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### Research Article

## Adapting the Smoking Expectancy Scale for Adolescents (SESA) to Turkish Culture

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### Abstract

Different researchers have tried examining the results of expectations that affect people's starting and continuing to smoke. These expectations can differ in terms of being a smoker, non-smoker, or ex-smoker. These expectations are also associated with age. So many scales have been developed in order to study the expectations of adults, youngsters, adolescents, and children about smoking. This study aims to adapt the Smoking Expectancy Scale for Adolescents (SESA) to Turkish culture. This scale has been adapted by basing itself on a study conducted over 720 university-level students with an average age of 17.5. The confirmatory factor analysis carried out in the investigation determined the SESA to have a 6-factor structure in Turkish. These factors are: affect control and boredom reduction, health costs and addiction, appearance-presentation costs, weight control, social benefits, and social costs. Additionally, the two dimensions of the scale, like the original scale, are seen as expected benefits and expected costs. As a result of the study, the scale is stated to have the quality of being able to measure adolescents' expectations about smoking in terms of psychometric properties.

### Keywords

Smoking • Expectancy • Adolescents • Adaptation • Scale

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The smoking rate among youths between 15 and 24 in Turkey, while measuring 25.4% in 2008, measured 18.9% in 2012. Although this is a significant decrease in the annual rate of smoking, the habit still poses health risks (Turkish Statistical Institute, 2012). Within this context, one of the crucial aspects is that smoking as a habit usually starts during adolescence (Audrain-McGovern et al., 2012). Adolescents' expectations from smoking are among the most important reasons that smoking starts (Bektaş, Öztürk, & Armstrong, 2010). Tendencies to develop smoking as a habit are stronger in the context of high expectations (Botvin, Botvin, Baker, Dusenbury, & Goldberg, 1992). These expectations that affect the tendency to smoke arise within an individual's social cognitive learning process. Such expectations relate to the effect of cognitive structures on the smoking habits of individuals in all age groups (Brandon & Baker, 1991). Inadequate and false information has a role in shaping the expectations from smoking. Many individuals objectively accept the harmful effects of smoking within a subjective evaluation system. However, their smoking behaviors differ. Comments from smokers are observed to be positive, while nonsmokers' are observed to be negative (Budd & Preston, 2001).

Expectations might become more reasonable when associated with their effects on mental health because some individuals have the belief and expectation that smoking reduces tension or increases maturity and autonomy (Cepeda-Benito & Ferrer, 2000). Expecting any benefit from smoking, especially for depressed adolescents in terms of starting smoking, is risky (Covington & Omelich, 1988). Some adolescents may consider smoking effective for overcoming some serious emotional matters or for providing social adaptation (Dalton, Sargent, Beach, Bernhardt, & Stevens, 1999).

Various scales have been developed in order to study and evaluate individuals' expectations from smoking on a cognitive basis. The number of items on these scales varies between 12 and 55. The extent to which the number of expectations about smoking differs on the scales is between two and eight. The coefficients of internal consistency for the scales' sub-dimensions are high on average, and the scales generally include items for measuring negative and positive expectations (Dols, Van Den Hout, Kindt, & Willems, 2002; Hendricks & Brandon, 2005; Hine, Honan, Marks, & Brettschneider, 2007; Turkish Statistical Institute, 2012). In addition, some of these scales' sub-scales have included items that state positive expectations to provide weight control (Dols et al., 2002; Hine, Summers, Tilleczek, & Lewko, 1997; Khwaja, Sloan, & Chung, 2007).

Certain scales have subscales that specifically emphasize the health dangers (Hine et al., 1997; Koval, Pederson, & Zhang, 2006). The difference in age ranges for the sample groups in these studies emphasizes differences in the expectations from smoking; nonsmokers as well as smokers have been included in the scales to expand the age range of the samples. Within this context, the scales are clearly concluded to have been

developed for students in different conditions, varying from high-school to university (Koval et al., 2006; Lewis-Esquerre, Rodrigue, & Kahler, 2005). However, some scales have been developed for certain groups in particular (Hine et al., 2007). Nevertheless, when examined generally, these scale studies can be suggested to have been carried out on college and university students, young adults, and adolescents in particular. Hine et al. (2007) developed a new scale, the Smoking Expectancy Scale for Adolescents (SESA) (Myers, McCarthy, MacPherson, & Brown, 2003) suggesting that the previous scales for adolescents were limited and questionable in terms of content validity. This scale was developed for smokers and non-smokers among adolescents on the basis of eight factors and examines their tendencies to smoke and subjective norms for smoking. No scales have been developed or adapted in Turkey, which has an extremely high smoking rate, for studying young adolescents' expectations from smoking.

