TQ

Manual of the Tinnitus Questionnaire

Revised and updated, 2008.

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Part 1. Introduction to the scale and norms.

Origins

The Tinnitus Questionnaire (TQ) was developed during a programme of research at the Royal National Throat Nose and Ear Hospital in London (1981-1988) into methods for alleviating the annoyance and emotional distress that tinnitus may cause. Clinical observations and surveys had shown that complaint about tinnitus was multifaceted and the questionnaire was an attempt to measure the most commonly reported adverse effects and to investigate, through factor analysis, how many underlying dimensions of complaint could be identified. The factor structure and psychometric properties of the TQ have been further explored since 1996 when the first manual was published (Hallam, 1996). The most extensive development has been carried out on a German translation (Goebel and Hiller, 1992, 1994, 1998). The TQ has also since been translated into Spanish, French, Dutch and Chinese (Cantonese).

The TQ has been used primarily as (1) a screening instrument (2) to evaluate change after treatment interventions and (3) to examine relationships between different facets of complaint and other psychological variables, (4) to explore how complaint relates to audiometric properties of tinnitus such as its pitch, loudness match, and minimal masking level. A brief review of some these applications is given in Part 2.

The need for tinnitus specific psychological measures

People who experience tinnitus may be affected in a number of different ways (Hallam, Rachman, and Hinchcliffe, 1984, Erlandsson, 2000). These include annoyance resulting from unwanted intrusion into awareness, interference with hearing and with the ability to sleep, emotional reactions such as anxiety, depressed mood, irritability and anger, difficulty with mental concentration, and worries about future health and wellbeing. The individual items for the TQ were selected mainly on the basis of frequently heard complaints in a clinical setting. The association between these complaints and the perception of a tinnitus noise is open to a number of interpretations. First, tinnitus is often only one of a number of co-occurring symptoms such as hearing loss and dizziness, each of which may make an independent contribution to complaint (Stephens and Hallam, 1985). Second, the complaint may reflect a general state of emotional distress and worry about health that might have been precipitated by any significant medical symptom or by causes entirely unrelated to tinnitus. Research has therefore been conducted to establish whether distress associated with tinnitus is specific to the nature of tinnitus or is part of a broader clinical state such as anxiety or depression. Tinnitus has been compared with a bothersome external noise, in which case it may have both specific and general stress-inducing effects. For instance, tinnitus may have effects on mental concentration similar to those of chronic pain (Hallam, McKenna and Shurlock, 2004).

It is generally recognised that there are different stages in the process of adapting to tinnitus and that a sizeable proportion of people who report tinnitus eventually adapt to its presence with few adverse consequences (Hallam, Rachman, and Hinchcliffe, 1984). However, some facets of tinnitus complaint may be more resistant to spontaneous improvement than others. There is also the possibility that certain groups of people have less success in adjusting to tinnitus because of the nature of their hearing loss and/or medical characteristics, their general psychological state, or their personality traits and coping mechanisms (see Part 2).

Questions raised by these issues can only be answered once the effects attributed to tinnitus have been carefully delineated and reliably measured. Having done this, complaint about tinnitus can be correlated with other variables, comparisons can be made between selected groups of complainant, and changes can be measured across time.

Scope and aims of the TQ as a measure of tinnitus complaint

A number of questionnaires and rating scales have been developed by tinnitus researchers, designed to measure the distress caused, sensory characteristics of the noises, handicap, and coping techniques. The items of the TQ, although providing broad coverage of common complaints, do not focus on the ensuing handicaps such as interference with work, family or leisure activity. Nor was the TQ designed to measure tinnitus coping strategies such as avoidance or attention-diversion. Depending on the purposes to which the TQ is put, some additional complementary measures may be needed, and some are suggested in Appendix A. The aim of the TQ is to provide a rapid assessment of the chief psychological effects of tinnitus. Because our original interest lay in evaluating cognitive therapy, a number of items were included to measure beliefs about the significance of the noises (chiefly negative) that sufferers commonly express. Examples here are: "It's unfair that I have to suffer with my noises" and "If the noises continue my life won't be worth living." Subsequent research has indeed shown that certain beliefs about the negative consequences of tinnitus are closely associated with emotional distress (Hallam and Jakes, 1988). Cognitive behavioural therapy that attends to these negative meanings has been shown to be effective (e.g. Goebel et al., 2006, Zachriat and Kroner-Herwig, 2004).

Some items of the TQ are concerned with beliefs about the *possibility* of coping with tinnitus but not with the employment of specific strategies. Examples here are: "Your attitude to the noise makes no difference to how it affects you" and "The noises are one of those problems in life you have to live with."

Some people who experience tinnitus complain about its sensory properties such as its loudness or the unpleasant quality of the noises. Questions exploring this aspect of complaint have been included because loudness and unpleasantness are often a source

of complaint and are likely to be components of a psychological response rather than an attempt to give an objective sensory description. However, more sophisticated self-report measures are needed for psychophysical research (e.g. see Hallam et al, 1985, Jakes et al, 1986).

The chief application of the TQ is in the evaluation and auditing of psychological interventions for tinnitus and it has been used in this way in a number of published studies. In a clinical situation, it has been found useful for screening patients attending outpatient clinics, many of whom are not significantly troubled by tinnitus (McKenna, Hallam, and Hinchcliffe, 1991). Following questionnaire administration, patients can be given a brief interview, focusing on the complaints that they report; in this way, patients who might need further assessment or counselling can be identified rapidly.

Single or multiple indicators of tinnitus severity?

Many researchers have acknowledged the multifaceted nature of tinnitus complaint but have nevertheless sought to devise a single indicator of 'tinnitus severity' (Anderssen, Lyttkens and Larsen, 1999, McCombe et al., 1999). These single indicators may meet clinical needs, such as the selection or categorisation of patients, but they are less useful as tools for research. Different aspects of complaint are correlated at only low to moderate levels and so information is lost when a single indicator of severity is employed. Some people who suffer from tinnitus are bothered by only one of its effects, such as insomnia, but this may have a severely disabling effect. The TQ is scored for five aspects of complaint; these are inter-correlated to some degree and so a single measure of severity can also be obtained by summing the subscale scores. The full questionnaire contains 52 items but only 41 items are included in the total score and sub-scales. The remaining items have been retained because, individually, they may provide clinically useful information. A shortened 33 item version of the TQ has also been used in some research and so scoring details and norms for this reduced item set have been included in Appendix B. However, this shortened TQ is no longer recommended for research purposes.

Comparison of the TQ with other published scales

The total TQ score correlates highly with other established measures of tinnitus distress and handicap (Baguley, Humphriss, and Hodgson, 2000). Unlike these other measures, the TQ also supplies 5 factorially derived sub-scale scores, each of which is internally reliable (see Table 4).

The Tinnitus Reaction Questionnaire (TRQ, Wilson et al., 1991) is a 26-item single scale which is primarily a measure of the emotional effects of tinnitus although it also includes items about mental function, avoidance, handicap and sleep/relaxation. The Tinnitus Handicap Questionnaire (THQ, Kuk et al., 1990) is a 27-item scale that focuses on the ways tinnitus affects emotion, behaviour and health. A group of items assess

interference with hearing ability and a smaller number measure beliefs about tinnitus of a general nature. Based on a factor analysis, two subscales were devised that had adequate internal reliability. The first measures social, emotional and physical effects of tinnitus, and the second, effects on hearing. As its name implies, the THQ, when used as a single severity indicator, measures tinnitus handicap. Kuk and colleagues found that subscale scores showed a somewhat different pattern of correlations with various psychological and audiometric variables, and in their comments on clinical application they suggest that subscale interpretation can be useful. The aim of the TQ is consistent with this sentiment although it attempts to measure a greater number of dimensions of complaint.

