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Research

The Validity and Reliability Study of the Turkish Version of the Perceived Professional Preparedness of Senior Nursing Students' Questionnaire

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ABSTRACT

Background: The Perceived Professional Preparedness of Senior Nursing Students' Questionnaire (PPPNS) is a widely used instrument to assess nursing students' readiness for professional practice.
Aim: To adapt the PPPNS into Turkish and perform the validity and reliability analyses of the Turkish version.
Methods: The methodological and cross-sectional study was conducted with 323 senior nursing students.
Results: The item-total score correlation values of the PPPNS scale varied between .54 and .73, and the scale explained 69.388% of the total variance. According to the confirmatory factor analysis, the scale was related to the 14 items and 4-factor structure that make up the scale ($p = 0.000$), and showed an acceptable fit based on an Root Mean Square Error value of 0.050 and an excellent fit based on an $\chi 2/SD$ value of 2.794. Cronbach's alpha was found to be 0.885, and the subscale reliability coefficients were in the range of 0.730-0.865. There was a statistically significant, positive, and high correlation between the PPPNS scores and the Work Readiness Scale scores ($r = 0.758$; $p = 0.000$).
Conclusions: The Turkish PPPNS scale is valid and reliable for measuring perceived professional preparedness in nursing students.

Introduction

The dynamic nature of the healthcare system and the resulting level of intricacy amplify the need for nursing graduates to be adequately prepared to deliver high-quality, safe, and high standards of care (Harrison et al., 2020; Shoghi et al., 2019). The transition from being a student to being a graduate in the field of nursing can be a challenging and stressful process due to problems related to graduates' preparedness to work upon commencing employment (Hallaran et al., 2022; Missen et al., 2015).

Professional preparedness pertains to the extent to which newly graduated nurses have the attitudes and characteristics to provide safe and high-quality nursing care (Aggar et al., 2018; Kim & Shin, 2022). In nursing, preparedness is a concept that integrates the principles of nursing practices and nursing roles, as well as essential skills such as communication, critical thinking, and the application of theoretical knowledge in practice. Perceived preparedness refers to an individual's self-assessment of their competence (Shahsavari et al., 2020). It is reported in the literature that nursing graduates face difficulties in being prepared for clinical and field applications and are not ready for practice when they start working (Harrison et al., 2020; Sharma et al., 2021). The insufficient levels of preparedness among newly graduated nurses have emerged as a global concern, especially in the field of nursing education (Matlhaba et al., 2019; Serafin et al., 2022). Perceived lack of preparedness causes a decline in self-confidence, feelings of incompetence, role stress, and psychological distress, leading to an increase in dropout rates and workforce turnover (Jamieson et al., 2019; Kaihlanen et al., 2020). This can also have negative consequences in terms of patient safety, quality of nursing care, and retention in nursing (Kim & Shin, 2022; Rusch et al., 2019).

Assessing the perceived preparedness of students who are in the final stage of nursing education is extremely important, and further investigation is required in this area (Järvinen et al., 2018; Rusch et al., 2019). It is the responsibility of undergraduate education programs and nurse educators to prepare nursing students to become confident and competent nurses (Hallaran et al., 2022; Jamieson et al., 2019). Evaluating the preparedness levels of nurses also plays an important role in the nurse manager's assignment of nurses according to their competency levels and career planning. Implementing this approach would not only mitigate the financial burden on the

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healthcare system but also improve healthcare quality, patient safety, and nurses' satisfaction (Alyateem & Abu Al-Ola, 2022).

In Turkey, there is a scarcity of measurement tools to determine nursing students' perceptions of professional preparedness. Given the absence of well-developed instruments and available data on the professional preparedness of senior nursing students, it is considered that there is a need for valid and reliable measurement tools that evaluate the perceptions of students ready to enter the workforce.

Method

Research Objective and Type

The research was conducted methodologically to adapt the Perceived Professional Preparedness of Senior Nursing Students (PPPNS) scale into Turkish and determine the validity and reliability of the Turkish version.

Research Setting and Time

A research study was carried out from May 2021 to May 2022 involving final-year nursing students at Balıkesir University's Faculty of Health Sciences. These students were enrolled in the Public Health Nursing course.

Research Questions

- Is the Turkish version of the PPPNS a valid measurement tool to evaluate the professional preparedness levels of nursing students?
- Is the Turkish version of the PPPNS a reliable measurement tool to evaluate the professional preparedness levels of nursing students?

Sample

The research population consisted of senior nursing students enrolled in the Balikesir University Faculty of Health Sciences in the 2020-2021 and 2021-2022 academic years ($n = 362$). The criteria for inclusion in the study were as follows: (a) being in the last year of nursing program and (b) volunteering to participate in the study. In scale validity and reliability studies, it is recommended to have a sample size of 5 to 10 times the total number of items and at least 300 participants to effectively reveal the factorial structure of the instrument (Esin, 2014; International Test Commission, 2017). Accordingly, the sample consisted of 323 nursing students whose data was obtained within the scope of the research.

