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Perception of drug addiction among Turkish university students: Causes, cures, and attitudes

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Abstract

In this paper, university students' beliefs about different causes of drug addiction and cures for it were investigated. Principal component analysis (PCA) with Causes of Drug Abuse Scale (CADAS) revealed four components: problems and coping, sensation seeking, social environment, and disposition. PCA with Cures for Drug Abuse Scale (CUDAS) produced four components: help seeking and avoidance, self-change, social activity, and change. Separate MANOVAs were performed and significant gender differences were found between two of CADAS' and three of CUDAS' components. Analysis on attitude scale revealed gender and drug main effects and an interaction effect. Men had more positive attitudes toward "drug" vignette. The most negative attitudes were found toward "heroin" vignette and the most positive attitudes were found toward the "cannabis" vignette. Results indicated that those who has known a drug user had more positive attitudes.

Keywords: Drug addiction; Cannabis; Heroin; Cocaine; Attitude; Lay theories

1. Introduction

Drug abuse and addiction has become one of the most important public health problems in recent years. Information providing role of lay theories is undeniable in preventive and rehabilitative works related to drug addiction. Several studies investigated lay beliefs and attitudes related to different kinds of drugs. For instance, Furnham and Thomson (1996)

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found that participants' political views were the most important determinant of lay beliefs about heroin addiction. Brook, Feigin, Sherer and Geva (2001) reported that high-school students have inadequate knowledge on illicit drugs and their attitudes become more liberal as age increases. Some studies revealed that attitudes toward drug use also consistently predicted drug use (e.g., Hawkins, Catalano, & Miller, 1992).

Research also indicated that certain variables increase the risk of drug abuse. Younger people are more prone to drug abuse (e.g., Royo-Bordonada, Cid-Ruzafa, Martin-Moreno, & Guallar, 1997). Lifetime prevalence of abuse is higher between the ages of 18 and 29 than other cohorts for both men and women (Young et al., 2002). University students fall into this age group and are also prone to drug abuse. Social pressures exerted by peer groups and group norms may increase drug abuse risks. Kauffman, Silver and Poulin (1997) examined gender differences in perception of drug abuse and attributions for causes and preventive strategies. Their study revealed a general gender difference; women more strongly believed that biological and environmental factors were the main causes of drug abuse. In addition, women more frequently stated relationship problems and stress as environmental and situational causes.

In the present study, university students' beliefs about different causes of drug addiction and cures for it were investigated with a factor analytic method. Specifically, the present study aims to answer three questions: (1) What are the university students' attributions for causes and cures for different drugs? (2) Is there an attitudinal difference in terms of gender and drug types? and (3) Does previous contact with a drug user has an effect in determining attitudes toward drugs?

2. Participants

Three hundred and fourteen private and state university students participated in this study voluntarily. Majority of the students were from a private university in Ankara, Turkey. The sample consisted of 166 women and 148 men and the mean age for the entire sample was 20.9 (S.D. = 1.5) and ranged from 18 to 27. One hundred and thirteen (36.9%) participants reported previous contact with a drug user and 193 of them reported no contact. No information about the nature of the contact was collected because of the confidentiality.

3. Procedure and measures

3.1. Demographic information questions (DIQ)

Participants were asked to indicate their year of birth, gender, education level of parents, and previous contact with a person who use the drug presented on DIQ. Because our purpose is to collect information about different kinds of drug and gender differences in attitudes, we used eight forms (four forms × two sexes) differing from each other only with name of drug and gender of the person on the vignettes. In addition to heroin, cocaine, and cannabis, the last drug in the study was labeled as *drug* because it is a general name given to all psychotropic drugs

among lay people in Turkey. In the public use, the term drug refers to narcotics in scientific classification of drugs and for the lay people, it represents all types of illegal drugs.

3.2. Causes of Drug Abuse Scale (CADAS)

An 84 item scale for causes of drug abuse was developed. Some items in the scale were generated by the authors and some of them were obtained by reviewing Turkish journals and books about the drugs. All items were written in third person singular because there is no gender typing in Turkish. The scale followed the statement "A person begins taking [*name of the drug*] because s/he. . .." In each of the scales, name of the drug was changed accordingly. Participants used five-point Likert-type scale to indicate the importance of a given cause (1 = *not important at all*, 5 = *very important*).

