

Developing a Scale to Determine University Students' Awareness Level of Substance Use

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Abstract

The aim of this study is to develop a scale in order to determine the awareness levels of university students towards drug use. There is no scale to determine the level of awareness of university students about drug abuse in Turkey To improve scale, a pool of questions has been created primarily. The 70 questions in the question pool were sent to 20 experts in the field. In the expert opinion form developed by Lawshe, each item is given options that are appropriate, viable and not appropriate. According to expert opinions, the CVI index values of each item was calculated and the final form of the pool of questions were prepared with a draft questionnaire of 57 questions. The survey was applied to 1031 people who were students in the 2019-2020 academic year of Sivas Cumhuriyet University. As a result of the application of clarifying factor analysis during the scale development phase, a structure consisting of 5 factors and 28 substances that explain 48% of the total variance was obtained. It was observed that the model was well-matched by subsequent confirmatory factor analysis for the scale. In the study, the total Cronbach α value of the scale was found to be 0.880. This research showed that this scale, developed to determine the level of awareness of drug use among university students, is accurate and reliable and that the scale can be used in field-related studies.

Key Words: Awareness Level, Substance Abuse, Scale Development, Structural Equality Model, Lawshe Scope Validity

Üniversite Öğrencilerinin Madde Kullanımına Yönelik Farkındalık Düzeylerini Belirleyecek Ölçeğin Geliştirilmesi

Öz

Bu çalışmada, üniversite öğrencilerinin madde kullanımına yönelik farkındalık düzeylerinin belirlenmesi amacıyla ölçek geliřtirmektedir. Türkiye'de üniversite öğrencilerinin madde bağımlılığına karşı farkındalık düzeyini belirlemeye yönelik bir ölçek bulunmamaktadır. Ölçek geliřtirmek için öncelikle soru havuzu oluşturulmuştur. Soru havuzunda yer alan 70 soru alanında uzman 20 kişiye gönderilmiştir. Lawshe tarafından geliştirilmiş olan uzman görüş formunda her maddenin uygun, kalabilir ve uygun deęil seçenekleri verilmiştir. Uzman görüşlerine göre her bir maddenin CVI index deęerleri hesaplanmış ve soru havuzunun son şekli 57 sorudan oluşan taslak anket hazırlanmıştır. Anket Sivas Cumhuriyet Üniversitesinde 2019-2020 öğretim döneminde öğrenim gören 1031 kişiye uygulanmıştır. Ölçek geliřtirme aşamasında açımlayıcı faktör analizi uygulaması sonucunda toplam varyansın %48'ini açıklayan 5 faktör ve 28 maddeden oluşan yapı elde edilmiştir. Ölçek için daha sonra doğrulayıcı faktör analizi yapılarak modelin iyi uyumlu olduęu gözlenmiştir. Çalışmada ölçeğin toplam Cronbach α deęeri 0,880 bulunmuştur. Bu çalışma üniversite öğrencilerinin madde kullanımına yönelik farkındalık düzeylerinin belirlenmesi amacıyla geliştirilen bu ölçeğin geçerli ve güvenilir olduęunu ve ölçeğin alanla ilgili arařtırmalarda kullanılabileceğini göstermiştir.

Anahtar Kelimeler: Farkındalık Düzeyi, Madde Bağımlılığı, Ölçek Geliřtirme, Yapısal Eşitlik Modeli, Lawshe Kapsam Geçerlilięi

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Introduction

Although named differently, drugs can be defined as any chemical that can be taken in different ways, can create a change in mood, perception, cognition and other brain functions and can lead to addiction. These can be illegal substances such as cannabis, heroin, cocaine, as well as legal drugs such as amphetamines, benzodiazepines, other sedative, hypnotic, or chemical substances such as volatiles, tobacco (nicotine), coffee (caffeine) and alcohol (ethanol) (Ceyhun, et al., 2001). Furthermore, drugs can be sold in many different forms. In this way, they can be attracting and galvanizing, and it can arouse curiosity among people.

Although there are many different reasons and groups of people for substance use, university students were studied in the study. University can be considered as the ultimate level of education where investments made by the society for the future. The knowledge and experience students acquire at this level can be taken into professional life. Therefore, loss of educated people can mean loss of material and moral investments for the country.

Young people living away from their families for the first time can become an open target for substance use. Using arguments such as entertainment, money and sexuality, young people are encouraged to use drugs, which in time leads to addiction. This situation, which start as an individual process, actually becomes a social problem by disrupting the family order, the smallest building block of the society. In order to detect such negativities and take precautions, this study aimed to determine the awareness levels of university students with regard to drug abuse.

Turkey's unique geopolitical position as a bridge connecting Asia and European continents has made access to substances easier in the country. Drugs produced in Asian countries are transported to European countries via Turkey. The Asian countries having to cope with many political and economic problems suffer from authority gaps since stability cannot be fully achieved. In this case, it leads to easy production and transportation of drugs. The amounts of drugs seized by European drugs and drug addiction monitoring center for 2017 are given in Table 1 for Turkey and European countries.

Table 1. Amount of Drugs Seized in Turkey and the European Union (kg)

Region	Heroin	Cocaine	Amphetamines	MDMA, MDA, MDEA	Marijuana*	Powder Hashish
European Union	5.418	140.435	7.037	1727	466 097	209 401
Turkey	17 385	1.476	7268	2.258	81.429	94.379
Percentage	321%	1%	103%	131%	17%	45%

Source: European Drug Report, (2017).

When Table 1 is examined, the amount of drugs seized in Turkey, especially for heroin, is three times as much as the amount seized in all Europe. In addition, amphetamines and MDMA, MDA, MDEA (synthetic drugs) amounts are also above total European values. In this respect, studies for increasing the level of awareness for drugs can help prevent drug abuse.

Awareness can be defined as the level of individual's knowledge of addictive substances, the effects of substances, and the effects and consequences of addiction on the lives of addicts. The level of awareness of the individual is related to their avoidance from addictive substances (Potas, et al., 2015). Therefore, determining the level of awareness of the individuals examined will provide arguments that can be used in determining the results of the studies.

