



## ADAPTATION OF WAKE FOREST PHYSICIAN TRUST SCALE TO TURKISH: A VALIDITY AND RELIABILITY STUDY

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### Abstract

Trust in the patient-physician relationship is one of the important factors determining the quality of patient care. The aim of this study was to examine the psychometric properties of the Wake Forest Physician Trust Scale and to analyze its Turkish validity and reliability. The sample group, selected by simple random sampling method, consists of 753 patients who applied to the outpatient clinics of three hospitals in Sivas city center. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were applied for construct validity. For reliability, Cronbach  $\alpha$  coefficient was calculated and analyzed. EFA revealed that the measurement structure of the scale explained 69.144% of the variance. The Turkish version of the scale consists of 7 items and one dimension. The validity of this scale was confirmed by applying CFA. Cronbach's  $\alpha$  coefficient for the WFPTS was found to be 0.92. The Turkish version of the WFPTS has a high level of validity and reliability. There is no scale developed to measure patients' trust in physicians in Turkish. This scale will be useful to measure trust in the patient-physician relationship in Turkish culture.

**Keywords:** Wake Forest Physician Trust Scale, Patient-Physician Relationship, Trust, Validity and Reliability

### Öz

Hasta-hekim ilişkisinde güven, hasta bakımının kalitesini belirleyen önemli faktörlerden biridir. Bu çalışmanın amacı Wake Forest Hekime Güven Ölçeği'nin psikometrik özelliklerini incelemek, Türkçe geçerlilik ve güvenilirliğini analiz etmektir. Basit tesadüfi örnekleme yöntemi ile seçilen örneklem grubu, Sivas il merkezindeki üç hastanenin polikliniklerine başvuran 753 hastadan oluşmaktadır. Yapı geçerliliği için açımlayıcı faktör analizi (AFA) ve doğrulayıcı faktör analizi (DFA) uygulanmıştır. Güvenilirlik için Cronbach  $\alpha$  katsayısı hesaplanmış ve analiz edilmiştir. AFA, ölçeğin ölçüm yapısının varyansın %69,144'ünü açıkladığını ortaya koymuştur. Ölçeğin Türkçe versiyonu yapılan analizler sonucunda 7 madde ve bir



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boyuttan oluşmaktadır. Bu ölçeğin geçerliliği DFA uygulanarak teyit edilmiştir. WFPTS için Cronbach's  $\alpha$  katsayısı 0,92 olarak bulunmuştur. WFPTS'nin Türkçe versiyonu yüksek düzeyde geçerlilik ve güvenilirliğe sahiptir. Türkçe'de hastaların hekimlere olan güvenini ölçmek için geliştirilmiş bir ölçek bulunmamaktadır. Bu ölçek Türk kültüründe hasta-hekim ilişkisinde güveni ölçmek için faydalı olacaktır.

**Anahtar Kelimeler:** Wake Forest Hekim Güven Ölçeği, Hasta-Hekim İlişkisi, Güven, Geçerlilik ve Güvenilirlik

### 1. INTRODUCTION

Trust is an important element that plays a role in determining the level of communication in social relations between people. It is built through behaviors and is crucial for healthy communication (Gülcemal, 2015). It is also an essential element in the patient-physician relationship. Trust in physician-patient relationships is a key component of high quality patient care (Segers & Merters 2022, Wu et al 2022). Patients want to be informed by the physician they consult, to share their personal information, and to know and trust that the services they need will be provided (Alkan, 2022). Patients want to trust the physician throughout the diagnosis and treatment process, and this sense of trust affects not only the patient but also the patient's relatives. Among other factors, the use of technology and the involvement of other healthcare professionals in healthcare delivery can affect the patient's sense of trust (Thom,2004).

