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The Validity And Reliability of Nursing Relationship Scale in Turkey

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ABSTRACT

Purpose: In this research, the "Nursing Relationship Scale (NRS) was adapted to Turkish and its validity and reliability was evaluated.

Method: The research was carried out methodologically and aimed to determine the psychometric properties of "NRS". For validity, 7 times of the 34 questions in the scale were reached and 238 nurses participated in the research. For reliability, test- re test (three weeks later) was applied in 59 nurses working in the same hospitals

Results: The total Cronbach α value of the "Turkish Version of Nursing Relationship Scale" (TVNRS) was 0.87; the Cronbach α values of the subscales of the scale were determined as "Caregiver/Supporter"; 0.80, "Nursing Satisfaction"; 0.75, "Authoritarian Stance"; 0.27 and "Negativity"; 0.72. In the scale, Cronbach α values and factor loads of five items were found to be low and t-tests were not found to be significant (p> 0.05). For this reason, the scale, which was originally 34 items, was reduced to 29 items.

Conclusions and Suggestions: Our result showed that TVNRS is a valid and reliable in Turkish culture and it is suggested to be used in evaluating the patient nurse relationship.

Hemşirelik İlişkisi Ölçeği'nin Türkiye için Geçerlik ve Güvenirlik Çalışması

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ÖZ

Amaç: Hemşirelik, temeli sağlık gereksinimi bulunan birey ile kurulan ilişkiye dayanan bir meslektir. Türkçe alanyazında, hemşirelik ilişkisinin belirlenmesine ve somutlaştırılmasına yönelik bir ölçüm aracı bulunmamaktadır. Bu araştırmada klinik hemşirelerin hemşirelik ilişkisi düzeylerinin belirlenebilmesi amacıyla "Nursing Relationship Scale"(NRS)" isimli ölçeğin psikometrik özelliklerinin belirlenmesi amacıyla yapılmıştır.

Yöntem: Araştırma metadolojik olarak gerçekleştirilmiş, ölçeğin geçerlik ve güvenirliği yapılmıştır. Araştırmanın geçerlik aşaması için, ölçekteki 34 sorunun 7 katına ulaşılmış ve 238 hemşireye çalışmaya katılmıştır. Ölçek güvenirliği için aynı hastanede çalışan 59 hemşireye üç hafta arayla ölçek yeniden uygulanmıştır.

Bulgular: "Hemşirelik İlişkisi Ölçeği (HİÖ)"'nün genel Cronbach αdeğeri 0.87; ölçeğin alt boyutlarının Cronbach α değerleri: "Bakım Verici /Destekleyici";0,80, "Hemşirelik Doyumu";0,75, "Otoriter Duruş";0,27 ve "Negatiflik";0,72 olarak saptanmıştır. Ölçekte, beş maddeye ait Cronbach α değerleri ile faktör yüklerinin düşük çıktığı ve t testlerinin anlamlı çıkmadığı (p>0,05) bulunmuştur. Bu sebeple beş madde ölçekten çıkarılmış ve orijinali 34 madde olan ölçek, 29 maddeye indirilmiştir.

Sonuç ve Öneriler: Ölçeğe ait sonuçların alanyazında kabul edilebilir sınırlar içinde yer alması ve ölçeğin orijinaline ait sonuçlar ile benzerlik göstermesi nedeniyle ölçek, Türk Kültürü için, geçerli ve güvenilir bulunmuştur.

