

Original Article

Development of Public Health Nursing Lesson Attitude Scale

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E-mail: gungormusz@yahoo.co.uk**Abstract****Background:** It is expected that the competencies of nursing students will be increased with the public health nursing lesson. A scale is needed to evaluate the realization of this expectation. Such a scale can be a guide for nurse educators in teaching nursing students the theory and practices of Public Health Nursing, and in identifying attitudes that may hinder or encourage positive attitudes.**Aims:** To develop a valid and reliable scale that can measure the attitudes of undergraduate nursing students towards the theory and practice of Public Health Nursing lesson.**Methods:** The research was conducted in a methodological design with 304 students studying at Gaziantep University, Faculty of Health Sciences, Department of Nursing, between March and November 2017. Data were collected with the Public Health Nursing Lesson Attitude Scale, developed in line with the information form and literature. IBM SPSS 22 and AMOS 24 programs were used to evaluate the data.**Results:** To determine the validity of the scale; content validity and structure validity (explanatory and confirmatory factor analysis) were made. The content validity was found to be 0.93. In order to make the structure validity, in the explanatory factor analysis; “Kaiser Meyer Olkin” and “Barlett Tests”(0.902, $p=0.000$), eigenvalue (13,026-14.629), total variance explanation (17.416-2.923%). In the confirmatory factor analysis, most of the compliance indexes of the scale were found in the acceptable/perfect harmony range. To determine the reliability of the scale; cronbach alpha (0.94), item-total score correlations (0.42-0.69) were studied.**Conclusion:** It was found that the developed scale was statistically valid and reliable.**Keywords:** Lesson, Validity, Reliability, Public Health Nursing, Scale, Attitude**Introduction**

Unlike other nursing fields, which are considered a special field in nursing; The service target of Public Health Nursing (PHN), which uses nursing, social and public health sciences, is “healthy population”, its service area is “any place where this population lives”, except for hospitals where treatment services are generally provided, and “the form of service is “this population”. every kind of modern service offered” approach. Based on this approach; PHN generally focuses on the physical, biological, socio-cultural environment, and provides community-oriented services at home, school,

workplace, prison, clinics where the healthy person is followed, in other community areas, in short, wherever there are people, as well as in health institutions. Practices of public health nurses; It consists of protecting and improving the health of the individual, family and society throughout life, preventing disease and disability, working autonomously or in coordination as the first contact point of care (Smith, 1994; Stanhope and Lancaster, 1996; Erci, 2016).

When we evaluate the development of PHN in the world; There are significant differences between naming, job descriptions and especially education levels of nurses working

in the field of public health. In developed countries, it is seen that public health nurses provide services in a wide range of applications, and their education is generally at undergraduate level and in other countries at high school level, but the importance of undergraduate nursing education is gradually increasing worldwide. To improve PHN; it is necessary to create a common language and vision, to work in cooperation with the higher education institution, the ministry of health, non-governmental organizations, professional organizations and national organizations that will be pioneers in the study (Altug Ozsoy and Koca, 2015).

As higher education institutions and nursing educators, the duties and roles of public health nurses should be fully embraced and emphasized by students (Altay and Oz, 2016). For this emphasis, in the PHN lesson; It is aimed that students become aware of their duties and responsibilities, receive adequate clinical training in the nursing profession along with other lessons they will read during their education, and comprehend the importance of teamwork. With this awareness and education, students; In order to improve and protect individual, family, group and community health and increase the quality of life, it is ensured that the importance and working areas of preventive health services are recognized, the country's health system is comprehended and the knowledge, skills and behaviors related to these areas are developed.

This program also includes the knowledge and skills related to preventive health services, which will be used by the student in his private and professional life, to increase the level of public health. Thus, the development of PHN will have started from undergraduate education and the desired success will be achieved with students who display love and positive attitudes in this field. The field preferences of nursing students after graduation affect their attitudes towards that field (Happell, 1999; Cam and Baysan Arabaci, 2009). In this direction, there is no study that examines the attitudes of student nurses towards the PHN lesson to determine the extent and reasons of their attitudes.