Brief description

The TQ is a 52-item questionnaire standardised on a clinical population of outpatients in an audiology clinic. Respondents are required to encircle True, Partly True, or Not True according to their agreement with a possible effect of tinnitus or their attitude towards it. The TQ assesses 5 dimensions of tinnitus complaint. These are: (1) Emotional Distress - 19 items (2) Auditory Perceptual Difficulties - 7 items (3) Intrusiveness - 7 items (4) Sleep Disturbance – 4 items and (5) Somatic Complaints – 4 items. These 5 subscales comprise 41 of the 52 items. The original questionnaire (Hallam et al., 1988) has now been widely disseminated, and the responses of people in various clinical situations and countries have been factor analysed. These analyses have yielded slight variations in item content of the factors although the general factor structure of the dimensions has been found to be reasonably consistent. The German TQ has 40 items but the items making up its sub-scales are virtually identical with the English language version. Consistency of factor structure across languages could be considered more significant than identity of item content, if the assumption is made that the sub-scales are tapping into the same psychological dimensions expressed slightly differently in different cultural settings.

The items of the TQ are given in Table 1, together with the distribution of scores in the standardisation sample. Individual subscale scores are fairly evenly distributed over the full range of possible scores although the distribution for Intrusiveness is skewed towards high scores. This may reflect the clinical nature of the standardisation sample and the fact that tinnitus is sufficiently severe to merit medical attention. The Sleep Disturbance scores are also skewed; approximately one third of the sample did not report any complaints of this nature. As can be seen from the pattern of inter-correlations between subscale scores (Table 2) the separate measures are only relatively independent. However, the total TQ scale has a high internal consistency (Cronbach's alpha = 0.95). Each of the subscales has a satisfactory, if lower, level of internal consistency. Test-retest reliability has been assessed in the virtually identically composed subscales of the German TQ and shown to be high (see Part 2).

Administration

The TQ is relatively short and should not take longer than 5-15 minutes to complete. Older respondents may take longer and may need to be given some encouragement. As with any self-report test, rapport should first be established and the purpose of the test briefly explained. Cooperation is essential and so queries of any kind should be answered; the instructions are pointed out and the person asked to read them. These state:

> ***"The purpose of this questionnaire is to find out whether the noises in your ears/head have had any effect on your mood, habits or attitudes. Please tick the answer that applies to you for each statement."***

The response alternatives are True, Partly True and Not True. It is advisable to check that the person is able to read and has glasses if needed. A quiet environment for test completion should be provided whether the test is administered manually or in a computerised form. It is also helpful to have someone on hand to answer any queries and to check for omitted items. The person should be encouraged to provide a response unless there is a genuine difficulty. Any help offered during completion should be limited to simple explanation and non-leading prompts.

Scoring and interpretation

The response categories were deliberately kept simple in view of the fact that the incidence of tinnitus is age-related and many respondents are elderly. The responses are scored 2,1,0 with a higher score indicating the presence of complaint (i.e. direction of scoring depends on the meaning of True or Not True for the item concerned; in fact, for almost all items, True indicates more severe). The word 'tinnitus' or 'noises' is mentioned in almost all items to ensure that the complaint is attributed to tinnitus and not to other conditions or circumstances. This was done because some respondents might need continual reminding of the general instructions.

A psychometric analysis of the TQ was first reported by Hallam et al. in 1988. The present scoring of subscales is based on a replication factor analysis conducted on a new sample, and supersedes the earlier published scoring system. The basis for scoring in the present manual is identical to the one reported in the first edition (Hallam, 1996). The factor structure is substantially the same as that found in the German TQ of Hiller and Goebel (see Part 2) although the method of scoring differs slightly.

Standardisation

The standardisation sample was composed of mainly middle aged and older persons referred as outpatients to a neuro-otology clinic in a London teaching hospital. The

patients' ear complaints had already been investigated at the primary care level and many were attending for a further medical opinion and/or audiological rehabilitation. There was, therefore, considerable variation between patients in the severity of complaint itself. A few patients were only mildly concerned about the cause of their tinnitus. The patients were unselected (apart from reporting tinnitus) and usually completed the questionnaire at their first appointment. The Audiology Centre at the hospital is known to specialise in tinnitus and so it can be safely assumed that the sample included patients representing the more severe end of the spectrum of complaint. Although details of tinnitus duration, location and frequency were not recorded for this sample, these features are likely to be similar to previous unselected samples from the same clinic, that is, the majority will have heard continuous noises in both ears over a period of at least 5 years. The mean age of the sample was 53.41 years (SD = 16.06, range 20-93 years). There were 53 men and 48 women (2 missing data).

Norms

The means and standard deviations and range of subscale scores and total (of all subscales) TQ score are given in Table 2. The scores for men and women did not differ significantly and so they are not given separately. As noted earlier, the norms are based on a revised method of scoring the TQ and so a direct comparison cannot be made with the means reported in research conducted prior to 1996.

The interpretation of subscale scores will depend to some degree on the clinical purposes to which the TQ is put. It is suggested that clinicians develop their own criteria for demarcating separate groups for research purposes. In the German TQ, a total score of 47 and above is regarded as a clinically significant level of distress (range = 0 - 84). However, as a guide to interpretation of the English TQ, the range of scores for each quartile of the distribution is given in Table 3.

Table 1. Items of the TQ, subscale identification and response frequencies.

ED = emotional distress, AP = auditory perceptual difficulties, IN = intrusiveness,
SD = sleep disturbances, SM = somatic complaints.

TQ	Item statement	Scale	True	Partly true	Not true
No.					
1	I can sometimes ignore the noises even when they are there.		43	36	24
2	I am unable to enjoy listening to music because of the noises.	AP	19	41	43
3	It's unfair that I have to suffer with my noises.	ED	40	29	34
4	I wake up more in the night because of my noises.	SD	27	26	50
5	I am aware of the noises from the moment I get up to the moment I sleep.	IN	50	34	19
6	Your attitude to the noise makes no difference to how it affects you.		36	36	31
7	Most of the time the noises are fairly quiet.	IN	27	31	45
8	I worry that the noises will give me a nervous breakdown.	ED	29	20	54
9	Because of the noises I have difficulty in telling where sounds are coming from.	AP	36	25	41
10	The way the noises sound is really unpleasant.	IN	59	31	12
11	I feel I can never get away from the noises.	IN	62	22	19
12	Because of the noises I wake up earlier in the morning.	SD	34	22	47
13	I worry whether I will be able to put up with this problem for ever.	ED	45	31	27
14	Because of the noises it is more difficult to listen to several people at once.	AP	47	26	47
15	The noises are loud most of the time.	IN	48	33	22
16	Because of the noises I worry that there is something seriously wrong with my body.	ED	18	21	63
17	If the noises continue my life will not be worth living.	ED	18	21	64
18	I have lost some of my confidence because of the noises.	ED	33	38	32
19	I wish someone understood what this problem is like.	ED	49	29	24
20	The noises distract me whatever I am doing.	ED	19	50	34
21	There is very little one can do to cope with the noises.	ED	34	31	37
22	The noises sometimes give me a pain in the ear or head.	SM	37	30	36
23	When I feel low and pessimistic the noise seems worse.		62	23	18
24	I am more irritable with my family and friends because of the noises.	ED	36	33	33
25	Because of the noises I have tension in the muscles of my head and neck.	SM	42	31	29
26	Because of the noises other people's voices sound distorted to me.	AP	26	30	47
27	It will be dreadful if these noises never go away.	ED	51	33	19

Table 1. Cont.

