PREVALANCE OF SMOKING, DRINKING AND ILLICIT DRUG USE AMONG ADOLESCENTS IN MERSIN, TURKEY: COMPARISON OF SECONDARY SCHOOL, HIGH SCHOOL AND UNIVERSITY STUDENTS.

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ABSTRACAT

Purpose: The objective of this study was to determine prevalence of smoking, drinking and illicit drug use among secondary school, high school and university students in Mersin city of Turkey.

Method: A total of 3282 students were included. A 45-item self-administered questionnaire was used to collect data.

Findings: Sixth grade students had significantly lower lifetime rates for the use of all substances. Smoking was observed at highest rate among 10th grade students. Rate of current smoking and alcohol use were significantly lower in 6th grade. Current prevalence of cannabis, inhalants and other drugs were lowest in the university group. Lifetime and current prevalence of smoking and alcohol use were significantly more frequent among male students in all groups.

Discussion and Conclusion: We found that the rates of illicit drug use among adolescents in Mersin were lower than those in most Western countries. Although significantly lower compared to figures from other countries, cannabis was still the most commonly used illicit substance in our study sample.

Keywords: alcohol, prevalence, smoking, substance use

MERSİN'DE ERGENLER ARASINDA SİGARA, ALKOL VE YASA DIŞI MADDE KULLANIM ORANLARININ YAYGINLIĞI: ORTAOKUL, LİSE VE ÜNİVERSİTE ÖĞRENCİLERİNİN KARŞILAŞTIRILMASI

ÖZET

Amaç: Bu çalışmanın amacı Mersin'de ortaokul, lise ve üniversite öğrencileri arasında sigara, alkol ve yasa dışı madde prevalansını tesbit etmektir.

Yöntem: Çalışmaya toplam 3282 öğrenci alınmıştır. Veriler, 45 soruluk bir anket formu doldurularak toplanmıştır. Altıncı sınıf öğrencileri arasında tüm maddelerin kullanımı belirgin şekilde daha düşüktü.

Bulgular: Sigara kullanım oranlarının onuncu sınıf öğrencileri arasında en yüksek olduğu gözlendi. Hâlen sigara ve alkol kullanım oranı, altıncı sınıfta belirgin olarak daha düşüktü. Esrar, uçucu maddeler ve diğer ilâçların hâlen kullanımı üniversite grubunda en düşüktü. Sigara ve alkolün yaşam boyu ve hâlen kullanım yaygınlığı ise tüm gruplarda erkek öğrenciler arasında daha sıktı.

Tartışma ve Sonuç: Mersin'de ergenler arasında yasa dışı madde kullanım oranlarını bir çok Batı ülkesindeki oranlardan daha düşük bulduk. Diğer ülkelere göre düşük olmasına rağmen bizim örneklemimizde de esrar en yaygın olarak kullanılan yasa dışı madde idi.

Anahtar Kelimeler: alkol, prevalans, sigara, madde kullanımı

NTRODUCTION

Mersin is an international harbor city on the Mediterranean coast of Turkey. This city receives migrations from many other parts of Turkey and shelters people from various ethnic roots and different socioeconomic strata. The majority of inhabitants are Muslims.

There is no clear data about the prevalence of smoking, alcohol and illicit drug use in Mersin. Previous studies conducted in different regions of Turkey on different samples have reported that the prevalence of illicit drug use was significantly lower than the rates found in European countries and USA (Martinez et al. 1999, Gfroerer et al 1997, Webb et al. 1996, Thomas et al. 1993, Macfadden and Woody 2000). Views about alcohol and rates of use may vary according to geographic, cultural, religious and educational (Ögel et al. 2001).

Lifetime prevalence of illicit drug use was found 3.3% among high school students (15-17 year age group) in a study done in 15 different cities of Turkey in 1998 (Ögel et al 2000). The

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prevalence rates of illicit drug use among adolescents living in Istanbul, the largest metropol of Turkey, were reported to vary between 2.6% and 6.7% and the prevalence rates found in other cities of Turkey generally remain below those rates (Akvardar et al 2001, Doğan 2001, Yüksel et al. 1994, Griesler and Kandel 1998).

The objective of this study was to determine and compare the prevalence of smoking, drinking and illicit drug use among secondary school, high school and university students.

METHOD

A sample size of approximately 10% of total student enrolment was selected from sixth grade and tenth grade students. University sample consisted of students from each school year of selected faculties. The number of participating students needed in each school was obtained through stratification, and by weighting for the enrolled student population in each subgroup. The final sample was derived using a simple random sampling technique.

