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Emel METE, PT, MSc[1]
Zübeyir SARI, PT, PhD, Prof.[2]

TURKISH VALIDITY AND RELIABILITY OF THE POUND SATISFACTION SCALE IN STROKE PATIENTS UNDERGOING REHABILITATION

ORIGINAL ARTICLE

ABSTRACT

Purpose: This study aimed to evaluate the Turkish validity and reliability of the Pound Satisfaction Scale (PSS).

Methods: For the adaptation of the PSS to Turkish (PSS-Tr), the translation and back-translation process was carried out by following the international guidelines. Confirmatory factor analysis (CFA) was performed to measure structural validity. The relationship between PSS-Tr and the Patient Satisfaction Scale in Physiotherapy (PSSP) and the SF-36 was assessed for construct validity. Convergent validity was evaluated computing by the Average Variance Extracted (AVE). Cronbach's alpha coefficient and Composite reliability (CR) for internal consistency of the PSS-Tr and Bland-Altman plot and test-retest reliability analysis for temporal consistency were used.

Results: The study included 130 stroke patients. The fit index values of the CFA showed that the structural validity of the PSS-Tr was appropriate (*x2/sd*=1.779, RMSEA=0.075, GFI=0.911, AGFI=0.853, CFI=0.955, NFI=0.905). A high correlation was found between the PSS-Tr total score and the PSSP (p=0.001, r=0.672). A moderate correlation was found between the hospital satisfaction sub-dimension of PSS-Tr, and the sub-dimensions of SF-36 (p=0.001, r=0.484-0.609), while a low correlation was found between the home satisfaction sub-dimension of the PSS-Tr and the physical functioning (p=0.002, r=0.266) and physical role (p=0.035, r=0.180) sub-dimensions of SF-36. And also the PSS-Tr was found to have good internal (Cronbach alpha= 0.895, CR=0.94) and temporal consistency (ICC = 0.976).

Conclusion: The Turkish version of the Pound Satisfaction Scale (PSS-Tr) is reliable and valid. The PSS-Tr may be useful for clinicians and researchers in assessing satisfaction with rehabilitation in stroke patients.

Keywords: Patient Satisfaction, Rehabilitation, Stroke

REHABİLİTASYON HİZMETİ ALAN İNMELİ HASTALARDA POUND MEMNUNİYET ÖLÇEĞİ TÜRKÇE GEÇERLİLİK VE GÜVENİLİRLİĞİ

ARAŞTIRMA MAKALESİ

ÖZ

Amaç: Bu çalışmada Pound Memnuniyet Ölçeği (PMÖ)'nin Türkçe geçerlilik ve güvenilirliğini araştırmak amaçlanmıştır.

Yöntem: PMÖ'nün Türkçeye uyarlanması (PMÖ-Tr) için çeviri süreci uluslararası yönergelere göre yapıldı. Yapısal geçerlilik, doğrulayıcı faktör analizi (DFA) ile gerçekleştirildi. PMÖ ile Fizyoterapide Hasta Memnuniyet Ölçeği (FHMÖ) ve SF-36 ölçekleri arasındaki ilişki yapı geçerliliği açısından değerlendirildi. Yakınsak geçerlilik, Ortalama Açıklanan Varyans değerleri hesaplanarak değerlendirildi. PMÖ-Tr'nin iç tutarlılığı; Cronbach's alpha katsayısı, birleşik güvenilirlik ve Bland Altman grafiği ile değerlendirildi. Zamansal tutarlılık ise test-tekrar test yöntemi ile değerlendirildi.

Sonuçlar: Bu çalışmaya 130 inme hastası dâhil edildi. DFA kapsamındaki uyum değerlerine göre PMÖ-Tr'in yapı geçerliliği açısından uygun bulundu (x2/sd=1,779; RMSEA=0,075; GFI=0,911, AGFI=0,853; CFI=0,955; NFI=0,905). PMÖ-Tr toplam skoru ile FHMÖ arasında güçlü bir korelasyon saptandı (p=0,001; r=0,672). SF-36'un alt boyutları ile PMÖ-Tr'in hastane memnuniyeti arasında orta düzeyde bir korelasyon saptanırken (p=0,001; r=0,484-0,609), PMÖ-Tr'in ev memnuniyeti ile SF-36'un fiziksel fonksiyon (p=0,002; r=0,266) ve fiziksel rol güçlükleri (p=0,035; r=0,180) alt boyutları arasında zayıf bir korelasyon bulundu. Ayrıca PMÖ-Tr'nin iyi bir iç (Cronbach alpha= 0,895; CR=0,94) ve zamansal tutarlılığı (ICC= 0,976) olduğu belirlendi.

