

Research Article

A Comprehensive Study on Addiction: 3D Scale on Youth*

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Abstract

Substance addiction is a social problem that influences all dimensions of individuals' lives, closing off their environment and disrupting their lives. Structuring the prosperity of society through youths, who have gained self-consciousness regarding the thought that healthy societies are able to occur through healthy generations and who have developed awareness on regarding substance addiction and addicts, is important for the future of the world and all countries. The aim of this research is to determine the levels of awareness levels (knowledge, comprehension, application, analysis, synthesis and evaluation sub-dimensions), attitudes, and stigmatization of youths between the ages of 15-29 living in Ankara, Turkey regarding substance addiction and addicts. It also aims to look for differentiations among the variables of addiction according to employment status, educational status, gender, age range, and educational status. Voluntarily participating in the research, which was designed as a survey model and uses the mixed-methods strategy, are 1,117 youths. Overall, seminars, conferences, information meetings, and projects have an impact on youths' awareness levels.

Keywords

Stigmatization • Awareness • Substance addiction • Substance addicts • 3D Scale • Attitude

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Firstly, substance addiction is a social problem that influences and upsets every dimension of individuals' lives. Addiction threatens people of all ages at an increasing rate and greater diversity (Durmuş, Işılak Durmuş, Karatekin, Açık, & Sarıkaya, 2015). People enter into a partially/completely different perceptual dimension using various substances. They try to reach temporary happiness by escaping from daily life issues in the dream world they create in their minds. The literature has given labels such as a drug, restricted substance, narcotic, and psychotropic substance to these tools that people use to get away from problems and obtain temporary happiness (Işık, 2013).

To identify a yearning for any substance as addiction, physical/psychological deprivation symptoms that prevent the individual from continuing their life must emerge when the individual does not take the substance (Çetin, 2013; Saka, Börtüçene, Çiçek, & Berent, 2013). Substance addiction is a wide concept that includes substances at the center of people's lives, individual loss of control over a substance, or the emergence of physical/psychological problems originating from the substance (Altuner, Engin, Gürer, Akyay, & Akgül, 2009).

One can categorize the causes of addiction in three categories: causes that stem from the self, the family, or the environment.

Self-stemming Causes

This cause of substance abuse in youths can be associated with several factors such as curiosity, peer pressure, desire to prove one's self, lack of self-confidence, loneliness, and difficulty in coping with stress for boosting energy, losing weight, or boosting creativity (Ögel & Tamar, 1997).

The addict's peers, emotional problems, desire to forget the past, use of drugs for dealing with problems, certain experienced traumatic events (death, rape, torture, suffering violence, etc.), and inability to develop a healthy identity in childhood (Bayram, 2013) can be considered as causes of addiction stemming from one's self.

Causes Stemming from Family

Even if parents warn their children about addiction, modeling through their behavior is much more effective (Gümüş, Kurt, Günay Ermurat, & Feyatörbay, 2011). For this reason, one cannot ignore the effect of parents' attitudes and behaviors on children regarding substance use. A family's negative attitudes, apathy, excessive discipline, use of violence, conflicts at home, and substance-addictions (Bayram, 2013) are the main factors stemming from family for youths' initial use of substances.

Factors such as an over-tolerant mother, domineering father figure, lack of compassion/affection, continuously and strictly punishing the child, choosing an environment outside

of the family to prove oneself, trying to correct a lack of affection from the family by seeking it outside, and trying to cope alone with problems can cause a child to enter harmful environments and use addictive substances (Altıntaş et al., 2004).

Causes Stemming from the Environment

Adult behavior related to substance use and addiction in society can create confusion for children and youths (Gümüş et al., 2011). Social factors such as industrialization, migration, poverty, unemployment, living in a low-income region, and having easy access affect substance use (Bayram, 2013).

According to the [European Monitoring Centre for Drugs and Drug Addiction's \(EMCDDA\) 2017 European Drug Report](#), the mortality rate due to overdoses in Europe in 2015 were estimated at 20.3 deaths per million for those aged 15–64. According to the latest data available, rates of over 40 deaths per million were reported in eight northern European countries, with the highest rates reported in Estonia (103 per million), Sweden (100 per million), Norway (76 per million), and Ireland (71 per million), while 20 per million in Turkey. The increase in substance use among youths especially is a threat to future society. Adolescents leave the family to gain independence and prove themselves by seeking a new environment. Adolescents might try to prove themselves in their new environment, and this situation brings new problems along with new experiences (Balseven, Özdemir, Tuğ, Hancı, & Doğan, 2002).

