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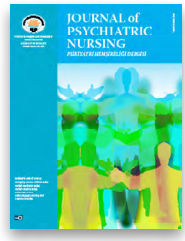

Original Article

Developing an ethical approach evaluation scale for psychiatric patients

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Abstract

Objectives: This study aimed to develop a scale to evaluate the ethical approaches of health professionals working in psychiatry units toward psychiatric patients and to conduct a validity–reliability study for this scale.

Methods: The research data that was planned methodologically were collected from 316 nurses working in four different regional psychiatric hospitals between February 2020 and February 2021. While collecting research data, "Descriptive Information Form" and the "Ethical Approach Toward Psychiatric Patients Evaluation Scale" were used. The draft scale, consisting of 48 items, took its final form consisting of 27 items as a result of the required validity and reliability studies. In the development process of the scale, the Lawshe technique, explanatory factor analysis, confirmatory factor analysis, test-retest reliability, Cronbach's alpha reliability coefficient, and item-total correlation analyzes were performed.

Results: As a result of the exploratory factor analysis, the scale developed by the researchers based on the relevant literature took its final form with four subdimensions of authoritarian, protective–altruistic, normative, and social distance. It was determined that the model data fit of the tested data was quite high based on the results of the confirmatory factor analysis (GFI=0.96, AGFI=0.95, RMSEA=0.068, SRMR=0.071, and chi-square/df=775.06/316=2.452). Cronbach's alpha reliability coefficients of the Ethical Approach Toward Psychiatric Patients Evaluation Scale were as follows: $\alpha_{authoritarian}$=0.84, $\alpha_{protective\text{-}altruistic}$=0.74, $\alpha_{normative}$=0.76, $\alpha_{social\ distance}$=0.70, and α_{EAPPES}=0.88. The estimated test-retest reliability coefficients for the whole scale and its subdimensions were as follows: r_{EAPPES}=0.93 $r_{authoritarian}$=0.94, $r_{protective\text{-}altruistic}$=0.79, $r_{normative}$=0.83, and $r_{social\ distance}$=0.72.

Conclusion: As a result of these data, it was determined that the "Ethical Approach Toward Psychiatric Patients Evaluation Scale" is a valid and reliable scale.

Keywords: Ethics; psychiatric nursing; scale; validity and reliability.

The most basic task of a nurse is care. Psychiatric nurses are also in a long-term communication and interaction with the patient while performing their task of care, which is their basic responsibility. Nurses, who are the closest health professionals to psychiatric patients, witness the sensitive and private situations of patients, their sadness, and their feelings such as loneliness and hopelessness due to their long-term relationship with the patient. This testimony may motivate the nurse to make decisions on behalf of the patient in some cases and to find solutions in difficult situations. A decision or a solution proposal that the nurse will make in the face of this dilemma may confront the nurse with ethical problems. Nurses working in psychiatry services often encounter these ethical problems, which cannot be clearly grouped as right or wrong and which leave the person encountering in a dilemma while providing care for the patient and their family.[1,2] A psychiatric nurse who encounters ethical problems finding a solution is only possible if he/she acknowledges his/her professional values and ethical principles.[3,4]

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What is presently known on this subject?

- Psychiatric nurses work with a special group of vulnerable patients who are at risk of exposure to all types of maltreatment. Therefore, they should be more attentive and sensitive about ethical rights. When the literature was examined, no measurement tool was found that could evaluate the ethical approaches toward psychiatric patients.

What does this article add to the existing knowledge?

- The Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES) is a valid and reliable standard measurement tool that can evaluate the ethical approaches of health professionals working in psychiatry units toward psychiatric patients and can be used in studies on this subject.

What are the implications for practice?

- The measurement tool developed within the scope of the study will contribute to increasing the quality of care of the services by health professionals for psychiatric patients.