Tartışma: Pound Memnuniyet Ölçeği›nin Türkçe versiyonu (PMÖ-Tr) güvenilir ve geçerlidir. PMÖ-Tr, inmeli hastalarda rehabilitasyon ile ilgili memnuniyet düzeyinin değerlendirilmesinde klinisyenler ve araştırmacılar için yararlı olabilir.

Anahtar Kelimeler: Hasta Memnuniyeti, İnme, Rehabilitasyon

1 *Istanbul Medeniyet University, Faculty of Health Science, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey*
2 *Marmara University, Faculty of Health Science, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey*

Correspondence (İletişim):

Emel METE
Istanbul Medeniyet University, Faculty of Health Science, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey
+90 216 280 31 99
meteemel53@gmail.com
ORCID Number: 0000-0002-6021-6466

Zübeyir SARI
E-mail: zubeyirsari@gmail.com
ORCID Number: 0000-0003-1643-5415

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INTRODUCTION

According to the Global Stroke Information Form, stroke is the second-most common cause of death and the third-most common cause of long-term disability in the world (1). In stroke rehabilitation, ICF is used to evaluate functionality, disability, and health together based on a biopsychosocial model. An important component of the ICF is that, in addition to health, it also evaluates environmental factors that influence performance during daily living activities. As part of this model, health is evaluated with a biopsychosocial approach, which considers health status and all factors that can influence health and functioning (2). In the context of the ICF, personal, medical, and environmental factors have been identified as affecting participation performance and satisfaction in stroke patients (3).

Satisfaction is a concept that is affected by a person's lifestyle and habits, sociodemographic characteristics, communication with other people, and social environment (4). In addition to these factors, satisfaction among stroke patients includes factors such as medical care and the rehabilitation process (5). In recent years, the importance of patient satisfaction in medical care has been emphasized. The level of satisfaction with healthcare services has been shown to positively affect patient compliance with treatment, alter patients' behavior, and lead to improved health outcomes. (4). In addition to affecting health outcomes, high patient satisfaction can also influence how health services are provided. Current concepts indicate that patient-reported outcomes, including patient satisfaction, play a crucial role in determining healthcare delivery and treatment effectiveness (6). In the USA, patient satisfaction reporting has been associated with reimbursement through appropriate care laws in a medical care center (6). According to a systematic review investigating the determinants of patient satisfaction, the importance of medical care services and providers has been very significant in patient satisfaction. Patient satisfaction is positively related to the quality of healthcare providers. Factors affecting the quality of healthcare providers can be listed as interpersonal communication, the physical environment of the facility, accessibility, continuity of care, and hospital characteristics (4). Healthcare providers should assess patient satisfaction to identify service factors that can be improved. It is also possible for healthcare providers to gain a better understanding of patients' needs to develop strategic plans and improve healthcare quality (7, 8).

As stroke causes long-term disability, it requires long-term treatment, including hospitalization and rehabilitation after discharge (1). In stroke rehabilitation, assessing patient satisfaction has been shown to have a significant impact on outcome measures. Patient satisfaction is related to quality of life measures and often depends on the individual's sense of interaction with the healthcare system. A stroke patient's rehabilitation process begins in the hospital and continues at home. Patient satisfaction with healthcare services, healthcare providers, and clinicians is an essential aspect of the rehabilitation process, both in terms of individual improvement and justifying continued participation (9). For these reasons, evaluating patient satisfaction may be an effective method for improving the quality of healthcare services and contributing to the rehabilitation process. The Pound Satisfaction Scale (PSS) was developed to evaluate patient satisfaction with the rehabilitation services provided to stroke patients both during hospitalization and after discharge (10). A scale that has Turkish validity and reliability and evaluates patient satisfaction in stroke patients has not been reported in the literature. The purpose of this study was to adapt the PSS to Turkish culture and determine whether it is a valid and reliable tool for assessing patient satisfaction.

METHODS

Participants

In this study, 130 stroke patients aged 18 to 80 years who had a Mini-Mental State Examination (MMSE) >24 and had received physiotherapy and rehabilitation services for two months with at least 16 sessions were included. Patients with an MMSE<24, other neurologic diseases (Such

as Multiple sclerosis and Parkinson), orthopaedic disorders (trauma or fractures), uncontrolled aritmia, visual and auditory deficits were excluded. Participants were recruited to the study among stroke patients who met the inclusion criteria and applied to the Physiotherapy and Rehabilitation Unit of a medical center called "Cadde Tıp Merkezi" in Istanbul, Turkey. Written and verbal consent was obtained from all subjects.

