

Original Article



Translation, Cultural Adaptation, and Validation of the Turkish Version of the St George's Respiratory Questionnaire for Idiopathic Pulmonary Fibrosis (SGRQ-I)

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ABSTRACT

OBJECTIVE: Idiopathic pulmonary fibrosis (IPF) substantially impairs health-related quality of life (HRQoL). The IPF-specific St George's Respiratory Questionnaire (SGRQ-I) is not available in Turkish. This study aimed to translate, culturally adapt, and validate the SGRQ-I for Turkish-speaking patients with IPF.

MATERIAL AND METHODS: Following international guidelines, the SGRQ-I underwent forward translation, reconciliation, back translation, developer review, and cognitive debriefing. Adult patients with IPF were consecutively recruited. Validity was assessed against the Turkish SGRQ and by examining associations with forced vital capacity (FVC), diffusing capacity for carbon monoxide (DLCO), the six-minute walk test (6MWT), gender-age-physiology (GAP) stage, modified Medical Research Council (mMRC) grade, and long-term oxygen therapy (LTOT) status. Test-retest reliability was assessed over seven days in clinically stable patients.

RESULTS: One hundred eighty patients were included (mean age 66.3±10.0 years; 36% male). Agreement with the SGRQ was excellent for the activities, impact, and total scores [intraclass correlation coefficients (ICC) >0.90] and moderate for the symptoms score. The SGRQ-I total score was significantly correlated with FVC% ($r = -0.476$), DLCO% ($r = -0.406$), and 6MWT distance ($r = -0.462$, all $P < 0.001$). SGRQ-I scores differed significantly across groups stratified by DLCO%, GAP stage, mMRC grade, and LTOT status ($P < 0.01$). Test-retest reliability was good to excellent, with ICCs ranging from 0.891 to 0.962.

CONCLUSION: The Turkish SGRQ-I is a valid and reliable instrument for assessing HRQoL in IPF, supporting its use in clinical practice and multinational research.

KEYWORDS: Idiopathic pulmonary fibrosis, quality of life, SGRQ, validation, reliability, translation

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INTRODUCTION

Health-related quality of life (HRQoL) is a pivotal endpoint in chronic respiratory diseases, as clinical stabilization does not always reflect the full impact of the disease on patients' daily functioning and overall well-being. The St George's Respiratory Questionnaire (SGRQ), originally devised for chronic airflow limitations,¹ has gained widespread adoption due to its robust

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psychometric properties and has been successfully translated into multiple languages^{2,3}—including Turkish⁴—while maintaining its validity and reliability.

Idiopathic pulmonary fibrosis (IPF) is a chronic, progressive interstitial lung disorder characterized by ongoing fibrosis of the lung parenchyma, leading to impaired gas exchange, persistent breathlessness, and markedly limited exercise capacity. The median life expectancy following diagnosis is generally reported to be around 3–5 years.⁵ In comparison with other long-term respiratory conditions such as chronic obstructive pulmonary disease (COPD), patients with IPF usually experience a faster deterioration in functional ability and HRQoL.⁵

To address this disease-specific burden, the St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis (SGRQ-I) was developed to capture IPF's unique symptomatology and functional impairments.⁶ Despite its demonstrated utility in IPF populations, no Turkish version of the SGRQ-I existed prior to our work. Ensuring conceptual equivalence and cultural relevance through a rigorous translation and adaptation process is essential for preserving the validity of patient-reported outcome (PRO) instruments.⁷

The goal of this study was to translate, culturally adapt, and psychometrically validate the SGRQ-I into Turkish for use among patients with IPF. A linguistically and culturally validated version of the SGRQ-I may facilitate standardized assessment of HRQoL among Turkish-speaking patients with IPF and support their inclusion in multinational research. The aim of this study was to translate and culturally adapt the SGRQ-I into Turkish and evaluate the validity and reliability of the Turkish version in patients with IPF.

MATERIAL AND METHODS

Study Design

This methodological, prospective study aimed to translate, culturally adapt, and validate the Turkish version of the SGRQ-I. Authorization to translate and validate the questionnaire was obtained from the original developer (Prof. J. Yorke).

The study protocol was approved by the Clinical Research Ethics Committee of University of Health Sciences Türkiye, Yedikule Chest Diseases and Thoracic Surgery Training and Research

Hospital (approval no: 2020-52, date: 03.12.2020). The study was registered at ClinicalTrials.gov (Identifier: NCT05147597). Written informed consent was obtained from all participants prior to enrollment.

Translation and Cultural Adaptation Process

This multi-step translation and cultural adaptation process—including developer permission, independent forward translations, reconciliation, blind back translation, developer review, and patient cognitive debriefing—aligns with established best practice guidelines in the field of PRO measures.^{8,9} The procedures performed are described below in a stepwise manner.

