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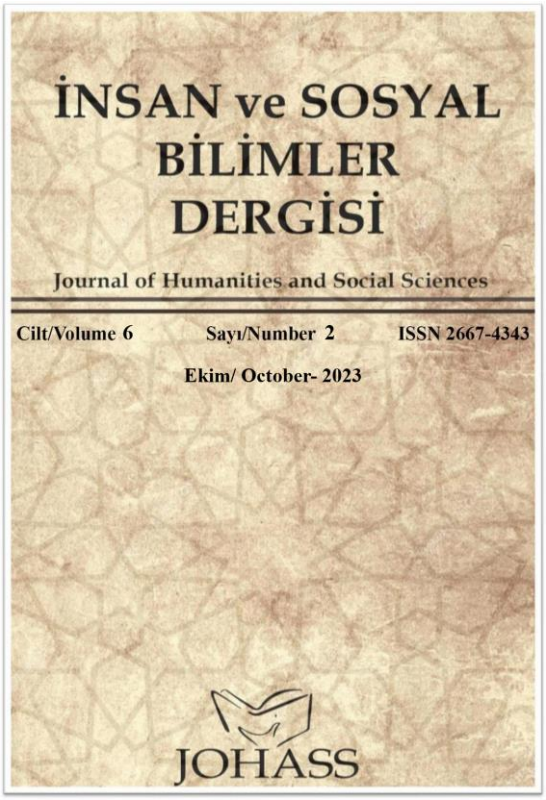

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A Tool to Analyze Delusions in a Nonclinical population: Peter's Delusional Inventory (PDI-21)

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Abstract

The purpose of this study is to culturally adapt the Peter's Delusional Inventory (PDI-21), originally developed by Peters, Joseph, and Garety (1999), for use in the Turkish context. A total of 674 participants participated in the data collection process. To provide a more culturally informed framework for the scale, an exploratory factor analysis (EFA) was conducted, resulting in the identification of 21 subscales. This scale structure underwent confirmatory factor analysis (CFA) to examine its six-component structure in a sample of university students. The results indicated that the 21-factor model demonstrated a satisfactory level of fit. To establish the criterion validity of Peter's Delusion Inventory, the EPQR-A scale, which is believed to assess similar constructs, was employed. The findings of the Pearson correlation analysis revealed a statistically significant positive association between the two measures (r=.35; p<.001). The study yielded a Cronbach's alpha coefficient of.81, indicating a high level of internal consistency. The ratio of Chi-square to degrees of freedom (χ 2 /df = 2.08), which was employed to assess the overall adequacy of the model, fell within the acceptable range. The root mean square error of approximation (RMSA) value for the model was determined to be 0.057. In this particular context, it was observed that the model exhibited a satisfactory level of conformity to the covariance matrix. Upon examination of the SRMR value, it was observed that it equaled 0.03, indicating a highly satisfactory fit. The NFI value of 0.92, which was higher than the threshold of 0.90, indicated that the model had a strong fit. The CFI score of 0.96 indicated that the model had a high level of fit. Based on these scores, it can be said that the Turkish form of PDI-21 is a valid and reliable tool.

Keywords: Delusional beliefs, validity, reliability, scale adaptation

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Introduction

Delusion is defined as false beliefs that do not have any logical explanation but are seriously believed by the person (DSM, American Psychiatric Association, 1987; Kiran & Chaudhury, 2009; Mullen, 1979). Studies have shown that delusions can be multidimensional (Brett-Jones, Garety & Hemsley, 1987; Chadwick & Lowe, 1990; Garety & Hemsley, 1987; Oltmanns & Maher, 1988; Strauss, 1969), and their beliefs are at different levels. Karl Jaspers (1913) defined delusion as a distorted reality pattern with three components in general psychopathology and listed these three components as accepting unconventional beliefs, irrationality, and the absurdity and falsity of its contents being discernible by other people. Hamilton (1978), on the other hand, defined delusion as an unshakable belief stemming from internal diseased processes that are incompatible with the person's cultural structure and educational background and therefore easily recognizable. Maher (1974) introduced a cognitive approach to delusions by explaining them as perception disorders. In Garety and Hemsley's (1994) models explaining delusional development, past experiences, influence, self-esteem, and the effects of motivation, as well as prejudices in perspective and judgment systems, come to the fore.

