KBB Uygulamaları 2022;10(2):68-76
doi: 10.5606/kbbu.2022.87059

Original Article / *Özgün Makale*

OPEN ACCESS

Psychometric properties of the Turkish version of the Facial Clinimetric Evaluation scale for patients with Bell's palsy

Bell paralizisi hastaları için Fasiyal Klinimetrik Değerlendirme skalasının Türkçe versiyonunun psikometrik özellikleri

Sevtap Badıl Güloğlu[1], Mustafa Çelik[2]

[1]*Department of Physical Medicine and Rehabilitation, Kafkas University Faculty of Medicine, Kars, Türkiye*
[2]*Department of Audiology, Istanbul Gelişim University, Faculty of Health Science, Istanbul, Türkiye*

ABSTRACT

Objectives: This study aimed to translate the Facial Clinimetric Evaluation (FaCE) scale into Turkish and then validate the Turkish version (FaCE-T) for use in Turkish patients.

Patients and Methods: This reliability and validity study was conducted between July 2018 and October 2019. Thirty patients (14 males, 16 females; mean age: 48.2±7.8 years, range 18 to 72 years) with unilateral and peripheral facial paralysis who were able to write and read Turkish were included in the study. The control group consisted of 52 healthy subjects (24 males, 28 females; mean age: 41.3±9.6 years, range 18 to 73 years) with intact facial nerves and no history of facial paralysis. The reliability of the FaCE-T was analyzed according to its internal consistency and test-retest reproducibility. Test-retest reliability was computed by comparing the FaCE-T outcomes received at the first and second visits of the study group. Discriminant validity was computed by comparing the FaCE-T scores of the study and control groups. The responsivity to changes in Bell's palsy effects have been analyzed by comparing the pre- and post-treatment FaCE-T scores of the patients.

Results: In the study group, total and subscale FaCE-T scores were significantly lower than in the control group (p=0.0001). In the study group, FaCE-T scores and the total score were significantly higher after treatment than before treatment (p=0.0001). The internal consistency of the FaCE-T scale was high, and Cronbach's alpha was 0.960 before treatment and 0.893 after treatment. A significant difference was not observed between the first and last test evaluations of the FaCE-T scale in facial mobility, facial comfort, oral function, eye comfort, lacrimal comfort, social function, and the total score (all p>0.05).

Conclusion: In this study, the FaCE-T questionnaire was found to be reliable, consistent, and valid for the Turkish population. The FaCE-T questionnaire is an appropriate questionnaire for the assessment of disease-specific quality of life in Turkish patients with facial paralysis.

Keywords: Facial Clinimetric Evaluation scale, facial paralysis, Turkish, validity.

ÖZ

Amaç: Bu çalışmada, Fasiyal Klinimetrik Değerlendirme (FaCE) skalasının Türkçe'ye tercüme edilmesi ve Türk hastalarda kullanımı için Türkçe versiyonun (FaCE-T) geçerliliğinin doğrulanması amaçlandı.

Hastalar ve Yöntemler: Bu güvenirlik ve geçerlik çalışması Temmuz 2018 - Ekim 2019 tarihleri arasında yürütüldü. Bu çalışmaya Türkçe okuma ve yazması olan, tek taraflı ve periferik fasiyal paralizisi olan 30 hasta (14 males, 16 females; mean age: 48.2±7.8 years, range 18 to 72 years) dahil edildi. Kontrol grubu, fasiyal paralizi öyküsü olmayan fasiyal sinir fonksiyonlarının normal olduğu sağlıklı 52 katılımcıdan (24 erkek, 28 kadın; ot. yaş: 41.3±9.6 yıl, dağılım 18-73 yıl) oluşturuldu. İçsel tutarlılık ve test-tekrar test tekrarlanabilirliği ile FaCE-T anketinin güvenirliği belirlendi. Test-tekrar test güvenirliği, çalışma grubunun birinci ve ikinci ziyaretinde alınan FaCE-T sonuçlarının karşılaştırılması kullanılarak hesaplandı. Ayırt edici geçerlik, çalışma ve kontrol gruplarının FaCE-T puanlarının karşılaştırılması ile hesaplandı. Bell paralizisi etkilerinin değişimine duyarlılığı, hastaların tedavi öncesi ve sonrası FaCE-T skorları karşılaştırılarak analiz edildi.