Studies to prevent substance abuse can be examined under three headings: (Bayram, 2013):

- Primary Prevention:** Individuals that have not used the substance yet are targeted. The aim is to raise the awareness of these individuals and prevent them from starting to use drugs by providing training.
- Secondary Prevention:** It involves early diagnosis and prevention of an individual who started to use drug before addiction develops.
- Tertiary Prevention:** It aims at helping individuals to give up using substances and to prevent their return to the substance use after treatment.

Raising awareness of individuals about addiction and addicts affects the life of the individual in many ways. Awareness is a strong aspect that constitutes the main purpose of the preventive studies for

individuals who have not tried addictive substances, which can ensure that the individual exhibits an attitude avoiding addictive substances throughout his life. On the other hand, raising the awareness of addicts can naturally cause addicts to accept their addiction, its life threatening affects and treatment, which can ensure that the treatment is successful (Potas, et al., 2015). When the stages of prevention activities are examined, it can be said that awareness of substance abuse will make a positive contribution at every stage. However, it is always desirable that it contributes to primary prevention activities.

2018 statistics were studied by Turkey Drug and Drug Addiction Control Center; for the first time , the average age of attempting tobacco product was 17.85, while it was 19.94 for alcohol and 19 for substance use (Turkish Drug Survey, 2019). As shown in the study findings, the average age of the students corresponds with the university's early years. As a result, this scale aimed to determine the awareness levels of university students against substance abuse. In this way, information that helps prevent activities will be obtained by revealing the existing situation. There is no study attempting at developing a scale investigating the level of awareness of university students about drug addiction. Thanks to this valid and reliable scale, further studies can rely on more sound data.

Related Research

In the 2009-2010 academic year, an M.A thesis at Gazi University, examined the opinions of first year students in Gazi Education Faculty about substance addiction. In the study, data were collected from 2035 students with the help of the questionnaire whose validity and reliability were calculated. When the research findings are examined, it was seen that social environment and friends are the main reasons for being addicts. In the results obtained, it was seen that the students avoided addictive substances because they knew the harms. The awareness levels of students about the harms of substances that cause addiction have been found to be high in all aspects (Akpınar Özdemir, 2011).

A study was conducted with 1152 students to develop a scale for the protection of secondary school students from substance abuse. For this purpose, the scale aimed to measure students' self-efficacies. The scale developed at the end of the study consists of 24 sub-dimensions and one control item. The scale explains 50.3% of the total variance. The overall internal consistency coefficient (Cronbach's) of the scale was 0.81. Thanks to the scale obtained, it was emphasized that the "Prevention of Substance Abuse Scale for Adolescents" can be used effectively in measuring the effectiveness of drug addiction prevention programs (Eker, et al., 2013).

In the study conducted in Kahramanmaraş province, the factors that affect substance addiction were investigated with the data obtained from 1541 students of high school seniors. In the findings, for smoking, 979 (63.7%) people replied "yes, I tried" and 559 (36.3%) people answered "no, I never tried". In the study, the youngest age at which students started smoking was determined to be 8 years old, while the oldest age was 19 years old. When the reasons for starting smoking are examined, 131 (31.7%) people tried it out of curiosity, 131 (31.7%) tried because of sadness, 69 (16.8%) tired because of the insistence of friends, 52 (12.6%) tried due to wannabe, 29 (7.0%) tried smoking to have fun, and 1 (0.2%) tried with the encouragement of his parents. As a result, it was observed that substance use was in an increasing trend in high schools compared to the past. However, the rate of substance abuse was found to be significantly low in students who stated that they could easily talk to their parents about their problems. Therefore, it has been stated that narcotic branch units affiliated to the police department should work harder and measures should be taken in order to increase field trainings involving parents and to prevent access to the substance (Ersoy, 2015).

In order to determine the knowledge and awareness of secondary school students about addictive substances, studies were conducted with 338 students in Erzincan. The Substance Abuse Awareness Scale (MBPS) and the Substance Abuse Knowledge Test (MBBT) were used for data collection. As a result, it was determined that students' awareness was high for substance addiction and their knowledge level was medium. In addition, it was observed that there was a positive and weak relationship between knowledge level and substance abuse awareness. As a result, it is recommended to explain the harmful effects of narcotic substances to body systems and organs in courses on health (Köse, et al., 2016).

In 2016, a descriptive research was carried out with random sampling on 130 history teachers working in the center of Antalya, Mersin and Ankara provinces to determine their thoughts on substance addiction. In this study, 70% of history teachers think that students can easily access prohibited substances, while 30% think that students can partially access prohibited substances. All of the history

teachers stated that the relationship between children and their parents affected the use of substance. As a result, it has been emphasized that no matter how awareness raising and training activities are carried out, more serious practices are inevitably needed for preventing access to drugs (Ulusoy, 2016).

1518 university students participated in the research on the relation between family related substance use and alcohol, smoking and substance use disorder among university students. It was observed that male students had a high rate of life-long smoking, alcohol and illegal substance trial rate. It was found that the education level of the parents was not related to the smoking habits of their children; however, it was related with alcohol and substance use. It was revealed that use of alcohol was more common in the children of the parents with higher education level. As a result, it has been stated that trainings related to "substance addiction" should be given regularly every year from the first grades of the university to protect university students from substance addiction. In addition, it is stated that posters, brochures and public spots related to drug addiction should be put up in many areas on the campus and counseling and treatment services for students on addiction should be increased (Atlam & Yüncü, 2017).

Another study aimed to determine self-efficacy and related factors to protect secondary school students from addictive substances. For this purpose, data was collected from 22,623 students in Sivas city center. Self-Efficacy Scale for Protection from Substance Abuse for Adolescents and Personal Information Form were used to collect the data. When the findings were analysed, it was seen 38.7% of the students stated that they or the people around them use substance. As a result, it has been stated that there is a need to implement practices aimed at strengthening self-efficacy about substance addiction, as secondary school students are at significant risk because of their age (Uzun & Kelleci, 2018).