1. Permission and Preparation

Prior to translation, formal permission for adaptation was obtained from the questionnaire developer. The original English version of the SGRQ-I served as the reference text.

2. Forward Translation

Two independent native Turkish-speaking translators (translators 1 and 2) each produced a Turkish translation of the original questionnaire. The translations were performed one week apart to minimize recall bias.

3. Reconciliation

The two forward translations were compared in detail by the principal investigator, and a reconciled Turkish draft was produced through consensus. Differences in terminology, phrasing, and cultural relevance were discussed and resolved.

4. Back Translation

An independent bilingual translator, a native English speaker fluent in Turkish (translator 3), produced a back translation of the reconciled Turkish version into English. To ensure objectivity, this translator had no prior knowledge of the questionnaire.

5. Developer Review

The back-translated version and a reconciliation report were sent to the original questionnaire developer (Prof. J. Yorke) for review. Feedback from the developer was incorporated into revisions to ensure conceptual equivalence.

6. Pilot Testing (Cognitive Debriefing)

The pre-final Turkish version was administered to 10 patients diagnosed with IPF. Participants completed the questionnaire and were then interviewed using structured questions.

- “Did you understand this item?”
- “What does this mean to you?”
- “Can you explain it in your own words?”
- “Would you suggest an alternative wording?”

Based on patient feedback, minor modifications were made to improve clarity and cultural relevance.

Main Points

- A Turkish version of the St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis (SGRQ-I) was developed through a standardized cross-cultural adaptation process.
- The Turkish SGRQ-I demonstrated strong validity and excellent test-retest reliability.
- SGRQ-I scores were associated with physiological impairment, exercise capacity, dyspnea, and disease severity.
- The instrument can be used confidently in clinical practice and research involving Turkish-speaking patients with idiopathic pulmonary fibrosis.

7. Proofreading and Finalization

The final Turkish version was formatted identically to the source version. Two independent proofreaders (proofreader 1 and proofreader 2) sequentially reviewed the document for spelling, grammar, typography, and consistency. The corrected version was sent to the developer for final endorsement.

Participants

The study population consisted of patients diagnosed with IPF who were consecutively recruited from the University of Health Sciences Türkiye, Yedikule Chest Diseases and Thoracic Surgery Training and Research Hospital. The diagnosis of IPF was established in accordance with the international American Thoracic Society (ATS)/European Respiratory Society (ERS)/Japanese Respiratory Society/Latin American Thoracic Association diagnostic guidelines and on the basis of compatible clinical findings, high-resolution computed tomography findings, and multidisciplinary evaluation. Histopathological findings were considered when clinically indicated and available.¹⁰ Eligible participants were adults over 18 years of age who were literate in Turkish and had a confirmed diagnosis of IPF. Patients were excluded if they had experienced an acute exacerbation within the preceding six weeks, had comorbid conditions limiting ambulation, or exhibited cognitive impairment that could interfere with questionnaire completion.

In scale development studies, it is generally recommended to include at least five participants for each item, resulting in a sample size equal to at least five times the number of items.^{11,12} Since the original questionnaire contained 36 items, a total of 180 patients were included in the present study.

Outcome Measures and Data Collection

Participants were prospectively recruited between January 2022 and January 2026. At the baseline visit, demographic and clinical characteristics were recorded, pulmonary function and functional exercise capacity were assessed, and the Turkish SGRQ-I and the validated Turkish SGRQ were completed by participants. The SGRQ-I was re-administered seven days later for assessment of test-retest reliability. Demographic data and clinical characteristics were recorded for all participants. Pulmonary function was assessed by forced vital capacity (FVC, % predicted) and diffusing capacity of the lung for carbon monoxide (DLCO, % predicted), measured according to ATS/ERS guidelines.¹³ Long-term oxygen therapy (LTOT) status (yes/no) was also documented. Functional exercise capacity was evaluated using the six-minute walk test (6MWT),¹⁴ expressed in meters.

