Original Article

The Brazilian Portuguese version of the London Chest Activity of Daily Living scale for use in patients with chronic obstructive pulmonary disease*

Versão brasileira da escala *London Chest Activity of Daily Living* para uso em pacientes com doença pulmonar obstrutiva crônica

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Abstract

Objective: To translate the London Chest Activity of Daily Living (LCADL) scale into Portuguese and to determine whether this version is reproducible in Brazilian patients with severe chronic obstructive pulmonary disease (COPD). **Methods:** The LCADL scale was translated into Portuguese and then back-translated into English. This pilot Brazilian Portuguese version was administered to 8 patients with COPD, and possible text-related problems were investigated. The principal problems were discussed with the authors of the original scale, and a final translated version was arrived at. At the study outset, two observers administered this final version (twice in one day) to 31 patients with COPD. One of those observers again administered the scale to the same patients 15-20 days later. At baseline, the patients were submitted to pulmonary function testing and to the six-minute walk test (6MWT). **Results:** The Brazilian Portuguese version of the LCADL scale demonstrated excellent reproducibility in the total score and in most of the questions, with an inter-rater Cronbach's alpha coefficient of 0.97 (95% CI: 0.89-0.97; $p < 0.01$) and an intra-rater Cronbach's alpha coefficient of 0.96 (95% CI: 0.83-0.96; $p < 0.01$). The total score presented a negative correlation with forced expiratory volume in one second in liters ($r = -0.49$; $p < 0.05$) and with distance covered on the 6MWT ($r = -0.56$; $p < 0.05$). **Conclusion:** The Brazilian Portuguese version of the LCADL scale is a reliable, reproducible, and valid instrument for evaluating dyspnea during activities of daily living in patients with severe COPD.

Keywords: Activities of daily living; Dyspnea; Diagnostic techniques and procedures; Reproducibility of results.

Resumo

Objetivo: Traduzir a escala London Chest Activity of Daily Living (LCADL) para o português e verificar se essa versão é reprodutível em pacientes com doença pulmonar obstrutiva crônica (DPOC) grave no Brasil. **Métodos:** Foram realizadas a tradução da escala LCADL para o português e a tradução retrógrada dessa versão em português para o inglês. Essa primeira versão em português foi aplicada a 8 pacientes com DPOC, e possíveis dificuldades em relação ao texto foram investigadas. As principais dificuldades encontradas foram discutidas com os autores da escala, chegando-se a uma versão final do instrumento. Essa versão final foi aplicada duas vezes a 31 pacientes com DPOC por dois observadores separadamente em um primeiro dia. Após 15-20 dias, essa mesma versão foi aplicada novamente aos mesmos pacientes por um dos observadores. No primeiro dia os pacientes foram submetidos à prova de função pulmonar e ao teste de caminhada de seis minutos (TC6). **Resultados:** A versão brasileira da escala LCADL demonstrou excelente reprodutibilidade no escore total e na maioria das questões, com um coeficiente alfa de Cronbach interobservador de 0,97 (IC95%: 0,89-0,97; $p < 0,05$) e um coeficiente alfa de Cronbach intra-observador de 0,96 (IC95%: 0,83-0,96; $p < 0,05$). O escore total dessa versão apresentou correlação negativa com o volume expiratório forçado no primeiro segundo em litros ($r = -0,49$; $p < 0,05$) e a distância percorrida no TC6 ($r = -0,56$; $p < 0,05$). **Conclusão:** A versão brasileira da escala LCADL é um instrumento confiável, reprodutível e válido para avaliar a dispnéia durante atividades de vida diária em pacientes com DPOC grave.

Descritores: Atividades Cotidianas; Dispnéia; Técnicas de diagnóstico e procedimentos; Reprodutibilidade dos Resultados.

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Submitted: 14 March 2007. Accepted, after review: 6 July 2007.