Jaspers' work has shaped the definition of currently existing delusions (Garety 1985), so that when a standard British (Mullen 1979) or American (American Psychiatric Association 1978) definition is taken, it seems that delusions have certain characteristics. These characteristics are: (a) content is considered false or fantastic; (b) the person's level of persuasion is absolute or solid; (c) beliefs are autonomous in the context of the believer's subculture; and (d) they are maintained despite counter-evidence or experience (Garety & Hemsley 1987). When describing delusions, Woo and Keatinge (2008) emphasized that they can be developed around any subject or theme and develop in a way that cannot be accepted in the individual's social or cultural environment. Delusions vary in content and are often associated with various themes such as size, somatic makeup, religion, eroticism, and various aspects of mental and bodily control (p. 473).

The definitions, ideas, and beliefs that society as a whole accepts and that have a measurable influence on societal formation are also those that people who do not subscribe to a particular belief system will uphold in their daily lives. Dawkins elucidates this phenomenon as the transmission of memes and the persistence of these cognitive units inside the realm of thought, even when they are not actively engaged. In his seminal work published

in 1989, Richard Dawkins introduced the notion of the meme, a concept that bears resemblance to the gene in its capacity to propagate beliefs and serves as a fundamental unit in the process of cultural evolution. Walston, Blennerhassett, and Charlton (2000) established a correlation between the delusion of persecution and the innate human survival instinct in their research. They made reference to the idea that shared ideas can influence perceptions of foreign, dangerous, and protected codes, ultimately leading to a false belief in malevolence as a means of self-defense.

In a similar vein, Mullen (1991) posited that while emotions may have a biological basis, their development and manifestation are intricately intertwined with cultural and societal influences. According to Mullen, vocabulary restrictions limit how much people can express their emotions and desires. The speaker posited that our emotions and the corresponding beliefs they engender are intrinsically linked to the cultural context in which we reside. To comprehensively understand an individual's beliefs, it is imperative to examine both the individual's personal experiences and the linguistic expressions ascribed to emotions and beliefs within their cultural milieu.

When examined within this particular framework, one is prompted to contemplate the notion that delusional beliefs have the capacity to influence and shape subsequent experiences. Furthermore, these beliefs have the potential to be transmitted and transformed, adopting novel manifestations over time.

As mentioned above, many studies have been done on the definition, diagnosis, and causes of delusion, but there are still some uncertainties. Although there is a well-established system for the diagnosis and treatment of delusional disorders, the isolation of delusions from society and the fact that it is limited to individuals diagnosed with this disorder may have resulted in not working on a point that will eliminate the uncertainties about delusions (Harper, 2004; Johns & Van Os, 2001; Mullen, 2003; Peters, et al., 2010; Verdoux, 1998). Moreover, empirical research has demonstrated the presence of delusional ideation not only among individuals in clinical settings but also among the non-clinical community. So, using evaluation criteria for delusional beliefs is becoming more and more important, both for finding pathological conditions and for figuring out what kinds of mentalities are common in society. While there are various scales available in the literature to assess delusions, they are mostly utilized by professionals to evaluate the clinical presentation and establish a diagnosis (Forgácová, 2008; Haddock, et al., 1999; Meyers, et al., 2006). There are no self-administered scales in the literature that solely rely on the individual's responses, without considering

clinical diagnosis. Hence, the incorporation of this scale will significantly enhance the existing body of literature. Consequently, the present investigation involved the adaptation of the PDI-21 scale, originally created by Peters et al. (1999) for the assessment of delusional ideation in non-clinical samples, to the Turkish cultural context.