Psychiatric nursing differs from nursing for other services due to the fact that care is based on communication and interaction and the roles of the nurse and structure of psychiatry services.[5] Psychiatric nurses should be more attentive and sensitive about ethical rights, as they work with a special group of vulnerable patients who are at risk of being exposed to all kinds of maltreatment. Furthermore, nurses are responsible for protecting these patients due to their caring role. This obligation delegates the nurse to the task of finding solutions to problems by using their ethical decision-making process.[2] A solution that the nurse will find in the light of ethical principles, which considers the patient's benefit and does not damage the patient's autonomy, will be the most correct approach.[6] At this point, it is important for the nurse to base this decision on ethical principles and laws while making decisions on behalf of the patient and not to ignore the patient's personal preferences in terms of protecting patient autonomy.

Patients whose treatment is carried out in the psychiatry service have certain rights like other patients. These rights can be listed as refusing or accepting treatment, obtaining informed consent, protecting privacy, continuing treatment in the least restrictive environment, and respecting the individual's autonomy. But most of the time, some restrictions can be made on these rights of psychiatric patients. These restrictions also bring along some legal and ethical issues. For example, in cases in which a patient has suicidal thoughts, the patient may be hospitalized compulsorily after some legal procedures without their consent. A patient who exhibits aggressive behavior after meeting a relative may be restricted from meeting that relative. In this case, isolation or restraint may be applied to the patient despite the right to receive treatment in the least restrictive environment. In cases in which a psychiatric patient may harm another individual, the principle of confidentiality may be violated. As observed in these examples, due to the weakness of psychiatric patients arising from their need for help, healthcare professionals, especially psychiatric nurses, who interact longer can suddenly become the decision-maker on behalf of the patient or the person who restricts the patient's rights. In such cases, psychiatric nurses may encounter difficult situations, even if they do not want to. For all these reasons, the ethical situations that are more common in psychiatry clinics compared with other clinics require psychiatric nurses, who are responsible for providing legal and ethical care, to be more sensitive and careful about ethics.[2,6,9,10]

An ethically insensitive approach leads to a decrease in the quality of care provided. At this point, it is necessary to determine the ethical approaches and attitudes of nurses. Thus, a standard measurement tool that can evaluate this is needed. When the literature was examined, such a measurement tool could not be found. Based on this, in this study, which was conducted to develop a tool for evaluating the ethical approaches of health professionals working in psychiatry units, the answer to the question "Is the developed tool valid and reliable?" was sought.

Materials and Method

The population of this methodological study consisted of nurses working in seven different regional psychiatric hospitals providing mental health services in Turkey. The research sample consisted of nurses who voluntarily participated in the study out of health professionals working as nurses in four regional psychiatric hospitals that allowed the study to be conducted, except for three for which institutional permission could not be obtained. The literature stated that 3–10-fold individuals should be reached for each scale item in determining the sample size.[11–15] In line with this information, it was aimed to reach individuals that are 10-fold of the number (29 items) of candidate scale items created after expert evaluation. However, while obtaining institutional permissions, two items of the scale had to be removed in line with the conditional recommendation from one of the institutions where the study was conducted. Thus, the final version of the scale, consisting of 27 items, was applied to 316 nurses who participated in the study between February 2020 and February 2021 and met the inclusion criteria. Nurses of 11.7-fold of the number of scale items were reached.

Data Collection

Data were collected by the researcher's presential visits to four regional psychiatric hospitals. For the reliability evaluation of the study, a time constancy analysis was conducted. Thus, it was aimed to reach again at least ¼ of those who participated in the first application. In this context, 90 nurses who were included in the sample and agreed to participate in the retest 3 weeks after the first application filled out the questionnaires again.

The following two forms were used in the study:

1. Descriptive Information Form: It consists of 14 close- and open-ended questions prepared by the researcher, which include information about the sociodemographic characteristics of the participants, whether they sufficiently considered

their level of knowledge about psychiatric disorders, and whether they took ethics courses during their education.

