Validity and Reliability of the Turkish Version of the Acceptance of Cosmetic Surgery Scale (ACSS)

Kozmetik Cerrahiyi Kabul Ölçeği'nin (KCKÖ) Türkçe Çeviriminin Geçerlik ve Güvenirliği

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SUMMARY

Objectives: Because cosmetic/aesthetic surgery has increased dramatically worldwide, it is necessary to evaluate the reasons and psychosocial situation of the persons proposing to undergo this surgery before any surgical intervention. The aims of the current study were to examine the validity and reliability of the Acceptance of Cosmetic Surgery Scale (ACSS) among Turkish persons.

Methods: This methodological study was conducted with 584 participants. Content and construct validity studies were carried out to test the validity of the scale. The construct validity was analyzed with confirmatory factor analysis (CFA). For the scale's reliability, the techniques of internal consistency and consistency over time were used.

Results: The Turkish adaptation of the ACSS was found to be valid, exhibiting a content validity index in the range of 0.80–1 on the item level, and 0.90 at the scale level. The scale displayed a three-factor structure. The total Cronbach's alpha coefficient for the scale was 0.92; the Cronbach's alpha coefficient for Factor 1 (Interpersonal) was 0.81; and 0.86 for Factor 2 (Social). The Cronbach alpha coefficient for Factor 3 (Consider) was 0.90.

Conclusion: The ACSS is a valid and reliable tool that can be used in assessing acceptance of cosmetic surgery.

Keywords: Cosmetic/aesthetics surgery; reliability; scale translation; validity.

ÖZET

Amaç: *Tüm dünyada kozmetik/estetik cerrahiye başvurular dramatik bir biçimde artmaktadır ve her tür müdahaleden önce bireylerin başvuru nedenlerinin ve psikososyal durumlarının değerlendirilmesi gereklidir. Bu çalışmanın amacı Kozmetik Cerrahiyi Kabul Ölçeğinin (KCKÖ) Türkçe'ye uyarlanması ve faktör yapısının değerlendirilmesidir.*

Gereç ve Yöntem: *Metodolojik tipte olan bu çalışma, 584 katılımcı ile yürütülmüştür KCKÖ'nün geçerlik çalışmaları için kapsam ve yapı geçerliliği (doğrulayıcı faktör analizi), güvenirliği için ise iç tutarlılık ve zamana göre değişmezlik tekniği kullanılmıştır.*

Bulgular: *Kozmetik Cerrahiyi Kabul Ölçeği'nin Türkçe için geçerli olduğu, madde düzeyinde kapsam geçerliliği indexinin.80 ile 1 aralığında, ölçek düzeyinde ise.90 olduğu bulunmuştur. Ölçek orjinali ile tutarlı olarak üç faktörlü bir yapı göstermiştir. Ölçeğin toplam iç tutarlılık katsayısının Cronbach alfa .92 olduğu; bu değerin Faktör 1 (Kişilerarası) için .81, Faktör 2 (Sosyal) için .86 ve Faktör 3 (Düşünceler) için .90 olduğu belirlenmiştir.*

Sonuç: *Kozmetik Cerrahiyi Kabul Ölçeği'nin kozmetik/estetik cerrahinin kabulü için kullanılabilecek geçerli ve güvenilir bir araç olduğu söylenebilir.*

Anahtar sözcükler: *Kozmetik/estetik cerrahi; güvenirlik; ölçek uyarlama, geçerlilik.*

Introduction

In the last decade, the popularity of cosmetic surgery has continued to grow. People, young and old, women and men of various socioeconomic backgrounds lie on the operating table willingly, hoping to improve their appearance.[1,2] Despite the popularity of cosmetic surgery, however, the number of studies that examine who is interested in cosmetic surgery, and for what reasons, is quite limited.[3]

In addition to societal factors, such as the increasing importance of physical appearance in contemporary western culture, the social acceptance of cosmetic surgery procedures, the media's interest in exhibiting first-hand positive results of cosmetic surgery[4] and the support it gives to cosmetic trends,[5,6] individual factors such as a negative perception of body image, the extreme level of investments spent on appearance, and powerful materialistic values[7–9] also increase the interest in cosmetic surgery.[5,7,9] Other motivating forces that propel individuals into seeking cosmetic surgery are the desire to develop self-confidence, self-respect and increase social interaction by improving one's outward appearance.[4]