28	I worry that the noises might damage my physical health.	ED	56	25	22
29	The noise seems to go right through my head.	SM	47	30	26
30	Almost all my problems are caused by these noises.	ED	16	25	62
31	Sleep is my main problem.	SD	29	26	48
32	It's the way you think about the noise - NOT the noise itself which makes you upset.		27	36	40
33	I have more difficulty following a conversation because of the noises.	AP	34	34	34
34	I find it harder to relax because of the noises.	SM	58	32	13
35	My noises are often so bad that I cannot ignore them.	IN	59	30	13
36	It takes me longer to get to sleep because of the noises.	SD	43	22	38
37	I sometimes get very angry when I think about having the noises.	ED	41	22	40
38	I find it harder to use the telephone because of the noises.	AP	24	25	54
39	I am more liable to feel low because of the noises.	ED	43	41	19
40	I am able to forget about the noises when I am doing something interesting.		51	37	15
41	Because of the noises life seems to be getting on top of me.	ED	26	34	43
42	I have always been sensitive about trouble with my ears.		27	15	60
43	I often think about whether the noises will ever go away.	ED	67	20	16
44	I can imagine coping with the noises.	ED	51	36	16
45	The noises never 'let up'.	IN	56	31	15
46	A stronger person might be better at accepting this problem.		40	37	25
47	I am a victim of my noises.	ED	28	27	48
48	The noises have affected my concentration.		40	46	17
49	The noises are one of those problems in life you have to live with.		71	21	11
50	Because of the noises I am unable to enjoy the radio or television.	AP	15	42	46
51	The noises sometimes produce a bad headache.		32	26	45
52	I have always been a light sleeper.		22	20	61

Table 2. Subscale means and measures of dispersion

Subscale	**Mean**	**SD**	**Range**	**Median**	**N**
Emotional distress	17.89	10.59	0-38	19	100
Aud. Percept, difficulties	6.08	4.40	0-14	6	101
Sleep disturbances	3.51	2.95	0-8	3	103
Intrusiveness	9.44	3.68	0-14	10	100
Somatic complaints	4.77	2.44	0-8	5	102
Total TQ subscales	41.60	20.02	4-81	43	95

Table 3. Distribution of subscale scores by quartiles.

Scale	0-25%	26-50%	51-75%	76-100%
Emotional distress	0-8	9-19	10-27	28-38
Aud. Percept. Difficulties	0-3	4-6	7-9	10-14
Intrusiveness	0-7	8-10	11-13	14
Sleep disturbances	0	0-3	4-6	7-8
Somatic complaints	0-3	4-5	6-7	8
Total TQ subscales	0-24	25-43	44-58	59-82

Revalidation of factor analysis.

Following on from an earlier factor analysis of the TQ (Hallam et al., 1988) data were collected from a new sample of 103 patients (Hallam, 1996). This analysis was conducted to revalidate the factor structure and to form the basis for development of subscales. The method used by Hiller and Goebel (1992) was followed in making a decision about item composition of subscales. After principal component analysis and having selected the method of varimax rotation, 12 factors with an eigen value greater than one were extracted. The data were reanalysed extracting 10, 8, 6 and 5 factors respectively. Item loadings were noted in each analysis and items were selected for subscales on the basis of (1) item loading greater than 0.44 (2) consistency of loading across analyses for the item cluster with which it was associated (3) additional considerations relating to consistency across the results of earlier factor analytic studies (4) item and internal reliability analyses.

Details of the analyses are given in Table 6, Part 2. In summary, they demonstrated remarkable consistency with the original analysis, analyses conducted by other authors and with the results of a factor analysis of the German TQ. A very clear separation of item clusters was achieved with a six-factor varimax solution; none of the items with loadings above 0.44 loaded more than one factor. Items selected for inclusion in subscales are given in Table 4. Despite consistency across analyses, it is worth bearing in mind that the six factors accounted for only 55% of the total variance.

The first and largest factor of the TQ, *Emotional distress (ED)*, comprises a collection of worries about the persistence of the noises and their significance for mental and physical health, an inability to cope, a low mood, irritability and anger, and a sense of unfairness and victimisation. There appears to be a large cognitive (i.e. worry) component in this factor. The *Intrusiveness (IN)* factor of the TQ reflects an evaluation that tends to be more sensory or attentional than emotional; the noises are perceived as loud and unrelenting, constantly intruding into awareness, and as inescapable and impossible to ignore. The *Auditory perceptual difficulties (AP)* factor concerns the effect of tinnitus on the ability to converse, to discriminate speech, to appreciate music, and to locate sounds. The *Sleep disturbance (SD)* factor identifies those individuals who report problems in getting to sleep, waking in the night, and early morning awakening.

The *Somatic complaints (SM)* factor indicates the presence of ear or head pain, and muscle tension, especially in the face and neck. The sixth factor in the analysis has not been consistently identified in other studies and so it will not be considered further.

Construction of subscales

Five prototype subscales of the TQ were constructed. With the following exceptions, the subscales simply include the items loading at least 0.45 on the first five factors of the analysis (see Table 4). The intrusiveness subscale additionally includes item 10 (loading 0.44) because this item was associated with this factor in the analyses of Hiller and Goebel (1992), Bond and Tyler (1992) and Henry (1992). The sleep disturbance subscale omits item 52 because this was originally included to test an etiological hypothesis and is not a current complaint about tinnitus. The somatic complaints subscale omits item 6 because its loading is low, it appears to be semantically unrelated, and its inclusion in the subscale detracted from internal consistency (see below).

Table 4. Items included in subscales and internal consistency

Items included * = score 0,1,2	**Inter-item correlations**	**Item-total correlations**	**Cronbach's alpha**
Emotional distress 3,8,13,16,17, 18,19,20,21,24, 27,28,30,37,39,41,43,44*,47	0.22 - 0.72 Mean = 0.45	0.55 - 0.77	0.940
Aud. Percept. Difficulties 2,9,14,26,33,38,50	0.40 – 0.68 Mean = 0.53	0.55 – 0.73	0.891
Sleep Disturbances 4,12,31,36	0.53 - 0.75 Mean = 0.63	0.71 - 0.75	0.876
Intrusiveness 5,7*,10,11,15,35,45	0.19 - 0.59 Mean = 0.39	0.41 - 0.65	0.819
Somatic Complaints 22,25,29,34.	0.34 - 0.51 Mean = 0.43	0.52 - 0.58	0.756

Subscale scores were computed by adding items (scored 2,1,0) together. Negative loading items (7, 44) were reverse scored. Table 2 gives means and measures of dispersion of subscale scores.

Inter-item correlations, item total correlations and Cronbach's alpha were computed for each of the prototype scales. These are shown in Table 4. Alpha was high for ED, AP, and SD and acceptable for IN and SM. Alpha for the total score (combined subscales) was 0.95.

Correlations between subscale scores

There are statistically significant correlations (Spearman) between subscale scores ranging between +0.24 and +0.69 (See Table 5).

Table 5. Spearman correlations between subscale scores (N=93)

Subscale	ED	AP	SD	IN	SM
ED	1				
AP	0.41	1			
SD	0.61	0.24	1		
IN	0.69	0.39	0.59	1	
SM	0.65	0.40	0.43	0.49	1

Subscale correlations with age and sex

These correlations were close to zero with one exception, AP and age ($r = +0.26$, $p < .05$). This result is consistent with the known association between hearing impairment and age but is small enough to be ignored for practical purposes.

Part 2. Review of research relating to dimensions of tinnitus distress and their validity.

Since its introduction, a number of factor analytic and other research studies have been conducted with the TQ. For instance, subscale scores have been correlated with psychological and audiometric variables and some of this research is reviewed below after giving an account of the early development of the questionnaire.

Research leading up to the development of the TQ

In our first statistical study of psychological responses to tinnitus (Jakes et al, 1985) factor analysis was performed on various ratings of psychological, medical and audiometric variables. Two complaint factors were extracted, labelled "emotional distress" and "intrusiveness". These factors were not loaded by medical or audiometric variables, confirming our clinical intuitions and results from earlier correlational research that complaint about tinnitus can vary independently of its clinical and audiometric features. The ratings of psychological response in this study were based on preconceived categories and so a new questionnaire was constructed consisting of statements that directly reflected complaints commonly heard in our tinnitus clinic. The 40 items of this questionnaire covered effects of tinnitus on mental and physical health, on the ability to cope, on leisure activities, and on hearing ability. Four interpretable factors were extracted in the analysis. The first was loaded by a variety of emotional and cognitive items indicating the presence of anxious, depressed and irritable mood, worrying thoughts and sleep disturbance. The second factor, labelled "auditory perceptual difficulties", comprised problems in sound location, voice distortion and poor discrimination. The third and fourth factors appeared to represent specific coping strategies (auditory masking and distraction).

