

Research Article

Investigation of the Psychometric Characteristics of the Turkish Version of the Pediatric Nurse Parent Partnership Scale for Pediatric Nurses

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Abstract

AIM: The objective of this study was to adapt the pediatric nurse parent partnership scale into Turkish and assess its validity and reliability.

METHODS: A methodological and correlational research methodology was employed. The study was performed with 348 pediatric nurses between January and March 2023. Data collection measures were a "Personal Information Form" and the "Pediatric Nurse Parent Partnership Scale." Content and structure validity, internal consistency, and item analysis methods were utilized to establish the validity and reliability of the measure.

RESULTS: The adapted measure was found to have 19 items, explaining 71.60% of the total variance, and a four-sub-dimensional structure. According to the explanatory factor analysis findings, factor loads varied from 0.509 to 0.854, and item-total score correlation values of 0.509–0.750 were obtained. The goodness of fit indices obtained from the confirmatory factor analysis were CMIN/DF=3.845, GFI=0.87, CFI=0.92, NFI=0.89, TLI=0.90, and RMSEA=0.091. The confirmatory factor analysis of the four-factor measure structure showed that these index figures were acceptable. Cronbach's α was 0.939 for the total scale and varied from 0.845–0.893 for the sub-dimensions.

CONCLUSION: The Pediatric Nurse Parent Partnership Scale was an effective and trustworthy measure that could be used in the Turkish sample to evaluate the partnerships reported by pediatric nurses and parents in the field.

Keywords: Nurses, parents, partnership, pediatric, reliability, validity

Introduction

Pediatric nurses (PNs) and parents play a significant role in caring for the child (Choi & Kim, 2014). Especially in this process, the focus is on the relationship between the pediatric patient, parents, and the nurse. This relationship continues before, during, and after hospitalization (Choi & Kim, 2014; Coyne et al., 2014; Hopwood et al., 2018). Providing optimal care for the child in pediatric nursing depends on the establishment of a collaborative relationship between the PN and parents (Coyne et al., 2014; Hopwood et al., 2018). When we look at the recent literature, the establishment of an association between parents and the sick child and pediatric nurses is seen as an important factor that ensures the provision of good care and accelerates the recovery process (Bae & Lee, 2017; Uhm & Kim, 2019; Yoo et al., 2020). The partnership between the nurse and parents is based on the collaborative relationship between the PN, who provides professional nursing care, and the parents of the sick child (Millenson et al., 2016; Uhm & Kim, 2019). In other words, the association of PNs with parents is that PNs respect parents, include them in care, and work together by making plans to strengthen them (Coyne et al., 2014; Hopwood et al., 2018). This association is managed by PNs and the parents of the sick child (Hopwood et al., 2018; Millenson et al., 2016; Smith, 2018).

The collaborative association between the parents of the sick child in the ward and the PNs is effective in managing the child and parents' stress resulting from hospitalization and in providing professional nursing care (Bae & Lee, 2017; Salvador et al., 2019; Uhm & Kim, 2019; Yoo & Cho, 2020; Yoo et al., 2020). In fact, it has been stated that the better the association between the parents of a sick child and PNs is, the higher the standard of professional nursing care for the child in the ward is and the better the satisfaction with the nursing service is (Bae & Lee, 2017; Salvador et al., 2019; Yoo & Cho, 2020). Especially for PNs, establishing positive partnerships with the families of sick children in the ward contributes to the fulfillment of family-centered care, which is one of the basic philosophies of pediatric nursing for sick children in the ward (Dall'Oglio et al., 2018; Yoo et al., 2020; Jung & Tak, 2017). Some studies in the literature have shown that family-centered care produces positive results, provides a good experience for children in the service and their families, increases satisfaction among healthcare professionals, and reduces medical costs (Dall'Oglio et al., 2018; Salvador et al., 2019).

There is limited research into the evaluation of the association between parents with sick kids and PNs in the literature (Choi & Uhm, 2022; Uhm & Kim, 2019). Yoo et al. (2020) found

that there were differences in the equality of relationship and the legibility of care between nurses and parents in a study they conducted on the equality of relationship and legibility of nursing care between parents of sick children in the ward and PNs. It was specified that the equality of relationship between the parents of sick children in the ward and nurses and the standard of nursing care were higher in elderly and married nurses with children. The equality of relationship between nurses and parents was specified as medium. It was also found that there was a good connection between the equality of the relationship between nurses and parents and the standard of nursing care (Yoo et al., 2020).

