

*Original Article / Araştırma Makalesi*

**ADAPTATION OF THE DECISIONAL BALANCE SCALE FOR SEXUAL  
ABSTINENCE AND THE SELF-EFFICACY SCALE FOR SEXUAL ABSTINENCE  
TO TURKISH: A VALIDITY AND RELIABILITY STUDY**

**Cinsellikten Kaçınma Karar Dengesi Ölçeği ve Cinsellikten Kaçınma Öz Yeterlilik  
Ölçeğinin Türkçe Uyarlaması: Geçerlik ve Güvenirlik Çalışması**

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**ABSTRACT**

The aim of this study is to make Turkish adaptation and psychometric analysis of the Decisional Balance Scale for Sexual Abstinence (DBSSA) and Self-Efficacy Scale for Sexual Abstinence (SESSA) developed in line with the Transtheoretical Model (TTM). DBSSA and SESSA were administered to total of 482 students, and 50 students were retested two weeks later. The validity of the scale was evaluated by; factor analysis, content and construct validity analysis while reliability was evaluated by internal consistency and test-retest. While content validity of scale was evaluated by receiving opinions from 12 experts, internal consistency, item analysis and test-retest results were evaluated via Cronbach alpha reliability coefficient and Pearson correlation analysis, respectively. The DBSSA content validity index was found as 0.97 and the SESSA content validity index was found as 1, and it was determined that there was a consensus among experts. Cronbach alpha reliability coefficient was found to be; 0,61 for pros/internal, 0,77 for pros/external, and 0,76 for cons among DBSSA subscales, while 0,88 for the SESSA. The test-retest reliability correlation was 0,70 for pros/internal, 0,70 for pros/external, and 0,80 for cons while 0,85 for SESSA. DBSSA and SESSA were found to be suitable, valid and reliable for Turkish culture.

**Keywords:** Sexual Abstinence, Sexuality, Reliability, Validity

**ÖZ**

Bu çalışmanın amacı Transteoretik Model (TTM) doğrultusunda geliştirilmiş Cinsellikten Kaçınma Karar Dengesi Ölçeği (CK-KDÖ) ve Cinsellikten Kaçınma Öz Yeterlilik Ölçeği'nin (CK-ÖYÖ) Türkçe uyarlamasını ve psikometrik analizlerini yapmaktır. CK-KDÖ ve CK-ÖYÖ'leri toplam 482 öğrenciye uygulanıp iki hafta sonra 50 öğrenciye tekrar test yapıldı. Ölçeğin geçerliği; faktör analizi, kapsam ve yapı geçerliği analizleri ile değerlendirilirken, güvenirliliği ise iç tutarlılık ve test-tekrar test yöntemleri ile değerlendirildi. Ölçeğin kapsam geçerliği 12 uzmanın görüşü alınarak değerlendirilirken, iç tutarlılığı, madde analizi ve test-tekrar test sonuçları sırası ile Cronbach alfa güvenirlilik katsayısı ve Pearson korelasyon analizi ile değerlendirildi. CK-KDÖ kapsam geçerliği indeksi 0,97 ve CK-ÖYÖ kapsam geçerliği indeksi 1 bulundu, ve uzmanlar arası görüş birliği olduğu belirlendi. Cronbach alfa güvenirlilik katsayısı; CK-KDÖ alt boyutlarından içsel yarar algısı için 0,61, dışsal yarar algısı için 0,77 ve zarar algısı için 0,76; CK-ÖYÖ için ise 0,88 bulundu. Test-tekrar test güvenirlilik korelasyonu; içsel yarar algısı için 0,70, dışsal yarar algısı için 0,70 ve zarar algısı için 0,80; CK-ÖYÖ için ise 0,85 bulundu. CK-KDÖ ve CK-ÖYÖ Türk kültürü için uygun, geçerli ve güvenilir bulundu.