Evaluations

The PSS-Tr was applied face-to-face to patients who had received at least 16 rehabilitation sessions over 2 months at the medical center. At the same time, to test the discriminant validity, the SF-36 quality of life scale and the Patient Satisfaction Scale in Physiotherapy (PSSP) were applied to the patients. The PSS-Tr was repeated on the patients 2 weeks later for the test-retest reliability.

The Pound Satisfaction Scale (PSS): The PSS was developed to assess the satisfaction of stroke patients undergoing rehabilitation. It has 12 items and two summary components: Hospital satisfaction and Home satisfaction after-discharge. Hospital satisfaction consists of two parts: information on admission to the hospital (5 items) and the quantity and quality of the treatment (3 items). Home satisfaction consists of information and post-discharge support for the patients (4 items). The PSS is a Likert-type scale scored between 0 and 3. Higher scores indicate greater satisfaction with the service. (10).

The Patient Satisfaction Scale in Physiotherapy (PSSP): The PSSP is a reliable and valid scale that evaluates the satisfaction of patients after receiving physiotherapy treatments. It is a Likert-type scale scored between 1 (bad) and 4 (perfect) with 14 items. It was not developed specifically for a disease and generally measures satisfaction in patients receiving physiotherapy. A total score is calculated out of 100 (13).

SF-36 (Short Form): SF-36 is a reliable and valid scale to measure the quality of life. It has 8 sections: physical functioning (10 items), mental health (5 items), vitality (4 items), emotional role limitations (3 items), pain (2 items), social functioning (2 items), general health perceptions (5 items), physical role limitations (4 items), and a single item about health status over one year. Scores for each subscale are calculated separately, but the total score of the scale is not available. A score of 0 to 100 is assigned to each of the sub-dimensions of health-related quality of life. Higher scores indicate a higher level of quality of life (14).

Study protocol and Design

This is a cross-sectional research to assess the Turkish reliability and validity of the PSS in stroke patients. It was carried out between August 2020 and October 2022 and ethics approval was received from the ethics committee of Non-Invasive Research Ethics Committee of Marmara University (Date: 26.11.2020; Approval no: 66) in Istanbul, Turkey. This study was conducted following the Declaration of Helsinki and was registered with the US National Institutes of Health (ClinicalTrials.gov) #NCT NCT05509205.

Necessary permission was obtained from the developers of the PSS for this study. The translation process and cross-cultural adaptation of the PSS to Turkish were conducted according to international guidelines (11). As a first step, the original form of the scale was translated into Turkish by two translators who were proficient in English as well as native Turkish speakers. As part of the second stage, two Turkish translations of the scale were created, and these translations, along with the original text, were sent to other experts who knew English very well. After the comparison was completed by the experts, a translation synthesis was created by converting the scale into one translation in Turkish. The third stage is called back translation. The created Turkish synthesis was translated into English by two independent translators who were native Turkish speakers and speak Turkish fluently. One of the translators was a healthcare professional but had no experience with the original version of the scale, while the other translator specialized in the English language and literature. In the fourth stage, the conceptual equivalences between the Turkish translation and the original scale were evaluated by the committee of

experts and the preliminary final version of the scale was created. In the fifth stage, a pilot study was conducted with 15 stroke patients to determine possible difficulties in understanding the items of the Turkish translation of the scale. A final version of the scale was developed after the pilot study results were evaluated in detail by the committee.

Reliability was assessed by test-retest reliability, internal consistency, and composite reliability. Structural validity and convergent validity were conducted for the validity of the PSS-Tr. A hypothesis test was conducted to determine the strength of the relationship between PSS and PSSP and PSS and SF-36 (Short Form) to assess construct validity. The first of the hypotheses was that since similar constructs were assessed, there would be a positive correlation (correlation coefficient 0.60 or greater) between the PSS-Tr and the PSSP. The second hypothesis was that there would be a positive correlation (correlation coefficient between 0.40 and 0.60) between the "Hospital Satisfaction" sub-dimension of the PSS-Tr and the SF-36 sub-dimensions since related but dissimilar constructs were assessed. The third hypothesis was that there would be a positive correlation (correlation coefficient between 0.40 and 0.60) between the "Home Satisfaction" sub-dimension of the PSS-Tr and the SF-36 sub-dimensions since related but dissimilar constructs were assessed.

Sample Size Calculation

In scale adaptation, validity, and reliability studies, it is recommended to include 5 to 10 times as many participants as the number of items in the study (12). In this study, the number of participants was calculated to be at least 120 because PSS-Tr contains 12 items. Considering the possibility of data loss, the sample size was increased by 10% to 130 participants.

Statistical analysis

The data was analyzed using the IBM SPSS-26 version (Statistical Package for Social Sciences). It was accepted that the statistical significance level was $p<0.05$. The Kolmogorov-Smirnov test was used to evaluate the data's conformity to the normal distribution. Also, Skewness-Kurtosis Normality Test values between -2 and +2 were sought following a normal distribution.