A study conducted by Frederick, Lever, and Peplau (2007) found that women had more of an interest in cosmetic surgery than men and that overweight individuals who were not happy with their weight had more of an interest in liposuction, a cosmetic surgery technique for fat removal.[3] The same study determined that persons who are extremely

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devoted to their outer appearance are more interested in cosmetic surgery than those who are lesser fixated on their appearance. Didie and Sarwer (2003) reported that the decision to have a breast modeling operation was influenced by intrapsychic, interpersonal, informational, medical, and economic factors.[10]

Anxiety, depression, low self-esteem, a negative body image or feeling ashamed of one's body, dissatisfaction with one's appearance, problems in interpersonal relations are factors that lead individuals into developing an interest in cosmetic surgery; these factors also have an impact on their satisfaction following the surgery.[4] What is expected from the cosmetic surgery is not only an improvement in physical appearance, but also to ensure an improvement in the psychosocial aspects of one's life. Some of the expectations following surgery include better psychological wellbeing, increased self-confidence, and increased quality of life.[11,12] These optimistic expectations may affect the satisfaction individuals eventually accrue from the results of surgery.[13] Based on the Hart (2010) study, the incidence of emotional disorders related to aesthetic surgical procedures has been found to be 47.7% in Japan, whereas in France, one study has reported that 50% of patients take various psychopharmacological agents, particularly antidepressants (27%), before surgery.[14] Clinical research exploring patient satisfaction has shown that there are patients who are happy with their new appearance after cosmetic surgery but also those that are not.[4]

In this context, health care professionals have started to focus their attention on persons turning to cosmetic surgery to determine the motivation involved in their decision.[12] Attitudes toward cosmetic surgery among the general population, the change in these attitudes with time, and related factors are subjects that have been treated in only a limited number of studies.[1,15] Persons who have unrealistic expectations of cosmetic/aesthetic surgery are often unsatisfied with the outcome regardless of the technical success of the surgery. Doing a thorough psychosocial evaluation prior to the operation is beneficial in taking the necessary precautions, i.e., reduction of psychological difficulties and increasing patient satisfaction, leading to a successful surgical intervention for the suitable patient. The first step of this evaluation is; to determine the reasons leading the patient to cosmetic/aesthetic surgery[16] The ACSS scale evaluates the reasons for application to aesthetic surgery in three sub-dimensions: the consider, interpersonal, and social dimensions.

In a study conducted with auxiliary healthcare professionals in Turkey, researchers found that when these personnel were asked their thoughts about aesthetic surgery, 92% of the group considered undergoing this type of surgery normal, 8% said this type of operation was unnecessary, but the same group said 16% "yes" to question "is the aesthetic surgery a sin". The same study reported that 20% of the group considered aesthetic and reconstructive patients a different case and showed less interest in cosmetic patients. When the reasons for this were explored, a large majority (94%) said that they felt sad about patients who would be going through reconstructive surgery and that they would like to be of more help to them. Another group (6%) expressed the view that plastic surgery was unnecessary, and for that reason this group said they did not show patients of this kind the same interest and care.[17] The results of this study suggest that healthcare professionals in Turkey may be prejudiced against patients who choose to have elective cosmetic surgery.

The psychosocial needs of cosmetic surgery patients have not been fully explored, and exactly who should be making such a psychosocial evaluation is still uncertain.[16] Guner (2011) reported in a study on plastic surgery nurses, 41% of nurses stated that they have the primary responsibility for carrying out the preoperative evaluation of a patient. The same study also asserts that 34% of nurses believe that the responsibility lies with plastic surgeons, whereas 25% say this task is the duty of the psychiatric department.[16] In a research study conducted with plastic surgeons, Borah, Rankin and Wey (1999) report that 75.8% of surgeons believe in the importance of preoperative screening.[18] Two-thirds of the nurses in the same study stated that they play a primary role in using preoperative screening tests, taking the patient's psychiatric history, and providing healthcare in terms of the patient's psychological condition. The valid and reliable tools used in assessing patients' surgical motivations can be used in psychosocial evaluations as well. It is considered that psychiatric nurses may psychosocially assess patients before surgery using valid and reliable measurement tools. It is for this reason that the aim of the present study was to make ACSS available for use in the Turkish language.

