NÖRO PSİKİYATRİ ARŞİVİ

Research Article / Araştırma Makalesi

Arch Neuropsychiatr 2015 • DOI: 10.5152/npa.2015.10292

UNCORRECTED

Validity and Reliability for the Turkish Adaptation of the Dream Reflective Awareness Questionnaire (DRAQ)

Rüya Reflektif Farkındalık Ölçeği Türkçe Uyarlama, Geçerlik ve Güvenirlik Çalışması

Ahmet GENÇ[1], Yaşar BARUT[1], Cüneyd AYDIN[2], Gülşah BAŞOL[3]

[1]Ondokuz Mayıs University, Counseling and Guidance, Samsun, Turkey
[2]Ondokuz Mayıs University, Psychology of Religion, Samsun, Turkey
[3]Gaziosmanpaşa University, Measurement and Evaluation in Education, Tokat, Turkey

ABSTRACT

Introduction: The aim of this research was to adapt the Dream Reflective Awareness Questionnaire (DRAQ) to Turkish and to examine its psychometic properties.

Methods: Three hundred and seventy-eight college students participated in the study. The average age of the participants was 20.4; 56% of participants were women and 44% were men. After the scale linguistic equivalence was completed, the validity and reliability analysis were checked. The exploratory factor analysis and confirmatory factor analysis were utilized for the construct validity and Cronbach's alpha coefficient was used for internal consistency reliability.

Results: In the exploratory factor analysis of the scale, unlike the original form, a 5 factor structure for 15 items was obtained, explaining the 71% of the toal variance. The factor loads were between .61 and .88. Confirmatory factor analysis results confirmed the structure that was obtained from exploratory factor analysis. Cronbach Alpha internal consistency coefficient that derived from the reliability analysis of the scale has ranged between .74 and .78.

Conclusion: Based on the results obtained, we can conclude that the scale as a valid and reliable tool with sufficient psychometric properties.

Keywords: Validity, reliability, adaptation, dream, awareness

ÖZET

Amaç: Bu araştırmanın amacı Rüya Reflektif Farkındalık Ölçeği'nin (RRFÖ) Türkçe'ye uyarlanması ve psikometrik özelliklerinin incelenmesidir.

Yöntemler: Çalışmaya 378 üniversite öğrencisi katılmıştır. Yaş ortalaması 20,4 olan katılımcıların %56'sını kadınlar %44'ünü erkekler oluşturmuştur. Ölçeğin dilsel eşdeğerlik çalışmaları tamamlandıktan sonra geçerlik ve güvenirlik analizlerine geçilmiştir. Yapı geçerliği için açımlayıcı faktör analizi ve doğrulayıcı faktör analizi, güvenirlik için Cronbach Alfa iç tutarlılık katsayılarından yararlanılmıştır.

Bulgular: Yapılan açımlayıcı faktör analizleri sonrasında ölçeğin asıl formundan farklı olarak toplam varyansın %71'ini açıklayan ve 15 maddeden oluşan 5 faktörlü yapı elde edilmiştir. Maddelerin faktör yüklerinin 0,61 ve 0,88 arasında değiştiği görülmüştür. Yapılan doğrulayıcı faktör analizinden elde edilen sonuçlar açımlayıcı faktör analizi sonrası ortaya çıkan yapıyı doğrulamıştır. Ölçeğin güvenirlik analizlerinden elde edilen Cronbach iç tutarlılık katsayılarının 0,74 ile 0,78 arasında değiştiği görülmüştür.

Sonuç: Analizler sonrası elde edilen sonuçlara dayanarak RRFÖ'nün iyi psikometrik özelliklere sahip geçerli ve güvenilir bir araç olduğu değerlendirilmiştir.