Introduction

Chronic obstructive pulmonary disease (COPD) is characterized by chronic airflow limitation that is partially reversible, progressive, and accompanied by an abnormal inflammatory response of the lungs to noxious particles or gases. It presents some significant extrapulmonary effects and severe comorbidities that can increase its severity.[1] Nutritional abnormalities, weight loss, and skeletal muscle dysfunction are some of the extrapulmonary effects of COPD.[2,3]

Reduced pulmonary function associated with peripheral muscle dysfunction limits exercise capacity in such individuals. The degree of disease severity has a direct effect on the extent to which COPD patients are limited by the fatigue and dyspnea experienced during the performance of activities of daily living (ADLs).[4,5]

The impairment of ADLs in such patients can be assessed using the six-minute walk test (6MWT), since the distance covered on the test is considered a good marker of functional capacity to perform ADLs.[6] However, this test does not identify the activities in which the impairment is present nor does it assess the impairment of activities performed using the upper limbs, which are typically used extensively in performing habitual ADLs.

There are few validated tools for assessing functional incapacity in patients with COPD. The instruments available have little applicability in severely limited patients[7] or present limited sensitivity to changes following interventions, such as pulmonary rehabilitation.[8]

Garrod et al. (2000)[9] developed an instrument, the London Chest Activity of Daily Living (LCADL) scale, which has four domains (personal care, household activities, physical activities, and leisure activities), with the aim of assessing the impairment of ADLs in patients with COPD. The LCADL scale has proven to be a reliable, valid, and sensitive instrument for assessing patient response to pulmonary rehabilitation programs.[10] Nevertheless, the use of a pre-existing instrument that was developed in another language and for use in another culture should be contemplated only after this instrument has been adapted for use in the target culture.[11-14]

The objective of this study was to develop a Brazilian version of the LCADL and to determine whether the Brazilian version is reproducible and valid for use in evaluating patients with severe COPD in terms of the degree of dyspnea experienced during the performance of ADLs.

Methods

A total of thirty-one individuals diagnosed with severe COPD and treated at the Vale do Itajaí University Physical Therapy Clinic in the city of Itajaí, located in the state of Santa Catarina, Brazil, were included in the study. The inclusion criteria were having been diagnosed with severe COPD, in accordance with the criteria of the Global Initiative for Chronic Obstructive Lung Disease (GOLD),[1] and clinical stability for the four weeks preceding the study outset. The exclusion criteria were as follows: presenting other nonpulmonary diseases that are considered disabling, severe, or difficult-to-control; presenting exacerbation during the study period; being incapable of understanding the scale; and being unable to perform the 6MWT.

All participants gave written informed consent, and the study was approved by the Ethics in Human Research Committee of the Triangle University Center.

First, the English version of the LCADL scale was translated into Portuguese by two researchers of this study. This Brazilian Portuguese version was then back-translated into English by a health professional who had no prior knowledge of the scale. This pilot Brazilian Portuguese version was administered to eight patients with COPD, and possible text-related problems were investigated. Subsequently, the principal problems were discussed with the authors of the original scale, and a final translated version was arrived at (Appendix). This final version was administered to the participants of this study.

The volunteers were assessed for prebronchodilator and postbronchodilator pulmonary function using a previously calibrated Multispiro spirometer (SX/PC; Creative Biomedics, San Clemente, CA, USA), in accordance with the guidelines established by the Brazilian Thoracic Society.[15] Oxygen saturation was also measured, using an Ohmeda pulse oximeter (Biox 3700; Ohmeda, Boulder, CO, USA), after the patients had rested for 15 min. On the same day, the patients performed two 6MWTs, after which the LCADL scale was administered. At the study outset, the scale was administered to the patients (twice in one day) by two observers (Obs. 1 and Obs. 2.1). The order of administration was always the same: first, the scale was

administered by Obs. 1 and, 10 min later, it was administered by Obs. 2.1. The scale was administered again, 15-20 days later, by the second observer (Obs. 2.2). On the second day of administration of the scale, the patients completed a brief questionnaire comparing current symptoms (cough, volume and color of secreted expectoration, as well as dyspnea) with those reported at the study outset. If there were any changes (in the symptoms or in the type/dose of medication used), a second spirometric test was performed on the second day. None of the patients in the sample presented any such changes in the symptoms or in the medication used between the two study days.

During the various administrations of the scale, the observer and the patient were alone. The observers read the questions to the individuals who had had little schooling, repeating them if necessary but not offering any explanations or interpretations.

The LCADL scale consists of 15 questions divided into four domains: personal care, household activities, physical activities, and leisure activities. Patients assign a score to each domain item. Scores range from 0 to 5, the highest score indicating the greatest incapacity to perform ADLs. The total score can reach 75 points. The scale was evaluated in terms of total score, domain scores, and scores for individual questions. The percentage of the total score corresponding to the number of questions to which the score given was not 0 was also evaluated.