A second study was conducted with an expanded (51 item) version of the questionnaire on a larger sample of 100 clinic attenders (mean age 53.9 years, range 18 to 76 years). A number of new cognitive items were constructed to reflect the negative meanings that patients commonly assign to tinnitus. The range of items relating to intrusiveness was increased and items referring to specific coping techniques were dropped. A principal components analysis with varimax rotation yielded three clearly interpretable factors plus seven more which were loaded by just a few items each. The largest factor, "sleep disturbance", was loaded most strongly by the sleep items of the TQ and less strongly by a mixed group of items including loss of concentration and difficulty in relaxing. The second, "emotional distress" factor was made up of three types of item, namely, the loudness and unpleasantness of the noises, worries about the consequences of the noises persisting, and emotional effects (irritability, anger, sadness). The third factor was labelled "auditory perceptual difficulties".

While this study showed that some negative and absolutist beliefs were associated

with emotional distress items (e.g. "It will be dreadful if these noises never go away") it was clear that a number of other cognitive items did not. The specific nature of tinnitus complaints was suggested by the fact that factors 4 to 10 in the analysis made up 21% of the variance. A separate "intrusiveness" factor was not extracted and this type of item was distributed between 'sleep' and 'emotional distress' factors.

Following further analyses we produced a shortened 33-item questionnaire consisting of three subscales based on the first three factors. A fourth scale was devised called "irrational beliefs"; this comprised items chosen on a priori grounds as relevant to cognitive therapy practice. This shorter TQ was used in several of our therapy evaluations. Details of the scoring and norms are provided in Appendix B but it is recommended that the full TQ with the latest subscale scoring be used in any future research. All subsequent research on the TQ has been consistent in demonstrating a separate intrusiveness factor. The rescaling of the full TQ is therefore regarded as more satisfactory and values for internal reliability (Cronbach's alpha) are generally higher.

Further details of the 1996 revalidation factor analysis

All items discriminated well between respondents (see Table 1) and so all were entered into the analysis. The factor structure was highly reproducible across the successive analyses except that the factors in the 5-factor solution were conceptually less distinct. As noted earlier, the six-factor solution was selected as the basis for subscale development (see Table 6). The item composition of all factors is also shown in Table 8 where it is compared with the results of factor analytic studies carried out in Australia, Germany, and Belgium.

Factor 1, the "*emotional distress*" (ED) factor is loaded by 19 items which includes all of the 8 core items from the "Cognitive and emotional distress" factor of the German TQ and 9 of their 12 associated items (see below). In addition, there are two further items which have loadings of less than 0.50 (the cut-off used in the German study). Factor 2, "*auditory perceptual difficulties*" (AP) is loaded by 7 items. They are identical to the 7 items of the similarly labelled factor in the German analysis. Factor 3, "*intrusiveness*" (IN) is composed of 6 items. This factor was not identified in our 1988 analysis although a factor of this type had been extracted by Jakes et al., (1985). There are 3 items in common with the 5 core intrusiveness items in the German study and 1 in common with the 3 associated items. In the German analysis, items indicating that tinnitus was unpleasant, distracting, affecting concentration, and an impediment to relaxation were included in their intrusiveness factor. The corresponding item loadings on IN in our 1996 analysis were 0.44, 0.37, 0.11, and 0.42.

Factor 4, "*sleep disturbances*" (SD) is loaded by 5 items. Four of these items defined the sleep factor in our 1988 study and the SD factor of the German analysis. Factor 5, "*somatic complaints*" (SM) is loaded by 5 items. Similar small factors with overlapping content were extracted in our 1988 study and in the German analysis.

Factor 6 consists of items that appear to relate to coping with tinnitus, especially the influence of psychological factors on the degree of distress. It resembles a small factor in our 1988 study tentatively labelled 'irrelevance of psychological factors'.

Five items failed to load any factor at the threshold level. These are items 1, 10, 42, 48, and 51.

Research on the German TQ

The TQ was translated independently into German by two experienced clinicians, both fluent in English and German. The questionnaire was then back-translated and individual items were compared for congruence. The final version was agreed after consulting additional bilingual and bicultural staff. The TQ was administered to 138 inpatients in a clinic for psychosomatic problems who were moderately to severely disabled by tinnitus (Hiller and Goebel, 1992). These patients were comparable to our own British samples except that there was a preponderance of males (91 men and 47 women). Mean age was 48.0 years, range 20-74, and mean duration of tinnitus 6.5 years. As a way of establishing the stability of factor structure, the authors compared solutions which, beginning with the maximum number of the unconstrained solution, successively extracted diminishing numbers of factors. An "auditory perceptual difficulties" factor was highly stable across all analyses. Two distinguishable item groups were found for the first main factor labelled "cognitive and emotional distress". Five core "intrusiveness" items were stable across analyses. Four "sleep disturbance" items had high stable loadings although several cognitive/emotional items also loaded the factor at a lower level. A stable sixth factor loaded by three items measuring ear/head pain, head and neck muscle tension and headache was also extracted. For clinical applications, the authors decided to score the TQ into five clinical subscales, differentiating core and associated items.

The results of this study were similar to our earlier findings (Hallam et al., 1988) but even more clearly replicated by the analysis conducted in 1996. It is apparent from both the British and German studies that there are a substantial number of distinguishable aspects of tinnitus complaint. It is possible that some of the smaller factors are tapping important effects of tinnitus and that the present questionnaire could be expanded to encompass them.

The reliability of the subscales was reported in a separate study (Hiller, Goebel, and Rief, 1993). In order to assess test-retest reliability, 60 inpatients were administered the TQ twice with a time interval of three days. Split half reliability was also assessed in a sample of 138 patients completing routine clinic assessments. Both measures of reliability were found to be high for all subscales (see Table 7).

Table 6. Item loadings: Six factor varimax solution (1996).

TQ		1	2	3	4	5	6
No	Item Content	ED	AP	IN	SD	SM	
	Factor percentage variance	31.4	7.4	5.0	4.1	3.9	3.3
13	I worry whether I will be able to put up with this problem forever.	0.74					
17	If the noises continue, my life will not be worth living	0.74					
16	Because of the noises I worry that there is something seriously wrong with my body.	0.73					
13	I worry whether I will be able to put up with this problem forever.	0.74					
17	If the noises continue, my life will not be worth living	0.74					
16	Because of the noises I worry that there is something seriously wrong with my body.	0.73					
41	Because of the noises life seems to be getting on top of me.	0.72					
28	I worry that the noises might damage my physical health.	0.69					
8	I worry that the noises will give me a nervous breakdown.	0.69					
3	It's unfair that I have to suffer with my noises	0.66					
39	I am more liable to feel low because of the noises.	0.66					
27	It will be dreadful if these noises never go away.	0.65					
37	I sometimes get very angry when I think about having these noises.	0.60					
43	I often think about whether the noises will ever go away.	0.58					
19	I wish someone understood what this problem is like.	0.57					
44	I can imagine coping with the noises.	-.49					
24	I am more irritable with my family and friends because of the noises.	0.48					
47	I am a victim of my noises.	0.47					
20	The noises distract me whatever I am doing.	0.47					
18	I have lost some of my confidence because of the noises.	0.46					
21	There is very little one can do to cope with the noises.	0.45					
33	I have more difficulty following a conversation because of the noises.		0.85				
26	Because of the noises, other people's voices sound distorted to me.		0.78				
14	Because of the noises, it is more difficult to listen to several people at once.		0.77				
9	Because of the noises, I have difficulty telling where sounds are coming from.		0.75				
50	Because of the noises, I am unable to enjoy the radio or television.		0.72				

38	I find it harder to use the telephone because of the noises.		0.72				
2	I am unable to enjoy listening to music because of the noises.		0.60				
45	The noises never 'let up'.			0.68			
15	The noises are loud most o the time.			0.65			
7	Most of the time the noises are fairly quiet			-.56			
5	I am aware of the noises from the moment I get up to the moment I sleep.			0.55			
11	I feel I can never get away from the noises.			0.55			
35	My noises are often so bad that I cannot I cannot ignore them.			0.50			
31	Sleep is my main problem.				0.67		
36	It takes me longer to get to sleep because of the noises.				0.58		
4	I wake up more in the night because of the noises.				0.58		
52	I have always been a light sleeper.				0.57		
12	Because of the noises I wake up earlier in the morning				0.52		
22	The noises sometimes give me a pain in the ear or head.					0.65	
25	Because of the noises I have tension in the muscles of my head and neck.					0.56	
34	I find it harder to relax because of the noises.					0.49	
6	Your attitude to the noise makes no difference to how it affects you.					-.48	
29	The noise seems to go right through my head.					0.47	
40	I am able to forget about the noises when I am doing something interesting.						0.72
32	It's the way you think about the noise-NOT the noise itself which makes you upset						0.64
46	A stronger person might be better at accepting this problem.						0.51
23	When I feel low and pessimistic the noise seems worse.						0.49
49	The noises are one of those problems in life you have to live with.						0.47