Anahtar kelimeler: Geçerlik, güvenirlik, uyarlama, rüya, farkındalık

INTRODUCTION

In more recent times, there was a prevailing opinion that dreaming is involuntary and unreflective (1). Nevertheless, the recent studies revealed the fact that the content of the dream is affected by waking life, mental activities, anxieties and the things attracting the individual's attention and there is a dramatization of cognitive formation and individual's thoughts on the content of dreams (2). It is contemplated that the difference between dreams and waking cognitions is quantitative rather than more qualitative and a certain quantity of self-awareness is reflected in dreams (3). The studies on the self-awareness during the dream exhibit that the factors for triggering the intellectual mindfulness during wakefulness regularly come out in the dream (4).

As the simple conscious mindfulness is described as the individual's ability of being aware of the events happening around itself and naming its senses and perceptions, the reflective self-awareness is described as the individual's examination to be capable of being aware of the transactional processes of the identity structuring (5). If the reflective self-awareness develops it is believed that the memory gets much free and the individual gets much cognitive power (6). The self-awareness in dreams which are evaluated in seven different dimensions from ego-absent dreams to multi-dimensional awareness is important to give information about the individual's consciousness state and personal development (7).

Correspondence Address/Yazışma Adresi: Dr. Ahmet Genç, Ondokuz Mayıs Üniversitesi, Psikolojik Danışma ve Rehberlik, Samsun, Türkiye
Phone: +90 362 312 19 19 E-mail: ahmtgnc@gmail.com

Received/Geliş Tarihi: 25.03.2015 **Accepted/Kabul Tarihi:** 15.10.2015 **Available Online Date/Çevrimiçi Yayın Tarihi:** 22.10.2015

Lucid dreams which are very special dimension of dreams are described as being aware of dreaming while having a dream (8). The studies on Lucid dreams demonstrate that the dreamers sometimes reach a state of clear self-thinking and accordingly, remembering the past events and having the ability of discernment and conducting voluntary actions (9,10). Both lucid and non-lucid dreams (normal dreams) are deemed as two important events contradictory to each other in terms of the theories of waking consciousness, which provide information about the nature of conscious experiences and their neural link during the dream (11).

Lee et al. (12) developed Dream Reflective Awareness Questionnaire (DRAQ) of 19 items containing both lucidity and reflective self-awareness in dreams. In the current study, it is aimed to adapt the scale into Turkish and later to consider its validity and reliability on a Turkish sample. In respect of the concepts it contains and the area it measures, it is assumed that DRAQ, which has a very authentic structure ofTurkish literature, will contribute to the studies on this subject to be carried out in Turkey.

METHODS

Sampling

A total of 378 students studying in the Faculty of Education and Faculty of Science and Literature of Ondokuz Mayıs University participated in the study. The data obtained from 41 students for Linguistic Equivalence Study, 191 students for Exploratory Factor Analysis (EFA) and was reached for the analyses. The data for Confirmatory Factor Analysis (CFA) was collected through a later attempt from a total of 146 students. The average age of the participants were 20.4, ranging from 18 to 22 and 56% were female and 44% were male.

Tools

The Effective Dream Registration Form and DRAQ was used as data collecting tools in the study.

Effective Dream Registration Form

In this form developed by the researchers, the participants were requested to report only one dream that they had in the last three months and was the most impressing one, in full detail as much as possible without adding any explanations and comments. In the report, it was pointed out they are allowed to talk about their thoughts and feelings coming out momentarily in the dream. In addition, they were reminded that they should never hesitate to make the mention of any feelings and thoughts even if they may seem illogical, inappropriate or exceptional to themselves. The participants filled out the DRAQ according to the dream they recorded into Effective Dream Registration Form.

Dream Reflective Awareness Questionnaire (DRAQ)