Procedure

The adaptation of the scale into Turkish and reporting of the scale were undertaken in accordance with the International Test Commission guidelines (International Test Commission, 2017). Language, content, construct, and concurrent validity analyses were performed for scale validity, and item-total score correlation, internal consistency, and split-half reliability analyses were used for scale reliability.

Language Validity

First, the scale was evaluated in terms of cultural equivalence. The scale items whose equivalence was confirmed were translated from English to Turkish by 3 translators who speak English as a native language and have in-depth knowledge of the culture to which the instrument was adapted. Then, English-speaking experts evaluated the translated items from a cultural perspective by comparing them with the original version. The final form of the Turkish version of the scale was obtained after the researchers examined the expert evaluations and evaluated the statements used in the items. Since both forward and back translations are recommended between the source and target languages, the scale items were back-translated into English by 3 linguists who spoke both languages at a native speaker level. The researchers examined both the original and back-translated scale items, ensuring the language validity of the adapted scale by taking into account the opinions of a Turkish language expert. The scale language adaptation stages were undertaken in accordance with standard steps (International Test Commission, 2017; Karacam, 2019).

Content Validity

The Davis technique (1992) was used for content validity. To ensure the content and concurrent validity of the scale, the opinions of 7 academicians with PhD degrees in nursing in Turkey were consulted. The experts evaluated each item in the scale as (a) "appropriate", (b) "needs slight revisions", (c) "needs major revisions", and (d) "not appropriate". The content validity index was calculated by dividing the number of experts who marked options a and b for each item by the total number of experts who provided opinions for that item. If the content validity index of each item is greater than 0.80, it is interpreted as the item being sufficient in terms of content validity (Capık et al., 2016; DeVellis, 2017). It was determined that the content validity rates for the scale items varied between 0.86 and 1. The researchers revised the items in line with expert opinions and finalized the adapted version.

Pilot Study

It has been stated that the pilot application can be carried out with at least 10-15 individuals (Erkus et al., 2017). In the current research, a pilot study was conducted with 30 students to determine the suitability of the scale items in terms of language and understandability. The items were reviewed in line with the students' opinions, and any spelling errors were corrected.

Concurrent Validity

In order to determine concurrent validity, the connection between the scale and another scale that examines the same or a related structure and whose validity has been proven before is measured by applying it simultaneously (Akturk & Acemoglu, 2012). In the study, the Nursing Professional Readiness Perception Scale, which was developed to determine the readiness levels of nursing students, was used for concurrent validity.

Data Collection Tools

A personal information form, the PPPNS, and the Nursing Professional Readiness Perception Scale (NPRPS) were used to collect data within the scope of the research.

Personal Information Form

This form was prepared by the researchers and consisted of a total of 21 items that questioned the personal and educational characteristics of nursing students.

PPPNS

This scale, developed by Shahsavari et al. (2020), consists of 19 items and 4 subscales: clinical competency, evidence-based practice, framework-oriented performance, and patient-centered care. The scale is of a 5-point Likert type, with scores ranging from 1 to 5. The raw scores of the scale are converted to scores in the range of 0-100 using a linear transformation equation. Perceived preparedness is considered poor if the score is below 25%, moderate if 25-50%, good if 50-75%, and excellent if greater than 75%. Cronbach's alpha values were determined to be 0.835 for the clinical competency subscale, 0.733 for the evidence-based practice subscale, 0.712 for the framework-oriented performance subscale, and 0.705 for the patient-centered care subscale (Shahsavari et al., 2020).

NPRPS

Developed in Turkish by Tarhan and Yıldırım (2021), this 5-point Likert-type scale consists of 15 items and 3 subscales (professional compliance, communication and cooperation, and professional competency). The total scale and its subscales are evaluated by dividing the total score by the number of items, and the arithmetic mean varies between 1 and 5. It is interpreted that as the scale score average increases, the perception of professional readiness increases. In the original scale development study, the Cronbach's alpha internal consistency coefficient was 0.90 for the total scale and ranged from 0.81 to 0.86 among the subscales (Tarhan & Yıldırım, 2021). In the current study, the Cronbach's alpha value of the total scale was 0.912, and those of the subscales varied between 0.812 and 0.90.

Data Collection

Data was collected between May 2021 and May 2022 via Google Forms using the online survey method from nursing students who met the eligibility requirements for participation in the study. Since university education was carried out online during this period due to the COVID-19 pandemic, the online survey method was used.

Data Analysis

The data obtained from the study was analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows, version 25.0, and AMOS. For the validity analysis of the scale, language and content validity, construct validity (exploratory and confirmatory factor analyses), and concurrent validity were assessed. The reliability of the scale was examined through internal consistency, item-total score reliability, and split-half reliability analyses. The statistical significance level was accepted as $p < 0.05$.

Ethical Considerations

Prior to commencing the research, ethical approval was obtained from the Noninterventional Ethics Committee of Balıkesir University (decision number: 2020/11), and institutional permission was obtained from the institution where the research was conducted. In order to conduct the Turkish validity and reliability analyses of the PPPNS scale, written permission was received via e-mail from Fatemeh Bakhshi, one of the authors involved in the development of the original scale. The students who took part in the study provided written informed consent. The research adhered to the principles outlined in the Declaration of Helsinki at all stages.