The aim of this study; To develop a valid and reliable scale that can measure the attitudes of undergraduate nursing students towards the

theory and practice of PHN lesson. It is thought that this study, which is the first in the literature, will contribute significantly to the success of the PHN lesson.

Research Hypotheses

H₁: Public Health Nursing Lesson Attitude Scale is a valid measurement tool.

H₂: Public Health Nursing Lesson Attitude Scale is a reliable measurement tool.

Material and Methods

Type of Research: The study is a research in methodological design.

Place and Time of the Research: Research; It was held face to face at Gaziantep University Faculty of Health Sciences between March - November 2017.

Population and Sample of the Research: The universe of the research; In the 2016-2017 academic year, a total of 451 students studying at the 3rd (216) and 4th grades (235) of Gaziantep University Faculty of Health Sciences, Nursing Department and took the PHN lesson were formed. An important topic of discussion in scale development/adaptation studies is the number of samples that can be considered sufficient to perform factor analysis (Kyriazos, 2018). Comrey and Lee defined the sample as n:100=poor, n:200=moderate, n:300=good, n:500=very good, n:≥1.000=excellent (Boateng et al., 2018). The number of samples in this study is 304.

Data Collection Tools

Introductory Information Form: It consists of 7 questions.

Public Health Nursing Lesson Attitude Scale (PHNLAS): It is a two-dimensional scale that evaluates the attitudes of undergraduate nursing students towards the theory and practice of Public Health Nursing (PHN) lesson. The scale is 5-point Likert type, and the items are answered as "0" strongly disagree- "1" disagree, "2" undecided, "3" agree and "4" strongly agree. There are no reverse scored items in the scales. Each scale is evaluated over the total score. The total scale score ranges from 0 to 4. The decrease in the scores towards 0 indicates the level of negative attitude, and the increase towards 4 indicates the level of positive attitude.

Data Evaluation: IBM SPSS 26 and AMOS 24 programs were used to evaluate the data.

To determine the validity of the scale; Content validity and construct validity (explanatory and confirmatory factor analysis) were performed. For content validity, content validity index (CVI) value over 0.80 was taken as basis. For construct validity, in explanatory factor analysis; Kaiser Meyer Olkin (KMO) and Bartlett test, eigenvalue and total variance explanation were examined. In confirmatory factor analysis; Factor loadings of the items and Chi-Square Index/Degrees of Freedom Ratio (CMIN/DF- x^2/df), RMSEA (Root Mean Square Error of Approximation), NNFI (Non-Normed Fitindex), CFI (Comperetive Fit Index), GFI (Goodness-of-Fit Index), AGFI (Adjusted Goodness of Fit Index) and SRMR (Standadized Root-Meansquare Residual), and fit values were examined. To determine the reliability of the scales; Internal consistency reliability coefficients (Cronbach's alpha) and item-total score correlations were examined.

Establishing the Item Pool for the Scale: In the first step of the scale development process, the necessary literature review is done, the existing measurements and the underlying theoretical frameworks are examined and an item pool is created (Brunton et al., 2019; Gkargkavouzi et al., 2019). The item pool for the draft scale developed to collect the data of the research was created by the researchers in line with the literature (Cam and Baysan Arabaci, 2009; Kocakoglu and Turkmen, 2010; Nigenda et al., 2010; Seker and Gencdogan, 2006). The draft scale created was designed as a total of 42 items for the theoretical field of the public health nursing lesson and presented to the opinion of 15 experts. As the experts stated that 42 items created for the theory of the lesson should be created for the application of the lesson in the same way, 42 more items were designed and the draft scale item pool was increased to 84.

Discussing the Findings Regarding the Validity of the Scale: Scale validity is the degree to which an instrument actually measures the latent dimension or construct it was developed to assess. The validity of a measurement tool can be examined in several ways; Content and construct validity are among the most common validity tests (Boateng et al., 2018; Souza et al., 2017).