Bulgular: Çalışma grubunda FaCE-T toplam ve alt alan skorları, kontrol grubuna kıyasla anlamlı düzeyde düşük idi (p=0.0001). Çalışma grubunda, FaCE-T skorları ve toplam skor tedavi sonrasında tedavi öncesine kıyasla anlamlı olarak daha yüksek idi (p=0.0001). Fasiyal Klinimetrik Değerlendirme skalasının Türkçe versiyonunun içsel tutarlılığı yüksek idi ve Cronbach alfa değeri tedavi öncesi 0.960 iken tedavi sonrası 0.893 idi. Yüz hareketliliği, yüz konforu, oral fonksiyon, göz konforu, lakrimal konfor, sosyal fonksiyon ve toplam skorda FaCE-T ölçeğinin ilk test ve son test değerlendirmeleri arasında anlamlı farklılık gözlenmedi (tümü p>0.05).

Sonuç: Bu çalışmada, FaCE-T anketinin Türk toplumu için güvenilir, tutarlı ve geçerli bir anket olduğu görüldü. Fasiyal Klinimetrik Değerlendirme anketinin Türkçe versiyonu, fasyal paralizili Türk hastalarının hastalığa özgü yaşam kalitesinin değerlendirilmesi için uygun bir ankettir.

Anahtar sözcükler: Fasyal Klinimetrik değerlendirme anketi, yüz felci, Türkçe, geçerlik.

Received: March 28, 2022 *Accepted:* August 08, 2022 *Published online*: September 13, 2022

Correspondence: Mustafa Çelik, MD. İstanbul Gelişim Üniversitesi, Sağlık Bilimleri Fakültesi, Odyoloji Bölümü, 34310 Avcılar, İstanbul, Türkiye.
e-mail: dr.mcelik@yahoo.com

Citation:

Badıl Güloğlu S, Çelik M. Psychometric properties of the Turkish version of the Facial Clinimetric Evaluation scale for patients with Bell's palsy. KBB Uygulamaları 2022;10(2):68-76.

Bell's palsy (BP) was first described by Charles Bell[1] in 1821 as the weakness of the muscles on one half of the face. The diagnosis of BP is one of exclusion, and viral pathogens have been accused as etiological agents in studies conducted on this subject. Although there is no consensus on the current treatment modality, the spontaneous recovery rate has been reported to be between 70 and 90%.[2,3]

In BP cases, treatment outcomes and assessment of the quality of life (QoL) have recently become popular. Generally, the response of the patients to the treatment is evaluated by the clinicians according to various classification systems, while the change in the QoL of the patients from the perspective of the patients is often incomplete.[4]

In recent studies, it is recommended to evaluate the QoL in patients with facial paralysis.[5,6] In this context, QoL questionnaires are suitable tools that allow quantitative evaluation of subjective outcomes, such as patient satisfaction and consequent treatment success. Although there are questionnaires that assess the overall QoL, such as Short Form (SF)-36, the use of a disease-specific questionnaire will allow for a more accurate assessment of the results. It may be difficult to analyze the patient's motivation and expectations in detail in the short outpatient period. Therefore, the questionnaires to be used should be designed in a short time. However, it has been shown in previous studies that short questionnaires are effective and valuable in evaluating BP cases.[5,7] Based on this philosophy, Kahn et al.[8] developed the Facial Clinimetric Evaluation (FaCE) scale, which provides functional and psychosocial evaluation of facial paralysis cases. This questionnaire consists of 15 questions with five options. According to the answers given to these questions, there are six specific subscales: social function, facial mobility, facial comfort, oral function, eye comfort, and lacrimal control. Each subscale and total FaCE score is calculated by a specific formulation specified by the authors. The rating ranges from 0 (worst) to 100 (best). The original form of this questionnaire was translated into various languages (German, French, Dutch, and Chinese), and the cultural adaptation was achieved through validation studies.[4,7-10] It is not enough to translate a questionnaire for use in different languages. Validation and cultural adaptation studies should be performed. The existing questionnaires need to be carefully adapted to allow a comparison of the data obtained with the new questionnaires developed from the existing surveys in the literature. In this study, the FaCE scale was translated into Turkish, and the Turkish version of the FaCE questionnaire (FaCE-T) was developed for use in Turkish society.