The DRAQ, developed by Lee et al. (12) consisted of 5 sub-dimensions and 19 items. It was developed for the evaluation of the reflective self-awareness appearing in dreams in various aspects. As the sub-dimensions contain 17 items in total, two more items were added into the Questionnaire to be able to measure Lucid Ineffectiveness (one of the types of self-awareness which means to be aware of being in the dream, but unable to affect the course of the dream) and Lucid Control (one of the types of self-awareness which means to be aware of being in the dream and be able to affect the course of the dream). The sub-dimensions and the number of items contained therein, which constitute the Questionnaire as well as these two items are as follows: a) Lucid Mindfulness sub-dimension consists of two items and contains the items relating to be aware of being in the dream and recognizing the ongoing feelings and thoughts. b) Dual Perspectives sub-dimension consists of five items and contains the ability of evaluating the dream content in two different aspects during the dream. c) Depersonalization sub-dimension consists of three items and contains the items relating to the reflective awareness in which the content seeming unrealistic and meaningless in the dream content is evaluated. d) Intra-dream Self-awareness sub-dimension had four items purposed to measure the reflection of reflective self-awareness into the dreams is evaluated. e) Willed Appearances sub-dimension as final dimension, consisting of three items that were intended to find out the appearance of the objects and figures in dream in response to the desires of the dreaming person.

The Questionnaire is in a five point Likert scale, scored as 0 corresponding to Not at all true, 1 corresponding to Slightly true, 2 corresponding to Moderately true, 3 corresponding to Quite true and finally 4 corresponding to Extremely true. The rise in the scores obtained from the sub-dimensions indicate higher levels of reflective self awareness into the dreams. The sub-dimensions of the original Questionnaire and their Cronbach's Alpha values are as follows: .73 for Lucid Mindfulness; .79 for Dual Perspectives; .62 for Depersonalization; .71 for Intra-dream Self-awareness; and. 57 for Willed Appearances (13). In addition, the correlations between sub-dimensions as an indicator of the construct validity in the original form of Questionnaire were investigated. The obtained low-medium level correlations were interpreted as they indicate that the sub-dimensions of Questionnaire are the factors different from each other (13). The obtained values are depicted in Table 1.

Development of the Turkish Form of the Questionnaire

The consents of the authors who developed the original form of the Questionnaire, required for the development of the Turkish form were obtained. The English form of the Questionnaire was translated into Turkish by three academicians who are specialist in their fields. The Turkish form developed through the obtained translations was back-translated into English by three different academicians who are also area specialists. The consistencies between two forms obtained in company with Linguists were evaluated. The Turkish form obtained after making the necessary corrections was applied twice at intervals of two weeks to the fourth class students of the English Teaching Department of OMU Faculty of Education. The linguistic equivalence analyses were conducted through the obtained data.

Statistical Analyses

Statistical Package for the Social Sciences 15.0 for Windows (SPSS, Chicago, IL, USA) and Lisrel 8.54 programs were used for the data analyses. In the studies for linguistic equivalence of the Questionnaire, Pearson Product-Moment Correlation and t-test for matched groups were used. For investigation of the construct validity of the Questionnaire, the–studies for Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were utilized. The Cronbach's Alpha coefficients were calculated for the internal consistency of the questionnaire.

Table 1. Intercorrelations Between Subscales of DRAQ

Sub-dimensions	LM	DP	Dep.	IDSA	WA
1. Lucid Mindfulness	--	.28	.13	.33	.37
2. Dual Perspectives		--	.21	.26	.13
3. Depersonalization			--	.13	.18
4. Intra-dream self-awareness				--	.39
5. Willed appearances					--

LM: lucid mindfulness; DP: dual perspectives; Dep.: depersonalization; IDSA: intra-dream self-awareness; WA: willed appearances

Table 2. The results for DRAQ linguistic equivalence analysis*

Sub-dimension	Forms	$\bar{X}$	SD	r
Dual perspectives	Turkish form	5.71	5.05	.95**
	English form	5.61	5.05	
Depersonalization	Turkish form	3.22	3.79	.93**
	English form	2.78	3.50	
Intra-dream self-awareness	Turkish form	5.98	4.22	.92**
	English form	5.73	4.11	
Willed appearances	Turkish form	3.78	3.18	.89**
	English form	3.39	3.16	
Lucid mindfulness	Turkish form	2.78	2.74	.97**
	English form	2.95	2.78	
Lucid control	Turkish form	.76	1.16	.82**
	English form	.63	1.07	
Lusid ineffectuality	Turkish form	1.32	1.57	.98**
	English form	1.29	1.52	

