

## Knowledge, attitudes, and opinions of Turkish private school principals regarding substance abuse

Ozlem Nazan Erdogan,<sup>1</sup> Mehmet Sarper Erdogan,<sup>2</sup> Safiye Kaya,<sup>3</sup> Tumer Ulus<sup>4</sup>

Kocaeli University, College of Hereke Ömer Ismet Uzunyol, Marshall Campus, Korfez, 41800-Kocaeli,<sup>1,3</sup>  
Istanbul University, Cerrahpasa Medical Faculty, Department of Public Health, Cerrahpasa, 34098-Istanbul,<sup>2,4</sup> Turkey.

### Abstract

**Objective:** To determine the knowledge, attitude, and opinion of private school principals in Kocaeli, Turkey regarding substance abuse.

**Methods:** Data of this descriptive study was collected by questionnaires in December 2008. The questionnaire, developed based on Turkey's "substance abuse regulations," was applied to the principals of private schools in Kocaeli affiliated with the Ministry of National Education. A survey was conducted and risk factors for these schools were determined. The data was analysed with Pearson correlation test, Spearman correlation test and Kruskal-Wallis one way analysis used.

**Results:** Principals of 27 of 31 schools were reached. Six (22.2 %) were women; 21(77.8 %) were men. Average age was  $43.37 \pm 10.08$  years. Average years of teaching was  $21.55 \pm 10.77$  years. Mean period as a school principal was  $9.42 \pm 9.36$  years. Seventy-one percent of the principals who participated in the survey were non-smokers.

**Conclusion:** The majority of principals considered substance abuse as a problem in Turkey and believed it to be more among primary and high school students.

**Keywords:** Substance related disorders, Primary, Junior, Legislation, Turkey (JPMA 61:953; 2011).

## Introduction

Substance abuse can result in termination from work and its successful treatment takes time.<sup>1</sup> Realizing a potential abuse problem of an individual and intervening with him/her can increase chances for a productive life. According to the literature the 12-24 years age group is at risk for addiction.<sup>2</sup> Given that school children are spending much of their time at school, senior directors have important responsibilities to address this problem. There is a "Substance Abuse Regulation" of the Ministry of National Education released in 1999.<sup>3</sup> This regulation was designed to guide school principals and its application was observed in the results of two surveys quoted below:

Research conducted in 2004 at a girls' vocational school in Izmir, Turkey found that 15.7% of 16-17 year-olds were using drugs. One-third attributed use to friends, and one-fourth claimed that peer pressure led to its use.<sup>4</sup> In 2001 high school students aged 15-17 (N=18,599) in 15 cities participated in a survey that measured the prevalence of tobacco, alcohol, and substance use.<sup>5</sup> The percentage of students who have ever smoked was 63.9% and 22% were daily smokers. Students "ever" using cannabis was 3.6%; 17.3% drank alcohol at least once in the last month; 8.6% reported inhaling paint thinner; and 3.3% had engaged in glue sniffing. This is a high rate of tobacco and alcohol usage, and it is believed that these rates were not under-reported. Kocaeli was one of the cities in which tobacco, alcohol, and substance usage was high.

In the United States, substance abuse remains a public health problem among youth<sup>6</sup> and it is estimated that 13 million youth aged 12-17 years will use alcohol, tobacco, and other drugs.<sup>7</sup> Besides health problems such as physical, emotional and mental retardation, such use can negatively affect one's physical, mental, and cognitive status. Furthermore, substance abuse can lead to a lower Grade Point Average, absenteeism, truancy, and not being promoted. Consequently, principals have important responsibilities to protect young people against substance use and to encourage a healthy lifestyle. Psychological problems (e.g., nervousness, depression, and loss of memory) are often found among users of alcohol or other drugs.<sup>8,9</sup> It is critical that school management identify students showing these symptoms and share their findings with the parents. Collaboration of the school, teacher, and parent is very important if we are to ameliorate substance abuse.

