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Translation and cross-cultural adaptation of the Thyroidectomy-Related Voice Questionnaire (TVQ) to Brazilian Portuguese

Tradução e adaptação transcultural do Thyroidectomy-Related Voice Questionnaire (TVQ) para o português brasileiro

Keywords

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Descritores

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ABSTRACT

Purpose: To translate and cross-culturally adapt the Thyroidectomy-Related Voice Questionnaire (TVQ) to Brazilian Portuguese. **Methods:** We divided the process of translation and cross-cultural adaptation into the following stages: two independent translations; synthesis of the translations; analysis by an expert committee; pretest; back-translation; final synthesis; and final version. We performed the pretest with 20 patients before or after thyroidectomy. We characterized the sample by means of descriptive analysis, and calculated the agreement between the experts by the Item Content Validity Index (I-CVI) and the Questionnaire Content Validity Index (Q-CVI). **Results:** Throughout the translation and cross-cultural adaptation, the instrument required operational, semantic, idiomatic, and syntactic/grammatical equivalences, especially after the analyses by the experts and the target population. The I-CVI and Q-CVI were mostly acceptable. The back-translation was equivalent to the original version. The comparison between the original, translated, and back-translated versions made possible the final version. **Conclusion:** We translated and adapted the TVQ to Brazilian Portuguese. The questionnaire is suitable for the next steps of the validation process.

RESUMO

Objetivo: Traduzir e adaptar o questionário *Thyroidectomy-Related Voice Questionnaire* (TVQ) para o português brasileiro. **Método:** o processo de tradução e adaptação transcultural foi dividido nas seguintes etapas: duas traduções independentes, síntese das traduções, análise por um comitê de especialistas, pré-teste, retradução, síntese final e versão final. O pré-teste foi realizado com 20 pacientes que se encontravam no período pré ou pós-operatório de tireoidectomia. A amostra foi caracterizada por meio de análise descritiva, e a concordância entre os especialistas foi calculada pelo Índice de Validade de Conteúdo por Item (IVC-I) e do questionário (IVC-Q). **Resultados:** ao longo das etapas do processo de tradução e adaptação, o instrumento necessitou de equivalências do tipo operacional, semântica, idiomática e sintática/gramatical, especialmente após avaliação dos especialistas e da população-alvo. Os IVC-I e IVC-Q foram, em sua maioria, aceitáveis. A retradução mostrou-se equivalente à versão original. A comparação entre as versões original, traduzida e retraduzida possibilitou a elaboração da versão final. **Conclusão:** o TVQ foi traduzido e adaptado para o português brasileiro, sendo considerado apto para as próximas etapas do processo de validação.

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INTRODUCTION

Pharyngolaryngeal symptoms are common after thyroidectomy⁽¹⁻⁴⁾ and generally relate to the involvement of the recurrent or superior laryngeal nerve during surgery⁽¹⁾. However, symptoms such as difficulties in swallowing and vocal changes can occur even in the apparent absence of nerve damage. This corresponds to a condition of multiple and sometimes undefined causes, known as post-thyroidectomy syndrome^(1,3).

Compressive and vocal symptoms such as hoarseness, difficulty in swallowing, and pharyngeal globus also occur prior to surgery^(1,2-5) due to hormonal disorders, enlarged thyroid gland, or the presence of benign or malignant nodules^(1,3).

Although the clinical routine usually neglects these symptoms, considering it as minor complications of thyroid disease or thyroidectomy, they significantly affect the quality of life of patients⁽¹⁾. In this sense, studies recommend investigating laryngeal, vocal, and swallowing conditions before and after thyroidectomy⁽⁵⁾. This investigation usually involves instrumental exams that demand cost, time, and that are not always available in the services⁽⁶⁾. An alternative to minimize these barriers is using self-reported questionnaires as screening tools. These questionnaires can select those patients who, in fact, need more specific tests for diagnostic confirmation⁽⁶⁾. Some authors proposed The Thyroidectomy-Related Voice Questionnaire (TVQ) for this purpose⁽⁵⁾.

The TVQ consists of 20 questions that address how often general vocal complaints and representative symptoms of laryngopharyngeal reflux, vocal fold paralysis, and changes in swallowing have occurred in the last month. A cut-off point defines the need to refer the patient to more specific exams⁽⁵⁾. Since the publication of the TVQ, other studies have reproduced it, applying the instrument both before and after surgery^(2,6-9).