2. The Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES) was developed by researchers. To develop the scale, various scales developed in the field of psychiatry in the literature were examined by the researchers, and the literature on ethics in psychiatry and ethical approach to psychiatric patients was screened.[1–3,11] After the literature review, the statements thought to represent ethical problems encountered in psychiatry were arranged as scale items, and a pool of candidate scale items was created. The literature stated that the first item pool developed should be at least twice as long as the desired final scale.[16,17] Based on this information, the first candidate pool of scale items, consisting of 48 items, based on clearly and simply expressed self-report was developed. While creating the items, care was taken to ensure that the items were understandable, in accordance with the spelling rules, and that the items were interrelated and consistent compared with each other. In addition, the literature stated that scales with two or three points have lower reliability than scales with five or seven points.[18] In the light of this information, the scale items were arranged in a five-point Likert type ("strongly disagree," "disagree," "neutral," "agree," "strongly agree"); then, validity–reliability analyzes were conducted.

Data Analysis

Exploratory factor analysis and analyzes for reliability and descriptive statistics used in the evaluation of the data were conducted using the IBM SPSS Statistic software version 23. The LISREL 8.80 software was used for the confirmatory factor analysis. Descriptive data was evaluated via number–percentage distributions. In the validity evaluation of the scale, the following were adopted: Lawshe technique for content validity (Table 1).

Table 1. Statistical Analyses Used in the Validity–Reliability Evaluation of the Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES)

Method	Techniques used
Validity	
Content validity	– Lawshe Technique Content Validity Index (10 experts) * Calculation of CVR, $CVR_{Critical}$ values
	To assess the adequacy of sample for factor analysis
	– Kaiseer-Meyer-Olkin (KMO) – Bartlett's Test
Construct validity	– Exploratory Factor Analysis (EFA) – Confirmatory Factor Analysis (CFA) * Chi-square * Goodness of Fit Index (GFI) * Adjusted Goodness of Fit Index (AGFI) * The Root Mean Square Error of Approximation (RMSEA) * Standardized Root Mean Squared Residual (SRMR)
Face validity	– Expert opinion on clarity and appropriateness – Pilot study on clarity and appropriateness outside the research sample
Invariance	– Test-retest method * Test-retest method (3 weeks later) * Correlation Analysis
Internal consistency	– Cronbach's alpha coefficient – Total Item Correlation

Ethics of Research

Approval was obtained from the Non-interventional Clinical Research Ethics Committee of a university with decision number 61 dated 06.02.2019. Written permission was obtained from the Provincial Health Directorates of the four regional psychiatric hospitals where the study was conducted. Furthermore, care was taken to ensure voluntary participation by explaining that the information given to all participants who accepted to participate in the study will be kept confidential and that this information will not be used anywhere other than the research.

Results

Of the 316 participants, 74.4% were female, the mean age was 36.50±8.07, 81.3% were university graduates, 66.8% were married, 57.6% lived with their spouses and children, and 88.9% lived in a nuclear family. It was determined that 37.0% of the nurses had 1–10 years of professional service and that 66.5% of them worked in the psychiatry unit for 1–10 years. The majority of the nurses (76.9%), 66.8% of whom were satisfied with being a nurse and 93.4% of whom were satisfied with working in the psychiatry unit, worked in shifts day and night. Furthermore, 59.8% of the nurses stated that they considered their current knowledge on ethics sufficient, and 82.3% of them stated that they had taken courses on ethics in their formal education before.

To determine whether EAPPES was suitable for the characteristic to be measured, whether the measurement was made in accordance with the rules, and whether the measured data really reflected the characteristic to be measured, its validity and reliability were examined. For this purpose, the following validity and reliability evaluations were performed.

Evaluation of Validity

1. Content Validity: To ensure content validity, "the Lawshe Technique" was employed. First, a group of 15 experts from different disciplines (psychologist, psychometrist, clinic nurse,

academic nurse, psychiatrist, sociologist) was created. The candidate scale form consisting of 48 items developed by the researchers was sent to 15 experts by hand or via e-mail for evaluation. Experts were requested to evaluate each item of the scale based on the following criteria: "Does it represent the characteristic to be measured? Is it easily understandable by the target audience? Is it expressed clearly enough?" In line with this, the experts were expected to evaluate each scale item as follows: "1= unnecessary," "2 = useful but insufficient," and "3 = required." The content validity ratio (CVR) was calculated for each item by combining the opinions of 10 experts who gave their opinions in a single form. Out of the candidate scale items for which the CVR was calculated, those with CVR = "0" and "negative" and those with positive CVR that were considered statistically insignificant at the a=0.05 significance level according to the minimum content validity index (CVI) ($CVR_{critical}$=0.62 for the number of 10 experts) were eliminated. In line with this, 19 items for EAPPES (1st, 4th, 5th, 7th, 11th, 12th, 20th, 21st,

