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Validity and reliability of the Turkish "Patient-Rated Wrist Evaluation" questionnaire

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Objective: The Patient-Rated Wrist Evaluation (PRWE) scale is a self-administered outcome questionnaire used to determine level of pain and disability in wrist problems. The scale includes pain (PRWE-P) and function (PRWE-F) subscales, the latter consisting of specific function (PRWE-SF) and usual (PRWE-UF) function. This study aimed to evaluate the validity and reliability of the Turkish version of the PRWE scale.

Methods: Permission was sought and received from the original author of the PRWE for a Turkish translation for use in the study. The study included 110 patients (85 female and 25 male; mean age: 50.8 ± 1.53 years; range: 18 to 85) with distal radius fracture, carpal tunnel syndrome, wrist ganglion cyst, De Quervain syndrome, Kienböck disease, and connective lesions affecting the wrist, all of whom completed the Turkish version of both the PRWE (PRWE-T) and the Disabilities of the Arm Shoulder and Hand scale (DASH). Reliability and validity of the PRWE-T scale were evaluated via an internal consistency analysis and a factor analysis respectively. The level of correlation between PRWE-T and DASH scores was also examined.

Results: Cronbach's alpha coefficient was calculated as 0.86, 0.82 and 0.88 for PRWE-P, PRWE-F and PRWE-T respectively for the scale and all subscales. The PRWE-T scale was found to be highly reliable. A statistically significant correlation was found between PRWE-T and DASH in the criterion-related validity analysis (Spearman's rho=0.9).

Conclusion: The PRWE-T was found to be valid and reliable. It is therefore suggested for use in evaluating patient-based pain and disability levels in routine clinical practice.

Keywords: Disability; outcome questionnaire; PRWE; Turkish version; validity.

The wrist is a complex joint that lies between the upper extremity and forearm. Joint defects due to injuries affecting this area can result in a reduction not only of function, but also patient independence, general wellbeing and quality of life.^[1,2] Desired outcomes of physiotherapeutic approaches in wrist and hand injuries are generally focused on range of motion, muscle strength and sensory function, and while these evaluation methods provide objective results, they cannot evaluate subjective factors such as daily life activities, pain and return-to-work.^[3] In addition to objective scales, outcome questionnaires used in examining wrist pathologies enable the clinician to evaluate the level of injury, and compare the outcomes of treatment approaches. Patient-rated instruments

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were developed to measure patient disability level and to allow for detailed evaluation.^[4]

The PRWE was originally developed by MacDermid in 1996 to determine wrist-related pain and disability level. Validity and reliability of the scale were determined via examination of distal radius fracture and wrist injuries.^[4,5] The questionnaire was designed using input from health professionals specializing in wrist surgery at an international level, literature studies in the area of biomechanics, and patient interviews.^[6] PRWE has been adapted for use in China, Hong Kong, Germany, Sweden, Japan and India.^[7-11]

The aim of our study was to assess the validity and reliability of the PRWE-T, which was designed to determine the disability level associated with wrist problems and treatment, and to evaluate patient progress. It was improved to complete commonly-used functional disability evaluations and radiological examinations, and also to provide clinicians with a simple, reliable and valid instrument of measurement.^[4]

Patients and methods

The study included 110 patients (85 women, 25 men; mean age: 50.8±1.53 years; range: 18 to 85) with wrist problems referred to the Orthopaedics and Traumatology Department of Medeniyet University Research and Training Hospital, and the Physiotherapy and Rehabilitation Department of the Turkish Red Crescent Altıntepe Medical Centre, Istanbul, Turkey between January 2011 and September 2011. Patients' diagnoses were distal radius fracture (66.4%), carpal tunnel syndrome (18.2%), wrist ganglion cyst (8.2%), De Quervain syndrome (3.6%), tendinitis (2.7%) and Kienböck syndrome (0.9%) (Table 1). A descriptive summary of the subjects (sex, affected hand, dominant hand, physical therapy history, type of treatment, diagnosis) is shown in Table 1. All participants voluntarily agreed to take part in the study and met the following inclusion criteria: being aged 18 years or over, having a pathology of wrist problems, and being literate in Turkish. Our study was approved by the Ethics Committee of Marmara University Health Sciences Institute. All participants completed the PRWE-T and DASH questionnaires, conducted by the attending physiotherapist in face-to-face interviews.