Brazil does not have a questionnaire with the characteristics of the TVQ currently under validation. In this perspective, this study translates and cross-culturally adapts the TVQ to Brazilian Portuguese aiming to start its validation process.

METHODS

This is a validation study restricted to the stage of translation and cross-cultural adaptation. The study was approved by the Human Research Ethics Committee of the Health Sciences Center of the Federal University of Paraíba, Brazil, through Opinion No. 2,190,942/2017, under Resolution 466/2012 of the National Health Council (NHC). All study participants signed the Informed Consent Form (ICF).

The translation and adaptation of the TVQ to Brazilian Portuguese followed traditional international guidelines⁽¹⁰⁾ and the recommendations of Pernambuco, Espelt, Magalhães Júnior, and Lima (2017)⁽¹¹⁾. After the consent and authorization of the researcher responsible for the original instrument, we performed the following steps:

1) *Translation*: independent translations of the original version into Brazilian Portuguese by two translators, one of them being a health professional and the other not, both without knowledge about the TVQ. Thus, we had two versions: T1 and T2.

2) *Synthesis of the translations*: the two translators of the first stage plus two researchers from the group responsible for the validation process reached a consensus after comparing the T1 and T2 versions, evaluating semantic, idiomatic, conceptual, linguistic, contextual, and cultural discrepancies. This led to a synthesis version (T3).

3) *Expert committee*: we sent the T3 version by email to a committee of twenty-eight (28) professionals with expertise in the area of voice and/or swallowing. These professionals worked clinically with, or studied, patients undergoing thyroidectomy. Twenty-one (21) experts accepted the invitation. These experts judged four aspects: relevance of each item for the purpose of the instrument; feasibility of items within the Brazilian cultural context; operational changes in the items; and adequacy of the T3 version of the instrument. Furthermore, we asked the judges to justify their disapprovals and forward comments or suggestions that they considered relevant.

For aspects such as relevance and feasibility, the judges indicated, on a Likert-type scale, whether they considered the item to be: (1) irrelevant or infeasible; (2) little relevant or little feasible; (3) relevant or feasible; (4) very relevant or very feasible. Regarding the operational changes, the alternatives were 'yes' or 'no'. Finally, the experts judged whether the synthesis of the translations was adequate or inadequate.

We calculated the Item Content Validity Index (I-CVI)⁽¹²⁾, that is, the proportion of approvals for each aspect, to determine the level of agreement between the experts. In the case of relevance and feasibility, categories 3 and 4 corresponded to approvals, and the other categories represented disapprovals. We considered as acceptable those items with I-CVI above 0.78. Moreover, we calculated the Questionnaire Content Validity Index (Q-CVI) using the arithmetic mean of the I-CVI in each of the four aspects. The minimum acceptable value for the Q-CVI was 0.90.

We submitted both the I-CVI and Q-CVI values, as well as the comments and suggestions from experts, to analysis by two researchers in the group responsible for the validation process. These researchers reached a consensus on the necessary adjustments. Then, we sent the reviewed version of the instrument back to the same twenty-one (21) specialists from the previous step to judge whether they considered the items adequate or inadequate and write comments and/or suggestions. The answer rate was 80%. We analyzed the comments and suggestions for the I-CVI and Q-CVI, subsequently developing the pretest version (T4).

4) *Pretest*: we performed this step with the target population (pre- and post-thyroidectomy patients) to verify the adequacy, structure, and application of the items in a real context. The

pretest included volunteers aged 18 years or over, of both genders, who were undergoing, or candidates for, partial or total thyroidectomy. We excluded from this step subjects with difficulty in understanding simple commands; with self-reported or medically recorded psychiatric, neurological, neuromuscular, or neurodegenerative alterations; with cognitive decline, noticeable or reported by a companion; with lowered level of consciousness; with previous surgeries in the head and neck; and with previous cancer treatment. The convenience sample consisted of 20 volunteers: nine (45%) prethyroidectomy patients and 10 (55%) post-thyroidectomy patients. Everyone who met the eligibility criteria signed the informed consent form and underwent a cognitive interview to confirm their understanding of the instrument items. In that interview, the researcher used the paraphrase strategy, asking a question and demanding the interviewee to repeat it immediately afterwards. In addition, for each item, the interviewer directly asked the participant if he/she had understood the question and if he/she had any suggestions for modification. During the interview, the researcher also recorded possible operational difficulties of the interviewee and nonverbal reactions such as facial expressions and impressions that evoked incomprehension or disinterest. The same researcher conducted all interviews, recording everything in writing. Finally, two researchers from the group responsible for the validation process analyzed the results and reached a consensus on the need for adjustments, inclusion, or exclusion of items, which led to the prefinal version (T5).