Another scale development study was carried out to measure the perceptions of individuals with regard to drug addiction by collecting data from 1531 individuals over the age of 18, selected by random sampling method from different districts of Eskiřehir. When the findings of the study were analyzed, it was seen that 4 factors were determinant in individuals starting to use and continue using drugs. These include family and individual conditions, friends and environment, community attitude and institutions and organizations fights against drug abuse. Reliability level of these four factors was 84.8% and variance explanation rate was 52%. Goodness of fit values of the scale were found to be over 90%. As a result, it has been stated that the attitudes of people, family, environment, friends and institutions are effective on starting to use substance and continuation of substance abuse (Polat & Kök, 2019).

Method

The Research Universe and Sample

Firstly, the application was made by obtaining the permission number "60263016-050.06.04-E.445416" on the date "25/02/2020" from the university of Sivas Cumhuriyet University. The study universe of research consists of around 40 thousand students who study in different faculties at Sivas Cumhuriyet University in the academic period 2019-2020. The study sample consists of 1031 university students chosen by an easily accessible case sampling method from this universe.

Preparation of Draft Scale

While preparing the draft scale, firstly, studies in the literature on drug abuse awareness level were reviewed and an item pool was created. The " *Gazı Education Faculty Year One Student's Attitudes to Substance Addiction* " scale developed by Özdemir (2011) was considered for the draft scale. Some items were added and removed from this item pool in line with the views of experts in terms of content and face. As a result, a draft scale of 57 items was obtained and administrated to students.

Content Validity

A pool of 70 questions was created and questions were sent to 20 experts. Expert opinion form developed by Lawshe was also sent and the experts were asked to evaluate the questions in line with the form (Lawshe, 1975: 568). Researchers who are experts in the field of social sciences were selected for index calculation. In the expert opinion form, each item is presented with three options: suitable, can remain, and not appropriate. According to expert opinions, CVI index values of each item were calculated in Table 2.

Table 2. CVI Index Values

<i>Items</i>	<i>n</i>	<i>N/2</i>	<i>CVI</i>	<i>Decision</i>	<i>Items</i>	<i>n</i>	<i>N/2</i>	<i>CVI</i>	<i>Decision</i>
Item 1	16	10	0,6	Accepted	Item 36	15	10	0,5	Accepted
Item 2	15	10	0,5	Accepted	Item 37	14	10	0.40	Accepted
Item 3	16	10	0,6	Accepted	Item 38	13	10	0.30	Accepted
Item 4	14	10	0.40	Rejected	Item 39	12	10	0.20	Accepted
Item 5	18	10	0.80	Accepted	Item 40	9	10	-0,1	Rejected
Item 6	19	10	0.90	Accepted	Item 41	13	10	0.30	Accepted
Item 7	19	10	0.90	Accepted	Item 42	15	10	0,5	Accepted
Item 8	19	10	0.90	Accepted	Item 43	15	10	0,5	Accepted
Item 9	18	10	0.80	Accepted	Item 44	15	10	0,5	Accepted
Item 10	10	10	0.00	Rejected	Item 45	16	10	0,6	Accepted
Item 11	9	10	-0,1	Rejected	Item 46	16	10	0,6	Accepted
Item 12	16	10	0,6	Accepted	Item 47	16	10	0,6	Accepted
Item 13	13	10	0.30	Rejected	Item 48	15	10	0,5	Accepted
Item 14	14	10	0.40	Rejected	Item 49	15	10	0,5	Accepted
Item 15	15	10	0,5	Accepted	Item 50	16	10	0,6	Rejected
Item 16	15	10	0,5	Accepted	Item 51	10	10	0.00	Accepted
Item 17	18	10	0.80	Accepted	Item 52	17	10	0.70	Accepted
Item 18	15	10	0,5	Accepted	Item 53	14	10	0.40	Accepted
Item 19	13	10	0.30	Rejected	Item 54	18	10	0.80	Accepted
Item 20	12	10	0.20	Rejected	Item 55	9	10	-0,1	Rejected
Item 21	11	10	0.10	Rejected	Item 56	20	10	1.00	Accepted
Item 22	14	10	0.40	Accepted	Item 57	19	10	0.90	Accepted
Item 23	8	10	-0.20	Accepted	Item 58	15	10	0,5	Accepted
Item 24	9	10	-0,1	Rejected	Item 59	15	10	0,5	Accepted
Item 25	12	10	0.20	Accepted	Item 60	17	10	0.70	Accepted
Item 26	19	10	0.90	Accepted	Item 61	15	10	0,5	Accepted
Item 27	13	10	0.30	Accepted	Item 62	16	10	0,6	Accepted
Item 28	14	10	0.40	Accepted	Item 63	15	10	0,5	Accepted
Item 29	13	10	0.30	Accepted	Item 64	15	10	0,5	Accepted
Item 30	9	10	-0,1	Rejected	Item 65	16	10	0,6	Accepted
Item 31	16	10	0,6	Accepted	Item 66	17	10	0.70	Accepted
Item 32	15	10	0,5	Accepted	Item 67	18	10	0.80	Accepted
Item 33	15	10	0,5	Accepted	Item 68	19	10	0.90	Accepted
Item 34	16	10	0,6	Accepted	Item 69	18	10	0.80	Accepted
Item 35	16	10	0,6	Accepted	Item 70	19	10	0.90	Accepted

When Table 2 is examined, it is seen that 70 items were presented to the experts and CVI index values were calculated. After the items that are decided to be removed from the item pool based on the CVI values on the basis of items were removed, the CVI value can be calculated for the entire scale formed by the remaining items. According to the opinions of 20 experts, the items with a minimum index of 0.42 CVI are accepted as suitable items. Thus, a total of 57 items remained, and content validity was achieved by discarding 13 items. The remaining items have an average CVI index value of 0.57, which is above 0.42. This revealed the validity of the scale.

Data Analysis

In the analysis of the data, the factors were developed by applying exploratory factor analysis and also the construct validity of the scale was ensured by exploratory factor analysis. For confirmatory factor analysis, the scale developed by using structural equation modeling was tested for compliance with the model created with the help of data. Cronbach Alpha value was calculated to determine internal consistency. SPSS 25.0 and AMOS statistical software were used to analyse the obtained data.