Dyspnea severity was evaluated with the modified Medical Research Council (mMRC) dyspnea scale,¹⁵ while overall disease severity was classified using the gender-age-physiology (GAP) index. The GAP model is a multidimensional staging tool designed for prognostic assessment in IPF. It integrates four routine clinical variables: sex, age, and two lung function parameters (FVC, % predicted, and DLCO, % predicted). Each component is assigned a point value according to predefined cut-offs, producing a cumulative score between 0 and 8. Based on this score, patients are categorized into stage I (0–3 points),

stage II (4–5 points), or stage III (6–8 points). Advancing GAP stage is associated with poorer survival, with approximate 1-year mortality rates of 6%, 16%, and 39% for the three stages, respectively. This model is frequently applied in both clinical care and research as a prognostic indicator, for patient counseling, and for risk stratification in therapeutic studies.¹⁶ Participants completed both the Turkish version of the SGRQ-I and the validated Turkish version of the SGRQ during routine visits. To test reproducibility, the SGRQ-I was re-administered to all patients after a 7-day interval. Clinical stability during the 7-day test-retest interval was defined as the absence of acute exacerbation, hospitalization, or clinically relevant change in treatment.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics for Windows, version 20.0 (IBM Corp., Armonk, NY, USA). Concurrent validity of the SGRQ-I was evaluated by analyzing its agreement with SGRQ by Bland-Altman analysis and intraclass correlation coefficients (ICC). Pearson correlation analysis was used to analyze the relationship between SGRQ-I and the clinical variables. Known-groups validity of SGRQ-I was explored by comparing it across patient groups stratified by DLCO% (<40% vs. ≥40%), GAP score, mMRC grade, and LTOT status (yes vs. no), using independent-samples t-test or one-way ANOVA test depending on the number of patient groups. SGRQ-I was administered twice, at a 7-day interval, to assess test-retest reliability. A paired-samples t-test was used to compare the test and retest scores for any meaningful difference. ICCs were calculated for each domain score and for the total score of SGRQ-I. ICC values were interpreted according to the thresholds proposed by Koo and Li¹⁷, with values <0.50 indicating poor, 0.50–0.75 moderate, 0.75–0.90 good, and >0.90 excellent reliability.

RESULTS

The final cohort included 180 patients, with no missing data. Demographic and clinical characteristics of the participants, together with SGRQ-I and SGRQ scores, are presented in Table 1.

Agreement between SGRQ-I and SGRQ, as measured by ICCs, was excellent for the activity and impact domain scores and the total score, whereas it was moderate for the symptoms domain, as shown in Table 2. The Bland-Altman analysis presented in Figure 1 also supported agreement between the questionnaires, demonstrating that the mean differences between SGRQ-I and SGRQ scores were close to zero for the activity, impact, and total scores, with most observations lying within the 95% limits of agreement. However, patients tended to score higher on the SGRQ-I, especially if they had a higher symptom burden. Correlations of the domain and total scores of the SGRQ-I with clinical variables, including FVC%, DLCO%, and 6MWT, were statistically significant, further supporting the concurrent validity of the SGRQ-I. However, correlations between the symptoms domain and clinical variables were relatively weaker than those for the other domains, as shown in Table 3.

Each domain score and the total score of the SGRQ-I differed significantly among patients when stratified by DLCO% (<40%

Table 1. Demographic and clinical characteristics	
	Mean ± SD or n (%)
Age (years)	66.33±10.04
Female sex, n (%)	115 (64%)
DLCO, % predicted	53.88±19.27
FVC, % predicted	65.92±20.47
LTOT, n (%)	32 (17%)
6MWT (m)	435±140
SGRQ-I	
Symptoms	47.22±27.51
Activities	60.21±25.97
Impact	27.92±28.27
Total	40.26±24.74
SGRQ	
Symptoms	38.13±21.14
Activities	56.80±26.65
Impact	27.77±25.81
Total	38.29±22.86

SD: standard deviation, DLCO: diffusing capacity of the lung for carbon monoxide, FVC: forced vital capacity, LTOT: long-term oxygen therapy, 6MWT: six-minute walk test, SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, SGRQ: St George's Respiratory Questionnaire

Table 2. Agreement between SGRQ-I and SGRQ	
SGRQ-I domain	ICC (95% CI)
Symptoms	0.580 (0.474–0.669)
Activities	0.906 (0.876–0.929)
Impact	0.923 (0.898–0.942)
Total	0.940 (0.920–0.955)

SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, SGRQ: St George's Respiratory Questionnaire, ICC: intraclass correlation coefficient, CI: confidence interval

Table 3. Association of SGRQ-I with clinical variables				
		FVC %	DLCO %	6MWT
SGRQ-I symptoms	r	−0.304	−0.269	−0.216
	P	<0.001	<0.001	0.007
SGRQ-I activities	r	−0.466	−0.395	−0.462
	P	<0.001	<0.001	<0.001
SGRQ-I impact	r	−0.451	−0.381	−0.452
	P	<0.001	<0.001	<0.001
SGRQ-I total	r	−0.476	−0.406	−0.462
	P	<0.001	<0.001	<0.001

SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, FVC: forced vital capacity, DLCO: diffusing capacity of the lung for carbon monoxide, 6MWT: six-minute walk test