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INTRODUCTION

Nursing is a discipline of health concerned with giving care to patients and built on scientific foundations (Ann & Barrett, 2015). The application of scientific knowledge together with practices based on the nursing relationship is what drives the care and practice aspects of nursing (ICN, 2020). This is why the nursing relationship used in nursing practices is an indispensable part of the nursing process (Bach & Grant, 2018, Arnold, & Boggs, K, 2019). The term "nursing relationship" refers to a dynamic and therapeutic process based on nursing care that forms between the nurse and the patient with medical needs (Özcan, 2015; Bach & Grant, 2018). In this relationship the nurse bears more responsibility. It is initiated by the nurse and progresses as a result of the interactions between the nurse and the patient, and is terminated, by the nurse in an appropriate time (Özcan, 2015). The nursing relationship is a process that establishes effective and constructive interaction between the nurse and the patient being cared for by giving importance to the personal characteristics of the individual in the nurse's care and letting the individual be treated holistically (Arnold, & Boggs, K, 2019). Moreover, a properly-established nursing relationship will provide a solid basis for effective care (Gürhan & Okanlı, 2017). The nursing relationship is also vital for identifying the requirements of the individuals being cared for (Özcan, 2015; Arnold & Boggs,2019) making the correct nursing diagnoses, and fully meeting the requirements of individuals with medical needs (Lees et al., 2014). Furthermore, this relationship needs to be utilized effectively in all preventative, treatment, and rehabilitation processes (Ku & Minas, 2010) because it is a fundamental care factor (Haugan et al., 2013) to improve the quality of care (Bach & Grant, 2018) and ensuring recovery (APNA, 2015).

The nursing relationship is a process that hastens recovery in individuals with medical needs (Bach & Grant, 2018), reduces levels of anxiety and depression (Haugan, Innstrand & Moksnes, 2013), increases feelings of hope (Haugan et al., 2016), as well as becoming better and fit for life and awareness (Yalçın, 2010). Moreover, an effective nursing relationship increases nurses' professional satisfaction (Hosseinabadi & Etemadinezhad, 2018) and contributes not only to their personal and professional development (Rasheed et al., 2019) but also to the establishment of a professional identity (Gürhan & Okanlı, 2017). For organizations, good nursing relationships help reduce costs and shorten hospitalization times (Kornhaber et al., 2016).

A review of literature on the subject of nursing relationships showed that effective nursing relationships contribute greatly to the nursing profession and practices, patient care outcomes and the recovery process, and reduce the institution's costs. It is known, however, that the nursing relationship in Turkey is a problems (Şantaş & Kahraman, 2017; Şengül, 2013; Geçkil, 2008). Busy working conditions, staff shortages, and the high number of patients to nurses form a significant barrier to forming a proper and effective nursing relationship (Şengül, 2013). When the nursing relationship is not at the desired level, this leads to inadequate communication between nurses too (Şengül, 2013) that case dissatisfaction in nursing too (Şantaş & Kahraman, 2017). There is a need for the right instruments to assess the nursing relationship and its associated problems. The lack of studies in Turkey regarding the concept of the nursing relationship and the absence of a scale specifically developed for the nursing relationship makes it hard to assess the topic's visibility, resulting in the need for an objective measurement tool for this topic. A review of the literature in this context showed that the Nursing Relationship Scale (NRS) developed by Ku & Minas (2010) is a scale that could be useful in determining the levels of nursing relationships. This tool can raise our awareness regarding nursing relationship and its importance, provide a means for showing nurses existance, contribute to patient care, and add value to the nursing profession. So, this study aimed to adapt the NRS to Turkish culture.

METHOD

Research Design

The research followed a methodical structure to determine the psychometric properties of the NRS. Two questions were considered in the research.

1. Is the Turkish version of the NRS (TVNRS) valid?

2. Is the TVNRS reliable?

Participants

The research was carried out in three hospitals (two training and research hospitals and one university hospital) with at least 500 bed capacity during 2017-2018.

The sample of the research was composed of nurses who were working in the internal, surgical, and psychiatry clinics of the mentioned hospitals and selected by a simple random sampling method. The total 238 nurses working in the clinics of three hospitals consisted of this research sample.

Inclusion criteria for the research were "volunteering to participate in the research" and "working in adult clinics of hospitals included within the scope of the research". Exclusion criteria were "working as a head nurse in the clinic and working in intensive care".