Table 7. Reliability of the German TQ (Hiller, Goebel and Rief, 1993)

Scale	N = 60		N = 138
	Test-retest reliability	Cronbach's alpha	Cronbach's Alpha
Emotional distress (E)	.89	.85	.86
Cognitive distress (C)	.89	.85	.86
Distress (E + C)	.90	.90	.92
Intrusiveness	.86	.75	.86
Aud. percept. difficulties	.93	.86	.86
Sleep disturbance	.92	.80	.85
Somatic complaints	.92	.74	.78
Total TQ (sum of above)	.94	.93	.94

Additional factor analytic research on the TQ

Factor analyses of the TQ have now been conducted on samples of people with tinnitus in Germany, Australia, and Belgium, yielding broadly similar factor structures. The items loading on each of the main five dimensions of complaint is shown in Table 8 where the results of each analysis can be compared.

In England, a modified version of the shortened TQ which excluded the irrational beliefs items, was administered to 169 members of tinnitus self-help groups (Bond and Tyler, 1992). The respondents were comparable to our own clinic samples. An analysis of the data yielded a factor structure similar to the German and 1996 British analysis despite the reduced number of items. The first four factors were labelled "Auditory perceptual difficulties", "Worry about future", "Worry about intensity of noise" and "Insomnia". Items loading the third factor are all found on the Intrusiveness factor in other analyses. Of the 18 high loading items, only one could be described as discrepant with other findings. The questionnaire was also scored as for the Short TQ and these subscale scores were correlated with other standardised psychological measures (see Table 9).

In a study carried out in Australia (Henry, 1992), the full TQ was administered to 190 adults recruited from an audiology department (n = 60) or by media advertisement (n=130). The sample was composed of 135 males and 55 females of mean age 61.6 years (range 37-87 years). Duration of tinnitus was 5 years or greater in 64% of the sample. Tinnitus was bilateral or in the head in 75%. Total TQ score was significantly higher in the audiology patients than in the adults recruited through the media. High internal consistency (Cronbach's alpha = 0.91) and test-retest reliability (r = 0.91 over a 6-8 week interval) was obtained for the total scale. A principal components analysis followed by varimax rotation of five factors was performed. Item loadings greater than

0.40 are listed in Table 8. The five factors share obvious similarities with the results of other analyses.

Meeus, Blaivie, and Van de Heyning (2007) translated the TQ into Dutch and analysed the responses of 167 patients (104 male and 63 female, mean age 50.7 years, range 14 – 81). Average duration of tinnitus was 4 years 8 months (range 2 weeks to 44 years). The principal components were subjected to an orthogonal varimax solution, and 7 factors accounted for 62.2% of the variance. Loadings of 0.40 and above were reported. The items of Factor 1 and Factor 3 combined to yield 16 of the 20 items of Hiller and Goebel's cognitive and emotional distress factor (plus one additional item not found there). The AP and SD items were identical to the German analysis. All of the items of the Somatic (SM) factor were replicated, plus three semantically related items. Factors 6 and 7 comprised items that have been labelled as signs of intrusiveness in former analyses. Cronbach's alpha for internal consistency of the whole TQ was 0.95. The Dutch translation of the TQ is given in Appendix C.

In the four different analyses, the number of items loading above threshold varies between 38 and 41 out of a possible total of 52. The 7 AP items and 4 SD items are identical in all analyses. Eleven of the ED and 4 of the IN items are identical. If the criterion is lowered to 3 out of 4 items in common between analyses, 17 ED, 5 IN and 3 SM items are seen to be given a common factor identification. This amount of agreement is surprising considering the different linguistic and cultural settings of questionnaire administration. It amounts to 36 items loading comparable factors across the four analyses.

The greatest overlap is between ED and IN, perhaps reflecting the emotional consequences of intrusive noises. Certain items do not show a consistent pattern of loadings: item 29 (The noises seem to go right through my head), item 34 (I find it hard to relax because of the noises), and item 48 (The noises have affected my concentration). Items 6, 42, and 46 are not included in any analysis.

Table 8. Scale composition of the factor-derived subscales in different language versions of the TQ

ED = emotional distress (cognitive/emotional), AP = auditory perceptual difficulties, IN = intrusiveness, SD = sleep disturbances, SM = somatic complaints.
* = negative loading.

	English	**Australian**	**German**	**Dutch**
Loading threshold	0.45	0.40	0.50	0.40
1		ED*		
2	AP	AP	AP	AP
3	ED	ED	ED	ED
4	SD	SD	SD	SD
5	IN	IN	IN	IN
6				
7	IN*	IN*	IN*	IN*
8	ED	ED	ED	ED/SM
9	AP	AP	AP	AP
10	IN	IN	IN	IN
11	IN	IN	ED	ED
12	SD	SD	SD	SD
13	ED	ED	ED	ED
14	AP	AP	AP	AP
15	IN	IN	ED	IN
16	ED	ED	ED	SM
17	ED	ED	ED	ED
18	ED	AP	ED	ED
19	ED	ED	ED	ED
20	ED	ED	ED/IN	ED
21	ED		ED	ED
22	SM	SM	SM	SM
23		SM		
24	ED			
25	SM	SM	SM	SM
26.	AP	AP	AP	AP
27	ED	ED	ED	IN
28	ED	ED	ED	SM
29	SM	IN		
30	ED	ED		
31	SD	SD	SD	SD
32		SM		
33	AP	AP	AP	AP

34	SM		IN	ED
35	IN	IN	IN	IN
36	SD	SD	SD	SD
37	ED	ED	ED	ED
38	AP	AP	AP	AP
39	ED		ED	ED
40		SM		
41	ED	ED	ED	ED
42				
43	ED	ED	ED	ED
44	ED*	ED*	ED*	ED*
45	IN	IN		
46				
47	ED	ED	ED	ED
48		AP	IN	
49		ED*		
50	AP	AP	AP	AP
51		SM	SM	SM
52		SD		
No. items	41	46	40	38

Specificity of tinnitus complaint; correlations with general measures of emotional distress and other variables

General emotional distress: Table 9 summarises data from various studies that have correlated standardised measures of general emotional distress with scores derived from the TQ or STQ. Because these scores are not always obtained in an identical manner, the correlations are offered as an approximate guide. As can be seen, except for ED, the correlations are low, although statistically significant. ED correlates between +0.37 and +0.73 with measures of generalised emotional distress; the higher values in the Davies, McKenna, and Hallam (1994) data may reflect the composition of this sample which consisted of distressed patients selected for psychological therapy. Although the TQ total score is moderately highly correlated with the SCL-90-R scale, the latter does not predict change in TQ after therapy (Goebel and Hiller, 1996).

Table 9. Correlations between factor-derived scores of the TQ and STQ with general measures of emotional distress.

Scale	N	ED	SD	AP	IN	TQ total
SCL-90-R[1]	198	0.37	0.20	0.24	0.23	0.37
SCL-90-R[2]	208					0.45
GHQ-28[3]	169	0.41	0.29	NS	-	
STAI-S[4]	30	0.53	0.18	0.12	-	
BDI[5]	30	0.73	0.26	0.25	-	

SCL-90-R (Global index), (Derogatis, 1977)
GHQ-28 (Goldberg, 1978)
STAI-S (Spielberger, 1970)
BDI (Beck et al., 1961)
1. Hiller et al. 1994
2. Goebel et al. 1996
3. Bond et al. 1992
4/5. Davies et al 1994

Hearing thresholds and other medical variables: Stobik et al. (2005) found that tinnitus patients who scored high on the German TQ (> 46) had higher sensory thresholds and reported less ability to mask their tinnitus with background sounds. There was no difference with respect to type or frequency of hearing impairment. The high scorers were more likely to display cardiovascular disorders but did not differ with respect to a variety of other medical conditions.