Results

Female students constituted 78% of the sample. The mean age was 21 ± 1.47 years, and the mean weighted grade point average was 2.92 ± 0.47. A substantial proportion of the participants (70.9%) reported owning a personal computer, however, a significant gap was identified in terms of internet access, with 62.5% lacking this essential resource. The participants' self-assessment of their theoretical knowledge indicated a varied level of confidence, with 22.9% expressing full competence and 54.8% reporting partial competence. Similarly, when evaluating their practical application skills, 7.7% of the participants felt fully competent, while a larger proportion (37.8%) indicated partial competence. Concerning professional competence, the results highlighted a notable discrepancy between perceived competence and practical experience, with only 14.6% claiming full competence and a substantial 64.7% reporting no prior work experience (Table 1).

The participants' mean scores were 3.79 ± 0.55 for the total PPPNS scale, 3.55 ± 0.80 for the clinical competency subscale, 3.69 ± 0.65 for the evidence-based practice subscale, 3.65 ± 0.80 for the framework-oriented performance subscale, and 4.26 ± 0.63 for the patient-centered care subscale.

Construct Validity

The suitability of the sample size for factorization was tested, yielding a Kaiser-Meyer-Olkin (KMO) value of 0.879 and a Bartlett's sphericity test value of $\chi 2(91) = 2039.509$ ($p < 0.01$). Principal component analysis and Varimax rotation methods were used to examine the factor structure of the scale. Upon analyzing the factor pattern of all items, it was determined that the scale had 4 dimensions and that the factor pattern was acceptable. As a result of the factor analysis, the items that had overlapping characteristics and were not aligned with the theoretical dimensions were excluded from the analysis (items 1, 2, 10, 13, and 14). According to the results of the exploratory factor analysis, the adapted scale explained 69.388% of the total variance (Table 2).

Confirmatory Factor Analysis

The confirmatory factor analysis revealed that the structural equation modeling result of the scale was significant at the $p = 0.000$ level and was related to the 14 items that constituted the scale and the 4-factor scale structure (Fig. 1). Improvements were made to the model. During this process, a covariance was created between errors with high MI values. The goodness-of-fit indices showed an adequate fit with the root mean square error of approximation (RMSEA) of 0.050, and there was an excellent fit according to the chi-square/degree of freedom ($\chi 2$ [Cmin/df]) value of 2.794 (Table 3). As a result, it was determined that the construct validity of the scale was ensured.

Concurrent Validity

There was a statistically significant, positive, and strong relationship between the PPPNS scale and the NPRPS ($r = 0.758$; $p = 0.000$) (Table 4).

Item-Total Score Correlation Coefficient and Item Discrimination

Item-total score correlation coefficients calculated to analyze whether each item score was related to the total scale score ranged between .543 and .732. In order to determine item discrimination, the raw scores obtained from the scale were ranked from largest to smallest, and the mean scores of the groups in the lower 27% and upper 27% bounds were compared using the independent-samples t-test. As a result of this comparison, there was a statistically significant difference between the mean item scores of the lower and upper bound groups (Table 5).

Table 1
Nursing students' personal and educational characteristics.

		n	%
Gender	Female	252	78.0
	Male	71	22.0
Age	Mean: 21.97 ± 1.47 years		
Grade point average	2.92 ± 0.47		
Income level	Low	18	5.6
	Moderate	231	71.5
	High	72	22.3
	Very high	2	0.6
Place of residence	Village	53	16.4
	Town	8	2.5
	District	89	27.6
	City center	173	53.6
Maternal education status	Illiterate	29	9.0
	Primary school	208	64.4
	High school	65	20.1
	University	20	6.2
	Postgraduate	1	0.3
Paternal education status	Illiterate	3	0.9
	Primary school	173	53.6
	High school	100	31.0
	University	44	13.6
	Postgraduate	3	0.9
Availability of personal computer	Present	229	70.9
	Absent	94	29.1
Internet access	Present	56	17.3
	Absent	202	62.5
	Partial	65	20.1
Where have you resided most of your life?	City center	187	57.9
	District center	78	24.1
	Town	11	3.4
	Village	47	14.6
Participation in professional activities	Never	42	13.0
	Rarely	196	60.7
	Usually	75	23.2
	Often	10	3.1
Student nursing association membership	Present	93	28.8
	Absent	230	71.2
Article reading frequency	Never	51	15.8
	Rarely	208	64.4
	Usually	52	16.1
	Often	12	3.7
Theoretical course competence	Strongly disagree	20	6.2
	Somewhat disagree	52	16.1
	Somewhat agree	177	54.8
	Strongly agree	74	22.9
Practical course competence	Strongly disagree	103	31.9
	Somewhat disagree	73	22.6
	Somewhat agree	122	37.8
	Strongly agree	25	7.7
Instructor competence	Strongly disagree	16	5.0
	Somewhat disagree	32	9.9
	Somewhat agree	185	57.3
	Strongly agree	90	27.9
Instructor competence during internship	Strongly disagree	42	13.0
	Somewhat disagree	45	13.9
	Somewhat agree	165	51.1
	Strongly agree	71	22.0
Appropriateness of internship courses	Strongly disagree	58	18.0
	Somewhat disagree	50	15.5
	Somewhat agree	152	47.1
	Strongly agree	63	19.5
Professional competence	Strongly disagree	34	10.5
	Somewhat disagree	67	20.7
	Somewhat agree	175	54.2
	Strongly agree	47	14.6
Professional experience	Present but not currently working	76	23.5
	Present and currently working	38	11.8
	None	209	64.7
Career prospects after graduation	Employment in public sector	233	72.1
	Employment in private sector	10	3.1
	Starting own business	18	5.6
	Continuing education	16	5.0
	Becoming an academician	46	14.2
Total		323	100

Table 2
Results of the exploratory factor analysis of the PPPNS scale.