Confirmatory factor analysis (CFA) was conducted to determine structural validity. CFA was conducted with the AMOS-26 Version (Analysis of Moment Structures) Package program using the fit index values (X2/df, GFI, AGFI, CFI, NFI, RMSEA). The structural validity of the PSS-Tr was determined by the cut-off values of the fit index (15). The Average Variance Extracted (AVE) was computed to assess convergent validity. AVE greater than 0.50 is considered adequate convergent validity (16). Construct validity was assessed by testing predefined hypotheses with correlation statistics (Spearman correlation coefficient). It is defined as low correlation when the correlation coefficient is less than 0.40, moderate correlation when the correlation coefficient is between 0.40 and 0.60, and high correlation when the correlation coefficient is greater than 0.60 (17).

The internal consistency reliability of PSS-Tr was evaluated by calculating Cronbach's alpha coefficient and composite reliability. A Cronbach's alpha coefficient of 0.70 or higher is considered to indicate acceptable internal consistency (18). Composite reliability (CR) is known as an alternative reliability index to Cronbach's alpha coefficient (19). The CR value should be above 0.70 in order to maintain internal consistency (20). The temporal stability of the PSS-Tr was examined by the test-retest method. A test-retest reliability assessment was conducted using the intraclass correlation coefficient ($ICC_{2.1}$). $ICC_{2.1}$ values below 0.50 indicate poor reliability, between 0.50 and 0.75 indicate moderate reliability, between 0.75 and 0.90 indicate good reliability, and above 0.90 indicate excellent reliability (21). Furthermore, the Bland-Altman plot was used in to compare the results between the test and the retest. The graphical method allows for the examination of concordance between repeated measurements. This plot displays the differences between the test and retest scores of each participant against the mean test and retest scores (22). It is necessary to establish whether the mean difference deviates significantly from zero

by calculating confidence intervals for the mean difference (23). Linear regression can be used to determine whether this difference is significant (24).

The floor and ceiling effects of the PSS-Tr were assessed. If the floor and ceiling scores for a scale do not exceed 15% of the participants, it is considered that there is no floor or ceiling effect on the scale (25).

RESULTS

A majority of the participants were male (62%), and the mean age was 62.53±9.72. The socio-demographic and clinical characteristics of the participants are shown in Table 1. A total of 130 participants were included in this study. The validity analyses were conducted on 130 participants (convergent validity, confirmatory factor analysis, correlations with all other scales), as well as reliability analyses (internal consistency, composite reliability). The test-retest method was completed by 77 participants (Figure 1).

Validity of the PSS-Tr

As a result of the CFA analysis, the fit index values were as follows: ΔX2 /df=1.684, RMSEA=0.073, GFI=0.909, AGFI=0.855, CFI=0.967, NFI=0.923 (Table 2). The path diagram of CFA is shown in Figure 2.

A high correlation was determined between both dimensions and total score of PSS-Tr and PSSP (r = 0.67, p = 0.001; Hypothesis 1). A moderate correlation was determined between the "hospital satisfaction" sub-dimension of the PSS-Tr and the sub-dimensions of the SF-36 (r = 0.48 to 0.60, p = 0.001; Hypothesis 2), while a low

Table 1. Demographic and Clinical Characteristics of the Participants

Gender N (%)	
Male	80 (62)
Female	50 (38)
Age *(years)*	
Mean ±SD	62.53±9.72
BMI *(kg/m²)*	
Mean ±SD	26.36±1.49
MMSE	
Mean ±SD	26.58±1.91
Time since stroke *(years)*	
Mean ±SD	4.5±3.46
Smoking N (%)	
Yes	40 (31)
No	90 (69)
Alcohol use N (%)	
Yes	10 (8)
No	120 (92)
Type of stroke N (%)	
Ischemic	126 (97)
Hemorrhagic	4 (3)
Education N (%)	
Elementary school	70 (54)
Secondary school	24 (18)
High school	30 (23)
University degree	6 (5)
Occupation N (%)	
Retired	74 (57)
Housewife	46 (35)
Not working	10 (8)
Antidepressant use N (%)	
Yes	9 (7)
No	121 (93)

SD: Standard deviation; N: Frequency.

