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RESEARCH ARTICLE / ARAŞTIRMA YAZISI

Turkish Adaptation, Validity and Reliability Study of the State Impostor Phenomenon Scale

Durumluk Sahtecilik Olgusu Ölçeğinin Türkçeye Uyarlanması, Geçerlik ve Güvenirlik Çalışması

Cemaliye Direktör[1], Zihniye Okray[2]

Abstract:

The purpose of the study was to adapt State Impostor Phenomenon Scale (SIPS) by Fujie into Turkish and study the validity and reliability of the adapted scale. Two different sample groups were studied for the reliability and validity of the scale. The first group in which explanatory factor analysis and Cronbach Alpha coefficient were examined consisted of 287 people with the mean age 23.84+5.32. The level of fit of the factor structure obtained by confirmatory factor analysis was examined. Accordingly, data were collected from a second group of 101 people with the mean age of this group was determined as 23.49+3.82. Results showed that State Imposter Phenomenon Scale has a stable factor structure and reliable measure in investigation of state impostor phenomenon in Turkish language.

Keywords: impostor phenomenon, scale, state, adaptation

[1]Assist. Prof., European University of Lefke, Faculty of Arts and Science, Psychology Department, Gemikonağı-TRNC, cdirektor@eul.edu.tr, Orcid; 0000-0002-2249-4908
[2]Prof., European University of Lefke, Faculty of Arts and Science, Psychology Department, Gemikonağı-TRNC, zokray@eul.edu.tr, Orcid; 0000-0002-9117-4991
Address of Correspondence/Yazışma Adresi: European University Of Lefke, Psychology Department, Gemikonağı,TRNC, Mersin 10 Turkey, 99728.E-mail: cdirektor@eul.edu.tr
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Öz:

Bu çalışmanın amacı Fujie tarafından geliştirilen Durumluk Sahtecilik Ölçeğini Türkçe'ye uyarlamak, uyarlanan ölçeğin geçerlik ve güvenirlik çalışmasını yapmaktır. Ölçeğin geçerlik ve güvenirliği için iki farklı örneklem grubu ile çaılışmıştır. Açımlayıcı faktör analizi ve iç tutarlılık analizi için oluşturulan 287 kişilik ilk örneklem grubunun yaş ortalaması 23.84+5.32'dir. Doğrulayıcı faktör analizi ile elde edilen faktör yapısının uyum düzeyi incelenmiştir. 101 katılımcıdan oluşan ikinci örneklem grubunun yaş ortalaması 23.49+3.82 olarak belirlenmiştir. Sonuçlar Durumluk Sahtecilik Olgusu Ölçeği'nin Türkçe'de istikrarlı bir faktör yapısına ve güvenilirlik katsayısına sahip olduğunu göstermiştir.

Anahtar Kelimeler: sahtecilik olgusu, ölçek, durumluk, uyarlama

Introduction

Impostor phenomenon (Impostor Syndrome) entered the literature as a phenomenon first described by Clance and Imes (1978). Clance and Imes defined the phenomenon of impostor as an internalized experience of being an impostor, especially by successful women. These women do not believe that their success is the result of their talents, thinking that they do not deserve the success they have achieved, that they have achieved it as a result of luck, personal charm or a mistake. These women experience intense anxiety that one day they will be discovered to be impostors. Harvey and Katz (1985) found that the impostor phenomenon is seen not only among successful women, but also in ordinary men and women. Harvey and Katz stated that many individuals feel that they are impostors about their appearance, social skills, family, and social roles. Subsequent studies on the impostor phenomenon found that there was no gender difference in the phenomenon of impostor (Chae, Piedmont, Estadt, & Wicks, 1995; Fried-Buchalter, 1997; Sonnak & Towell, 2001; Castoro, Jones, & Mirsalimi, 2004).

Clance (1985) stated that the cycle he named Impostor Cycle is the biggest problem faced by individuals who experience the impostor phenomenon. The Impostor cycle increases the level of intense anxiety, suspicion of abilities and anxiety of the individual who is faced with a new task. This fear, worry, and anxiety causes either procrastination or over-preparation. They often succeed in this new role and receive the praise and recognition they deserve. This causes short-term happiness and relaxation. After the relaxation period, their opinions about being impostors reappear and are reinforced. This cycle is repeated with a new task encountered.