Establishing a sense of trust between the patient and the physician starts at the first encounter (Dinççağ,1999). The physician's emotional state, appearance and attitude affect the patient's trust and communication (Çobanoğlu, 2009). The physician's behaviors, including their communication, are considered to be the most important variable affecting trust in the patient-doctor relationship (Rudawska & Krot 2018). A recent study concluded that trust is primarily related to what happens between clinicians and patients in the exam room (Khullar et al 2022). It is quite difficult for a patient to trust a physician who is unfriendly, doesn't listen, doesn't give a chance to speak and show any interest and compassion during the treatment. If the patient doesn't have a sense of trust in the doctor, the treatment that the doctor intends to give may not be followed (Safran, 2001). Patients want their physicians to handle their issues in a way that doesn't damage their trust (Gordon, 1997).

Measuring trust will help inform policy deliberations and stabilize situations that threaten the doctor-patient relationship (Thom 2004). In the relevant literature there are many studies that seek to answer the question of how patients' trust in physicians can be measured (Boubshait et al. 2022, Richmond 2022, Han et al 2022, Wu et al 2022, Deniz et al. 2021, Koca et al. 2021, Şengül et al. 2020, Petrocchi et al. 2020, Heybet et al. 2016, Dong et al. 2014, Bachinger et al. 2009, Lee et al. 2009, Hall et al. 2002, Pearson et al. 2001). However, when reviewing the national literature, no standardized scale developed in Turkish or a Turkish validity and reliability study for measuring patients' trust in physicians was found. Based on this gap in literature, this study conducted with the aim of adapting a scale that measures patients' trust in physicians in Turkish language. The aim of the present study is to examine the psychometric properties of the WFPCS and to analyze its Turkish validity and reliability.

#### 1.1. The Wake Forest Physician Trust Scale (WFPTS)

The WFPTS was originally developed by Hall et al. (2002) in the United States using items from previous trust scales and research with larger samples at the national and regional levels. It

consists of 10 statements reflecting patients' trust in their physicians. The scale has a unidimensional structure. The scale is designed using a 5-point Likert scale with response options ranging from "1: Strongly Disagree", "2: Disagree", "3: Neutral", "4: Agree", "5: Strongly Agree". In the original study in which the scale was developed, the Cronbach's alpha reliability coefficient was calculated as 0.93. If a high score is obtained from the scale, it shows that the trust in the physician is high. The scale has previously been adapted into Dutch (Bachinger et al., 2009), Chinese (Dong et al., 2014), German and French (Petrocchi et al., 2020) and French (Amarandei et al 2021).

## 2. METHOD

### 2.1. The Translation of the Scale into Turkish

First Mark Hall, one of the developers of the scale was contacted via e-mail and a written permission to adapt the WFPTS to Turkish was obtained. Then, three experts including an academic in the field of Health Management, an academic in the field of English Language and Literature and a physician with a good command of English translated the original version of the scale into Turkish. Subsequently, the scale was translated back from Turkish into English by three experts who are proficient in both languages and the researchers made necessary adjustments to the items based on these translations. The final version of the scale was pilot tested on 30 patients, and it was concluded that the scale items were understandable for everyone.

### 2.2. Population and Sample

The study was conducted by administering a questionnaire to patients who visited the outpatient clinics of a total of three hospitals in total, two public hospitals and one private hospital located in the city centre of Sivas, between 01.02.2023 and 03.03.2023. Patients aged 18 years old and older, who had previously visited the same physician for at least one private examination, who had basic literacy skills, no visual impairment and/or reading comprehension difficulties or any other obstacles were included in the study on a voluntary basis. When individuals who do not represent the population are excluded and a margin of error of 5% and a trust level of 95% are taken into account, it was calculated that a sample size of 383 people would be sufficient. The people who participated in the study were selected using a subset of random sampling called simple random sampling.

The questionnaire was distributed to the patients, in the outpatient clinics, to the patients who agreed to participate in the study after the explanations about the study were provided by the second author MK, who met the patients in person while they were waiting in the outpatient clinics. After the completion of the questionnaires, they were collected by the same author. Informed consent was obtained from all patients and anonymity and confidentiality of participants were protected. Ethics committee approval for this study was obtained from Cumhuriyet University Ethics Committee on 14.12.2022. The EFA, aiming to determine the measurement structure of the WFPTS was conducted with a study group consisting of 500 patients (289 female, 211 male). CFA and calculation of the Cronbach's Alpha coefficient were performed to examine the construct validity of the scale obtained from a total of 253 patients (148 female, 105 male).