Factors				
	PCC	EBP	CC	FOP
PCC17	0.822			
PCC16	0.775			
PCC18	0.769			
PCC15	0.736			
PCC19	0.735			
EBP7		0.792		
EBP8		0.764		
EBP6		0.618		
EBP9		0.612		
CC4			0.873	
CC3			0.832	
CC5			0.716	
FOP12				0.833
FOP11				0.689
Eigen value	**5.701**	**1.886**	**1.289**	**0.838**
Explained variance	**23.455**	**18.756**	**16.485**	**10.691**
Total explained variance **= 69.388**				

PPPNS: Perceived Professional Preparedness of Senior Nursing Students' Questionnaire, PCC: Patient-Centered Care, CC: Clinical Competency, FOP: Framework-Oriented Performance.

Internal Consistency

The Cronbach's alpha coefficient was determined to be 0.885 for the total PPPNS scale, 0.811 for the clinical competency subscale, 0.789 for the evidence-based practice subscale, 0.730 for the framework-oriented performance subscale, and 0.865 for the patient-centered care subscale.

Split-Half Reliability

In the split-half method, the items in the data set are divided into 2 equal halves, and the relationship between the 2 halves is evaluated. According to the results obtained from the current study, the correlation coefficient was 0.809 between the 2 halves of the scale, the Spearman-Brown coefficient was 0.894, and the Guttman split-half coefficient was 0.893. Based on these values, the scale was accepted to be reliable.

Discussion

In this study, in which the PPPNS scale was adapted into Turkish, after language adaptation, the validity and reliability analysis stages of the scale were undertaken. It is recommended to use at least 2 methods to test the validity and reliability of a scale (Erkus et al., 2017).

Exploratory and confirmatory factor analyses were performed to test the construct validity of the adapted scale. The suitability of the sample size for factorization was tested. Since the KMO value was above 0.50 and the chi-square value obtained from Bartlett's sphericity test was acceptable, it was concluded that the sample size and items were sufficient to perform factor analyses (Buyukozturk, 2017; Esin, 2014).

According to the exploratory factor analysis, the adapted scale explained 69.388% of the total variance. In the original scale study, the scale explained 61.91% of the total variance (Shasavari et al., 2020). A crucial requirement in factor analysis is that the proportion of variation explained should be greater than 50% of the total variance (Yaslıoglu, 2017). This indicates that the created factor structure met the basic criterion. Five items were excluded from the original scale. These items included: "I believe that I know the drugs and their common complications.", "I believe that I have sufficient knowledge