Content Validity: Content validity is a subjective indicator that expresses the

measurement of the content and relevance of the selected topic, and the measurement is consistent with the purpose and necessity of the measurement (Zhong et al., 2017). Content validity is basically evaluated through the assessment made by experts and target audience experts (Boateng et al., 2018). In this study, opinions of 9 experts were taken for content validity. Content validity should be carried out especially in studies conducted to develop scales.

Davis's (1992) content validity index (CVI) formula was used for the content validity of the scale. The Davis technique grades the expert opinions as (4) appropriate, (3) the item should be slightly revised, (2) the item should be reviewed seriously, and (1) the item not appropriate. In this technique, the content validity index (CVI) of the item is calculated by dividing the number of experts who chose option (4) and (3) by the total number of experts. In order for the scale and item content validity to be sufficient, the value should be 0.80 and above (Davis, 1992; Polit and Beck, 2006). In the study, it was found that the scale was valid in terms of scope since its CVI value was 0.93.

Construct Validity: Construct validity indicates the scale's ability to measure the related concept or the entire conceptual structure (Culha and Acaroglu, 2020). Another technique commonly used by researchers to verify construct validity is factor analysis (Souza et al., 2017). Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are increasingly used, especially to develop and psychometrically test tools (Harerimana et al., 2020). Before the factor analysis is performed, the suitability of the data for the factor analysis is evaluated for construct validity. A high Kaiser Meyer Olkin(KMO) statistic and significant probability for the Bartlett Test are sufficient correlations to continue the factor analysis (Souza et al., 2017). A KMO value between 0.8 and 1.0 indicates that it is sufficient (Shrestha, 2021). It was determined that the scale developed according to the results calculated in the study was suitable for factor analysis.

Exploratory Factor Analysis (EFA): It is a type of test in which the researcher tries to obtain information about the nature of the factors measured by the measurement tool, rather than testing a specific hypothesis

(Orcan, 2018). Different criteria have been developed to determine the number of factors in EFA. In this study, three criteria were used to determine the number of factors that can reveal the relationships between the items in the least number and most effectively. These criteria are; explained variance rate, eigenvalue criterion and line scree plot (Ozdamar 2002; Buyukozturk, 2007).

Variance Ratio: It is based on a specified cumulative percentage of the total variance explained by consecutive factors. The larger the cumulative variance rates obtained at the end of the analysis, the stronger the factor structure. In scale development and adaptation studies, 30% or more is taken as a criterion for the explained variance rate (Buyukozturk, 2007; Alis, 2017). According to the values obtained in the study, it is seen that the construct validity of the scale is at an appropriate level.

Eigenvalue: It is a criterion used to calculate the ratio of variance explained by each factor and to determine the number of significant factors (Harerimana and Mtshali, 2020). Although there are different criteria for determining the number of factors, according to Kaiser, the number of factors should be determined by taking into account the factors with an eigenvalue greater than 1, and those less than 1 should be excluded from the analysis (Montoya and Edwards, 2021). In this study, while 20 factors with an eigenvalue above 1 were defined in the scale, the eigenvalues of two factors (First factor: 14.629, Second factor: 13.026) were found to be much higher than the others.

Scree Plot: The graphic, which represents the eigenvalues on the vertical axis and the factors on the horizontal axis, makes the eigenvalues visible (Akbas et al., 2019). It is obtained as a result of combining the points determined as a result of matching the factors and eigenvalues. In this context, the breaking points (fast declines) seen in the graph determine the number of factors (Bryman and Cramer, 2005; Buyukozturk, 2007). In the graph in the study, it is seen that the second factor is the breaking point and the factors after the determined factor are both small and the distance between them is very similar.

Confirmatory Factor Analysis (CFA): Confirmatory Factor Analysis is usually performed after explanatory factor analysis to confirm the number of underlying latent

variables (factors or structures) and the observed pattern of variable factor relationships (Lewis, 2017). Among the criteria to be evaluated in CFA are the estimation value and fit indices (Joreskog and Sorbom, 1993).