Research Instruments and Processes

Nursing Relationship Scale (NRS): This scale was developed by Ku and Minas in 2010. It is a "*5-point Likert-type scale*" consisting of 34 items, grading from disagree (0) to agree (4) (Ku & Minas, 2010). There is no reverse coded question on the scale. The obtained points from the scale are a minimum point is "0" and a maximum point is 136. The scale has no cut-off point or reverse-coded item, and it is asserted that as the scale score increases the nursing relationship does, too. The scale consists of four sub-scales under the headings of "*Caring/Supportive Approach*", *"Nursing Satisfaction", "Authoritarian Stance" and "Negativity*". The Caring/Supportive Approach sub-scale evaluates nurses' tendencies to encourage patients, spend time explaining, and make explanations for care and treatment. The Nursing Satisfaction sub-scale evaluates nurses' perception of the satisfying aspects of the nursing profession. While the authoritarian stance evaluates the tendency to take over the management, Negativity evaluates the tendency to avoid, to give incomplete information about the prognosis, and to feel a barrier towards the patient. The alpha coefficients for diabetes case in the reliability analysis of NRS were as follows: Caring/Supportive Approach, 0.91; Nursing Satisfaction, 0.75; Authoritarian Posture, 0.65; and Negativity, 0.78. The alpha coefficients for the mental illness case were: Caring/Supportive Approach, 0.91; Nursing Satisfaction, 0.75; Authoritarian Posture, 0.73; and Negativity, 0.85.

Data Analysis

SPSS 20.0 and LISREL 8.7 programs were used to analyze the data. Firstly, the "*language validity", "content validity", and "construct validity"* assessments of the scale were carried out as part of the validity study of the research. Within the scope of language validity, the scale was translated by two language experts. The scale whose language validity was made was then sent to seven experts for content validity and was structured in line with the suggestions. After the content validity was made, the consistency of the experts' opinions was assessed with the "*Content Validity Ratio"* (CVR) and "*Content Validity*" (CVI) analysis.

In the reliability study of the research, the "*test-retest evaluation*" of the scale was assessed with "*Pearson correlation analysis"*, and the compatibility analysis was assessed with the t-test independent groups, the item-total score analysis for the scale and its subscales were assessed with "*Pearson correlation analysis*", and the internal consistency of the scale and sub-scales was assessed with the Cronbach α coefficient and the intra-class correlation coefficient. Factor analysis was used for the item-factor relationship, and Confirmatory Factor Analysis (CFA) was used to determine whether the items and sub-scales explained the original structure of the scale.

Ethic

The non-clinical research ethics committee of Hacettepe University approved the study. Written official permissions from the hospitals were obtained (16969557-762). Written permission for the use of the scale was obtained from Tan Kan KU, the author of the original questionnaire. Also, the nurses were informed about the data collection tool, and their written consent was obtained.

RESULTS

Validity Study

Language Validity: The original form of the scale is in English. To ensure validity, language equivalence was first established, and accordingly, the scale was then translated from *"English to Turkish"* by seven experts (1 language expert8, 6 psychiatric nursing experts). Two psychiatric nursing experts evaluated these translations, and the Turkish version of the scale was prepared. The Turkish form was sent back to the same six psychiatric nursing experts, and the scale was finalized by taking their recommendations. The scale, which was translated into Turkish and its final form was taken, was sent back to two language experts and translated back into English. Next, it was sent to Ku and Minas (2010), the developers of the scale, to compare the translation with the original.

Content Validity: Content validity was calculated using the Lawshe technique (Ayre & Scally,2014). The scale, for which language equivalence was ensured and a Turkish version was formed, was sent to 6 psychiatric nursing experts to conduct the content validity. For content validity, experts were asked about the grading criteria [(1=Completely applicable; 2=Applicable (requires minor changes to the item); 3=Slightly applicable (the item needs to be adjusted); 4=Not applicable)] specific to each item in the scale by using the Davis technique and they were asked to make an assessment. The *"Content Validity Ratio"* (CVR) and the *"Content Validity Index"* (CVI) were found to be in line with the opinions of experts and the expressions for the scale items were corrected.

Construct Validity: The Turkish translation, whose content validity was made, was translated into English, the original language of the scale, and sent to the scale developers. The scale was applied for research after the scale developers approved it as being applicable. Lisrel 8.7 package program was used to assess the construct validity. Factor analysis was used for the item-factor relationship, and *"Confirmatory Factor Analysis"* (CFA) was used to determine whether the items and sub-scales explained the original structure of the scale. Items with at least 30 load values in CFA were included in the factor construct.