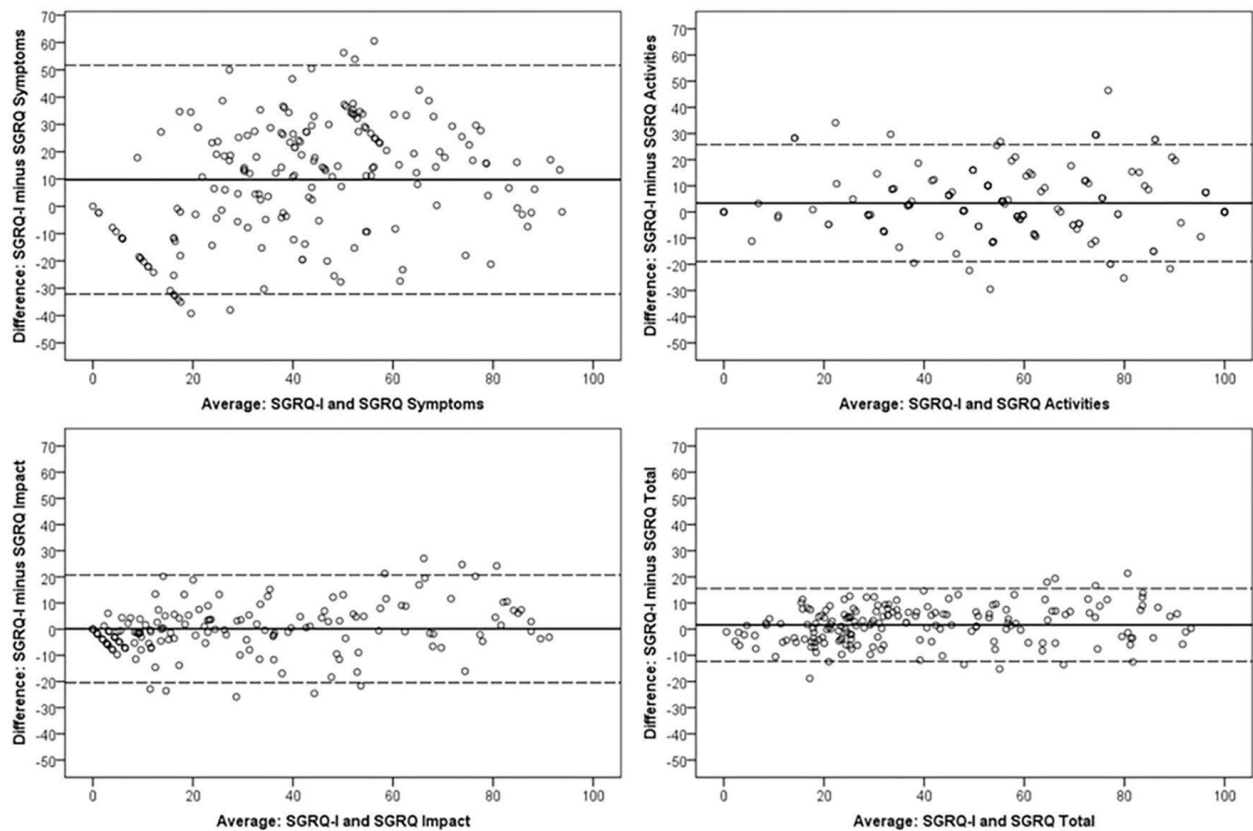


Figure 1. Bland-Altman plots showing agreement between SGRQ-I and SGRQ scores for the symptoms, activities, impact, and total domains. The solid horizontal line represents the mean difference between the two instruments, and the dashed lines represent the upper and lower 95% limits of agreement (mean difference ± 1.96 SD)

SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, SGRQ: St George's Respiratory Questionnaire, SD: standard deviation

vs. $\geq 40\%$), GAP stage, mMRC grade, and LTOT status (yes vs. no) ($P < 0.01$). A comparison of the total SGRQ-I scores across patient groups is presented in Figure 2.

The final analysis included 180 participants with complete data. The SGRQ-I was re-administered seven days after the baseline assessment for test-retest reliability. Test-retest reliability was good to excellent, with ICCs ranging from 0.891 to 0.962 across the domains and the total score; corresponding 95% confidence intervals are presented in Table 4. Paired-samples t-tests showed no significant differences between test and retest scores (all $P > 0.05$).

DISCUSSION

The Turkish version of the SGRQ-I demonstrated strong concurrent validity with the original Turkish SGRQ. ICCs were excellent for the activities, impact, and total scores (ICC > 0.90)

and moderate for the symptoms domain, closely mirroring the patterns observed in the original English validation¹⁸ and derived version studies.¹⁹ Bland-Altman analysis confirmed the agreement between the two instruments, with mean differences near zero for most domains. Similar domain-specific variability, particularly lower correlations for symptoms, has been reported in other adaptations,^{8,20} suggesting that symptom perception may be influenced by disease-specific and cultural factors.