PATIENTS AND METHODS

This reliability and validity study was conducted between July 2018 and October 2019 at the Otorhinolaryngology and Physical Medicine and Rehabilitation clinics of Kafkas University Hospital. Thirty patients (14 males, 16 females; mean age: 48.2±7.8 years, range 18 to 72 years) with unilateral and peripheral facial paralysis who were able to write and read Turkish were included in the study. Patients who did not have any etiology according to diagnostic tests and examinations (medical history, complete otolaryngologic examination, serology, and radiological imaging) were included in the study group. Patients with previous facial paralysis, history of trauma, otological and neurologic surgery, otitis complications, central facial paralysis, congenital facial paralysis, and bilateral cases were excluded. The control group consisted of 52 healthy subjects (24 males and 28 females; mean age: 41.3±9.6 years, range 18 to 73 years) with intact facial nerves and no history of facial paralysis. The control group included the staff of our hospital and the students of our university.

Translation and cultural adaptation phase

The FaCE-T scale is a forward- and backward-translated version of the FaCE scale. Translation and cultural adaptation of the FaCE scale was performed according to the criteria of Guillemin et al.[11] The original English version of the questionnaire was translated into Turkish by two native speakers. The two translations were then compared, and a common translation was agreed upon. This final translation was then translated from Turkish to English by two different translators. The final translation was created by comparing these two translations. This translation was compared to the original version and the differences were corrected. In the cultural adaptation phase, the questionnaire was filled out by 20 healthy volunteers to check the intelligibility of the questionnaire, and it was found to be understandable (Appendix 1).

Data collection

The FACE-T questionnaire was completed by the participants in three visits. At the first visit, the FaCE-T questionnaire was completed by both the study and control groups. At the second and third visits, the FaCE-T questionnaire was completed only by the subjects in the study group. At the second visit, only the study group completed the FaCE-T questionnaire before treatment. After the second visit, patients received facial face exercises for 15 days. At the third visit, the FaCE-T questionnaire was

completed by the study group in the first month after treatment. In addition, the SF-36 questionnaire, which was validated in Turkish,[12] was filled in the first and third visits by the study group, and the facial paralysis degree was evaluated using the House-Brackman grading system (HBGS).

Statistical analysis

Statistical analysis was carried out using SPSS version 22.0 software (SPSS Inc., Chicago, IL, USA). The sample size was calculated according to the estimated sample size formula.[13] The number of cases to be taken into each group was determined with a 5% error margin, 80% power, and a standard effect size of 0.78. It was determined that at least 26 cases were required in each group. For all variables, descriptive statistics were measured, including frequencies and percentages for nominal variables and means, medians, and dispersion (standard deviations and ranges) for continuous variables. The Kolmogorov-Smirnov test was used to consider the distribution of the data. The value of every intergroup distinction was analyzed by Student's t-test, and the importance of any distinction in median values was evaluated through the Mann-Whitney U test or chi-square test. Quantitative facts were analyzed using the Wilcoxon test. Spearman correlation test was used for correlation analysis. The reliability of the FaCE-T was analyzed according to its internal consistency and test-retest reliability. Internal consistency was decided by calculating Cronbach's alpha, for which the minimum rating is 0.7. The test-retest reliability, a measure of stability and reproducibility, regards to the capability of a scale administered on separate occasions to acquire constant results. Test-retest reliability was computed by comparing the FaCE-T outcomes received at the first and second visits of the study group.

Discriminant validity was computed by comparing the FaCE-T rankings of the study and control groups using the Mann-Whitney U test and chi-square test. Responsivity and sensitiveness to changes in BP effects were analyzed by comparing the pre-and post-treatment FaCE-T scores of the patients. A p value <0.05 was considered statistically significant.

RESULTS

There was no statistically significant difference between the age and sex distribution of the subjects in the study and control groups (p=0.090 and p=0.964, respectively). In the study group, while 16 (53.3%) patients had facial paralysis on the left side, 14 (46.7%) patients had facial paralysis on the right half of the face. In the study group, significant improvement was detected in the HBGS after treatment (p=0.0001, Table 1).