Estimate Value: It is a coefficient representing the relationship between indicators and latent factors (Ozcan and Balyer, 2012). As a result of the factor analysis, it is stated that the estimated values of each item should be 0.30 and above (Gunduz and Akarcay, 2019). As a result of the confirmatory factor analysis, for the scale whose estimated value was below 0.30, a total of 50 items, 25 items each from the theoretical and practical sub-dimensions, were removed from the scale. When the confirmatory factor analysis was performed again after the removed items, the estimated value of all items was found to be above 0.30.

Fit Indices: Some fit values are obtained by confirmatory factor analysis. Whatever fit indices are used, most methodologists agree that more than one, and possibly several, should be used to increase confidence in model fit (Lewis, 2017). For this reason, in the CFA testing of the scales, the following goodness-of-fit indicators were used for the suitability of the scale structure.

Chi-Square Index/Degrees of Freedom Ratio (CMIN/DF- x^2/df): The chi-square value is one of the most frequently used criteria in the CFA model fit test (Subas and Cetin, 2017). Although it tends to be a statistically significant test, it is extremely sensitive to model fit (Harerimana and Mtshali, 2020; Lewis, 2017; Kyriazos, 2018). In the literature, if this ratio is equal to 1, the fit is excellent, for values less than 2, the fit is good, for values less than 5, the fit is acceptable, and for values greater than 5, the fit is interpreted as unacceptable (Varst, 2021; Farzad et al., 2020).

GFI (Goodness-of-Fit Index): It is used to measure the fit between the hypothesized model and the observed covariance matrix (Farzad et al., 2020). If GFI is equal to or above 0.90, it can be concluded that there is compliance. However, the acceptable value of GFI value is 0.85 and above (Someya et al., 2001).

AGFI (Adjusted Goodness of Fit Index): It is used to measure the fit between models and observed data (Pinar et al., 2009). Its value

ranges from 0-1, with an acceptable value of 0.80 (Crede and Harms, 2019).

CFI (Comperetive Fit Index): Model summative fit is among the indices (Crede and Harms, 2019). It is used to compare models (Farzad et al., 2020). CFI values above 0.90 represent good model fit (Lewis, 2017; Hernandez Sanchez et al., 2017). A CFI of 0.80 or above indicates that the model can be accepted (Gatignon, 2011).

RMSEA (Root Mean Square Error of Approximation): Another commonly used criterion from the absolute fit indices category is the root mean square error of approximation (Lewis, 2017). RMSEA provides the calculation of a confidence interval that provides information about the reliability of the model fit (Hoofs et al., 2018). RMSEA values less than 0.06 indicate a good fit, and values of 0.08 or more indicate an acceptable fit (Hernandez Sanchez et al., 2017; Bin Mustafa et al., 2020).

NNFI (Non-Normed Fitindex): It is among the summative fit indices for the model (Crede and Harms, 2019). If it is equal to or above 0.90, it indicates that there is harmony (Erdogan et al., 2015).

SRMR (Standadized Root-Meansquare Residual): The use of SRMR is important (Harerimana and Mtshali, 2020). A value below 0.10 indicates that there is fit (Erdogan et al., 2015). The values calculated in the study show that the developed scale is acceptable/good fit.

PATH Diagram: Path diagrams are obtained as a result of the analysis in the structural equation model. After the appropriate matrix is created, a PATH diagram is drawn in addition to the fit indices and the output page of the analysis software, and the variables of the model, t values, factor loadings, unexplained variance and some goodness of fit values are summarized in this diagram. These diagrams briefly present the outputs of the model graphically (Capik, 2014). As seen in the path diagram of this study, a 2-factor structure emerged (Figure 2). Since all the analysis values made to determine the validity of the scale were within the desired values, the research "H₁: Public Health Nursing Lesson Attitude Scale is a valid measurement tool." confirms the hypothesis.

The Reliability Findings of the Scale: Reliability is the ability to reproduce a consistent result by presenting aspects related

to consistency, stability, equivalence and homogeneity in time and space or from different observers (Souza et al., 2017). Cronbach's alpha and item-total score correlation analyzes are also recommended among the reliability assessment methods in scales (Tezbasaran, 2008).