3.3. Cures for Drug Abuse Scale (CUDAS)

A 67-item scale was developed in the same way with CADAS. Twenty-nine items were either taken or adapted from Cures for Depression Scale (Çırakoğlu, Kökdemir, & Demirutku, 2003). The scale begins with the question, "What should a person do to overcome [name of drug] addiction?" Participants stated their agreements on a five-point Likert-type scale (1 = *completely agree*, 5 = *completely disagree*).

3.4. Attitude scale

The scale consisted of 20 items and is derived from Grakoğlu (1999). In the original study, the scale was used to measure attitude toward a mentally ill person depicted on a vignette. The scale begins with the instruction "X is a [*name of the drug*] addicted man" or "X is a [*name of the drug*] addicted woman". These statements were used as vignettes. Participants were asked to answer the question in the light of this statement. Similarly, participants stated their agreements on a five-point Likert-type scale (1 = *certainly yes*, 5 = *certainly no*). Four items were reversed before analyses. Attitudes toward vignettes were found by taking mean scores for the scale. Higher scores in the scale indicated more positive attitudes. DIQ, CADAS, CUDAS, and attitude scale were administered together in group and individual sessions in university campuses.

4. Results

4.1. Causes of Drug Abuse Scale

Prior to Principal component analysis (PCA), a reliability analysis was performed for the 84-item scale. Because corrected item total correlations for all items was high enough ($\geq$.20) all items were used for further analyses. PCA with an 84-item scale revealed 19 components. However, examining scree plot indicated a four-component solution. Then, PCA was

replicated with varimax rotation by forcing the number of components to four with a cutoff level of .45. Table 1 presents PCA results, eigenvalues, internal consistencies, and variance explained by each component of CADAS with sample items.

The first component consisted of 26 items that were mainly related to problems and coping methods that people utilize. Therefore, the component was named as *problems and coping*. The second component consisted of 13 items related to *sensation seeking*. The third component was labeled as *social environment* and included 12 items pertaining to effects of social environment, such as peers, date, stars, and the like. The fourth component consisted of 4 items and labeled as *disposition*. The four components explained 37.79% of total variance and internal consistency for the total scale was .95. Correlations among components are presented Table 2.

A 2 (gender) × 4 (drug type) MANOVA was performed on four CADAS components: problems and coping, sensation seeking, social environment, and disposition. With the use of Wilks' criterion, a main effect for gender was obtained [$F(4,302) = 10.65$, $P < .05$, $\eta^2 = .01$]. Analysis of the univariate F test revealed that gender had significant effects on problems and coping [$F(1,305) = 9.92$, $P < .05$, $\eta^2 = .03$] and sensation-seeking component [$F(1,305) = 9.57$, $P < .05$, $\eta^2 = .03$]. While women were high on problems and coping component ($M = 3.58$, S.D. = 0.05), men were high on sensation-seeking component ($M = 2.66$, S.D. = 0.05).

4.2. Cures for Drug Abuse Scale

A reliability analysis was performed for the 67-item scale to examine the corrected item total correlations. Twelve items had low correlations (≤.20) so they were excluded from the scale, and the remaining 55 items were used for further analyses. In an initial analysis, PCA

Table 1
Means, standard deviations, reliabilities, and PCA results of the CADAS (three sample items are presented for each component)

A person begins taking [*name of the drug*] because s/he...	*M*	S.D.	Component			
			1	2	3	4
Has emotional problems	3.62	1.10	.71			
Has problematic communication with his/her family	3.66	1.11	.71			
Wants to get rid of his/her sufferings	3.73	1.15	.70			
Has been experiencing sexual dissatisfaction	2.46	1.08		.62		
Wants to get sexual power by this way	2.52	1.14		.58		
Imitates stars	2.46	1.11		.54		
Imitates others	3.84	1.05			.68	
Has friends who are [name of drug] dependent	3.97	.96			.65	
Was influenced from social environment	3.81	.99			.65	
Is not educated	3.26	1.35				.69
Has a weak personality	3.87	1.18				.67
Is weak willed	3.91	1.11				.66
Eigenvalue			12.14	7.50	7.38	4.71
Variance (%)			14.46	8.93	8.78	5.61
α			.94	.84	.86	.79

$N = 314$.