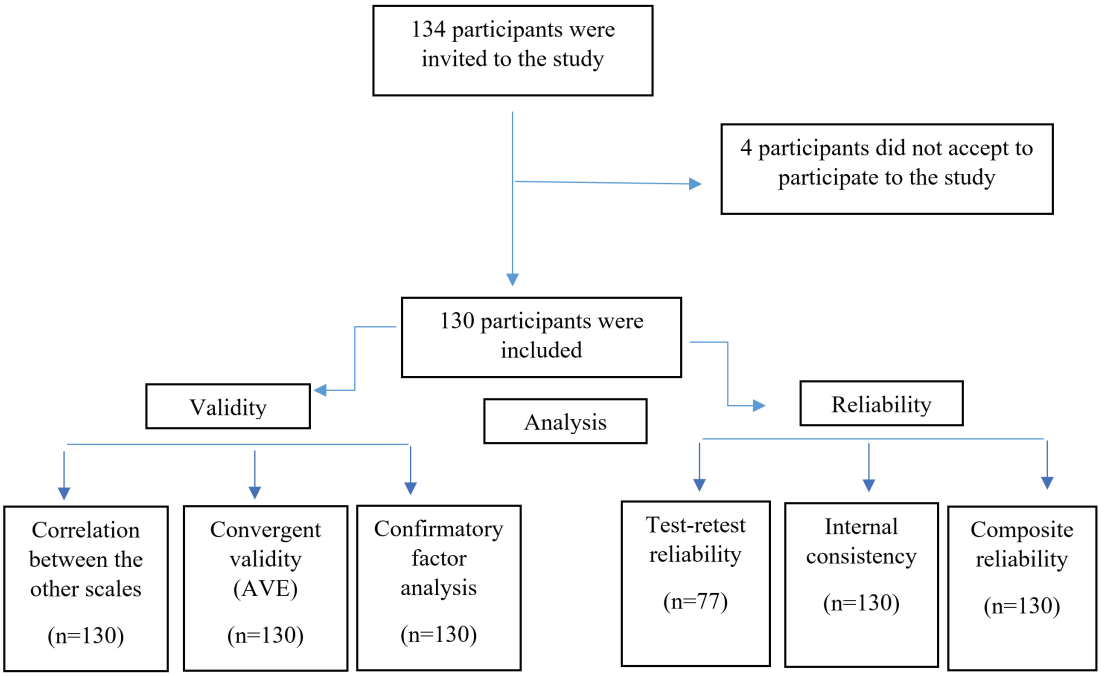

Figure 1. Flow chart of the study

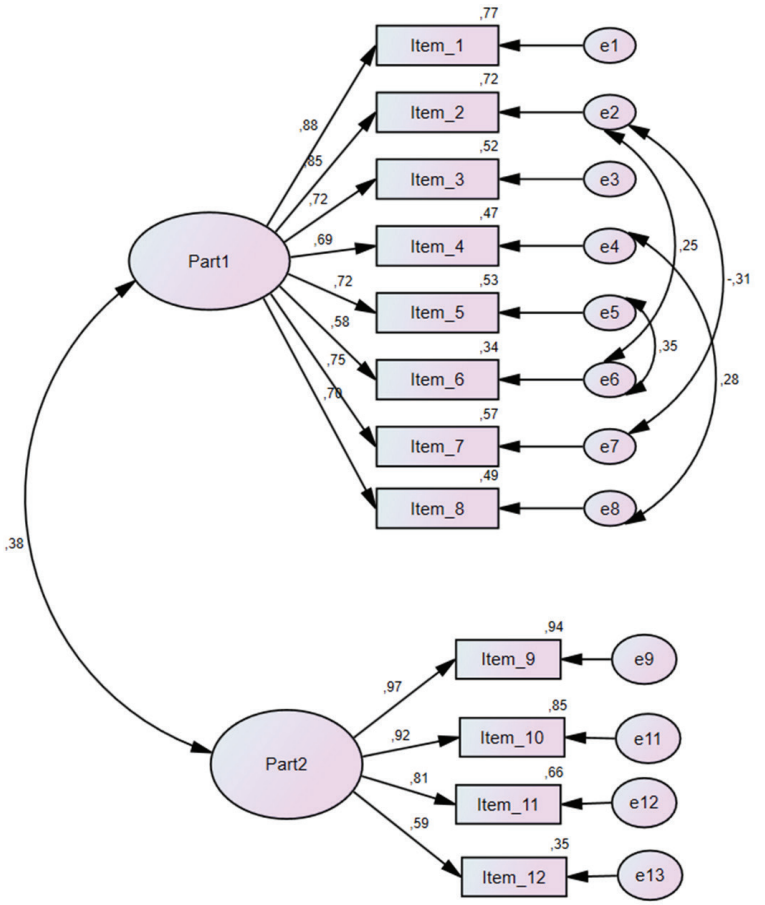

Figure 2. Path diagram of Confirmatory Factor Analysis

Table 2. The Model Fit Index Values for CFA

CFA Fit Index	Index Values	Good fit value	Acceptable Fit values
x2/df p	1.684 <0.001	0 <x2 /df ≤ 2	2<x2 /df ≤ 3
RMSEA	0.073	0 <RMSEA≤ 0.05	0.05 <RMSEA ≤ 0.08
GFI	0.909	0. 95 ≤ GFI <1.00	0. 90 ≤ GFI <0.95
AGFI	0.855	0.90 ≤ AGFI <1.00	0.85 ≤ AGFI <0.90
CFI	0.967	0.95 ≤ CFI < 1.00	0.95 ≤ CFI < 0.97
NFI	0.923	0.95 ≤ NFI < 1.00	0.90 ≤ NFI < 0.95

