# **Tinnitus Cognitions Questionnaire: Development and Psychometric Properties of a Measure of Dysfunctional Cognitions Associated with Tinnitus**

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**Abstract:** The development of the Tinnitus Cognitions Questionnaire (TCQ), a scale designed to assess positive and negative cognitions associated with tinnitus, is described. Psychometric analyses of the TCQ are examined, with a total of 189 subjects from three separate samples. The results indicate good test-retest reliability (r = 0.88) and internal consistency (Cronbach's alpha = 0.91). Factor analysis revealed two factors that were interpreted as positive cognitions and negative cognitions. TCQ negative items and positive items were found to be unrelated (r = 0.09). Correlations between the TCQ and other self-report indices of depression, automatic negative thoughts, and tinnitus-specific symptomatology are reported. The TCQ may provide a useful index of the cognitive responses of tinnitus sufferers and may be employed as a measure of change in outcome research on psychological management of tinnitus.

The assessment of psychological distress or handicap experienced by tinnitus sufferers has been the subject of recent research. A number of measures have been developed to assess tinnitus-related distress, coping strategies, and cognitive reactions to tinnitus, including the Tinnitus Effects Questionnaire (TEQ) [1,2]; Tinnitus Handicaps Questionnaire (THQ) [3]; Tinnitus Reaction Questionnaire (TRQ) [4]; and the Subjective Tinnitus Severity Scale [5]. A number of these measures have been subjected to factor analyses, the results of which suggest several different dimensions of tinnitusrelated distress.

Hallam et al. [1] reported a factor analysis of the TEQ, sometimes also known as the *Tinnitus Questionnaire* (TQ), which revealed three factors: emotional distress, auditory perceptual difficulties, and sleep disturbance. The emotional distress factor consisted of statements that reflected "anxious or depressed mood and associated thoughts" (p. 216), such as "It is unfair that I have

to suffer with my noises" or "It will be dreadful if the noises never go away" (p. 219). An earlier factor analysis conducted by Jakes et al. [6] had led to the identification of a factor described as "intrusiveness," which consisted of statements reflecting self-report of loudness and self-report of the tinnitus as being unpleasant, distracting, and resulting in inability to cope. In a comprehensive manual, Hallam [2] reported that the measure consists of these four factors plus somatic complaints. Henry [7] conducted a factor analysis of the TEQ with an Australian sample and identified the following five factors: (1) emotional and cognitive distress, (2) intrusiveness, (3) auditory perceptual difficulties, (4) sleep disturbance, and (5) physical complaints.

In a factor analysis of the TRQ, Wilson et al. [4] identified four factors: (1) general distress, (2) severe distress, (3) interference with work and leisure, and (4) activity avoidance. The THQ [3] was developed as a measure of perceived degree of handicap associated with tinnitus. Both Kuk et al. [3] and Henry and Wilson [8] reported similar factorial solutions. The three factors can be interpreted as (1) the emotional, social, and physical sequelae of tinnitus; (2) effects of tinnitus on hearing acuity and communication; and (3) appraisal of

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tinnitus. These results of research on measures (TEQ, TRQ, THQ) of tinnitus-related distress serve to highlight the fact that reactions to and perceptions of tinnitus may vary along several dimensions, each of which may have to be evaluated by the clinician assessing a patient with tinnitus. Further study of the nature of these dimensions and of the sources and consequences of perceptions of tinnitus may assist us in understanding psychological adjustment to tinnitus.

The measures already mentioned were designed primarily to measure the extent of distress or handicap associated with tinnitus. A second type of instrument should be developed to study more precisely the coping characteristics of tinnitus patients. Such measures may assist the researcher in identifying the particular features of coping with tinnitus that lead to good or poor adaptation to the problem. This line of research has been pursued most vigorously in the area of chronic pain, wherein the presence of certain coping strategies and cognitive content have been found to be associated with poor psychosocial functioning (reviewed by Wilson et al. [9]). In the tinnitus area, Kirsch et al. [10] found that those who cope poorly were more depressed and anxious than were those who coped well. Halford and Anderson [11] also found that subjects who reported more severe distress from tinnitus were more anxious and depressed. Although these results help to identify the broad psychological features of those who cope poorly, they do not reveal the precise characteristics of the coping styles of those patients who do become depressed and anxious.