In conclusion, PNs need to establish a partnership with parents to provide suitable nursing care to pediatric patients in the pediatric clinic. It has been observed that PNs' establishment of partnerships with parents to provide professional nursing care to hospitalized children affects the standard of nursing care and patient outcomes, but a review of the literature on this subject has shown that there is limited research (Choi & Uhm, 2022; Uhm & Kim, 2019). This may be due to limited measurement tools that can be used to evaluate PN-parent partnerships (Choi & Uhm, 2022). This research was conducted to adapt the pediatric nurse parent partnership scale—pediatric nurses (PNPPS-PNs) from the English language to the Turkish language, carry out its reliability and validity analyses, and introduce the adapted form of the measure to the field.

Research Questions

1. Is the PNPPS-PN a valid measurement tool in Turkish?
2. Is the PNPPS-PN a reliable measurement tool in Turkish?

Methods

Research Design

This is a methodological research.

Sample

The research was conducted with the participation of nurses who served in pediatric services in two different cities in the central and eastern of Türkiye from January to March 2023. When a measure is adapted to another culture, it is advised to recruit subjects about five to 10 times the count of items on the measure so that a factor analysis can be performed to test reliability and validity (DeVellis, 2016; Tabachnick & Fidell, 2015). Accordingly, it was planned to recruit 190 pediatric nurses as there were 19 items on the measure. Considering a 10% attrition rate, the number of nurses was increased to 209. Eventually, 348 pediatric nurses who approved to join the research and were chosen using the convenience sampling method participated in the study. Data were collected via an online survey method from nurses' social media accounts and institutional e-mail

Data Collection Tools

Individual identification form

There were six items on this form to be filled out by nurses working in the pediatric clinic. They were about participants' gender, age, marital status, total working years, education, and the pediatric unit.

The pediatric nurse parent partnership scale—pediatric nurses (PNPPS-PNs)

Choi & Uhm (2022) created this measure to evaluate pediatric nurse-parent partnerships for PNs. It comprises 19 five-point Likert type items, which are evaluated between strongly disagree (one point) to strongly agree (five points). The measure comprises seven sub-dimensions: reciprocity, professional knowledge and skills, sensitivity, cooperation, communication, shared information, and mindfulness. The sub-dimensions and their items are as follows: the reciprocity sub-dimension (1–5); the professional knowledge and skills sub-dimension (6 and 7); the sensitivity sub-dimension (8–11); the cooperation sub-dimension (12 and 13); the communication sub-dimension (14 and 15); the shared information sub-dimension (16 and 17); and the attention sub-dimension (18 and 19). Some of the items are as follows: "The parent and I respect each other;" "The parent appears to feel relieved when I am in charge of the child;" "I console parents who are in painful circumstances;" "Both the parent and I have the same objectives for the care of the child;" "When there are problems with the child, the parent consults with me about them;" "The parent alerts me when there are any changes in the child's condition;" and "The parent and I are careful about our words toward each other." Scores on the measure vary from 19 to 95. The higher the score on the measure is, the higher the equality for the nurse-parent association noticed by the PN is. The explanatory factor analysis (EFA) revealed a 7-factor structure. As shown by the confirmatory factor analysis (CFA), the 7-factor structure had acceptable fit indices. The values of the comparative fit index (CFI), goodness of fit index (GFI), normal fit index (NFI), and Tucker Lewis index (TLI) were all greater than 0.80. Root mean square error of approximation (RMSEA) was less than 0.080. Cronbach's α of the measure was 0.89. Also, the internal consistency reliability of the measure was good.

Procedure

Language validity

The language validity study of the PNPPS-PN included the translation-back translation approach. It was first translated from English into Turkish by five pediatric nursing specialists. Following the translation process, the most appropriate expressions for the measure items were selected, forming a Turkish equivalence of the measure. After that, two English language specialists converted the new version back into the original language (Johnson & Christensen, 2014; Kartal & Bardakçı, 2018). The items of the back-translated model and those of the original version were compared, and it was seen that both forms were compatible. Expert opinions were obtained to assess the clarity and appropriateness of the items. The items were evaluated by seven faculty members from the field of pediatrics. The Davis technique was utilized to measure the content validity of the measure. The items were rated as follows: (not appropriate, one point), (comprehensive revision, two), (slight revision, three), and (no change, four).