**Anahtar kelimeler:** Cinsellik, Cinsellikten Kaçınma, Geçerlik, Güvenirlilik

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## INTRODUCTION

Early and unconscious sexual intercourse, sexually transmitted diseases (STD), HIV/AIDS, and unwanted pregnancies lead to unhealthy abortions. So, this is considered an important public health problem as it affects maternal and child health negatively (N. Adhikari, S. Adhikari & Sulemanec, 2018; McCarraher et al., 2018). The youth period, when sexual behaviors begin to take shape, is a special period in which the adult lifestyle is determined. Adolescents and young are the most important risk groups for risky sexual behavior (Wolfe, Jaffe, & Crooks, 2008). According to the United States Disease Prevention and Control Center (CDC), it has been reported that in 2013, 56% of new gonorrhea cases and 67% of new chlamydia cases were constituted by adolescents, while 26% of new AIDS cases were seen among the individuals aged of 13-24 (CDC, 2013). Tokuç et al. reported that the number of new HIV cases increased 2.5 folds (14.695 cases) in our country in the period of 2012-2016. Besides, the mean age of diagnosed people is gradually decreasing (Tokuç, Berberoğlu, Saraçoğlu, & Çelikkalp, 2011).

Nowadays, as the age of marriage increases, the possibility of having sexual intercourse before marriage is getting higher. According to the Guttmacher Institute, 68% of adolescents in the United States and 72% in France by age 20 have had pre-marital sex. Besides, this rate is 43% in sub-Saharan Africa and 20% in Latin America (ICF, 2015). Studies have reported that the age of sexual activity is decreasing in our country and young people are at risk due to wrong sexual attitudes (Akın & Özvarış, 2003; Ateş, Karahan, & Erbaydar, 2005; Korkmaz et al., 2008; D. M. Siyez & E. Siyez, 2007; Tandoğan & Oskay, 2019; Topkaya & Sümer, 2010).

In the literature, it is stated that sexual abstinence is important to prevent unwanted pregnancies and sexually transmitted diseases, and should be included in health education programs (Avert, 2014; Gürsoy & Gençalp, 2010; McKay & Bissell, 2010; Underhill, Montgomery, & Operario, 2007; UNESCO, 2013). It is necessary to evaluate the factors that affect risky behavior and to make interventions against these factors for behavior change programs to be successful. The decisional balance including pros and cons and self-efficacy, are two important concepts that affect the sexual abstinence of individuals. There are no valid and reliable data collection tools to evaluate the factors affecting sexual abstinence in Turkish literature. The Decisional Balance Scale (DBSSA) and Self-Efficacy Scales (SESSA) for sexual abstinence scales, developed by Hulton using the Transtheoretical Model (TTM), are valid and reliable tools (Hulton, 2001).

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The scales of DBSSA and SESSA are originally in English and the aim of this study study is to make Turkish adaptation and psychometric analysis.

## **MATERIAL AND METHOD**

This research, in methodological type, was conducted in October 2019-2020 in a foundation and a state university in Istanbul. The students in Health Services Vocational School constituted the population of the study. 482 students who agreed to participate the study were included without sample selection. Adaptation and validation studies for a scale are generally advised to be conducted with 10 folds of a sample population when the number of items in the scale are considered and at least 300 people have to be evaluated for confirmatory factor analysis (CFA) (Hair, Black, Babin, Anderson, & Tatham 2010; Sousa & Rojjanasrirat, 2011). The sample size meets the number as suggested in the literature.

50 students with the characteristics of the sample group were retested two weeks after the first data collection to evaluate the invariant with respect to time. The DBSSA and SESSA, which were developed by Hulton in line with TTM, were used as data collection tools (Hulton, 2001).

### **Instrumentation**

#### **Personal Information Form**

This form, which was created by the researcher using demographic information and the sexual health section of the CDC (Centers of Disease Control and Prevention) Risky Health Behavior questionnaire, consists of 7 items. In form; In order to ensure the confidentiality of the answers, there are questions about the participant's code, age, marital status, place of residence, sexual identity and sexual behavior.

#### **Decisional Balance Scale for Sexual Abstinence (DBSSA)**

The scale measures the benefit (pros) and harm (cons) perceptions of sexual abstinence. 17 questions in total, the pros consists of 10 items as internal (6 items) and external (4 items), and the cons consists of 7 items. The scale was rated with 5-point Likert in the range of strongly agree (1 point) and strongly disagree (5 points). High pros scores indicate that the individual has an attitude that supports sexual abstinence while high cons scores do not support. The Cronbach's alpha reliability coefficient of the original scale was 0.82 for DBSSA the pros/internal, 0.80 for DBSSA the pros/external, and 0.88 for DBSSA the cons (Hulton, 2001).