Method

Study Group

In the process of adapting the Peters Delusion Inventory into Turkish, data were collected from three different groups for linguistic equivalence, criterion-dependent validity, and validity and reliability studies. For the linguistic equivalence study of the scale, 56 participants with an advanced level of English were reached. The criterion-dependent validity study of the scale was carried out using data collected from 183 university students. The validity and reliability studies of the scale were conducted in a total of 674 universities, with 468 (69.4%) females and 206 (30.6%) males, aged between 18-50. SPSS 20.0 and LISREL 8.51 programs were used for the analysis of the obtained data.

Data Collection Tools

Personal information form: The researcher created a form with seven questions asking participants about their gender, age, occupation, educational status, marital status, religion, and ethnic origin. Religion and ethnic origin questions were not required to be answered, and the participants were told that they could answer if they had a religion or ethnicity that they identified with.

EPQ-R: The EPQR-A was created by Francis et al. (1992) through a comprehensive examination of the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) as well as its condensed version consisting of 48 items (Eysenck, Eysenck & Barrett, 1985). Karanci, Dirik, and Yorulmaz (2007) conducted the process of adapting the scale to Turkish culture. The EPQR-A inventory comprises three distinct sub-scales, namely extraversion, neuroticism, and psychoticism, with each sub-scale consisting of six individual items. To mitigate potential bias in the questionnaire administration, a lie scale was employed as a control measure. The lie scale was scored using a binary system, with "yes" assigned a value of 1 and "no" assigned a value of 0. The lie scale allowed for a range of scores from 0 to 6.

PDI-21 Delusion Inventory: The Peters Delusion Inventory is a scale developed on the basis of the “Basic State Review” (Wing, Cooper, & Sartorius, 1974) designed to elicit information that enables the investigator to rank 107 symptoms based on patients' self-reports. The Peters Delusion Inventory has 63 items and was designed to measure delusional thinking in the normal population. It consists of 11 "factors," each of which consists of two questions, except for the depersonalization factor, which has only one item. These have been named as religiosity, cruelty, grandiosity, paranormal beliefs, thought disorders, skepticism, paranoid thinking, negative self, depersonalization, catastrophic thinking, broadcasting, and the idea of reference and credibility (Peters, 2004). The scale has a structure that measures the anxiety this belief causes, the persuasion of the belief's reality, and the frequency of the thought using a 5-point Likert scale, and with this aspect, it provides recognition of the multidimensional delusional structure (Garety & Hemsley, 1994).

Findings about the original scale are listed as follows: The internal consistency of the scale was measured by calculating the Cronbach's alpha coefficient, which was found to be 0.82. Item-whole correlations ranged from 0.35 to 0.60.

Compliance with Ethical Standards

The techniques conducted in research studies involving human subjects adhered to the ethical standards set by the institutional and/or national research committee, as well as the 1964 Helsinki Declaration and its subsequent revisions, or other comparable ethical norms. The privacy of all participants was ensured, and complete adherence to confidentiality rules for data collection and analysis was maintained. Therefore, this research study adheres to the principles of research publishing ethics.

Findings

Linguistic Equivalence Study

In developing the scale for the adaptation study of the Peters Delusion Inventory, Prof. Dr. Emmanuelle Peters was contacted via email, and the necessary permission was obtained to adapt the scale into Turkish. Six people with advanced English language skills separately translated the scale into Turkish before evaluating their translations to produce a Turkish form. An English teacher who was not involved in the translation process translated this Turkish form back into English. The word differences between the original English form and

the English form obtained as a result of back translation were determined, and the consistency between the forms was examined. The opinions of three experts from the field of psychological counseling and guidance and two experts from the field of measurement and evaluation were taken. The obtained Turkish form and the original form of the scale were filled out by 37 individuals who are fluent in both languages, one week apart, and the correlation between the data obtained was examined in order to examine whether the Turkish form of the scale was similar to the original form. As a result of the Pearson Product-Moment Correlation Analysis, it was seen that there was a positive and significant relationship between the two forms ($r = .35$; $p < .001$), and it was seen that the Turkish version of the scale had the feature of measuring the variable that was wanted to be measured at a level close to the original language.