Content validity

Following expert opinions, the content validity index (CVI) and content validity ratio (CVR) were utilized to interpret the items (Kartal & Bardakçı, 2018). In this research, the CVI and CVR values of the scale were calculated as 1.0.

Face validity

Following the content validity, a pilot application was carried out to determine whether more corrections were needed regarding the clarity of the measure items. The pilot application was carried out on a total of 20 pediatric nurses. Since no corrections were suggested by the nurses about the questions, the draft form was finalized for application on the main sample (Johnson & Christensen, 2014). Data obtained from the preliminary application were not involved in the main dataset.

Construct validity

Explanatory factor analysis and CFA were performed to assess construct validity.

Reliability

Reliability assessment involved split-half, Cronbach's α , and item analysis.

Statistical Analysis

Data were analyzed using the Statistical Package for Social Sciences version 25.0 software (IBM Corp.; Armonk, NY, USA) and AMOS 24.0 statistical software packages. Descriptive statistics were presented using numbers and percentages. The translation-back translation method was used for the language validity of the scale. In the validity analysis of the scale, content validity, face validity, and construct validity were applied. Content validity index and CVR were calculated using the Davis technique for content validity. A pilot application was also conducted for face validity. Exploratory factor analysis and CFA were used for construct validity. Exploratory factor analysis was employed to determine the structure of the Turkish version of the scale, and CFA was performed to confirm the new structure. Exploratory factor analysis revealed the item-factor relationships. Confirmatory factor analysis was utilized to test whether the data were suitable for the model, whether the structure determined by EFA was confirmed, whether the sub-dimensions were appropriate for the scale, and whether the items were adequately related to their sub-dimensions. In the reliability analysis of the scale, split-half, Cronbach's α , and item analysis were calculated (DeVellis, 2016; Karagöz, 2016; Kartal & Bardakçı, 2018; Tabachnick & Fidell, 2015). A significance level of $p < .05$ was accepted as the indicator of statistical significance.

Ethical Considerations

The author of the measure was contacted via e-mail to get permission to adapt it into Turkish. Ethics approval was received for this study from the Hakkari University Scientific Research and Publication Ethics Committee (Approval no: IRB: 2022/103-1, Date: December 6, 2022). In addition, the informed consent form was sent online to the nurses who accepted to join the research, and the measures were applied after they approved participation by checking a box reading "I have read the form and approve to join the research."

Results**Participants' Descriptive Features**

Of the participants, 50.9% ($n = 177$) were ≤ 32 years old, 66.7% ($n=232$) were female, and 54.0% ($n=188$) were

married. The education levels of the participants and the rates of each group were as follows: 3.7% with high school education ($n=13$); 4.9% ($n=17$) with an associate degree; 70.4% ($n=245$) with an undergraduate degree; and 21.0% ($n=73$) with a postgraduate degree. The total professional practice was less than one year for 8.9% ($n=31$) of the participants, 1–5 years for 34.5% ($n=120$), and >5 years for 56.6% ($n=197$). Of the participants, 12.4% ($n=43$) worked in the internal unit, 10.1% ($n=35$) in the surgical unit, 10.1% ($n=35$) in the intensive care unit, 22.4% ($n=78$) in the neonatal unit, 27.0% ($n=94$) in the emergency department, 12.4% ($n=43$) in polyclinics, and 5.7% ($n=20$) in the oncology unit (Table 1).

Validity Analysis

Exploratory factor analysis and CFA were employed to test the construct validity of the measure.

First, Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test were utilized to test the construct validity. Kaiser-Meyer-Olkin was found to be 0.917, and Bartlett's χ^2 was calculated as 4723.582 ($p = .00$), indicating a significant chi-square value ($p < .05$) in the Bartlett test. Accordingly, varimax rotation with principal components analysis was performed for EFA. These results and the scatter plot (Figure 1) supported the variance ratio explained by the factors/dimensions. As a result of EFA, it was found that the 19-item measure had a four-dimensional structure and that 71.60% of the total variance was explained

Table 1.
Participants' Descriptive Features N=348

		n	%
Age (years)	≤ 32	177	50.9
	≥ 33	171	49.1
Gender	Female	232	66.7
	Male	116	33.3
Marital status	Single	160	46.0
	Married	188	54.0
Education	High school	13	3.7
	Associate degree	17	4.9
	Undergraduate degree	245	70.4
	Postgraduate	73	21.0
Experience	<1 year	31	8.9
	1–5 years	120	34.5
	>5 years	197	56.6
Unit	Internal	43	12.4
	Surgical	35	10.1
	Intensive care	35	10.1
	Neonatal	78	22.4
	Emergency	94	27.0
	Polyclinics	43	12.4
	Oncology	20	5.7

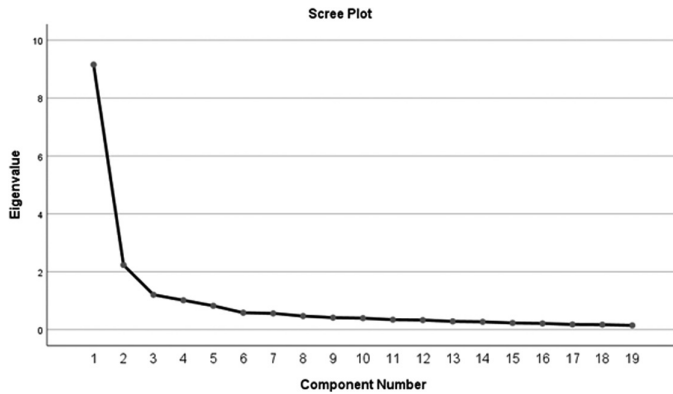


Figure 1. Principal Component Analysis Scatter Plot for Factor Structure.

by the factors. As seen in Table 2, the analysis yielded item factor loads of 0.509 to 0.854.

No measure items were dropped from the Turkish version, as in the original measure, and they were distributed under different sub-dimensions. The names of the sub-dimensions and the number of items were as follows: reciprocity (six items), sensitivity (five items), cooperation and attention (four items),

and communication and shared information (four items). In the Turkish version, the reciprocity sub-dimension was combined with the professional knowledge and skills sub-dimension, sensitivity with the professional knowledge and skills sub-dimension, collaboration with the attentiveness sub-dimension, and communication with the shared information sub-dimension. Table 3 shows factor names and the items falling under these factors for the new factor structure.

Confirmatory factor analysis was performed to confirm the new construct of the measure. When the fit indexes of the four-sub-dimensional model of the measure were evaluated in the CFA, the following index values were found: CMIN/DF 3.845; CFI 0.92; GFI 0.87; NFI 0.89; TLI 0.90; and RMSEA 0.091 (Table 4). The structural equation model for CFA according to the new factor structure of the measure is given in Figure 2.

Results of the Reliability Assessment of the Measure

Cronbach’s α coefficient was 0.939 for the total measure, 0.893 for the reciprocity sub-dimension, 0.890 for the sensitivity sub-dimension, 0.873 for the cooperation and attentiveness sub-dimension, and 0.845 for the communication and shared information sub-dimension. Following the split-half analysis, the Spearman–Brown coefficient was found to be 0.885, the Guttman split-half coefficient was 0.883, and the correlation

Table 2. The EFA Results of the Measure (Principal Components Analysis)

Items	Factor				Variance Explanatory Power
	1	2	3	4	
15. The parent and I understand each other’s position.	0.854				11.75
12. The parent and I are considerate of each other	0.834				
14. The parent and I understand each other’s feelings.	0.788				
13. The parent and I listen attentively to each other’s words.	0.693				
11. The parent and I respect each other.	0.655				
16. The parent appears to feel relieved when I am in charge of the child.	0.545				
18. I am sensitive to any changes in the child’s condition.		0.832			48.18
111. I behave carefully when I provide nursing for the child.		0.768			
110. I encourage parents when they are in a difficult situation.		0.746			
19. I prioritize the child when I provide nursing care for him/her.		0.746			
17. I console parents who are in painful circumstances.		0.676			
15. The parent and I are careful about our behaviors toward each other.			0.800		
14. The parent and I are careful about our words toward each other.			0.747		
13. The parent and I are cooperative toward each other.			0.634		
12. The parent and I have common goals for the care of the child.			0.617		
19. The parent provides me with information about the child’s characteristics (e.g., how to administer oral medication and dietary habits).				0.839	
18. The parent alerts me when there are any changes in the child’s condition.				0.836	
117. I am someone on whom the parent can rely on.				0.535	5.33
16. When there are problems with the child, the parent consults with me about those problems.				0.509	

Note: KMO: 0.917; Bartlett’s sphericity test χ^2 : 4723.582; total variance explanatory power: 71.60%.