The PRWE questionnaire consists of 15 questions related to level of wrist pain and function during daily activities. It is comprised of two subscales: The pain subscale consists of questions on pain level and frequency; the function subscale consists of 6 questions on specific functions and 4 questions on usual functions. Each answer is scored from 0 to 10 (0 = no pain/no difficulty; 10
 Table 1.
 Descriptive summary of subjects.

Variable	n	%
Sex		
Female	85	77.3
Male	25	22.7
Affected hand		
Right	46	41.8
Left	54	49.1
Bilateral	10	9.1
Dominant hand		
Right	103	93.6
Left	6	5.5
Bilateral	1	0.9
PT history		
PT	56	50.9
Non-PT	54	49.1
Type of treatment		
Operated	67	60.9
Not operated	43	39.1
Diagnosis		
Distal radius fracture	73	66.4
De Quervain syndrome	4	3.6
Dorsal ganglion	9	8.2
Carpal tunnel syndrome	20	18.2
Kienböck syndrome	1	2.7
Tendinitis	3	0.9

PT: Physiotherapy.

= worst ever/unable to do). The overall score is computed on a scale of 100, with a higher score indicating a greater disability level.

The DASH scale was developed to evaluate the whole extremity, or any part of it, among patients experiencing upper extremity problem(s). The scale has been shown to be useful in evaluating shoulder, elbow and wrist injuries.^[3] The DASH questionnaire includes questions on daily life activities, and is the most frequently used scale for evaluating upper extremity issues. ^[12] Various versions of DASH have been developed for Turkey and many other countries. A study of the validity and reliability of the Turkish DASH questionnaire was carried out in 2006.^[13]

Permission for a Turkish translation of the original PRWE scale was sought and received via mail from its author. Subsequently, two individuals, one of whom was employed in the field of healthcare, produced separate Turkish translations of the scale from the original English. Both translators were fluent in both languages. A third person then combined these two translations to create one scale. In order to double-check the translation, two professional translators, independent of the study, retranslated the Turkish version of the scale into English. A minor variation was made to the Turkish version. As the pound system is not used in Turkey, the phrase "carry an object weighing 10 pounds with my affected hand" was revised as "Carry an object weighing 5kg with my affected hand". The final form of the Turkish version can be seen in Additional Material. Comprehensibility of the questionnaire's items was tested on a group of 10 literate patients with wrist-related trauma.

Statistical analyses were performed with SPSS 16.0 (SPSS Inc., Chicago, IL, USA). P-values of less than 0.05 were accepted as statistically significant. Demographic data and PRWE-T and DASH scores were evaluated. The internal consistency of the PRWE-T questionnaire was calculated using Cronbach's alpha coefficient. The correlation coefficients between PRWE-T and DASH were evaluated as Spearman's correlation in order to evaluate structural validity.

Results

Demographic characteristics of the participants were analyzed to investigate the validity and reliability of the PRWE-T questionnaire. Average PRWE-T and DASH scores are shown in Table 2. In the PRWE-P (PRWE pain subscale), PRWE-F (PRWE function subscale) and PRWE scales, the minimum overall disability scores of participants were recorded as 7, 8 and 5 respectively. Maximum overall disability score was obtained by one participant for each of the three scales.

The reliability of the scale was investigated in terms of internal consistency. Cronbach's alpha for internal consistency of the scale was 0.88 for the total PRWE score. The correlation coefficient calculated for the five items of the PRWE-P subscale was 0.86. When these items were subsequently eliminated, the range was 0.80-0.91. Cronbach's alpha for the six items in the PRWE-SF subscale was 0.59. When each item was subsequently eliminated, the range was 0.50-0.78. Cronbach's alpha for the four items in the PRWE-UF subscale was 0.71 (range: 0.60-0.80). The alpha for all ten items in the PRWE-F subscale was 0.82 (range: 0.58-0.81) (Table 3). The internal consistency correlation coefficient was statistically significant. These results indicate that the scale showed a high level of internal consistency (measurement was carried out using the split half method).