RMSEA: Root mean square error of approximation; GFI: Goodness of fit index; AGFI: Adjusted goodness of fit index; CFI: Comparative fit index; NFI: Normed fit index; x2/df: Chi-Square test/degrees of freedom; CFA: Confirmatory factor analysis.

Table 3. Spearman Correlation Coefficient between the PSS-Tr and the PSSP and the SF-36

	Hospital satisfaction		Home satisfaction		Total score of PSS-Tr	
	*P**	*r*	*P**	*r*	*P**	*r*
PSSP	0.001	0.641	0.001	0.614	0.001	0.672
SF-36						
Physical functioning	0.001	0.591	0.002	0.266	0.001	0.530
Physical role	0.001	0.484	0.035	0.180	0.001	0.443
Pain	0.001	0.583	0.001	0.354	0.001	0.544
General health perceptions	0.001	0.514	0.001	0.410	0.001	0.570
Vitality	0.001	0.552	0.001	0.358	0.001	0.518
Social functioning	0.001	0.609	0.001	0.418	0.001	0.603
Emotional role	0.001	0.545	0.001	0.380	0.001	0.579
Mental health	0.001	0.570	0.001	0.435	0.001	0.554

*: Spearman's correlation, r: correlation coefficient; PSSP: Patient Satisfaction Scale in Physiotherapy; PSS-Tr: Turkish adapted of Pound Satisfaction Scale.

correlation was found between the "home satisfaction" sub-dimension of the PSS-Tr and sub-dimensions of the SF-36 (r = 0.18 to 0.43, p = 0.035 to 0.001; Hypothesis 3) (Table 3). Seventy-five percent of the findings were in agreement with the hypotheses. Therefore, PSS-Tr was found to have good construct validity.

In both sub-dimensions as well as the total score of the PSS-Tr, AVE values were found to be above 0.50 (Table 4).

Reliability of the PSS-Tr

The Cronbach alpha coefficient of PSS-Tr was found to be 0.904, and the Cronbach alpha coefficient of the subdimensions of PSS-Tr was found to be between 0.868 and 0.906. PSS-Tr was also found to have a CR value above 0.70 (Table 4).

The PSS-Tr was retested on 77 stroke patients to determine temporal consistency. The intraclass correlation coefficient ($ICC_{2.1}$) of the

Table 4. Test-retest Reliability Analysis, Average variance extracted, Internal Consistency, and Composite Reliability of the PSS-Tr

	Test Mean±SD	Retest Mean±SD	$ICC_{2.1}$	95% CI for LoA	P*	AVE	CR	*Cronbach's α*
Hospital satisfaction	17.88±4.34	18.25±4.39	0.961	(-3.20) – (2.40)	0.719	0.54	0.90	0.906
Home satisfaction	5.06±2.01	4.9±1.78	0.906	(-1.07) – (1.41)	0.077	0.69	0.89	0.868
Total	22.95±5.57	23.15±5.71	0.963	(-4.70) – (4.30)	0.441	0.59	0.94	0.904

ICC: Intraclass Correlation Coefficient, CI: Confidence Interval, *: Linear regression, LoA: Limits of Agreement, AVE: Average Varience Extracted, CR: Composite reliability