The fit indices of TVNRS on all nurses (n=238) were examined. The RMSEA value was found to be 0.08 and the p-value to be $p<0.001$ in our research.

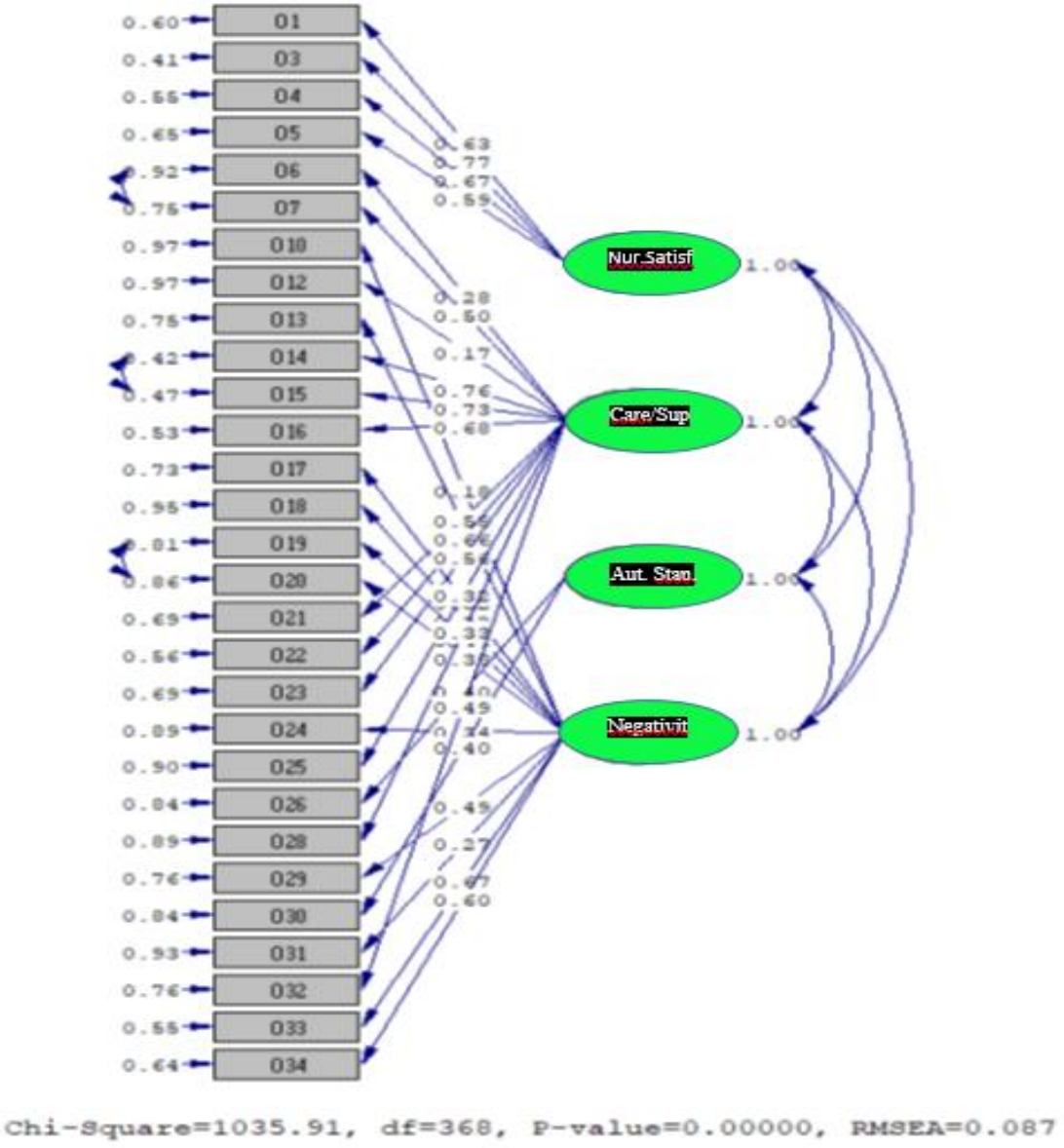

Figure 1. *Structural Equation Modeling Results of TVNRS*

Structural Equation Model results of the TVNRS showed that five items (items 2, 8, 9, 11, and 27) were not compatible with the original scale developed by Ku and Minas (2010), the Cronbach α values and factor loads of these five items were low, and the t-tests were not significant (p>0.05). For this reason, five items (items 2, 8, 9, 11, and 27) were excluded from the scale, reducing the 34-item scale to 29 items (Figure 1). The items 1, 3, 4 and 5 of the scale reduced to 29 questions constitute the "Nursing Satisfaction" sub-scale, the items 6, 7, 12, 14, 15, 16, 21, 22, 23, 25, 28 and 32 constitute the "Caring/Supportive Approach" sub-scale, the items 26 and 30 constitute the "Authoritarian Stance" sub-scale, and the questions 10, 13, 17, 18, 19, 20, 24, 29, 31, 33 and 34 constitute "Negativity" sub-scale.

Reliability Study

Reliability indicates the consistency of the measurement tool (Sönmez & Alacapınar, 2014). The test-retest method is the implementation of the same measurement material to the same people under the same conditions at least twice. It shows the stability of the test in measuring (Alpar, 2020). It is considered sufficient for nurses to participate in the test-retest method as much as 25% of the first application group (Alpar, 2020). In the research, 59 nurses, 25% of the 278 nurses to whom the measurement tool was first applied were retested three weeks after the first application. Afterward, the correlation between the scores the nurses obtained in the

first application and the scores they obtained from the second application was calculated through the Pearson Correlation Coefficient (Alpar, 2020; Sönmez & Alacapınar, 2014). The compliance between the two applications performed in three weeks of intervals was analyzed with the intraclass correlation coefficient (ICC). Item-total-score correlation explains the correlation between the scores obtained from the test items and the total score of the test. Positive and high item-total correlation indicates that the items exemplify similar