The aim of this study is to adapt Hine et al.'s (2007) scale into Turkish culture in order to examine the smoking expectations of adolescents, who are a high-risk group in terms of smoking. The adapted scale is expected to have significant contributions for research on how people start, continue, and quit smoking.

## Method

### Participants

First-year students enrolled in different departments of the Education Faculty at Recep Tayyip Erdoğan University participated in the study. The students were selected from the departments of Primary Education Mathematics Teaching, Classroom Teaching, Social Studies Teaching, Turkish Language Teaching, and Science Teaching. Table 1 displays descriptive statistics on the gender, age, and smoking status of the study sample.

Table 1  
*Distribution of Participants by Gender, Age, and Smoking*

Variable	<i>N</i>	%
<i>Gender</i>		
Female	456	63.3
Male	264	36.7
<i>Age</i>		
17	343	47.6
18	377	52.4
<i>Smoking</i>		
Never smoked	443	61.5
Smoked once or twice	151	21.0
Occasionally smokes	67	9.3
Always smokes	38	5.3
Quit smoking	21	2.9
<i>Total</i>	720	100

Table 1 reveals that 63.3% ( $n = 456$ ) of the participants are female and 36.7% are male ( $n = 264$ ). As for age distribution, 47.6% of participants ( $n = 343$ ) are seen to be 17 and 52.4% ( $n = 377$ ) to be 18 years old. Lastly, 61.5% of participants ( $n = 443$ ) have never smoked, 21 % ( $n = 151$ ) have smoked once or twice, 9.3 % ( $n = 67$ ) occasionally smoke, 5.3 % ( $n = 38$ ) smoke regularly, and 2.9 % ( $n = 21$ ) have quit smoking. In total, 720 people participated in the survey.

## Instrument

**Smoking expectancy scale for adolescents (SESA).** The original version of SESA determined respondents' expectations from smoking under 43 items, some of which were borrowed from the scale developed by Hine, Tilleczeck, Lewko, McKenzie-Richer, and Perreault (2005) on smoking expectations. In developing the scale, semi-structured interviews were also conducted with 20 smokers and 20 non-smokers between 12 and 18 years old, as done by Bostrom, Fischhoff, and Morgan (1992). The interviewees were asked to write down everything they could think of about smoking. Then they were interviewed again with the intention of getting more detailed opinions about their expressions. The new concepts resulting from these interviews were also included in the scale. As a result of these qualitative studies, 12 conceptual categories were created about smoking expectations. These categories are: health, addiction, feelings of physical negativity, social costs, financial damages, decrease in performance, physical appearance, social benefits, weight control, negative emotion control, positive effects, and negative effects. The instrument was applied to 724 students (344 males, 377 females, and 3 undeclared) between the ages of 12 and 18 ( $M = 14.60$ ,  $SD = 1.66$ ). According to cigarette usage, the participants were seen to fall into five different categories: never smoked (64%), smoked once or twice in their lives (23%), smoke occasionally (7%), smoke daily (4%), and, lastly, quit smoking (2%).

Afterwards, a panel was convened by the researchers who had developed the scale with two other researchers. During the panel, items thought to best reflect the categories were chosen from the scale that had been developed from the interviews. The scale was graded using a 10-point rating format (0-Completely disagree to 9-Completely agree) as used on the Smoking Consequences Questionnaire developed by Copeland, Brandon, and Quinn (1995). Participants were asked to state the extent to which they agree with statements on the consequences of cigarettes by choosing from among the given values. The scale consists of 43 items, for which the respondents were given 5-10 minutes to complete. An exploratory factor analysis was performed on the obtained data, and SESA was found to consist of eight dimensions. Four of the dimensions are negative statements covered under Expected Costs: health (13, 19, 23, 43), appearance-presentation (8, 9, 10, 28), social (3, 22, 29), and addiction (1, 12, 42). The remaining four dimensions are positive statements under the heading of

Expected Benefits: social (38, 39, 40), affect control (2, 4, 17, 20), boredom reduction (18, 21, 27), and weight control (14, 15, 41). Thus, one factor was derived from four of the mentioned dimensions, resulting in two factors.