Henderson-King and Henderson-King (2005) developed the acceptance of cosmetic surgery scale in the USA.[1] Swami (2010) conducted research in the Malay community,[19] and Swami, Hwang, and Jung[13] worked with a sample of university students in Korea and then with an adult sample in Brazil[20] to test this scale for validity and reliability. Stefanile et al. (2014) worked with a sample of woman in Italian,[21] and Farshidfar et al. (2013) tested this scale for validity and reliability in an Iranian sample.[22]

The objective of the present work was to review the validity and reliability of the Turkish version of the ACSS.

There is also a lack of tools to evaluate the acceptance of cosmetic surgery scale (ACSS) in the Turkish language. Psychiatric nurse and other health professionals will find it useful to employ the ACSS to assess cosmetic surgery motivations and causes in Turkish people.

Materials and Method

The research was of methodological design. A group of 372 university students and 212 academicians enrolled in the Department of Education at a state university. These students, who had not had any cosmetic surgery, had no communication impediments, and had participated in the research voluntarily, were recruited into the study, yielding a final sample of 584 participants. The validity and reliability of ACSS was done with adult and undergraduate students in Henderson-King's (2005) study. For this reason, the authors of the present study, similarly selected university students and academicians.

Although there is no clear data available on scale adaptation, it has been reported that reliability increases as the number of participants increase. Sencan (2005) refers to Comrey and Lee's definition of sample size as n=50, very weak; n=100, weak; n=200, average; n=300, good; n=500, very good; and n=1000, excellent. In addition to the sample size, it is reported that the sample size should be large enough to have at least five respondents for each variable.[23]

Data Collection Instruments

The researchers collected the study data using the information form that they had prepared; it consisted of the respondents' sociodemographic characteristics in combination with the ACSS.

Acceptance of Cosmetic Surgery Scale (ACSS)

The ACSS, developed by Henderson-King and Henderson-King (2005), is a 15-item scale that determines individuals' attitudes toward cosmetic surgery. The permission of the authors of the scale was enlisted for the validity and reliability studies to be carried out on the Turkish version of the scale. The ACSS is a 7-item Likert-type of scale, ranging from 1 (I completely disagree) to 7 (I completely agree); the scale is scored in all three sub-scales and in terms of the scores on the total scale. The score range on the ACSS is 15 to 105. The higher scores on the sub-scales and on the total scale indicate more of a positive attitude toward cosmetic surgery. The sub-scales of the scale consist of the Interpersonal dimension (items 1, 2, 4, 5, and 14), the Social dimension (items 9, 11, 12, 13, and 15) and the dimension of Consider (items 3, 6, 7, 8, and 10). The interpersonal sub-scale measures personal assessments of individuals about their own appearances, factors that serve as motivation for cosmetic surgery. The social sub-scale ascertains attitudes that lead individuals to look positively on cosmetic surgery because they think they will feel better in social relations and social environments. The dimension of Consider assesses individuals' views on cosmetic surgery in terms of whether they would consider having this procedure. In Henderson-King's study, the internal consistency of the scale was reported to be high (Cronbach's alpha was between 0.91 and 0.93). The scale provides a means of assessment in both its sub-scales; based on the total scores on the entire scale and the higher the scores, the more the individual is considered likely to accept cosmetic surgery.[1]

Translation

The techniques of both a group translation and the back-translation method were used in the linguistic adaptation of the scale. For the group translation, five native speakers of Turkish who had learned English as a second language were asked to translate the scale from English into Turkish. The researchers assessed the translators and made revisions on the items of the scale. After an independent expert performed the back-translation into English, the scale was sent to Henderson-King for an opinion, and the result was that the back-translation was found to be appropriate.