In the last decade, a steady growth of interest has occurred in the development of psychological methods for helping people to cope with tinnitus. Earlier approaches consisted mainly of biofeedback and relaxation techniques, but emphasis in recent years has shifted toward the use of cognitive therapy techniques involving either attention control methods or the examination and modification of thoughts and beliefs about tinnitus [12-20]. This latter approach is based on the cognitive restructuring method advanced by Beck et al. [21] in the treatment of depression. Cognitive theorists (notably Beck) would argue that psychological problems, such as depression, are not caused by the mere presence of the tinnitus but by the person's perception of the tinnitus. A person who engages in constructive thoughts ("The noise won't hurt me"; "It has been as bad as this before, but it generally gets better after a while"; and "If I do something enjoyable, I probably won't notice it as much") would, according to Beck, not become depressed as a result of the experience of tinnitus. However, a person who engages in negative, catastrophic thoughts ("How can I live my life with this noise?"; "The noise is making my nerves bad"; and "This is the worst thing to happen to anyone") is likely to become depressed. Cognitive therapy begins with a detailed analysis of the kinds of thoughts (or selfstatements) in which people engage when they notice the tinnitus, especially when the tinnitus is very severe or when they are distressed. The therapist teaches such people to develop skills in stopping the negative thoughts and in learning to substitute appropriate, constructive thoughts. Sweetow [22,23] described the cognitive methods in the management of tinnitus-related distress, and some promising results have been obtained in clinical outcome studies [12–20,24].

The aim of this article is to report on the development of a measure (the TCQ) designed to assess the content of a person's cognitions in relation to tinnitus. This questionnaire may be a useful tool in research on the cognitive processes involved in coping with tinnitus. Correlations between the TCQ and other measures may reveal important relationships between thinking content, other psychological attributes, and emotional states. The TCQ also might be employed as an outcome measure in studies of the effectiveness of cognitive and other types of interventions. The process of improvement might also be more carefully investigated using such a measure, enabling researchers to examine relationships between changes in cognitions and adaptation to the tinnitus. At the idiographic level, the TCQ might provide utility also in therapeutic interventions using cognitive techniques, by assisting the clinician in the identification of problematic cognitions in specific patients or by providing a means by which to select patients who may benefit from cognitive therapy.

#### METHOD

#### **Item Development**

The version of the TCQ presently described was a revised adaptation of an earlier form of the questionnaire. The original questionnaire consisted of 20 items constructed on the basis of clinical experience obtained during interviews with tinnitus sufferers. This original version was administered to 69 tinnitus subjects attending the audiology department of a veterans' hospital. Preliminary investigations of the psychometric properties of the original TCQ indicated that both the positive and negative items of the scale correlated positively with the total score, even without reverse scoring for the negative items. These findings suggested that the respondents may have been confused by the format in which positive and negative items were interspersed and that the scale was not being used properly. Thus, a revision of the questionnaire was undertaken and involved a reorganization of the items so that the negative items and positive items were separated, with clear instructions that the first 13 items referred to negative

thoughts and the final 13 items (items 14–26) referred to positive thoughts. An additional six items were developed so that an equal number of positive and negative items was ensured.

Each of the TCQ 26 items is rated on a 5-point scale (0–4). For each item, respondents are asked to "indicate how often you have been aware of thinking a particular thought on occasions when you have noticed the tinnitus." Each of the five anchor points is supplied with a verbal descriptor: *never*, *rarely*, *occasionally*, *frequently*, and *very frequently*.

The negative items (1–13) are scored 0–4, whereas the positive items (14–26) are reverse-scored: 4–0. The scoring procedure involves the simple addition of the number circled by the respondent for items 1–13 and the addition of reverse-scored items 14–26. The total score of the TCQ has a potential range from 0 to 104. A high score represents a greater tendency to engage in negative cognitions in response to tinnitus and low engagement in positive cognitions. In the present study, all the TCQ-positive, TCQ-negative, and TCQ-total scores were calculated.

#### Subjects

The TCQ and various other self-report measures were administered to 200 subjects drawn from three separate samples. Sample 1 consisted of 60 subjects referred by an audiological department of a veterans' hospital. Sample 2 consisted of 50 subjects, and sample 3 consisted of 90 subjects, all of whom responded to media advertisement.

The total sample consisted of 138 male and 62 female subjects. The mean age was 57.6 years, with a range of 20–83 years. With regard to duration of tinnitus, 41.4% reported duration of 0–5 years, 22.3% reported duration of 5–10 years, 22% reported duration of 10–20 years, and 14.3% reported duration of more than 20 years. Hearing loss accompanied tinnitus in 130 subjects. Bilateral tinnitus was reported by 97 subjects.