*Pearson Product-Moment Correlation, **p<.01

RESULTS

Linguistic Equivalence

The original form of the Questionnaire and the Turkish form obtained as a result of the studies applied to a group of 41 students from the fourth class of the English Teaching Department of the Faculty of Education, Ondokuz Mayıs University, at intervals of two weeks. First, the normality of the data per item was checked and according to the results there were no data points that need to be concerned for. According to the results in both language forms, Turkish and English, it was seen that the total DRAQ scores are compatible with the normal distribution (Turkish application K-S Z=.67; p>.05; English application K-S Z=.97; p>.05). As a result of the correlation of Pearson Product-Moment correlation performed between the Turkish and English items, all items in the Questionnaire were found to be relevant at a significance level of .01. The findings obtained from the linguistic equivalence of the DRAQ in Turkish form revealed that the correlations between the Turkish and original form are .95 for Dual Perspectives sub-dimension; .97 for Lucid Mindfulness sub-dimension; .93 for Depersonalization sub-dimension; .92 for Intra-dream Self-awareness sub-dimension; .89 for Willed Appearances sub-dimension; .82 for Lucid Control and .98 for Lucid Ineffectiveness. The correlations between sub-dimensions can be seen in Table 2.

In addition, within the scope of linguistic equivalence studies, the t-test for matched group was applied to determine whether the findings obtained from the group to which the Turkish and English forms of the measurement tools were applied at intervals of two weeks, have been differentiated on the basis of items or not. The results of the t-test for matched groups were insignificant as expected. The results are provided in Table 3.

As seen from Table 3, the difference between the averages of the answers given to the Turkish and English forms of all items available in the Questionnaire as a result of the t-test for matched groups conducted to determine the linguistic equivalence of items was found statistically insignificant. This situation yields that the translated items have the same meaning as those in English form. In other words, it is understood that the items have the linguistic equivalence.

Table 3. The results for DRAQ linguistic equivalence paired samples t test

	Groups	N	$\bar{X}$	SD	SEM	t test		
						t	df	P
Dual 1	Tur1	41	1.51	1.50	.23	-.44	40	.66
	Eng1		1.54	1.50	.23			
Dual 2	Tur 2	41	1.44	1.58	.25	1.94	40	.06
	Eng 2		1.22	1.46	.23			
Dual 3	Tur 3	41	1.59	1.48	.23	1.43	40	.16
	Eng 3		1.44	1.50	.23			
Dual 4	Tur 4	41	1.32	1.57	.25	.44	40	.66
	Eng 4		1.29	1.52	.23			
Dual 5	Tur 5	41	1.27	1.53	.24	-1.35	40	.19
	Eng 5		1.46	1.42	.22			
Dual 6	Tur 6	41	1.00	1.40	.22	1.42	40	.16
	Eng 6		.83	1.34	.21			
Dual 7	Tur 7	41	2.00	1.50	.23	.74	40	.46
	Eng 7		1.88	1.54	.24			
Dual 8	Tur 8	41	1.59	1.73	.27	1.19	40	.24
	Eng 8		1.42	1.69	.26			
Dual 9	Tur 9	41	1.12	1.47	.23	1.74	40	.09
	Eng 9		.95	1.32	.21			
Dual 10	Tur 10	41	1.49	1.45	.23	.50	40	.62
	Eng 10		1.42	1.48	.23			
Dual 11	Tur 11	41	1.02	1.49	.23	.90	40	.37
	Eng 11		.88	1.33	.21			
Dual 12	Tur 12	41	.80	1.19	.19	.27	40	.79
	Eng 12		.78	1.22	.19			
Dual 13	Tur 13	41	1.20	1.54	.24	1.22	40	.23
	Eng 13		1.07	1.47	.23			
Dual 14	Tur 14	41	1.49	1.50	.24	.87	40	.39
	Eng 14		1.37	1.50	.23			
Dual 15	Tur 15	41	.88	1.29	.20	-1.64	40	.11
	Eng 15		1.05	1.38	.22			
Dual 16	Tur 16	41	1.27	1.50	.23	-1.43	40	.16
	Eng 16		1.42	1.53	.24			
Dual 17	Tur 17	41	.85	1.39	.22	.63	40	.53
	Eng 17		.81	1.35	.21			
Dual 18	Tur 18	41	.95	1.38	.22	.00	40	1.00
	Eng 18		.95	1.40	.22			
Dual 19	Tur 19	41	.76	1.16	.18	1.15	40	.26
	Eng 19		.63	1.07	.17			