Analyses

Content and construct validity studies were carried out to test the validity of the scale. For the scale's reliability, the techniques of internal consistency and consistency over time were used. The demographic data of the research were analyzed with descriptive statistical ;;analysis, the content validity was analyzed with the content validity index, construct validity was analyzed with confirmatory factor analysis (CFA); internal consistency was assessed with the Cronbach's alpha test; and Pearson's correlation test was used to evaluate the test-retest. The re-test was a re-application 4 weeks after the first measurement.

For the confirmatory factor analysis, chi-square statistics and other fit indices, including the goodness-of fit index (GFI), the adjusted goodness-of-fit index (AGFI), the non-normed fit index (NNFI), the comparative fit index (CFI), the standardized root mean residual (SRMR), and the root mean square error of approximation (RMSEA) were used. Significance was set at $p<0.05$, with the confidence interval estimated to be at the 95% level.

To assess content validity, the translated scale was shown to specialists in their field for their opinions: two plastic surgeons, one psychiatrist, two psychologists, a consultation-liaison psychiatric nurse, a surgical nurse, a public health nurse, and two psychiatric nurses. The specialists were asked to rate the scale from 1 to 4 based on how they thought it measured acceptance of cosmetic surgery. In this assessment, suitability to the subject was scored on a basis of 1, "It is not related to the subject"; 2, "It needs a lot of revision"; 3, "It is related to the subject but it needs a little revision"; 4, "It is related to the subject."

Content validity was calculated both at the item level (CVI-I) and at the scale level (CVI-S). CVI-I for each item was determined by dividing the number of specialists who

Table 1. Model fit indices of the Turkish version of the Acceptance of Cosmetic Surgery Scale

Model fit indices	Value
x^2	218.43
p	<0.001
df	75
x^2/df	2.91
Root Mean Square Error of Approximation (RMSEA)	0.057
Standardized Root Mean Residual (SRMR)	0.036
Comparative Fit Index (CFI)	0.99
Non-Normed Fit Index (NNFI)	0.99
Goodness-of fit Index (GFI)	0.95
Adjusted Goodness-of-fit Index	0.92

rated the scale as 3 or 4 by the total number of specialists. CVI-S on the item level was determined by adding the CVIs and dividing this by the number of items in the scale.

The statistical analyses were assessed using the Statistical Package for Social Sciences, Version 17 for Windows and the Lisrel 8.8 Edition.

Ethical Considerations

The permission of the author of the scale was obtained to carry out the study. The written consent was obtained from the institution where the study was conducted. Volunteerism was the basis for the sample and the informed consent of all participants was obtained.

Results

The participants were of the 18–59 age group; their mean ages were 26.55±9.43, and 58.2% (n=340) were women.

Content Validity: The evaluations of the specialists resulted in the finding that the content validity index of the ACSS on the item level was between 0.80–1, and 0.90 on the scale level.

Construct Validity: Confirmatory Factor Analysis was performed using the technique of Maximum Likelihood Estimation to test the validity of the factor structure determined with EFA. The appropriateness of the CFA model was evaluated with the most widely used model fit indices of RMSEA (Root Mean Square Error of Approximation), CFI (Comparative Fit Index), the Non-Normed Fit Index (NNFI), Goodness-of-Fit Index (GFI), and the Adjusted Goodness-of-Fit Index.

The model fit indices related to the model found with Confirmatory Factor Analysis are given in Table 1. Although the model was not found to be significant (chi-square=218.43, df=75, p<0.001), other model fit indices indicated that RMSEA<0.07 and X^2/df <3, meaning that the data acceptably fit the model. SRMR<0.05 and the CFI, NNFI, GFI, AGFI indices were close to 1, thus exhibiting a good fit. When the model fit indices are evaluated in combination, it showed that the CFA model was generally a good fit for the ACSS.