Cronbach's alpha ( $\alpha$ ) coefficients for the calculated internal consistency of the scale's reliability range from .68 to .87. For the scale's validity, the responses of 359 randomly-selected participants from the group who had provided answers to the 43 items on smoking expectations were subjected to exploratory factor analysis. The scale was found to account for a total variance of 54%. The correlation coefficients between factors ranged from -.52 to .46. As a result of exploratory factor analysis, 16 items with item loadings less than .50 were omitted from the scale, leaving 27 items in the final version of the scale. As the next step, confirmatory factor analysis was performed on these 27 items over the responses of 358 participants who had been left out of the previous exploratory analysis. According to confirmatory analysis, the best goodness-of-fit values were found to be in the eight- and two-factor models. The goodness-of-fit values for the eight-factor model were found to be  $\chi^2/df = 1.82$ ,  $CFI = .943$ ,  $RMSEA = .048$ , and  $SRMR = .044$ . For the two-factor model, the obtained goodness-of-fit values were  $\chi^2/df = 2.01$ ,  $CFI = .925$ ,  $RMSEA = .053$ , and  $SRMR = .070$ .

Internal consistency coefficients for the scale were calculated from the responses of the two different groups. The internal consistency coefficients calculated for group from the exploratory factor analysis for the eight-factor structure of the scale is as follows: control effects = .86, social benefits = .84, boredom reduction = .74, weight control = .78, appearance-presentation costs = .82, health costs = .86, social costs = .69, and addiction = .76. As for the group employed in confirmatory factor analysis, the internal consistency coefficients were found as: affect control = .88, social benefits = .86, boredom reduction = .71, weight control = .70, appearance-presentation costs = .82, health costs = .88, social costs = .68, and addiction = .71. For the group-applied exploratory factor analysis for the scale's two-factor structure, internal consistency coefficients were calculated as expected costs = .89 and expected benefits = .86. On the other hand, confirmatory factor analysis yielded the following internal consistency coefficients: expected costs = .88 and expected benefits = .86.

This study uses the final version of the original twenty seven-item scale for adaptation into Turkish. Validity and reliability analyses were conducted over this framework with results presented in the findings.

**Personal information form.** A personal information form was developed by the researchers in order to obtain certain demographics about the participants. This form includes such variables as gender and age, smoking status, mother's smoking status, and father's smoking status (1, never smoked; 2, rarely smokes; 3, quit smoking; 4, sometimes smokes; 5, always smokes).

## Procedure

The authors first obtained permission by e-mail from the developers of the SESA (Hine et al., 2007) to adapt it for Turkish culture. The scale's name in Turkish has been determined as the Ergenlerin Sigaradan Beklentileri Ölçeği (ESBÖ). The scale was translated in the scope of the study into Turkish culture in accordance with the opinions of foreign language experts after making various corrections. The participants were given 15 minutes to fill the approved scale form. In addition, as the scale would be applied again in a month, the participants were asked to state their name, surname, or alias with the guarantee that this information would only be used for the research and kept private. After these explanations, the research was performed with voluntary students. Twenty-nine scales that had not been completely filled out or where their name, surname, or alias had not been stated were excluded from the research. The SPSS 16.0 and AMOS 18.0 software packages were used in analyzing the obtained research data. For the validity of SESA, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) were performed and correlations were made. In addition, Cronbach's alpha of internal consistency was calculated and the test-retest method used for determining the reliability of the scale.

## Findings

This section focuses on the validity and reliability analyses of SESA. Exploratory factor analysis was performed primarily to determine SESA's factor structure. The study randomly divided the data obtained from the implementation group in half, similar to the operations performed on the original scale, so as to perform EFA on one half ( $n = 360$ ) and CFA on the other half ( $n = 360$ ). Validity of the factor structure that resulted from EFA was tested through CFA. The analysis results are presented below.