### 2.3. Data Analysis

To examine the construct validity of WFPTS, confirmatory and exploratory factor analysis (CFA and EFA) were conducted. EFA and CFA were performed using independent samples. There is no definitive statement in the literature regarding which fit indices should be used for

interpreting CFA results, but fit indices such as  $\chi^2$ /sd GFI, CFI, TLI and RMSEA are commonly used. These indices were also considered in this study. A  $\chi^2$ /sd index below 3, GFI index above 0.90, TLI and CFI indices above 0.95 and RMSEA index below 0.05 and 0.08 indicate an acceptable level of model fit (Meydan and Şeşen, 2015: 37).

The reliability of the scale was examined by calculating Cronbach's  $\alpha$  coefficient. In addition the inter-item correlations and item-total correlations were calculated, and the internal consistency of the scale was assessed in this context.

To assess the internal validity of the scale, Spearman correlation coefficients were calculated and evaluated between trust in the medical practitioner and contentment with the medical practitioner, as well as the earlier appointments with the medical practitioner. It was expected that these correlation values would be meaningful in the line with the research findings of Hall et al. (2002). The Spearman correlation coefficient was used due to the non-normal distribution of the data related to the variable of trust in the physician. Exploratory Spearman correlations were also examined between trust in the physician and gender, age, education level and income level. IBM SPSS 25.0 and IBM AMOS 25.0 software packages were used for conducting the mentioned statistical analysis.

### 3. RESULTS

**Table 1.** The Original Wake Forest Physician Trust Scale Items (English-Turkish)

Items	English	Turkish
1	[Your doctor] will do whatever it takes to get you all the care you need.	Doktorunuz ihtiyacınız olan tüm tedavileri almanız için ne gerekiyorsa yapacaktır.
2	Sometimes [your doctor] cares more about what is convenient for [him or her] than about your medical needs.	Doktorunuz, bazen sizin tıbbi ihtiyaçlarımızdan çok, kendisi için uygun olan şeye daha fazla önem verir.
3	Your doctor's medical skills are not as good as they should be.	Doktorunuzun mesleki (tıbbi) becerileri olması gerektiği kadar, yeterince iyi değildir.
4	[Your doctor] is extremely thorough and careful.	Doktorunuz son derece titiz ve dikkatlidir.
5	You completely trust [your doctor's] decisions about which medical treatments are best for you.	Doktorunuzun sizin için en iyi tedavi kararını vermiş olduğuna güveniniz tamdır.
6	[Your doctor] is totally honest in telling you about all of the different treatment options available for your condition.	Doktorunuz sizin için uygun olan tüm tedavi seçeneklerini tamamen dürüst bir şekilde size söyler/anlatır.
7	[Your doctor] only thinks about what is best for you.	Doktorunuz (sadece) sizin için en iyi olanı düşünür.
	Sometimes [your doctor] does not pay	Doktorunuz, bazen ona söylemeye

8	full attention to what you are trying to tell [him or her].	çalıştığınız şeye tam olarak dikkatini vermez.
9	You have no worries about putting your life in [your doctor's] hands.	Hayatınızı doktorunuzun ellerine teslim etme konusunda endişeniz yoktur.
10	All in all, you have complete trust in [your doctor].	Doktorunuza güveniniz tamdır.

The English and Turkish versions of the WFPTS items are given in Table 1. The original scale is in English and consisted of 10 items. As explained in section 3.1, it was observed that the three items, (item no 2,3,8) with negative content had the lowest correlations with the entire scale, were removed from the scale.

**Table 2.** Demographic Characteristics of the Sample (N=753)

	N	%
<b>Age</b>		
18-27	247	32,8
28-37	212	28,2
38-47	136	18,1
48-57	86	11,4
58-67	40	5,3
68 and above	32	4,2
<b>Sex</b>		
Female	437	58,0
Male	316	42,0
<b>Education Level</b>		
Primary School	92	12,2
Middle School	55	7,3
Highschool	172	22,8
Associate's Degree	122	16,2
Bachelor Degree	251	33,3
Master's Degree	49	6,5
Doctorate Degree	12	1,6
<b>Chronic Disease</b>		
None	504	66,9
Diabetes	45	6,0

Hypertension	34	4,5
Cancer	16	2,1
Asthma/COPD	54	7,2
Heart Diseases	24	3,2
Others	76	10,1

Sociodemographic data of the patients who participated in the study are given in Table 2.