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## Self-Efficacy Scale for Sexual Abstinence (SESSA)

The scale includes 6 questions that evaluate individuals' self-efficacy sexual abstinence. The questions were rated with a 5-point Likert ranging between I'm not sure (1 point) and I'm very sure (5 points). While scores obtained from the scale range between 6-30, high scores indicate high SESSA. Cronbach's alpha reliability coefficient was found 0.91 in the original study (Hulton, 2001).

**Language Equivalency-Cultural Adaptation and Content Validity:** The original language of the scales was English and the Turkish form was created by translating the scale into Turkish by two independent linguists who are competent in their field. The Turkish form created was translated back into English by two different linguists. Finally, an independent third linguist determined the most suitable one for the items in the scale and created an English form. Original language and Turkish items were examined by a group of 12 experts in the fields of obstetrics and women's health and public health, in terms of the appropriateness of the translation and content validity. Experts who were consulted for content validity, were asked to evaluate the suitability and comprehensibility of each item in the scale by scoring between 1-4. Experts were asked to choose one of the responses "not suitable (1)", "the item needs to be tailored (2)", "suitable but needs minor change (3)" or "very suitable (4)" for each item. The scale, which was arranged in line with the recommendations of the experts (Esin, 2014), was presented to Hulton for approval (Çapık, Gözüm, & Aksayan, 2018; Jesus & Valente, 2016).

## Data Analysis

The data were evaluated by using SPSS 26 (Statistical Package for Social Sciences Inc, IL, USA). In addition, the package programs of LISREL 8.80 (Scientific Software International [SSI]) was used for DBSSA and MPLUS 8.10 was used for SESSA, respectively. Content and construct validity analysis to evaluate the validity of the scales was performed, while internal consistency, and test-retest analysis for reliability. The content validity index was evaluated for content validity.

Construct validity was analyzed by CFA. In the first stage, CFA assumptions were reviewed and the extent to which the theoretical model explained the relationship in the data set was tested. At the last stage, an analysis of alternative models was made. Chi-square ( $\chi^2$ ), degrees of freedom (DOF), standardized root mean square residual (SRMR), comparative fit index (CFI), root mean square error of approximation (RMSEA) and, concordance/discordance coefficients were evaluated. Since item scores are ordered variables and do not have a normal

distribution, CFA was performed for DBSSA, and the SESSA scales by DWLS (diagonally weighted least square) estimation method and scale WLSMV (weighted the least square mean and variance adjusted estimators) estimation method, respectively. The degree to which the items had univariate normal distribution properties was examined by calculating their skewness and kurtosis coefficients. The relationship between the items was randomly analyzed by drawing a binary scatter plot.

Since the item was removed from the theoretical model of the DBSSA scale, the two models that were no longer nested were compared with the AIC criteria. In addition, the power of the test, which was examined with the NIESEM program developed by MacCallum et al., was 1.00 for 482 people (MacCallum, Browne, & Sugawara, 1996).

Reliability was evaluated by internal consistency and test-retest. "Cronbach's alpha reliability coefficient" was used to evaluate internal consistency. In the evaluation of the Cronbach's alpha coefficient, it was stated that 0.50 and below showed low reliability, 0.50-0.70 medium reliability, 0.70 -0.90 high reliability, and 0.90 and above excellent reliability (Hinton, McMurray, & Brownlow, 2014).

Pearson correlation analysis were utilized to evaluate the relationship between test-retest scores.

## RESULTS

### Sociodemographic Results

The mean age of the students was  $20.63 \pm 2.07$  and 53.1% were female, 46.9% were male and 66.6% were living with their families. 51.0% of the students were not sexually active and 88.0% of them had heterosexual preferences (Table 1).

**Table 1.** Socio-Demographic Information of Students

Variables	Min.- Max.	M±Sd
Age	18- 34	20.63±2.07
	n	%
<b>Gender</b>		
Female	256	53.1
Male	226	46.9
<b>Who do you live with?</b>		
Family	321	66.6
Student House	79	16.4
Dormitory	77	16.0
Other	5	1.0
<b>Sexual Preference</b>		
I do not want to answer	22	4.6
Heterosexual	424	88.0
Gay/ Lesbian	7	1.5

<b>Bisexual</b>	2	0.4
<b>Other</b>	11	2.3
<b>Not sure</b>	16	3.3
<b>Sexual Activity</b>		
<b>I do not want to answer</b>	62	12.9
<b>Yes</b>	174	36.1
<b>No</b>	246	51.0
<b>Total</b>	482	100.0