The validity of the scale was investigated by construct validity and criterion validity. DASH was conducted for criterion-related validity of the PRWE-T questionnaire. The correlation between the PRWE-T and DASH scores was investigated using Spearman's rank correlation. The two total scores for the symptom subscale showed a significant positive correlation (p<0.01)

	х	SD	Min.	Max.
PRWE-P	31.6	1.2	0	54.0
PRWE-SF	37.6	2.1	0	60.0
PRWE-UF	21.6	1.05	0	38.0
PRWE-F	27.1	2.1	0	49.0
PRWE-T	58.57	1.16	0	95.5
DASH-S	26.21	21.03	0	85.0
DASH-W	29.2	2.56	0	100.0

PRWE-P: Pain scale of the PRWE; PRWE-SF: Specific Functional scale of the PRWE; PRWE-UF: Usual Functional scale of the PRWE; PRWE-F: Functional Scale of the PRWE; PRWE-T: Turkish version of the Patient-Rated Wrist Evaluation; DASH-S: Disability/Symptom scale of the Turkish version of the Disabilities of the Arm Shoulder and Hand Scale; DASH-W: Work scale of the Turkish version of the Disabilities of the Arm Shoulder and Hand Scale.

Table 3. PRWE-T questionnaire Cronbach alpha (α) coefficients

	Cronbach α	Cronbach α range
PRWE-P	0.86	0.80-0.91
PRWE-SF	0.59	0.50-0.78
PRWE-UF	0.71	0.60-0.80
PRWE-F	0.82	0.58–0.81
PRWE-T	0.88	

PRWE-P: Painscale of the PRWE; PRWE-SF: Specific Functional scale of the PRWE; PRWE-UF: Usual Functional scale of the PRWE; PRWE-F: Functional Scale of the PRWE; PRWE-T: Turkish version of the Patient-Rated Wrist Evaluation.

(Table 4). When the correlation between all sub-scales of PRWE-T, and symptoms and training sub-scales of DASH was examined, a significantly positive correlation was found between pain and DASH symptoms; and between pain and DASH training sub-scale (p<0.01) (Table 4). The correlation between the specific functions subscale of PRWE-F and the symptom and training subscales of DASH was significantly positive (p<0.01) (Table 4). The correlation between the usual functions subscale of PRWE-F and the symptom and training subscales of DASH was significantly positive (p<0.01) (Table 4). The correlation between the usual functions subscale of PRWE-F and the symptom and training subscales of DASH was significantly positive (p<0.01) (Table 4).

In our study, the KMO (Kaiser-Meyer-Olkin) value was calculated as 0.926. Additionally, the Bartlett Sphericity test was used to check whether the data showed multivariate normal distribution. The chi-square test was statistically significant, which indicated that the data came from a multivariate normal distribution. Two factors showed eigenvalues greater than 1; these two factors explained 74% of the variance in the data (factor 1, 38%; factor 2, 36%). Each item was represented in factor analysis. The results were in parallel with the original scale factor analysis (Tables 5 and 6).

	Spearman correlation												
	PRWE-P	PRWE-SF	PRWE-UF	PRWE-F	PRWE	DASH-S	DASH-W						
PRWE-P	1.000	.829*	.783*	.843*	.945*	.827*	.684*						
PRWE-SF	.829*	1.000	.863*	.979*	.926*	.917*	.729*						
PRWE-UF	.783*	.863*	1.000	.936*	.894*	.854*	.811*						
PRWE-F	.843*	.979*	.936*	1000*	.946*	.926*	.781*						
PRWE	.945*	.926*	.894*	.946*	1000	.915*	.777*						
DASH-S	.827*	.917*	.854*	.926*	.915*	1000	.735*						
DASH-W	.684*	.729*	.811*	.781*	.777*	.735*	1000						

Table 4. Correlation coefficients between PRWE-T and DASH scores.

*p<0.01. PRWE-P: Pain scale of the PRWE; PRWE-SF: Specific Functional scale of the PRWE; PRWE-UF: Usual Functional scale of the PRWE; PRWE-F: Functional Scale of the PRWE; PRWE-T: Turkish version of the Patient-Rated Wrist Evaluation; DASH-S: Disability/Symptom scale of the Turkish version of the Disabilities of the Arm Shoulder and Hand Scale; DASH-W: Work scale of the Turkish version of the Disabilities of the Arm Shoulder and Hand Scale.

Discussion

Measurements including subjective answers were reported to be more reliable than the objective measurements such as grip strength, range of joint motion and radiological evaluations. They were also found to be more sensitive in evaluating the process.^[14] Outcome scales along with objective evaluations improve understanding of patients' experience of their disease.