behaviors, and the internal consistency of the test is high (Evci & Aylar, 2017). The correlation coefficient is used to find and interpret the amount of the correlation between two variables. The descriptive values of the data were given as a number, percentage, mean and standard deviation, and the statistical significance level in the test results was accepted as $p \leq 0.05$.

Cronbach α internal consistency coefficient and intraclass correlation coefficient were calculated and the *"test-retest method"* was used in determining the reliability of the scale. *"Cronbach's alpha"* analysis was used to test internal consistency within the content of reliability, and the coefficient's closeness to 1 was evaluated. The *"test-retest"* evaluation of the scale was assessed with *"Pearson correlation analysis"*, and the compatibility analysis was assessed with the t-test independent groups, the item-total score analysis for the scale and its subscales were assessed with *"Pearson correlation analysis"*, and the internal consistency of the scale and sub-scales was assessed with the Cronbach α coefficient and the intra-class correlation coefficient.

Table 1. *Cronbach α Values of NRS and TVNRS.*

	Cronbach α values of NRS (n=208)		Cronbach α values of TVNRS (n=238)
	Psychiatric Nurses	General Nurses	Nurses (Adult, medical, surgical, and psychiatry)
General Cronbach α values	Undefined	Undefined	0.87
Cronbach α Values of the sub-dimensions of NRS			
Caregiver/Supporter	0.91	0.91	0.80
Nursing Satisfaction	0.75	0.75	0.75
Authoritarian Stance	0.73	0.65	0.27
Negativity	0.85	0.78	0.72

The *"test-retest method"* was used to determine the reliability of the TVNRS for its invariance over time. For this purpose, the scale was reapplied to 59 nurses at three weeks of intervals.

Table 2. *Test-Retest Results and ICC Values for Sub-Scales of TVNRS*

TVNRS	Test X±df	Retest X±df	Statistical Evaluation T	p	ICC (Intra-Class Correlation Coefficient Values)
Caregiver/Supporter	3.04±0.87	3.03±0.89	0.846	0.401	0.99
Nursing Satisfaction	3.26±1.02	3.29±1.05	0.444	0.659	0.95
Authoritarian Stance	3.55±1.65	3.55±1.65	*	*	0.99
Negativity	2.37±0.74	2.36±0.74	1.657	0.103	0.97

* Since repeated measurements are the same and standard error difference is "0", "t" and "p" values were not calculated.