Cronbach's Alpha (α) Coefficient: Cronbach's alpha evaluates the internal consistency of the scale items, that is, the degree of covariance of the item set in the scale according to their total scores (Boateng et al., 2018). An alpha coefficient of 0.70 is generally acceptable for reliability (Boateng et al., 2018; Baydas, 2019). On the other hand, reliability coefficient values greater than 80 can be considered as highly reliable (Baydas, 2019). As a result of the study, the cronbach's alpha value of the scale was 0.941 and it was seen that the scale was a reliable measurement tool.

Item-Total Score Correlation: Another technique that supports the deletion or modification of items is the estimation of item-total correlations. These correlations, often displayed in the form of a matrix, are used to examine relationships between individual items in a pool. Inter-item correlations examine the extent to which scores on one item are related to scores on all other items on a scale. It also examines the extent to which items in a scale rate the same content. Items with very low correlation ($r < 0.30$) are less desirable and could potentially be a clue for deletion from the scale (Boateng et al., 2018). If the factor loading of an important item in the scale or the item-total score correlation is low, there is literature indicating that the item can be preserved if the content validity of that item is high (Zeman et al., 2012). In the study, it was observed that the item-total score correlation coefficient values were above 0.30. The item-total score correlation coefficient values of all scales were found to be sufficient to a large extent.

Since all the analysis values made to determine the reliability of the scale were within the desired values, the research "H₂: Public Health Nursing Lesson Attitude Scale is a reliable measurement tool." confirms the hypothesis.

Ethical Principles of the Study: Permission was obtained from the Clinical Research Ethics Committee (Decision No: 2017/78)

and the people who participated in the study. The study was conducted in accordance with the ethical rules specified in the Declaration of Helsinki.

Results

Results on Descriptive Characteristics

The students were female (72.7%), 21-23 age group (79.6%), single (98.7%), 3rd grade (68.8%), having a general academic grade point average of 2.0-2.99 (79.6%) and having taken the PHN lesson for the first time. It was determined that they were not students (100%).

Results Regarding the Validity of the Scale

To determine the validity of the scale; content validity and construct validity (explanatory and confirmatory) and hypothesis tests were conducted. For content validity, a CVI value above 0.80 was taken as a basis. For construct validity in exploratory factor analysis; Kaiser Meyer Olkin and Barlett tests, eigenvalues of the scales and total variance explanation values were examined (Table 1, Figure 1). In confirmatory factor analysis; The data quality of the items, χ^2/sd , RMSEA, NNFI, CFI, SRMR, GFI and AGFI were examined (Table 2). A total of 36 items with data quality less than 0.30 were removed (Figure 2).

Table 1. KMO, Barlett Test, Eigenvalue, Total Variance Values of Public Health Nursing Lesson Attitude Scale (PHNLAS)

SCALE	KMO	Barlett Test	p	CVI	Eigenvalue	Total Variance
PHNLAS	0.90	5192.808	0.000	0.93	13.026-14.629	17.416-32.923%