The 6MWT was performed twice, with a 30-min interval, and the value of the greatest distance covered was used for analysis. The patients walked at their own pace along a corridor (25 min length), and were given verbal encouragement through the use of standardized phrases and in accordance with the American Thoracic Society criteria.[16]

In the statistical analysis, the Wilcoxon test was used to compare the scores obtained from the administration of the LCDAL scale by Obs. 1 and by Obs. 2.1 and to compare the scores obtained from the administration of the scale by the second observer on the two days (Obs. 2.1 and Obs. 2.2). The intraclass correlation coefficient (ICC)[17,18] was used to determine the reproducibility of the scale. The kappa coefficient was used to determine the concordance of the responses to question 16, which was a multiple-choice question ("How much does shortness of breath affect your performance of ADLs?") offering the following options: 'Quite a bit'; 'Slightly'; and 'Not at all'. Bland & Altman plots[19,20] were used in order to improve the visualization of the concordance between the scores obtained from the various administrations of the scale. Spearman's correlation coefficient was used to determine how the score of the LCADL scale correlated with distance covered on the 6MWT and with forced expiratory volume in one second (FEV_1). For the statistical analysis, the level of significance was set at 5% ($p < 0.05$).

Results

Of the sample of thirty-one patients with COPD, twenty-four (77%) were male. There were eight patients (all males) who were oxygen-dependent for the performance of their ADLs. The characteristics of the patients are shown in Table 1.

Table 1 - Anthropometric data of the sample studied, pulmonary function test results, and distance covered on the six-minute walk test.

Characteristic	Mean	SD	Median	95% CI	
				LL	UL
Age (years)	65	7	68	63	68
Smoking (pack-years)	50.0	23.2	45.0	42.0	58.3
BMI (kg/m^2)	24	4	23	22	25
FEV_1 (L)	1.06	0.40	0.96	0.91	1.21
FEV_1 (% of predicted)	38.5	13.1	36.1	33.8	43.1
FVC (L)	2.10	0.8	2.03	1.85	2.39
FVC (% of predicted)	62.9	18.4	61.5	56.3	69.3
FEV_1/FVC (%)	62.3	15.9	61.2	56.7	67.9
SpO_2 (%)	93.0	2.3	93.5	92.2	93.8
D6MWT (m)	337.83	134.0	376	290.7	385

SD: standard deviation; 95% CI: 95% confidence interval; LL: lower limit; UL: upper limit; BMI: body mass index; FEV_1: forced expiratory volume in one second; FVC: forced vital capacity; SpO_2: peripheral oxygen saturation; D6MWT: distance covered on the six-minute walk test.

The means of the total LCADL scores, as well as of the domain scores, are shown in Table 2.

The comparison between the means of the scores obtained by Obs. 1 and of those obtained by Obs.2 revealed no statistically significant difference in terms of the total score or the percentage of the total score. The same was found to be true for the comparison between the means of the scores obtained by the second observer on the first day (Obs. 2.1) and those of the scores obtained by that same observer 15-20 days later (Obs. 2.2).

In the analysis of inter-rater reliability, we obtained a Cronbach's alpha coefficient (α) of 0.97 (95% CI: 0.89-0.97; $p < 0.01$) for the total score of the LCADL scale. In addition, for 13 of the 15 questions, the ICC was higher than 0.90 ($p < 0.01$). Furthermore, for question 12 (related to dyspnea when stooping), the ICC was 0.85 ($p < 0.01$), and, for question 15 (related to speaking/conversing), the ICC was 0.67 ($p < 0.05$). Figure 1 shows the inter-rater reliability.

The analysis of intra-rater reliability revealed an α of 0.96 (95% CI: 0.83-0.96; $p < 0.01$) for the total score. In addition, only questions 3 (related to dyspnea while putting on shoes/socks) and 12 (related to dyspnea while stooping) obtained an ICC lower than 0.90 (0.85 and 0.86, respectively). The excellent inter-rater and intra-rater reliability can be confirmed in the Bland & Altman plots (Figure 2), where it can be seen that most patients presented differences of less than or equal to 5 points between the two administrations. In the inter-rater analysis, three patients presented a difference greater than 5, and, in one of those, the difference was 21. In the intra-rater analysis, four patients presented a difference greater than 5, and, in one of those, the difference was 29.