### Findings Related to Validity Analysis

**Exploratory factor analysis.** In order to determine SESA's factor structure, EFA was first applied. In this context, sampling appropriateness was confirmed starting with the Kaiser-Meyer-Olkin index ( $KMO = .86$ ) and Barlett's test ( $\chi^2 = 718.00$ ,  $df = 35$ ,  $p < .001$ ). Maximum likelihood and varimax vertical rotation techniques were applied in order to determine SESA's structural validity and number of factors. The factor structure of the scale is shown in Table 2.

Table 2  
Factor Structure of SESA

Items	Factor Loadings					
	AB	HA	AP	WC	SB	SC
17. Feel less stressed	.86					
18. Feel less bored	.85					
20. Feel relaxed	.82					
2. Feel calm	.80					
4. Distract from negative feelings	.68					
21. Make life less dull	.52					
27. Help kill time	.51					
19. Hurt lungs		.78				
23. Get heart disease		.76				
28. Stain fingers and teeth		.71				
13. Seriously damage health		.64				
12. Become dependent on nicotine		.62				
43. Get lung cancer		.59				
42. Become addicted to cigarettes		.53				
1. Get hooked		.47				
8. Smell bad			.73			
9. Bad taste in the mouth			.66			
10. Bad breath			.62			
14. Control weight				.85		
15. Prevents overeating				.77		
41. Prevents weight gain				.77		
38. Fit in better with friends					.77	
39. Look more attractive					.72	
40. Increase status					.58	
3. Lose respect of friends						.74
22. Become less popular						.66
29. Feel like an outsider						.65
Factors' Explained Variances	14.82	13.60	8.53	7.70	6.63	6.19
Total Explained Variance	57.51					

AB = Affect Control and Boredom Reduction, HA = Health Costs and Addiction, AP = Appearance-Presentation Costs, WC = Weight Control, SB = Social Benefits, and SC = Social Costs

As shown in Table 2, the scale consists of six factors whose factor loadings vary from .47 to .86. The scale's variance is 57.51%. The scale's factors explanation of variance is as follows: Affect Control and Boredom Reduction: 14.82%, Health Costs and Addiction: 13.60%, Appearance-Presentation Costs: 8.53%, Weight Control: 7.70%, Social Benefits: 6.63%, and Social Costs: 6.19%.

**Confirmatory factor analysis.** The Turkish version of the scale (ESBÖ) has a six-factor structure: Affect Control and Boredom Reduction (Items 2, 4, 17, 18, 20, 21, 27), Health Costs and Addiction (Items 1, 12, 13, 19, 23, 28, 42, 43), Appearance-Presentation Costs (Items 8, 9, 10), Weight Control (Items 14, 15, 41), Social Benefits (Items 38, 39, 40), and Social Costs (Items 3, 22, 29). Just as in the original scale, however, the factors of Affect Control and Boredom Reduction, Weight Control,

and Social Benefits were found to be associated with positive expectations from smoking and grouped under the dimension of Expected Benefits. On the other hand, Health Costs and Addiction, Appearance-Presentation Costs, and Social Costs, being associated with negative expectations, were placed under the dimension of Expected Costs. Therefore, the dimensions of Health Costs and Addiction have been combined as a result of factor analysis. Likewise, Affect Control and Boredom Reduction are seen combined under one dimension. Thus in this study, each of the three dimensions have been aggregated to form a factor. After the first EFA, just like in the original study, this scale underwent factor analysis for the six-factor and two-factor structures to see whether the scale’s factors significantly explain variance in adolescents’ expectations from smoking (Figures 1 & 2). Goodness-of-Fit values appear in Table 3.