In the study group, pre-treatment SF-36 scores (physical function, physical role, pain, vitality, general health, social function, emotional role, and mental health scores) were lower than in the control group (all p<0.05). Statistically significant improvement in SF-36 scores was observed after treatment in the study group (p<0.005, Table 2).

Discriminant validity of FaCE-T

In the study group, FaCE-T total score and subscale scores were significantly lower than the control group (p=0.0001, Table 3). These findings show that the

Table 1
Demographic characteristics of the groups

	Study group (n=30)					Control group (n=52)					
	n	%	Mean±SD	Median	Range	n	%	Mean±SD	Median	Range	p
Age (year)			48.2±7.8	53.0	18-72			41.3±9.6	35.0	19-73	0.090*
Sex											0.964†
Female	16	53.3				28	53.8				
Male	14	46.7				24	46.2				
Length (cm)			164.6±8.7	164.0				165.4±8.6	165.0		0.629*
Body weight (kg)			77.2±15.0	76.5				76.0±13.4	74.5		0.678*
Body mass index (kg/m^2)			28.5±5.3	28.9				27.8±4.5	27.8		0.544*
Side of paralysis											
Right	14	46.7				-	-				
Left	16	53.3				-	-				

SD: Standard deviation; * Mann-Whitney U test; † Chi-square test.

Table 2
Comparison of SF-36 scores of the groups

	Study group (n=30)		Control group (n=52)		
	Mean±SD	Median	Mean±SD	Median	*p**
Physical function					
Pre-treatment	77.7±26.0	87.5	97.3±6.1	100.0	**0.000**
Post-treatment	84.7±18.6	92.5			
P value	**0.015†**				
Physical role					
Pre-treatment	42.5±43.6	37.5	87.5±21.3	100.0	**0.000**
Post-treatment	72.5±38.5	100.0			
P value	**0.010†**				
Pain					
Pre-treatment	61.3±26.8	57.5	83.7±12.4	90.0	**0.000**
Post-treatment	70.0±26.2	76.3			
P value	**0.203†**				
General health					
Pre-treatment	42.8±23.4	35.0	48.0±9.8	45.0	0.120
Post-treatment	62.8±17.5	65.0			
P value	**0.002†**				
Vitability					
Pre-treatment	45.3±28.7	42.5	65.4±15.0	65.0	**0.001**
Post-treatment	58.8±19.0	57.5			
P value	**0.011†**				
Social function					
Pre-treatment	52.5±30.3	50.0	61.8±15.7	50.0	0.146
Post-treatment	70.0±24.9	75.0			
P value	**0.009†**				
Emotional role					
Pre-treatment	44.4±40.4	33.3	71.8±43.5	100.0	**0.002**
Post-treatment	72.2±36.2	100.0			
P value	**0.010†**				
Mental health					
Pre-treatment	52.7±28.1	50.0	60.8±18.7	60.0	0.171
Post-treatment	62.0±20.5	60.0			
P value	**0.027†**				

SF-36: Short Form-36; SD: Standard deviation; * Mann-Whitney U test; † Wilcoxon signed-rank test.

FaCE-T questionnaire can be used to differentiate between cases with BP and healthy subjects, which proves that the FaCE-T questionnaire has acceptable discriminant validity.

Responsiveness of FaCE-T to change in BP outcomes

In the study group, FaCE-T scores and total scores were significantly higher after treatment than before treatment (p=0.0001, Table 4). This shows that the FaCE-T questionnaire is effective and useful in determining the response to treatment of BP patients in the post-treatment period.

Reliability of FaCE-T

The test-retest method was applied to the study group in the pre-treatment period to minimize the effect of the treatment on the questionnaire scores. A significant

Table 3
Comparison of FaCE-T scores of the groups

	Study group (n=30)*		Control group (n=52)		
	Mean±SD	Median	Mean±SD	Median	*p*†
Facial mobility	23.9±26.7	16.7	98.6±6.5	100.0	0.000
Facial comfort	34.2±24.1	29.2	97.1±8.6	100.0	0.000
Oral function	44.2±32.6	37.5	97.8±5.9	100.0	0.000
Eye comfort	31.3±28.2	25.0	96.9±7.4	100.0	0.000
Lacrimal control	33.3±37.9	25.0	97.6±7.4	100.0	0.000
Social function	60.6±30.1	62.5	97.4±5.9	100.0	0.000
Total score	40.1±20.3	36.7	97.6±4.4	100.0	0.000

FaCE-T: The Turkish Version of Facial Clinimetric Evaluation; SD: Standard deviation; * Pre-treatment; † Mann-Whitney U test.