Table 4. DRAQ factor structure (first analysis)*

Items	F1	F2	F3	F4	F5	F6
1	.76				.32	
2					.49	-.32
3	.38	.69				
4	.75					
5	.35	.37				.31
6				.84		
7		.80				
8						.80
9		.74				
10			.83			
11				.75		
12			.68	.31		
13				.75		
14					.81	
15			.69			
16	.81					
17					.84	
18			.35			.63
19	.41	.31	.48			
Eigen value	5.31	2.03	1.61	1.36	1.25	1.12
Explained variance	27.94%	10.69%	8.47%	7.17%	6.59%	5.89%
Cumulative variance	27.94%	38.63%	47.10%	54.27%	60.86%	66.85%

*Principal components factor analysis, varimax rotation

The results obtained from both analyses indicate that the Turkish and English forms did not differentiate statistically and the linguistic equivalence of all items was fulfilled.

Validity

The studies for the construct validity of the Questionnaire were performed through the data obtained from a total of 337 students. For EFA works, the data obtained from 191 students were used. As a method, Principal Components Factor Analysis was utilized because it is the most explanatory factor analysis method for total variance (14). In order to test the construct obtained from EFA, CFA was applied. The Questionnaire was applied twice for CFA works. In this application, the sample was 146 students who were enrolled in the Faculty of Education and Faculty of Science and Literature of Ondokuz Mayıs University.

The correlation matrix between the items was firstly examined and checked whether there were substantially significant correlations or not. The sampling adequacy and Barlett's Sphericity tests were carried out. In order for the data to be adequate for factor analysis, Kaiser-Meyer-Olkin (KMO) is required to be over .60 and a highly large, and significant Barlett's Sphericity test indicates the factorability of the data (15). In this study, the sampling adequacy coefficient of KMO and χ^2 value of Barlett's Sphericity test were as. 77 and 1288.212 ($p<.001$), respectively.

To determine the number of factors, the main principle for eigenvalues to be bigger than one is adopted (16). In the first analyses, six factors with eigenvalues over one were found. Further, it was seen that the obtained six actors accounted for 66% of the total variance. However, it was decided to omit some items from the Questionnaire because two items were loaded under several factors and two items failed in constituting an adequate sub-dimension in terms of the content. The results obtained from the first analyses are seen in Table 4.

In order to be able to decide whether there is any item in the Questionnaire loaded under several factors or not, the rule of having a minimum discrepancy of .10 between the factor loads was taken as a basis (17). As a result of the review, it was seen that the items 5 and 19 are problematic and accordingly they were omitted from the Questionnaire. As for the two items (item 8 and 18) they were omitted from the Questionnaire because they failed in constituting an adequate sub-dimension in terms of the content.

For the remaining 15 items, it was decided to repeat the Principal Components Analysis. First of all, the data set was examined for the remaining 15 items, whether it was adequate for factor analysis or not. For these 15 items, the results of Barlett's test showed that the data set was adequate for factor analysis (χ^2=867,880=p<.001). The results of KMO (KMO=.74) indicated that the sample was adequate for running a PCA. A Principal Component Analysis with a Varimax rotation was employed on 15 items. When the Principal Components Analysis was repeated for the remaining 15 items, it was seen that the items gathered under five factors and accounted for 71% of the total variance. The construct obtained after the second analyses is seen in Table 5.

The value of .32 and over is suggested as a limit for factor loadings (18). When the factor loads were examined it was seen that there is no factor load with different signs under a group. As a result of the second analyses, it was seen that a 15 item scale under five dimensions accounted for 71% of the total variance in the data.