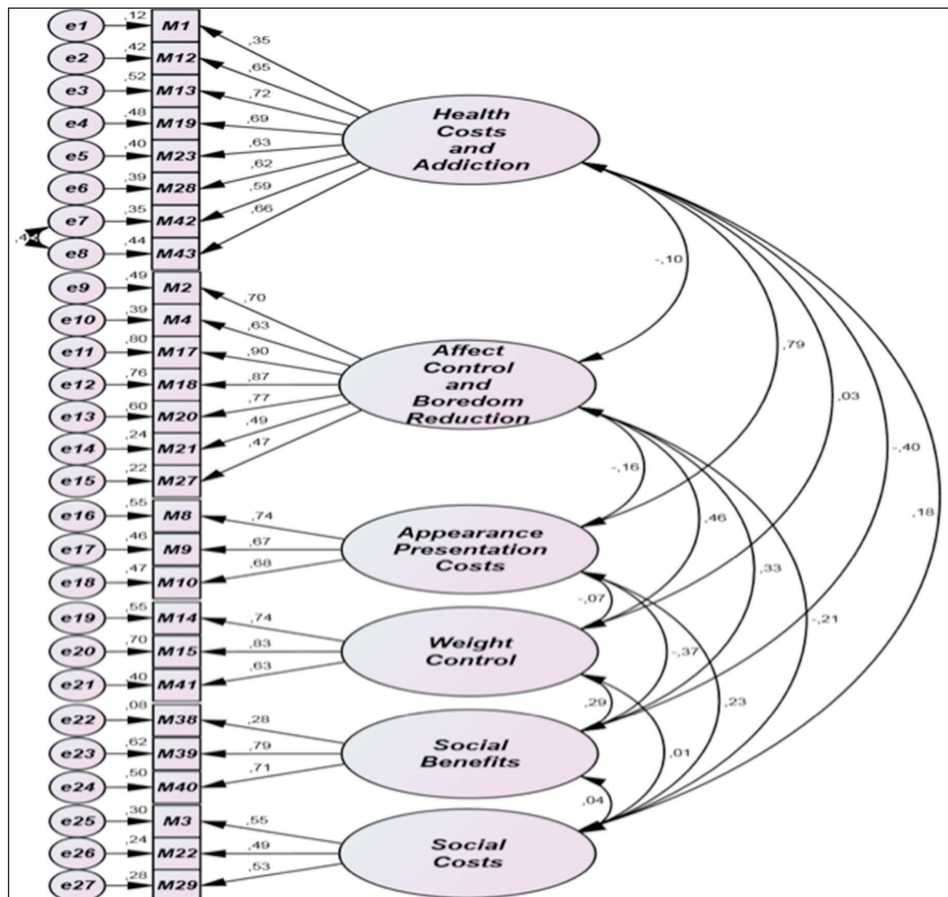


Figure 1. Confirmatory factor analysis performed on the six-factor structure.



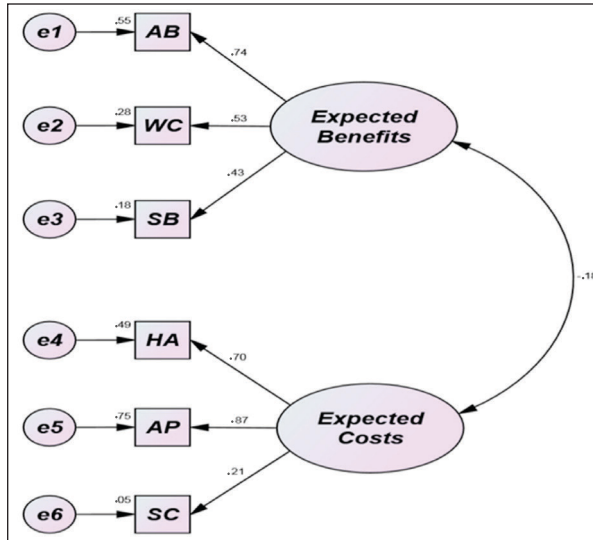


Figure 2. Confirmatory factor analysis performed on the two-factor structure.

Table 3  
Goodness-of-Fit Values Obtained from CFA Results

Factors	<i>df</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>NFI</i>	<i>TLI</i>	<i>RMSEA</i>
Six-Factor Structure	3.12	.91	.89	.91	.87	.89	.05
Affect Control and Boredom Reduction	9.68	.95	.90	.95	.94	.92	.11
Health Costs and Addiction	6.06	.96	.92	.95	.94	.93	.08
Appearance-Presentation Costs	-	1.00	-	1.00	1.00	-	-
Weight Control	-	1.00	-	1.00	1.00	-	-
Social Benefits	-	1.00	-	1.00	1.00	-	-
Social Costs	-	1.00	-	1.00	1.00	-	-
Two-Factor Structure	8.82	.97	.92	.90	.89	.82	.10
Expected Costs	5.72	.92	.89	.89	.87	.86	.08
Expected Benefits	4.16	.95	.92	.95	.93	.93	.07