The mean score and ICC values for the first and re-test of TVNRS are shown in Table 2. The "t" test was used to assess whether there was a significant difference between the first test and test-retest measurements for the sub-scales of TVNRS, and no significant difference was found in any of the sub-scales ($p>0.05$). Since the means were close to each other, Intra-Class Correlation Coefficient (ICC) values were calculated to test the reliability.

Table 3. *The Correlation Between The First Test and Re-Test Measurements Of TVNRS And Its Sub-Scales* (n=59)

TVNRS	Statistical Evaluation (Correlation)	
	r	p
TVNRS Total Score (Initial Test and Retest)	0.998	p<0.001
Caregiver/Supporter	0.997	p<0.001
Nursing Satisfaction	0.972	p<0.001
Authoritarian Stance	0.997	p<0.001
Negativity	0.982	p<0.001

When Table 3 is examined, the "*Pearson Product-Moment correlation coefficient"* of the total scale score was found to be 0.998 (p<0.001) between the two applications, indicating a high level of correlation between the *"test-retest measurements"* of the sub-scales (p<0.01).

Table 4. *Item-Total Correlations According to Sub-scales of TVNRS*

Sub-Dimensions of TVNRS	**r**	**p**
Caregiver/Supporter		
I would spend more time with Mr. A/S than with other patients on the ward.	0.409	p<0.001
I would encourage Mr. A / S more than any other patient to take as much care of herself as possible.	0.481	p<0.001
I expected Mr. A/S to follow my instructions regarding the treatment regimen.	0.406	p<0.001
I would be more careful than usual when explaining a nursing activity or treatment to Mr. A/S.	0.413	p<0.001
I would be more careful than usual when explaining to Mr. A/S about the ward's rules, upsets, and general culture.	0.437	p<0.001
I would be more careful when asking Mr. A/S about his health.	0.633	p<0.001
Compared to other patients, I would more encourage Mr. A/S's caregivers to be supportive.	0.618	p<0.001
Compared to other patients, I would be very supportive of Mr. A/S's caregivers.	0.505	p<0.001
More than usual, I would ask Mr. A/S if he would like to discuss any problems or concerns about his hospitalization.	0.404	p<0.001
If a visitor of Mr. A/S tried to stay out of visiting hours, I would allow it.	0.381	p<0.001
I would be particularly careful about the secrecy of Mr. A/S's situation.	0.531	p<0.001
Nursing Satisfaction		
It would be very satisfying for me to care for Mr. A/S as caring for him requires special skills.	0.505	p<0.001
I would make a special effort to care for Mr. A/S.	0.538	p<0.001
I would discuss Mr. A/S's management of care with my colleagues at the ward.	0.502	p<0.001
Looking after Mr. A/S would be a challenge that I would look forward to.	0.482	p<0.001
Authoritarian Stance		
I would not completely trust the opinion of Mr. A/S in making treatment decisions.	0.390	p<0.001
I would be wary of discussing Mr. A/S's condition with any of his visitors.	0.440	p<0.001
Wouldn't be too optimistic about Mr. A/S's prognosis.	0.521	p<0.001
Negativity		
I would have taken a more "kind" approach to Mr. A/S than to other patients.	0.390	p<0.001
I would worry a little more than usual that Mr. A/S might become aggressive in the ward.	0.497	p<0.001
Compared with other patients, I would avoid letting Mr. A/S know about me or my private life.	0.305	p<0.001
Compared with other patients, I would avoid confrontation with Mr. A/S if he did something against the rules of the ward.	0.393	p<0.001
I would feel "barriers" between me and Mr. A/S more so than with other patients.	0.349	p<0.001
I would make an effort to encourage Mr. A/S to talk about his problems or illness.	0.304	p<0.001
I would expect Mr. A/S to be a more demanding patient than most patients.	0.420	p<0.001
I would think Mr. A/S would need more privacy than most patients in the.	0.317	p<0.001
I would be a little reluctant to work with Mr. A/S to develop the care plan.	0.480	p<0.001
I would have been more patient with Mr. A/S than with other patients at the ward.	0.536	p<0.001
Compared with other patients, I would be less persistent if Mr. A/S do not want to discuss a topic.	0.460	p<0.001