Table 3.
Factor Names and the Items Falling Under These Factors for the New Factor Structure

Factors	Items	Factor Names
Factor 1	I1, I2, I3, I4, I5, and I6	Reciprocity
Factor 2	I7, I8, I9, I10, and I11	Susceptibility
Factor 3	I12, I13, I14, and I15	Collaboration and mindfulness
Factor 4	I16, I17, I18, and I19	Contact and shared information

Table 4.
Fit Indexes of the Model for the New Dimensional Construct of the Measure

Model Fit Indices	Model Fit Index Values	Acceptable Fit Index Values
CMIN/DF	3.845	≤5
RMSEA	0.091	0.05 ≤ RMSEA ≤ 0.10
CFI	0.92	≥0.85
GFI	0.87	≥0.80
NFI	0.89	≥0.80
TLI	0.90	≥0.80

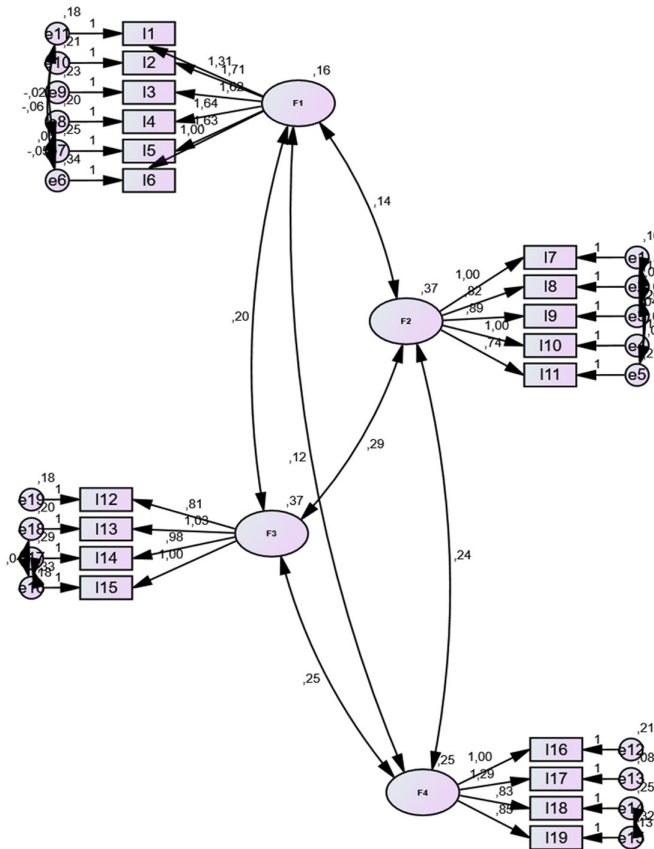


Figure 2.
Structural Equation Model for Confirmatory Factor Analysis for the New Factor Structure of the Measure.

coefficient of the two halves was 0.794. The outcomes of the reliability analysis of the measure and its sub-dimensions are given in Table 5.

The corrected item–total correlation values for the items on the measure ranged from 0.509 to 0.750, and Cronbach's α coefficients obtained when the items were removed were between 0.934 and 0.938 (Table 6).

Discussion

In this section, the psychometric features of the Turkish version of the PNPPS-PN are discussed.

The CVI should be at least 0.80 to achieve content validity (DeVellis, 2016). In the content validity analysis conducted in our research, the inter-rater agreement, e.g., the CVI was observed to be quite high (1.0), and therefore the measure met the criteria of content validity. The content validity results of the original measure (Choi et al., 2022) could not be compared with those of our study because they were not involved in the original study.