**Sd:** Standard deviation, **Min:** Minimum, **Max:** Maximum, **M:** Mean

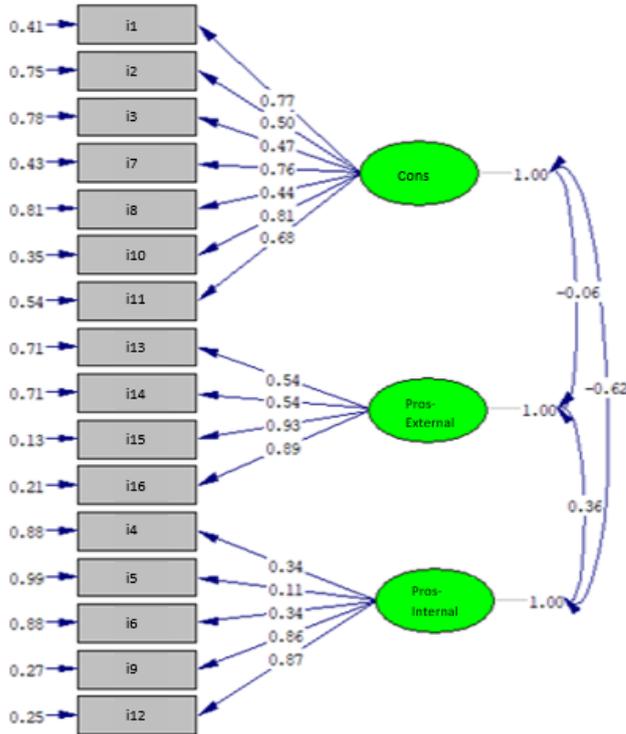
## Results Related to Validity

The content validity index of DBSSA was found to be 0.97. The relationship between the data obtained from the Turkish form of DBSSA was examined by CFA. First, the overall concordance and discordance coefficients of the theoretical three-factor model were given. Later, the item "Having sex before marriage is against my personal standard of what is right and wrong", which has a low factor load in the DBSSA Pros/internal, was removed from the analysis, and an alternative model (Model 2) was defined. In addition, two alternative (competing) models, one with unrelated factors and the other with one factor, were tested, and the results were shown as 3rd and 4th models in the table (Table 2). Model 2 with the smaller AIC coefficient was the model that best explained the relationship in the data set. The factor-loads of items for this model (2) are given in Figure 1.

**Table 2.** Overall Concordance/Discordance Coefficients Obtained Result of CFA of DBSSA

Model	Satorra-Bentler $\chi^2$	sd	$\frac{\chi^2}{sd}$	<i>p</i>	CFI	RMSEA (%90)	SRMR	AIC	$\Delta\chi^2_{sd}$
1. Theoretical	199.07	116	1.72	.00	.94	.07(.05- .09)	.11	273.07	
<b>2. Alternative (-i17)</b>	<b>164.55</b>	<b>101</b>	<b>1.63</b>	<b>.00</b>	<b>.95</b>	<b>.06(.05 - .08)</b>	<b>.10</b>	<b>234.55</b>	
3. 3 unrelated factor	230.33	119	1.94	.00	.92	.08(.07 -.10)	.16	298.33	65.78 <sub>(8)</sub>
4. One factor	506.54	104	4.87	.00	.69	.16(.15-.18)	.16	272.00	341.99 <sub>(3)</sub>

**Note.** **AIC** = Akaike information criterion; **SRMR** = standardized root mean square residual; **CFI** = comparative fit index; **RMSEA** = root mean square error of approximation.