5. *Back-translation*: to assess whether the items reflected the content of the original version, we sent the T5 version for back-translation by an English-speaking consultant whose mother tongue is English but who is also fluent in Brazilian Portuguese. The translator was unaware of the TVQ.

6. *Final synthesis*: made by consensus by two researchers from the group responsible for the validation process. The researchers compared the original version to the back-translated and prefinal versions in terms of semantic, idiomatic, experiential, conceptual, syntactic/grammatical, and operational equivalences. This analysis led to the final version of the instrument.

The researchers analyzed the equivalences by consensus according to the following criteria⁽¹³⁾: (1) *semantic equivalence*: did the words mean the same thing?; (2) *idiomatic equivalence*: was it necessary to formulate an expression equivalent to colloquialisms difficult to translate?; (3) *experiential equivalence*: was the original item replaced by a similar item that actually exists in the target culture?; (4) *conceptual equivalence*: did the words/expressions with a different conceptual meaning between cultures need to be replaced or deleted?; (5) *syntactic/grammatical equivalence*: were adjustments

related to orthographic or grammatical questions necessary?; (6) *operational equivalence*: did procedures inherent to the application of the instrument need to be modified.

RESULTS

Chart 1 shows the versions of the TVQ items at each stage of the translation and cross-cultural adaptation process.

It is noteworthy that, during the synthesis of the translations, the authors proposed an operational equivalence to the target culture. It consisted in transforming the questionnaire into an interview, modifying the statements of the instrument and the structure of the items from affirmative statements to direct interrogative sentences.

Still in the synthesis stage, the authors also decided by consensus to insert the pronoun “you” at the beginning of all items after their transformation into direct interrogative sentences. However, in the next step, one of the experts suggested removing the pronoun to make the instrument less informal. Hence, the authors decided to exclude the pronoun from all items.

Table 1 shows the results of the decisions of the expert committee on the I-CVI and Q-CVI. Regarding relevance, only items 17 and 18 were below acceptable levels. However, the translation of these items was semantically mistaken. Therefore, the authors decided to adjust the items (and not to exclude them) according to the suggestions of experts.

Regarding the feasibility of the items, only one of them was below the acceptable level, showing that the experts agreed that the TVQ items are mostly feasible in the Brazilian culture. The Q-CVI was acceptable for both relevance and feasibility. Operational equivalence was also widely accepted, as only two experts did not agree with the proposed change.

Regarding the adequacy of the synthesis of the translations, three items were below the acceptable level, as well as the Q-CVI. The authors then changed these items and, after the second round of expert judgment, the I-CVI and Q-CVI became adequate.

The most substantial changes in the items occurred after consulting the experts (Chart 1). During the pretest, there was a constant need to remember the response categories to the interviewees. Thus, the authors recommend that the interviewer repeat the answer possibilities at the end of each question. After the pretest, item five (5) became item ten (10). With that, items six (6), seven (7), eight (8), nine (9), and ten (10) became items five (5), six (6), seven (7), eight (8), and nine (9), respectively.

The back-translation corresponded to the content of the original version, differing only in relation to the sentence structure. Thus, the translated version of the TVQ, adapted to Brazilian Portuguese (Appendix 1), proved to be equivalent to the original version.

Chart 1. Versions obtained during the translation and cross-cultural adaptation of the Thyroidectomy Voice-Related Questionnaire (TVQ) to Brazilian Portuguese