Exploratory Factor Analysis

While performing item analysis, the main consideration is to check whether the items distributed in these dimensions are included in a meaningful way in measurement tools consisting of one-dimensional or more than one sub-dimension. The validity studies of a developed or adapted scale are carried out by factor analysis. Factor analysis is a construct validity study that allows the reduction of highly correlated variables to fewer latent dimensions (Tabachnick & Fidell, 2001; Tinsley & Tinsley, 1987). Factor analyses, like all multivariate statistical tests, are quite powerful, can provide a lot of information about the tools used, and are used to indicate whether various items in a scale should be grouped under several sub-dimensions where they reflect a different structure (Williams, Onsman, & Brown, 2010; Streiner, 1994). There are two types of factor analysis. Exploratory factor analysis is used to determine the sub-dimensions in which the items are grouped, while confirmatory factor analysis is used to test how well the items can measure the situation under the existing sub-dimension.

Kaiser-Meyer-Olkin (KMO) values were examined in order to determine whether the distribution was suitable for factor analysis in the sample group, and it was seen that the data were suitable for factor analysis as this value was .801. Tavşancıl (2002) stated that testing the normality of the distribution with Bartlett's Test is important for factor analysis, and stated that the level of significance in the Bartlett's Test is an important predictor of the normality of the distribution. In the analysis, it was seen that the Bartlett's Test value was 30545.22 ($p < .001$), and in light of these results, it was seen that the research data came from a normal

distribution. There are 63 items in total in Peter's Delusion Inventory, which is stated to be a short form. Based on the exploratory factor analysis made during the adaptation of the scale, it was stated that the original scale was one-dimensional, but this one-dimensional structure was not confirmed by confirmatory factor analysis (Peters, Joseph, Day, & Garety, 2004). However, when the studies were examined, it was seen that different culture-specific structures were obtained due to the fact that Peter's Delusion Inventory has a very culture-sensitive structure, and these structures were not confirmed by confirmatory factor analysis. For example, while it is seen that the Peter's Delusion Inventory, which is adapted to the French culture, can be explained with seven sub-dimensions, it is stated that there are seven sub-dimensions but different questions are gathered under different sub-dimensions when adapted to the Spanish culture (Verdoux, Van Os, Maurice-Tison, Gay, Salamon, & Bourgeois, 1998; Lopez-Ilundain, Perez-Nievas, Otero, et al. 2006). In their study, Jones and Fernyhough (2007) evaluated both factor structures on their own samples in order to test which factor structure would be more suitable for the scale. For this reason, exploratory factor analysis was performed in order to determine the factor structure that the scale would create in Turkish culture.

However, in line with the adaptation steps, it was tested whether a one-dimensional structure was confirmed on the data obtained from the Turkish culture, as in the original scale, and it was seen that it was not confirmed. For this reason, considering that it is a short form, exploratory factor analysis was applied without discarding items. The possible sub-dimensions (3, 5, 7, and 11) were analyzed in the context of the sub-dimensions found in other cultures and the theoretical infrastructure. Based on the results, it was decided to think of them as having 21 sub-dimensions. The results obtained are given in Table 1.