Findings and Discussion

Findings of Exploratory Factor Analysis

In the light of the data obtained, the exploratory factor analysis of the scale was performed to investigate its construct validity. However, first of all, the suitability of the data to the factor analysis was tested and values obtained are given in Table 3.

Table 3. *Examining the Suitability of the Data for Factor Analysis*

(KMO)Measurement Adequacy of the Sample	0.922	
Bartlett Test	Chi square value	7930.6
	S.D.	378
	(P<0.05).	0.000

Since the KMO coefficient is 0.922, the sample size in the research is sufficient. Since the probability value was $(p) = 0,000 < 0.05$ as a result of the Bartlett test, the data meet multiple normal distribution assumptions and confirm the feasibility of factor analysis.

Principal Components Analysis and Varimax Rotation methods were used in exploratory factor analysis. As a result of the analysis and after the overlapping or low load-weight items were discarded, the five-factor structure was obtained as a result of the exploratory factor analysis of the remaining 28 items. Factors obtained and factor loads are given in Table 4.

Table 4. *Rotated Components Matrix: on the Factor Structure of the Scale*

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Q41	0.754				
Q39	0.705				
Q47	0.644				
Q42	0.644				
Q38	0.633				
Q32	0.616				
Q30	0.589				
Q36	0.570				
Q55	0.542				
Q56	0.523				
Q35		0.707			
Q26		0.679			
Q34		0.678			
Q37		0.619			
Q21		0.617			
Q23		0.579			
Q24		0.550			
Q13			0.694		
Q14			0.649		
Q19			0.619		
Q9			0.514		
Q11			0.455		
Q5				0.670	
Q7				0.628	
Q8				0.621	
Q1					0.715
Q6					0.571
Q3					0.476

When Table 4 is examined, it seen that the factor loads obtained vary between 0.754 and 0.455. For factor coefficient, which explains the relationship between items and the factor to which it belongs, in general, values above 0.45 are recommended as a good measure for item selection (Buyukozturk, 2002: 118). The explained variance load values of the 5-factor structure with eigenvalues greater than 1 for the factors are given in Table 5.

Table 5. Total Variances Explained by Factors

Scale Sub-dimension	Items	Factor** Load Value	Eigenvalue	Variance (%)	Cumulative Variance (%)
Factor 1	Q41	0.754	7,067	15.988	15.988
	Q39	0.705			
	Q47	0.644			
	Q42	0.644			
	Q38	0.633			
	Q32	0.616			
	Q30	0.589			
	Q36	0.570			
	Q55	0.542			
	Q56	0.523			
Factor 2	Q35	0.707	2.726	12.090	28.078
	Q26	0.679			
	Q34	0.678			
	Q37	0.619			
	Q21	0.617			
	Q23	0.579			
	Q24	0.550			
Factor 3	Q13	0.694	1.323	8.648	36.726
	Q14	0.649			
	Q19	0.619			
	Q9	0.514			
	Q11	0.455			
Factor 4	Q5	0.670	1.181	5.834	42.560
	Q7	0.628			
	Q8	0.621			
Factor 5	Q1	0.715	1.099	5.284	47.844
	Q6	0.571			
	Q3	0.476			

In order to apply the confirmatory factor analysis, there should be at least three variables in the structural equation models to be applied that measure each hidden variable (Karagöz, 2017). Therefore, it is ensured that the variables accommodated by the factors obtained are at least three. The analysis results obtained show that the scale has construct validity.

Naming the Factors

Since the main reason for the exploratory factor analysis is to reduce the number of variables to fewer factors, these factors should be named. This naming process is made according to the common characteristics of the variables in the factor (Nakip, 2006). For the 5-factor structure found as a result of exploratory factor analysis, the items in the factors and their names are given in Table 6, Table 7, Table 8, Table 9 and Table 10.

Table 6. Naming the First Factor

Item	First Factor: Biopsychosocial Assessment
Q41	I think that addiction will negatively affect the psychology of the person.
Q39	I think that the use of substance will disrupt the person's social environment.
Q47	I think the risk of attempting suicide in people who use drugs is high.
Q42	I think it will upset individuals if one or more members of their family are using substance.
Q38	I think that addictive substances will bring unhappiness to people in the long run.
Q32	I believe that the use of addictive substances may negatively affect education life.
Q30	I think people who use addictive substances harm themselves, their relatives and the society
Q36	I think that substance use is a condition that enslaves the individual
Q55	I think people who use drugs need help.
Q56	I think that parents who use drugs will also encourage their children in this direction.

Table 7. Naming the Second Factor

<i>Item</i>	<i>Second Factor: Normalization</i>
Q35	I think that some of the addictive substances will not harm people because they are natural.
Q26	I think it is normal to use alcohol, drug-like substances on people's special occasions (birthday, graduation party, etc.).
Q34	I think that tobacco and alcohol are not addictive substances
Q37	I think it is useful for people to use addictive substances in distressed and stressful situations.
Q21	I think that addictive substances make a positive difference to people's lives.
Q23	I think that from time to time, people can take substances to make themselves happy.
Q24	I think what is said about the evil and negative of addictive substances is not credible.

Table 8. Naming the Third Factor

<i>Item</i>	<i>Third Factor: Individual Effects</i>
Q13	I think that my family will feel sorry for me when they learn that I am using substance.
Q14	I think that the use of drugs will disrupt human physiology.
Q19	I think that addictive substances will be deadly when used for a long time.
Q9	I think that the use of substance by the people (artists, writers, journalists, politicians, etc.) that the society has set as role models has an encouraging effect on people.
Q11	I think that the use of substance restricts the individuals freedom.

Table 9. Naming the Fourth Factor

<i>Item</i>	<i>Fourth Factor: Making addiction seem innocent</i>
Q5	I think that the damage caused by smoking to the body is not important.
Q7	I think peoples use of drugs (cigarettes, alcohol, drugs) is not an obstacle in establishing friendship relationships.
Q8	I think that using drugs from time to time will not harm the body.