The KMO coefficient and Bartlett's sphericity test are recommended for sample adequacy so that the construct validity of a measure can be confirmed (Kartal & Bardakçı, 2018; Seçer, 2018). The KMO value is categorized as follows: <0.50, unacceptable; 0.50–0.59, poor; 0.60–0.69, fair; 0.70–0.79, good; 0.80–0.89, very good; and 0.90–1.00, excellent (DeVellis, 2016; Tabachnick & Fidell, 2015). A KMO value above 0.60 and close to 1 shows that the data are appropriate for factor analysis (Johnson & Christensen, 2014). A meaningful Bartlett's test of sphericity indicates the suitability of the correlation matrix of the items on the measure for performing an analysis of the factors. In this study, the KMO value was 0.917; therefore, Bartlett's sphericity test was meaningful. This value showed that the measure was excellently suitable for factor analysis. Since the KMO value and Bartlett's sphericity test results were not given in the original research (Choi & Uhm, 2022), they could not be discussed with the outcomes of this research. Explanatory factor analysis is recommended to analyze the construct validity of the measure (Özdamar, 2016). In this study, principal component analysis was utilized to find the factors, and the varimax rotation method and the scree plot were utilized to define the number of factors (Kartal & Bardakçı, 2018; Seçer, 2018). Variance rates between 40% and 60% are considered appropriate for adjusting the number of factors (DeVellis, 2016). The factor structure (seven-factor structure) that emerged as a consequence of principal component analysis and varimax rotation method applied in this study was not as good as that of the original measure, and it was found based on the scree plot test result that the measure had a four-factor structure. In this research, it was found that the explained variance ratio (71.60%) was >0.40% for the total measure. According to EFA, factor loads of the measure items were observed to be ≥0.30 (Tabachnick & Fidell, 2015). In this research, factor loads (0.509–0.854) were found to be >0.30. In the Turkish adaptation, it was found that the measure had 4 sub-dimensions and 19 items, which were distributed under different sub-dimensions. Thus, the sub-dimension names

Table 5.
Reliability Analysis Results of Scale and Sub-dimensions

	Total Scale	Reciprocity Sub-dimension	Susceptibility Sub-dimension	Cooperation and Mindfulness Sub-dimension	Communication and Shared Information Sub-dimension
Cronbach α	0.939	0.893	0.890	0.873	0.845
Spearman-Brown	0.885				
Guttman Split-Half	0.883				
Correlation between two halves	0.794				

were redefined. No items were excluded from the measure. In this study, it was found that there was a certain fit between the answers given to the measure items, the construct validity of the measure was ensured, and the measure had a powerful factor structure. Since explanatory factor analysis outcomes were not given in the study of the original measure (Choi & Uhm, 2022), our results could not be discussed.

Another method used to determine the measure structure in measure adaptation research is CFA (Karagöz, 2016; Kartal & Bardakçi, 2018). In CFA, the goodness of fit indices shows how well the structure describes the data obtained. The goodness of fit indices help decide whether to accept or reject the model. CMIN/DF, GFI, CFI, NFI, TLI, and RMSEA are among the most generally chosen goodness of fit indices (Karagöz, 2016). The CMIN/DF value is anticipated to be ≤ 5 , the CFI value is anticipated to be ≥ 0.85 , and GFI, NFI, and TLI values

are anticipated to be ≥ 0.80 (Kartal & Bardakçi, 2018). Root mean square error of approximation values are interpreted as follows: ≤ 0.05 , good fit; 0.05–0.08, enough fit; 0.08–0.10, acceptable fit; and > 0.10 , unacceptable fit (Kaplan, 2000; Kline, 2011; MacCallum et al., 1996). According to the CFA, the CMIN/DF index was < 5 . The CFI, GFI, NFI, and TLI fit indices of the measure were > 0.85 and RMSEA was < 0.10 . In this study, the RMSEA value was found to be above the recommended value of 0.08, but when we look at the literature, some references indicate that the value between 0.08 and 0.10 is an acceptable fit (Kaplan, 2000; Kline, 2011; MacCallum et al., 1996). The CFA indicated that the measure had goodness of fit and valid factor structure. According to the CFA findings of the original study (Choi & Uhm, 2022), the fit indices were as follows: CMIN/DF = 2.36, CFI = 0.91, RMSEA = 0.078, GFI = 0.88, NFI = 0.85, and TLI = 0.88, which were acceptable, similar to our research results.