KMO: Kaiser Meyer Olkin, **CVI:** Content Validity Index

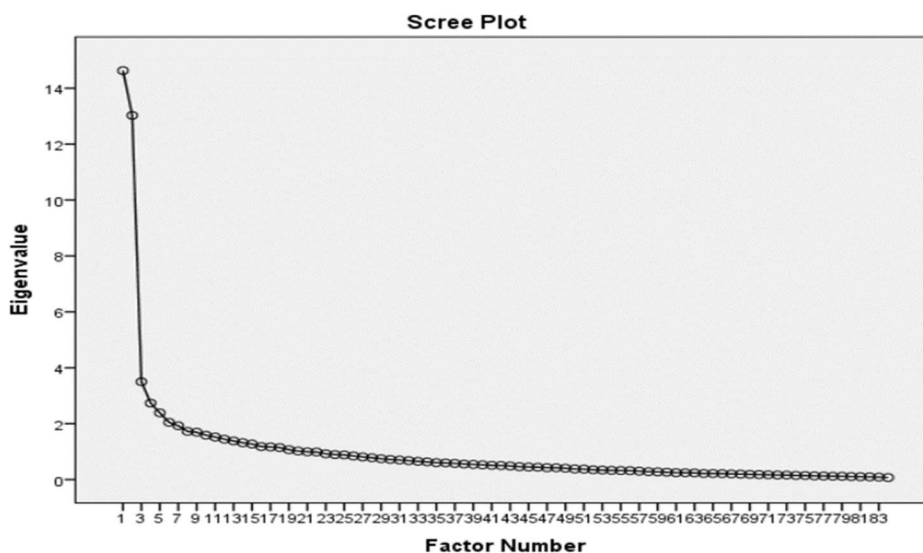


Figure 1. Scree Plot Chart of Public Health Nursing Lesson Attitude Scale (PHNLAS)

Table 2. Confirmatory Factor Analysis of Public Health Nursing Lesson Attitude Scale (PHNLAS)

SCALE	Fitness Values							Estimate Values
	χ^2/sd	RMSEA	NNFI	CFI	GFI	AGFI	SRMR	
PHNLAS	1.698	0.04	0.90	0.92	0.85	0.82	0.05	0.42-0.69

χ^2/sd : Chi-Square Test, **RMSEA**: Root Mean Square Error of Approximation, **NNFI**: Non-Normed Fit Index, **CFI**: Comparative Fit Index, **GFI**: Goodness of Fit Index, **AGFI**: Adjusted Goodness of Fit Index, **SRMR**: Standardized Root Meansquare Residual

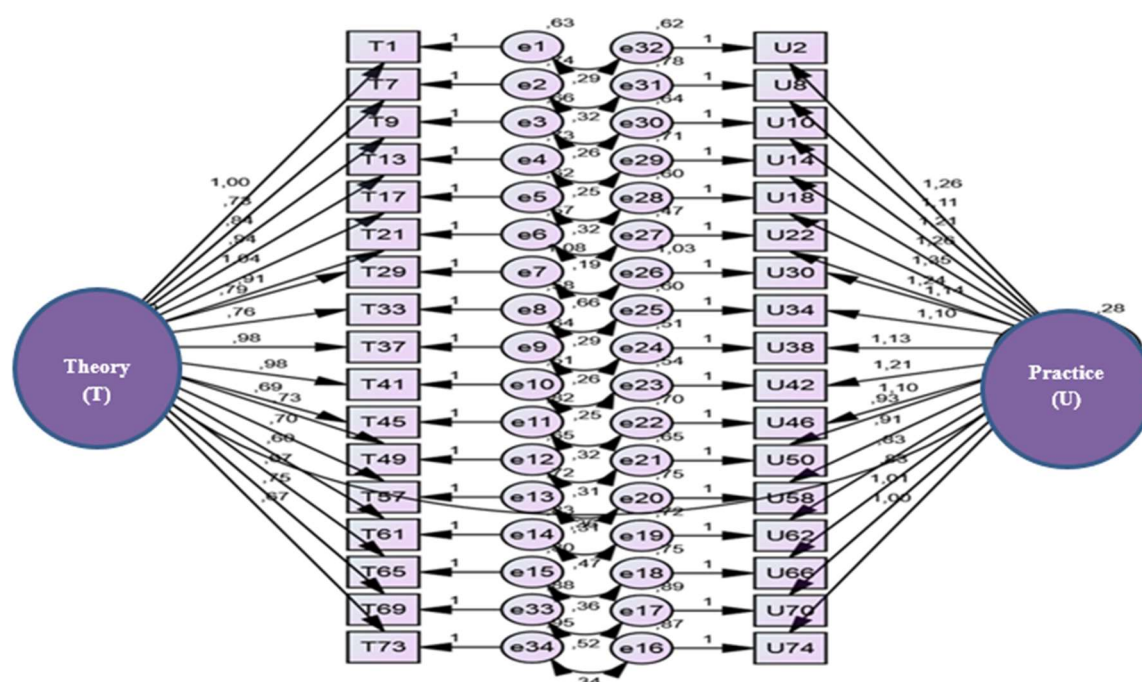


Figure 2. Path Diagram of Public Health Nursing Lesson Attitude Scale (PHNLAS)