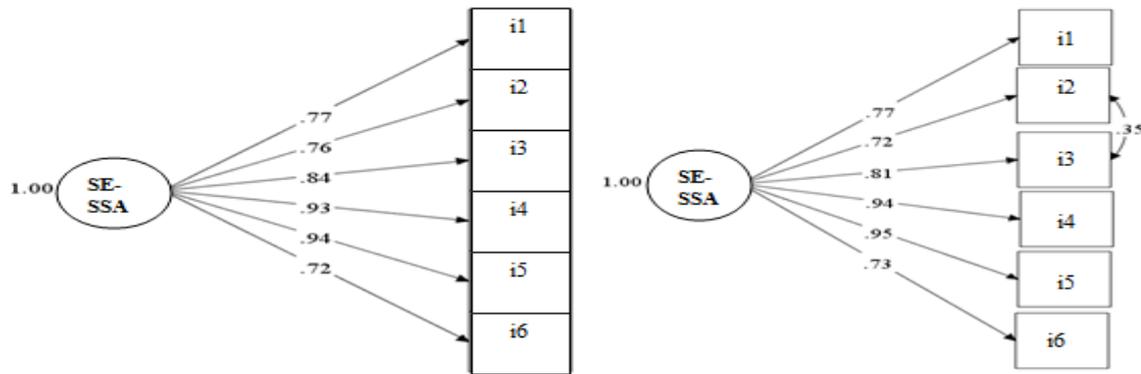
**Figure 1.** Item-Factor Loads

The content validity index of the SESSA was found to be 1. The results of the CFA performed to examine the relationship between the data obtained from the Turkish form of SESSA are given in Table 4. The overall concordance coefficients of the theoretical model were found to be  $\chi^2_9 = 62.71$ ,  $p = .00$ , CFI = 1.00; RMSEA .11 and SRMR .02. It was observed that there was an additional relationship between i2 and i3 beyond what was explained by the model when the residual values were examined. When this error covariance is added to the model, the overall concordance coefficients are  $\chi^2_8 = 17.78$ ,  $p = .00$ , CFI = 1.00; RMSEA was .05 - 90% CI: .02 with .08 and SRMR was .01 (Table 3). The factor loads of the alternative model were found between .72 and .95 (Figure 2).

**Table 3.** Overall Concordance/Discordance Coefficients Obtained Result of CFA of SESSA

Model	$\chi^2$	sd	$\frac{\chi^2}{sd}$	$p$	CFI	RMSEA (% 90)	SRMR
1. Theoretical	62.71	9	6.96	.00	1.00	.11(.09 - .14)	.02
2. Alternative (i2 ↔ i3)	17.78	8	2.22	.00	1.00	.05(.02 - .08)	.01

**Note.** SRMR = standardized root mean square residual; CFI = comparative fit index; RMSEA = root mean square error of approximation.  $\chi^2$ ; Chi-square



**Figure 2:** Item- Factor Loads model 1 on the left, model 2 on the right

### Results on Item Analysis and Reliability

As a result of the data obtained from the 482 participants, the Cronbach's alpha reliability coefficient of DBSSA was 0.61 for DBSSA pros/internal, 0.77 for DBSSA pros/external, and 0.76 for DBSSA cons. Test-retest reliability correlation was 0.70 for DBSSA pros/internal, 0.70 for DBSSA pros/external, and 0.80 for DBSSA cons. The Cronbach alpha reliability coefficient of SESSA was 0.80 and the test-retest reliability correlation was 0.85.

When the DBSSA factor scores of the students were examined, the mean score of the DBSSA pros/internal was  $12.57 \pm 3.99$ , mean score of the DBSSA pros/external was  $10.14 \pm 4.08$ , mean score of the DBSSA cons was  $25.46 \pm 5.38$  while the mean the score of SESSA was found to be  $24.84 \pm 5.93$ . It was determined that the mean score of the SESSA was the highest as  $4.14 \pm 0.99$  when examined at the item level (min=1, max=5) (Table 4).

**Table 4.** Reliability Analysis and Descriptive Statistical Values of DBSSA and SESSA (n=472)

Factor (min- max)	Mean	Sd	Adjusted Mean (1-5)	Sd	Test - Retest	Cronbach's alpha
<b>DBSSA</b>						
DBSSA Pros/internal (5-25)	12.57	3.99	2.51	0.80	.70	.61
DBSSA Pros/external (4-20)	10.14	4.08	2.54	1.02	.70	.77
DBSSA Cons (9-35)	25.46	5.38	3.64	0.77	.80	.76
<b>SESSA (6-30)</b>	24.84	5.93	4.14	.99	.85	.80

**Sd:** Standard deviation

### DISCUSSION

In this study, it can be stated that the Turkish version of the DBSSA had; 4 items measuring DBSSA pros/internal, 5 items measuring the DBSSA pros/external, and 7 items measuring the DBSSA cons, while the Turkish version of the SESSA had six items and a single

factor. It can be concluded that the DBSSA and SESSA for sexual abstinence are valid and reliable tools that can be used to examine sexual abstinence behaviors in young people.