Validity of the TQ

TQ factor scores have been shown to discriminate between outpatients who report tinnitus (but are attending primarily on account of other neuro-otological symptoms) from patients whose primary complaint is tinnitus and evidence more distress about it (Hallam et al, 1988).

Bond and Tyler (1992) using the STQ found that total score and insomnia scores correlated significantly with the use of cognitive, behavioural and avoidance strategies measured by an adaptation of the Coping Strategies Questionnaire (Moos et al., 1984). Emotional distress scores were associated with an avoidance strategy, with level of awareness of tinnitus, with annoyance experienced, and with self-reported loudness.

When the TQ has been used in the evaluation of psychological therapy, it is the emotional distress (ED) score that usually shows the greatest reduction after the intervention (Davies et al., 1995, Jakes et al., 1992, Kroner-Herwig et al., 1995). These treatment effects have not always been large (effect sizes in the range .50 to 1.0) and in some cases they were reduced or reversed at follow-up. However, Zachriat and Kroner- Herwig (2004) reported significant change in total TQ score after cognitive behavioural therapy that persisted to 18 months follow-up. A substantial change in

TQ score occurred after only one educational session, and with respect to the reduction of negative beliefs about tinnitus, therapy was not more effective than education alone.

Other studies of patients receiving cognitive and behavioural interventions have also shown robust and persisting reduction of scores on the TQ (Goebel et al., 2006). That distress can be substantially reduced while perceived loudness remains largely unchanged, was demonstrated in a single case treated psychologically (Hallam and Jakes, 1985); TQ emotional distress scores were zero at follow-up although perceived loudness was almost the same.

Individual TQ subscales should detect clinically significant change after intervention but for certain aspects of complaint, such as sleep disturbance, more sensitive indicators may be needed. Measures of auditory perceptual difficulties have generally been unresponsive to change in psychological interventions and this presumably reflects the fact that these difficulties are chiefly attributable to sensory impairment. Some additional supplementary measures are suggested in Appendix A.

The influence of demand effects and response biases on the TQ has not so far been investigated. However, the lack of change over time in TQ scores in waiting-list control subjects suggests that demand effects are not large (e.g. Jakes et al, 1992, Kroner-Herwig et al, 1995).

Appendix A. Additional measures to complement the TQ

Visual analogue scales for Loudness and Annoyance

It has been common to include simple visual analogue scales (VASs) for rating the loudness and annoyance of tinnitus (Jakes et al., 1986, Meikle and Taylor-Walsh, 1984, Zenner, De Maddalena, and Zalaman, 2005). The scales usually have between 5 and 10 equal-appearing intervals each of which is labelled, or only the end-points (e.g 0 and 10) are labelled. Jakes et al. (1986) found that, contrary to common belief, small but significant correlations could be found between audiometric (loudness match) measures and self-reported loudness. Explicitly labelled self-report scales produced higher correlations and removal of subjects who found it difficult to provide a loudness match also increased the correlation. VASs provide a rapid indication of change if serial measurements are needed. Zenner et al., 2005, used a six-point loudness scale (Not audible, Barely audible, Moderately audible, Quite audible, Loud, and Very loud) and an eight-point annoyance scale (Not annoying, Hardly annoying, Slightly annoying, Moderately annoying, Annoying, Rather annoying, Intensely annoying, and Extremely annoying). Test-retest correlations over a two-week, waiting time period were 0.72 for loudness and 0.62 for annoyance. As there is no reason to assume that loudness and annoyance are actually variables that remain constant, the coefficients may reflect change in tinnitus over this period, as well as measurement error. The loudness VAS correlated +0.54 with total TQ score and annoyance correlated +0.66.

Tinnitus Diary

Tinnitus diaries have been used in therapy evaluations (e.g. Jakes et al., 1986, Jakes et al., 1992, Davies et al., 1995, Zachriat and Kroner-Herwig, 2004) and in basic research (Kemp and George, 1992). Jakes et al., (1992) found that compliance for continous diary-keeping was low and that it proved to be counter-therapeutic. However, a diary can be used more sparingly by sampling with one-week assessment periods. A diary is also of value in assessing quality of sleep. Loudness and annoyance are typically assessed morning, afternoon and evening, with the option of obtaining a general rating, or a rating of most and least loud or annoying.

The Interference with Daily Activities Checklist (IWDA)
This measure was employed by Jakes et al., 1985.
Instructions: Please indicate whether, during the LAST week, any of the following activities have been affected by your tinnitus.

You may indicate that the activitity has been affected "a little", "a lot", "not at all" or that you have had no chance to engage in the activity, "no opportunity". PLEASE DO NOT LEAVE OUT ANY ITEM.

	Not at all	A little	A lot	No opportunity
Reading newspapers				
Reading books				
Watching television				
Listening to the radio				
Listening to music				
Conversation with one other person				
Conversation with a group of people				
Driving				
Riding on public transport				
Ability to concentrate				
Relaxing during the day				
Using the telephone				
Mental arithmetic				
Dealing calmly with problems				
Writing letters				
Going to the cinema/theatre				
Bothersome when doing nothing in particular				
Listening to several people at once				
Getting your daily work done				
Enjoying parties				
Getting off to sleep				
Staying sound asleep				

Scoring: "a lot" = 2, "a little" = 1, "not at all" = 0. (Score adjusted for the proportion of 'no opportunity').

Norms (Jakes et al, 1985)**:** Mean = 17.7 (SD=1.7). N = 24 (mean age = 55 years).

Appendix B. Short Tinnitus Questionnaire used in some early research

The scoring for this 33 item version of the TQ is included for completeness but it is not recommended for future studies. It consists of four subscales: (1) distress and intrusiveness (2) sleep disturbances (3) auditory perceptual difficulties (4) irrational beliefs. The items come from the 52 item questionnaire but responses are scored either 2 or 1 rather than 2, 1, 0 (see below). Normative data are provided below on an unselected group of 66 patients reporting tinnitus, and a sample of 38 patients selected for psychological therapy (Davies et al., 1994). Cronbach's alpha for the total scale is 0.83.

Table 10. Listing of items in the STQ and method of scoring.

		Scoring		
Subscale	Items (from 52 item questionnaire)	True	Partly True	Not True
Distress and intrusiveness (11 items)	7 11,24,10,19,15,37,39 20,27,43	-2 2 2	-2 2 1	-1 1 1
Sleep disturbance (6 items)	4,31,36 35,12,34	2 2	2 1	1 1
Aud. Percept. Difficulties (5 items)	9,26,33,38 14	2 2	2 1	1 1
Irrational beliefs (11 items)	32,46 49 21,8,47,16,30,3 6,17	-2 -2 2 2	-2 -1 2 1	-1 -1 1 1

Norms

Table 11. Normative data on the STQ

Source	Mean age (range)	Mean (SD)				
		ED/IN	SD	AP	IB	Total
Clinic N=66 29m:37f	51.7 (23-77)	16.02 (2.38)	9.66 (1.94)	7.70 (1.67)	7.20 (1.82)	40.00 (6.02)
Davies et al. (1994) N=38 16m:22f	56.1 (24-72)	16.13 (2.23)	9.61 (1.81)	7.39 (1.75)	6.80 (1.77)	

Appendix C. Foreign language translations of the TQ

For the Chinese (Cantonese) TQ, contact Professor Anna Kam, The Institute of Human Communication Research, Department of Otorhinolaryngology, Head and Neck Surgery, The Chinese University of Hong Kong, Yan Chai Hospital.