The relationships between the subscales of the ACSA reveal that there is a positive and significant relationship between the Interpersonal and Social (r=0.70; t=27.49; se=0.03) and Consider (r=0.79; t=36.79, se=0.02) dimensions. Simi-

Table 2. Item Total Score Correlations and Cronbach's Alpha of the ACSS

Factors	Items	Item total score correlation	Cronbach's Alpha
Interpersonal	1. It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look.	0.74	0.81
	2. Cosmetic surgery is a good thing because it can help people feel better about themselves.	0.76	
	4. People who are very unhappy with their physical appearance should consider cosmetic surgery as one option.	0.70	
	5. If cosmetic surgery can make someone happier with the way they look, then they should try it.	0.68	
	14. Cosmetic surgery can be a big benefit to people's self-image.	0.68	
Social	9. I would seriously consider having cosmetic surgery if my partner thought it was a good idea.	0.78	0.86
	11. I would think about having cosmetic surgery to keep looking young.	0.66	
	12. If it would benefit my career, I would think about having plastic surgery.	0.76	
	13. I would seriously consider having cosmetic surgery if I thought my partner would find me more attractive.	0.74	
	15. If a simple cosmetic surgery procedure would make me more attractive to others, I would think about trying it.	0.77	
Consider	3. In the future, I could end up having some type of cosmetic surgery.	0.79	0.90
	6. If I could have a surgical procedure done for free I would consider trying cosmetic surgery.	0.77	
	7. If I knew there would be no negative side effect or pain, I would like to try cosmetic surgery.	0.81	
	8. I have sometimes thought about having cosmetic surgery.	0.78	
	10. I would never have any kind of plastic surgery (R).	0.60	
ACSS total			0 .92

ACSS: Acceptance of Cosmetic Surgery Scale.

larly, a positive and significant relationship was found between the Social and Consider subscales (r=0.84; t=55.79, se=0.02).

Reliability: Item analysis: The item-total correlations of the ACSS were found to be between 0.60 and 0.81 (Table 2).

Internal consistency: The total Cronbach alpha coefficient for the scale was found to be 0.92; the Cronbach alpha coefficient for Factor 1 (Interpersonal) was 0.81, and for Factor 2, (Social), 0.86. The Cronbach's alpha coefficient for Factor 3 (Consider) was 0.90 (Table 2).

Consistency over time: The test-retest correlation value for the ACSS was found to be 98.

Discussion

Because the specialists who offered their expertise to the translation of the scale suggested that the word "cosmetic" was used more in Turkish to mean non-invasive small procedures (such as Botox injections) and that the word "aesthetic" was understood to refer to the operations people went through to change their appearance with their own free will, it was decided to name the scale the "Acceptance of Aesthetic Surgery Scale."

It can be said that the item-total correlations of the ACSS evidenced "very good" discrimination.

The ACSS exhibited a three-factor structure, which was consistent with the original form. In the validity and reliability study of Swami et al. (2011) conducted in Brazil with an adult population,[20] the scale exhibited a three-factor structure, true to its original form. In another study by Stefanile, Nerini, and Matera (2013), the scale showed a three-factor structure.[21] Swami, Hwang, and Jung (2012) found a two-factor structure in the validity-reliability study that they conducted with university students in North Korea.[13] Swami (2010) similarly found a two-factor structure in the Malay community.[19] In addition, the Iranian version of the ACSS presented a two-factor structure.[22] It may be suggested that the differences in the study results may reflect the cultural differences among populations.

The results of the content validity analysis showed that the statements in the scale were suitable for the Turkish culture and represented an acceptance of cosmetic surgery.

When the internal consistency coefficients for the ACSS are examined as a group, it can be seen the there is a "very high" level of consistency in the sub-scales.

The strong correlation between the test-retest values of the ACSS points to the scale's consistency over time.

Conclusions

With this study, the adaptation of the ACSS for the Turk-ish language has produced an instrument that shows internal consistency, good comprehensibility, and validity; it is an adequate and useful instrument for the evaluation of acceptance of cosmetic surgery among the present study sample. Health professionals will find it useful to employ the ACSS in assessing cosmetic surgery motivations and causes in the Turkish population. Thus, its use can be recommended in clinical settings and future outcome studies in Turkish samples. It may be suggested that ACSS be used in new studies addressing body image, self-esteem, expectation from surgical intervention, and its outcomes. In addition, future research should also assess whether the acceptance of cosmetic surgery is changing over time.

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