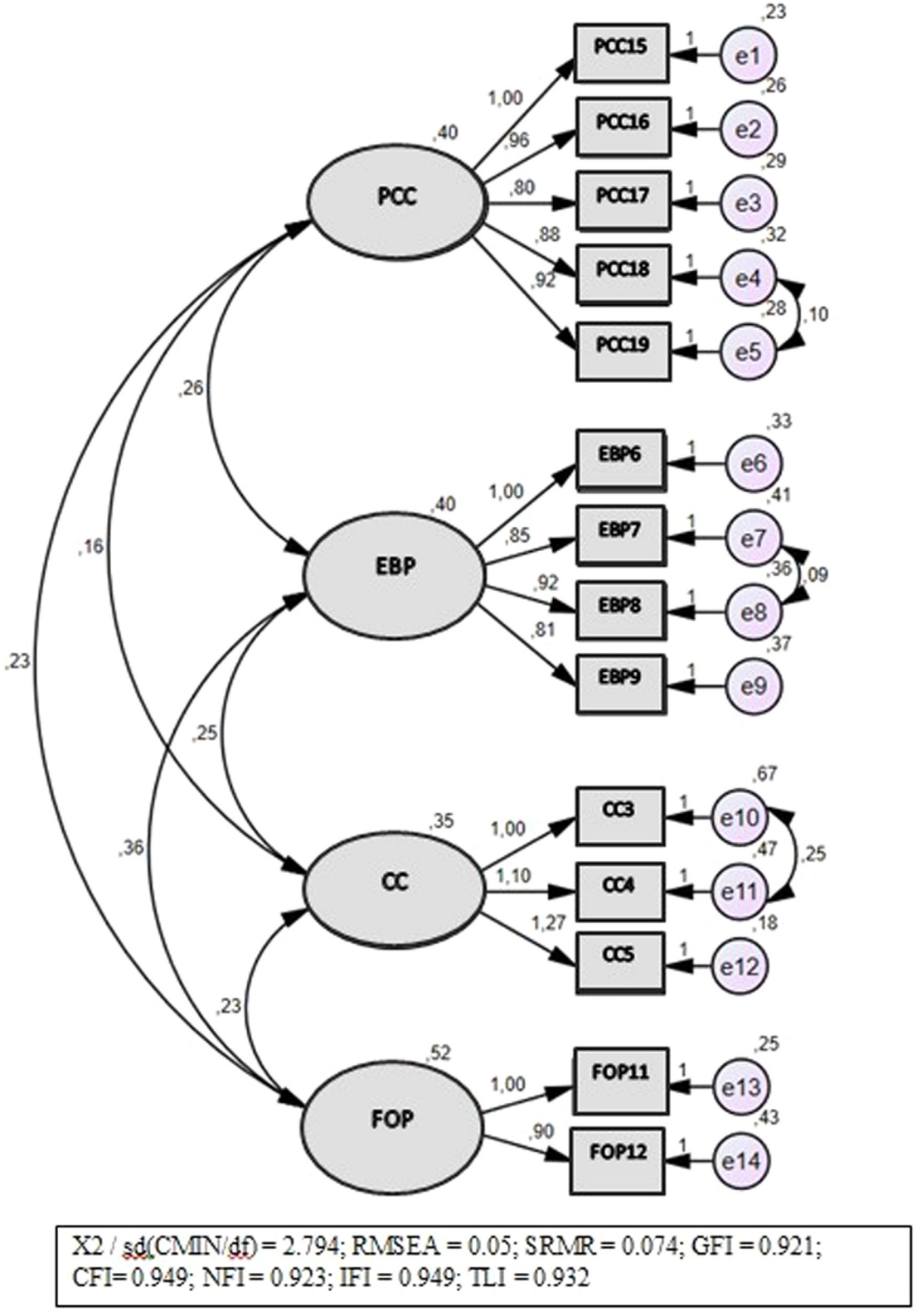

Fig. 1. Path diagram of the PPPNS scale.

about diseases, diagnosis, and treatments.", "I feel that I have enough creativity to fulfill my responsibilities.", "I am ready to keep nursing records accurately.", "I think I can fully gain the trust of patients and their families."

Confirmatory factor analysis is performed to ascertain whether the model is consistent with the theory according to the results of various fit indices (Capık, 2014; Erkorkmaz et al., 2013). Upon examination of the fit index values in the current study, it was determined

Table 3
Results of the confirmatory factor analysis.

Index	Good Fit	Acceptable Fit	Result
X^2/SD	$0 \leq \chi^2/df \leq 3$	$3 \leq \chi^2/df \leq 5$	2.794
RMSEA	0.00 ≤RMSEA≤0.05	0.05 ≤RMSEA≤0.08	0.050
SRMR	0.00 ≤SRMR≤0.05	0.05 ≤SRMR≤0.08	0.074
CFI	0.97 ≤CFI≤1.00	0.90 ≤CFI	0.949
GFI	0.90 ≤GFI≤1.00	0.85 ≤GFI	0.921
AGFI	0.90 ≤AGFI≤1.00	0.85 ≤AGFI	0.878
NFI	0.95 ≤NFI≤1.00	0.90 ≤NFI	0.923
IFI	0.95 ≤IFI≤1.00	0.90 ≤IFI	0.949
TLI	0.95 ≤TLI≤1.00	0.90 ≤TLI	0.932

X^2/SD: Degrees of Freedom; RMSEA: Root Mean Square Error of Approximation; CFI: Comparative Fit Index; NFI: Normed Fit Index; GFI: Goodness-of-Fit Index; AGFI: Adjusted Goodness-of-Fit Index.

that the construct validity of the scale was ensured (Hooper et al., 2008; Simon et al., 2010).

The concurrent validity analysis revealed a statistically significant, positive, and strong correlation between the PPPNS scale and the NPRPS. As the students' preparedness levels in the areas of clinical competency, evidence-based practice, framework-oriented performance, and patient-centered care increased, they also experienced a heightened sense of professional readiness. In nursing, professional readiness encompasses nursing skills, nursing roles, and competencies such as communication and critical thinking. Based on this evaluation, it was determined that the scale had concurrent validity (Karakoc & Donmez, 2014).

Reliability analysis is carried out to test whether the statements used in a scale are consistent with each other and whether all the statements measure the same construct. According to the results obtained from the current study, the Cronbach's alpha of the PPPNS was 0.885, indicating that it is a very reliable scale (Erkus et al., 2017).

A high item-total correlation suggests that the scale item aligns well with the theoretical structure. In the current study, the item-total test correlation values of all items were above 0.30. Accordingly, it was accepted that all items were related to each other (Esin, 2014; Tavsancıl, 2014).

In order to determine item discrimination, the mean scores of the lower 27% and the upper 27% groups were compared using the independent-samples t-test, and it was observed that there was a statistically significant difference between these 2 groups in terms of the mean item scores. As a result of the analysis, it can be stated that the items are distinctive in terms of measuring the intended quality (Buyukozturk, 2017).