Table 10. Naming the Fifth Factor

<i>Item</i>	<i>Fifth Factor: Addiction Awareness</i>
Q1	I think that using the substance once is enough for addiction.
Q6	I think that smoking is the most widely used addictive substance in the world.
Q3	I think alcohol is at least as dangerous as a drug.

Reliability and Validity of Data

When developing a Likert type scale, it is appropriate to use the α coefficient developed by Cronbach, which is accepted as the internal consistency criterion to determine the level of reliability. The Cronbach α coefficient is between 0 and 1, and the higher the α coefficient of the scale, that is, closer to 1, the items in the scale are considered to be consistent and measure the elements of the same feature (Tezbařaran, 1996).

Below are the reliability levels according to Cronbach α values:

If it is $0.00 \leq \alpha < 0.40$, the scale is unreliable,

If it is $0.40 \leq \alpha < 0.60$, the reliability is low,

If it is $0.60 \leq \alpha < 0.80$, the scale is very reliable,

If it is $0.80 \leq \alpha < 1.00$, the scale is highly reliable.

As a result of the investigation of the internal consistency, Cronbach α values for the factors and the whole scale are given in Table 11.

Table 11. Internal Consistency Coefficients of the Scale

<i>Factors</i>	<i>Number of Items</i>	<i>Cronbach Alpha Coefficient (α)</i>
Factor-1: Biopsychosocial Assessment	10	0.856
Factor-2: Normalization Factor	7	0.803
Factor-3: Individual Effects	5	0.709
Factor-4: Making addiction seem innocent	3	0.549
Factor-5: Addiction Awareness	3	0.415
Total	28	0.880

According to the data in Table 11, reliability levels are acceptable for all factors, all items and the whole scale.

Confirmatory Factor Analysis

Confirmatory factor analysis was applied to examine the goodness of fit and construct validity of the structure determined to consist of 5 factors with exploratory factor analysis. While testing the compatibility between the model and the data, a few or all of the goodness of fit tests can be used (Schumacker, 2006). There is no consensus in the literature regarding which of these goodness of fit statistics will be used (İlhan & Çetin, 2014,30-31). The results of the confirmatory factor analysis were modified for errors; between 25 and 28, between 24 and 27, between 19 and 27, between 22 and 23, between 19 and 20 in Factor-1, between 2 and 7, between 5 and 7, between 6 and 3, between 5 and 2, between 2 and 3 in Factor-2, and between 11 and 12 in Factor-3. As a result of the first level model, chi-square = 671,787 and degree of freedom = 329 were found as a result of the modification confirmatory factor analysis, fit index values are given in Table 12.

Table 12. *Fit Indices used in Confirmatory Factor Analysis*

<i>Model Fit Criteria</i>	<i>Good Fit</i>	<i>Acceptable</i>	<i>Value found</i>
CM / SD	$\chi^2 / sd \leq 3$	$\chi^2 / sd \leq 5$	2,042
<i>Comparative Fit Indices</i>			
TLI (NNFI)	$0,95 \leq NNFI$	$0,90 \leq NNFI$.948
IFI	$0,95 \leq IFI$	$0,90 \leq IFI$.955
CFI	$0,95 \leq CFI$	$0,90 \leq CFI$.955
RMSEA	$RMSEA \leq 0,05$	$RMSEA \leq 0,08$,032
<i>Absolute Fit Indices</i>			
GFI	$0,90 \leq GFI$	$0,85 \leq GFI$.955
AGFI	$0,90 \leq AGFI$	$0,85 \leq AGFI$.944

When Table 12 is examined, the scale shows a good fit according to the fit values. Therefore, the validity of the 5-factor structure obtained as a result of exploratory factor analysis was confirmed by the results of confirmatory factor analysis. The scale obtained can be used to determine the awareness levels of university students about substance use.

Regression weights of the model

Regression weights are given in Table 13. The regression values found here indicate the power of the explanatory variables, i.e. the items, to predict the factors. It can be concluded that they are significant since $p < 0.05$, which is the probability value for the relationships specified in Table 13. The significant relations found as a result show that the items explain the factors obtained correctly.

Table 13. *Regression Weights Related to the Model*

<i>Direction Relation</i>		<i>Estimate</i>	<i>S.E</i> <i>(Standard error)</i>	<i>Cr</i> <i>Critical Rate</i>	<i>P (Sigma).</i>
F2s24	< F2	1			
F2s23	< F2	1,103	0,079	13,931	.00
F2s21	< F2	1,011	.072	14,069	.00
F2s37	< F2	1.189	.077	15.514	.00
F2s34	< F2	941	.074	12,668	.00
F2s26	< F2	1.212	0,079	15.294	.00
F2s35	< F2	1.141	0,078	14,596	.00
F3s11	< F3	1			.00
F3s9	< F3	0.972	0.083	11.734	.00
F3s19	< F3	0.95	.074	12.823	.00
F3s14	< F3	1,048	0,078	13.393	.00
F3s13	< F3	,858	.072	11.927	.00
F4s8	< F4	1			.00
F4s7	< F4	0,785	0.075	10.474	.00
F4s5	< F4	.914	0.079	11.563	.00
F5s3	< F5.	1			.00
F5s6	< F5.	2,246	.301	7.457	.00
F5s1	< F5.	1,834	263	6.966	.00
F1s56	< F1	1			.00
F1s55	< F1	1.11	0.087	12.716	.00
F1s36	< F1	1,359	099	13.674	.00
F1s30	< F1	1,294	0,097	13,349	.00
F1s32	< F1	1.43	0,101	14.203	.00
F1s38	< F1	1.107	0,095	11.668	.00
F1s42	< F1	1,219	0,089	13.758	.00
F1s47	< F1	1,234	.092	13.368	.00
F1s39	< F1	1.497	,108	13,801	.00
F1s41	< F1	1,434	0.098	14.592	.00

These are the estimation values of the other regression weights that need to be examined in the confirmatory factor analysis administrated with structural equation models. The values in Table 14 are standardized representations of the estimation values in Table 13.