Excellent inter-rater and intra-rater reliability was also found for the percentage of the total score of the LCADL scale, and the ICC was 0.97 and 0.98 ($p < 0.01$), respectively. When the total score was correlated with the percentage of the total score, an r value of 0.87 ($p < 0.05$) was found.

Question 16 is related to the extent to which the performance of ADLs is impaired by dyspnea, and patients answer it by checking one of the three multiple-choice responses: 'Quite a bit'; 'Slightly'; or 'Not at all'. A strong concordance between Obs. 1 and Obs. 2 (kappa = 0.87; $p < 0.001$) and a moderate intra-rater agreement (kappa = 0.60; $p < 0.01$) were observed for this question.

The total score of the LCADL scale presented a negative correlation with FEV_1 in liters ($r = -0.49$; $p < 0.05$) and with distance covered on the 6MWT ($r = -0.56$; $p < 0.01$). When this correlation was analyzed using the percentage of the total score of the LCADL scale and distance covered on the 6MWT, an r value of –0.75 ($p < 0.01$) was found.

Discussion

In the present study, we observed that the Brazilian version of the LCADL scale presents excellent reliability for administration by different observers as well as for administration by the same observer at two distinct time points. This version

Table 2 - Means of the total scores, of the percentage of the total score, and of the scores of the domains of the London Chest Activity of Daily Living in the sample studied, as well as inter-rater and intra-rater intraclass correlation coefficients.

	Obs. 1	Obs. 2.1	Obs. 2.2	Inter ICC	Intra ICC
Total LCADL	26.7 ± 13.9 (21.8-31.6)	27.4 ± 15.3 (22.0-32.8)	26.9 ± 14.8 (21.7-32.1)	0.97[a]	0.96[a]
% of total LCADL	45.4 ± 19.0 (38.7-52.1)	45.9 ± 19.8 (38.9-52.9)	45.5 ± 19.7 (38.6-52.4)	0.98[a]	0.98[a]
Personal care	8.6 ± 4.5 (7.0-10.2)	8.9 ± 4.5 (7.3-10.5)	8.7 ± 4.6 (7.1-10.3)	0.99[a]	0.97[a]
Household activities	7.2 ± 9.2 (4.0-10.4)	7.8 ± 9.9 (4.3-11.3)	7.4 ± 9.6 (4.0-10.8)	0.96[a]	0.95[a]
Physical activities	5.0 ± 2.0 (4.3-5.7)	4.9 ± 1.5 (4.4-5.4)	5.2 ± 1.7 (4.6-5.8)	0.92[a]	0.95[a]
Leisure activities	5.8 ± 2.8 (4.8-6.8)	5.7 ± 2.8 (4.7-6.7)	5.6 ± 2.8 (4.6-6.6)	0.94[a]	0.98[a]

[a]$p < 0.01$ in intraclass correlations: excellent correlation (0.8-1.0); good correlation (0.6-0.8), satisfactory correlation (0.4-0.6); and weak correlation (0.2-0.4). Obs.1: observer one on the first day; Obs. 2.1: observer two on the first day; Obs. 2.2: observer two 15-20 days later; Inter ICC: inter-rater intraclass correlation coefficient; Intra ICC: intra-rater intraclass correlation coefficient; Total LCADL: means of the total scores of the London Chest Activity of Daily Living scale; and % of total LCADL: means of the percentage of the total score of the London Chest Activity of Daily Living scale.Data expressed as mean ± standard deviation (95% confidence interval: lower limit-upper limit); and non-significant p value > 0.05 in the comparison between the scores obtained by Obs. 1 and by Obs. 2 and between the scores obtained by Obs. 2.1 and by Obs. 2.2 (Wilcoxon test).