For a subset of 32 subjects (20 from sample 1 and 12 from sample 2) who represented subjects assigned to waiting-list control conditions in two treatment outcome studies [13,14], responses to the TCQ were available from two administrations separated by a period of 6–8 weeks. The responses to these two administrations were used for the calculation of test-retest reliability. Notably, owing to missing data (i.e., lack of response to all items of the TCQ by some subjects), the analyses for the TCQ were conducted on 189 cases.

#### **Assessment Procedure**

Besides completing the TCQ, subjects were administered a number of additional self-report questionnaires. The TRQ is a 26-item self-report scale designed to assess the psychological distress associated with tinnitus [4]. The items describe some of the potential effects that tinnitus might have on lifestyle, general well-being, and emotional state.

The THQ is a self-report questionnaire designed to measure perceived degree of handicap due to tinnitus [3]. The THQ consists of 28 items that describe potential effects of tinnitus on hearing, lifestyle, health, and emotional status. Notably, data for the THQ are available only for subjects in samples 1 and 2 who participated in two treatment outcome studies [13,14].

The TEQ is a self-report questionnaire designed to assess dimensions of complaint about tinnitus [1,2]. In a factor analysis reported by Hallam et al. [1], three factors were identified: (1) emotional distress, (2) auditory perceptual difficulties, and (3) sleep disturbance. Jakes et al. [16] also used a set of items to extract an "irrational beliefs" subscale. This subscale has particular relevance to cognitive interventions for tinnitus and, therefore, was included for attention in the present study, together with the other three subscales. These subscales are designated as (1) TEQ-auditory perceptual (TEQ-AP); (2) TEQ-emotional distress (TEQ-ED); (3) TEQ-insomnia (TEQ-IN); and (4) TEQ-irrational beliefs (TEQ-IB). A total score on the TEQ also was calculated (TEQ-total).

The Beck Depression Inventory (BDI), a widely used self-report measure of depression, presents good evidence in support of its reliability and validity [25,26]. A measure of depression was included to provide a more general index of emotional state not directly linked to tinnitus.

The Automatic Thoughts Questionnaire (ATQ) was devised by Hollon and Kendall [27] as a measure of the frequency of occurrence of automatic thoughts associated with depression. A high score represents a greater frequency of occurrence of these thoughts. Notably, data for the ATQ is available only for the 50 subjects in sample 3 who participated in a treatment outcome study [14].

The Locus of Control of Behavior Scale (LCB) is a 17-item self-report scale designed to assess locus of control of behavior [28]. This term refers to the extent to which people perceive events as a consequence of their behavior and, therefore, potentially under personal control. High scores indicate high external locus of control [28]. Data for the LCB are available only from the 60 subjects in sample 2 who participated in one of our treatment outcome studies [13].

#### **Statistical Analyses**

The TCQ was examined for several psychometric properties, including internal consistency (Cronbach's alpha, item-total correlations) and test-retest reliability. A principal-components factor analysis was performed using varimax rotation with Kaiser normalization. Only those factors having eigen values of one or more were considered, and items were included in a factor only if they had a factor loading of 0.40 or more *and* their highest loading was on that factor. Pearson product-moment correlations between the TCQ and the other assessment devices also are examined.

#### RESULTS

#### **Means and Standard Deviations**

For sample 1, the mean TCQ-total score was 59.05 (SD = 18.41); for sample 2, the mean TCQ-total score was 41.56 (SD = 14.64); and for sample 3, the mean TCQ-total score was 41.67 (SD = 15.31). The difference in mean TCQ-total scores among the three samples was investigated with a one-way analysis of variance. A significant difference in mean TCQ-total scores was observed among the three samples, with sample 1 obtaining a significantly higher mean TCQ-total score as compared with samples 2 and 3. The overall mean TCQ-total score for the entire sample (n = 189) was 47.16 (SD = 16.20).