Table 14. *Standard Regression Coefficients*

<i>Direction of Relations</i>		<i>Estimate</i>	<i>Direction of Relations</i>		<i>Estimate</i>
F2s24	< F2	0.556	F4s5	< F4	533
F2s23	< F2	,603	F5s3	< F5.	.343
F2s21	< F2	611	F5s6	< F5.	541
F2s37	< F2	677	F5s1	< F5.	0.43
F2s34	< F2	0.514	F1s56	< F1	0.496
F2s26	< F2	674	F1s55	< F1	.498
F2s35	< F2	0.627	F1s36	< F1	.629
F3s11	< F3	506	F1s30	< F1	.606
F3s9	< F3	0,52	F1s32	< F1	0,681
F3s19	< F3	0.607	F1s38	< F1	485
F3s14	< F3	676	F1s42	< F1	0.643
F3s13	< F3	0.553	F1s47	< F1	,603
F4s8	< F4	0.645	F1s39	< F1	,698*
F4s7	< F4	0,457	F1s41	< F1	.723

The AMOS diagram of the model obtained as a result of confirmatory factor analysis is given in Figure 1.

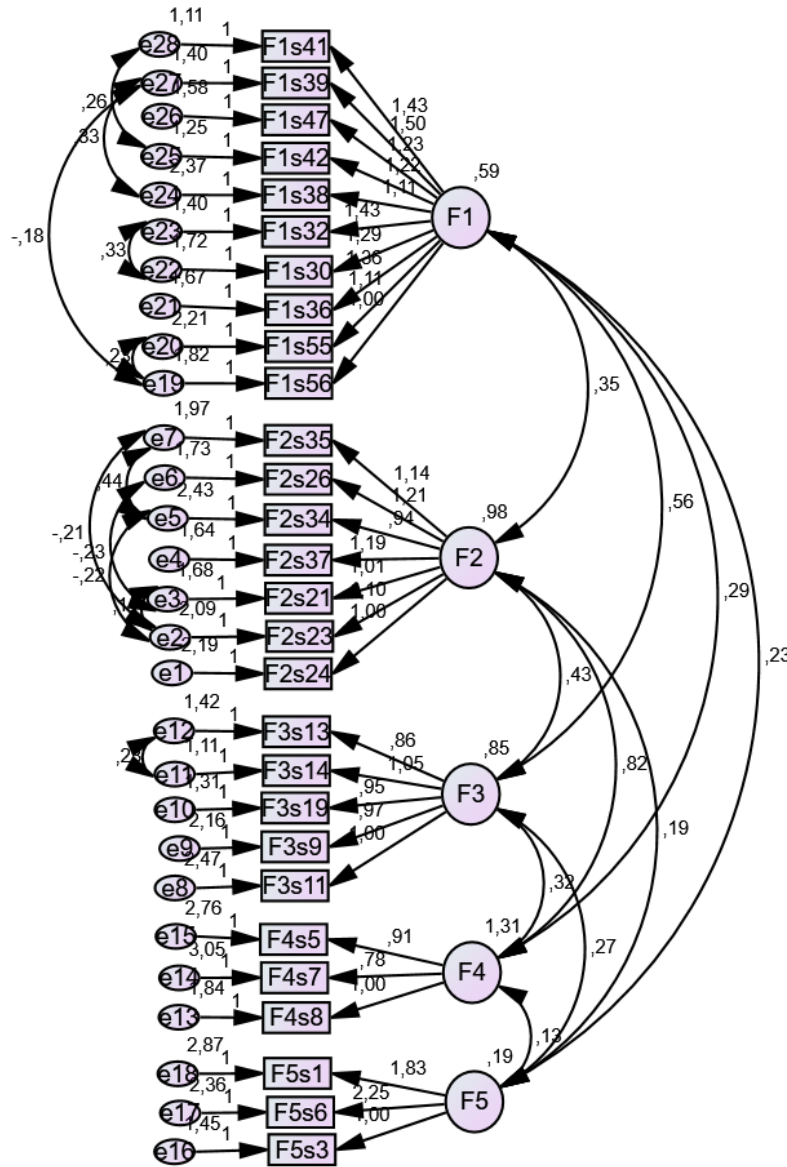


Figure 1. Structural Equation Model AMOS Output

When Figure 1 is examined, it is seen that the factors obtained are significant for the scale.

Discussion, Conclusion, and Suggestions

In this study, a scale was developed to reveal the awareness levels of the university students in Sivas province about substance use and to measure the level of awareness. To develop a scale, a question pool was created using the construct validity method, unnecessary questions were removed and new questions added to the pool by taking the opinions of the experts. The final form of the question pool was transformed into a draft questionnaire consisting of 57 questions, which was administrated to 1031 people.

Exploratory factor analysis was conducted to reveal the construct validity of the scale. Since the KMO coefficient was 0.922, the sample size in the study was found to be sufficient. According to the results obtained from exploratory factor analysis, 5 factors were created. These factors are biopsychosocial, normalization, individual effects, making it seem innocent and addiction awareness, respectively.

It was concluded that the values obtained as a result of exploratory factor analysis were shown to have good agreement by applying confirmatory factor analysis. In addition, the Cronbach $\alpha=0,880$ value, which indicates the reliability and internal consistency of the scale, showed that the scale is reliable.

As a result of this study, “Awareness Levels of University Students on Substance Use” was developed. This scale was developed to be a guide for the researchers in the field and presented to the use of researchers. Thus, it is considered that determining awareness levels will be effective in the prevention of substance addiction.

Ethical Declaration

In the writing process of the study titled “Developing a Scale to Determine the Awareness Levels of University Students for Substance Use”, there were followed the scientific, ethical and the citation rules; was not made any falsification on the collected data and this study was not sent to any other academic media for evaluation. Ethics committee decision: Sivas Cumhuriyet Üniversitesi Bilimsel Arařtırma ve Yayın Etięi Sosyal ve Beřeri Bilimler Kurulu, Date: 20/02/2020, No: 10.