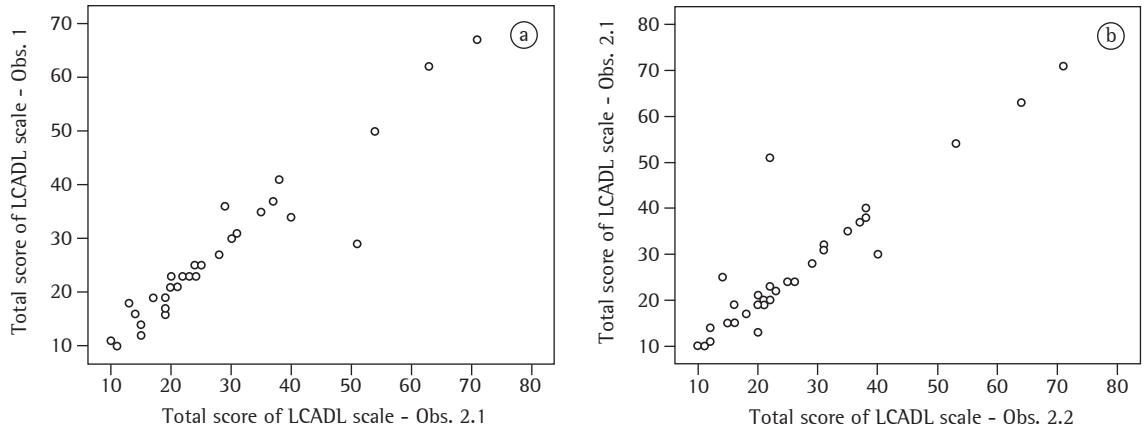

Figure 1 - Intraclass correlation of the scores: a) Administration of the London Chest Activity of Daily Living (LCADL) scale by observer one (Obs. 1) and by observer two (Obs. 2) on the first day ($\alpha = 0.97$ and $p < 0.01$); and b) Administration of the scale by observer two on the first day (Obs. 2.1) and 15-20 days later (Obs. 2.2) ($\alpha = 0.96$ and $p < 0.01$).

also proved to be valid, correlating with distance covered on the 6MWT and with FEV_1.

The evaluation of the inter-rater reliability of the total score revealed an ICC of 0.97, which shows excellent reliability. In the intra-rater analysis, the ICC presented a value similar to that found by Garrod et al. (2002),[10] who, in analyzing the reproducibility of the LCADL scale in nineteen individuals, also obtained excellent reliability ($\alpha = 0.96$).[21] The inter-rater and intra-rater agreement for the various administrations of the scale was confirmed using Bland & Altman plots. However, the upper and lower limits of the inter-rater and intra-rater analyses were relatively high, considering that the maximum score is 75 points. Nevertheless, this does not represent a tendency of the sample as a whole since only one patient presented considerable discrepancies among the scores obtained at the three time points at which the scale was administered (30, 51, and 22 points, respectively). The high values of the differences among the various administrations (inter-rater difference of 21 points and intra-rater difference of 29 points) for this patient (age, 57 years; body mass index, 20 kg/m^2; FEV_1, 36% of predicted) might have been responsible for increasing the 95% CI of the sample.

The satisfactory reliability of the LCADL scale can be explained by the relative simplicity of the items included in each domain; it was always clear to the patients which ADL a given item was referring to.[10] In addition, during the process of translating the scale, we conducted a pilot study, in which we were careful to note the principal questions the participants had regarding the items of the instrument and to discuss those questions with the authors of the original scale, thus arriving at a final translated version.

In the systematic approach to validating questionnaires and scales, discussion with the original authors is not the norm; most studies involve evaluation by bilingual observers with the aim of obtaining a harmonious text that is easily understood.[22,23] In other studies, however, this goal of achieving linguistic harmony while maintaining the essence of the instrument has been achieved with the participation of the original authors.[13,24]

Initially, the principal difficulty found was related to the differentiation of the score for each ADL by the individuals of the sample, especially for the scores 0 ('I would not do that under any circumstances.'), 4 ('I cannot do that anymore.'), and 5 ('Someone does that for me.') Difficulties in interpreting the items evaluated have also been identified in other studies, and those items need to be rephrased in order to be more easily understood.[12,13] In order to minimize the possibility of misinterpretation of the scores, it was necessary to adapt the first translation of the LCADL scale after the pilot study was carried out. The final translated version was arrived at in collaboration with the authors of the original version. Therefore, the items were made to read as follows: (score 0) 'I do not perform this activity (because I have never needed to or it is irrelevant).'; (score 4) 'Due to shortness of