Table 4
Responsiveness of FaCE-T to changes in BP outcomes

	Pre-treatment		Post-treatment		
	Mean±SD	Median	Mean±SD	Median	*p**
Facial mobility	23.9±26.7	16.7	68.9±31.4	79.2	**0.000**
Facial comfort	34.2±24.1	29.2	65.6±32.8	75.0	**0.000**
Oral function	44.2±32.6	37.5	79.6±29.4	100.0	**0.000**
Eye comfort	31.3±28.2	25.0	57.5±34.2	50.0	**0.002**
Lacrimal control	33.3±37.9	25.0	73.3±34.7	100.0	**0.000**
Social function	60.6±30.1	62.5	81.7±27.7	100.0	**0.001**
Total score	40.1±20.3	36.7	71.8±26.6	80.8	**0.000**

FaCE-T: The Turkish Version of Facial Clinimetric Evaluation; BP: Bell's palsy; SD: Standard deviation; * Wilcoxon signed-rank test.

Table 5
Test-retest reliability results of the FACE-T in BP patients

	Test		Re-test		
FaCE-T	Mean±SD	Median	Mean±SD	Median	*p**
Facial mobility	23.9±26.7	16.7	25.9±24.9	16.7	0.109
Facial comfort	34.2±24.1	29.2	33.0±27.0	33.3	0.428
Oral function	44.2±32.6	37.5	48.7±34.1	50.0	0.204
Eye comfort	31.3±28.2	25.0	29.3±29.7	25.0	0.204
Lacrimal control	33.3±37.9	25.0	44.0±42.1	25.0	0.076
Social function	60.6±30.1	62.5	61.0±28.3	62.5	0.812
Total score	40.1±20.3	36.7	41.4±22.1	38.3	0.267

FaCE-T: The Turkish Version of Facial Clinimetric Evaluation; BP: Bell's palsy; SD: Standard deviation; * Wilcoxon signed-rank test.

difference was not observed between the first and last test evaluations of FaCE-T facial mobility, facial comfort, oral function, eye comfort, lacrimal comfort, social function, and the total score (all p>0.05, Table 5).

The internal consistency of FaCE-T was high, and Cronbach's alpha was 0.960 before treatment and 0.893 after treatment. The correlation between FaCE-T scores and SF-36 and HBGS scores is summarized in Table 6.

Table 6
Evaluation of the correlation between FaCE-T scores and SF-36 scores

	Facial mobility	Facial comfort	Oral function	Eye comfort	Lacrimal control	Social function	Total score
HBGS							
r	-0.231	-0.070	-0.482	-0.292	-0.100	-0.334	-0.389
*p**	0.220	0.713	**0.007**	0.118	0.598	0.071	**0.034**
Physical function							
r	0.020	0.321	0.275	0.100	0.150	0.128	0.298
*p**	0.917	0.084	0.141	0.600	0.430	0.499	0.110
Physical role							
r	0.341	0.505	0.380	0.476	0.366	0.300	0.518
*p**	0.065	**0.004**	**0.038**	**0.008**	**0.046**	0.107	**0.003**
Pain							
r	0.161	0.324	0.364	0.227	0.337	0.155	0.398
*p**	0.397	0.081	**0.048**	0.229	0.068	0.414	**0.029**
General health							
r	0.211	0.255	0.168	0.269	0.054	0.234	0.293
*p**	0.263	0.174	0.373	0.150	0.777	0.214	0.117
Vitability							
r	0.141	0.384	0.136	0.472	0.027	0.579	0.522
*p**	0.458	**0.036**	0.474	**0.008**	0.886	**0.001**	**0.003**
Social function							
r	0.399	0.423	0.400	0.630	0.151	0.621	0.683
*p**	**0.029**	**0.020**	**0.028**	**0.000**	0.426	**0.000**	**0.000**
Emotional role							
r	0.500	0.433	0.371	0.425	0.429	0.388	0.592
*p**	**0.005**	**0.017**	**0.044**	**0.019**	0.018	**0.034**	**0.001**
Mental health							
r	0.095	0.282	0.082	0.407	-0.066	0.683	0.483
*p**	0.619	0.132	0.668	**0.025**	0.729	**0.000**	**0.007**