Table 2. Explanatory and Confirmatory Factor Analysis of the Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES) and Reliability Coefficient and Descriptive Statistics of the Whole Scale and Its Subdimensions

Items	The Protector-Altruist		Authoritarian		Normative		Social Distance		r^2	t
	EFA	CFA	EFA	CFA	EFA	CFA	EFA	CFA		
Item 1	0.462	0.59							0.35	16.07
Item 5	0.641	0.73							0.53	20.42
Item 7	0.636	0.55							0.30	14.88
Item 8	0.425	0.41							0.17	9.99
Item 9	0.477	0.56							0.31	22.57
Item 10	0.551	0.49							0.24	11.25
Item 21	0.328	0.38							0.15	10.09
Item 26	0.460	0.33							0.11	8.80
Item 2			0.709	0.54					0.29	30.15
Item 3			0.471	0.67					0.45	39.49
Item 14			0.611	0.60					0.36	36.67
Item 15			0.533	0.53					0.28	33.52
Item 19			0.393	0.55					0.31	39.08
Item 20			0.653	0.68					0.46	41.68
Item 23			0.411	0.42					0.18	24.38
Item 25			0.661	0.52					0.27	28.71
Item 27			0.643	0.81					0.77	47.51
Item 4					0.401	0.52			0.27	22.38
Item 6					0.426	0.34			0.11	14.96
Item11					0.590	0.59			0.35	30.37
Item 12					0.518	0.64			0.41	27.76
Item 13					0.483	0.53			0.29	19.12
Item 16					0.467	0.62			0.38	31.75
Item 24					0.460	0.68			0.46	31.94
Item 17							0.624	0.72	0.51	9.61
Item 18							0.376	0.39	0.09	5.32
Item 22							0.374	0.47	0.22	8.33
Eigenvalues	6.755		2.582		1.685		1.425			
Explained variance (%) Explained total variance (%)	25.1		9.5		6.2		5.2			
KMO Bartlett X^2 (p)	0.87 2636.105 (p<0.001)								Total Scale (EAPPES)	
For scale sub-dimensions α	0.744		0.837		0.764		0.700		0.875	
For scale sub-dimensions X±Ss	4.66±3.98		25.65±7.80		27.71±4.85		12.92±2.50		101.30±14.29	

P<0.01 Significant Level. CFA: Confirmatory factor analysis; EFA: Explanatory factor analysis.

23rd, 27th, 30th, 33rd, 34th, 35th, 36th, 39th, 41st, 44th and 48th items) were removed from the scale. As a result, it was decided that the 29 items found to be statistically significant be included in the final form. By taking the averages of the total CVRs of these items, the "content validity index (CVI)" was calculated, and CVI = 0.91(CVI= ∑CVR/Item number) was determined.

2. Face Validity: For the face validity of the scale, the items of the scale were evaluated in terms of intelligibility and expression by the experts first and then by 10 nurses who participated in the pilot application, excluding the study sample. The experts and nurses in the pilot study group were asked to evaluate the scale items by asking questions based on "regularity and expressiveness, legibility, clarity of terms, length of sentences, clearness and clarity of meaning." Within the context of content validity, some of the scale items were adjusted in line with the suggestions from the experts. In the pilot study conducted on 10 nurses for face validity, it was deemed unnecessary to change any item in the scale.

3. Construct Validity: Factor analysis was conducted to evaluate the scale's ability to measure the characteristic and concept that it is supposed to measure. For factor analysis, first of all, the KMO value was calculated to evaluate whether the sample size had a factorable structure, and it was determined to be 0.87. The chi-square value of Bartlett's Test of Sphericity statistics was also obtained as 2636.105 (degrees of freedom= 351), and this value was found to be statistically significant at the p<0.001 level.