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TÜRKÇE GENİŞ ÖZET

Günlük yaşantıda farklı isimlendirmeleri olmasına rağmen; madde, kötüye kullanım ve bağımlılığa yol açabilecek, değişik yollarla alınabilen duygu durum, algılama, biliş ve diğer beyin işlevlerinde bir değişiklik yaratan her türlü kimyasal olarak tanımlanabilir. Bunlar esrar, eroin, kokain gibi yasadışı maddeler olabileceği gibi, amfetaminler, benzodiazepinler, diğer sedatif, hipnotik gibi yasal ilaçlar ya da satışlarında kısmi yasal düzenlemeler olan uçucular, tütün (nikotin), kahve (kafein) ve alkol (ethanol) gibi kimyasal maddelerdir (Ceyhun, vd., 2001). Ayrıca bunlarla sınırlı kalmayıp zaman içerisinde kendini çeşitlendiren bir ürün ağına sahiptir. Böylelikle ilgi çekici ve özendirici bir hal alarak insanlarda merak uyandırabilmektedir.

Madde kullanımının çok farklı sebepleri olmasına rağmen, çalışmada üniversite çağındaki öğrenciler ele alınmıştır. Üniversite çağı toplum tarafından geleceğe yapılan yatırımların son öğrenim noktalarından biri kabul edilebilir. Öğrenci artık profesyonel anlamda meslek yaşantısına atılabilecek bilgi ve deneyime sahip olmaktadır. Bu yüzden bu noktada bulunan bireylerin kaybedilmesi ülke açısından maddi ve manevi yatırımların boşa gitmesi demektir.

Madde kullanımı konusunda üniversite için ilk defa ailesinin yanından ayrılan gençler açık hedef haline gelebilmektedir. Eğlence, para ve cinsellik gibi argümanlar kullanılarak uyuşturucu maddeler özendirilmekte ve bağımlılığı teşvik edilmektedir. Bireysel bir süreç olarak başlayan bu durum aslında, toplumun en küçük yapı taşı olan aile düzenini bozarak toplumsal bir sorun haline almaktadır. Bu gibi olumsuzlukların tespiti ve önlemlerin alınabilmesi adına üniversite öğrencilerinin madde bağımlılığına karşı farkındalık düzeyleri belirlenmek istenmiştir.

Bireyde bağımlılık ve bağımlılar konusunda farkındalık gelişmesi çok yönlü olarak bireyin yaşamını etkiler. Bağımlılık yapan maddeleri denememiş bireylerde gelişen farkındalık önleyici çalışmaların da temel amacını oluşturan güçlü bir yöndür ki bireyin yaşamı boyunca bağımlılık yapan maddelerden uzak duran bir tutum sergilemesini sağlayabilir. Öte yandan, bağımlılardan gelişen farkındalık ise bağımlı olduğunu ve bağımlı olduğunun maddenin kendisinin yaşamını tehdit ettiğinin farkında olan bireyin tedaviyi kabul etmesi ve tedavinin başarılı olması farkındalığın doğal sonucu olarak oluşur (Potas vd., 2015). Önleme faaliyetlerinin aşamaları incelendiğinde madde bağımlılığına olan farkındalık her aşamada olumlu bir katkı sağlayacağı söylenebilir. Ancak istenilen durum her zaman için birinci önleme faaliyetleri açısından katkı sağlayabilmektedir.

Sonuç olarak geliştirilen bu ölçek sayesinde üniversitesi öğrencilerinin madde bağımlılığına karşı farkındalık düzeylerini tespit etmek amaçlanmıştır. Böylelikle var olan mevcut durum ortaya çıkarmak ve önleme faaliyetlerine yardımcı olabilmektedir. Özellikle Türkiye’de üniversite öğrencilerinin madde bağımlılığına karşı farkındalık düzeyini araştıran bir ölçek çalışması bulunmamaktadır. Geliştirilen bu ölçek sayesinde geçerliliği ve güvenilirliği bulunan veriler ile araştırmalar anlamlı bir temele yaslanmış olacaktır.

Araştırma evreni üniversite çağındaki bulunan öğrencilerdir. Araştırmanın örnekleme basit tesadüfi örnekleme yöntemi ile seçilen Sivas Cumhuriyet Üniversitesi’nde öğrenim görmekte olan 1031 öğrenciden oluşmuştur. Taslak ölçek olarak Özdemir (2011) tarafından hazırlanan “Gazi Üniversitesi Gazi Eğitim Fakültesi Birinci Sınıf Öğrencilerinin Madde Bağımlılığı ile İlgili Görüşleri” kullanılmıştır. Taslak ölçek hazırlanırken öncelikle farkındalık düzeyi üzerine yapılmış literatürdeki çalışmalar taranarak madde havuzu oluşturulmuştur. Oluşturulan bu madde havuzu alanında uzman kişiler kapsam ve şekil yönünden incelenerek uzmanların görüşü doğrultusunda madde havuzundan soru çıkarma ve ekleme yapılmıştır. Toplamda 70 soru havuzu oluşturularak alanında uzman 20 kişiye sorular gönderilmiştir. Lawshe tarafından geliştirilmiş olan uzman görüş formu gönderilerek değerlendirmeleri istenmiştir (Lawshe, 1975, s. 568). Son durumda 57 maddeden oluşan bir taslak ölçek elde edilerek öğrencilere uygulanmıştır. Verilerin analizinde, açıklayıcı faktör analizi uygulanarak faktörler oluşturulmuş ve ayrıca açıklayıcı faktör analiziyle ölçeğin yapı geçerliliği de sağlanmıştır. Doğrulayıcı faktör analizi için yapısal eşitlik modellemesi kullanılarak elde edilen ölçeğin veriler yardımıyla oluşturulan modele uygunluğu test edilmiştir. İç tutarlılığı belirlemeye yönelik Cronbach Alpha değeri hesaplanmıştır. Elde edilen verilerin analizinde SPSS 25.0 ve AMOS istatistik paket programı kullanılmıştır.