The SGRQ-I effectively discriminated between patient groups stratified by DLCO%, GAP stage, mMRC grade, and LTOT status, with all comparisons reaching statistical significance. Patients with more advanced disease, worse gas exchange, or greater dyspnea burden had significantly higher (worse) SGRQ-I scores. These findings are consistent with prior work demonstrating the sensitivity of SGRQ-I to clinically relevant differences in disease severity in IPF populations.^{18,21,22}

Test-retest analysis over a 7-day interval in clinically stable patients revealed no significant differences between repeated administrations, and ICCs indicated good-to-excellent reliability. These values align with previous validations, including the Brazilian-Portuguese⁸ and Spanish²⁰ versions, which reported ICCs above 0.88.

Our psychometric findings parallel those of the Spanish²⁰ and Brazilian-Portuguese⁸ adaptations, both of which demonstrated high internal consistency (Cronbach $\alpha > 0.90$), strong test-

Table 4. Test-retest reliability of SGRQ-I

SGRQ-I domain	ICC (95% CI)
Symptoms	0.891 (0.857–0.918)
Activities	0.936 (0.915–0.952)
Impact	0.952 (0.936–0.964)
Total	0.962 (0.949–0.972)

SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, ICC: intraclass correlation coefficient, CI: confidence interval

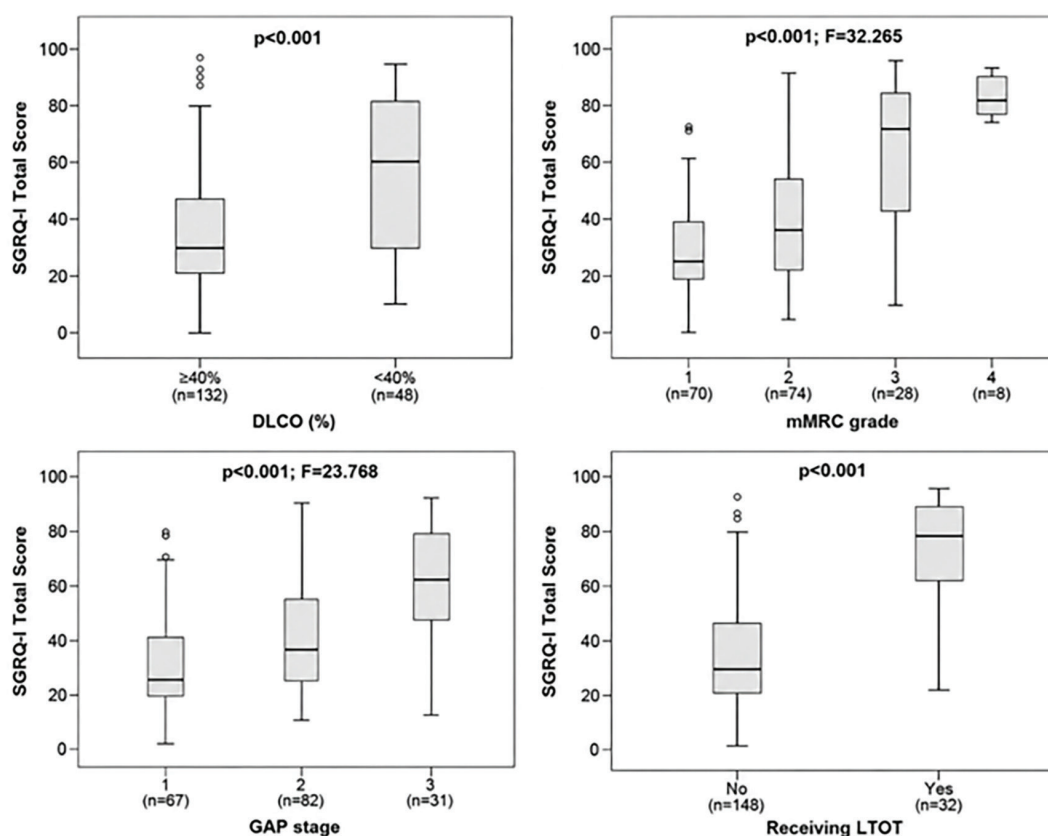


Figure 2. Total SGRQ-I scores according to DLCO%, GAP stage, mMRC grade, and LTOT status. Group comparisons were performed using independent-samples t-tests or one-way analysis of variance (ANOVA), depending on the number of groups, as described in the statistical analysis section

SGRQ-I: St George's Respiratory Questionnaire for idiopathic pulmonary fibrosis, DLCO: diffusing capacity of the lung for carbon monoxide, GAP: gender-age-physiology, mMRC: modified Medical Research Council, LTOT: long-term oxygen therapy

retest reliability, and robust construct validity. Cross-cultural adaptations have consistently shown that SGRQ-I retains its measurement properties across diverse settings.