Table 2
Correlation matrix among CADAS components

Component name	Problems and coping	Sensation seeking	Social environment	Disposition
Sensation seeking	.44			
Social environment	.39	.52		
Disposition	.30	.18	.32	
M	3.45	2.55	3.70	3.58
S.D.	0.73	0.65	0.67	0.95

$N = 314$, all correlations are significant at $P < .05$.

with 55-item scale revealed 10 components. The examination of scree plot indicated a four-component solution. Then, another PCA was performed by forcing component numbers to four with a cutoff level of .45. Table 3 presents PCA results, eigenvalues, internal consistencies, and variance explained by each component of CUDAS with sample items.

The first component that included 16 items was *help seeking and avoidance*. *Self-change* was the second component that appeared in the PCA. This component consisted of 15 items related to change that people can make with themselves. The third component of CUDAS was *social activity* and included 11 items. As the name implies, this component was related to social activities and hobbies. The final component consisted of 5 items and it was named as *change*. The four components of CUDAS explained 53.39 of total variance and internal consistency for the total scale was .96. Correlations among components are presented Table 4.

A 2 (gender) × 4 (drug type) MANOVA was performed on four CUDAS components: help seeking and avoidance, self-change, social activity, and change. With the use of Wilks'

Table 3
Means, standard deviations, reliabilities, and PCA results of the CUDAS (three sample items are presented for each components)

What should a person do to overcome [name of drug] addiction?	*M*	S.D.	Component			
			1	2	3	4
S/he should...						
Give up his/her relationship with people who use [name of drug]	1.56	1.06	.81			
End up relationship with his/her friends who use [name of drug]	1.59	1.06	.76			
Consult rehabilitation centers	1.58	1.11	.76			
Care about people who want to help her/him	1.68	.96		.72		
Be active in areas where s/he could be successful	1.81	1.03		.69		
Believe that s/he can overcome [name of drug] problem	1.53	1.05		.68		
Make sports	2.13	1.10			.60	
Listen to music	2.29	1.11			.59	
Engage in artistic activities	2.35	1.14			.56	
Not carry too much money	2.74	1.29				.64
Limit places that s/he visits	2.42	1.22				.59
Move to another city.	3.32	1.17				.49
Eigenvalue			11.61	10.70	4.60	2.98
Variance (%)			20.73	19.11	8.22	5.32
α			.94	.95	.89	.56

$N = 314$.

Table 4
Correlation matrix among CUDAS components

Component name	Help seeking and avoidance	Self-change	Social activity	Change
Self-change	.78			
Social activity	.71	.79		
Change	.23	.30	.34	
M	1.78	1.75	2.05	2.73
S.D.	0.83	0.84	0.73	0.73

$N = 314$, all correlations are significant at $P < .05$.

criterion, a gender main effect was obtained [$F(4,302) = 5.59$, $P < .05$, $\eta^2 = .06$]. Univariate F test revealed that gender had significant effects on help seeking and avoidance [$F(1,305) = 12.73$, $P < .05$, $\eta^2 = .04$], self-change [$F(1,305) = 22.27$, $P < .05$, $\eta^2 = .06$], and social activity [$F(1,305) = 11.24$, $P < .05$, $\eta^2 = .03$] components. Women had low scores than men in all three components, indicating greater agreement with items. Women's score on help seeking and avoidance component ($M = 1.63$, S.D. = 0.65) was lower than men ($M = 1.96$, S.D. = 0.68). Self-change component yielded similar result; scores of women were lower ($M = 1.54$, S.D. = 0.64) than that of men ($M = 1.98$, S.D. = 0.68). On social activity component, women also had lower scores ($M = 1.92$, S.D. = 0.57) than men ($M = 2.20$, S.D. = 0.60).