FaCE-T: The Turkish Version of Facial Clinimetric Evaluation; SF-36: Short Form-36; HBGS House-Brackman grading system; * Spearman Correlation test.

DISCUSSION

Bell's palsy is an important disease that has a significant impact on quality of life and should be accurately evaluated for therapeutic or research purposes.[1,5] Numerous questionnaires have been used in various studies to assess the QoL in BP cases.[4-8] The applicability of questionnaires evaluating patient satisfaction in clinical practice should be considered by clinicians.

Before using a questionnaire in a population outside its intended area, it must be translated, culturally adapted, evaluated for its psychometric properties, and compared with the original version. The studies involving these stages are validation studies and are valuable studies. However, loss of information, validity, or reliability is a risk for any validation study, and caution is required. The FaCE questionnaire is a questionnaire that can be easily applied in outpatient conditions. Therefore, the FaCE questionnaire was translated into Turkish, cultural adaptation was ensured, reliability and validation were performed, and FaCE-T version was created. Kahn et al.[8] considered, in designing the FaCE questionnaire, that the questionnaire was easy to implement. The version of FaCE-T developed after translation, and

cultural adaptation of this questionnaire was found to be understandable and easily applicable.

In this study, it was seen that the FaCE-T questionnaire had appropriate psychometric properties for the Turkish population. The Cronbach's alpha value, which indicates internal consistency, was quite high and was similar to the values obtained in validation studies conducted in different languages (German and Danish).[4,9] The results of this study showed that the FaCE-T scale is a valuable and reliable questionnaire for the evaluation of BP results. The FaCE-T questionnaire was found to be effective in discriminating between BP patients and healthy individuals (53.4±6.2 *vs.* 98.1±3.5, p<0.05). All FaCE-T subgroup scores and total scores were lower in the study group. This finding is consistent with previous validation studies.[4,7,10] The total and subgroup FaCE-T scores increased significantly in the study group compared to pre-treatment in the first month after treatment (all p values <0.05). In the comparison of test-retest reliability, the FaCE-T questionnaire was found to be quite consistent.

Numerous questionnaire and grading systems have been developed to be used in the evaluation of facial paralysis patients. In these grading systems, the evaluation of the physiological and anatomical changes in the face is in the foreground. Although there is no grading system that evaluates the effect of patients on the QoL, it has been shown in previous studies that there is withdrawal from social life and a decrease in social communication after facial paralysis.[9,10] There are also great differences between the degree of facial paralysis and the motivation of patients. An individual's educational status, socioeconomic status, and professional work life may be related to the degree of exposure to the disease. For example, a patient with Grade 4 facial paralysis may have no significant change in the QoL, while a Grade 2 facial paralysis patient may show a significant deterioration in the QoL enough to isolate himself from social life. In this study, there was a negative correlation between HBGS, a commonly used facial paralysis assessment system, and FaCE-T oral function and total questionnaire scores. However, there was no significant correlation between HBGS and FaCE-T facial mobility, facial comfort, eye comfort, lacrimal comfort, and social function scores. A negative correlation between HBGS and FaCE-T scores is expected due to HBGS's design. The findings of this study are consistent with previous studies.[4,7-10] Kahn et al.[8] reported that correlations between the FaCE scale and facial paralysis grading systems were not always as expected.

The use of a questionnaire that assesses disease-specific QoL results in healthier outcomes than surveys that assess overall QoL. Questionnaires assessing overall QoL may not be useful enough to assess the change in disease-specific QoL. Short form-36 and FaCE-T scores were correlated in this study. As SF-36 is a general health survey, a strong correlation is not expected. In this study, as in previous studies, there was no strong correlation between SF-36 and FaCE-T questionnaires.