Table 6.
Results of the Item Analysis of the Measure

Items	Mean When the Item Is Deleted	Variance When the Item Is Deleted	Adjusted Item-Total Correlation	Cronbach's α Value When the Item Is Deleted
I1	74.26	84.578	0.671	0.935
I2	74.45	82.870	0.657	0.936
I3	74.35	82.293	0.714	0.934
I4	74.46	83.223	0.658	0.936
I5	74.49	83.484	0.614	0.937
I6	74.26	85.805	0.544	0.938
I11	74.00	86.081	0.542	0.938
I7	74.10	83.612	0.700	0.935
I8	74.02	85.383	0.636	0.936
I9	74.04	84.949	0.617	0.936
I10	74.11	83.533	0.714	0.935
I12	74.13	84.722	0.694	0.935
I13	74.23	82.460	0.740	0.934
I16	74.15	85.052	0.636	0.936
I17	74.13	83.356	0.750	0.934
I18	74.14	86.619	0.529	0.938
I19	74.19	86.219	0.509	0.938
I14	74.25	82.430	0.704	0.935
I15	74.21	82.299	0.685	0.935

Various methods are utilized to designate the reliability of a measure (Polit & Beck, 2012). In our research, the internal consistency coefficient was calculated for reliability, and item-total score correlation analysis and split-half analysis were performed (Tabachnick & Fidell, 2015). Cronbach's α is the internal consistency coefficient and it is a method utilized to define reliability and measure internal consistency. A higher value shows that the items are coherent. If the Cronbach's α value of the measure is $0.80 \leq \alpha < 1.00$, it is accepted as highly reliable (Polit & Beck, 2012; Tabachnick & Fidell, 2015). In this research, Cronbach's α value was found as 0.939 for the total measure and >0.80 for the sub-dimensions. These outcomes showed that the measure was considerably trustworthy. The reliability value was greater than that of the original research (0.89) (Choi & Uhm, 2022).

In the evaluation of the reliability of a measure, it is advised to conduct an item analysis to test the explanatory power of the measure items on the total score (Özdamar, 2016; Seçer, 2018). Item-total score correlation coefficients are expected to be above 0.20 (Özdamar, 2016; Polit & Beck, 2012). In this research, the adjusted item-total correlation coefficients (0.509–0.750) of the items were above 0.20 and met an appropriate standard. In the original study (Choi & Uhm, 2022), the item-total score correlation coefficients were observed to be between 0.35 and 0.66, which were similar to our research results.

One of the methods used in measuring reliability is split-half analysis. In this analysis, Spearman-Brown and Guttman split-half coefficients are expected to be >0.80 (Tabachnick & Fidell, 2015). In this study, Spearman-Brown and Guttman split-half coefficients were >0.80 , indicating that the measure items and structure were highly reliable. Since no split-half analysis was applied in the original research (Choi & Uhm, 2022), our outcomes could not be discussed with the original study findings. In this study, it was shown that the items were suitable for the theoretical structure and that the measure was reliable.

Study Limitations

The use of convenience sampling in this study is a limitation of the study. This may limit the generalizability of the scale. Another limitation of the study is that the scale was filled out only by pediatric nurses. For this reason, it is thought that it would be useful to conduct the scale on parents. Another limitation of the study is that the test-retest reliability method was not applied. However, a split-half analysis was implemented to increase the reliability of the scale.

Conclusions and Recommendations

In conclusion, it was shown the PNPPS-PN was an effective and reliable measuring instrument that could be used in the Turkish sample to evaluate the associations reported by PNs in the hospital. With this measure, the status of pediatric nurse-parent association can be measured and the standard of nursing care provided can be determined accordingly. In this regard, an intervention program can be developed to increase the pediatric nurse-parent association. The measure can also contribute

to evidence-based practices. The reliability and validity of the measure can be determined in other languages. Additionally, cross-cultural comparative studies can be performed via this measure. The focus here is on the collaborative role of nurses. However, cooperation is a reciprocal situation with the parent. Therefore, there is a need to develop reliable parameters to evaluate parents' cooperation. This measure can be expanded to include both groups in the future.

Ethics Committee Approval: Ethics approval was received for this study from the Hakkari University Scientific Research and Publication Ethics Committee (Approval no: IRB: 2022/103-1, Date: December 6, 2022).

Informed Consent: Written informed consent was obtained from all participants who participated in this study.

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