In particular, the fact that Turkey has a strategic location in the world in terms of trafficking addictive substances increases the danger even more (Altıntaş et al., 2004). According to the results from a study conducted by Süngü (2014) with 4,628 undergraduate students in Bozok University during the 2012-2013 academic year, the most harmful substances used by students are cigarettes and alcohol. Substance use has become a big problem in Turkey, as in the whole world, which can lead to stigmatization in terms of results. According to the results of a study by Luoma et al. (2007) on 197 patients being treated for substance abuse, participants stated having a high level of stigmatization.

Structuring the prosperity of society using youths who have gained self-consciousness regarding the thought that healthy societies are possible with healthy generations and who have developed awareness about addicts and substance addiction is of great importance for the future of the world and all countries. Having the younger generation make use of preventive services to raise awareness at schools and at the national level is important as part of the struggle against addiction to tobacco, alcohol, drugs, technology, and other substances (Durmuş et al., 2015). To realize this, one must reveal youths' scope and levels of knowledge, awareness, attitudes, and stigmatization. This study was performed for the Determining Knowledge,

Awareness, Attitudes, and Stigmatization of Youth on Substance Addiction and Addicts Project through the support of the Republic of Turkey's Ministry of Youth and Sports in the 2014 Youth Projects Support Program II: Summons Period. This project was conducted using the field research technique. In this context, the aim of this study is to research the differences and their significances among the various dimensions of participants' levels of awareness (knowledge, comprehension, application, analysis, synthesis, and evaluation sub-dimensions), attitudes, and stigmatization regarding substance addiction and addicts according to employment status, educational status, gender, age range, and educational status.

Methodology

The research has been designed as a survey model using the mixed-methods technique. [Harkness et al. \(2006\)](#) stated that all quantities refer to some quality, and all qualities can be present to some quantifiable degree. [Creswell \(2006\)](#) stated that mixed-method studies involve collecting and analyzing quantitative and qualitative data in a single study or multiple studies under one research. The use of mixed methods in our collaborative international research has been essential for trying to understand local meanings, incorporating culturally distinctive constructs into frameworks that enable comparisons across cultures, and establishing a higher level of confidence that it has been done correctly ([Harkness & Super, 2016](#)).

Population and Sample

According to figures from the [Turkish Statistical Institute \(TUIK, 2014\)](#), 1,251,981 youths aged 15-29 live in Ankara, which constitutes the universe of the study. According to the district population density of the universe, 3-layer separation has been deemed as appropriate. As no previous study has been encountered, the ratio of positive or negative patterns for each layer approach was taken as 50%. In this way, we intend to bring the required sample size to the best level. The sample was taken using the stratified random sampling method; layers were made using proportional distribution. Because each layer is taken in equal proportions, the volume of the sample has been calculated prior to stratification.

The required sample size estimates the percentage to be within limits of ± 0.03 (sample size $z = 1.96 \approx 2$), and $p = 0.5$ has been received at a 95% confidence interval, as required by the sample ([Yamane, 2010](#)). This is according to the proportional distribution layer when dispersed on this sample size (see Table1).

$$n_0 = \frac{(z^2 \times P \times Q)}{d^2} = \frac{\left(4 \times \left(\frac{1}{2}\right) \times \left(\frac{1}{2}\right)\right)}{\left(\frac{3}{100}\right)^2} = \frac{10000}{9} \approx 1112 \quad (1)$$

Table 1
Layers Distribution According to Sample Volume

Layers	N_h	W_h	p_h	q_h	d	n_h
1	53,779	0.042955	0.5	0.5	0.03	48
2	135,492	0.108222	0.5	0.5		120
3	1,062,710	0.848823	0.5	0.5		944
Total	1,251,981	1				1,112

1,117 youths have voluntarily participated in the research. Of these participants, 839 are students and 278 are employed; 561 are female and 556 are male; 816 participants are high school graduates, 133 are associate degree graduates, 140 are undergraduates, and 28 have masters/doctorates. According to the participant distribution by age group, 760 are between 15-19 years old, 257 between 20-24 years old, and 100 between 25-29 years old.

Data Collection Tool

The scale used for collecting data in the study was designed as a survey model. The 3-Dimensional Scale (SASSA Scale) used by Potas et al. (2016) for a research project on awareness, attitudes, and stigmatization of substance addiction and addicts has been used. The dimension of awareness, based on Bloom's cognitive domain taxonomy, consist of six sub-dimensions: knowledge, comprehension, application, analysis, synthesis, and evaluation. Accordingly, the Cronbach alpha value for the dimension of awareness is 0.866; for attitude, 0.799; for stigmatization, 0.807, and for the entire SASSA Scale, 0.895. Therefore, the SASSA Scale is reliable.

Data Analysis

Stata SE 13 statistical software has been used in the data analysis. The analysis was made as follows. Descriptive statistical techniques were used to determine awareness levels (knowledge, comprehension, application, analysis, synthesis, and evaluation sub-dimensions), attitudes, and stigmatization levels of youths between the ages of 15-29 living in Ankara, Turkey on substance addiction and addicts.