The research was conducted with senior nursing students who were receiving online education due to the COVID-19 pandemic. There have been growing concerns about professional preparedness, particularly during and following the COVID-19 pandemic (McGarity et al., 2023). In the study, the nursing students' perceived preparedness levels were determined to be above average. McGarity et al. (2023) emphasized that newly graduated nurses felt competent, but they needed more training to feel more prepared.

Table 5
Results of the PPPNS scale item analysis.

PPPNS subscales	r	t (lower 27%-upper 27%)	*p*-value (lower 27%-upper 27%)
Clinical competency			
Item 3	0.656	20.036	0.000*
Item 4	0.732	19.383	0.000*
Item 5	0.606	18.695	0.000*
Evidence-based practice			
Item 6	0.593	18.945	0.000*
Item 7	0.595	15.753	0.000*
Item 8	0.657	19.329	0.000*
Item 9	0.543	17.055	0.000*
Framework-oriented performance			
Item 11	0.575	24.168	0.000*
Item 12	0.575	22.746	0.000*
Patient-centered care			
Item 15	0.694	22.014	0.000*
Item 16	0.687	18.394	0.000*
Item 17	0.646	12.249	0.000*
Item 18	0.694	18.080	0.000*
Item 19	0.707	20.905	0.000*

*n = 323, r = Item-Total Correlation, *Statistically significant at $p < 0.05$.*
PPPNS: Perceived Professional Preparedness of Senior Nursing Students' Questionnaire.

According to the analysis of the mean scores of the PPPNS subscales, the lowest score was obtained from the clinical competency subscale and the highest score from the patient-centered care subscale. Clinical competency refers to the ability to integrate knowledge, skills, attitudes, and values into a clinical situation and is crucial in nursing education, clinical settings, and nursing management, as well as during times of crisis (Hui et al., 2023). While Hui et al. (2023) reported similar clinical competency levels for students compared to our findings, Terefe et al. (2023) found these levels to be lower. In another study, more than half of nursing students perceived themselves as incompetent (Bifftu et al., 2016). Nursing students in Turkey commence clinical practice in their second semester and continue for 7 semesters. Nevertheless, the sample population in this study experienced a 4-semester disruption of clinical placements due to the COVID-19 pandemic. This prolonged absence from clinical settings may have resulted in decreased perceptions of clinical competence among students. A subjective assessment of students' readiness revealed a mean score of 5.85±1.95 on a 0-10 scale, indicating a moderate level of perceived preparedness. Subscale analysis yielded consistent findings.

Table 4
Concurrent validity of the Turkish version of the PPPNS scale Criterion validity.

		Professional compliance	Communication and collaboration	Professional competency	NPRPS
Clinical competency	r	0.501*	0.254*	0.502*	0.469*
	p	0.000	0.000	0.000	0.000
Evidence-based practice	r	0.599*	0.431*	0.596*	0.624*
	p	0.000	0.000	0.000	0.000
Framework-oriented performance	r	0.569*	0.380*	0.480*	0.554*
	p	0.000	0.000	0.000	0.000
Patient-centered care	r	0.566*	0.685*	0.519*	0.718*
	p	0.000	0.000	0.000	0.000
PPPNS	r	0.724*	0.551*	0.678*	0.758*
	p	0.000	0.000	0.000	0.000

PPPNS: Perceived Professional Preparedness of Senior Nursing Students' Questionnaire, NPRPS: Nursing Professional Readiness Perception Scale.
*Pearson correlation analysis.

Patient-centered care is a valuable and comprehensive concept in the nursing profession, encompassing the principles of respect and responsiveness to patient individuality, preferences, and needs (Ghane & Esmaeili, 2019). By centering on the concept of "person before disease" and prioritizing the promotion and protection of health at the individual, family, and community levels, the public health nursing approach fosters a holistic perspective. The high scores on the patient-centered care subscale among research participants, who were enrolled in a public health nursing course, may be attributed to the emphasis placed on patient-centered care within this specific educational context. In the current study, the nursing students' high level of preparedness for patient-centered care is considered a positive result in terms of ensuring high-quality care and satisfaction for both patients and nurses.

Limitations

The findings are limited to the data obtained from the institution where the research was conducted. Therefore, although the tests recommended for validity and reliability were used in the current research, it is recommended to further assess the scale in different samples by employing additional tests. Another important limitation of the research is that there was a disruption in assessing test-retest reliability due to the continuation of online education as a result of the COVID-19 pandemic measures implemented during the study period.

Conclusion

The preparedness levels of nursing students play an important role in healthcare due to their effects on various areas such as career planning, quality of care, patient safety, and satisfaction. Therefore, it is very valuable to determine the preparedness levels of nursing students, especially before graduation. In this study, the Turkish version of the PPPNS, which is one of the tools used for this purpose, was determined to be sufficiently reliable and valid for use in terms of distribution properties, measurement ability, and internal consistency. It is recommended to further assess the scale with senior nursing students enrolled at different institutions.

Declaration of competing interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

CRediT authorship contribution statement

Ayse Karadas: Conceptualization, Methodology, Resources, Writing – review & editing, Supervision, Funding acquisition. **Deniz Aslı Dokuzcan:** Conceptualization, Methodology, Investigation, Writing – review & editing, Project administration, Funding acquisition. **Celalettin Çevik:** Validation, Formal analysis, Data curation, Writing – review & editing, Visualization, Funding acquisition.