The eigenvalues of the subdimensions were respectively found as authoritarian = 6,755, protector–altruist = 2.582, normative = 1.685, and social distance = 1.425. The percentages of variance explained for each dimension were 25.1%, 9.5%, 6.2%, and 5.2%, respectively, and the total explained variance value was determined to be 46.0%. It was found that the EAPPES explains a four-factor structure in EFA and CFA. It was observed that the factor loads of the items belonging to the subdimensions of the EAPPES ranged from 0.34 to 0.81 (Table 2, Fig. 1). The t values of all factor loads were found to be statistically significant (p<0.01). The R2 (item reliability) values of all items in the scale were found in the range of 0.09–0.77 (Table 2).

As a result of the fit analyzes conducted, the following was determined: GFI = 0.96, AGFI = 0.95, RMSEA = 0.068, SRMR = 0.071, and chi-square/df = 775.06/316 = 2.452.

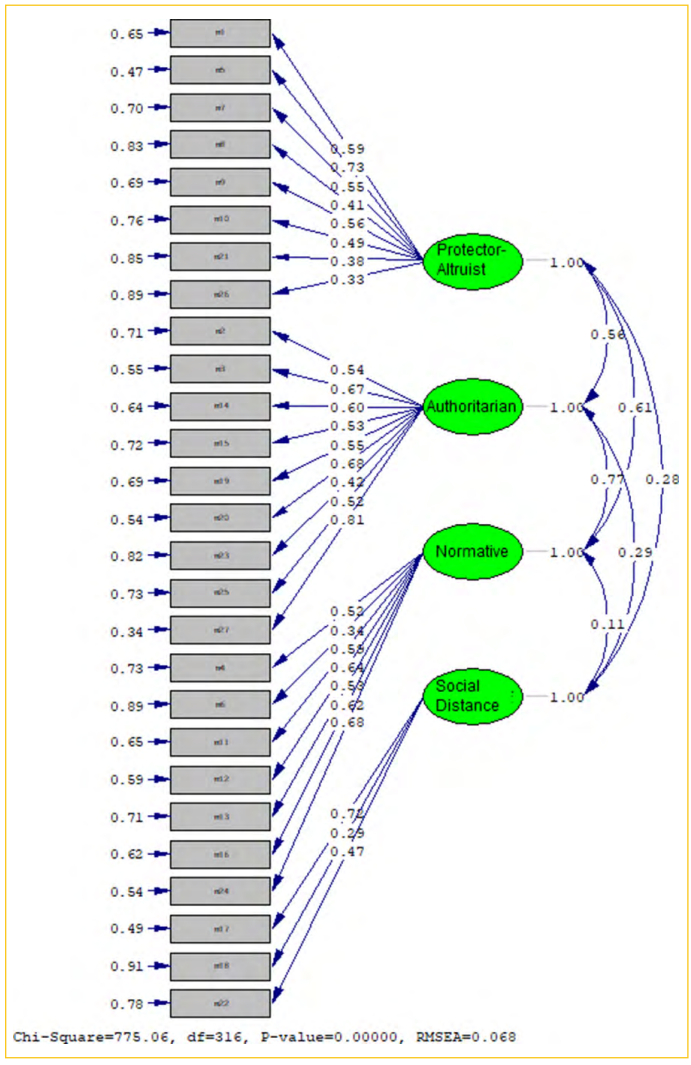

Figure 1. Path Diagram of Standardized Coefficients for Confirmatory Factor Analysis of the Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES).

Evaluation of Reliability

Its reliability was examined to determine if the EAPPES could measure without errors and collect data correctly and whether it was a repeatable scale. Internal consistency and time invariance analyzes were conducted for the reliability assessment of the scale.

1. Internal Consistency: The reliability coefficients of the EAPPES were as follows: α=0.84 for the "authoritarian" dimension, α=0.74 for the "the protector–altruist" dimension, α=0.76 for the "normative" dimension, α=0.70 for the "social distance" dimension, and α=0.88 for the whole scale (Table 3).

It was observed for the items of the EAPPES that the correlation coefficients and total test scores of all items were above 0.30, except for the five items (17th, 18th, 21st, 22nd, and 26th), and the correlation coefficients and total test scores of these five items were in the range of 0.30–0.20, but when these five items were removed from the scale, the alpha coefficient did not dramatically change the scale reliability, and the contribution of each item to the reliability of the test was positive and similar.