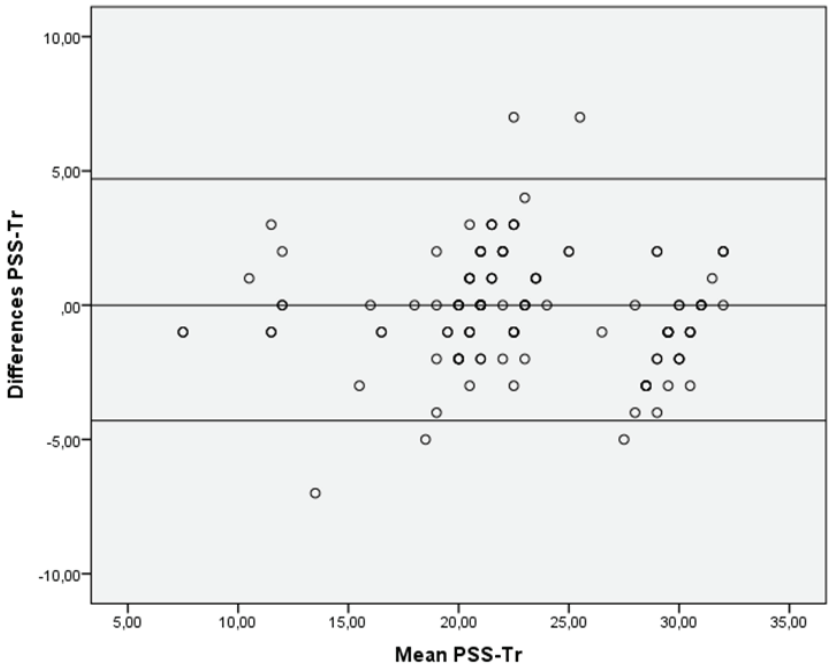

Figure 3. Bland Altman plot analysis graph for PSS-Tr test-retest reliability

PSS-Tr was found to be 0.963, and sub-dimensions ranged between 0.906 and 0.961 (Table 4).

In this study, Bland-Altman (Figure 3) and linear regression analyses indicated that there was no significant difference between the test-retest results and that the test reproducibility was acceptable (Table 4).

Results of the floor or ceiling effects showed that participants who received the lowest score of "0" comprised 0.76% (n = 1), while participants who received the highest score of "36 comprised 2.30% (n = 3). According to the results, the PSS-Tr had no floor or ceiling effects.

DISCUSSION

This study found that the PSS-Tr has been a reliable and valid tool to measure satisfaction with rehabilitation services among stroke patients. A Turkish scale evaluating patient satisfaction specific to stroke patients has not been reported in the literature. This study aimed to establish the Turkish validity and reliability of the Pound Satisfaction Scale (PSS) in stroke patients. Based on the results of this study, it was determined that the PSS-Tr has appropriate structural validity and sufficient convergent validity. As a result of reliability analysis, the PSS-TR has good composite reliability and internal consistency, as well as excellent temporal consistency. Similarly, the PSS also has Spanish validity and reliability (26).

The importance of patient satisfaction has been emphasized in recent years (27). And it is also known that patient satisfaction affects rehabilitation outcomes in stroke patients (9). In order to support patient-centered quality management, healthcare providers and clinicians should evaluate patient satisfaction to determine whether appropriate measures are being taken to meet patients' expectations and potential needs and improve patients' perceptions of actual service quality. High patient satisfaction also increases compliance with treatment and improves the competitiveness and impact of hospitals. In this way, both social and economic benefits can be achieved (6). The PSS-Tr may be helpful for the management of patient-centered quality because it contains items that measure the satisfaction of patients with rehabilitation services, physical environment, accessibility, therapists, and health care provided in the hospital and after discharge.

The PSS-Tr has two main parts: "hospital sat-

Tablo 5. Pound Memnuniyet Ölçeği

Lütfen her bir ifadeyi okuyun ve size en yakın olan yanıtı işaretleyin. Doğru ya da yanlış yanıt yoktur, önemli olan sizin görüşlerinizdir. Lütfen her soruyu cevaplayınız.

Hastane bakımı ve tedavi	**Kesinlikle katılıyorum**	**Katılıyorum**	**Katılmıyorum**	**Kesinlikle katılmıyorum**
Hastane personeli tarafından nezaketli ve saygı çerçevesi içerisinde tedavi edildim.				
Hastane personeli kişisel ihtiyaçlarımı iyi bir şekilde karşıladı. (Örneğin; isteğim vakit tuvalete gidebildim)				
Hastane personeli ile yaşadığım herhangi bir sorun hakkında konuşabileceğimi hissettim.				
Hastalığımın nedenleri ve tedavisi hakkında istediğim tüm bilgileri hastane personelinden edinebildim.				
Hekimler beni tedavi edebilmek için elinden geleni yaptılar.				
Hastalığımın başlangıcından beri kat ettiğim iyileşme miktarından memnunum.				
Terapistlerin beni tedavi etme biçimlerinden memnun kaldım.				
Yeterli tedavi süresi ve seansına sahip oldum.				
Taburculuk sonrası	**Kesinlikle katılıyorum**	**Katılıyorum**	**Katılmıyorum**	**Kesinlikle katılmıyorum**
Hastaneden taburcu edildikten sonra ihtiyacım olabilecek ödenekler veya hizmetler (evde bakım hizmeti gibi) hakkında ihtiyacım olan tüm bilgiler bana verildi.				
Eve dönüş için ilgili her şey (örneğin ihtiyacınız olduğunda kullanabileceğiniz tekerlekli sandalye gibi) güzel hazırlanmıştı.				
Evde bakım hizmetleri, evde hemşirelik hizmetleri gibi ihtiyacım olan hizmetleri taburculuk sonrası aldım.				
Hastane tarafından sağlanan taburculuk sonrası hizmetlerden memnun kaldım (kontrol muayene randevuları gibi).				