Table 1

Peter's Delusion Inventory Exploratory Factor Analysis Results

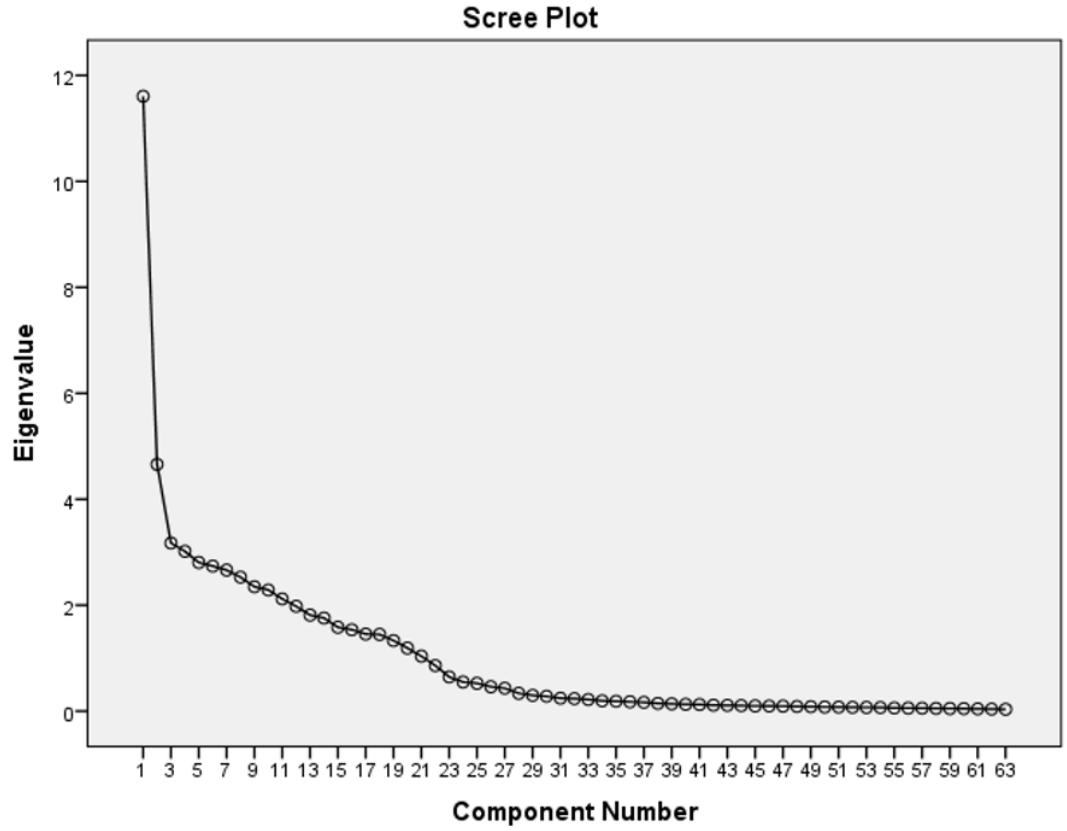
	(Initial Eigenvalues)			**Total Factor Loadings**			**Rotated Totals of Factor Loadings**
Factor	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**
1	11,606	18,422	18,422	11,606	18,422	18,422	5,264
2	4,659	7,395	25,817	4,659	7,395	25,817	4,591
3	3,171	5,034	30,851	3,171	5,034	30,851	3,812
4	3,017	4,790	35,641	3,017	4,790	35,641	3,633
5	2,805	4,453	40,094	2,805	4,453	40,094	4,309