Table 4 demonstrates the item-total correlations for each sub-scale of TVNRS. When the item-total correlations are examined, it is seen that the item-total correlations of the "Caring/Supportive Approach" sub-scale range from 0.381 to 0.633, the "Nursing Satisfaction" sub-scale range from 0.482 to 0.538, the "Authoritarian Stance" sub-scale range from 0.390 to 0.521 and the "Negativity" sub-scale range from 0.304 to 0.506. The validity phase of the HLFS was performed with the Structural Equation Model (SEM).

In our study, the Cronbach α value was calculated as 0.87 for the whole nursing relationship, 0.80 for the "Caring/Supportive Approach sub-scale", 0.75 for the "Nursing Satisfaction sub-scale", 0.72 for the "Negativity sub-scale", and 0.27 for the "Authoritarian Stance sub-scale". The first test and test-retest Pearson Product-Moment correlation coefficient regarding the total score of the scale was found to be 0.998 ($p<0.001$.). Table 3 shows Cronbach's alpha values for the NRS and TVNRS. Regarding item correlations, when Table 3 is examined, these values vary between 0.38-0.63 for the "Caring/Supportive Approach" sub-scale, 0.48-0.53 for the "Nursing Satisfaction" sub-scale, 0.39-0.52 for the "Authoritarian Stance" sub-scale, 0.30-0.53 for the "Negativity" sub-scale.

DISCUSSION

In this study, we adapted the Nursing Relationship Scale to Turkish and analyzed its psychometric properties. In this study, NRS was found to be a valid and reliable measurement tool, and four conceptual dimensions called Caregiver/Supporting Approach, Nursing Satisfaction, Authoritarian Posture, and Negativity were reached, similar to the original. Also, our result showed that TVNRS is a valid and reliable measurement tool for Turkish culture because the results of the fit indices, Cronbach's α values, and item-total correlations are within acceptable limits and show similarities with the results of the original scale (Ku &Minas, 2010). Nursing relationship affects nursing care outcomes, nursing satisfaction, and the recovery process. It also contributes to the development and professionalization of the nursing profession. Therefore, it is important to determine the nursing relationship levels of nurses.

Content Validity: In a six-person expert evaluation; it is expected to be CVR>0.99 for ($p=0.05$) significance level (Ayre & Scally, 2014; Yeşilyurt & Çapraz, 2018). Since CVR >0.99 in the research, no item was eliminated from the scale during the application phase. As a result of the analysis, it was determined that there was harmony among the experts. CVI value was calculated separately for each sub-scale and was found CVI=3 in all sub-scales. The scale was evaluated as valid in terms of content validity since CVI>CVR (Ayre & Scally; Yeşilyurt & Çapraz, 2018). The translation of the scale assessed by Ku & Minas (2010) was determined to be following its original, and the scale took its final form.

Construct Validity: All fit indices were within acceptable levels. According to the fit indices, X^2/sd value being 2 or less indicates that the model has a good fit, and 5 and less indicates that the model has an acceptable fit (Esin, 2014). In our study, the X^2/sd value was found to be less than 5 (2.81). According to this value, the model has an acceptable fit (Esin, 2014). In the literature, it is stated that the fit indices obtained in the validity and reliability studies of the scale can take values ranging from 0 to 1 and that the fit values approaching 1 indicates that the goodness of fit of the model increases and the scale exhibits a strong fit (Evci & Aylar, 2017; Kline, 2016). Since the fit index values in our research were between 0.77 and 0.89, it can be said that the scale showed an acceptable fit. RMSEA value being equal to or less than 0.08 and the p-value being less than 0.005 indicates a very good fit, while RMSEA value being equal to or less than 0.10 indicates a poor fit (Esin, 2014). The RMSEA value obtained in our research shows that the model has an acceptable fit.