**Discussion Related to Validity** is the degree of serving the purpose of a measurement tool. (Aksayan & Gözüm, 2002; Büyüköztürk, Kılıç, Akgün, Karadeniz, & Demirel, 2013; Eser & Baydur, 2007).

**Content Validity** is the degree to which the scale and each item in the scale represents or conforms to the structure to be measured (Yaghmaie, 2003). In order to evaluate the content validity, it is recommended to get an opinion from experts who are well-versed in the research subject and the methods of preparing scale items. It is stated that the opinions of at least 3 and at most 20 experts should be obtained and the Content Validity Index (CVI) should be calculated, according the literature (Esin, 2014). Experts evaluate, to what extent the items in the scale measure the desired behaviors in terms of clarity, understandability, and cultural appropriateness. The scale is rearranged in line with expert recommendations (Büyüköztürk et al., 2013; Şencan, 2005). For the CVI, it states that 80% of the scale items should get a score of 3 and above (Grant & Davis, 1997). In this research, it was determined that the mean scores given by the 12 consulted experts were between 3.43- 4 for DBSSA and 3.83-4 for SESSA. The CVI was found to be 0.97 for DBSSA and 1 for SESSA, showing that the expressions in the scale are appropriate for our culture and represent the structure to be measured. In addition, it is recommended to obtain approval from the expert who developed the scale, after back translation in the literature (Çapık et al., 2018; Jesus & Valente, 2016). The scale was arranged with the approval from Hulton after the back translation (Hulton, 2001).

**Construct Validity** shows that the items in the scale can measure a single concept or a few concepts, and it presents this situation numerically. Construct validity studies are performed by examining the factors measured by the measuring tool or by determining the relationship of the measuring tool whose validity is investigated with other scales and measures (Aksayan & Gözüm, 2003). CFA, one of the validity methods, is used in scale development and adaptation of an improved scale to another community (Çokluk, Şekercioğlu, & Büyüköztürk, 2012). According to the CFA results, overall concordance coefficients of the theoretical model of the **DBSSA** were found as  $\chi^2_{116} = 199.07$ ,  $p = .00$ , CFI = .94; RMSEA .07, and SRMR .11. Hair et al., reported that if the number of items is between 12 and 30 and the number of people is >250, the value of  $\chi^2$  is expected to be statistically significant (Hair et al., 2010). However, it has been stated that if the CFI is greater than .92, RMSEA is less than .07 and SRMR is less than .08, the general concordance coefficients of the model can be considered

as sufficient. Accordingly, it can be asserted that the theoretical model explains the correlations between items sufficiently. The SRMR is the mean of the difference between the observed and the covariance matrices produced by the model, indicating that the model cannot explain some relationship. However, the suitability of the model with the available data is examined according to the overall concordance coefficients, parameter importance tests, direction, and size of the parameter coefficients. In addition to most of overall concordance coefficients, other indicators were thought to be sufficient and item-factor relationship related to the theoretical model were examined. Kline states that the standardized regression weights should be considered large if they are more than .50, medium if they are around .30, and low if they are below .10 (Kline, 2015). Accordingly, the standardized regression weight regarding the i17 item ("Having sex before marriage is against my personal standard of what is right and wrong") included in the pros/internal is zero. The item with a factor load of zero was excluded from the analysis, an alternative model was defined, and the two models that were no longer nested were compared with the AIC criteria since the item was removed. It was concluded that the alternative model with a smaller AIC coefficient explains the data better when compared to the theoretical model. In addition, Browne and Cudeck stated that the model selection approach is comprehensive and a set of theoretically reasonable models can be proposed (Browne & Cudeck, 1993). The overall concordance coefficients of unrelated three-factor and single-factor models (3 and 4) made for DBSSA were found to be lower than model 2. Based on the results, it is accepted that the theoretical Model (2) without i17 has the best explanation of the relationship in the data set.

CFA evaluates the adequacy of the relationship between the items that make up a factor and the factor, and factor loads should be  $>0.40$  (Aksayan & Gözüm, 2002). In our study (Model 2), the factor loads of the items were found to be sufficient as  $<0.40$ , except for one item in pros/internal.