Fit values obtained after CFA for the six-factor structure are:  $\chi^2 / df = 3.12$ ; *GFI* = .91; *AGFI* = .89; *CFI* = .91; *NFI* = .87; *TLI* = .89; *RMSEA* = 0.05. Fit values obtained after CFA for the two-factor structure are:  $\chi^2 / df = 8.82$ ; *GFI* = .97; *AGFI* = .92; *CFI* = .90; *NFI* = .89; *TLI* = .82; *RMSEA* = 0.10. Analysis shows the obtained goodness-of-fit values to be acceptable (Arbuckle, 2007; Brown, 2006; Hu & Bentler, 1999; Kline, 2011; Schumacker & Lomax, 1996). These results suggest the measurement instrument, just as the original, can be used in both a six- and two-dimensional structure.

**Language validity.** The reverse-translation technique was used to provide equivalence. Within this concept, the scale was translated into Turkish and then back into English by a group of five linguistic experts, each of whom has a brilliant command of both languages.

The translations were examined again by the researchers, and the most appropriate expression for each item was added to the Turkish form. This Turkish form was then translated back into English by the five foreign language experts, after which the back-translation was compared with the original scale's expressions and the necessary corrections made. The form, which was translated again into Turkish, was broached to the five academic members in terms of content validity. The scale was put into its final form using the expressions that had been made more understandable by means of feedback.

After the Turkish translation process was completed, two different applications were conducted among college students who know both languages well in order to examine the language validity. First the original form of the scale, then two weeks later the Turkish translation of the scale, were applied to 46 students of the English Language and Literature department. As a result of these applications, correlation analysis was made to determine whether the answers from the English and Turkish forms of the scale coincided. These obtained results are shown in Table 4.

Table 4  
*Relationship Between Scale Scores as Applied to Foreign Language Students for Language Validity*

Factors	AB	HA	AP	WC	SB	SC	EB	EC
6-Factor Structure								
Affect Control & Boredom Reduction	.93*							
Health Costs & Addiction		.84*						
Appearance-Presentation Costs			.61*					
Weight Control				.87*				
Social Benefits					.45*			
Social Costs						.67*		
2-Factor Structure								
Expected Benefits							.91*	
Expected Costs								.76*

\*  $p < .01$ .

AB = Affect Control & Boredom Reduction, HA = Health Costs & Addiction, AP = Appearance-Presentation Costs, WC = Weight Control, SB = Social Benefits, SC = Social Costs, EB = Expected Benefits, and EC = Expected Costs.

When examining Table 4, a positive and meaningful relationship is seen between the two forms. The correlation values between dimensions are understood to range from .61 to .93. As such, one can say the two forms are equivalent based on the data.

### Findings Related to Reliability Analysis

**Cronbach's alpha ( $\alpha$ ) of internal consistency.** Internal consistency was calculated as  $\alpha = .76$ . The internal consistency values for the six-factor scale's items are as follows: Affect Control and Boredom Reduction = .87, Health Costs and Addiction

= .82, Appearance-Presentation Costs = .75, Weight Control = .77, Social Benefits = .52, and Social Costs = .53. These values for the two-factor structure are: Expected Benefits = .85 and Expected Costs = .81.

**Test-retest method.** The test-retest method, another reliability analysis, was used to determine the reliability of the scale. The scale was re-administered to the participants after four weeks. Correlation coefficients for the six-factor structure were observed to vary from .46 for Social Benefits to .75 for Affect Control and Boredom Reduction, and for the two-factor structure from .56 for Expected Costs to .72 for Expected Benefits. In the test-retest method, if the time interval is far enough apart, some changes may occur in individuals' characteristics (Seçer, 2015; Şeker & Gençdoğan, 2014). The great difference in reliability coefficients in this study are thought to be due to the wide time gap between the two applications.