Original	T3 Version (Synthesis of T1 + T2)	T4 or Pretest Version	T5 or Prefinal Version	Back-translated Version	Final Version	Equivalences
1- I have difficulty singing	Você tem dificuldade para cantar?	Tem dificuldade para cantar?	Tem dificuldade para cantar?	Do you have difficulty singing?	Tem dificuldade para cantar?	Operational
2- I have difficulty producing high pitch	Você tem alguma dificuldade em produzir sons agudos/finos?	Tem dificuldade para produzir sons agudos/finos?	Tem dificuldade para produzir sons agudos/finos? (entrevistado pode mostrar um exemplo de som agudo/fino)	Do you have difficulty producing sharp/fine sounds? (interviewee can demonstrate an example of sharp/fine sound)	Tem dificuldade para produzir sons agudos/finos? (entrevistador pode mostrar um exemplo de som agudo/fino)	Idiomatic Operational
3- I feel like my voice tone is lower than before	Você sente que o tom da sua voz está mais baixo que antes?	Sente que sua voz está mais grave/grossa?	Sente que sua voz está mais grave/grossa?	Do you feel that your voice is deeper/lower?	Sente que sua voz está mais grave/grossa?	Semantic Operational
4- I feel strained when producing voice	Você sente que faz esforço ao falar?	Sente que faz esforço para falar?	Sente que faz esforço para falar?	Do you feel that it is an effort to speak?	Sente que faz esforço para falar?	Semantic Operational
5- I feel pain of discomfort after talking	Você sente dor ou desconforto depois de falar?	Sente dor ou desconforto depois de conversar?	Sente dor ou desconforto depois de conversar?	Do you feel pain or discomfort after a conversation?	Sente dor ou desconforto depois de conversar?	Semantic Operational
6- I feel vocal fatigue after a long conversation	Você sente sua voz cansada depois de uma longa conversa?	Sente sua voz cansada depois de conversar por muito tempo?	Sente sua voz cansada depois de conversar por muito tempo?	Do you feel that your voice is tired after talking for a long time?	Sente sua voz cansada depois de conversar por muito tempo?	Operational
7- My voice sounds hoarse and cracked	Você sente que sua voz está rouca ou com falhas?	Sente que sua voz está rouca e/ou com falhas?	Sente que sua voz está rouca e/ou com falhas?	Do you feel that your voice is hoarse and/or weak?	Sente que sua voz está rouca e/ou com falhas?	Syntactic/ Grammatical Operational
8- I run out of air when I talk	Você sente falta de ar quando fala?	Sente falta de ar quando fala?	Sente falta de ar quando fala?	Do you feel you are short of breath when you talk?	Sente falta de ar quando fala?	Idiomatic Operational
9- I can hardly make a loud voice (or I have difficulty producing a loud voice)	Você sente dificuldade em falar alto?	Sente dificuldade em falar alto/forte?	Sente dificuldade em falar alto/forte?	Do you have difficulty to speak loudly/strongly?	Sente dificuldade para falar alto/forte?	Syntactic/ Grammatical Operational
10- I feel like my voice became weak	Você sente que sua voz enfraqueceu?	Sente que sua voz ficou fraca?	Sente que sua voz ficou fraca?	Do you feel that your voice is weak?	Sente que sua voz ficou fraca?	Operational
11- I have lots of spidun in my throat	Você sente muito pigarro na garganta?	Sente muita secreção na garganta?	Sente muita secreção na garganta?	Do you feel a lot of secretion/mucus in your throat?	Sente muita secreção na garganta?	Semantic Operational
12- I feel like something is stuck in my throat	Você sente que tem algo preso na garganta?	Sente que tem algo preso/parado na garganta?	Sente que tem algo preso/parado na garganta?	Do you feel that there is something stuck in your throat?	Sente que tem algo preso na garganta?	Operational
13- I frequently clear my throat because I feel I have sputum in my throat	Você tem costume de pigarrear?	Precisa pigarrear frequentemente porque sente secreção em sua garganta?	Precisa pigarrear frequentemente porque sente secreção em sua garganta?	Do you need to clear your throat often because you feel mucus in your throat?	Precisa pigarrear frequentemente porque sente secreção em sua garganta?	Idiomatic Semantic Operational

Chart 1: Continuation...