We aimed to search how the awareness levels (sub-dimensions of knowledge, comprehension, application, analysis, synthesis, and evaluation), attitudes, and stigmatization levels on substance addiction and addicts of youths between 15-29 years of age living in Ankara, Turkey, differ according to demographic characteristics, as well as which dimensions significantly differ in this study. First, a significant difference between the total scores of awareness (knowledge, comprehension, application, analysis, synthesis, and evaluation) was investigated because a total score of homogeneity of variance and normality in the group was not achieved. From the nonparametric tests, the Mann-Whitney U-test was used for two groups and the Kruskal-Wallis test for more than two groups. Second, whether a significant difference exists among the demographic characteristics with general awareness,

attitudes, and stigma (based on the concept of addiction/addicts) was investigated by the Mann-Whitney and Kruskal-Wallis tests; results are given in the tables. To determine the significance of the differences among levels, the Conover-Iman test from among the non-parametric multiple comparison tests was applied.

Findings

Findings Related to Employment Status

According to Table 2, significant differences in the sub-dimension of knowledge were found in favor of students, in the sub-dimension of comprehension in favor of employees, and in the sub-dimension of analysis in favor of students. Students' awareness levels for the sub-dimensions of knowledge and analysis are greater than employees' levels. On the other hand, employees' awareness levels for the sub-dimension of comprehension were greater than students' levels. The sub-dimensions of application, synthesis, and evaluation were not significantly different in terms of employment status. Lastly, we can say that students see themselves more sufficient compared to employees for the sub-dimension of knowledge.

Table 2
Two Independent Samples Mann-Whitney U-Test Results According to Participants' Employment Status in Terms of Awareness Levels

Employment Status	Sub-Dimensions of Awareness	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Two Independent Samples Mann-Whitney U-Test Results (<i>z</i> and <i>p</i> values)	
Student	Knowledge (KD)	839	2.23376	.5108248	483,755.5	3.178	0.0015
Employee		278	2.16232	.5433705	140,647.5		
Student	Comprehension (CD)	839	2.180317	.4683836	454,056.5	-3.234	0.0012
Employee		278	2.254946	.3967493	170,346.5		
Student	Application (ApD)	839	2.140495	.4709868	475,141.5	1.328	0.1842
Employee		278	2.153135	.3971238	149,261.5		
Student	Analysis (AnD)	839	2.159863	.4267831	482,548.5	2.922	0.0035
Employee		278	2.070144	.3763109	141,854.5		
Student	Synthesis (SD)	839	2.142282	.4841607	462,511	-1.397	0.1624
Employee		278	2.196493	.4611522	161,892		
Student	Evaluation (ED)	839	1.972586	.4144187	468,326.5	-0.146	0.8836
Employee		278	1.996917	.3872908	156,076.5		

According to Table 3, a significant difference was found for employment status among the received responses for awareness and stigmatization (addicts). This difference favors employees for awareness and stigmatization (addicts). Students' awareness being greater than employees may stem from trainings and projects aimed at raising students' consciousness that have been made –or that are ongoing– by various organizations and firms. Furthermore, employees are prone to greater stigmatization towards addicts than students are. The dimensions of attitude, stigmatization (addiction), and stigmatization do not significantly differ in terms of employment status.

Substance use disorders are the most common problems exposed to the most severe stigmatization. Stigmatization towards substance addicts is directly affected by certain characteristics, such as the addict's personality traits, criminal situation, gender (women are more stigmatized), the properties of the substance (those who use illegal substances are more stigmatized), being unemployed (those with low socioeconomic status are more stigmatized), marital status, and having a comorbid mental illness (Ögel, 2010). Most research on substance abuse stigmatization is about stigmatization toward substance addicts. In this study, we have handled stigmatization both toward substance addicts and toward the phenomenon of substance addiction. Stigmatization to substance addicts is intense according to this study results, but stigmatization to addiction phenomenon is not significantly different.

Table 3
Two Independent Samples Mann-Whitney U-Test Results according to Participants' Employment Status

Employment Status	Dimensions	n	\bar{X}	S	Rank Sum	Two Independent Samples	
						Mann-Whitney U-Test Results (z and p values)	
Student	Awareness	839	2.138217	.2985327	479,771	2.311	0.0208
Employee	(Section 2)	278	2.138992	.2450314	144,632		
Student	Attitude (Section3)	839	2.124127	.6931685	467,872.5	-0.244	0.8073
Employee		278	2.130524	.6657534	156,530.5		
Student	Stigmatization	839	2.299166	.5179181	468,189.5	-0.176	0.8602
Employee	Addiction (Section 4)	278	2.308453	.5377874	156,213.5		
Student	Stigmatization	839	2.483115	.6019831	456,773.5	-2.637	0.0084
Employee	Addicts (Section 4)	278	2.597722	.6031263	167,629.5		
Student	Stigmatization	839	2.39114	.4685107	463,193.5	-1.247	0.2125
Employee	(Section 4)	278	2.453088	.4677782	161,209.5		

Findings Related to Educational Status

According to Table 4, educational status creates a significant difference in terms of awareness for all sub-dimensions. Significant differences among sub-dimensions have been considered as follows.