The Cronbach alpha reliability coefficient was calculated as an indication of the PWRE-T questionnaire's

Table 5.Component matrix of factor analysis for PRWE-SF and
PRWE-UF.

		Component	
	1		2
SF-1	0.819		-0.389
SF-2	0.857		0.044
SF-3	0.728		-0.511
SF-4	0.783		-0.022
SF-5	0.798		0.395
SF-6	0.838		-0.398
UF-1	-0.397		0.859
UF-2	-0.012		0.910
UF-3	-0.006		0.887
UF-4	-0.265		0.724

Table 6. Component matrix of factor analysis for PR	WE-F	Ρ.
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Material	Component
Pain-1	0.546
Pain-2	0.847
Pain-3	0.876
Pain-4	0.824
Pain-5	0.786

Pain 1-5: Pain scale score of PRWE-T.

internal consistency and homogeneity. The alpha method is a weighted average standard deviation. It is calculated as a proportion of total variance of questions in the scale to general variance, and ranges from 0 to 1. The resulting alpha coefficient should be greater than 0.70. However, it is suggested in the literature that this value should not exceed 0.90, because this may indicate an excessive number of items in the scale. In our study, Cronbach's alpha was 0.88 for the total score of the PRWE-T questionnaire, compared with 0.98 reported by MacDermid et al. for the PRWE questionnaire. Cronbach's alpha was calculated as 0.95 in a study conducted by Imaeda et al. on patients with different pathologies.^[11]

When Cronbach's alpha correlation was calculated for the PRWE-T subscales, internal consistency coefficients for pain, specific functions, usual functions and total score were 0.86, 0.56, 0.71 and 0.88 respectively. The internal consistency coefficients of the original scale conducted by MacDermid were 0.93, 0.96, 0.92 and 0.98. Hemelaers et al. tested the validity and reliability of the German version of the PRWE, and their internal consistency coefficients were 0.81 for pain, 0.85 for function, and 0.89 for total score.^[4,15] These are similar to the results obtained in the present study. The reason why the Cronbach's alpha of specific functions was low may be because we requested that our patients evaluate the disability level caused by an activity undertaken with their affected hand. If the patient was unable to undertake the activity, we asked them to estimate the disability level, which might have resulted in misleading responses. Mehta et al. examined the validity and reliability of the Indian version of PRWE. They reported internal consistency coefficients of 0.86 for pain and 0.92 for function. Wong Man Wah et al. examined the validity and reliability of the Chinese version of PRWE, and reported internal consistency coefficients 0.78 for pain, 0.92 for

function, 0.87 for specific functions and 0.88 for usual functions. $\ensuremath{^{[8]}}$

The alpha correlation value that we obtained for the pain subscale (0.86) was in parallel with that reported for other similar studies.^[8,14,15] Hemelaers et al. calculated an alpha coefficient of 0.89 for PRWE total score in a German population with distal radius fracture.^[15] The alpha was also reported as 0.89 in the Indian study by Mehta et al.^[14] The internal consistency coefficient of our study was lower than studies using the original scale and studies conducted later. However, our alpha value was within acceptable limits (above 0.70). As a result, the Turkish version of the scale was regarded as being highly reliable.

The present study tested the hypothesis that the PRWE-T was significantly correlated with the DASH questionnaire. The validity and reliability of the DASH questionnaire have been evaluated previously. The correlation between scores for the PRWE-T questionnaire and DASH questionnaire was investigated using Spearman's rank correlation. We used the DASH questionnaire in order to evaluate criterion-related validity as it was the gold standard scale in previous studies examining the validity and reliability of Swedish and Japanese versions of the PRWE scale.^[6,11] The DASH questionnaire was used by Navarro et al. to evaluate the validity and acceptability of the Swedish version of PRWE, and the study conducted by Imaeda et al. to evaluate the validity and acceptability of the Japanese version of PWRE.^[10,11,15] The study by Imaeda et al. also used SF-36 in addition to the DASH questionnaire.^[11]

The relationship between the PRWE-T total score and its subscale scores, and the total score of the DASH questionnaire was investigated in order to determine the criterion-related validity of the PRWE scale. A statistically significant correlation was found between the DASH total score, and the PRWE pain, function and total scores. Consistent with the findings of our study, the study of Navarro et al. found a strong correlation between the PRWE total score and DASH score.^[6] Also in parallel with the results of the present study, Hemelaers et al. reported a strong correlation between the total and subscale PWRE scores, and DASH scores.^[15]