Measurements that have to be taken in schools, according to Turkey's substance abuse regulation, are presented below.<sup>3</sup>

a- Students and their parents should be informed about substance abuse.

b- In-service education and seminars about health issues should be provided to principals and students.

c- Instead of using boardmarkers containing ethyl acetate and xylene, alcohol-based boardmarkers should be used.

d- Following a school official's discussion with the parents of a student suspected of being addicted to a substance, s/he should be referred to a health institution for treatment.

e- A student diagnosed as drug-dependent should be provided treatment (with consent of his/her parents) and be reported to the Directorate of National Education, if necessary.

f- Anyone suspected as seller of illicit drugs should be reported to the Directorate of National Education.

g- Junk food should not be sold in school canteens.

h- Selling cigarettes and alcohol should not be allowed within a 200 meter radius of the schools.

i- School personnel should watch out for drug pushers and report suspicious behaviour to the police.

j- Students should be encouraged to engage in arts, sports and scouting in their leisure time, and be allowed to use the school's equipment.

k- As much participation of students as possible should be provided in educational activities. Drug abuse education is required.

l- The parents and media should be invited to these activities.

In this study, we sought to determine the principals' knowledge of substance abuse and related legislation via a questionnaire based on the circular of the Ministry of National Education substance abuse prevention policy.

## Methodology

Data collection took place during December 2008. First, a pilot study was conducted in 13 private schools which were selected from several cities; 4 schools in Isparta, 3 in Adana, 2 in Bolu, 2 in Çorum, 2 in Mersin. The questionnaire, which we developed based on the new "substance abuse regulation," was administered to the principals of private schools in Kocaeli affiliated with the Ministry of National Education. The survey conducted by Altintas et. al in 2004<sup>1</sup> for first year students at the School of Medicine was kept as a reference when preparing the questionnaire. In addition, an observational survey was conducted in the school district and risk factors for the schools were determined. Twenty-seven of thirty-one schools were reached.

The questionnaire contained 29 questions which covered school and demographic data, principal smoking prevalence, and drug dependency issues. Seven questions investigated the attitudes towards substance abuse. The subjects

were asked to score statements given in those questions ranging from 1, meaning I absolutely agree to 5, meaning I absolutely do not agree. Cronbach's alpha (0.65) was applied for item analysis of the principals' scores and an average "attitude score towards drug dependency" was calculated for each principal. These scores were taken for statistical analyses.

The final 10 questions investigated the precautions that should be taken according to the National Education Ministry's regulation. With the responses given to these questions an average score of compatibility with the regulation was calculated out of 100 that means full compatibility (Table-1).

**Table-1: Opinions of school principals dealing with substance abuse.**

Answers of the question of 'what the substance abuse is'	N	%
Habit	7	29.2
Difficulty in quitting use of addicted substance	2	8.3
Captivity	2	8.3
Effect of environment	1	4.2
Over usage of substances	1	4.2
Everything damaging the body and spirit of person	1	4.2
Psychological disability	1	4.2
People first start to use it and later cannot discontinue	1	4.2
To need substance felt its shortage when it was not used	1	4.2
To need substance would be harmful for health	1	4.2
To eat and drink harmful things involuntarily	1	4.2
Habit acquired by people because of weakness of mind	1	4.2
Sweet trouble floating people to the disaster	1	4.2
Abandonment from independent life	1	4.2
Usage of harmful substance for health such as narcotic	1	4.2
To feel mandatory not to quit substance	1	4.2
Total	24	100.0

On the observation form developed for the schools, the security conditions of the school, the number of the entrances to the school area, the number of the cafeterias and buffets selling alcohol and cigarette in the 200 meter radius of the school were noted.

Based on the data collected via observation we calculated an average risk score for the schools.