4.3. Test with attitude scale

An ANOVA, 4 (drug type) × 2 (gender) × 2 (gender of vignette), was carried out with attitude scale scores as being the dependent variable. There was a main effect for gender and drug type and an interaction effect between these variables. Men showed significantly positive attitudes toward the person depicted in vignette ($M = 2.84$, S.D. = 0.56) than women did [$M = 2.67$, S.D. = 0.53; $F(1,291) = 4.80$, $P < .05$, $\eta^2 = .01$]. The effect of drug type was also significant [$F(3,291) = 2.63$, $P < .05$, $\eta^2 = .02$]. Post hoc analyses using the Scheffe test indicated that attitudes toward the heroin vignette ($M = 2.60$, S.D. = 0.07) was significantly negative than cannabis vignette ($M = 2.91$, S.D. = 0.07). A significant interaction effect was obtained between gender and drug type [$F(3,291) = 2.82$, $P < .05$, $\eta^2 = .02$]. Post hoc analysis indicated that men had more positive attitudes ($M = 3.02$, S.D. = 0.59) toward the drug vignette then women [$M = 2.51$, S.D. = 0.62; $t(82) = 3.80$, $P < .05$]. Effects of previous contact with a drug user on attitudes were tested by t test. Effect of previous contact was not taken as a variable in ANOVA because of the insufficient information about the quality of contact. However, an independent analysis revealed a significant attitudinal difference between those who know a drug user ($M = 3.01$, S.D. = 0.72) and those who do not [$M = 2.62$, S.D. = 0.62; $t(297) = 4.84$, $P < .05$].

5. Discussion

The present study examined university students' attributions of causes and cures for drug addiction as well as their attitudes toward different kind of drugs. The study revealed four

components for causes of drug abuse: problems and coping, sensation seeking, social environment, and disposition.

The first component consisted of items related to people's problems and methods they utilize to cope with these problems. Because CADAS included enough items, problems and coping methods could have expected to be separate components. However, such a separation was not observed. Having significant problems was stated as a reason to start using drug, according to some participants. Some other group of participants made different causal attribution and emphasized coping function of drug. Emphasis on different aspects of problems may be one explanation for the unity in the component. Sensation seeking is another component among the causes of beginning to use a drug. A considerable number of items in the component were related to sexuality. For this component, our sample seems to make causal attributions parallel to scientific observations. For instance, Arnett (1996) reported a significant relationship between sensation seeking and sexual behavior and drug use. Sensation seeking was also found to be a significant predictor of substance abuse (Wagner, 2001). Influence of social environment is another category of causal attribution that our data proposed. Because our sample consisted of young university students, this was an expected result. Peers and friends are the most important component of social environment of young people so they are expected to influence young people in both positive and negative ways.

Results of the present study revealed some gender differences for both CADAS and CUDAS components. Women perceived problems and coping items as more important causes for using drugs. This result provides support for the Kauffman et al. (1997) study; as compared to men, women perceived interpersonal relationships and environmental stress as causes of drug abuse. Because our sample consists of better educated university students who are familiar with the Western lifestyle, this similarity is not unexpected.

As for the CUDAS scale, analysis revealed four components: help seeking and avoidance, self-change, social activity, and change. Except for the change component, women had lower scores than men, indicating that women have strong preferences in overcoming drug dependence. Several studies reported that women tend to perceive use of drugs in different conditions (e.g., occasional and experimental) that are more risky than men (Spigner, Hawkins, & Loren, 1993). Therefore, as a result of such an attribution, women may think that a multidimensional change is necessary to overcome drug abuse.

Attitudes toward different drugs were another interest of the present study. Result showed different attitudinal patterns for different kinds of drugs. Among the drugs chosen, heroin had the most negative attitudes, followed by cocaine. In addition, the most positive attitudes were obtained toward cannabis. In general, men had more liberal attitudes toward the vignettes. Analysis showed that 46.1% of men and 28.4% of women reported previous contact with a drug user. Because men reported more previous contact, they may have a more realistic view of drugs. However, this explanation should be taken cautiously because of the insufficient information on quality of contact. Analysis indicated that men had more positive attitudes toward drug vignette than women. Gender difference on this vignette may be interpreted as a general indicator of attitude difference between men and women. In general, men had more positive attitudes toward drugs and the difference is mostly visible in the most general

category of drug. On the other hand, what is meant by "drug" and whether there exists a specific substance that can be substituted for the drug should be examined in detail in the future. Future research should focus on sources of gender differences in attributions specifically and effects of social contact in lay theories.

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