The means and standard deviations of the TCQpositive, TCQ-negative, TCQ-total, TRQ, TEQ (full scale and subscales), THQ, BDI, LCB, and ATQ are presented in Table 1. As can be seen from these means, the sample can be characterized as exhibiting mild to moderate depressive symptomatology (the BDI) and moder-

**Table 1.** Means and Standard Deviations for TCQ-positive, TCQ-negative, TCQ-total, TRQ, TEQ (total scale and subscales), THQ, BDI, LCB, and ATQ

Mean	SD
22.74	12.71
24.35	11.54
47.16	18.05
49.45	22.25
51.00	16.69
5.33	2.97
6.72	3.24
8.01	4.10
12.45	4.41
49.47	19.63
11.01	7.36
29.57	12.23
49.44	21.40
	Mean   22.74   24.35   47.16   49.45   51.00   5.33   6.72   8.01   12.45   49.47   11.01   29.57   49.44

ate to severe tinnitus-related distress (the TRQ, TEQemotional distress) and handicap (TEQ-total, THQ).

#### **Frequency Distribution**

An inspection was made of the percentage of subjects who responded in each of the five levels for the individual items. For only one item, 50% or more of the subjects responded to the *never* category: For instance, 58% of respondents selected item 13, "I think: 'With this noise, life is not worth living.'" Items with highest endorsement rates (i.e., at least 20% responding at level 3 (*frequently*) or 4 (*very frequently*)) included items 1, 2, 5–9, and 11. All these items represent negative cognitions. Apparently, many of the subjects in the present sample endorsed items indicating that they engaged in negative cognitions that reflect despair, persecution, hopelessness, loss of enjoyment, a desire for peace and quiet, and beliefs that others do not understand the severity of the noise.

#### Reliability

The internal consistency of the TCQ was examined by Cronbach's coefficient alpha and by computing itemtotal correlations. Cronbach's alpha was found to be 0.91, indicating good internal consistency. Item-total correlations (corrected for exclusion of the item to be correlated) are presented in Table 2. These correlations varied from 0.43 (item 5, "I think: 'Nobody understands how bad the noise is'") to 0.66 (item 18, "I think 'There are things in life worse than tinnitus'"). The test-retest correlation was 0.88 (retest period, 6–8 weeks), which indicates adequate stability over time.

#### **Factor Analysis**

A principal-components factor analysis was performed using varimax rotation with Kaiser normalization to investigate the factorial structure of the TCQ. This analysis produced a two-factor solution. Table 3 displays the loading of each item on these two factors.

Factor 1 accounted for 31.4% of the variance and consisted of all the positive cognitions (items 14–26). Factor 2 accounted for 26.0% of the variance and consisted of all the negative cognitions (items 1–13).

## Correlations Between Negative and Positive Items of the TCQ

Pearson-product moment correlations among the TCQnegative item scores, TCQ-positive item scores, and TCQ-total scores were examined. A correlation of 0.77 was found between TCQ-positive item scores and the TCQ-total, and a correlation of 0.71 was seen between

#### Table 2. Tinnitus Cognitions Questionnaire (TCQ) Items and their Means, Standard Deviations, and Item-Total Correlations

	Item-Total		
TCQ Item	Correlation	Μ	SD
1. I think "If only the noise would go away"	0.44	2.75	1.06
2. I think "Why me? Why do I have to suffer this horrible noise?"	0.52	1.79	1.29
3. I think "What did I do to deserve this?"	0.47	1.41	1.27
4. I think "The noise makes my life unbearable"	0.59	1.54	1.20
5. I think "Nobody understands how bad the noise is"	0.43	2.27	1.21
6. I think "If only I could get some peace and quiet"	0.46	2.58	1.14
7. I think "I can't enjoy what I'm doing because of the noise"	0.54	2.07	1.00
8. I think "How can I go on putting up with this noise"	0.62	1.80	1.21
9. I think "The noise will drive me crazy"	0.63	1.62	1.27
10. I think "Why can't anyone help me?	0.50	1.80	1.33
11. I think "My tinnitus is never going to get better"	0.50	2.51	1.26
12. I think "The noise will overwhelm me"	0.58	1.47	1.27
13. I think "With this noise, life is not worth living"	0.53	0.81	1.16
14. I think "No matter how unpleasant the noise gets, I can cope"	0.60	1.77	1.18
15. I think "The noise might be unpleasant, but it won't drive me crazy"	0.57	1.88	1.25
16. I think "I'll be able to enjoy things if I keep my attention off the noise"	0.59	1.64	1.35
17. I think "I'm not the only person with tinnitus"	0.62	1.78	1.41
18. I think "There are things in life worse than tinnitus"	0.66	1.65	1.40
19. I think "The noise will eventually get less annoying if I try to distract myself from it"	0.61	1.61	1.25
20. I think "I have coped with the noise before, so I can cope again this time"	0.59	1.69	1.28
21. I say to myself "It will help if I try to think of something pleasant"	0.49	1.90	1.27
22. I tell myself "I can learn to live with it"	0.61	1.70	1.23
23. I think "The noise might be there, but I can still enjoy things"	0.64	1.70	1.17
24. I tell myself "Think of something else other than the noise"	0.57	1.81	1.34
25. I tell myself "I won't think about the noise"	0.49	1.89	1.28
26. I think "The noise is a nuisance but I just won't let it bother me"	0.61	1.75	1.21