2. Consistency (Test-Retest) Reliability: The test-retest method was employed to examine the time invariance of the EAPPES. The correlation coefficients obtained for the total scale and subdimensions were respectively as follows: r_{EAPPES}=0.93; $r_{authoritarian}$ = 0.94; $r_{protective\text{-}altruistic}$ = 0.79; $r_{normative}$ = 0.83; and $r_{social\ distance}$ = 0.72.

Table 3. Item Analysis Results of the Ethical Approach Toward Psychiatric Patients Evaluation Scale (EAPPES)

Ethical Approach towards Psychiatric Patients Evaluation Scale (EAPPES)	Items	Scale Mean Score if Item Deleted	Scale Varience If Item Deleted	Corrected Item/ Total Correlation	Cronbach's Alpha If Item Deleted
Alfa: 0.88	Item 1	96.9810	194.825	.412	.872
Total Items: 27	Item 2	99.2532	188.082	.445	.870
X=101.30±14.29	Item 3	98.0601	181.847	.603	.866
N=316	Item 4	97.1456	190.830	.469	.870
	Item 5	97.0759	191.220	.512	.869
	Item 6	96.8101	194.764	.315	.874
	Item 7	96.9335	195.084	.406	.872
	Item 8	96.6772	197.959	.319	.874
	Item 9	97.6930	188.982	.381	.873
	Item 10	96.7468	197.498	.368	.873
	Item 11	97.5032	186.359	.482	.869
	Item 12	97.4937	188.321	.532	.868
	Item 13	96.9589	193.017	.480	.870
	Item 14	98.6266	184.095	.511	.869
	Item 15	97.8354	187.065	.427	.871
	Item 16	97.8418	186.070	.484	.869
	Item 17	97.1519	195.774	.286	.877
	Item 18	96.5949	200.699	.277	.877
	Item 19	98.1772	181.734	.499	.869
	Item 20	98.6297	181.904	.569	.867
	Item 21	96.9494	198.074	.285	.874
	Item 22	96.8924	198.630	.200	.876
	Item 23	97.8228	189.619	.391	.872
	Item 24	97.6614	185.825	.542	.868
	Item 25	98.8196	187.298	.462	.870
	Item 26	96.7089	198.620	.290	.874
	Item 27	98.8544	177.534	.710	.862

Discussion

The findings regarding the evaluation of validity and reliability, which were obtained from the study conducted to develop a tool for evaluating the ethical approaches of health professionals working in psychiatry units, are discussed in this section.

Evaluation of Validity

1. Content Validity: To determine to which extent the developed scale was suitable for its purpose,[19] the content validity of the scale was examined. For this purpose, the Lawshe technique was employed, and the scale was presented to 15 experts. The experts were asked to evaluate each item in the scale by scoring, and then the corresponding coefficient according to the scores given to the scale items by the 10 experts was calculated, determining the CVR of each item. After the items with a CVR value of 0 or (–) were removed from the scale, it was evaluated whether the items with a positive CVR value were significant according to the ($CVR_{Critical}$). According to the index created by Hooper and Veneziano (1997), the $CVR_{Critical}$ for 10 experts was determined as 0.62.[20] Based on $CVR_{Critical}$ = 0.62 for the EAPPES (for 10 experts), 19 items that were found to be statistically insignificant (1st, 4th, 5th, 7th, 11th, 12th, 20th, 21st, 23rd, 27th, 30th, 33rd, 35th, 36th, 39th, 41st, 44th and 48th items) were excluded from the scale. After the adjustments performed within the context of content validity, as the (CVI=0.91) value calculated for the candidate scale consisting of 29 items provided CVI ≥ $CVR_{Critical}$ or CVI/$CVR_{Critical}$ ≥0, content validity was found to be statistically significant. In other words, it was determined that the scale items represented the area to be measured.