The first one of the sub-dimensions obtained as a result of AFA is Lucid Mindfulness (F1) sub-dimension. This sub-dimension consisted of three items, accounting for 29% of the total variance and its factor loads vary between. 75 and. 83. The second one, Depersonalization (F2) sub-dimension, consisted of three items, accounting for 14% of the total variance. The factor loads vary between. 75 and. 83. The third one is Intra-dream Self-awareness (F3) sub-dimension. It consisted of three items accounting for 10% of the total variance and its factor loads were between. 65 and. 85. The fourth one, Dual Perspectives (F4) sub-dimension, consisted of three items, accounting for 8% of the total variance and its factor loads vary between. 72 and. 88. The fifth and the last one, Willed Appearances (F5) sub-dimension was consisted of three items, accounting for 7% of the total variance. The factor loads of the items remaining within this sub-dimension vary between. 61 and. 85. In addition, the correlations between the sub-dimensions were also investigated as in the main study and they were close to the original scale's inter sub-dimension correlations are seen in Table 6. The obtained low-to-medium level correlations were considered as an indicator of the discriminant validity of the sub-dimensions.

As regards the construct validity of the DRAQ, CFA is applied to verify the construct obtained from the factor analyses. The data were also collected for CFA from a total of 146 students. The fit indices of the model

Table 5. DRAQ factor structure (second analysis)*

Items	F1	F2	F3	F4	F5
16	.83				
4	.80				
1	.75				
6		.83			
11		.78			
13		.75			
7			.85		
9			.78		
3			.65		
10				.88	
12				.74	
15				.72	
14					.85
17					.71
2					.61
Eigen value	4.12	2.01	1.46	1.20	1.11
Explained variance	29.42%	14.36%	10.42%	8.51%	7.79%
Cumulative variance	29.42%	43.78%	54.20%	62.71%	70.60%

*Principal components factor analysis, varimax rotation

Table 6. DRAQ correlations between sub-dimensions*

Subdimensions	LM	DP	Dep.	IDSA	WA
LM	--	.21	.45	.18	.35
DP		--	.22	.35	.11
Dep.			--	.25	.31
IDSA				--	.26
WA					--

*Pearson Product-Moment Correlation
LM: lucid mindfulness; DP: dual perspectives; Dep.: depersonalization; IDSA: intra-dream self-awareness; WA: willed appearances

Table 7. DRAQ and subdimensions Cronbach's alpha coefficient

DRAQ and subdimension	Cronbach alpha
DRAQ	.81
Lucid mindfulness	.78
Dual Perspectives	.74
Depersonalization	.74
Intra-dream self-awareness	.74
Willed appearances	.75

obtained from the conducted CFA were examined. It was seen that the Chi-square value (χ^2=121.55; n=141; SD=67; p=.00) was significant. The other fit indices were found as RMSEA=.075; SRMR=.086; CFI=.91; GFI=.89; AGFI=.83; RMR=.16; and NNFI=.88, respectively. These fit indices demonstrate that the model shows good coherence. The path diagram and factor loads for the model are provided in Figure 1.