In the sub-dimension of knowledge, significant differences were found between the sub-dimensions of assoc. degree-undergraduate, assoc. degree-high school, graduate-assoc. degree, undergraduate-graduate, and high school-undergraduate. The awareness levels on the sub-dimension of knowledge for graduate youths are higher than the levels for youths with associate's degrees and those who are undergraduates. The higher level of educational status is the highest level of knowledge. The reason for awareness levels in the sub-dimension of knowledge being higher for youths with a high-school education level compared to youths with associate's degree or undergraduates can be the efficiency of awareness seminars and projects on substance addiction in high schools.

Table 4
Kruskal-Wallis Test Results According to Participants' Educational Status for Awareness and Analysis Results of Differences among Levels for the Dimensions of Awareness

Educational Status	Awareness Sub-Dimensions	n	\bar{X}	S	Rank Sum	Kruskal-Wallis Test Results (χ^2 and p values)	Differences between Levels
High School	Knowledge (KD)	816	2.246936	.530502	479,191.00	33.787 0.0001	Assoc. Degree-Undergrad Assoc. Degree – High School Graduate- Assoc. Degree Undergrad- Graduate High School- Graduate
Assoc. Degree		133	2.044173	.3318607	56,546.00		
Undergrad		140	2.152679	.4602128	71,161.00		
Graduate	Comprehension (CD)	28	2.446429	.8906852	17,505.00	33.427 0.0001	Undergrad- Graduate High School- Graduate Assoc. Degree- High School
High School		816	2.15671	.4437814	432,877.50		
Assoc. Degree		133	2.280075	.1577769	92,909.50		
Undergrad	Application (ApD)	140	2.200893	.312975	80,708.00	9.878 0.0196	Graduate- High School Assoc. Degree- UG High School- Assoc. Degree Undergrad- Assoc. Degree- Undergrad
Graduate		28	2.086735	.718337	13,639.00		
High School		816	2.099877	.4599163	445,115.50		
Assoc. Degree	Analysis (AnD)	133	2.329887	.3420977	93,470.00	33.676 0.0001	Assoc. Degree- High School Undergrad- Assoc. Degree Graduate- Assoc. Degree High School- Graduate
Undergrad		140	2.092857	.4284119	73,759.50		
Graduate		28	1.964286	.4650482	12,058.00		
High School	Synthesis (SD)	816	2.172028	.4928067	466,262.00	21.691 0.0001	Assoc. Degree- Undergrad Graduate- Undergrad High School- Graduate Undergrad- Undergrad
Assoc. Degree		133	2.009398	.3811441	60,261.00		
Undergrad		140	2.240179	.4369068	85,137.00		
Graduate	Evaluation (ED)	28	1.955357	.5139425	12,743.00	22.384 0.0001	High School- Graduate Undergrad- High School Assoc. Degree- High School
High School		816	2.007703	.4003138	477979.00		
Assoc. Degree		133	1.936627	.4460413	68003.50		
Undergrad		140	1.869388	.3280485	64776.00		
Graduate		28	1.877551	.6349773	13644.50		

In the sub-dimension of comprehension, significant differences were found between assoc. degree-high school, graduate-high school, and assoc. degree-undergraduate. The awareness levels for the sub-dimension of comprehension of youths with an associate's degree are higher than youths with a high school or undergraduate education level. In the sub-dimension of application, significant differences are found between assoc. degree-high school and assoc. degree-undergraduate. The awareness levels for the sub-dimension of application of youths with a high-school education

level are higher than youths with an associate's degree. This finding is parallel to the findings for the sub-dimension of knowledge.