For the calculation of the risk score following situations scored as 1 positive point:

- ◆ The school area is surrounded with a fence instead of a wall
- ◆ There is more than one entrance to the school
- ◆ There is a kiosk and/or a cafeteria in the 200 meter radius of the school
- ◆ Cigarettes and/or alcohol are sold in the kiosks and cafeterias

### Statistical analysis:

This is a descriptive study with an analytical

component. Gender of principal, the type of the school (elementary or high school), the school's district, and smoking status of the principal were categorical variables of the study.

The attitude score towards substance abuse and the score of compatibility with the circular were numerical variables of the study that were derived from the questionnaire by the questions 13-19 and 20-29, respectively. The risk score was another numerical variable of the study derived from the observation form.

Age of the principal, numbers of teachers and administrative staff, number of students, number of years the principal had spent in service and number of years principal had spent on administrative duty were also numerical variables of the study.

While the numerical variables were presented in means and standard deviations, categorical variables are presented in numbers and percentages. As the correlations between numerical variables were analyzed with Pearson correlation tests, the correlations between categorical variables were analyzed with Spearman correlation tests. For the comparison of two variables Kruskal-Wallis one-way analysis of variance was used, if at least one of the variables were not distributed normally. The significance level was set at 0.05. For the analysis of the data SPSS Version 16.0 was used.

## Results

Of school principals included in the study, 22.2 % were women, 77.8 % were men. Average age was 43.37 ± 10.08 (ranging from 25-59 years); average years in education was 21.55 ± 10.77 (ranging from 5-39 years); average time as a school principal was 9.42 ± 9.36 years (ranging from 1-33 years). Seventy-one percent of the principals reported being nonsmokers.

Principals' opinions as to what constitutes substance abuse are presented in Table-2.

**Table-2: The mean scores of statements about substance abuse given by principals.\***

Premises	Mean score ± std. dev.
"The dependence inducing substance keeps one away from the problems"	1.54 ± 1.06
"Persons using substance should be excluded from the community"	1.69 ± 0.97
"Persons with problems are not more prone to use substances"	2.80 ± 1.44
"Drug dependents are invertebrate persons"	3.08 ± 1.38
"Nothing would happen when the substance is once used"	1.80 ± 1.29
"Drug dependency is not a problem in Turkey"	1.77 ± 1.36
"Drug dependency is not a problem in secondary education"	1.69 ± 1.38

\*This group of statements were scored by 26 principals.

**Table-3: The substances considered dependency inducing by principals.**

Substance	N*	%
Cigarette	25	92.6
Alcohol	24	88.9
Cannabis	24	88.9
Heroin	23	85.2
Cocaine	21	77.8
Paint Thinner	21	77.8
Ecsasy	21	77.8
Glue	20	74.1
LSD	12	44.4
Waterpipe	11	40.7
Cigar	11	40.7
Amphetamine	6	22.2
Coffee	6	22.2
Tea	3	11.1
Chocolate	3	11.1

\*Respondents could choose more than one answer.

**Table-4: Where the student is directed by principals in case of substance abuse.**

	N	%
To the parent	18	66.7
To the Guidance and Research Center	17	63.0
To the University Hospital	6	22.2
To the Public Hospital	2	7.4
To the Office of Public Education	1	3.7

**Table-5: The distribution of the scores measuring the compatibility of the schools with the circular of National Education Ministry about substance abuse.**

Compatibility scores	N	%
(41-50)	5	18.5
(51-60)	6	22.2
(61-70)	10	37.0
(71-80)	6	22.2
Total	27	100.0

**Table-6: Risk scores for drug use of the schools.**

Risk scores	N	%
0	3	11.1
1	6	22.2
2	6	22.2
3	7	25.9
4	2	7.4
4	2	7.4
6	1	3.7
Total	27	100.0

The premises about substance abuse were scored by the principals from 0 "do not agree" to 5 "agree." Table-3 shows the mean scores given by principals for each premise.

There is a positive correlation between the attitude

scores of principals and years in service (Spearman correlation  $r=0.40$ ,  $p=0.044$ ). The substances which principals considered dependency inducing are shown in Table-4. Tobacco was listed by 92.6% principals, with heroin noted by 85.2% principals.