### 3. 1. Factor Structure and Structural Validity

First the Kaiser-Meyer-Olkin (KMO) coefficient was calculated and the Bartlett's Test was conducted to determine the adequacy of the sample size and the suitability of the data for EFA. In the analysis, the KMO coefficient was calculated as 0.912, and based on the results of the Bartlett's Test  $\chi^2=2501,163$ ,  $p<0,001$ , it was determined that the sample size and the data were suitable for the EFA.

Based on the EFA conducted, two factors were extracted that had eigenvalues above 1 and accounted for 66.914% of the total variance (Table 2). The first factor included 7 items with negative statements (Item2, Item3, Item8). A positive and high correlation ( $r= 0,71$ ) was found between the two factors, and all items did not load under a single factor. However, it was not possible to separate the items based on the statements they contained, considering the items that comprised the two factors. It was also observed that the three items with negative content had the lowest correlations with the entire scale ( $r=0,327$ ;  $r=0,463$  ve  $r=0,533$ , respectively). On the basis of all these findings, the three items that loaded under the second factor, which contained negative content, were removed from the scale and the EFA procedure was repeated.

**Table 3.** Results of Exploratory Factor Analysis for the 10-Item Scale (N=500)

Scale Sub-Dimension	Items	Factor Load Value	Variance (%)	Cumulative Variance (%)
<b>Factor 1</b>	Item5	0,866	53,778	53,778
	Item10	0,848		
	Item6	0,823		
	Item4	0,805		
	Item7	0,803		
	Item9	0,797		
	Item1	0,718		
<b>Factor 2</b>	Item3	0,790	13,136	66,914
	Item2	0,782		
	Item8	0,682		

Repeated EFA revealed a 7-item measurement structure with a single factor explaining 69.144% of the variance, with factor loading values ranging from 0.742 to 0.892. (Table 4).

**Table 4.** Results of Exploratory Factor Analysis for the 7-Item Scale (N=500)

Scale Sub-Dimension	Items	Factor Load Value	Variance (%)
<b>Factor 1</b>	Item5	0,892	69,144
	Item10	0,881	
	Item6	0,846	
	Item7	0,826	
	Item4	0,821	
	Item9	0,803	
	Item1	0,742	

The fit index value obtained from the CFA conducted for the one-dimensional measurement structure are provided in Table 5.

**Table 5.** Fit Index Values for Two Alternative Models

	$\chi^2$	sd	$\chi^2/sd$	GFI	CFI	TLI	RMSEA
WFPTS	27,604	13	2,123	0,970	0,984	0,974	0,067

When looking at the fit index values in table 5, the single-factor model shows a good fit based on  $\chi^2/sd$  GFI, CFI and TLI indices, and an acceptable fit based on the RMSEA items. The standardized factor loadings obtained from the CFA for the items in the scale, as well as the AVE and CR values for the factors, were obtained as shown in Table 6.

**Table 6.** Standart Regression Weights of WFPTS Items

Items	Trust
1. Your physician will do whatever it takes for you to receive all the necessary treatments.	0,680
4. Your physician is extremely thorough and careful.	0,749
5. You have full trust that your physician has made the best treatment decision for you.	0,800
6. Your physician honestly tells/explains all the treatment options that are suitable for you.	0,803

7. Your physician considers (only) what is best for you.	0,717
9. You have no worries about putting your life in your physician's hands.	0,678
10. You have complete trust in your physician.	0,770
<b>AVE</b>	<b>0,55</b>
<b>CR</b>	<b>0,93</b>

### 3. 2. Reliability

The total Cronbach's alpha coefficient for the 7-item scale was found to be 0.92. The average value of the inter-item correlations was calculated as 0.66. It was found that all item-total correlations were significantly above 0.2 and ranged from 0.66 to 0.84.