In the sub-dimension of synthesis, significant differences are found between assoc. degree-high school, undergraduate-assoc. degree, graduate-undergraduate, and high

Table 5
Kruskal-Wallis Test Results according to Participants' Educational Status and Analysis Results of Differences among Levels

Education Status	Awareness Dimensions	N	\bar{X}	S	Rank Sum	Kruskal-Wallis Test Results (χ^2 and p values)	Differences between Levels
High School	Awareness (Section2)	816	2.143871	.3039017	474512.00	18.036 0.0004	High
Assoc. Degree		133	2.117213	.1055691	64239.00		School-Assoc.
Undergraduate		140	2.129401	.2310639	68779.00		Degree
Graduate		28	2.125	.5110678	16873.00		High School-Undergrad
High School	Attitude (Section3)	816	2.051296	.5952904	436357.50	53.361 0.0001	Assoc. Degree
Associate's Degree		133	2.627283	.988467	99310.50		-High School
Undergraduate		140	2.044898	.6039283	71638.00		Undergrad-As-
Graduate		28	2.316327	.7943082	17097.00		soc. Degree
High School	Stigmatization <u>Addiction</u> (Section4)	816	2.299632	.4966018	456417.50	29.283 0.0001	Graduate- High
Assoc. Degree		133	2.195489	.5626796	65528.00		School
Undergraduate		140	2.319643	.6072611	78502.50		Graduate-As-
Graduate		28	2.767857	.3464674	23955.00		soc. Degree
High School	Stigmatization <u>Addicts</u> (Section 4)	816	2.508374	.6060629	456323.00	33.940 0.0001	Graduate- Undergrad
Assoc. Degree		133	2.47995	.5042069	71790.00		High
Undergraduate		140	2.430952	.6412997	71270.50		School-Assoc.
Graduate		28	3.160714	.3966997	25019.50		Degree
High School	Stigmatization (Section 4)	816	2.404003	.4686504	458485.00	46.552 0.0001	Assoc. De-
Assoc. Degree		133	2.337719	.3221883	67759.50		gree-Undergrad
Undergraduate		140	2.375298	.5435541	71661.50		Graduate- High
Graduate		28	2.964286	.2790974	26497.00		School
							Graduate-As-
							soc. Degree
							Graduate- Un-
							dergrad
							High School-
							Undergrad
							Graduate- High
							School
							Graduate-As-
							soc. Degree
							Graduate- Un-
							dergrad
							High
							School-Assoc.
							Degree
							High School-
							Undergrad

school-assoc. degree. The awareness levels for the sub-dimension of synthesis for youths with high school and undergraduate education levels is higher than youths with associate's degree or who are graduates; this finding is remarkable. In evaluating the sub-dimensions, significant differences were found between undergraduate-high school and high school-assoc. degree. The awareness levels for the sub-dimension of evaluation for youths with a high-school education level are higher than youth with undergraduate or associate's-degree education levels. The awareness levels for all sub-dimensions from youths with a high-school education level are generally high. This finding strengthens the efficiency of the performed awareness seminars and projects on substance addiction in high schools during recent years.

According to Table 5, Educational status creates a significant difference for all sub-dimensions. Significant differences among sub-dimensions are considered as follows. In the dimension of awareness, significant differences are found between the levels of high school-assoc. degrees, high school-undergraduate, graduate-assoc. degree, and undergraduate-graduate. The awareness levels of youths with graduate degrees are higher than those who have an associate's degree but lower than those who are undergraduates. In the dimension of attitude, significant differences are found between the levels of high school-assoc. degree, assoc. degree-undergrad and graduate-assoc. degree. The attitude levels of youths who have an associate's degree being more positive than those with high school, undergraduate, or graduate education levels is a remarkable finding. In the dimension of stigmatization toward addiction, significant differences are found between the levels of high school-graduate, assoc. degree-graduate, graduate-undergraduate, high school-assoc. degree, and assoc. degree-undergraduate. In the dimension of stigmatization toward addicts, significant differences are found between the levels of high school-graduate, assoc. degree-graduate, graduate-undergraduate, and high school-undergraduate. In the dimension of general stigmatization, significant differences are found between the levels of high school-graduate, assoc. degree-graduate, graduate-undergraduate, high school-undergraduate, and high school-assoc. degree. In all dimensions of stigmatization, the stigmatization tendency of youths with graduate degrees is greater than that of those with an associate's degree, undergraduate, or high-school education level. In the dimension of stigmatization toward addiction, the stigmatization tendency of youths who are undergraduates is greater than those who have an associate's degree. In the dimensions of stigmatization toward addicts and general stigmatization, the stigmatization tendency of youths with a high-school education level is more than that of those who are undergraduates; furthermore, the stigmatization tendency in general stigmatization of youths with a high-school education level is greater than that of youths with an associate's degree. Overall, the results for stigmatization show that the higher the educational status, the higher the level of stigmatization tendency. These findings are similar to other studies.