The CFA results of the Turkish version of the **SESSA** showed that it was compatible with 6 items in the original structure of the scale (Hulton, 2001). Overall concordance coefficient for the theoretical model were found as  $\chi^2_9 = 62.71$ ,  $p = .00$ , CFI= 1.00; RMSEA .11 and SRMR .02. The fact that the RMSEA is greater than .07 indicates that the relationship between some items in the model is not adequately explained by the model. When the residual values are examined, it is observed that there is an additional relationship between i2 and i3 beyond that explained by the model. When this error covariance was added to the model, the overall concordance coefficients were found to be  $\chi^2_9 = 17.78$ ,  $p = .00$ , CFI= 1.00; RMSEA .05 ve SRMR

.01. Factor loadings were determined to be between .72 and .94. Hair et al. stated that if the number of items is less than 12 and the number of people is greater than 250, the value  $\chi^2$  is statistically insignificant. Then, they state that if the CFI is greater than .97 and the RMSEA is less than .07 (SRMR may be biased), the accuracy of the model can be taken as evidence (Hair et al., 2010). In this context, besides the overall concordance coefficients of the alternative model, importance tests of the parameters (such as factor load), the direction and magnitude of the parameter coefficients were considered to be sufficient.

**Reliability** is that all items in a measurement tool measure the desired property and give consistent and stable results when re-measured (Aksayan & Gözüm, 2002; Ercan & Kan, 2004; Eser & Baydur, 2007; Özgüven, 2000). Internal consistency is the determination of the reliability showing the compatibility of the items in the scale. The Cronbach alpha coefficient is usually used to determine the internal consistency reliability. (Şencan, 2005). The alpha coefficient of the scales shows low reliability when 0.50 and below, medium reliability between 0.50 and 0.70, high reliability between 0.70 and 0.90, and excellent reliability at 0.90 and above (Hinton et al., 2014). The Cronbach alpha value of SESSA was found to be 0.91 in the original study. In this study, the Cronbach alpha reliability coefficient was found as 0.88 which means high-reliability level.

The Cronbach's alpha value of DBSSA in the original study was 0.82 for the DBSSA pros/internal, 0.80 for the DBSSA pros/external, and 0.88 for the DBSSA cons. In this study, the DBSSA pros/internal was 0.61, DBSSA pros/external was 0.77, and the DBSSA cons was 0.76. Except for the DBSSA pros/internal, the findings were close to the alpha coefficient of the original scale and were at a good level. The Cronbach's alpha value of pros/internal was found to be lower and medium reliability compared to the original study. Based on the literature, as the number of questions in the scale increases, reliability increases (Kline, 2013). The low number of questions in the pros/internal, which consists of four questions, and the young group with a mean age of  $20.63 \pm 2.07$  may be the reason for this result.

Test-retest reliability are repeated measurements for the measuring tool to give consistent results and to show stability over time. It is stated that there should be a minimum of 2 and a maximum of 4 weeks between two measurements (Aksayan & Gözüm, 2003) and should be performed with at least 100 people, in the literature (Kline, 2013). The test-retest correlation coefficient is recommended to be  $\geq 0.40$  (Streiner, Norman, & Cairney, 2015). No retest correlations were made in the original study.

In this study, the test-retest reliability coefficients performed two weeks later from the first data collection with 50 people were as .80 for the DBSSA cons, .70 for the DBSSA pros/internal, and .70 for the DBSSA pros/external while it was high-level as .85 for the SESSA.

## CONCLUSION

As a result, the Turkish form of the DBSSA and SESSA which was developed by Hulton and original language of which is English, was found to be at a good level of validity and reliability for university students. CFA results performed to evaluate the construct validity DBSSA and SESSA confirmed the original factor structure in the literature. It was determined that DBSSA and SESSA are consistent scales that can provide similar measurement values in repeated measurements. According to these results, the Turkish form of DBSSA and SESSA can be used.

## Restrictions of the Study

The main limitation of the study is that it is limited to university students studying at a foundation and a state university.

## Ethics Committee Approval

Permission was obtained from Linda Jane Hutton via e-mail, in order to use the scale. Approval was obtained from the Ethics Committee of Marmara University (20.06.2019-143). Institutional permission was obtained for the application of scales and questionnaires in Universities.

## Reviewer Evaluation

## Authorship Contributions

Concept of the study; Ö. K., A. E. Design: Ö. K., A. E., Data collection or processing: Ö. K., A. B., Analysis or interpretation: A. B., Ö. K., A. E., Literature review: Ö. K., written by: Ö. K., A. E. contributed to the writing of the article. The authors declared no conflict of interest and no financial support was received for the study.

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