Implications for Nursing Practice

The scale adapted into Turkish can be used by nursing students, educators, and nurse managers to effectively implement personal development, career planning, and organizational planning processes.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethics Approval

To conduct the present study, written consent and approval from the Balikesir University Clinical Research Ethics Committee (Ethics Committee No: 2020/11).

Informed Consent

Written consent was obtained from the nursing students participating in the study.

Permission to Reproduce Material From Other Sources

Written permission was obtained from the relevant authors via e-mail for the data collection tools used in the research.

Statistical Information

Consultancy was received from Istar statistics for statistical analysis.

Language Editing

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Supplementary materials

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References

Aggar, C., Bloomfield, J. G., Frotjold, A., Thomas, T., & Koo, F. K. (2018). A time management intervention using simulation to improve nursing students' preparedness for medication administration in the clinical setting: A quasi-experimental study. *Collegian (Royal College of Nursing, Australia), 25*, 105–111. doi:10.1177/08445621221074872.

Akturk, Z., & Acemoglu, H. (2012). Reliability and validity in medical research. *Dicle Medical Journal, 39*(2), 316–319. doi:10.5798/diclemedj.0921.2012.02.0150.

Alyateem, S., & Abu Al Ola, L. M. H. (2022). Readiness for practice of graduates of Jordanian nursing colleges from clinical nursing leader's perspective. *Eatsern Journal of Healthcare, 2*(1), 58–64. doi:10.31557/ejhc.2022.2.1.58-64.

Bifftu, B. B., Dachew, B. A., Tiruneh, B. T., Kelkay, M. M., & Bayu, N. H. (2016). Perceived clinical competence among undergraduate nursing students in the University of Gondar and Bahir Dar University, Northwest Ethiopia: A cross-sectional institution based study. *Hindawi Publishing Corporation Advances in Nursing, 2016*, 9294673. doi:10.1155/2016/9294673 7 pages.

Buyukozturk, S. (2017). *Sosyal Bilimleri İçin Veri Analizi El Kitabı*. 23.Baskı. *Ankara: Pegem Akademi*, 133–147.

Capık, C. (2014). Geçerlik ve güvenirlik çalışmalarında doğrulayıcı faktör analizinin kullanımı. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi, 17*(3), 196–205.

Capık, C., Gözüm, S., & Aksayan, S. (2016). Kültürlerarası ölçek uyarlama aşamaları, dil ve kültür uyarlaması: Güncellenmiş rehber. *Florence Nightingale Journal of Nursing, 26*(3), 199–210. doi:10.26650/FNJN397481.

Davis, L. L. (1992). Instrument review: getting the most from a panel of experts. *Applied Nursing Research, 5*(4), 194–197.

DeVellis, R. F. (2017). Ölçek geliştirme kuram ve uygulamalar. *(T. Totan, Çev.)*. Nobel Akademik Yayıncılık.

Erkorkmaz, Ü., Etikan, I., Demir, O., Ozdamar, K., & Sanisoglu, S. Y. (2013). Doğrulayıcı faktör analizi ve uyum indeksleri. *Türkiye Klinikleri J Med Sci, 33*(1), 210–223.

Erkus, A., Sunbul, Ö., Omur Sunbull, S., Yormaz, S., & Asiret, S. (2017). *Psikolojide Ölçme ve Ölçek Geliştirme*. 1. *Baskı, Ankara: Pegem Akademi,* 34–148.

Esin, N. (2014). Veri Toplama Yöntem ve Araçları: Veri Toplama Araçlarının Güvenirlik ve Geçerliği. In S Erdoğan, N Nahcivan, N Esin (Eds.), *Hemşirelikte araştırma: süreç, uygulama ve kritik* (edit). (pp. 193–232). Nobel Tıp Kitapevleri Tic. Ltd. Şti.

Ghane, G., & Esmaeili, M. (2019). Nursing students' perception of patient-centred care: A qualitative study. *Nursing Open, 7*(1), 383–389. doi:10.1002/nop2.400.

Hallaran, A. J., Edge, D. S., Almost, J., & Tregunno, D. (2022). New nurses' perceptions on transition to practice: A thematic analysis. *Canadian Journal of Nursing Research, 55* (1), 126–136. doi:10.1177/08445621221074872.

Harrison, H., Birks, M., Franklin, R. C., & Mills, J. (2020). Fostering graduate nurse practice readiness incontext. *Collegian (Royal College of Nursing, Australia), 27*(1), 115–124. doi:10.1016/j.colegn.2019.07.006.

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: guidelines for determining model fit. *Electronic Journal of Business Research Methods, 6* (1), 53–60.

Hui, T., Zakeri, M. A., Soltanmoradi, Y., Rahimi, N., Hossini Rafsanjanipoor, S. M., & Nouroozi, M. (2023). Nurses' clinical competency and its correlates: before and during the COVID-19 outbreak. *BMC Nursing, 22*, 156. doi:10.1186/s12912-023-01330-9.