Findings Related to Gender

Table 6

Two Independent Samples Mann-Whitney U-Test Results according to Participants' Gender in Terms of Awareness

Gender	Awareness Dimensions	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Two independent samples Mann-Whitney U-Test Results (<i>z</i> and <i>p</i> values)	
Female	Knowledge (KD)	561	2.210116	.5230162	309,492	-0.765	0.4442
Male		556	2.221897	.5169127	314,911		
Female	Comprehension (CD)	561	2.213235	.4530548	326,352	2.387	0.0170
Male		556	2.153552	.3848186	298,051		
Female	Application (ApD)	561	2.085052	.4387045	272,513.5	-7.684	0.0000
Male		556	2.262847	.4473679	351,889.5		
Female	Analysis (AnD)	561	2.165553	.4076198	337,331.5	4.427	0.0000
Male		556	2.080036	.4859529	287,071.5		
Female	Synthesis (SD)	561	2.168449	.4520915	316,334	0.509	0.6107
Male		556	2.142986	.5046096	308,069		
Female	Evaluation (ED)	561	1.907308	.4277978	274,802	-7.282	0.0000
Male		556	2.050617	.3733738	349,601		

According to Table 6, a significant difference is found in the sub-dimension of comprehension in favor of females, the sub-dimension of application in favor of males, the sub-dimension of analysis in favor of females, and the sub-dimension of evaluation in favor of males. The sub-dimensions of knowledge and synthesis do not significantly differ in terms of gender.

Table 7

Two Independent Samples Mann-Whitney U-Test Results according to Participants' Gender

Gender	Dimensions	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Two independent samples Mann-Whitney U-Test Results (<i>z</i> and <i>p</i> values)	
Female	Awareness (Section2)	561	2.124952	.2905246	301,856	-2.179	0.0293
Male		556	2.151989	.2810684	322,547		
Female	Attitude (Section3)	561	2.11561	.5727851	321,870	1.546	0.1221
Male		556	2.13592	.7845186	302,533		
Female	Stigmatization <u>Addiction</u> (Section4))	561	2.340463	.5032865	329,243	2.936	0.0033
Male		556	2.26214	.5391945	295,160		
Female	Stigmatization <u>Addicts</u> (Section 4)	561	2.48574	.5676415	306,751.5	-1.277	0.2017
Male		556	2.53777	.6381062	317,651.5		
Female	Stigmatization (Section 4)	561	2.413102	.425858	314,488	0.165	0.8689
Male		556	2.399955	.5089279	309,915		

According to Table 7, a significant difference is found in terms of gender between received responses for awareness and stigmatization (addicts). This difference is in favor of males for awareness and stigmatization (addicts). The sub-dimensions of attitude, stigmatization (addiction), and stigmatization (general) do not significantly differ by gender.

Findings Related to Age Ranges

Table 8
Kruskal-Wallis Test Results according to Participants' Age Ranges on Awareness; Analysis Results of Differences between Levels in Awareness Sub-Dimensions

Age Ranges	Awareness Sub-Dimensions	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Kruskal-Wallis Test Results (χ^2 and <i>p</i> values)		Differences between Levels
15-19	Knowledge (KD)	760	2.237993	.5094219	439,348.50	8.785	0.0124	(15-19)-(20-24)
20-24		257	2.149805	.5039444	131,366.50			
25-29		100	2.21875	.6198971	53,688.00			
15-19	Comprehension (CD)	760	2.163651	.4379841	410,267.50	12.802	0.0017	(15-19)-(20-24) (20-24)-(25-29)
20-24		257	2.235895	.342124	159,895.50			
25-29		100	2.2	.4663554	54,240.00			
15-19	Application (ApD)	760	2.147932	.4683538	409,302.50	12.712	0.0017	(15-19)-(20-24) (25-29)-(20-24)
20-24		257	2.250695	.3793914	159,715.50			
25-29		100	2.17	.4747576	55,385.00			
15-19	Analysis (AnD)	760	2.126151	.4787337	428,912.00	15.802	0.0004	(25-29)-(15-19) (25-29)-(20-24)
20-24		257	2.169261	.3942626	151,384.00			
25-29		100	1.98	.3146868	44,107.00			
15-19	Synthesis (SD)	760	2.180757	.4892577	438,349.00	10.467	0.0053	(15-19)-(20-24) (25-29)-(20-24)
20-24		257	2.079767	.452002	129,006.00			
25-29		100	2.16125	.4495702	57,048.00			
15-19	Evaluation (ED)	760	2.037782	.378776	463,234.00	59.234	0.0001	(15-19)-(20-24) (15-19)-(25-29)
20-24		257	1.846581	.4669904	118,647.50			
25-29		100	1.868571	.3555839	42,521.50			

According to Table 8, age ranges create a significant difference in terms of awareness for all sub-dimensions. Consideration of the significant differences among sub-dimensions is as follows.