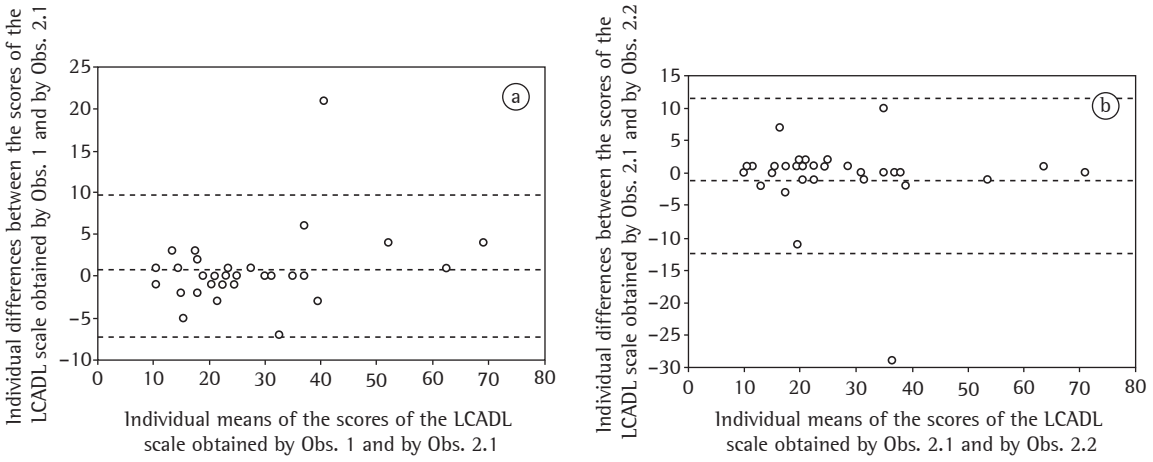

Figure 2 - Visualization, using Bland & Altman plots, of the scores obtained in the various administrations of the London Chest Activity of Daily Living (LCADL) scale by observer one and observer two on the first day (Obs. 1 and Obs. 2) and by observer two 15-20 days later (Obs. 2.2): a) Inter-rater analysis: mean = 0.68; upper limit = 9.82 and lower limit = −8.46; and b) Intra-rater analysis: mean = −0.58; upper limit = 11.8 and lower limit = −12.9.

breath, I cannot perform this activity anymore, and I do not have anyone to do it for me.'; and (score 5) 'Due to shortness of breath, I cannot perform this activity anymore, and I need someone to help me or to do it for me.' These alterations allowed a better understanding on the part of the patients, making the score more illustrative. According to the authors of the original LCADL scale, these alterations did not change the objectives set, but rather facilitated the understanding on the part of the patients. In another study by Garrod et al. (2002),[10] sentences of a more illustrative nature were added to the 0 to 5 score, something that had not been done in the original scale.

Another difficulty identified in the pilot study was the determination of the score for those patients who were oxygen-dependent for the performance of their ADLs. In the original study by Garrod et al. (2000),[9] this difficulty was not observed, since, in the sample, there were no individuals who used oxygen. In the pilot phase of the present study, we found that the use of oxygen influenced the choice of the score since many oxygen-dependent patients reported not having dyspnea or reported having only mild dyspnea while performing certain activities. However, when those patients were asked whether they would be able to perform such activities without oxygen support, they said that they would not, due to dyspnea. Studies have demonstrated that the use of oxygen reduces the sensation of dyspnea in patients with COPD, facilitating the performance of ADLs.[25,26] Oxygen support was not considered a relevant factor in the conception of the original LCADL scale. However, after discussing it with its authors, we decided that this support could be interpreted as being an aid to performing the activity, without which the activity might be more difficult or even impossible.

Another relevant point is that, after the administration of the LCADL scale, we noticed that some individuals, despite giving a score of 5 for most of the domains, presented a low total score. This occurred primarily among males who had never performed household activities, such as making a bed or changing the sheets, even prior to having symptoms of COPD. This led them to give a score of 0 for most of the items of this domain, considerably reducing the total score. Therefore, we suggest that the percentage of the total score also be used to interpret the scale, disregarding the questions in which the score is 0, as was done in the present study. We believe that the percentage of the total score can provide a better idea of the impairment of ADL, improving the interpretation of the degree of impairment of the patients.