TCQ-negative item scores and the TCQ-total score. Note that the positive items were reverse-scored; thus, the higher the score on the positive scale, the more dysfunctional are the cognitions. Consistent with the results of the factor analysis, the TCQ-negative and TCQ-positive scales were found to be unrelated (r = 0.09).

#### **Correlations with Other Measures**

Correlations among the TCQ-total, TCQ-positive, TCQnegative, and other measures of tinnitus distress and general psychopathology were computed. These Pearsonproduct moment correlations are reported in Table 4.

Overall, the TCQ-total displays moderate correlations with most other tinnitus-related measures, such as the TRQ, the THQ, and the TEQ-total. The TCQ-total correlated more highly with the subscales of the TEQ, which measure emotional distress (TEQ-ED) and irrational beliefs (TEQ-IB), than with the auditory perception subscale (TEQ-AP). In each case, the TCQ-negative scale had higher correlations than either the TCQ-total or TCQ-positive scale with these other tinnitus-related measures. The correlation between the BDI and the TCQ-negative scale was higher than were the correlations between the BDI and the TCQ-positive or TCQtotal scales. Examination of the nontinnitus cognitive measures reveals higher correlations between the ATQ and both the TCQ-total and the TCQ-negative than with the TCQ-positive subscale. Precisely the same result occurred on the LCB.

#### DISCUSSION

The development of a new scale designed to assess reported engagement in negative and positive cognitions in response to tinnitus has been described. Psychometric analyses of the TCQ indicate good test-retest reliability (r = 0.88) and internal consistency (Cronbach's alpha = 0.91). Factor analysis yielded two factors that were interpreted as negative cognitions and positive cognitions. The independence of the positive versus the negative questions of the scale suggests that the negative cognitions of people who experience tinnitus clearly are independent of any positive cognitions that they reportedly experience. The pattern of correlations with other measures tends to support this view. Scores on the set of positive items of the TCQ may not be considered to be predictive of responses to the negative items. That is, endorsement of only a few positive items does not indicate necessarily that a respondent would endorse a large number of negative items (and vice versa).

The lack of association between negative and posi-

Table 3.	Factor Loading	gs of the Tinnitu	s Cognitions (	Questionnaire (	TCQ	)) Items:	Two-Factor	Solution
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TCQ Item	Factor 1	Factor 2
1. I think "If only the noise would go away"		0.64
2. I think "Why me? Why do I have to suffer this horrible noise?"		0.78
3. I think "What did I do to deserve this?"		0.74
4. I think "The noise makes my life unbearable"		0.83
5. I think "Nobody understands how bad the noise is"		0.67
6. I think "If only I could get some peace and quiet"		0.71
7. I think "I can't enjoy what I'm doing because of the noise"		0.74
8. I think "How can I go on putting up with this noise"		0.83
9. I think "The noise will drive me crazy"		0.82
10. I think "Why can't anyone help me?		0.76
11. I think "My tinnitus is never going to get better"		0.62
12. I think "The noise will overwhelm me"		0.81
13. I think "With this noise, life is not worth living"		0.63
14. I think "No matter how unpleasant the noise gets, I can cope"	0.73	
15. I think "The noise might be unpleasant, but it won't drive me crazy"	0.67	
16. I think "I'll be able to enjoy things if I keep my attention off the noise"	0.82	
17. I think "I'm not the only person with tinnitus"	0.75	
18. I think "There are things in life worse than tinnitus"	0.76	
19. I think "The noise will eventually get less annoying if I try to distract myself from it"	0.80	
20. I think "I have coped with the noise before, so I can cope again this time"	0.79	
21. I say to myself "It will help if I try to think of something pleasant"	0.69	
22. I tell myself "I can learn to live with it"	0.78	
23. I think "The noise might be there, but I can still enjoy things"	0.82	
24. I tell myself "Think of something else other than the noise"	0.80	
25. I tell myself "I won't think about the noise"	0.74	
26. I think "The noise is a nuisance but I just won't let it bother me"	0.79	