### 3. 3. Internal Validity

The WFPTS analysis shows a high correlation between physician trust and satisfaction, indicating a strong correlation between trust and satisfaction ( $r=0,589$ ;  $p<0,05$ ). In addition, a positive and significant correlation was found between trust in the physician and the number of previous appointments with the physician ( $r=0,196$ ;  $p<0,05$ ) (Table 6).

**Table 7.** Standard Regression Weights of WFPTS Items (N=253)

	Trust in Physician		
	N	r	p
Satisfaction with the Physician	253	0,589	<b>0,000</b>
Number of Previous Appointments	253	0,196	<b>0,000</b>
Gender	253	-0,031	0,484
Age	253	0,053	0,239
Education Level	253	-0,105	<b>0,019</b>
Income Level	253	-0,054	0,231

### 3. 4. Trust in the Physician and Patient Characteristics

The relationship between the WFPTS scores and patient demographic characteristics was examined (Table 7). There was no significant correlation between the trust in the physician variable and gender, age and income level ( $p>0,05$ ). However, a significant negative correlation was observed between trust in the physician and education level.



## 4. CONCLUSIONS AND DISCUSSION

### 4. 1. Conclusion

The analysis conducted to determine the factor structure of the WFPTS, two different measurement models were obtained. The first model consists of 7 items and a single underlying factor. Based on the results of the CFA, it was concluded that the fit index values of the first model were better than those of the second model, indicating a good fit with the data. In the literature, it is generally considered sufficient for the total explained variance ratio to be above 60% in EFA (Kartal and Bardakçı, 2018:101). Hair et al.. (2009) suggest that item factor loading values above 0.50 are an appropriate criterion. According to Büyüköztürk (2010), factor loading values of at least 0.45 are considered sufficient for construct validity. On the basis of these criteria, the scale appears to meet the requirements for construct validity. The results indicate that the factor structure of the scale should be single-factor according to these findings. In this respect, the factor structure of the original WFPTS differs from the adapted scale, but it yields similar results to the Dutch version.

### 4. 2. Discussion

Having both convergent and discriminant validity is an important indicator of the construct validity of scale. In terms of convergent validity, AVE (Average Variance Extracted) and CR(Composite Reliability) values are taken into account, as these values provides information about the fit of the items grouped under the same factor. If the AVE value for a factor is less than 0.5, the scale does not have convergent validity because it means that variance that could be attributed to measurement error is greater than the variance explained by that factor (Fornell and Larcker, 1981:46). The calculated CR value for the factors ranges between 0 and 1. For the scale to have convergent validity, it should have values greater than 0.7 (Kartal and Bardakçı, 2018:102). The AVE value of the WFPTS was calculated as 0.55, and the CR coefficient was calculated as 0.93.

Cronbach's  $\alpha$  coefficient is a measure of internal consistency and an important indicator of reliability. If this coefficient is greater than 0.70, it indicates that the scale is reliable. In this study the Cronbach's  $\alpha$  coefficient for WFPTS was calculated as 0.92. Therefore, the scale has a high reliability. For WF-D (Bachinger, 2009), a Cronbach's  $\alpha$  coefficient of 0.88 was found. Hence, there is similarity between the Dutch version and this study.

The correlation between the measurement results of the WFPTS and patients' demographic characteristics was examined. While no significant correlation was found between the variable of trust in the physician and gender, age, and income level, a negative and significant correlation was found with educational level. Hall et al. found that patients' trust in their doctors led to higher satisfaction in their encounters, and longer lasting relationships with them increased trust. There was a significant and strong correlation between trust in the physician and the number of previous appointments.

### 4. 3. Practice Implications

Trust in the patient-physician relationship is one of the important factors determining the quality of patient care. There is no scale developed in Turkish to measure patients' trust in physicians. The WFPTS, which was adapted into Turkish in this study, is a reliable and valid measurement to assess patients' trust in their physicians. Therefore, it is thought that this scale, for which validity and reliability studies have been conducted, will meet the need in the field.