2. Face Validity: Validity study is primarily conducted by the researcher. In line with this, face validity is examined to question whether the statements in the scale fit the purpose and to understand whether the scale is challenging for the target population's education, culture, and knowledge level.[21] Also in this study, the scale items were evaluated by the research-

ers and experts for face validity in terms of intelligibility and expression.[12,13] Afterwards, the candidate scale whose final form was determined was applied to 10 nurses outside the research sample, and a pilot study was carried out. The scale, which underwent expert examination for the pilot study to be conducted to obtain information about the compatibility of the items with the scale and internal validity of the scale,[22] is applied to a small sample group. There are different opinions in the literature about the sample size for the pilot study. Evci and Aylar (2017) stated that approximately 5% of the target audience should be reached.,[23] On the other hand, Şeker and Gençdoğan (2014) stated that it would be sufficient to have between 30 and 50 participants representing the target audience.[24] In this application, the scale was piloted with 10 individuals out of the sample, and it was determined that the scale was appropriate and clear enough, and no changes were made to any item of the scale. It was determined that the scale items were appropriate. Furthermore, it was concluded that the scale measures the desired criteria. Thus, face validity was fulfilled.

3. Construct Validity: The factor analysis method was employed to evaluate the construct validity of the EAPPES. To be able to conduct factor analysis, first of all, the Kaiser–Meyer–Olkin (KMO=0.87) and Bartlett's tests were conducted to evaluate whether the sample size was sufficient to perform factor analysis.[14] The fact that the KMO value was greater than 0.80 and Barlett's test was p<0.001 indicated that the correlation matrix of the items in the scale was suitable for factor analysis.[12]

In the literature, it has been stated that each dimension should have at least three items with high factor loading while determining the factors. It has also been reported that the factor should not be evaluated if it contains two or less items.[11,12,15] For any variable to be considered a factor, the factor load must be at least 0.30, and at the same time, the t value must be significant.[11,12] In line with this information, after the factor analysis calculations performed for the construct validity of the EAPPES were repeatedly evaluated, it was determined that the four-factor structure was the most appropriate analysis for the dimensions in which the items resided and factor loads." deleted for clarity. In the process of developing a new scale, EFA is called an explanatory step, whereas CFA is the second step to check whether the construct defined in EFA works in a newer sample. When the literature was examined, it was found that there are different fit indices, but there is no standard for their use. In line with this information, EFA was used to determine how many factorial structures the scale consisted of, and CFA was employed to test the accuracy of the determined construct. It has been stated that the total variance explained by the four-dimensional factorial construct obtained via exploratory factor analysis should be over 40%, and the variance of each factor should not be less than 3-fold of the variance explained by the next dimension.[25] In line with this literature information, it was observed that the validity of the scale is at an acceptable level according to the variance value explained. Furthermore, a model was defined to verify the four-dimensional factorial construct obtained by EFA for 27 items, and as a result of the analysis conducted to determine whether this hypothetical model had model data fit with CFA, it was observed that the four-factor construct model tested had a very high data fit when evaluated along with goodness-of-fit indices, error indices, and chi-square/df ratio (GFI >0.90, AGFI >0.90, RMSEA ≤ 0.080, SRMR ≤0.080, and chi-square/df ratio <5).[26–30] In addition, all t values corresponding to item factor loads obtained as a result of CFA were found to be significant at the p<0.01 level.

Evaluation of Reliability

1. Internal Consistency (Cronbach's Alpha) Reliability: For internal consistency, Cronbach's alpha coefficient and item-total score reliability were calculated. According to Şencan (2005) and George and Mallery (2003), if a Cronbach's alpha value determined for a measurement tool is >0.90, the scale reliability is excellent; 0.80–0.90 is good; 0.70–0.80 is acceptable; 0.60–0.70 is doubtful; 0.50–0.60 is weak; and <0.50 is considered unacceptable.[12] In this study, it was observed that Cronbach's alpha values for the total and subdimensions of EAPPES ranged from 0.70 to 0.88. Accordingly, it can be stated that the EAPPES demonstrated "good" reliability for a total of 27 items and subdimensions; in other words, the whole scale and its subdimensions measure the same characteristic.