With the introduction of the impostor phenomenon into the literature, the Impostor Phenomenon Scale developed by Harvey and Katz (1985), The Impostor Test developed by Clance (1985), and the Perceived Fraudulence Scale developed by Kolligian and Stenberg (1991) used in foreign publications (Leary, Patton, Orlando, & Wagoner Funk , 2000). In the Turkish literature, while there is no scale developed to measure the phenomenon of impostor, there are adapted scales. One of them is the Impostor Scale, which was developed by Leary et al. (2000) and adapted into Turkish by Akın, Yalnız, Akın & Özçelik (2015). The other is the State Impostor Case Scale, which was developed by Fujie (2010) and pre-studied by Buran, Balkır & Okray (2019).

All scales developed so far are scales devised independently of sentences expressing certain situations. Harvey and Katz (1985) argued that the phenomenon of impostor develops depending on certain situations and that these special-specific situations cause or increase the phenomenon of impostor. In this case, it is important for the Impostor Case to develop the state impostor scale, which focuses on special-specific situations, not typical features such as personality or life events. Fujie (2010) developed the State Impostor Phenomenon Scale to measure the state impostor phenomenon. The aim of this study is to adapt the State Impostor Phenomenon Scale, which was pre-validated by Buran et al. (2019), into Turkish, and to conduct a validity and reliability study.

Methods

Before the scale's adaptation to Turkish and validity and reliability studies were carried out, Fujie, who developed the scale, was contacted and necessary permissions were obtained. The English form of the scale was translated into Turkish by 2 psychologists who are fluent in English, then it was back-translated into English by an English department lecturer, and the consistency between the two forms was examined. The scale, which was translated into Turkish, was then examined by Turkish Language and Literature instructors in terms of Turkish Language and necessary corrections were made for grammar and word usage.

For the purpose of the preliminary evaluation of this first form, a validity and reliability study was conducted with a group of 372 students by the students of the Psychology PhD Program (Buran et al., 2019). In this first study, the scale exhibited a two-factor structure that defined 53.42% of the variance. The Cronbach α internal consistency coefficient of the dimension called Subjective Inadequacy of the scale was calculated as 0.815, and the Cronbach α internal consistency coefficient of the second dimension called the Impostor to Others was calculated as 0.765. The findings obtained in this preliminary study are similar to the original study by Fujie (2010). Fujie stated that the Cronbach α internal consistency coefficient was 0.86 for the Impostor to Others sub-dimension and 0.80 for the Subjective Inadequacy sub-dimension.

Sample Groups

Considering the pandemic process, research data were collected on a web basis. Informed Consent Form, demographic information and scale were shared from the social media accounts of the researchers via Google Form, and volunteer participants who read and accepted the consent form and filled out the scale were included in the study. In the study, two different sample groups were studied for the reliability and validity of the scale. The first

group in which explanatory factor analysis and Cronbach Alpha coefficient were examined consisted of 287 people, 191 of whom were female (66.6%) and 96 were male (33.4%). The mean age of the first group of participants was 23.84+5.32. The level of fit of the factor structure obtained by confirmatory factor analysis was examined. Accordingly, data were collected from a second group. The second sample group of the study consisted of 101 people, 58 (57.4%) female and 43 (42.6%) male. The mean age of this group was determined as 23.49+3.82, similar to the other group.

Evaluation Tools

State Impostor Case Scale: The scale was developed by Fujie (2010) to measure the situational factors in the impostor phenomenon. The scale, which is a five-point Likert type rating scale, consists of 12 items. There is no reverse scored item in the scale. The scores of the scale vary between 12-60. While a total score can be obtained from the scale, evaluation can be made on both dimensions. Two dimensions of the scale were named as Subjective Inadequacy and Impostor to Others. Fujie stated that the Cronbach α internal consistency coefficient was calculated as 0.86 for the entire scale, 0.86 for the Impostor to Others sub-dimension, and 0.80 for the Subjective Inadequacy sub-dimension.

Impostor Scale: The Turkish adaptation, validity and reliability study of the scale developed by Leary et al. (2000) was performed by Akın et al. (2015). The Impostor Scale is a one-dimensional scale consisting of 7 items. The scores of the scale, which is a five-point Likert-lip rating scale, range from 7 to 35. The Cronbach α internal consistency coefficient of the scale was calculated as 0.87.

Statistical Evaluation

The data obtained within the scope of the research were evaluated with SPSS 26 package program and AMOS 21 package program software. For the reliability analysis of the scale, the scale total score and the Cronbach α internal consistency coefficients for its sub-dimensions were calculated.