The translation of the FaCE scale into Turkish and its validation for use in the Turkish community was conducted according to the highest standards for the translation of self-assessment questionnaires. This is one of the main strengths of our study. In addition, the discriminating power of the FaCE-T scale was determined by statistical differences in the pre- and post-treatment scores. The distinctive strength of the FaCE-T scale was tested in clinical practice, which is another feature that makes this work valuable.

The relatively small number of patients and the short follow-up period are among the main limitations of the study. In other studies, the most commonly used Facial Disability Index (FDI) questionnaire was correlated with FaCE,[7,9] whereas a FaCE and FDI correlation could not be made in this study. Since the Turkish validation study of the FDI questionnaire has not been conducted, the correlation between the two questionnaires could not be evaluated. In addition, we think that evaluating the QoL related to the same disease with two different questionnaires is unnecessary.

In conclusion, the FaCE-T questionnaire was found to be reliable, consistent, and valid for the Turkish population. The FaCE-T questionnaire is an appropriate questionnaire for the assessment of disease-specific QoL in Turkish patients with facial paralysis. The FaCE-T questionnaire, which was developed with the validation of previous studies, should be used in Turkish studies.

Ethics Committee Approval: The study protocol was approved by the Kafkas University Faculty of Medicine Ethics Committee (date/no: 26.06.2018/20). The study was conducted in accordance with the principles of the Declaration of Helsinki.

Patient Consent for Publication: Informed consent was obtained from all individual participants included in the study.

Data Sharing Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions: Idea, concept, design, control, data collection, analysis, references, materials: S.B.G., M.Ç.; Literature review, writing article: M.Ç.; Critical review: S.B.G.

Conflict of Interest: The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding: The authors received no financial support for the research and/or authorship of this article.

REFERENCES

1. Hohman MH, Hadlock TA. Etiology, diagnosis, and management of facial palsy: 2000 patients at a facial nerve center. Laryngoscope 2014;124:E283-93.
2. Hervochon R, Madelain V, Seiller I, Lahlou G, Nguyen Y, Tankéré F. CT and clinical prognostic factors in Bell's palsy: A study of 56 cases. Clin Otolaryngol 2019;44:861-4.
3. Güneş S, Çelik M, Çolak C, Olgun B. Does the degree of the mastoid pneumatization affect the side of bell palsy? J Craniofac Surg 2018;29:e362-e365.
4. Kleiss IJ, Beurskens CH, Stalmeier PF, Ingels KJ, Marres HA. Quality of life assessment in facial palsy: Validation of the Dutch Facial Clinimetric Evaluation Scale. Eur Arch Otorhinolaryngol 2015;272:2055-61.
5. Luijmes RE, Pouwels S, Beurskens CH, Kleiss IJ, Siemann I, Ingels KJ. Quality of life before and after different treatment modalities in peripheral facial palsy: A systematic review. Laryngoscope 2017;127:1044-51.
6. Ng JH, Ngo RY. The use of the facial clinimetric evaluation scale as a patient-based grading system in Bell's palsy. Laryngoscope 2013;123:1256-60.
7. Barry P, Mancini J, Alshukry A, Salburgo F, Lavieille JP, Montava M. Validation of French versions of the Facial Disability Index and the Facial Clinimetric Evaluation Scale, specific quality of life scales for peripheral facial palsy patients. Clin Otolaryngol 2019;44:313-22.
8. Kahn JB, Gliklich RE, Boyev KP, Stewart MG, Metson RB, McKenna MJ. Validation of a patient-graded instrument for facial nerve paralysis: The FaCE scale. Laryngoscope 2001;111:387-98.
9. Volk GF, Steigerwald F, Vitek P, Finkensieper M, Kreysa H, Guntinas-Lichius O. Facial Disability Index and Facial Clinimetric Evaluation Scale: Validation of the German versions. Laryngorhinootologie 2015;94:163-8.
10. Li Y, Jiang H, Wang K, Feng GD, Ding XY, Zha Y, et al. Quality of life survey on patients with peripheral facial paralysis by using Chinese version of the FaCE scale. Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi 2013;48:11-6.
11. Guillemin F, Bombardier C, Beaton D. Cross-cultural adaptation of health-related quality of life measures: Literature review and proposed guidelines. J Clin Epidemiol 1993;46:1417-32.
12. Koçyiğit H, Aydemir Ö, Fişek G, Ölmez N, Memiş A. Kısa Form-36 (KF-36)'nın Türkçe versiyonunun güvenirliliği ve geçerliliği. İlaç ve Tedavi Dergisi 1999;12:102-6.
13. Kelsey JL, Whittemore AS, Evans AS, Thompson WD, editors. Methods observational epidemiol. 2nd ed. Oxford: Oxford University Press; 1996.