For question 16, where the individuals performed a qualitative evaluation of how much shortness of breath affected the performance of their ADLs, we observed excellent inter-rater agreement (kappa = 0.87) and good intra-rater agreement

(kappa = 0.60). The intra-rater agreement was lower than the inter-rater agreement, and we believe that this finding is likely to have occurred at random, since the same did not occur in the other questions of the scale. In addition, a value of 0.60 is still considered a satisfactory coefficient of concordance, and, since it is not evaluated quantitatively, this variable does not affect the total score.

It is known that, in order to determine whether an evaluation instrument presents reproducibility over time, the clinical status of the patients at the first administration should be similar to that presented at the second administration. Clinical parameters have been used in order to confirm this equivalence.[10,12-14] In the present study, the parameters of clinical stability evaluated on the two days of administration were common COPD symptoms/characteristics (cough, volume/color of secreted expectoration, and dyspnea) and medication used. According to the GOLD, COPD exacerbation is characterized by changes in the basal symptoms,[1] and there is evidence that changes in FEV_1 are primarily related to changes in dyspnea.[27]

The total score of the LCADL scale presented a weak to moderate association with the degree of obstruction and with performance on the 6MWT. However, the correlation with distance covered increased when the percentage of the total score was used. Therefore, interpreting this instrument based on the percentage of the total score might provide a better profile of the functional impairment of patients with COPD. Garrod et al.[10] demonstrated that patients who scored higher on the LCADL scale also presented lower exercise capacity, as determined using the shuttle walk test. Nevertheless, in an earlier study, the same authors found that there was no correlation between the LCADL scale score and FEV_1.[9] It is known that FEV_1 is not strongly associated with the level of routine physical activities in patients with COPD, and that the 6MWT better reflects functional capacity to perform ADLs.[6]

The LCADL scale has great applicability in the assessment of the degree of impairment of ADL in COPD patients presenting a greater degree of disease severity. For such patients, dyspnea is an incapacitating symptom for even the most ordinary everyday activities. Other instruments, such as the Pulmonary Functional Status and Dyspnea Questionnaire[26] and the activity domains of some quality-of-life questionnaires, might not be as appropriate for assessing patients who are more severely impaired. In addition, these instruments should have sensitivity to assess response to interventions, such as pulmonary rehabilitation, which is one of the main therapeutic approaches to minimizing COPD patient intolerance to ADLs. The Nottingham Extended Activities of Daily Living scale,[28] despite having been shown to differentiate among patients with COPD on the basis of the level of functional impairment, was not found to be sensitive enough to detect improvement after pulmonary rehabilitation.[29] Another such instrument is the Manchester Respiratory Activities of Daily Living questionnaire, which is, however, aimed at assessing only elderly patients with COPD.[30]

Further studies are needed in order to determine the sensitivity of the Brazilian Portuguese version of the LCADL scale in determining patient responses to therapeutic interventions. However, we believe that interpreting a score of 5 ('I cannot perform this activity anymore due to shortness of breath and need someone to do it for me or help me') as including the use of supplemental oxygen can limit the use of this instrument in assessing patient response to oxygen therapy.

In conclusion, the Brazilian Portuguese version of the LCADL scale is a reliable and valid instrument for evaluating dyspnea during the performance of ADLs by patients with severe COPD.

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Appendix

Name:
Date of birth:
Do you live alone? ( ) Yes ( ) No

Personal care
1) Drying yourself after the shower _____
2) Clothing the upper part of your body (T-shirt, coat) _____
3) Putting on shoes/socks _____
4) Washing your hair _____

Household activities
5) Making your bed _____
6) Changing the sheets _____
7) Washing windows/curtains _____
8) Dusting _____
9) Doing the dishes _____
10) Vacuum cleaning/sweeping _____

Physical activities
11) Climbing stairs _____
12) Bending over _____
LEISURE ACTIVITIES
13) Walking in the home _____
14) Going out _____
15) Speaking/talking _____

General
16) How much does shortness of breath affect your performance of activities of daily living?
( ) Quite a bit ( ) Slightly ( ) Not at all

Score
0) I do not perform this activity (because I have never needed to or it is irrelevant).
1) I do not experience shortness of breath while performing this activity.
2) I experience mild shortness of breath while performing this activity.
3) I experience severe shortness of breath while performing this activity.
4) Due to shortness of breath, I cannot perform this activity anymore, and I do not have anyone to do it for me.
5) Due to shortness of breath, I cannot perform this activity anymore, and I need someone to help me or to do it for me.