## Discussion

The aim of this study has determined to adapt the SESA to Turkish culture by applying validity and reliability studies. The conducted reliability study shows that the scale has a six- and two-factor structure. However, the original scale consists of eight and two factors (Hine et al., 2007). The factor analysis that was conducted indicates the items of Boredom Reduction and Addiction, which were each a separate factor in the original scale, to not be separate factors. The item of Boredom Reduction was observed to be used in the items of Affect Control and Health Costs. Affect Control and Boredom Reduction have similar contexts. Both dimensions emphasize the tendency to expect smoking to reduce psychological tension. Some researchers examined the expectancies of these dimensions in the same context and concluded that the expectancies of stress and boredom reduction have a relationship with tendencies to smoke (Turkish Statistical Institute, 2012). In some studies that developed scales to examine the smoking expectancy of adolescents, the dimensions of expectancy were studied in detail and categorized under two parts: positive and negative expectancies (Dols et al., 2002; Turkish Statistical Institute, 2012; Wahl, Turner, Mermelstein, & Flay, 2005). The findings here support the idea that the expectancies of Affect Control and Boredom Reduction can be examined under the same dimension. However, these factors were observed to be examined under separate dimensions (as Boredom and Negative Affection Reduction or as Boredom and Negative Affection) in some scales developed with similar goals. The two different factors that resulted from two different studies are ascertained to be reasonably related to smoking expectancies. These findings support that the items in these factors have similar indications as Affect Control (Hendricks & Brandon, 2005; Khwaja et al., 2007). In this study, the items on Health Costs and Addiction were examined under the same factor (Negative Expectancies on Smoking). Dalton et al. (1999) reported that the items of Health and Habits could be examined under the same context (Turkish Statistical Institute, 2012).

Budd and Preston (2001) examined the items of addiction under the factor of Health Costs in their scale developed over detecting the attitudes and beliefs of students on smoking (Koval et al., 2006). Hence, we have decided to examine these two dimensions under the same dimension.

This study fixes SESA with a six- and two-factor consistency. The scale developed by Wahl et al. (2005) has four factors: Taste, Weight Control, Boredom, and Negative Affection (Khwaja et al., 2007). The item of Social Expectancies, as related to smoking (Health and Addiction), were not included in their scale. Brandon and Baker (1991) developed a scale with four factors (Negative Results, Positive Reinforcements, Negative Reinforcements, & Weight Control; Dols et al., 2002). The item under Social Expectancies were not included in their study. In the scale developed by Dalton et al. (1999), the items under Weight Control were not included, and Social Expectancies only identified two items (Turkish Statistical Institute, 2012). Addiction is examined as an item under the factor of Negative Expectancies. In contrast to SESA and other scales, items under the factors of Self Confidence and Body Image were included in the scale developed by Budd and Preston (2001; Koval et al., 2006). Significant similarities exist between SESA and the scale developed by Lewis-Esquerre et al. (2005; Hendricks & Brandon, 2005), apart from consisting of seven factors. In contrast to SESA, "enjoyment" is included as a factor in that scale. Additionally, the factor of Negative Social Effects stands as another factor, whereas the factors on *Social Benefits* from expectancies scales were included in the SESA.

The total variance calculated for the adapted scale is 57.51%. Variance rates calculated by factors vary from 6.19% to 14.82%. Variance rates in the original eight-factor scale vary between 26-32% (Hine et al., 2007). Variance rates in the adapted scale are smaller compared to the original. However, variance rates in similar scales have been ascertained to vary from 6.89% to 15.08%, as well (Koval et al., 2006).

Factor analysis was applied to the adapted scale just as in the original. According to the results of these analyses, the values are similar to those from the original scale. The internal consistency coefficient calculated by the reliance study for the six-factor structure varies from .52 (Social Benefits) to .87 (Affect Control and Boredom Reduction), and for the two-factor structure from .81 (Expected Costs) to .85 (Expected Benefits). These values are close to those calculated by Wahl et al. (2005;  $\alpha = .73$ ).

In addition to the above explanations, this study has certain limitations. The first is about the generalizability of the acquired results. The individuals composing the sample of the study can be said to form a constraint regarding the representation of adolescents as a group. This situation relates to the range of the study participants in terms of age and education level: The sample group has a narrow age range and all participants are undergraduate students.

The second important limitation is that the acquired data is based on personal statements. Results and discussions have been conducted solely on the basis of the data. The psychological and physiological conditions of addiction for the smoking group were not taken into consideration. Giving place to the subjective reactions of individuals about their smoking expectations in the study may decrease the effect of this limitation.

In conclusion, this scale, which was developed in order to examine smoking expectations on a cognitive basis, has been determined to have strong psychometric properties. Scale development studies that consider the cultural attributions over different groups are thought to perhaps also be beneficial.

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