?</p> <ul style="list-style-type: none"> <li>• Da, aproape mereu sau tot timpul</li> <li>• Da, în mare parte a timpului</li> <li>• Da, uneori</li> <li>• Nu în ultimul an</li> <li>• Nu, niciodată</li> <li>• Nu știu/Nu răspund</li> </ul>	<p><i>[Pentru toți participanții cu tinitus]</i></p> <p>În ultimul an, cât de mult vă îngrijorează, deranjează și supără aceste sunete când sunt în cea mai rea manifestare?</p> <ul style="list-style-type: none"> <li>• Grav</li> <li>• Moderat</li> <li>• Puțin</li> <li>• Deloc</li> <li>• Nu știu/Nu răspund</li> </ul>	<p><i>[Pentru toți participanții cu tinitus]</i></p> <p>În ultimul an, v-ați vizitat doctorul de familie sau un alt medic la o clinică sau spital despre problemele cu sunetele din cap sau urechi?</p> <ul style="list-style-type: none"> <li>• Da, 5 sau mai multe vizite</li> <li>• Da, 2-4 vizite</li> <li>• Da, o singură vizită</li> <li>• Deloc</li> <li>• Nu știu/Nu răspund</li> </ul>	<p><i>[Pentru toți adulții]</i></p> <p>În prezent, aveți probleme cu auzul, cum ar fi dificultăți în urmărirea unui discurs atunci când este zgomot?</p> <ul style="list-style-type: none"> <li>• Da, nu aud deloc</li> <li>• Da, probleme grave</li> <li>• Da, probleme medii</li> <li>• Da, probleme ușoare</li> <li>• Nicio problemă</li> <li>• Nu știu/Nu răspund</li> </ul>

Russian	<p>Теперь Вам будут заданы несколько вопросов о проблемах слуха и шумах в голове или в одном или обоих ушах. В медицине эти симптомы, известные как "тиннитус".</p>	<p><i>Задавать всем взрослым (18+)</i></p> <p>В течение последнего года Вы слышали шумы, такие как звон или свист, в своей голове или в одном или обоих ушах, который длится более пяти минут за один раз? <i>Один ответ</i></p> <ul style="list-style-type: none"> <li>• Да, очень часто или постоянно</li> <li>• Да, довольно часто</li> <li>• Да, иногда</li> <li>• Нет, не в течение последнего года</li> <li>• Нет, никогда</li> <li>• Не знаю/ не желаю отвечать</li> </ul>	<p><i>E2 и E 3 задать</i></p> <p>Насколько сильно, в течение последнего года, эти шумы Вас волновали, раздражали, огорчали, когда они были наиболее яркими.?</p> <ul style="list-style-type: none"> <li>• Очень сильно волновали</li> <li>• Скорее волновали Немного волновали</li> <li>• Совсем не волновали</li> <li>• Не знаю/ не желаю отвечать</li> </ul>	<p><i>E2 и E 3 задать</i></p> <p>В течение последнего года Вы обращался к семейному врачу или к сертифицированному специалисту в одном из учреждений здравоохранения с шумами в голове или ушах?</p> <ul style="list-style-type: none"> <li>• Да, посетил/-а 5 или более раз</li> <li>• Да, посетил/-а от двух до четырех раз</li> <li>• Да, посетил/-а только один раз</li> <li>• Не посетил/-а ни одного раза</li> <li>• Не знаю/ не желаю отвечать</li> </ul>	<p><i>Задавать всем взрослым (18+)</i></p> <p>У Вас в настоящее время есть проблемы со слухом, например, услышать сказанное в шумной ситуации?Один ответ</p> <ul style="list-style-type: none"> <li>• Да, ничего не слышу</li> <li>• Да, тяжелые проблемы</li> <li>• Да, умеренные проблемы</li> <li>• Да, небольшие проблемы</li> <li>• Нет проблем</li> <li>• Не знаю/ не желаю отвечать</li> </ul>
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<b>Spanish</b>	<p>Ahora le hacemos algunas preguntas sobre problemas auditivos y sobre la sensación de ruido en la cabeza, en uno o ambos oídos, que es un síntoma que los médicos llaman "tinnitus"</p>	<p><i>[Base: todos pero +18 años]</i></p> <p>Durante el año pasado, ¿usted ha tenido ruidos (como sonar o zumbar) en su cabeza o en uno o ambos oídos que ha durado más de cinco minutos seguidos?</p> <ul style="list-style-type: none"> <li>• Sí, la mayoría del tiempo</li> <li>• Sí, muchas veces</li> <li>• Sí, algunas veces</li> <li>• No, no en el último año</li> <li>• No, nunca</li> <li>• NS/NC</li> </ul>	<p><i>[Base: Si cod. 1-3 en E1]</i></p> <p>Durante el año pasado, ¿Le ha preocupado, molestado o trastornado ese ruido en su oídos o cabeza cuando ha estado en su peor momento?</p> <ul style="list-style-type: none"> <li>• Mucho</li> <li>• Moderadamente</li> <li>• Ligeramente</li> <li>• En absoluto</li> <li>• NS/NC</li> </ul>	<p><i>[Base: Si cod. 1-3 en E1]</i></p> <p>Durante el año pasado, ¿usted ha visitado a su médico de cabecera o ha visto a un profesional de la salud en una clínica u hospital por sus problemas de ruidos en la cabeza o en los oídos?</p> <ul style="list-style-type: none"> <li>• Sí, 5 o más visitas</li> <li>• Sí, de 2 a 4 visitas</li> <li>• Sí, solo una visita</li> <li>• En absoluto</li> <li>• NS/NC</li> </ul>	<p><i>[Base: todos pero +18 años]</i></p> <p>¿Tiene usted actualmente alguna otra dificultad con su audición, como oír en una situación ruidosa?</p> <ul style="list-style-type: none"> <li>• Sí, no puedo oír nada</li> <li>• Sí, dificultad severa</li> <li>• Sí, dificultad moderada</li> <li>• Sí, una ligera dificultad</li> <li>• Sin dificultad</li> <li>• NS/NC</li> </ul>
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