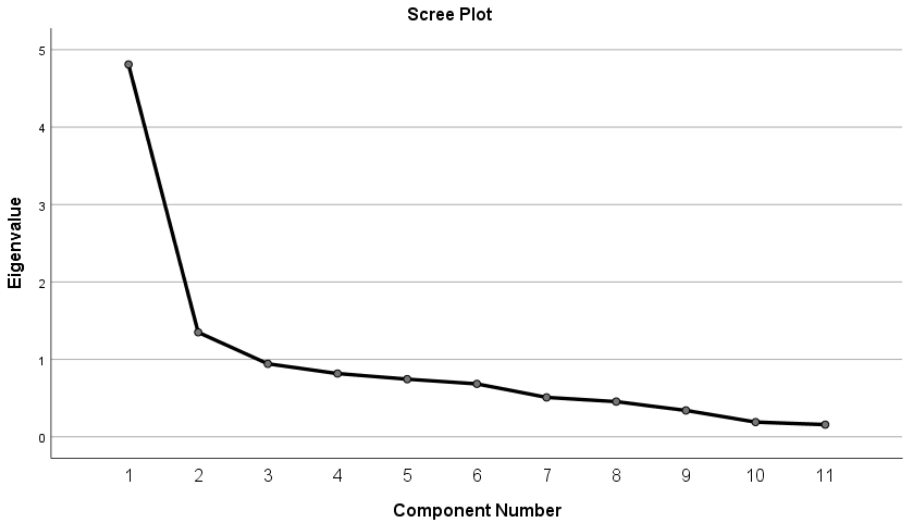
Confirmatory and explanatory factor analyzes were performed to reveal the construct validity of the scale. In addition, the correlation coefficient with the Fraud Scale was evaluated in terms of co-validity. For explanatory factor analysis, factors with an eigen-value above 1 were taken into consideration. The explanatory structure of the scale was compared with the dimensions of the original scale. With confirmatory factor analysis, the fit to the model and the stability of the data were evaluated. Principal component analysis was used in all factor analyses. Since the original form of the scale had a two-factor structure, varimax rotation analysis was taken into account.

Results

In order to evaluate whether the data set is suitable for factor analysis, the Kaiser Meyer Olkin value was examined. Büyüköztürk (2010) suggests that the KMO value should be greater than .500 and significant ($p < .05$). When the data set was examined, the KMO value was found to be .822 and the Barlett sphericity test $\chi 2 = 1439.823$ ($df = 55$) $p < .001$. Accordingly, it was decided that the data were suitable for factor analysis.

Principal component analysis and varimax rotation method were used in factor analysis. When factor analysis was examined, it was observed that the scale had a two-factor structure. It supports the factor structure obtained in Scree Plot (Figure 1).

Figure 1. Scree Plot.



When the cumulative value is examined, it can be said that the scale measures the state impostor concept at a rate of 55.997% (Table 1). The first factor explains 43.728% of the variance and the second factor explains 12.269%. There are 5 items in the first factor and 6 items in the second factor.

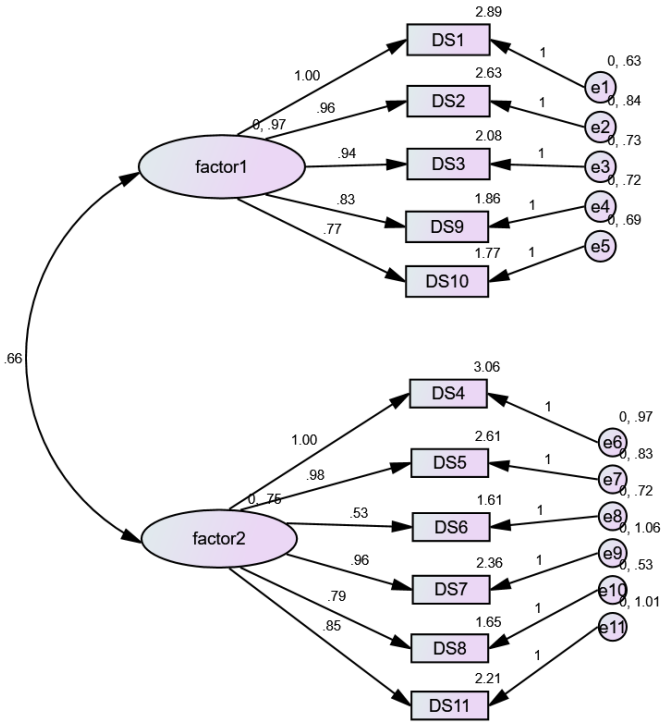
Table 1. Explanatory Factor Analysis Pattern Matrix.