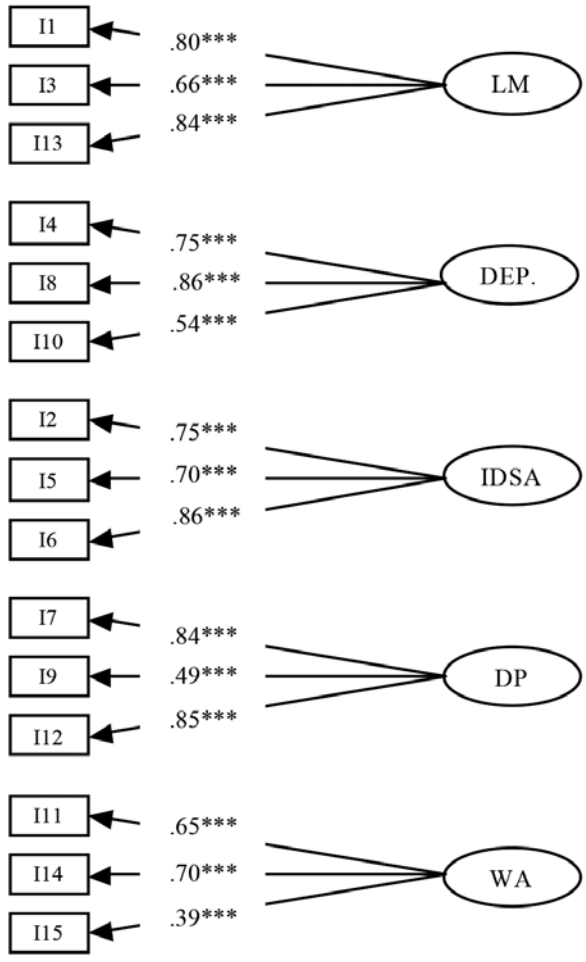

Figure 1. Path Diagram and Factor Loads (***p<.001)

Reliability

In this study, the reliability check of the DRAQ was carried out through the calculation of Cronbach's Alpha coefficient. The analyses were repeated first for the reliability of the complete Questionnaire and next on the basis of sub-dimensions. The results are given in Table 7.

The Cronbach's Alpha coefficients of internal consistence of the DRAQ were found out as .78 for Lucid Mindfulness; .74 for Depersonalization; .74 for Intra-dream Self-awareness; .74 for Dual Perspectives; .75 for Willed Appearances and .81 for the total Questionnaire. While these values approach to one it, so does the internal consistency of the items. In order to be able to say that a Questionnaire is reliable, this value is required to be at least .70 (19). When taking this cut off value into the consideration, it is possible to say that the internal consistency of the Questionnaire was at a good level.

DISCUSSION

In this study, the linguistic equivalence, the validity and reliability of the scale were investigated in a Turkish student population. For the linguistic equivalence studies which have a critical importance in the adaptation works, the correlation between the English and Turkish forms of the Questionnaire was calculated and it was seen that there was a high consistence between

the forms. Furthermore, no statistically significant difference was found between English and Turkish forms of the Questionnaire and the average scores of the forms. According to these results, it is possible to say that the linguistic equivalence of all items in the Questionnaire was fulfilled.

The total variance ratio of 71% accounted for, which was obtained from the EFA analyses conducted for checking the construct validity can be considered as an indicator of the construct validity of the Questionnaire. However, the Turkish form obtained after the factor analysis is partly different from its original form. As a result of the omission of 4 items from the Questionnaire due to the aforementioned reasons, the Turkish form of the Questionnaire comprised of 15 items. However, the five dimensions remaining in the original Questionnaire were saved in Turkish form as well. The validity of the resulting construct after EFA was checked through CFA analyses. According to the results obtained from the CFA, it is possible to say that both the fit indices for the constructed measurement model and the data were in a coherent relationship. Although the obtained results for some fit indices do not show an excellent coherence, the attained results are deemed as acceptable when considered all values.

In order to determine the reliability of the questionnaire, the coefficient of internal consistence was calculated and found high in the sub-dimensions and for the complete questionnaire. Cronbach's Alpha coefficients obtained from the reliability analyses for internal consistence of the questionnaire were highly acceptable both for the total and for the sub-dimensions. Considering that the recommended reliability level of the measurement tools is .70 (19), it is seen that while the two dimensions of the original Questionnaire (.62 for Depersonalization; .57 for Willed Appearances) remained below the cut-off point, all of the coefficients obtained in the current study were above the limit. Accordingly, it is possible to say that the items remaining in the questionnaire are coherent to each other and the most reliable in terms of the internal consistency. In other words, it is seen that the items remaining in all dimensions of the questionnaire are coherent to each other within themselves and for the relevant sub-dimensions in line with the obtained results.

This is the first and pioneering study in Turkey for the measurement of dream reflective awareness and it is deemed important to perform this study on the different sampling groups. In this way, a contribution shall have been made to the introduction of new proofs for the validity and reliability of Turkish form and for the support of research findings. In order to determine the convergent validity of the Questionnaire, the relations between the DRAQ and the scales evaluating the various psychological constructs (conscious awareness, personality traits, metacognitive constructs, etc.) which may be related to reflective awareness can be studied.