6	2,738	4,346	44,439	2,738	4,346	44,439	4,497
7	2,662	4,226	48,665	2,662	4,226	48,665	3,942
8	2,529	4,014	52,679	2,529	4,014	52,679	3,849
9	2,348	3,727	56,407	2,348	3,727	56,407	3,987
10	2,287	3,630	60,036	2,287	3,630	60,036	4,049
11	2,117	3,361	63,397	2,117	3,361	63,397	4,283
12	1,978	3,140	66,538	1,978	3,140	66,538	3,497
13	1,813	2,877	69,415	1,813	2,877	69,415	3,435
14	1,757	2,789	72,204	1,757	2,789	72,204	5,235
15	1,583	2,512	74,716	1,583	2,512	74,716	3,590
16	1,537	2,439	77,155	1,537	2,439	77,155	3,764
17	1,455	2,309	79,464	1,455	2,309	79,464	5,142
18	1,447	2,298	81,762	1,447	2,298	81,762	3,286
19	1,331	2,113	83,875	1,331	2,113	83,875	4,217
20	1,190	1,889	85,764	1,190	1,889	85,764	2,495
21	1,038	1,647	87,411	1,038	1,647	87,411	4,141
22	,861	1,366	88,777				
23	,646	1,025	89,802				
24	,549	,872	90,674				
25	,526	,834	91,508				
26	,460	,729	92,238				
27	,431	,685	92,923				
28	,337	,535	93,457				
29	,298	,474	93,931				
30	,280	,444	94,375				
31	,244	,387	94,762				
32	,235	,373	95,135				
33	,220	,349	95,483				
34	,195	,310	95,793				
35	,186	,296	96,089				
36	,177	,280	96,369				
37	,166	,263	96,632				
38	,146	,232	96,864				
39	,138	,219	97,084				
40	,128	,203	97,287				
41	,124	,198	97,484				
42	,113	,179	97,663				
43	,109	,174	97,837				
44	,104	,165	98,001				
45	,098	,155	98,157				
46	,097	,154	98,311				
47	,095	,150	98,461				
48	,088	,140	98,600				
49	,084	,133	98,733				
50	,078	,124	98,858				
51	,075	,120	98,977				
52	,071	,112	99,089				

53	,070	,111	99,200
54	,067	,106	99,306
55	,060	,095	99,402
56	,057	,091	99,493
57	,055	,087	99,579
58	,052	,082	99,662
59	,049	,077	99,739
60	,047	,075	99,813
61	,043	,068	99,881
62	,039	,061	99,943
63	,036	,057	100,000

Figure 1

The Scree Plot of PDI-21 after EFA.



The confirmatory factor analysis confirmed this structure's 21 sub-dimensions after the exploratory factor analysis. The results obtained are given in Table 2.

Table 2

Sub-Dimensions Determined as a Result of Peters Delusion Inventory Factor Analysis and Items Loading from These Dimensions

Factor	Number of items	Item numbers
1. Insinuation from people	3	1,2,3
2. Implications from electronic devices	3	4,5,6
3. Not being what you think it is	3	7,8,9
4. To be tormented	3	10,11,12
5. Conspiracy	3	13,14,15
6. Being important	3	16,17,18
7. Being special	3	19,20,21
8. Being close to God	3	22,23,24
9. Telepathic communication	3	25,26,27
10. Effects of electronic devices	3	28,29,30
11. Being God's chosen one	3	31,32,33
12. Magic	3	34,35,36
13. Infidelity	3	37,38,39
14. Being a sinner	3	40,41,42
15. Distinctive Appearance	3	43,44,45
16. Losing thoughts	3	46,47,48
17. The end of the world	3	49,50,51
18. Being alienated from one's own thoughts	3	52,53,54
19. Vivid thought	3	55,56,57
20. Echo of thought	3	58,59,60
21. Losing willpower	3	61,62,63

Validity Analysis

Criterion Validity

In order to ensure the criterion validity of the Peter's Delusion Inventory, the EPQR-A scale, which is thought to measure similar structures, was used, and both scales were administered to 100 individuals. As a result of the normality tests showing the normality of the distribution, the significance of the relationship between both scales was tested by applying parametric correlation tests. As a result of the Pearson correlation analysis, it was seen that there was a significant positive relationship between the two scales ($r=.35$; $p<.001$). As a result of the statistically significant relationship between the Peter's Delusion inventory and the EPQR-A scale in this process, where the criterion validity was tested, it was concluded that this scale is a measurement tool that provides criterion validity.