German TQ (Goebel and Hiller, 1994, *HNO*, 42, 166-172)

1. Manchmal kann ich die Ohrgeräuscher ignorieren, auch wenn sie da sind
2. Ich kann keine Musik genie ßen wegen der Ohrgeräuscher
3. Es ist unfair, daß ich unter meinen Ohrgeräuschen zu leiden habe
4. Ich wache in der Nacht wegen meinen Ohrgeräuschen häufiger auf
5. Ich bin mir der Ohrgeräusche vom Aufwachen bis zum Schlafengehen bewußt
6. Die Meinung und Einstellung zu den Ohrgeräuschen beeinflussen nict das Quälende daran
7. Meistens sind die Ohrgeräusche ziemlich leise
8. Iche mache mir Sorgen, daß mich die Ohrgeräusche in einen Nervenzusammenbruch treiben
9. Wegen der Ohrgeräusche habe ich Schwierigkeiten zu sagen, woher andere Töne kommen
10. Die Art, wie die Ohrgeräusche klingen, ist wirklich unangenehm
11. Ich habe den Eindruck daßich den Ohrgeräuschen nie entkommen kan
12. Wegen der Ohrgeräusche wache ich morgens früher auf
13. Ich mache mir Sorgen, ob ich jemals in der Lage seine werde, mit diesem Problem
14. Wegen der Ohrgeräusche ist es für mich schwieriger, mehreren Menschen gleichzeitig zuzuhören
15. Der Ohrgeräusche sind die meiste Zeit laut
16. Ich mache mir wegen der Ohrgeräusche Sorgen, ob mit meinem Körper ernstlich etwas nicht in Ordnung ist
17. Wegen der Ohrgeräusche andauern wird mein Leben nicht mehr lebenswert sein
18. Aufgrund der Ohrgeräusche habe ich etwas von meinem Selbstvertrauen verloren
19. Ich wünsche mir, jemand würde verstehen, was das überhaupt für ein Problem ist
20. Egal was ich tue, die Ohrgeräusche lenken mich ab
21. Es gibt nur ganz wenig, was man tun kann, um mit den Ohrgeräuschen fertig zu werden
22. Die Geräusche machen mir manchmal Ohren- und Kopfschmerzen
23. Wenn ich mich niedergeschlagen oder pessimistisch fühle, scheinen die Ohrgeräusche schlimmer zu sein
24. Aufgrund der Ohrgeräusche bin ich mit meiner Familie und meinen Freunden gereizter
25. Aufgrund der Ohrgeräusche habe ich Muskelverspannungen an Kopf und Nacken
26. Aufgrund der Ohrgeräusche erscheinen mir die Stimmen anderer Menschen verzerrt
27. Es wird fürchterlich sein, Wenn diese Ohrgeräusche nie weggingen
28. Ich sorge mich, daß die Ohrgeräusche meine körperliche Gesundheit schädigen könnten
29. Die Ohrgeräusche scheinen direkt durch meinen Kopf zu gehen
30. Fast alle meine Probleme sind durch diese Ohrgeräusche bedingt
31. Mein Hauptproblem is der Schlaf
32. Was mir zu schaffen macht, ist die Art und Weiser darüber zu denken, - NACHT das Gerausch selbst

33. Wegen der Ohrgeräusche ist es für mich schwieriger, einer Unterhaltung zu folgen
34. Wegen der Ohrgeräusche fällt es mir schwerer, mich zu entspannen
35. Oft sind meine Ohrgeräusche so schlimm, daß ich nicht ignorienen kann
36. Wegen der Ohrgeräusche brauche ich länger zum Einschlafen
37. Wegen der Ohrgeräusche fällt es mir schwerer zu telefonieren
38. Wenn ich über die Ohrgeräusche nachdenke, werde ich manchmal sehr ärgerlich
39. Wegen der Ohrgeräusche bin ich leichter niedergeschlagen
40. Wenn ich was etwas Interessantes tue, kann ich die Ohrgeräusche vergessen
41. Wegen der Ohrgeräusche scheint mir das Leben über den Kopf zu wachsen
42. Ohrenbeschwerden haben mir schon immer Sorgen bereiter
43. Ich denke oft darüber nach, ob die Ohrgeräusche jemals weggehen werden
44. Ich kann mir vorstellen, zu lernen, mit den Ohrgeräuschen fertig zu werden
45. Die Ohrgeräusche lassen nie nach
46. Eine stabilere Persönlichkeit würde dieses Problem vielleicht besser akzeptieren
47. Ich bin ein Opfer meiner Ohrgeräusche
48. Die Ohrgeräusche haben meine Konzentration beeinträchtigt
49. Die Ohrgeräusche sind eines der Probleme im Leben, mit denen man zu leben hat
50. Aufgrund der Ohrgeräusche bin ich unfähig, Radio oder Fernsehen zu genießen
51. Manchmal verursachen die Ohrgeräusche starke Kopfschmerzen
52. Ich hatte schon immer einen leichten Schlaf

Dutch TQ (Meeus, Blaivie, and Van de Heyning. *B-ENT,* 2007: 3, Suppl. 7, 11-17).

1. Soms kan ik het oorsuizen negeren, ook als het er is
2. Ik kan niet van muziek genieten vanwege het oorsuizen
3. Het is oneerlijk dat ik onder het oorsuizen moet lijden
4. Ik word ‘s nachts vaker wakker door mijn oorsuizen
5. Ik ben me bewust van het oorsuizen vanaf het moment dat ik opsta tot ik in slaap val
6. Je houding t.o.v. het oorsuizen heeft geen invloed op de last ervan
7. Meestal is het oorsuizen vrij zacht
8. Ik ben bang dat het oorsuizen me een zenuwinzinking bezorgt
9. Door het oorsuizen kost het me moeite te zeggen waar geluiden vandaan komen
10. De manier waarop het oorsuizen klinkt, is echt onprettig
11. Ik heb het gevoel dat ik nooit aan het oorsuizen kan ontsnappen
12. Door het oorsuizen word ik ‘s morgens vroeger wakker
13. Ik maak me er zorgen over of ik dit probleem voor altijd zal kunnen verdragen
14. Vanwege het oorsuizen is het moeilijker om naar meer mensen tegelijkertijd te luisteren
15. Het oorsuizen is meestal luid
16. Vanwege het oorsuizen ben ik bang dat er lichamelijk iets ernstig mis is met mij
17. Als het oorsuizen blijft, is mijn leven niet meer de moeite waard
18. Ik heb aan zelfvertrouwen verloren door het oorsuizen
19. Ik wou dat iemand begreep wat voor een probleem dit is
20. Het oorsuizen leidt mij af wat ik ook doe
21. Je kunt maar heel weinig doen om het oorsuizen te leren verdragen
22. Het oorsuizen bezorgt mij soms oorpijn of hoofdpijn
23. Als ik me neerslachtig en somber voel, lijkt het oorsuizen erger
24. Ik ben sneller geïrriteerd in de omgang met familie en vrienden als gevolg van het oorsuizen
25. Door het oorsuizen zijn de spieren van mijn hoofd en nek gespannen

26. Door het oorsuizen klinken de stemmen van andere mensen voor mij vervormd
27. Het zal verschrikkelijk zijn als dit oorsuizen nooit overgaat
28. Ik maak me er zorgen over dat het oorsuizen mijn lichamelijke gezondheid kan schaden
29. Het oorsuizen lijkt dwars door mijn hoofd te gaan
30. Bijna al mijn problemen worden door het oorsuizen veroorzaakt
31. Het slapen is mijn grootste probleem
32. Het is de manier waarop je over het oorsuizen denkt,NIET het oorzuizen zelf,wat je van streek maakt
33. Door het oorsuizen heb ik meer moeite om een gesprek te volgen
34. Ik vind het moeilijk om te ontspannen vanwege het oorsuizen
35. Mijn oorsuizen is vaak zo erg dat ik het niet kan negeren
36. Het kost me meer tijd om in slaap te vallen vanwege het oorsuizen
37. Ik word soms heel boos als ik nadenk over het oorsuizen
38. Door het oorsuizen vind ik het moeilijker om te telefoneren
39. Ik voel me sneller somber door het oorsuizen
40. Ik kan het oorsuizen vergeten als ik iets aan het doen ben wat me interesseert
41. Door het oorsuizen ben ik haast niet meer tegen het leven opgewassen
42. Ik heb me altijd al zorgen gemaakt over problemen met mijn oren
43. Ik denk er vaak over na of het oorsuizen ooit weg zal gaan
44. Ik kan me voorstellen dat ik met oorsuizen om kan gaan
45. Het oorsuizen wordt nooit minder
46. Een sterker iemand zou dit probleem misschien makkelijker accepteren
47. Ik ben slachtoffer van mijn oorsuizen
48. Het oorsuizen heeft mijn concentratie aangetast
49. Het oorsuizen is één van die problemen in het leven waarmee je moet leren leven
50. Vanwege het oorsuizen kan ik niet van de radio of televisie genieten
51. Het oorsuizen leidt soms tot zware hoofdpijn
52. Ik ben altijd een lichte slaper geweest.