isfaction" and "home satisfaction". In the CFA, analyses were carried out on two factors based on these two main parts. According to the CFA results, the fit index scores were found to be at an acceptable level (15). In the Spanish validity of the PSS, fit index scores were found to be similar to those in this study (26). The PSS-Tr has a positive and high correlation with the PSSP. The PSSP is valid and reliable to evaluate patient satisfaction with physiotherapy and rehabilitation services for musculoskeletal problems (13). While the PSSP generally evaluates patient satisfaction with musculoskeletal problems (13), the PSS-Tr is specific to stroke patients (10). In addition, while the PSSP only evaluates satisfaction within the hospital, the PSS-Tr evaluates satisfaction with both in-hospital medical care and social support after discharge (10). Stroke is among the main causes of long-term disability and therefore includes a long-term treatment

period (28, 29, 30). Therefore, it becomes necessary to evaluate not only in-hospital medical services but also post-hospital medical services and environmental support for stroke patients to assess patient satisfaction. According to studies, patient satisfaction may be related to the quality of life (31, 32). In this study, the correlation of the PSS-Tr with SF-36 was examined, and a positive moderate correlation was found between "hospital satisfaction" sub-dimension of the PSS-Tr and SF-36. There was a low correlation between the physical function and physical role difficulties sub-dimensions of the SF-36 and the home satisfaction sub-dimension of the PSS-Tr, and a moderate correlation with the in-hospital satisfaction sub-dimension of the PSS-Tr. Similar results were found between SF-36 and the Spanish validity of the PSS (26). As part of the home satisfaction section of the PSS-Tr, questions were asked regarding outpatient services rather than physical role difficulties. Outpatient services included items related to environmental regulations as well as control examinations and appointments. The environmental regulations required that the patient's home and living area be ergonomically designed for the patient (for example, stair rails and ramps for wheelchairs). Research conducted in Turkey indicates that ergonomic environmental regulations are not sufficient to accommodate the needs of individuals with physical disability (33, 34). Despite this, there is evidence in the literature that ergonomic programs can contribute to the improvement of quality of life for people with disabilities (35). The Turkish health care system provides outpatient services under the title of home care services. Home care services in Turkey include physician examinations, nursing care, physiotherapy, patient transfers, and psychotherapy. A study conducted in Ankara, Turkey, found that only 30% of those receiving home care services were satisfied with home care services. Furthermore, these individuals had lower socioeconomic levels and expectations than others. A higher socioeconomic level is associated with lower levels of satisfaction. It has been reported that home care services can be improved to enhance quality of life by improving social support components (36). In this context, it may have been found that there is a low relationship between the physical function and physical role difficulties sub-dimensions of SF-36 and home satisfaction measured by PSS-Tr.

The Cronbach alpha coefficient of the PSS-Tr was found to be> 0.70 (16), which indicates that the PSS-Tr has a high internal consistency and is reliable. Any items (0%) were not excluded from the scale. According to test-retest reliability analysis, the PSS-Tr has excellent temporal consistency ($ICC_{2.1}$ = 0.976). Similarly, the temporal consistency was high in the Spanish version of the PSS (26).

While validity and reliability studies were conducted on 74 people in the Spanish version of the PSS (26), analyses were carried out on a larger sample group, such as 130 in this study, and the rate of 50% was exceeded in the test-retest analysis. Although this shows the strengths of this study, it also has some limitations. The time after stroke varied greatly among the patients, and the average was 4.50 years. The time since the stroke may have provided neurological and functional stability, but it can also lowen emotions and mask real satisfaction. Patients in acute, subacute, and chronic phases may have varying expectations regarding recovery, and patient satisfaction may be affected as a result. Additionally, a single center was used for this study. It is difficult to generalize data obtained from a single center. Consequently, we believe that future studies can be effective in determining the level of satisfaction through multicenter studies that ensure homogeneity so that minimal clinical significance can be determined.

This study showed that the Turkish adaptation of PSS is a reliable and valid to assess the satisfaction of patients with stroke. There is no scale with Turkish validity and reliability to evaluate patient satisfaction in stroke. It may be useful for clinicians and researchers to assess patient satisfaction as part of the stroke rehabilitation process to promote patient-centered quality management, meet patients' expectations, and identify potential needs.

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