In the sub-dimension of knowledge, significant differences are found between the 15-19 and 20-24 age ranges. Awareness levels on the knowledge sub-dimension of youths whose age range is 15-19 are higher than youths whose age range is 20-24. In the sub-dimensions of comprehension, application, and synthesis, significant differences are found between the 15-19 and 20-24 age groups, and the 20-24 and 25-29. Awareness levels for the sub-dimension of comprehension and application are higher for youths in the 20-24 age range than for others. Awareness levels for the sub-dimension of synthesis of youths in the 15-19 and 25-29 age range are higher than youths in the 20-24 age range. In the sub-dimension of analysis, significant differences are found between the 25-29 and 15-19, as well as between the 25-29 and 20-24 age ranges. Awareness levels for the sub-dimension of analysis for youths in the 25-29 age range are lower than the rest. In the sub-dimension of evaluation, significant differences are found between the 15-19 and 20-24 age ranges, as well as between the 15-19 and 25-29. Awareness levels for the sub-dimension of evaluation for youths in the 15-19 age range is higher than the rest.

Table 9

Kruskal-Wallis Test Results According to Participants' Age Ranges and Analysis Results for the Differences between Levels

Age Range	Dimension	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Kruskal-Wallis Test Results (χ^2 and <i>p</i> values)		Differences between Levels
15-19	Awareness (Section2)	760	2.149044	.2987988	447,334.00	20.629	0.0001	(15-19)-(20-24)
20-24		257	2.122001	.2496202	129,611.00			(15-19)-(25-29)
25-29		100	2.099762	.27146	47,458.00			
15-19	Attitude (Section3)	760	2.061278	.5712442	415,090.50	16.102	0.0003	(15-19)-(20-24)
20-24		257	2.352974	.9427164	160,297.00			(15-19)-(25-29)
25-29		100	2.031429	.5766644	49,015.50			(20-24)-(25-29)
15-19	Stigmatization (Section4)	760	2.320724	.4824128	435,086.50	18.348	0.0001	(25-29)-(15-19)
20-24		257	2.32393	.6138707	146,599.00			(25-29)-(20-24)
25-29		100	2.0975	.5245188	42,717.50			
15-19	Stigmatization (Section 4)	760	2.526535	.6137823	432,796.00	4.974	0.0831	(25-29)-(15-19)
20-24		257	2.509079	.55446	142,237.50			
25-29		100	2.405	.6453907	49,369.50			
15-19	Stigmatization (Section 4)	760	2.423629	.4697611	43,9211.50	18.202	0.0001	(25-29)-(15-19)
20-24		257	2.416505	.4307436	141,986.00			(25-29)-(20-24)
25-29		100	2.25125	.5290208	43,205.50			

According to Table 9, age ranges create significant differences in all dimensions except for stigmatization (addicts). Consideration of the significant differences among sub-dimensions shows the following. In the dimension of awareness, significant differences exist between the 15-19 and 20-24, the 15-19 and 25-29, and the 20-24 and 25-29 age ranges. Awareness levels of youth in the 15-19 age range are higher than both the 20-24 and 25-29. In the dimension of attitude, significant differences are found between the 15-19 and 20-24 and the 15-19 and 25-29 age ranges. The attitude levels of youths in the 20-24 age range are higher than both the 15-19 and 25-29 age ranges. The attitude levels of youths in the 15-19 age range is higher than the 25-29. In the dimensions of stigmatization (addiction) and stigmatization (general), significant differences are found between the 25-29 and 15-19 and between the 25-29 and 20-24 age ranges. The stigmatization levels of youths in the 25-29 age range are higher than the rest. Overall, the results from stigmatization show that the higher the age range is, the higher the stigmatization-tendency level.

Findings Related to Participants' Educational Status in Terms of Addiction

According to Table 10, participants' educational status in terms of addiction showed significant differences in the sub-dimensions of comprehension, analysis, and synthesis in favor "no". Other sub-dimensions do not significantly differ.

Table 10

Two Independent Samples Mann-Whitney U-Test Results according to Participants' Educational Status in Terms of Addiction in Terms of Awareness

Educational Status on Addiction	Awareness Dimensions	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Two Independent Samples Mann-Whitney U-Test Results (<i>z</i> and <i>p</i> values)	
Yes	Knowledge (KD)	40	2.021875	.6810669	18,962	-1.703	0.0885
No		1077	2.223189	.511818	605,441		
Yes	Comprehension (CD)	40	2.015625	.7387986	18,437	-1.976	0.0482
No		1077	2.189763	.4040573	605,966		
Yes	Application (ApD)	40	2.092857	.8779823	20,078	-1.148	0.2508
No		1077	2.176549	.4282637	604,325		
Yes	Analysis (AnD)	40	1.6125	.6733241	12,560	-4.919	0.0000
No		1077	2.141945	.4286005	611,843		
Yes	Synthesis (SD)	40	1.625	.5110949	10,576	-5.903	0.0000
No		1077	2.175487	.4664216	613,827		
Yes	Evaluation (ED)	40	1.842857	.7086223	18,585	-1.906	0.0566
No		1077	1.983685	.3918832	605,818		