Appendix 1: The Turkish version of the FaCE questionnaire (FaCE-T)

Türkçe Yüz Klinimetrik Değerlendirme Skalası

Aşağıdaki ifadeler yüzünüzün nasıl hareket ettiğini düşündüğünüzle ilgilidir. Bu sorulara daha önce de cevap vermiş olabilirsiniz. Lütfen bu sorulara en iyi şekilde cevap verin. Sadece bir seçeneği işaretleyin.

	Bir taraf	İki taraf	Zorluk yaşamıyorum
Yüzümü hareket ettirmeye çalıştığımda zorlandığımı farkediyorum:	1	2	0

(Not: Eğer her iki tarafta da sorun varsa, anketin geri kalanındaki soruları daha çok etkilenen tarafa göre yanıtlayın ya da her iki tarafı da eşit etkilenmiş olarak kabul edin).

Geçen haftada: (her satırda yalnızca bir numarayı işaretleyin)

Etkilenen tarafta:		Hiç	Sadece konsantre olursam	Biraz	Neredeyse normal	Normal
1.	Gülümsediğimde ağzımın kenarı yukarı çıkıyor	1	2	3	4	5
2.	Kaşımı kaldırabiliyorum	1	2	3	4	5
3.	Dudaklarımı büzdüğümde ağzımın etkilenen tarafı hareket ediyor	1	2	3	4	5

		Her zaman	Çoğu zaman	Bazen	Nadiren	Hiçbir zaman
4.	Yüzümün etkilenen tarafını gergin, yorgun ve rahatsız hissediyorum	1	2	3	4	5
5.	Etkilenen gözümü, kuru, tahriş olmuş ve kaşıntılı hissediyorum	1	2	3	4	5
6.	Yüzümü hareket ettirdiğimde gerginlik, ağrı veya spazm hissediyorum	1	2	3	4	5
7.	Etkilenen gözüm için göz damlaları veya kremler kullanıyorum	1	2	3	4	5
8.	Etkilenen gözüm ıslak veya yaşlı	1	2	3	4	5
9.	Yüzüm veya yüz problemim sebebiyle insanlara farklı davranıyorum	1	2	3	4	5
10.	Yüzüm veya yüz problemim sebebiyle insanlar bana farklı davranıyor	1	2	3	4	5
11.	Yiyecekleri ağzımın içinde hareket ettirmede sorun yaşıyorum	1	2	3	4	5
12.	Salya akması ya da ağzımda yemek ya da içecek tutamayıp çeneme ya da kıyafetlerime akıtmayla ilgili problemlerim var	1	2	3	4	5

Aşağıdakiler yüzünüz veya yüzünüzdeki sorun nedeniyle geçen hafta nasıl hissettiğiniz veya neler yaptığınız ile ilgili ifadelerdir. Lütfen her bir ifadeye ne oranda katıldığınızı belirtin:

(her satırda bir numarayı işaretleyin)		Kesinlikle katılıyorum	Katılıyorum	Bilmiyorum	Katılmıyorum	Kesinlikle katılmıyorum
13.	Yüzüm yorgun ya da yüzümü hareket ettirmeye çalıştığımda, gerginlik, ağrı ya da spazm hissediyorum	1	2	3	4	5
14.	Görünümüm sosyal etkinliklere katılma veya aile ya da arkadaşlarımı görme isteğimi etkiledi	1	2	3	4	5
15.	Yemek yerken yaşadığım zorluk nedeniyle restoranlarda ya da başkalarının evlerinde yemek yemekten kaçınıyorum	1	2	3	4	5