Confirmatory Factor Analysis Results

The fit index values obtained as a result of confirmatory factor analyses are given in Table 3.

Table 3

Fit Index Values for Peter's Delusions Inventory

Scale	x^2/sd	RMSA	SRMR	NFI	CFI
PDI-21	2,08	0.057	0.03	0,92	0,96

The fit indices obtained as a result of the analysis showed that the data conformed to the established model. It was seen that the ratio of Chi-square to degrees of freedom (χ 2 /sd = 2.08), which was examined in order to evaluate the overall fit of the model, fell within the appropriate range. It was seen that the RMSA value of the model was 0.057, and in this context, it was seen that the model had a good fit to the covariance matrix. When the SRMR value was examined, it was seen that it took the value of 0.03 and had a very good agreement with this value. It was observed that the 0.92 NFI value in the model was above 0.90, and it showed a very good fit. It has been seen that the model has a perfect fit with a CFI value of 0.96.

Reliability Study

While the reliability study of the Peter's Delusion Inventory, which was adapted to Turkish culture, was conducted, the Alpha value was taken into account since it is a preferred method among psychological tests (Daniel & Witta, 1997). The reliability analysis conducted in this particular study revealed a Cronbach's Alpha coefficient of .929 for the Turkish version of the Peter's Delusion Inventory total score. Based on this coefficient, it can be inferred that the scale demonstrated a good level of dependability. The alpha coefficients for the subscales of the Turkish version of the Peter's Delusion Inventory ranged from .725 to .980.

Test-Retest Scores

The reliability of the Turkish version of the scale was assessed by calculating internal consistency coefficients and test-retest reliability coefficients. The results of the analysis, including the Cronbach Alpha internal consistency coefficients for both the factors and the overall scale, are displayed in Table 4.

Table 4

Reliability Analysis Findings for Internal Consistency of PDI-21

Factors	Number of items	Cronbach α
1	3	.740
2	3	.801
3	3	.877
4	3	.868
5	3	.850
6	3	.737
7	3	.734
8	3	.850
9	3	.855
10	3	.804
11	3	.788
12	3	.735
13	3	.845
14	3	.863
15	3	.875
16	3	.841
17	3	.872
18	3	.706
19	3	.765
20	3	.753
21	3	.758
Total	63	.870

Discussionand Results

The objective of this study was to culturally adapt the Peter's Delusion Inventory, a measurement instrument used to assess delusional ideation in a population that included individuals without clinical diagnoses, for the Turkish context. In the present setting, for the purpose of serving as a legitimate and dependable instrument of measurement within the Turkish cultural milieu, it is imperative to conduct a comprehensive investigation of language equivalence as well as an examination of the individual items.

Following the translation of the scale into Turkish, an assessment is conducted to evaluate the compatibility of the scale's structure with Turkish culture. In contrast, it has been observed that the structure of the scale varies across different cultural contexts, as the content of delusional beliefs may be organized differently. Consequently, the Turkish structure of the scale is being examined with the author's consent.

In the exploratory factor analysis study, the scale was found to have a structure with 21 sub-dimensions. Delusion is defined as a structure that shows cultural differences in its content (Ndetei & Vadher, 1984; Suhail & Cochrane, 2002). In other words, although

delusion types receive general definitions in terms of content, it is known that culture has an impact on the formation of these definitions (Bhavsar & Bhugra, 2008; Campbell, et al., 2017; Gaines, 1995).