Reliability coefficients were consistently high across all domains, supporting the instrument's stability for repeated measurements. The slightly lower reliability in the symptoms domain has also been noted in the original validation¹⁸ and may reflect day-to-day symptom variability in IPF.

Several PRO measures are employed to evaluate HRQoL in IPF, each with unique strengths and limitations. The King's Brief Interstitial Lung Disease (K-BILD) questionnaire is a concise, ILD-specific instrument validated for IPF, offering reduced respondent burden compared to longer tools.²³ However, it lacks direct comparability with COPD cohorts or the extensive historical datasets available for the SGRQ.^{1,7,18,24} The original SGRQ, though psychometrically robust, was developed for obstructive lung diseases and may not fully capture IPF-specific symptomatology and functional limitations.^{7,24} Swigris et al.²⁴ reviewed SGRQ's performance in IPF populations, affirming its utility, but emphasized that the disease-specific modifications in the SGRQ-I improve responsiveness and interpretability.^{7,21}

Other instruments have also been explored in IPF. The COPD assessment test, while originally developed for COPD, has demonstrated significant correlations with SGRQ scores and physiological parameters in IPF patients, indicating its validity as a measure of health status in this group.²⁵ The Leicester Cough Questionnaire addresses the impact of chronic cough—a cardinal feature in IPF—but focuses solely on cough-related domains and does not encompass broader HRQoL constructs. Other tools, such as the Needs Assessment Tool: Progressive Disease–Interstitial Lung Disease, target supportive care and palliative needs rather than HRQoL per se;²⁶ further illustrating the complementary value of the SGRQ-I, which captures both respiratory-specific health status and functional impairment in a disease-sensitive manner.

In our study, SGRQ-I scores were significantly correlated with DLCO%, 6MWT distance, and symptom burden, consistent with previous evidence. Amin et al.²⁷ demonstrated in a heterogeneous ILD cohort (including IPF) that DLCO% predicted was strongly associated with both 6MWT distance and SGRQ total score. In contrast, FVC% predicted showed no significant correlation with SGRQ, suggesting that DLCO may be a more sensitive physiological marker of HRQoL than FVC in ILD populations. Our findings in a cohort composed solely of IPF patients are consistent with these results, reinforcing the notion that reduced gas exchange capacity more closely reflects functional limitation and HRQoL impairment than do spirometric measures alone. In larger IPF-specific cohorts, higher GAP stage, reduced FVC and DLCO, and shorter 6MWT distances have been linked to poorer HRQoL outcomes. For example, in the IPF-PRO registry cohort ($n = 829$), each 10% decrease in DLCO% predicted corresponded to a significant increase in SGRQ total score—specifically, by 5.0 points.²⁸ This underscores the profound connection between physiological decline in gas exchange and deteriorating HRQoL in IPF.²⁸ Additionally, components of the SGRQ-I—across activity,

impact, and total scores—have shown moderate to strong correlations with FVC%, DLCO%, and mMRC dyspnea grade in validation studies.²⁹ These findings underscore the central role of dyspnea in HRQoL impairment. The alignment of SGRQ-I scores with functional capacity, gas exchange, dyspnea severity, and GAP staging affirms its clinical relevance in capturing the multidimensional burden of IPF.

While tools such as the K-BILD have also been validated in IPF,²³ SGRQ-I offers the advantage of direct comparability with COPD cohorts and large historical datasets, while preserving IPF-specific sensitivity.^{18,19}

Strengths of the Study

This study benefits from a robust translation and cultural adaptation process that adheres to international guidelines, and from the direct involvement of the original questionnaire developer. The sample size was larger than in some prior adaptations,^{8,20} enhancing the precision of the validity and reliability estimates.

Study Limitations

Due to its cross-sectional design, the study could not assess responsiveness to change; therefore, the longitudinal validity of the instrument remains to be determined. Furthermore, the single-center design may limit the generalizability of the findings to the broader Turkish IPF population. The relatively low proportion of male participants in the study cohort should be considered when interpreting the representativeness and generalizability of the findings. Although concurrent validity was assessed using the validated Turkish SGRQ and associations with relevant clinical measures were examined, the inclusion of an additional ILD-specific PRO measure, such as the K-BILD, could have strengthened the assessment of convergent validity. Additionally, subtle cultural differences may influence symptom reporting, warrant exploration in multicenter cohorts.