French TQ (Meeus, Blaivie, and Van de Heyning. *B-ENT,* 2007: 3, Suppl. 7, 11-17).

1. Je peux parfois ignorer l'acouphène, même s'il est présent
2. Il m'est impossible de profiter de la musique à cause de l'acouphène
3. Il est injuste que je doive souffrir de l'acouphène
4. Je me réveille plus souvent la nuit à cause de l'acouphène
5. Je prends conscience de l'acouphène dès le lever jusqu'au coucher
6. L'attitude envers l'acouphène ne change en rien la manière dont il vous affecte
7. La plupart du temps, l'acouphène est plutôt silencieux
8. Je crains que l'acouphène me cause une crise de nerfs
9. A cause de l'acouphène, il m'est difficile de localiser les sons
10. L'acouphène a un son très désagréable
11. J'ai le sentiment de ne jamais pouvoir échapper à l'acouphène
12. A cause de l'acouphène, je me réveille plus tôt le matin
13. Je m'inquiète à savoir si je pourrai faire façe à ce problème pour toujours
14. A cause de l'acouphène, il m'est plus difficile d'écouter plusieurs personnes en même temps
15. La plupart du temps, l'acouphène est fort
16. En raison de l'acouphène, je m'inquiète qu'il y ait un problème plus sérieux dans mon corps
17. Si l'acouphène persiste, ma vie n'en vaudra plus la peine

18. J'ai perdu un peu de confiance en moi à cause de l'acouphène
19. Je voudrais que quelqu'un comprenne à quel point l'acouphène est un problème pour moi
20. L'acouphène me distraît, quel que soit mon occupation
21. Il n'y a que très peu de moyens pour vivre avec l'acouphène
22. L'acouphène me procure parfois des douleurs à l'oreille ou à la tête
23. L'acouphène semble pire quand je me sens triste, abattu(e) ou pessimiste
24. Je suis plus irritable envers ma famille et mes amis à cause de l'acouphène
25. A cause de l'acouphène, les muscles de ma tête et de mon cou sont plus tendus
26. A cause de l'acouphène, les voix d'autres personnes me semblent déformées
27. Ce serait affeux si l'acouphène ne partait jamais
28. Je m'inquiète que l'acouphène porte atteinte à ma santé
29. L'acouphène semble traverser tout droit ma tête
30. Presque tous mes problèmes ont pour cause l'acouphène
31. Le sommeil forme mon problème majeur
32. C'est la manière de penser à propos de l'acouphène, et NON l'acouphène en soi qui vous rend désemparé(e)
33. J'ai plus de difficultés à suivre une conversation à cause de l'acouphène
34. J'ai plus de difficultés à me détendre à cause de l'acouphène
35. L'acouphène est souvent si important que je ne peux pas l'ignorer
36. Je mets plus longtemps à m'endormir à cause de l'acouphène
37. Parfois je suis furieux(-euse) en pensant à l'acouphène
38. Il m'est plus difficile de répondre au téléphone à cause de l'acouphène
39. Je suis plus susceptible de me sentir triste ou abattu(e) à cause de l'acouphène
40. J'arrive à oublier l'acouphène quand je suis occupé(e) à quelque chose d'intéressant
41. A cause de l'acouphène, je n'arrive plus à prendre le dessus
42. J'ai toujours été inquiet(e) au sujet de mes oreilles
43. Je suis souvent préoccupé(e) de savoir si l'acouphène partira un jour
44. Je peux m'imaginer pouvoir vivre avec l'acouphène
45. L'acouphène ne diminue jamais
46. Une personne plus forte pourrait peut-être mieux accepter ce problème
47. Je suis victime de l'acouphène
48. L'acouphène a affecté ma concentration
49. L'acouphène est l'un de ces problèmes qu'il faut apprendre à accepter dans la vie
50. A cause de l'acouphène, il m'est impossible de profiter de la radio ou de la télévision
51. L'acouphène cause parfois de forts maux de tête
52. J'ai toujours eu le sommeil léger.

Spanish TQ Zenker F. and Barajas, J. J. (Oct. 2008)
www.auditio.com/tinnitus/aaa2000/

INSTRUCCIONES: Por favor, tache la respuesta que mejor describa su experiencia con el ruido o acúfeno. A la derecha de cada pregunta encontrará las respuestas. Tache la A si está totalmente de acuerdo, la B si lo está a veces y la C sí no está de acuerdo con lo que se le pregunta. A Siempre / Si estoy de acuerdo, B A veces, C Nunca / No estoy de acuerdo. RESPUESTAS

1. Soy capaz de ignorar el ruido aunque esté presente.
2. Por culpa del ruido soy incapaz de oir música tranquilamente

3. Creo que es injusto tener que sufrir por culpa de este ruido.
4. El ruido me despierta por las noches.
5. Estoy pendiente del ruido todo el día
6. Lo que yo piense acerca del ruido influye en la forma en la que el ruido me molesta
7. La mayor parte del tiempo el ruido es flojo de volumen
8. Hay veces en las que el ruido me hacerme perder los nervios.
9. Por culpa del ruido tengo dificultades en saber de donde viene un sonido
10. El ruido es desagradable
11. Siento que no puedo escapar de este ruido
12. Por culpa del ruido me despierto más temprano
13. Creo que no voy a poder aguantar con este ruido
14. Por culpa del ruido se hace difícil oír a mas de una persona a la vez
15. La mayor parte del tiempo el ruido está muy fuerte
16. Al tener este ruido creo que debo tener algo grave
17. Mi vida no valdrá la pena si este ruido continúa
18. Por culpa del ruido he perdido la confianza en mi mismo
19. Me gustaría que alguien comprendiese este problema
20. El ruido me distrae de lo que hago
21. Yo no puedo hacer nada por soportar este ruido
22. Algunas veces, y por culpa del ruido, me dan dolores en los oídos o en la cabeza
23. Noto que el ruido se pone peor cuando me siento algo deprimido o pesimista
24. Por culpa del ruido me enfado más fácilmente con mis familiares y amigos
25. Por culpa del ruido tengo tensos los músculos de la nuca y el cuello
26. Por culpa del ruido, las voces de otras personas parecen estar distorsionadas
27. Si este ruido no desapareciese me sentiría muy mal
28. Estoy preocupado porque el ruido acabe dañando a mi salud
29. El ruido parece ir directo a mi cabeza
30. Casi todos mis problemas son por culpa del ruido
31. Mi mayor problema es no dormir bien
32. Lo que me hace sentirme mal es lo que pienso del ruido no el ruido en sí mismo
33. Por culpa del ruido tengo mas dificultades en seguir una conversación
34. El ruido no me deja relajarme
35. Algunas veces el ruido es tan molesto que no puedo ignorarlo
36. Por culpa del ruido me cuesta dormir
37. Me pongo nervioso cuando pienso en el ruido
38. Por culpa del ruido me es más difícil escuchar a alguien hablar por el teléfono.
39. Por culpa del ruido me deprimo más fácilmente
40. Cuando estoy haciendo algo interesante soy capaz de olvidarme del ruido
41. Por culpa del ruido mi vida se ha vuelto más difícil
42. Mis oídos son muy sensibles
43. A veces pienso que el ruido es para toda la vida y que no se me va a quitar nunca
44. Puedo imaginarme a mí mismo viviendo con este ruido de forma normal
45. El ruido está siempre presente, no desaparece nunca
46. Una persona de carácter fuerte aceptaría mejor este problema
47. Me considero una víctima de este ruido
48. Por culpa del ruido me cuesta concentrarme
49. El ruido es una de esas cosas con las que uno tiene que acostumbrarse a vivir
50. Por culpa del ruido soy incapaz de disfrutar normalmente de la radio o la televisión
51. Algunas veces el ruido me produce dolor de cabeza
52. Siempre he tenido un sueño profundo

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