Our results showed a statistically significant correlation between the total DASH score, training subscale score, the total PRWE score, and pain and function subscales. Imaeda et al. also found a statistically significant correlation between PWRE pain and function subscales and DASH.^[11] Principal component factor analysis was conducted to determine the structural validity of the PRWE-T questionnaire. The two factors identified in the study were similar to the original scale. With the exception of the first question, the other questions showed heavy factor loadings. This may indicate that the first question was not sufficiently comprehensible to the re-

One limitation of our study may be the similarity of participants' injury types; 65% of our group experienced distal radius fractures, and the remained consisted of 5 distinct pathologies, with few other wrist-related fractures. This unequal distribution may have affected the evaluation of disability level. Another limitation is that we did not analyze sensitivity of the PRWE questionnaire in identifying changes emerging over time. Applying that method was not possible in the present study, as the majority of the study participants were evaluated retrospectively.

The correlation between the short version of the DASH questionnaire (Quick DASH) and the PRWE-T scale can be evaluated in future studies. In addition to wrist injuries, the PRWE scale has come to be used to evaluate not only wrist, but also hand injuries. One item has been added to develop the PRWHE (Patient Rated Wrist and Hand Evaluation) scale. The validity and reliability of this new version of PRWE can be studied in further studies.

Our study indicated that the PRWE-T questionnaire is useful in evaluating wrist injuries, and is highly reliable and valid. In accordance with studies evaluating other versions of this tool, the PRWE-T questionnaire was found to be concise, easy to answer, and comprehensible similar to DASH.

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***Appendix:** Turkish translate and original version of the PRWE questionnaire.

Conflics of Interest: No conflicts declared.

References

spondents.

- Garcia-Elias M, Folgar MA. The management of wrist injuries: an international perspective. Injury. 2006;37:1049– 56. CrossRef
- Simmen BR, Angst F, Schwyzer HK, Herren DB, Pap G, Aeschlimann A, et al. A concept for comprehensively measuring health, function and quality of life following orthopaedic interventions of the upper extremity. Arch Orthop Trauma Surg 2009;129:113–8. CrossRef
- Changulani M, Okonkwo U, Keswani T, Kalairajah Y. Outcome evaluation measures for wrist and hand: which one to choose? Int Orthop 2008;32:1–6. CrossRef
- 4. MacDermid JC, Turgeon T, Richards RS, Beadle M, Roth

JH. Patient rating of wrist pain and disability: a reliable and valid measurement tool. J Orthop Trauma 1998;12:577-86.

- 5. MacDermid JC. Development of a scale for patient rating of wrist pain and disability. J Hand Ther 1996;9:178-83.
- 6. Mellstrand Navarro C, Ponzer S, Törnkvist H, Ahrengart L, Bergström G. Measuring outcome after wrist injury: translation and validation of the Swedish version of the patient-rated wrist evaluation (PRWE-Swe). BMC Musculoskelet Disord 2011;12:171. CrossRef
- 7. Xu W, Seow C. Chinese version of patient rated wrist evaluation (PRWE): cross-cultural adaptation and reliability evaluation. Ann Acad Med Singapore 2003;32(5 Suppl):48-9.
- 8. Wah JW, Wang MK, Ping CL. Construct validity of the Chinese version of the Patient-rated Wrist Evaluation Questionnaire (PRWE-Hong Kong Version). J Hand Ther 2006;19:18-27. CrossRef
- 9. John M, Angst F, Awiszus F, Pap G, Macdermid JC, Simmen BR. The patient-rated wrist evaluation (PRWE): cross-cultural adaptation into German and evaluation of its psychometric properties. Clin Exp Rheumatol 2008;26:1047-58.
- 10. Wilcke MT, Abbaszadegan H, Adolphson PY. Evaluation of a Swedish version of the patient-rated wrist evaluation outcome questionnaire: good responsiveness, validity, and

*Appendix

HASTA BAZLI EL BİLEĞİ DEĞERLENDİRME ANKETİ

Aşağıdaki sorular geçtiğimiz hafta içinde el bileğinizdeki problem nedeniyle ne kadar zorlandığınızı anlamamıza yardımcı olacaktır. Son haftadaki el bileğinizle ilgili ortalama şikayetlerinizi 0 - 10 dereceli bir skala ile tanımlıyor olacaksınız. Lütfen tüm sorulara cevap vermeye çalışın. Eğer son hafta içinde aktiviteyi yapmadıysanız lütfen beklediğiniz zorlanma veya ağrı derecesini belirtiniz. Eğer aktiviteyi hiçbir zaman gerçekleştirmediyseniz boş bırakabilirsiniz