Results Regarding the Reliability of the Scale

To determine the reliability of the scale; internal consistency reliability coefficient (Cronbach's alpha) and item-total score correlation test were performed (Table 3). The lowest item average score in the item average score of the scale is item T33 in the Theoretical sub-dimension (2.2±0.9), while the highest item average score is the item T61 in the Theoretical sub-dimension (2.7±1.0). Item total score correlations for the items in the scale; item (r:0.653), item T7 (r:0.488), item T9 (r:0.565), item T13 (r:0.584), item

T17 (r:0.654), item T21 (r:0.611), item T29 (r:0.477), item T33 (r:0.558), item T37 (r:0.634), item T41 (r:0.679), item T45 (r:0.461), item T49 (r:0.524), item T57 (r:0.491), item T61 (r:0.441), item T65 (r:0.458), item T69 (r:0.478), item T73 (r:0.433), item U2 (r:0.626), item U8 (r:0.540), U10 item (r:0.593), U14 item (r:0.589), U18 item (r:0.642), U22 item (r:0.655), U30 item (r:0.519), U34 item (r:0.581), item U38 (r:0.630), item U42 (r:0.640), item U46 (r:0.554), item U50 (r:0.513), item U58 (r:0.469), item U62 (r:0.473), item U66 (r:0.455), U70 item

($r:0.484$), U74 item ($r:0.489$) and it is at a very significant level ($p:0.000$).

Table 3. Findings Regarding the Reliability of Public Health Nursing Lesson Attitude Scale (PHNLAS)

SCALE	Mean±SD	Cronbach Alpha	Item-Total Score Correlation
PHNLAS	2.4±0.6	0.94	0.43-0.67

SD: Standart Deviation

Discussion

Nursing refers to a professional group that has the functions of healing and rehabilitating in case of illness while helping to protect and promote the health of the individual, family and society. It also includes the care of healthy, sick or disabled individuals in the process of health promotion, disease prevention and treatment. It plays an important role in creating a health care system that can provide services to changing demographic structure and disease patterns and in achieving global public health goals. Therefore, it is recommended that all nurses should be trained with public health nursing (PHN) practice skills (Celikkalp et al., 2020).

Because PHN is considered a special field within the profession and is generally seen as a nursing field that demonstrates basic nursing skills in the community (Kucuk and Demirbag, 2022). In addition to basic nursing skills, nurses who will serve in this field are expected to have basic health knowledge including the clinical effects of public health interventions, etiology and prognosis of diseases. In addition, they need to gain experience in practical/field applications in order to improve their ability to plan, implement and evaluate public health interventions (Celikkalp et al., 2020). It is possible to achieve these gains with a quality PHN education. PHN education is an important part of nursing education and is given to student nurses under the roof of nursing education (Gumus Sekerci, 2020). In PHN lessons around the world and in Turkey, the focus is on providing students with knowledge, skills and attitudes related to preventive services to increase the health level

of the society, which they can use in their professional lives (Topuz and Gozum, 2021).

The PHN lesson, which is included in the applied lessons of nursing education, needs to continuously evaluate the theoretical and practical applications realized during the lesson (Dolu et al., 2022). In this context, it is important to determine the attitudes of student nurses towards the theory and practice of the PHN lesson in applied lessons. Students who will undertake the provision of care, information, education and counseling to healthy and sick individuals in their future working lives are expected to have a positive attitude towards the PHN lesson (Gumus Sekerci, 2020).

Because a positive attitude towards the theoretical and practical aspects of applied lessons facilitates learning and improves the quality of the education received, which in turn increases satisfaction. Students' positive attitude towards applied lessons facilitates learning and improves the quality of the education received. Therefore, it is very important to ensure this attitude (Yalcinoz Baysal et al., 2020). In this context, there are no studies examining the attitudes of student nurses towards the PHN lesson to determine the extent and reasons of their attitudes. With the studies to be conducted; the attitudes of nursing students towards the PHN lesson in their education programs and the determination of how much these attitudes have developed will determine the direction of the lesson contents and programs. The PHN lesson taken at the undergraduate education level is expected to increase the competencies of nursing students. A scale is needed to evaluate the realization of this expectation. It is thought that such a scale can be a guiding

guide for nurse educators in teaching PHN theories and practices to nursing students and in determining the attitudes that may prevent or encourage positive attitudes.