Original	T3 Version (Synthesis of T1 + T2)	T4 or Pretest Version	T5 or Prefinal Version	Back-translated Version	Final Version	Equivalences
14- I cough after meals or after lying down	Você tosse após comer ou deitar?	Tosse após comer ou deitar?	Tosse após comer ou deitar?	Do you cough after eating or lying down?	Tosse após comer ou deitar?	Idiomatic Operational
15- My mouth is dry and I feel thirsty	Você percebe sua boca seca e sente muita sede?	Percebe sua boca seca e sente sede?	Percebe sua boca seca e sente sede?	Do you feel that your mouth is dry and you feel thirsty?	Percebe sua boca seca e sente sede?	Syntactic/ Grammatical Operational
16- My neck is numb and I feel discomfort (or pain).	Você sente dormência, desconforto ou dor no pescoço?	Sente desconforto ou dor pela sensação de dormência no pescoço?	Sente desconforto ou dor pela sensação de dormência no pescoço?	Do you feel discomfort or pain from a sensation of numbness in your neck?	Sente desconforto ou dor pela sensação de dormência no pescoço?	Semantic Syntactic/ Grammatical Operational
17- My upper chest is numb and I feel discomfort (ou pain)	Você sente dormência ou desconforto ou dor no peito?	Sente desconforto ou dor pela sensação de dormência no peito?	Sente desconforto ou dor pela sensação de dormência no peito?	Do you feel discomfort or pain from a sensation of numbness in your chest?	Sente desconforto ou dor pela sensação de dormência no peito?	Semantic Syntactic/ Grammatical Operational
18- My shoulder is numb and I feel discomfort (or pain)	Você sente dormência ou desconforto ou dor nas pernas?	Sente desconforto ou dor pela sensação de dormência nos ombros?	Sente desconforto ou dor pela sensação de dormência nos ombros?	Do you feel discomfort or pain from a sensation of numbness in your shoulders?	Sente desconforto ou dor pela sensação de dormência nos ombros?	Semantic Syntactic/ Grammatical Operational
19- I feel discomfort when swallowing food or liquid	Você sente desconforto quando engole alimento ou líquidos?	Sente desconforto quando come ou bebe?	Sente desconforto quando come ou bebe?	Do you feel discomfort when you eat or drink?	Sente desconforto quando come ou bebe?	Semantic Operational
20- I have difficulty breathing or have frequent choking episodes	Você tem dificuldade para respirar ou engasgos com frequência?	Sente dificuldade para respirar ou engasga com frequência?	Sente dificuldade para respirar ou engasga com frequência?	Do you frequently have difficulty breathing or do you choke?	Sente dificuldade para respirar ou engasga com frequência?	Operational

Table 1. Item Content Validity Index (I-CVI) and Questionnaire Content Validity Index (Q-CVI) according to the relevance and feasibility of the items, operational equivalence and synthesis of translations in the two rounds

Item	Relevance of items		Feasibility of items		Operational equivalence*		Synthesis of translations Round 1 (n=21)		Synthesis of translations Round 2 (n=17)	
	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI
01	3	0.86	2	0.90	2	0.90	1	0.95	0	1.00
02	0	1.00	1	0.95	2	0.90	1	0.95	0	1.00
03	1	0.95	2	0.90	2	0.90	2	0.90	0	1.00
04	1	0.95	0	1.00	2	0.90	2	0.90	1	0.94
05	1	0.95	0	1.00	2	0.90	1	0.95	0	1.00
06	1	0.95	0	1.00	2	0.90	2	0.90	0	1.00
07	1	0.95	0	1.00	2	0.90	3	0.86	0	1.00
08	1	0.95	0	1.00	2	0.90	1	0.95	0	1.00
09	1	0.95	0	1.00	2	0.90	1	0.95	0	1.00
10	3	0.86	1	0.95	2	0.90	3	0.86	1	0.94
11	2	0.90	1	0.95	2	0.90	6	0.71	0	1.00
12	3	0.86	2	0.90	2	0.90	1	0.95	0	1.00

Table 1: Continuation...

Item	Relevance of items		Feasibility of items		Operational equivalence*		Synthesis of translations Round 1 (n=21)		Synthesis of translations Round 2 (n=17)	
	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI	No. of disapprovals	I-CVI
13	4	0.80	1	0.95	2	0.90	9	0.57	0	1.00
14	1	0.95	0	1.00	2	0.90	1	0.95	0	1.00
15	4	0.80	2	0.90	2	0.90	3	0.86	0	1.00
16	3	0.86	2	0.90	2	0.90	3	0.86	1	0.94
17	7	0.66	6	0.71	2	0.90	3	0.86	1	0.94
18	5	0.76	3	0.86	2	0.90	1	0.95	2	0.88
19	0	1.00	0	1.00	2	0.90	3	0.86	0	1.00
20	0	1.00	1	0.95	2	0.90	5	0.76	0	1.00
	Q-CVI = 0.90		Q-CVI = 0.90		Q-CVI = 0.90		Q-CVI = 0.83		Q-CVI = 0.98	

Legend: I-CVI= Item Content Validity Index; Q-CVI = Questionnaire Content Validity Index.

* Corresponds to the suggestion to transform the affirmative declarative sentences of the original version into direct interrogative sentences

DISCUSSION

The methods of the present study enabled the translation and cross-cultural adaptation of the TVQ instrument to the Brazilian culture, making it suitable for the next steps in the validation process. After validation, the Brazilian Portuguese version of the TVQ can be reproduced to track, evaluate, and monitor general vocal complaints and representative symptoms of laryngopharyngeal reflux, vocal fold paralysis, and changes in swallowing in patients undergoing, or candidates for, thyroidectomy(8). Incorporating an instrument such as TVQ in the clinical routine may favor the creation of an operational flow in the services, and more assertively direct therapeutic procedures before and after thyroidectomy.