The correlations of the items with the total test score need to be positive and not greater than 0.30. However, in some sources, it has been stated that the baseline threshold of this value may be 0.20 in newly developed scales. In this regard, it is necessary to check the correlation of the items with the total score and their effects on Cronbach's alpha.[11,14,30] It was found that the correlations of the items with the total scale score for the EAPPES on the basis of whole scale ranged from 0.28 to 0.71 and were within an acceptable range. All items in the scale showed high correlation with the whole scale, and it can be stated that each item measures the characteristic that is intended to be measured. Although it was observed that the contribution of the five items (Items 17, 18, 21, 22, and 26) whose correlation coefficients with the total test score of the EAPPES items were low in terms of scale, Cronbach's alpha value did not significantly increase the reliability of the test and did not provide a significant change in the scale variance and mean if they were removed from the scale. For this reason, it was concluded that each item positively contributed to the reliability of the test, and these items were not removed from the scale, taking into account the suggestion by the statistician that the items should not be removed.

2. Constancy (Test-Retest) Reliability: The scale is reapplied to at least ¼ of the participants selected from the research sample after the first measurement to evaluate the similarity between the result of the scale at a certain time and the result at a different time, in other words, the invariance consistency with respect to time.[31] In the literature, it has been stated that for the retest analysis, which is an intermittent method, the test

should be reapplied on at least 30 people 2–6 weeks later. It is stated that the retest application should not be in such a short time that allows the recall of the scale items and should not be too late, which can cause the scale items to be forgotten.[32,33] Also, this study aimed to reach ¼ of the sample (n=316) 3 weeks after the first application, and taking into account possible dropouts, the EAPPES was reapplied to 90 participants. It has been concluded that the 3 weeks interval preferred for re-application to determine the invariance reliability of the scale with respect to time is a scientifically approvable period. The test-retest reliability coefficient showing the consistency between two measurements was found to be above 0.70, the lowest accepted value for the whole scale and its subdimensions.[1,12,22] It was found that there was a highly statistically significant correlation between the scale mean scores of the total scale and subdimensions of the test-retest test measurements of the EAPPES ($p<0.01$) In other words, it was observed that the results of the two measurements performed with the scale and a 3-week interval were consistent with each other. The correlation coefficients between the EAPPES and subdimensions and between the subdimensions were found to be statistically significant ($p<0.00$; $p<0.01$). Accordingly, it was determined that the test-retest reliability coefficients determined for the whole scale and its subdimensions were quite high; in other words, the scale and its subdimensions were invariant over time and had reliability in terms of permanence.

After the evaluation of validity and reliability, in the evaluation of the final version of the scale consisting of 27 items, positive items (2nd, 5th, 7th, 8th, 9th, 10th, 17th, 18th, 21st, and 26th items) were converted into numerical values by being scored as follows: 1 point, "I strongly disagree"; 2 points, "I am undecided"; 3 points, "I agree"; and 4 and 5 points, "I totally agree." Negative items were exactly reversely scored (1st, 3rd, 4th, 6th, 11th, 12th, 13th, 14th, 15th, 16th, 19th, 20th, 22nd, 23rd, 24th, 25th, and 27th items). Developed in five-point Likert type, the scale consists of four subdimensions: authoritarian: items 2, 3, 14, 15, 19, 20, 23, 25, and 27; protective–altruistic: items 1, 5, 7, 8, 9, 10, 21, and 26; normative: items 4, 6, 11, 12, 13, 16, and 24; and social distancing: items 17, 18, and 22. The highest score that a participant can receive is "135," and the lowest is "27." A high score from the developed scale indicates a positive ethical approach toward psychiatric patients.

Conclusion

The EAPPES was developed to evaluate the ethical approaches of health professionals working in psychiatry clinics toward psychiatric patients. As a result of the statistical evaluations, it was found that the EAPPES items represent the area to be measured (content validity), measure the construct under investigation (face validity), consist of four subdimensions according to factor analysis (construct validity), have high internal consistency between items (internal consistency reliability), and perform consistent measurements over time (test-retest reliability). As a result, it was determined that the EAPPES developed in this study is a valid and reliable measurement tool that can evaluate ethical approaches toward psychiatric patients.

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