International Test Commission (ITC). (2017). Guidelines for translating and adapting tests. *International Journal of Testing, 18*(2), 101–134.

Jamieson, I., Sims, D., Basu, A., & Pugh, K. (2019). Readiness for practice: the views of New Zealand senior nursing students. *Nurse Education in Practice, 38*, 27–33. doi:10.1016/j.nepr.2019.05.007.

Järvinen, T., Eklöf, N., & Salminen, L. (2018). Factors related to nursing students' readiness to enter working life - A scoping literature review. *Nurse Education in Practice, 29*, 191–199. doi:10.1016/j.nepr.2018.01.010.

Kaihlanen, A. M., Elovainio, M., Haavisto, E., Salminen, L., & Sinervo, T. (2020). Final clinical practicum, transition experience and turnover intentions among newly graduated nurses: A cross sectional study. *Nurse Education Today, 84*, 104245. doi:10.1016/j.nedt.2019.104245.

Karacam, Z. (2019). Ölçme araçlarının Türkçeye uyarlanması. *Ebelik ve Sağlık Bilimleri Dergisi, 2*(1), 28–37.

Karakoc, F. Y., & Donmez, L. (2014). Ölçek geliştirme çalışmalarında temel ilkeler. *Tıp Eğitimi Dünyası, 40*, 39–49. doi:10.25282/ted.228738.

Kim, J., & Shin, S. (2022). Development of the nursing practice readiness scale for new graduate nurses: A methodological study. *Nurse Education in Practice, 59*, 103298. doi:10.1016/j.nepr.2022.103298.

Matlhaba, K. L., Pienaar, A. J., & Sehularo, L. A. (2019). Community service nurses' experiences regarding their clinical competence. *Health SA Gesondheid, 24*, 1–8. doi:10.4102/hsag.v24i0.1284.

McGarity, T., Monahan, L., Acker, K., & Pollock, W. (2023). Nursing graduates' preparedness for practice: substantiating the call for competency-evaluated nursing education. Behavioral Sci*ence, 13*, 553. doi:10.3390/bs13070553.

Missen, K., McKenna, L., & Beauchamp, A. (2015). Work readiness of nursing graduates: current perspectives of graduate nurse program coordinators. *Contemporary Nurse, 51*(1), 27–38. doi:10.1080/10376178.2015.1095054.

Rusch, L., Manz, J., Hercinger, M., Oertwich, A., & McCafferty, K. (2019). Nurse preceptor perceptions of nursing student progress toward readiness for practice. *Nurse Educator, 44*(1), 34–37. doi:10.1097/NNE.0000000000000546.

Serafin, L., Pawlak, N., Strząska-Kliś, Z., Bobrowska, A., & Czarkowska-Pączek, B. (2022). Novice nurses' readiness to practice in an ICU: A qualitative study. *Nursing in Critical Care, 27*(1), 10–18. doi:10.1111/nicc.12603.

Shahsavari, H., Bakhshi, F., Khosravi, A., Najafi, Z., & Ghorbani, A. (2020). Perceived professional preparedness of senior nursing students' questionnaire: development and psychometric evaluation. *Nurse Education Today, 93*, 104533. doi:10.1016/j.nedt.2020.104533.

Simon, D., Kriston, L., Loh, A., Spies, C., Scheibler, F., Wills, C., & Härter, M. (2010). Confirmatory factor analysis and recommendations for improvement of the Autonomy-Preference-Index (API). *Health expectations, 13*(3), 234–243.

Shoghi, M., Sajadi, M., Oskuie, F., Dehnad, A., & Borimnejad, L. (2019). Strategies for bridging the theory-practice gap from the perspective of nursing experts. *Heliyon, 5*(9), e02503. doi:10.1016/j.heliyon.2019.e02503.

Sharma, S. K., Kalal, N., & Rani, R. (2021). Clinical practice readiness of nursing graduates. *Clinics Mother Child Health, 18*(4), 381. doi:10.35248/2090-7214.21.18.381.

Tarhan, M., & Yıldırım, A. (2021). Hemşirelikte mesleki hazır oluşluk algısı ölçeğinin geliştirilmesi. *Sağlık ve Hemşirelik Yönetimi Dergisi, 8*(1), 1–11.

Tavsancıl, E. (2014). *Tutumların Ölçülmesi ve SPSS İle Veri Analizi*. 5.Basım. *Ankara, Nobel Basımevi,* 19–51.

Terefe, T. F., Geletie, H. A., GebreEyesus, F. A., Tarekegn, T. T., Amlak, B. T., Kindie, K., Geleta, O. T., Mewahegn, A. A., Temere, B. C., Mengist, S. T., Beshir, M. T., Wondie, A., & Mengist, B. (2023). Clinical competency and associated factors among undergraduate nursing students studying in universities of southern regional state of Ethiopia. *Heliyon, 9*(8), e18677. doi:10.1016/j.heliyon.2023.e18677.

Yaşlıoglu, M. M. (2017). Factor analysis and validity in social sciences: application of exploratory and confirmatory factor analyses. *Istanbul University Journal of the School of Business, 46*(Special Issue), 74–85.