Contribution Rate of Researchers: The contribution rates of the authors in the study are equal.



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"We confirm that all patient/personal identifiers have been removed or hidden so that the patient/persons identified cannot be identified and cannot be identified through the details of the story."

"In order to conduct the study, ethics committee permission dated 14.12.2022 and numbered 2022-12/46 was obtained from Sivas Cumhuriyet University Non-Interventional Clinical Research Ethics Committee. In addition, permission letters were obtained from the Provincial Health Directorate for Numune Hospital, the Chief Physician of Private Sivas Medicana Hospital and the Chief Physician of the University Hospital."

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### REFERENCES

- Gülcemal E, Keklik B. An investigation on factors affecting the confidence of patients to physicians: a research in Isparta. *Mehmet Akif Ersoy University Journal of Social Sciences Institute* 2016; 8: 64-87. <https://doi.org/10.20875/sb.66346>. (in Turkish)
- Segers S, Mertes H. The curious case of “trust” in the light of changing doctor–patient relationships. *Bioethics* 2022. <https://doi.org/10.1111/bioe.13064>.
- Wu Q, Jin Z, Wang P. The Relationship Between the Physician-Patient Relationship, Physician Empathy, and Patient Trust. *J Gen Intern Med.* . 2022; 37: 1388-93. <https://doi.org/10.1007/s11606-021-07008-9>.
- Alkan A, Özyıldız KH, Güder M, Balcı B. A field study on the relationship between the use of media tools and trust to physicians: the case of Isparta province. *Türkiye Klinikleri J Health Sci* 2022; 7: 233-41. <https://doi.org/10.5336/healthsci.2021-81511>. (in Turkish)
- Thom DH, Hall MA, Pawlson LG. Measuring patients' trust in physicians when assessing quality of care. *Health Aff (Millwood)* 2004; 23: 124-32. <https://doi.org/10.1377/hltaff.23.4.124>.
- Dinççag A. Communication with the patient, İstanbul: *Nobel Publishing*; 1999. (in Turkish).
- Çobanoğlu N. Theoretical and applied medical ethics, 1th ed. Ankara: *Eflatun Publishing*; 2009. (in Turkish).
- Rudawska, I., and Krot, K. “The relationship between doctors' communication and trust in doctor: some behavioural data,” in problems, methods and tools in experimental and behavioral economics. CMEE 2017. *Springer Proceedings in Business and Economics*, eds K. Nermend and M. Latuszynska (Cham: Springer) 2018. <https://doi.org/10.1007/978-3-319-99187-0-14>.
- Khullar D, Prasad K, Neprash H, Poplau S, Brown RL, Williams ES, Audi C, Linzer M. Factors associated with patient trust in their clinicians: results from the healthy work place study. *hcmrjournal* 2022; 47: 289-96. <https://doi.org/10.1097/HMR.0000000000000336>.
- Safran DG, Montgomery JE, Chang H. Switching doctors: predictors of voluntary disenrollment from a primary physician's practice. *J Fam Pract* 2001; 50: 130-36. PMID: 11219560.
- Gordon T, Edwards WS. Doctor-Patient Cooperation, İstanbul: *Sistem Publishing*; 1997. (Translated in Turkish by Emel Aksay)