Factor 1		Factor load
1		.730
2		.805
3		.800
9		.616
10		.728
α=.713	Variance=%43.73	
Factor 2		Factor load
4		.555
5		.449
6		.552
7		.859
8		.606
11		.856
α=.701	Variance =%12.27	

Confirmatory Factor Analysis

In order to confirm the two-factor structure obtained by exploratory factor analysis, Confirmatory Factor Analysis was performed in the second sample (Figure 2) The fact that $\chi 2/df < 5$ in the Chi-Square statistics made in Confirmatory Factor Analysis indicates an acceptable fit (Wheaton, et.al., 1977). Similarly, a value of less than 3 is recommended as a good fit, and a value of less than 2 as a perfect fit (Kelloway, 1998)..

Figure 2. First level CFA with standardized results.



In our model, CMIN ($\chi 2$) = 102,832 (p = .000), CMIN/df ($\chi 2/df$) = 2.39 < 3, CFI = .858. The closer the CFI is to 1, the better the scale is interpreted. In addition, results were found as GFI = .861, IFI = .862, NFI = .784, TLI = .819, and RMSEA = .089 (Table 2). Byrne (2016) indicates that GFI value above .80 is acceptable for Goodness of Fit Index. Also in Turkish literature Özdemir et al. (2020) accepted GFI as .80, CFI .88, RMSEA .089 as good fit.

Table 2. Confirmatory Factor Analysis Results of Impostor Scale.

	χ^2	χ^2/df	CFI	GFI	IFI	RFI	NFI	RMSEA
CFA	102.832	2.39	.858	.861	.862	.724	.784	.089

Criterion-Related Validity

When the findings regarding the Criterion-related validity were examined, it was observed that there was a moderately significant relationship ($r = .544$, $p < .001$) between the total scores of the Impostor Scale and the total scores of the State Impostor Case Scale.

Reliability

The Cronbach Alpha value was used to analyze the reliability of the State Impostor Scale. Accordingly, the Cronbach Alpha value was found to be .868 for the first sample and .875 for the second sample. When the split half reliability was examined, it was observed that it was .833 for the first group and .823 for the second group. The Cronbach Alpha value of the first factor was determined as .844 and the second factor as .789. At this point, the results obtained for reliability show that the scale is reliable.

Discussion

After Harvey and Katz explained the concept of Impostor, tools to measure the concept of Impostor were needed. The scales developed to date have been devised independently of the sentences expressing certain situations. Accordingly, it is argued that special-specific situations in impostor scales reveal the impostor phenomenon. This focuses on specific situations rather than typical features such as personality or life events. The State Impostor Scale developed by Fujie (2010) as a scale focusing on special-specific situations was prepared as 20 items, but it was reduced to 12 items as a result of the factor analysis. In this study, it is aimed to adapt Fujie's State Impostor Scale to Turkish. The original form of the State Impostor Scale has a two-factor structure. In this study, similar to the original form, it was found that there were two factors: Subjective Inadequacy and Impostor Against Others. With the confirmatory factor analysis, it was determined that the two-factor structure of the scale was valid. The two-factor structure of the scale is in good fit.

The internal consistency coefficient of the State Impostor Scale was found to be .87 for the total score in the first sample and .88 for the second sample. It was observed that the result obtained was similar to the original form. Fujie (2010) also reported that the internal consistency coefficient was .86. In addition, sub-dimensions were found to be similar between the Turkish form and the original form. The internal consistency coefficient for the Turkish form was .84 for the Subjective Competence sub-dimension, and .79 for the Impostor Against Others sub-dimension. It is stated that for the original form of the scale, .80 for the first factor and .86 for the second factor. It was determined that the Turkish version of the scale was valid and reliable. It has been observed that it is a scale that can be used in the field of research and practice.

Declarations

Ethics Approval and Consent to Participate

This study was review and approved by the European University of Lefke- Scientific Research and Publication Ethics Committee. Inform consent was obtained from all participants included in the study.

Consent for Publication

Not applicable

Availability of Data and Materials

Not applicable.

Competing Interests

The author declares that no competing interests in this manuscript.

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Authors' Contributions

CD and ZO carried out the proposal of the main idea of the research. ZO contributed to collection of data, and CD carried out the data analysis. CD and ZO contributed to writing and revision of the article content. All authors have read and approved the final article.

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