A 45-item self-administered questionnaire was used to collect data. The questionnaire included questions about socio-demographic characteristics and lifetime and current use of cigarette, alcohol, cannabis, inhalants and other illicit drugs. Other illicit drugs refer to cocaine, opiates, hallucinogens, amphetamines, ecstasy and tranquilizers. Current use refers to use within the past month. The self-completion exercise was carried out during a class hour, after explanations and assurances of confidentially. Anonymity was strictly maintained. The students' lecturers were not present during the exercise which was supervised by the authors and trained research assistants. No side talks were allowed whilst the questionnaires were being completed.

Data were analyzed with chi-square test using SPSS for Windows computer program.

Table 1. Participants by sex and age

	Female n (%)	Male n (%)	Total n	Mean age (SD (range)
Sixth grade	514 (43.5)	673 (56.5)	1187	11.9 (0.8 (11-16)
Tenth grade	532 (44.6)	662 (55.4)	1194	16 (0.9 (15-20)
College	420 (46.6)	481 (53.4)	901	20.5 (2.2 (16-31)
Total	1466	1811	3282	-

Table 2. Comparison of lifetime prevalence rates in three groups.

Substance	Sixth grade (%)	Tenth grade (%)	University (%)	Mean (%)	P<
Cigarette	15.4	56.9	46.1	39.0	0.001
Alcohol	12.1	54.0	50.5	37.6	0.001
Cannabis	1.7	4.0	4.7	3.4	0.001
Inhalants	3.1	5.4	5.0	4.5	0.05
Other drugs	1.7	2.8	3.9	2.7	0.05

Table 3. Comparison of current prevalence rates in three groups.

Substance	Sixth grade (%)	Tenth grade (%)	University (%)	Mean (%)	P<
Cigarette	4.7	25.3	38.7	22.0	0.001
Alcohol	3.5	18.8	43.9	20.3	0.001
Cannabis	2.1	2.9	1.1	2.1	0.05
Inhalants	2.5	2.3	0.9	2.0	NS
Other drugs	2.4	2.3	0.8	1.9	0.05

FINDINGS

Distribution of the study sample by sex and age group is given in the Table 1.

Sixth grade students had significantly lower lifetime rates for the use of all substances examined. Cigarette smoking was observed at highest rate among 10th grade students. Similar lifetime prevalence rates for other substances were found between 10th grade students and university students.

Rate of current smoking and alcohol use were significantly lower in 6th grade compared to other groups. Highest rates were found in the university group. On the other hand, current prevalence of cannabis, inhalants and other drugs were lowest in the university group, and the corresponding rates were similar in 6th and 10th grade students.

Lifetime prevalence of cigarette smoking and alcohol use were significantly more frequent in male students than the female students in all groups.

Use of cannabis and other illicit drugs were not different between the males and females in 6th grade, but were significantly more frequent in males in 10th grade and university students. Inhalant use did not show an association with sex.

Prevalence of current cigarette smoking and alcohol use were significantly more frequent in male students than the female students in all groups. The current use of cannabis was not different between the males and females in 6th grade, but was significantly more frequent in males in 10th grade and university students. The current prevalence of inhalant use was not related with sex. The rates for the current use of other illicit drugs were higher in male students in 6th grade and 10th grade, whereas it was similar in male and female students in university students.

DISCUSSION

As in other studies from Turkey, we found the rates of illicit drug use among adolescents in Mersin lower than those in most Western countries. Several studies have shown that prevalence of substance use significantly vary according to ethnic, religious, geographical and cultural differences (Griesler and Kandel 1998, Web et al. 1996). It is interesting to note that although Turkey is located on a transport way of illicit substances, use these substances are found quite low. As factors associated with this finding remain to be cleared, it has been suggested that cultural factors, social attitudes, peer behaviors, laws, and drug cost and availability all influence initial experimentation with substances, including alcohol and tobacco (kaplan). Social and cultural factors profoundly influence the availability of illicit drugs, which in turn influence which groups in a society are most likely to become users.

Cannabis is the most commonly used illicit substance throughout the world (Macfadden and Woody 2000). Although significantly lower compared to figures from other countries, cannabis was still the most commonly used illicit substance in our study sample.