For the student who was suspected as being addicted to a substance, 66.7% principals said that they would talk to the student's parents; 63% said that they would direct the student to the Guidance and Research Center of the school (Table-5). For the students who they believed to be addicted to a substance, 40.7% principals said that they would discuss this with student's parent and give them advice.

Inservice education and seminars for students and parents were provided at approximately 89% (24/27) schools. These were offered biannually at 40% of the schools. Trainings for teachers were given in 78% schools. The regulation also required that students should assist with the training.

The regulation bans junk food from sales in the school canteen. Eight of the schools did not have a canteen. Of the other 19 schools 12 school principals advised their canteens not to sell junk food.

With regard to tobacco and alcohol sales in kiosks and cafes (which the regulation prohibits within 200 meters of a school) 12 schools had such facilities near them, and that tobacco and alcohol were consumed near 7 schools. The distribution of the scores measuring the compatibility of the schools with the regulation of National Education Ministry about substance abuse is shown in Table-5.

With respect to security, regulations which required that the schools be walled, and with restricted access to the public, 15% of the schools surveyed were not protected by walls. The remainder of the schools did have walls, with 26% located on main streets, 37% on secondary roads and 22% in city centers.

The risk scores for drug use is presented in Table-6.

There was no significant correlation between the schools and the attitude scores of principals about substance abuse (Pearson correlation  $p>0.05$ ). There was no correlation between the districts where the school was located and the risk scores as well (Kruskall-Wallis Variance Analysis,  $p> 0.05$ ).

## Discussion

According to the regulation of the Ministry of National Education on substance abuse teachers must not smoke in the schools. Seventy-one percent of the principals in this study declared that they did not smoke. In Turkey, smoking rate is 58.4% for 35-44 years age group in men, 25.2% for 15+ age group in women.<sup>10</sup> Nonsmoking principals are a positive role model for students and teachers.

On the other hand steps should be taken to reduce the 29% smoking rate. Principals are more likely to be successful in reducing substance abuse in their schools if they model the behaviour they ask of others. According to a study carried out on the students of a vocational school for girls, one student out of five advised that the reason for her starting smoking was peer pressure.<sup>4</sup> Since young people take their teachers as role models especially in the early adolescence, the education of this group brings heavy responsibilities for the principals. On the other side the institutional culture that is developed for the school will be decisive for students in acquiring healthy behaviours.

According to a study investigating the mental symptoms of drug addiction, poor social skills leads to a higher risk for drug addiction.<sup>8</sup> Since children and young people spend so much time in school, the school environments should be designed to promote the socializing of students.

Eighty-nine per cent of principals gave a definition of substance abuse (Table-1).

The desire to use natural or synthetic drugs or substances regularly, thus leading to addiction,<sup>11</sup> was mentioned by 30% of the principals. Some descriptions of principals about addictiveness were overlapping with the indicator questions used by physicians to investigate the level of addictiveness.<sup>12</sup> Some examples for those type of questions are, "Do you have difficulties in quitting smoking?" Or, "Do you have strong desires for smoking?"

We expected that the degree of experience would affect principals' opinions. Statistically analyzed, there was a correlation between the number of years of principals in service and their attitude scores. With more the years in their position the higher were their attitude scores.

Addiction can be mental or physical.<sup>13</sup>

Mental dependence is described as intentionally using a drug or substance whose effects are known or experienced.<sup>11</sup> This is psychological addictiveness and withdrawal symptoms, when the drug or substance is not taken, are mental discomfort, unwellness and nervousness.<sup>14</sup>

Physical dependence is being in the need of substances for providing the continuity of normal functions of the cells. When the substance is not used, there emerges mental and physical symptoms such as insomnia, yawning, sweating, chilling, diarrhoea, acute back pain, leg pain and tachypnea. Physical dependence is accompanied by mental dependence.<sup>14</sup> All these reactions depend on the substance used.