The factor structure indicates that specific variations are influential in the creation of factors. The scale possesses a framework that elucidates analogous notions within distinct sub-dimensions. The intricate variation is believed to stem from Turkey's historical context and geographical position, which foster an atmosphere conducive to the development of microcultures (Çelik, 2008; Özensel, 2013). The cultural variations within Turkey are evident, as well as the distinct distinctions among comparable cultures, which can be attributed to factors such as geographical variations, individual characteristics, and evolving patterns of migration (Doğan, 2020). Hence, it is believed that the scale is divided into 21 sub-dimensions due to the numerous micro-cultural elements that can influence delusional thinking

When we evaluate it in the context of the contents, it is seen that the religious content sub-dimensions are not collected in a single latency dimension. Considered as a cultural structure, being close to God is a situation that every individual can experience, while being chosen by God is a situation that is only attributed to saints or special people (Karamustafa, 2014; Mohr, et al., 2010; Rudalevičienė, et al., 2008). While the sub-dimension of being chosen by God has a definition closer to grandiose-type delusion, being close to God corresponds to having a more conservative mindset and explaining the experience through a belief system. Similarly, the sub-dimension of being a sinner appears as a latency dimension that differs from the spiritual belief system because it is evaluated from a more negative experience, emphasizing the negativities of being a sinner. Peters and his friends state that they think that the creator's conscious or unconscious use of punishment or arousal in the process of the subject figuring out what happened affects how well the content is shaped. To clarify, the effectiveness of this thought formation can be attributed to the cultural transmission of this concept to individuals, regardless of their adherence to the specific religious or spiritual belief system that promotes it (Peters, Day, McKenna & Orbach, 1999).

The confirmatory factor analysis of the scale revealed the presence of two distinct sub-dimensions: the impact of electronic devices and the content of communications received through electronic devices. The lack of consolidation of these sub-dimensions into a single sub-dimension is believed to be linked to the growing notion that the human body is influenced and regulated by electronic devices beyond direct or subliminal messages,

particularly in the context of 5G conspiracy theories (Bruns, Hurcombe & Harrington, 2022; Mahl, Schäfer & Zeng, 2023; Samory, & Mitra, 2018).

It can be seen that the concept of magic is a sub-dimension in the form of a scale adapted to Turkish culture. The prevalence of magic as a culture and belief system is believed to influence the manifestation of this idea as a sub-dimension. Research has demonstrated that in civilizations where beliefs in magic and sorcery are prevalent, these cultural norms exert a greater influence on the content of delusions (Ndetei, & Vadher, 1984).. The emergence of this sub-dimension as a distinct entity within spiritual belief systems is believed to be attributed to its ability to sustain its existence across both the belief system and the cultural framework (Haarman & Marler, 2008; Siddiq, 2018; Ünal, 1984)

In the confirmatory factor analysis applied after the factor structure of the scale was determined, it was found that the factor structure of the scale showed high fit. It has been observed that culture-appropriate sub-dimensioning increases the reliability of the scale in other cultures to which the scale has been adapted.

The EPEQ-A form was used when performing the criterion validity analysis of the scale, and it was observed that there was a significant positive relationship between the two scales. EPQ-A form is a sub-form that measures a person's delusional thoughts. In this context, it would be correct to say that the scale can give an idea about the delusional structure.

There is no measurement tool in society that measures structures that are not called pathological but are similar in content to delusional thinking. PDI-21 differs from other scales developed for delusions because it is a scale that allows delusional thoughts to be measured without pathological definition. BAs a self-reported scale, it is also a dependable instrument, as individuals may be hesitant to openly disclose their delusional ideas to avoid social stigma or being perceived as mentally unstable. They should exhibit greater transparency and candor regarding their delusional ideations when they are capable of self-assessing their severity. Particularly among those who are not clinically diagnosed, as they do not possess the same level of conviction as someone with delusions, the utilization of a self-assessment instrument could perhaps alleviate their apprehension about social disapproval.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Compliance with Ethical Standards

The techniques conducted in research studies involving human subjects adhered to the ethical standards set by the institutional and/or national research committee, as well as the 1964 Helsinki Declaration and its subsequent revisions, or other comparable ethical norms. The privacy of all participants was ensured, and complete adherence to confidentiality rules for data collection and analysis was maintained. Therefore, this research study adheres to the principles of research publishing ethics. The authors assert that they have no conflicts of interest.

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