Table 11

Two Independent Samples Mann-Whitney U-Test Results according to Participants' Educational Status in Terms of Addiction

Educational Status On Addiction	Dimensions	<i>n</i>	\bar{X}	<i>S</i>	Rank Sum	Two Independent Samples Mann-Whitney U-Test Results (<i>z</i> and <i>p</i> values)	
Yes	Awareness (Section2)	40	1.868452	.5845007	18,025.5	-2.164	0.0305
No		1077	2.148436	.2639562	606,377.5		
Yes	Attitude (Section3)	40	1.907143	.8052353	20,641	-0.865	0.3872
No		1077	2.133837	.6804201	603,762		
Yes	Stigmatization <u>Addiction</u> (Section4)	40	2.09375	.815883	19,748.5	-1.319	0.1872
No		1077	2.309192	.5075306	604,654.5		
Yes	Stigmatization <u>Addicts</u> (Section 4)	40	2.345833	.8789948	18,920	-1.726	0.0844
No		1077	2.517796	.5910649	605,483		
Yes	Stigmatization (Section 4)	40	2.219792	.7972971	18,250	-2.053	0.0401
No		1077	2.413494	.4512659	606,153		

According to Table 11, a significant difference is found in participants' educational status for addiction between the responses received for awareness and general stigmatization in favor of "no". Other sub-dimensions do not significantly differ.

Discussion and Conclusion

According to the research results, (a) significant differences in the sub-dimension of knowledge have been found in favor of students, in the sub-dimension of

comprehension in favor of employees, and in the sub-dimension of analysis in favor of students, and (b) significant differences are found for employment status with the received responses for awareness and stigmatization (addicts).

Educational status creates a significant difference in terms of awareness for all its sub-dimensions, attitude, and stigmatization. The results of stigmatization show that the higher the educational status level, the higher stigmatization-tendency level becomes. These findings are similar to other studies regarding the possible relationship and differences between mental illness with substance addicts and job stress with stigmatizing attitudes. According to Coy's (2010) research results obtained with the participation of 157 undergraduate- and graduate-level psychological counselors working in urban areas, the higher the level of job stress in either group (undergraduate- and graduate-level counselors), the greater the increase in the level of stigmatizing attitudes.

Significant differences in the sub-dimension of comprehension were found in favor of females, in the sub-dimension of application in favor of males, in the sub-dimension of analysis in favor of females, and in the sub-dimension of evaluation in favor of males. The sub-dimensions of knowledge and synthesis do not significantly differ in terms of gender. Gender creates a significant difference between the received responses for awareness and stigmatization (addicts). This difference is in favor of males for awareness and stigmatization (addicts). Males' awareness is greater than females.

Furthermore, females make more stigmatization toward addicts than males. Men and women's perspectives on events, perceptions, and information strategy use are different. According to results of the study developed by Akpınar Özdemir (2011) with the participation of 2,035 university students, female students have higher awareness of substance addiction than male students. Differences in stigmatization due to gender have been discussed in research studies.

According to participants' educational status with addiction, significant differences in the sub-dimensions of comprehension, analysis, and synthesis have been found in favor those who said, "No." Significant differences in participants' educational status with addiction have also been found between the received responses for awareness and general stigmatization in favor of those who said, "No." Other sub-dimensions do not significantly differ.

Recommendations

Youths should be trained to interpret the feelings they experience (happiness, anger, sadness) and their thoughts (blameworthiness, unskillfulness), as well as be informed about possible psychiatric illnesses. In that kind of situation, parents should also be trained on such matters as communication skills, addictive substances, and

deprivation statements. In addition, preventative measures should be also taken regarding substance-use relapse.

The prevalence of substance use and related disorders in the world and in Turkey is steadily increasing (Bilici, Karakaş Uğurlu, Tufan, Güven, & Uğurlu, 2012). In this context is a growing need for projects and approaches that will provide a solution to the problem of the increase in drug addiction, especially among younger generations aged 15-25 years (Yaman, 2014). New projects in terms of raising awareness about drug abuse should be made.

According to the Turkish Monitoring Center for Drugs and Drug Addiction (TUBİM, 2017), by the end of the 2016-2017 academic year, 9,205,302 students, 2,070,427 parents, and 612,654 teachers have been trained in fighting drugs in the context of the Turkey Against Addiction Education Program (TBM). Overall, seminars, conferences, information meetings, projects, and so on have had an impact on youths' awareness levels. Research studies and any education-based study of projects on substance abuse should be done, anytime and anywhere in the world, because children and young people are the worlds' future.

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