1. AĞRI

0-10 değerler üzerinden ağrınızı tarif eden rakamı yuyarlak içine alarak, gectiğimiz hafta içerisinde bileğinizde hissettiğiniz ağrının ortalama şiddetini değerlendiriniz. Sıfır (0) ağrınızın hiç olmaması ve on (10), hissettiğiniz en şiddetli ağrı veya ağrıdan dolayı aktiviteyi gerçekleştirememek anlamındadır.

AĞRINIZI DERECELENDİRİN: Örnek Skala 🖙	0	1	2	3	4	5	6	7	8	9	10
	Ağ	ġri y	/ok								Dayanılmaz ağrı
İstirahatte (Dinlenmede)	0	1	2	3	4	5	6	7	8	9	10
Tekrarlı el bilek hareketlerini içeren bir iş yapıldığında	0	1	2	3	4	5	6	7	8	9	10
Ağır bir nesneyi kaldırırken	0	1	2	3	4	5	6	7	8	9	10
En kötü olduğu zaman	0	1	2	3	4	5	6	7	8	9	10
Hangi sıklıkta ağrınız var?	0	1	2	3	4	5	6	7	8	9	10
	Hiçbir zaman										Her zaman

2. FONKSIYON A. SPESIFIK AKTIVITFI FR

0-10 arası değerler üzerinden yaşadığınız zorluk miktarını tanımlayan rakamı yuvarlak içine alarak geçtiğimiz hafta içerisinde aşağıda sıralanan işleri yaparken yaşadığınız zorluk miktarını değerlendiriniz. Sıfır (0) herhangi bir zorluk yaşamadığınız ve on (10) aktiviteyi yapamayacak kadar zorlandığınız anlamına gelmektedir.

Örnek Skala 🖙	0	12	3	4	5	6	7	8	9	10
	Zo	Zorluk yok Yapmal					ak mümkün değil			
Etkilenen elimi kullanarak kapı kolu çevirmek	0	12	3	4	5	6	7	8	9	10
Etkilenen elimle bıçak kullanarak et doğramak	0	12	3	4	5	6	7	8	9	10
Gömlek düğmesi iliklemek	0	12	3	4	5	6	7	8	9	10
Etkilenen elimden destek alarak sandalyeden kalkmak	0	12	3	4	5	6	7	8	9	10
Etkilenen elimle 4,5 kg ağırlık taşımak	0	12	3	4	5	6	7	8	9	10
Etkilenen elimle tuvalet kağıdı kullanmak	0	12	3	4	5	6	7	8	9	10

B. GÜNLÜK AKTİVİTELER

0-10 arası değerler üzerinden ağrınızı tarif eden rakamı yuvarlak içine alarak geçtiğimiz hafta içerisinde günlük aktivitelerinizi yaparken yaşadığınız zorluk miktarını değerlendiriniz. "Günlük aktiviteler"den kastımız el bileğinizde sorun yaşamaya başlamadan önce gerçekleştirdiğiniz aktivitelerdir. Sıfır (0) hiç zorluk yaşamadığınız anlamına gelirken, on (10) o işi yapamayacak kadar zorlandığınız anlamına gelmektedir

3	4	5	6	7	8	9	10
3	4	5	6	7	8	9	10
3	4	5	6	7	8	9	10
3	4	5	6	7	8	9	10
	3 3 3 3 3 3	3 4 3 4 3 4 3 4	3 4 5 3 4 5 3 4 5 3 4 5 3 4 5	3 4 5 6 3 4 5 6 3 4 5 6 3 4 5 6 3 4 5 6	3 4 5 6 7 3 4 5 6 7 3 4 5 6 7 3 4 5 6 7 3 4 5 6 7	3 4 5 6 7 8 3 4 5 6 7 8 3 4 5 6 7 8 3 4 5 6 7 8 3 4 5 6 7 8	3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9 3 4 5 6 7 8 9

reliability, in 99 patients recovering from a fracture of the distal radius. Scand J Plast Reconstr Surg Hand Surg 2009;43:94-101. CrossRef