In this study, a scale was developed to measure student nurses' attitudes towards the theoretical and practical aspects of the public health nursing course. Validity and reliability analyses were conducted for the developed scale. Scale validity is the degree to which "an instrument actually measures the latent dimension or construct it was developed to assess". The validity of a measurement tool can be examined in various ways; among the most common validity tests are content and construct validity (Boateng et al., 2018; Souza et al., 2017).

In the validity analyses conducted for the scale developed in this study, the scale was found to be adequate in terms of scope with the calculated content validity ratio (Davis, 1992; Polit and Beck, 2006), it was found to be suitable for factor analysis with Kaiser Meyer Olkin and Barlett tests (Shrestha, 2021), it had a two-factor structure with eigenvalues defined well above 1 (Montoya and Edwards, 2021) and the explained variance ratio was above 30% (Buyukozturk, 2007; Alis, 2017), the estimate values of the items were above 0.30 (Gunduz and Akarcay, 2019), χ^2/sd , RMSEA, NNFI, CFI, GFI, AGFI and SRMR fit values calculated as a result of confirmatory factor analysis showed acceptable/good fit (Varst, 2021; Farzad et al., 2020; Bin Mustafa et al., 2020; Erdogan et al., 2015; Gatignon, 2011; Someya et al., 2001; Crede and Harms, 2019) and in this context, the developed scale was found to be valid.

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(Varst, 2021; Farzad et al, 2020; Hernandez Sanchez et al, 2017; Bin Mustafa et al, 2020; Erdogan et al, 2015; Gatignon, 2011; Someya et al, 2001; Crede and Harms, 2019) and in this context, the developed scale was found to be valid. Scale reliability is the ability to reproduce a consistent result by providing aspects related to consistency, stability, equivalence and homogeneity across time and space or from different observers (Souza et al., 2017). Reliability assessment methods in scales include cronbach's alpha and item-total score correlation analyses (Tezbaşaran, 2008). In the reliability analyses conducted for the scale developed in this study, it was found that the scale was highly reliable with Cronbach's alpha coefficient (Baydas, 2019), the item-total score correlation coefficient values of the scale ($r > 0.30$) were found to be largely sufficient (Boateng et al., 2018; Zeman et al., 2012), and in this context, the developed scale was reliable.

Limitations of the Study: This study presents a methodological article on the elaboration of the scale developed to evaluate the attitudes of undergraduate nursing students towards the theory and practice of the Public Health Nursing (PHN) lesson, and its statistical reliability and validity were evaluated with appropriate methods for the scale/authors. This study, conducted with a sufficient sample, includes a careful presentation of the best theoretical analysis and detailed elaboration processes of the scales, following the best psychometric properties that the scales should have. A positive attitude towards the theory and practice of applied lessons is very important in terms of facilitating learning and increasing the quality of the initiatives to be taken within the scope of the training received and the resulting satisfaction. Thanks to the scale developed in the study, which was conducted for the first time in the literature, it was envisaged that it would make a significant contribution to evaluating the attitudes of nursing students towards the PHN lesson. However, the weakness of this study is that it was conducted only with nursing students at Gaziantep University. Another weakness is that the research data was collected in the form of a survey. It is thought that the partially limited survey response rates may have

limited accurate assessment, especially in terms of psychometric measurements.

Conclusion and Suggestions: It has been determined that the Public Health Nursing Lesson Attitude Scale is a valid and reliable measurement tool in determining the attitudes of nursing students towards the theoretical and practical field of the public health nursing lesson. With the developed scale, it is recommended to be used in order to improve the attitudes of undergraduate nursing students towards the public health nursing lesson in a positive way, and to investigate and eliminate the negative aspects.

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