Anket Sivas Cumhuriyet Üniversitesi öğrencisi olan 1031 kişiye uygulanmıştır. Ölçek geliştirme aşamasında açılıyıcı faktör analizi uygulaması sonucunda toplam varyansın %48'ini açıklayan 5 faktör ve 28 maddeden oluşan yapı elde edilmiştir. Birinci Faktör: Biyopsikososyal Değerlendirme, İkinci Faktör: Normalleştirme, Üçüncü Faktör: Bireysel Etkiler, Dördüncü Faktör: Masumlaştırma, Beşinci Faktör: Bağımlılık Bilinci şeklinde isimlendirilmiştir. Faktörlerin güvenirlik analizinde kullanılan iç tutarlılık katsayıları (Cronbach Alpha Katsayısı) Biyopsikososyal Değerlendirme faktöründe 10 madde için 0,856; Normalleştirme Faktörü faktöründe 7 madde için 0,803; Bireysel Etkiler faktöründe 5 madde için 0,709; Masumlaştırma faktöründe 3 madde için 0,549; Bağımlılık Bilinci faktöründen 3 madde için 0,415 bulunmuştur. Çalışmada ölçeğin toplam Cronbach α değeri 0,880 bulunarak verilerin güvenilirliği ortaya konulmuştur. Doğrulatoryıcı faktör analizi ile elde edilen ki-kare = 671,787 değeri ve serbestlik derecesi = 329 sonucunda uyum indeks değerleri CMIN/SD= 2,042; TLI (NNFI)= 0,948; IFI= 0,955; CFI=0,955; RMSEA=0,032; GFI= 0,955 bulunmuştur. Uyum değerleri ölçek iyi uyum göstermektedir. Dolayısıyla, açılıyıcı faktör analizi sonucunda elde edilen 5 faktörlü yapının geçerliği, doğrulatoryıcı faktör analizi sonuçlarıyla doğrulanmıştır. Elde edilen ölçek üniversite öğrencilerinin madde kullanımına yönelik farkındalık düzeylerinin belirlenmesi için kullanılabilir olduğu söylenebilir.

Bu çalışma sonucunda "Üniversite Öğrencilerinin Madde Kullanımına Yönelik Farkındalık Düzeylerinin Belirlenmesi" adlı ölçek geliştirilmiştir. Bu ölçek alanla ilgili arařtırmacılara bir yol gösterici olması için geliştirilmiş, arařtırmacıların kullanımına sunulmuştur.

EK – Üniversite Öğrencilerinin Madde Kullanımına Yönelik Farkındalık Düzeylerini Belirleyecek Ölçek Maddeleri

Madd e No	Birinci Faktör: Biyopsikososyal Değerlendirme
S41	Madde bağımlılığının kişinin psikolojisini olumsuz yönde etkileyeceğini düşünüyorum
S39	Madde kullanımının kişinin sosyal çevresiyle ilişkilerini bozacağını düşünüyorum.
S47	Madde kullanan insanlarda intihara teşebbüs riskinin fazla olduğunu düşünüyorum.
S42	Ailesinde madde kullanan biri ya da birilerinin olmasının bireyleri üzeceğini düşünüyorum.
S38	Bağımlılık yapan maddelerin uzun vadede insanlara mutsuzluk getireceği kanaatindeyim
S32	Bağımlılık yapan madde kullanımının eğitim hayatını olumsuz etkileyebileceği kanaatindeyim
S30	Bağımlılık yapan maddeleri kullanan insanların kendilerine, yakınlarına ve topluma zarar verdiğini düşünüyorum
S36	Madde kullanımının bireyi köleleştiren bir durum olduğunu düşünüyorum
S55	Madde kullanan insanların yardıma muhtaç olduklarını düşünüyorum.
S56	Madde kullanan ebeveynlerin çocuklarını da bu yönde özendirceğini düşünüyorum.
İkinci Faktör: Normalleştirme	
S35	Bağımlılık yapan maddelerden bazılarının doğal olduğu için insana zarar vermeyeceğini düşünüyorum
S26	İnsanların özel günlerinde (doğum günü, mezuniyet partisi...vb.) alkol, uyuşturucu tarzı maddeler kullanılmasının normal olduğunu düşünüyorum.
S34	Tütün ve alkolün bağımlılık yapan maddelerden olmadığını düşünüyorum
S37	Sıkıntılı ve stresli durumlarda insanların bağımlılık yapan maddeleri kullanmalarının onlar için yararlı olduğunu düşünüyorum.
S21	Bağımlılık yapan maddelerin insanların yaşamına olumlu yönde bir farklılık getirdiğini düşünüyorum.
S23	İnsanın zaman zaman kendisini mutlu etmek için madde alabileceğini düşünüyorum.
S24	Bağımlılık yapan maddelerin kötülüğü ve olumsuzluğu hakkında söylenenlerin inandırıcı olmadığını düşünüyorum.
Üçüncü Faktör: Bireysel Etkiler	
S13	Ailemin madde kullandığını öğrendiğinde benim için üzüntü duyacağını düşünüyorum.
S14	Madde kullanımının insan fizyolojisini bozacağını düşünüyorum.
S19	Bağımlılık yapan maddelerin uzun süre kullanıldığında ölümcül olacağını düşünüyorum.
S9	Toplumun rol model olarak belirlediği kişilerin (sanatçı, yazar, gazeteci, politikacı... vb.) madde kullanmasının kişiler üzerinde özendirici etki oluşturduğunu düşünüyorum.
S11	Madde kullanımının bireyin özgürlüğünü kısıtladığını düşünüyorum.
Dördüncü Faktör: Masumlaştırma	
S5	Sigaranın vücuda verdiği zararların önemli olmadığını düşünüyorum.
S7	İnsanların madde (sigara, alkol, uyuşturucu)kullanmasının, arkadaşlık ilişkileri kurmada engel olmadığı düşüncesindeyim
S8	Uyuşturucu maddelerin zaman zaman kullanılmasının vücuda zarar vermeyeceğini düşünüyorum.
Beşinci Faktör: Bağımlılık Bilinci	
S1	Maddeyi bir kez kullanmanın bağımlılık için yeterli olduğunu düşünüyorum.
S6	Sigaranın dünyada en yaygın kullanılan bağımlılık yapıcı madde olduğunu düşünüyorum
S3	Alkolün en az bir uyuşturucu madde kadar tehlikeli olduğunu düşünüyorum.