CONCLUSION

The findings of this study suggest that the Turkish version of the SGRQ-I is a valid and reliable instrument for assessing HRQoL in Turkish-speaking patients with IPF. The instrument may be useful for HRQoL assessment in clinical practice and facilitate the inclusion of Turkish-speaking patients in multinational studies using standardized PRO. Further multicenter, longitudinal studies are warranted to confirm its generalizability and to determine its responsiveness and the minimal clinically important difference.

Ethics

Ethics Committee Approval: The study protocol was approved by the Clinical Research Ethics Committee of University of Health Sciences Türkiye, Yedikule Chest Diseases and Thoracic Surgery Training and Research Hospital (approval no: 2020-52, date: 03.12.2020). The study was registered at ClinicalTrials.gov (Identifier: NCT05147597).

Informed Consent: Written informed consent was obtained from all participants prior to enrollment.

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Footnotes

Authorship Contributions

Surgical and Medical Practices: E.P., Z.B.Ö., C.K., F.S.K., R.E., B.D., U.İ., H.Ç., E.Ç., Concept: E.P., Design: E.P., Data Collection or Processing: E.P., Z.B.Ö., C.K., F.S.K., R.E., B.D., U.İ., Analysis or Interpretation: M.Z., Literature Search: E.P., R.E., B.D., U.İ., Writing: E.P., M.Z., H.Ç., E.Ç.

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Permission to Reproduce Material from Other Sources:

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REFERENCES

- Jones PW, Quirk FH, Baveystock CM. The St George's Respiratory Questionnaire. *Respir Med.* 1991;85(Suppl B):25-31; discussion 33-37. [\[Crossref\]](#)
- Barr JT, Schumacher GE, Freeman S, LeMoine M, Bakst AW, Jones PW. American translation, modification, and validation of the St. George's Respiratory Questionnaire. *Clin Ther.* 2000;22(9):1121-1145. [\[Crossref\]](#)
- Sherpa CT, LeClerq SL, Singh S, et al. Validation of the St. George's Respiratory Questionnaire in Nepal. *Chronic Obstr Pulm Dis.* 2015;2(4):281-289. [\[Crossref\]](#)
- Polatlı M, Yorgancıoğlu A, Aydemir Ö, et al. St. George solunum anketinin Türkçe geçerlilik ve güvenilirliği [Validity and reliability of Turkish version of St. George's respiratory questionnaire]. *Tuberk Toraks.* 2013;61(2):81-87. Turkish. [\[Crossref\]](#)
- Lynch JP 3rd, Huynh RH, Fishbein MC, Saggar R, Belperio JA, Weigt SS. Idiopathic pulmonary fibrosis: epidemiology, clinical features, prognosis, and management. *Semin Respir Crit Care Med.* 2016;37(3):331-357. [\[Crossref\]](#)
- Yorke J, Jones PW, Swigris JJ. Development and validity testing of an IPF-specific version of the St George's Respiratory Questionnaire. *Thorax.* 2010;65(10):921-926. [\[Crossref\]](#)
- Wild D, Grove A, Martin M, et al.; ISPOR Task Force for Translation and Cultural Adaptation. Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation. *Value Health.* 2005;8(2):94-104. [\[Crossref\]](#)
- Aguiar WF, Mantoani LC, Silva H, et al. Translation, cross-cultural adaptation, and measurement properties of the Brazilian-Portuguese version of the idiopathic pulmonary fibrosis-specific version of the Saint George's Respiratory Questionnaire (SGRQ-I) for patients with interstitial lung disease. *Braz J Phys Ther.* 2021;25(6):794-802. [\[Crossref\]](#)
- Acquadro C, Bayles A, Juniper E. Translating patient-reported outcome measures: a multi-step process is essential. *J Bras Pneumol.* 2014;40(3):211-212. [\[Crossref\]](#)
- Raghu G, Remy-Jardin M, Myers JL, et al.; American Thoracic Society, European Respiratory Society, Japanese Respiratory Society, and Latin American Thoracic Society. Diagnosis of idiopathic pulmonary fibrosis. An Official ATS/ERS/JRS/ALAT Clinical Practice Guideline. *Am J Respir Crit Care Med.* 2018;198(5):e44-e68. [\[Crossref\]](#)
- Cruchinho P, López-Franco MD, Capelas ML, et al.; Handovers4SafeCare. Translation, cross-cultural adaptation, and validation of measurement instruments: a practical guideline for novice researchers. *J Multidiscip Healthc.* 2024;17:2701-2728. [\[Crossref\]](#)
- Alpar R. Uygulamalı istatistik ve geçerlik-güvenirlilik: spor, sağlık ve eğitim bilimlerinden örneklerle (3. baskı). Ankara: Detay Yayıncılık. 2014. [\[Crossref\]](#)
- Stanojevic S, Kaminsky DA, Miller MR, et al. ERS/ATS technical standard on interpretive strategies for routine lung function tests. *Eur Respir J.* 2022;60(1):2101499. [\[Crossref\]](#)
- ATS Committee on Proficiency Standards for Clinical Pulmonary Function Laboratories. ATS statement: guidelines for the six-minute walk test. *Am J Respir Crit Care Med.* 2002;166(1):111-7. Erratum in: *Am J Respir Crit Care Med.* 2016;193(10):1185. [\[Crossref\]](#)
- Bestall JC, Paul EA, Garrod R, Garnham R, Jones PW, Wedzicha JA. Usefulness of the Medical Research Council (MRC) dyspnoea scale as a measure of disability in patients with chronic obstructive pulmonary disease. *Thorax.* 1999;54(7):581-586. [\[Crossref\]](#)
- Ley B, Ryerson CJ, Vittinghoff E, et al. A multidimensional index and staging system for idiopathic pulmonary fibrosis. *Ann Intern Med.* 2012;156(10):684-691. [\[Crossref\]](#)
- Koo TK, Li MY. A Guideline of selecting and reporting intraclass correlation coefficients for reliability research. *J Chiropr Med.* 2016;15(2):155-163. Erratum in: *J Chiropr Med.* 2017;16(4):346. [\[Crossref\]](#)
- Prior TS, Hoyer N, Shaker SB, et al. Validation of the IPF-specific version of St. George's Respiratory Questionnaire. *Respir Res.* 2019;20(1):199. [\[Crossref\]](#)
- Prior TS, Hoyer N, Shaker SB, et al. Validation of a derived version of the IPF-specific Saint George's Respiratory Questionnaire. *Respir Res.* 2021;22(1):259. [\[Crossref\]](#)
- Capparelli I, Fernandez M, Saadia Otero M, et al. Translation to Spanish and validation of the specific Saint George's Questionnaire for idiopathic pulmonary fibrosis. *Arch Bronconeumol (Engl Ed).* 2018;54(2):68-73. English, Spanish. [\[Crossref\]](#)
- Prior TS, Hoyer N, Hilberg O, Shaker SB, Davidsen JR, Bendstrup E. Responsiveness and minimal clinically important difference of SGRQ-I and K-BILD in idiopathic pulmonary fibrosis. *Respir Res.* 2020;21(1):91. [\[Crossref\]](#)
- Zhao G, Lei S, Li Y, Feng Z, Li J. Health-related quality of life and health state utility value in idiopathic pulmonary fibrosis: a systematic review and meta-analysis. *Health Qual Life Outcomes.* 2025;23(1):3. [\[Crossref\]](#)
- Patel AS, Siegert RJ, Brignall K, et al. The development and validation of the King's Brief Interstitial Lung Disease (K-BILD) health status questionnaire. *Thorax.* 2012;67(9):804-810. [\[Crossref\]](#)
- Swigris JJ, Esser D, Conoscenti CS, Brown KK. The psychometric properties of the St George's Respiratory Questionnaire (SGRQ) in patients with idiopathic pulmonary fibrosis: a literature review. *Health Qual Life Outcomes.* 2014;12:124. [\[Crossref\]](#)
- Matsuda T, Taniguchi H, Ando M, et al. COPD assessment test for measurement of health status in patients with idiopathic pulmonary fibrosis: a cross-sectional study. *Respirology.* 2017;22(4):721-727. [\[Crossref\]](#)

26. Johnson MJ, Jamali A, Ross J, et al. Psychometric validation of the needs assessment tool: progressive disease in interstitial lung disease. *Thorax*. 2018;73(9):880-883. [\[Crossref\]](#)
27. Amin R, Vaishali K, Maiya GA, et al. Relationships between disease severity and measures of health status in people with interstitial lung disease in India: an observational study. *Sci Rep*. 2025;15(1):16985. [\[Crossref\]](#)
28. O'Brien EC, Hellkamp AS, Neely ML, et al.; IPF-PRO registry investigators. Disease severity and quality of life in patients with idiopathic pulmonary fibrosis: a cross-sectional analysis of the IPF-PRO registry. *Chest*. 2020;157(5):1188-1198. [\[Crossref\]](#)
29. Akihiko S, Tomohiro H, Toru O, et al. The association between health-related quality of life and disease progression in idiopathic pulmonary fibrosis: a prospective cohort study. *Sarcoidosis Vasc Diffuse Lung Dis*. 2017;34(3):226-235. [\[Crossref\]](#)