tive thoughts about tinnitus may be interpreted within the states-of-mind model advanced by Schwartz [29] and Schwartz and Garamoni [30] (see also Schwartz [31] and Schwartz & Michelson [32]). This model postulates an optimal balance between the frequency of negative and positive thoughts that occur in internal dialogue (i.e., self-statements within the stream of consciousness of the individual). Operationally, a low proportion of positive thoughts in relation to the total of negative plus positive thoughts is said to characterize moderate or severe psychopathology, with precise ratios being provided to define the ranges involved at each level of severity. If a high frequency of endorsement of negative thoughts were associated with a low frequency of endorsement of positive thoughts, the states-of-mind model essentially would be refuted. In

Table 4. Intercorrelations between all measures

	TCQ-N	TCQ-P	TCQ-T	TRQ	THQ	BDI	TEQ-T	TEQ-AP	TEQ-ED	TEQ-IB	TEQ-IN	ATQ	LCB
TCO-N	1.00	.09	.71	.58	.59	.46	.65	.25	.64	.47	.41	.50	.46
TCQ-P	_	1.00	.77	.25	.19	.05	.11	.01	.06	.15	.07	.13	.17
TCQ-T			1.00	.55	.52	.33	.50	.17	.46	.41	.31	.49	.43
TRQ				1.00	.74	.45	.60	.24	.52	.54	.38	.64	.44
THQ					1.00	.50	.75	.61	.60	.58	.44	.39	.38
BDI						1.00	.49	.12	.48	.39	.36	.51	.62
TEQ-T							1.00	.50	.85	.74	.69	.34	.50
TEQ-AP				_				1.00	.27	.17	.13	.07	.23
TEQ-ED									1.00	.54	.58	.33	.46
TEQ-IB										1.00	.38	.31	.48
TEQ-IN								_			1.00	08	.46
ATQ	_		_				_					1.00	
LCB													1.00

Key: TCQ-P = TCQ-positive item score; TCQ-N = TCQ-negative item score; TCQ-T = TCQ-total score; TRQ = Tinnitus Reaction Questionnaire; THQ = Tinnitus Handicap Questionnaire; BDI = Beck Depression Inventory; TEQ-T = Tinnitus Effects Questionnaire—total score; TEQ-AP = Tinnitus Effects Questionnaire—Auditory Perceptual subscale; TEQ-ED = Tinnitus Effect Questionnaire—Emotional distress subscale; TEQ-IB = Tinnitus Effects Questionnaire—Irrational Beliefs subscale; TEQ-IN = Tinnitus Effects Questionnaire—Irrational Beliefs subscale; TEQ-IN = Tinnitus Effects Questionnaire—Insomnia subscale; ATQ = Automatic Thoughts Questionnaire; LCB = Locus of Control of Behaviour Scale.

this study, no association was found between positive and negative thoughts, consistent with the view that individual subjects vary widely on the two measures. The correlation of 0.55 between the TCQ-total scale and the TRQ (equivalent to the algebraic solution that would be achieved by calculating the ratios according to the states-of-mind methodology if one preserves the positive score without the reverse scoring) indicates a moderate relationship between the proportion of negative thoughts endorsed on the TCQ and a measure of psychological distress related to tinnitus. Notably, here the conventional methodology for calculating the proportion of positive thoughts is one that involves real-time recording of verbalized thoughts for a fixed interval rather than through a self-report questionnaire; this method was not available in the present study. Nevertheless, a fruitful area for further research might be to apply this states-of-mind methodology to tinnitus patients.

The TCQ may be a useful measure of the reported cognitive responses to tinnitus. The TCQ may assist clinicians in identifying patients who have a high reported level of negative thoughts about tinnitus and a low frequency of endorsement of positive thoughts. Such people might be good candidates for cognitive therapy for tinnitus. Researchers might find the TCQ to be a valuable tool for inclusion on studies of coping with tinnitus. Some caution is required with respect to the usage and interpretation of the TCQ. What should be acknowledged is that the TCQ can be considered to be only a scale designed to measure what people report their cognitions to be in response to tinnitus. What is not assessed is the extent to which people actually engage in these reported cognitions. A future study in which correlations between the TCQ and verbalized reports of thoughts during specific tasks would assist in providing further validation of the measure.

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