This study of translation and cross-cultural adaptation showed the relevance of each step for the improvement of the instrument in its Brazilian Portuguese version. Two individuals with different profiles translated the instrument; experts judged the items and translations; representatives of the target population were able to give their opinion; and the back-translation corresponded to the original version, thus enabling the final synthesis. The present study highlights the collaboration of members of the expert committee and target population, as their comments and suggestions encouraged the authors to discuss and adapt the instrument.

The I-CVI and Q-CVI values were mostly adequate. However, inadequate items went through reviews and adjustments according to needs. The fact that experts consider most items relevant to the questionnaire and feasible in the Brazilian culture ratified the need for the instrument.

In this study, the first need was to suggest an operational equivalence in relation to the format of the items. The proposal to transform them into interrogative sentences and apply the instrument as an interview considered the fact that most Brazilians prefer that the assessment instruments be applied in this way, mainly due to personal preference and reading difficulties(14). In Brazil, there are limitations to the wide use of self-applied instruments, considering the low educational

level of part of the population and the consequent difficulty in understanding(15). Most experts agreed with this equivalence, so the authors maintained it.

In addition to operational equivalences, semantic, idiomatic, and syntactic/grammatical equivalences of some items were necessary. Among them, the predominant one was the semantic equivalence, necessary to ensure that the words or expressions of the original version have the same meaning.

The idea of validating the TVQ in Brazil was initially due to the need to have a standardized, valid, and reliable instrument that would allow to know thyroidectomy-related vocal and swallowing symptoms. Although several services already carry out this survey, their instruments are not robust from a psychometric point of view. Therefore, the process of validating the Brazilian Portuguese version of the TVQ will continue from the translated and adapted version presented in this study.

CONCLUSION

After all the methodological steps, this study translated and adapted the TVQ to Brazilian Portuguese, making the instrument suitable for the next validation steps.

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Authors' contribution

DHNS contributed to data collection and analysis, writing and final review of the article; JFRS and ACNU contributed to the writing and final review of the article; LP contributed to the design, guidance, data analysis, writing and final review of the article.

Appendix 1. Thyroidectomy-Related Voice Questionnaire (TVQ) – Brazilian Portuguese version

Instruções: Estas perguntas são sobre sintomas relacionados à sua voz e deglutição (ato de engolir) e sobre os efeitos que esses sintomas provocam na sua vida. Diga pra mim a resposta que indica com qual frequência você vivenciou cada sintoma nos últimos 30 dias: 0 (nunca), 1 (quase nunca), 2 (às vezes), 3 (quase sempre) e 4 (sempre).

Tem dificuldade para cantar?	0	1	2	3	4
Tem dificuldade para produzir sons agudos/finos? (entrevistado pode mostrar um exemplo de som agudo/fino)	0	1	2	3	4
Sente que sua voz está mais grave/grossa?	0	1	2	3	4
Sente que faz esforço para falar?	0	1	2	3	4
Sente sua voz cansada depois de conversar por muito tempo?	0	1	2	3	4
Sente que sua voz está rouca e/ou com falhas?	0	1	2	3	4
Sente falta de ar quando fala?	0	1	2	3	4
Sente dificuldade para falar alto/forte?	0	1	2	3	4
Sente que sua voz ficou fraca?	0	1	2	3	4
Sente dor ou desconforto depois de conversar?	0	1	2	3	4
Sente muita secreção na garganta?	0	1	2	3	4
Sente que tem algo preso na garganta?	0	1	2	3	4
Precisa pigarrear frequentemente porque sente secreção em sua garganta?	0	1	2	3	4
Tosse após comer ou deitar?	0	1	2	3	4
Percebe sua boca seca e sente sede?	0	1	2	3	4
Sente desconforto ou dor pela sensação de dormência no pescoço?	0	1	2	3	4
Sente desconforto ou dor pela sensação de dormência no peito?	0	1	2	3	4
Sente desconforto ou dor pela sensação de dormência nos ombros?	0	1	2	3	4
Sente desconforto quando come ou bebe?	0	1	2	3	4
Sente dificuldade para respirar ou engasga com frequência?	0	1	2	3	4