Current rates of cannabis, inhalants and other substances were lowest in the college group and rates from 6th and 10th grades were similar. A somewhat similar finding was reported from US, where, for young adults (18 to 25), marijuana use was similar across all educational levels except for lower rates of current use among college graduates. For those ages 26 to 34, current use decreased significantly at higher educational levels. Individuals with less than a high school diploma had higher rates of past-year and current marijuana use than those all in other education categories. Among adults 35 and older, however, this trend was reversed for lifetime use; 33% of college graduates reported having ever used marijuana versus 12% of those with less than a high school diploma (Macfadden and Woody 2000). A report by the Institute for the Study of Drug Dependence (1993), based upon several surveys, suggested that 8% to 30% of youth aged 16 to 20 had used marijuana, while about 8% to 14% of youth in the 20 to 24 year old range had used this substance (Engs and Van Teijlingen 1997). Above data suggest that as adolescents get older, those with greater educational attainments are more likely to reduce their substance use. Gfroerer et al. (1997) also reported that substance use was more prevalent in high school age group than in others.

According to studies from US, the rate of past year and current marijuana use by males was almost twice the rate for females overall among those age 26 and older. This gap between the sexes narrows with younger users; at ages 12 to 17, there are no significant differences (Macfadden and Woody 2000). Likewise, cannabis use was not different between the boys and the girls (however, low number of cannabis users might have concealed statistical difference) while males reported higher rates in the 10th grade and the college groups. These findings lend support to previous reports of cannabis use that being male is associated with cannabis use (Martinez et al. 1999, Engs and Van Teijlingen 1997, Miller and Miller 1997, Ogunde and Leak 1999).

The highest rates for current cigarette and alcohol use were observed in the college group. University life is undoubtedly stressful for some students and high levels of anxiety and stress have been reported in university students (Ashton and Kamali 1995, Firth 1986). In addition, factors such as entering into a more diverse social environment and separation from family may also increase the risk of cigarette and alcohol use. Some studies showed that the prevalence peaks in this age group and a slow decline in use occurs after this age. (Thomas et al. 1993, Engs and Van Teijlingen 1997).

In all three groups, lifetime prevalence rates of alcohol and cigarette use were significantly higher among males compared to females. It has been reported that rate of cigarette smoking was similar between boys and girls in USA (Hughes 2000). These results support general studies in the U.K. which suggest that the gap between men and women is narrowing for smoking (Thomas et al. 1993, Engs and Van Teijlingen 1997). Lower rates for girls in our study may be explained on the basis of cultural differences in social roles. Smoking and alcohol consumption is not as much approved and tolerated as for females than males by the Turkish society.

Among 8th grade students in USA inhalants are the most commonly used substances after alcohol and tobacco (Crowley 2000). Inhalant use was not reported at a considerable degree in our study sample. However, inhalant use was at a higher rate in the 6th and the 8th grades compared to the college group.

Table 4. Lifetime use of cigarette, alcohol, cannabis, inhalants and other illicit drugs by female and male respondents.

	Cigarette (%)		Alcohol (%)		Cannabis (%)		Inhalants (%)		Other (%)	
	male	female	male	female	male	female	male	female	male	female
Sixth grade	21.6	7.6**	15.3	8**	1.7	1.7	3.7	2.3	2.4	0.9
Tenth grade	60.2	52.8*	57.5	49.8*	5.8	1.7**	6.1	4.5	4.1	1.1**
University	52.7	38.7**	63.6	35.0**	8.1	0.8**	5.9	3.9	5.9	1.6**

Differences between females and males were tested by Chi-square test for each 2x2 (gender) table, with one degree of freedom (df).
* p<0.05
** p<0.005

Table 5. Current use of cigarette, alcohol, cannabis, inhalants, and other illicit drugs by female and male respondents.

	Cigarette (%)		Alcohol (%)		Cannabis (%)		Inhalants (%)		Other (%)	
	male	female	male	female	male	female	male	female	male	female
Sixth grade	6.3	2.5**	4.5	2.1*	2.6	1.4	3.2	1.7	3.4	1.2*
Tenth grade	30.8	18.4**	23.8	12.5**	4.4	0.9**	3.0	1.4	3.3	0.9*
College	44.3	32.2**	53.8	32.0**	2.0	0*	0.9	1.0	0.8	0.7

Differences between females and males were tested by Chi-square test for each 2x2 (gender) table, with one degree of freedom (df).
* p<0.05
** p<0.005

Cohorts have been followed up in various countries but geographic, social, cultural, and educational differences, as well as differences in the populations under study, limit their relevance to students in Mersin.

CONCLUSION

Substance use is an important problem among youth all over the world and a multidimensional problem influenced by several factors. Prevalence of use and type of drug used may vary between different countries and even different societies in the same country. Studies reporting local prevalence rates for substance use may indirectly contribute to clarify factors associated with substance use. Studies designed to identify factors increasing the risk of substance use would help to establish more effective preventive strategies in handling this universal problem.

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