- 11. Imaeda T, Toh S, Nakao Y, Nishida J, Hirata H, Ijichi M, et al. Validation of the Japanese Society for Surgery of the Hand version of the Disability of the Arm, Shoulder, and Hand questionnaire. J Orthop Sci 2005;10:353-9. CrossRef
- 12. MacDermid JC, Tottenham V. Responsiveness of the disability of the arm, shoulder, and hand (DASH) and patient-rated wrist/hand evaluation (PRWHE) in evaluating change after hand therapy. J Hand Ther 2004;17:18-23.
- 13. Düger T, Yakut E, Öksüz Ç, Yörükan S, Bilgütay BS, Ayhan Ç ve ark. Kol, omuz ve el sorunları (Disabilities of the Arm, Shoulder and Hand-DASH) anketi Türkçe uyarlamasının güvenirliği ve geçerliği. Fizyoterapi ve Rehabilitasyon 2006;17:99-107.
- 14. Mehta SP, Mhatre B, MacDermid JC, Mehta A. Crosscultural adaptation and psychometric testing of the Hindi version of the patient-rated wrist evaluation. J Hand Ther 2012;25:65-78. CrossRef
- 15. Hemelaers L, Angst F, Drerup S, Simmen BR, Wood-Dauphinee S. Reliability and validity of the German version of "the Patient-rated Wrist Evaluation (PRWE)" as an outcome measure of wrist pain and disability in patients with acute distal radius fractures. J Hand Ther 2008;21:366-76.

PATIENT RATED WRIST EVALUATION

The questions below will help us understand how much difficulty you have had with your wrist in the past week. You will be describing your average wrist symptoms over the past week on a scale of 0-10. Please provide an answer for ALL questions. If you did not perform an activity, please ESTIMATE the pain or difficulty you would expect. If you have never performed the activity, you may leave it blank.

1 PAIN

Rate the average amount of pain in your wrist over the past week by circling the number that best describes your pain on a scale from 0-10. A zero (0) means that you did not have any pain and a ten (10) means that ou had the worst pain you have ever experienced or that you could not do the activity because of pain.

RATE YOUR PAIN: Sample Scale 🖙	0 No	1 Pai	2 n	3	4	5	6	7	8	9	10 Worst Ever
At rest	0	1	2	3	4	5	6	7	8	9	10
When doing a task with a repeated wrist movement	0	1	2	3	4	5	6	7	8	9	10
When lifting a heavy object	0	1	2	3	4	5	6	7	8	9	10
When it is at its worst	0	1	2	3	4	5	6	7	8	9	10
How often do you have pain?	0 Ne	1 ver	2	3	4	5	6	7	8	9	10 Always

2. FUNCTION

Rate the amount of difficulty you experienced performing each of the items listed below - over the past week by circling the number that describes your difficulty on a scale of 0-10. A zero (0) means you did not exper ence any difficulty and a ten (10) means it was so difficult you were unable to do it at all.

Sample Scale 🕫	0	1	2	з	4	5	6	7	8	a	10
	No Difficulty									Unable To Do	
Turn a door knob using my affected hand	0	1	2	ś	4	5	6	7	8	9	10
Cut meat using a knife in my affected hand	0	1	2	3	4	5	6	7	8	9	10
Fasten buttons on my shirt	0	1	2	3	4	5	6	7	8	9	10
Use my affected hand to push up from a chair	0	1	2	3	4	5	6	7	8	9	10
Carry a 10lb object in my affected hand	0	1	2	3	4	5	6	7	8	9	10
Use bathroom tissue with my affected hand	0	1	2	3	4	5	6	7	8	9	10

B. USUAL ACTIVITIES

B. OSUAL ACTIVITIES Rate the amount of difficulty you experienced performing your usual activities in each of the areas listed below, over the past week, by circling the number that best describes your difficulty on a scale of 0-10. By "usual activities", we mean the activities you performed before you started having a problem with your wrist. A zero (0) means that you did not experience any difficulty and a ten (10) means it was so difficult you were unable to do any of your usual activities.

Personal care activities (dressing, washing)	0	1	2	3	4	5	6	7	8	9	10
Household work (cleaning, maintenance)	0	1	2	3	4	5	6	7	8	9	10
Work (your job or usual everyday work)	0	1	2	3	4	5	6	7	8	9	10
Recreational activities	0	1	2	3	4	5	6	7	8	9	10