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- Boubshait LA, AlShamlan NA, AlShammari RZ, Alamrah SA, Fallatah BA, Abdel Wahab MM, Alreedy AH. Patient trust in primary care physicians: a mixed methods study of persons with diabetes at university- based clinics in the eastern province of Saudi Arabia. *Patient Prefer Adherence* 2022; 16: 3241-55. <https://doi.org/10.2147/PPA.S377500>.
- Richmond J, Boynton MH, Ozawa S, Muessig KE, Cykert S, Ribisl KM. Development and validation of the trust in my doctor, trust in doctors in general, and trust in the health care team scales. *Soc Sci Med* 2022. <https://doi.org/10.1016/j.socscimed.2022.114827>.
- Han Y, Lie RK, Li Z, Guo R. Trust in the Doctor–Patient Relationship in Chinese Public Hospitals: Evidence for Hope. *Patient Prefer Adherence* 2022; 16: 647-57. <https://doi.org/10.2147/PPA.S352636>
- Deniz S, Çimen M. A research on determining the level of trust in physicians. *Celal Bayar University Health Sciences Institute Journal* 2020; 8: 10-6. <https://doi.org/10.34087/cbusbed.656592>. (in Turkish)
- Koca GŞ, Erigüç G. A scale development study to measure the trust communication in the patient-physicians relationship from a patient perspective. *CEEOL* 2021; 186-202- Special issue <https://doi.org/10.18026/cbayarsos.689732>. (in Turkish)
- Şengül H, Bulut A. Turkish Validity and Reliability Study of Medical Mistrust Scale and Physician Trust Scale. *Social Sciences Studies Journal (SSSJournal)* 2020. <https://doi.org/10.26449/sss.2323>. (in Turkish)
- Petrocchi S, Labrie NH, Schulz PJ. Measurement invariance of the short wake forest physician trust scale and of the health empowerment scale in German and French women. *J Health Psychol* 2020; 25: 558-69. <https://doi.org/10.1177/1359105317719582>.
- Heybet M, Tekin O, Kahveci R, Heybet ER, Yarloğlu G, Şencan İ, et al. Development of a scale for measuring physician perception: physician related health care perception scale. *Konuralp Medical Journal* 2016; 8:104-13. <https://doi.org/10.18521/ktd.24199>. (in Turkish)
- Dong E, Liang Y, Liu W, Du X, Bao Y, Du Z, Ma J. Construction and validation of a preliminary Chinese version of the Wake Forest physician trust scale. *Med Sci Monit* 2014; 20:11-42. <https://doi.org/10.12659/MSM.889992>.
- Bachinger SM, Kolk AM, Smets EM. Patients’ trust in their physician—psychometric properties of the Dutch version of the “Wake Forest Physician Trust Scale”. *Patient Educ Couns* 2009; 76: 126-3. <https://doi.org/10.1016/j.pec.2008.11.020>.
- Lee YY, Lin JL. The effects of trust in physician on self-efficacy, adherence and diabetes outcomes. *Soc Sci Med*. 2009; 68:1060-68. <https://doi.org/10.1016/j.socscimed.2008.12.033>.
- Hall MA, Zheng B, Dugan E, Camacho F, Kidd KE, Mishra A, Balkrishnan R. Measuring patients’ trust in their primary care providers. *Med Care Res Rev* 2002; 59: 293-318. <https://doi.org/10.1177/1077558702059003004>.
- Pearson SD, Raeke LH. Patients' trust in physicians: many theories, few measures, and little data. *J Gen Intern Med*. 2000;15: 509-13. doi: [10.1046/j.1525-1497.2000.11002.x](https://doi.org/10.1046/j.1525-1497.2000.11002.x).
- Amarandei RS, Mahut S, Sixou P, Jami A. The patient, the doctor and trust: translation, cultural adaptation and validation of Wake Forest Trust Scale. *Exercer-La Revue Francophone De Medecine Generale* 2021; 176:359-64. <https://www.webofscience.com/wos/woscc/full-record/WOS:000706515700006>



## ULUSLARARASI SAĞLIK YÖNETİMİ VE STRATEJİLERİ ARAŞTIRMA DERGİSİ

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- Meydan CM, Şeşen H. Structural equation modeling AMOS applications. 2th ed. Ankara: *Detay Publishing*; 2015.
- Kartal M, Bardakçı S. Reliability and validity analysis with SPSS and AMOS applied examples, Ankara: Akademisyen Publishing; 2018. (in Turkish)
- Hair JF, Black WC, Anderson RE, Babin BJ. Multivariate data analysis, *Seventh Edition*; New Jersey: Prentice Hall; 2009.
- Büyüköztürk Ş. Manual of data analysis for social sciences, 30th ed. Ankara: *Pegem Publishing* ; 2010. (in Turkish)
- Fornell C, Larcker DF. Evaluating structural equations models with unobservable variables and measurement error. *Journal of Marketing Research (JMR)* 1981; 18: 39-50. <https://doi.org/10.2307/3151312>.