Reliability: Cronbach's alpha and intraclass correlation coefficients were calculated for reliability. The higher the Cronbach α values on the scales, the greater the time invariance of that measurement (Esin, 2014; Ku & Minas, 2010). In Ku's study (2010) it was found that Cronbach's α values in all sub-scales of the NRS ranged from 0.72 to 0.91.In our study Cronbach's α values of all sub-scales found in our research were ranged from 0.27 to 0.80 and the general Cronbach α value of scale found 0.87. Hinton et al., (2014) stated that Cronbach alpha values reveal moderate in between the interval of 0.50–0.70, high in between the interval of 0.70–0.90, and excellent reliability over 0.90. This study has high reliability with its three subscales and also general Cronbach α value of scale. The value of 0.27 determined for the "Authoritarian Stance sub-scale" is below the expected reliability. Five questions are measuring the "Authoritarian Stance" sub-scale in the TVNRS. In our research, three questions were excluded from this sub-scale because the factor loads were low (<0.30) and the t-tests were not significant (p>0.05). Thus, the "Authoritarian Stance" sub-scale of the TVNRS consisted of two questions with a high factor load (>0.30) and a significant t-test (p<0.05). Streiner et al., (2015) stated that the low number of questions may lead to Cronbach alpha values being low. Therefore the low Cronbach α value determined for the "Authoritarian Stance" sub-scale is thought to be related to the fact that two questions were measuring this sub-scale. The "Authoritarian Stance" sub-scale was not removed because the test-retest value for the "Authoritarian Stance" sub-scale of the scale was high (0.997) and statistically significant (p<0.05), the correlations of the items belonging to the "Authoritarian Stance" sub-scale with the whole scale were above the value of 0.30 and the overall Cronbach α value of the scale decreased when the items belonging to the authoritarian stance were removed. Therefore, it was found that the two scales were close to each other and both scales had high reliability. In the study, the item-total correlations ranged from 0.304 to 0.633. The item-total correlation demonstrates the effect of the relevant item on the total item score. It is desired that this effect should not be less than 0.40, but Evci & Aylar (2017) and Büyüköztürk (2018) state that value of 0.30 is acceptable. In this respect, it is seen that the item-total correlations are at a sufficient level. In addition, Esin (2014) and Sönmez & Alacapınar (2014) stated that 0.30 and higher item-total correlations distinguish the measured feature well. In line with all these, it is thought that the item-total correlations obtained as a result of the research are sufficient.

According to ICC, scale reliability is assessed as excellent reliable in the range of 0.95-100, highly reliable in the range of 0.85-0.89, moderately reliable in the range of 0.70-0.84, and unacceptable in the range of 0.00-0.69 (Evci & Aylar, 2017; Kline, 2016). In the statistical analysis, the ICC value of the scale was calculated as 0.998 and the reliability of the scale was found to be at an excellent level (p<0.05). It is seen that the intraclass reliability of the sub-scales of the scale is also within acceptable limits.

CONCLUSION AND SUGGESTIONS

The results showed that the TVNRS is a valid and reliable tool to evaluate nursing relationship levels. It is a scale with four key sub-dimensions that may contribute to a clearer understanding of the differences in nursing practice. The nursing relationship is a foundation for nursing care, an effective healing process, and a key factor in quality care. It is necessary to understand the effects of the nursing relationship in the nursing care process and to raise awareness about the importance of the nursing relationship. It is recommended that this scale be used in studies to assess the patient nurse relationship to increase the quality of nursing care provided in the changing world conditions and larger populations.

LIMITATIONS

In our study, the attitude towards adult patients was evaluated. In addition, the study could not be conducted in all planned hospitals lead to a decrease in the number of psychiatric nurses in the sample.

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Conflict of Interest

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Author Contributions

Design: A.G.Y.A., F.O., Data Collection or Processing: A.G.Y.A., F.O., Analysis or Interpretation: A.G.Y.A., F.O., Literature Search: A.G.Y.A., F.O., Writing: A.G.Y.A., F.O.

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