In this study, the results for such demographic variables as age and gender were not investigated. For future studies, we suggest researchers to look into the differences in the reflective awareness, which reflected on the individuals' dreams, changed by the demographic variables or not. In addition, through the use of the Turkish form of the Questionnaire developed on the basis of the concepts of Far East culture, cross-cultural studies would provide evidence for the differences based on the culture related to the reflective self-awareness reflecting on in the researches in the future.

It is thought that both reflective awareness and lucid dreams are important concepts that are capable of making a contribution to consciousness theories. The measurements to be made for both concepts are also ultimately important in this context. That is why we expect the DRAQ could be useful for the researchers who intend to measure the dreams in multi-dimensional context, considering the reflective awareness reflecting on dreams and the lucid dreams. Finally, we propose the DRAQ as a scale with linguistic equivalence for those who will take the survey in Turkish, and also as a valid and reliable tool for those who study on dreams and its relation to the consciousness state.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

REFERENCES

1. Foulkes D. Dreaming: A Cognitive-Psychological Analysis. New Jersey: Lawrence Erlbaum Associates; 1985.
2. Domhoff GW. The content of dream: Methodologic and theoretical implications. Kryger MH, Roth T, Dement WC, editörler. Principles and Practies of Sleep Medicine içinde. 4. baskı. Philadelphia: W.B. Saunders; 2005; s. 522-534.
3. Kahan TL, LaBarge S, Levitan L, Zimbardo P. Similarities and differences between dreaming and waking cognition: an exploratory study. Conscious Cogn 1997; 6:132-147.
4. Kozmova M, Wolman RN. Self-awareness in dreaming. Dreaming 2006; 16:196-214.
5. Kondrat ME. Who is the self in self-aware: Professional self-awareness from a critical theory perspective. The University of Ohaio. Social Service Review USA December 1999; s. 451-477.
6. Lee MN. Reflective awareness in dreams following loss and trauma. Yayınlanmamış doktora tezi 2010. Edmonton, Alberta.
7. Rossi, EL. Dreams and the Growth of Personality: Expanding Awareness in Psychotherapy. 2nd Edition. New York: Brunner-Mazel; 1985.
8. Schredl M, Erlacher D. Lucid dreaming frequency and personality. Personality and Individual Differences 2004; 37:1463-1473.
9. Gackenbach J. Frameworks for understanding lucid dreaming: A review. Dreaming 1991; 1:109-128.
10. Green C, McCreery C. Lucid Dreaming: The Paradox of Consciousness During Sleep. New York: Routledge; 1994.
11. Windt JM, Noreika W. How to integrate dreaming into a general theory of consciousness – a critical review of existing positions and suggestions for future research. Conscious Cogn 2011; 20:1091-1107.
12. Lee MN, Kuiken D, Czupryn J. Reflective awareness in impactful dreams and dream induced changes. IASD Konferansı 2007. Sonoma, CA.
13. Lee MN. Reflective Awareness in Dreams Following Loss and Trauma. Yayınlanmamış doktora tezi, Edmonton, Alberta, 2010.
14. Şencan H. Sosyal ve Davranışsal Ölçümlerde Güvenilirlik ve Geçerlik. Ankara: Seçkin; 2005.
15. Büyüköztürk, Ş. Veri Analizi El Kitabı. Ankara: Pegem A Yayıncılık; 2004.
16. Pallant J. SPSS Survival Manual. Buckingham: Open University Press; 2003.
17. Büyüköztürk Ş. Faktör Analizi: Temel Kavramlar ve Ölçek Geliştirmede Kullanımı. Kuram ve Uygulamada Eğitim Yönetimi 2002; 32:470-483.
18. Tabachnick BG, Fidell, LS. Using Multivariate Statistics. Boston: Allyn & Bacon; 2001.
19. Tavşancıl E. Tutumların Ölçülmesi ve SPSS ile Veri Analizi. Ankara: Nobel; 2002.