Although the physical dependence of narcotic analgesics develops fast, that of alcohol is slow. Among the narcotic analgesics, heroin has the greatest potential to

develop a dependency.<sup>13</sup>

From the substances with potentials of developing addiction identified in studies investigating the substance abuse in Turkey,<sup>15</sup> cigarettes were chosen by 92.6% of principals as inducing dependency. Other substances containing nicotine are cigars and water pipes, with 40.7% principals noting this. This suggests that the knowledge of principals about this field is inadequate. This is consistent with the findings of Ogel in Turkey.<sup>15</sup> Nicotine leads to physical and mental dependency on tobacco.<sup>16</sup>

Alcohol is actually a mental dependency-inducing substance, but when used for long and in large quantities physical dependency develops. Alcohol and cannabis were the most commonly chosen substance by principals, after cigarettes.

Only 22.2% of principals selected amphetamines, although it has a large potential for inducing both physical and mental dependency, and drug tolerance develops in the short term. This is probably because of low consumption of amphetamine (0.07 % of all consumed substances in 2002) which could make amphetamine less known. Amphetamine was found to be the most used drugs often by athletes.<sup>11</sup>

Cocaine and amphetamine dependency are similar in many aspects.<sup>14</sup> But, only 22.2% principals chose amphetamine while cocaine was selected by 77.8% principals (Table-3). Cocaine induces a very strong mental dependency, and in prolonged use and larger quantities physical dependency also develops.

Cocaine and thinner, respectively were elected by 77.8% principals. Thinner and bali are substances inducing a volatile solvent type of dependency that may develop mental dependency and in repeated use, partial physical dependency.

According to Ogel volatile solvent consumption began in youth at an age as young as 10 years of age.<sup>18</sup>

Heroin from opiates induces strong mental dependency, and physical dependency and drug tolerance occurs very early. It has been stated as the most potent drug in narcotics.<sup>15</sup> Cannabis induces mental dependency but physical dependency and tolerance to cannabis is negligible. It has been used by the elementary, secondary and high school students. Heroin and cannabis were selected by 85.2 and 88.9 % principals, respectively.

LSD leads to hallucinogen type of dependency, i.e. develops mental dependency, no physical dependency, but high degree of tolerance. LSD was chosen by 44.4% principals. The consumption rate is 0.8% among all narcotics.<sup>15</sup> According to a study investigating drug use profile of Turkey, cannabis is the most widely used drug. Cocaine, LSD and ecstasy are rarely consumed.<sup>15</sup>

Tea (11.1%), chocolate (11.1%) and coffee (22.2%) were noted by several principals as dependency inducing substances. All contain caffeine, which has a stimulant potential and tolerance develops in longer use.<sup>18</sup>

Using ecstasy, the derivative of amphetamine, is not legal.<sup>17</sup> Ecstasy develops a medium level tolerance but the potential of developing dependency is low.<sup>19</sup> Ecstasy was elected by 77.8 % principals as dependency inducing drug.

The responses of the principals were compatible with the frequency of the drugs used in Turkey.

Regarding the importance of the knowledge about substances in preventing drug dependency, the principals should be provided with the information about dependency - inducing drugs via inservice training.

The principals disagreed with the premise that one time use of dependency inducing substances would not change anything.

In the literature it is emphasized the necessity of knowing that the drug dependency inducing potential of each substance is different and even one time use could also be very risky. Besides the names of the drugs and substances which develop, their dependency potential should be known in order to understand and diagnose drug addiction.<sup>20</sup>

According to a study evaluating the efficacy of education programmes for teachers and parents on the prevention of substance abuse, in-service education enhances the knowledge levels.<sup>21</sup> Thereby in-service education for teachers about substance abuse should be given, and this would include covering the dependency-inducing substances and their effects.

In this study we found that inservice education and seminars for students and parents were provided at approximately 89% (24/27) of the schools.

These kind of activities were done biannually at 40% of the schools. Trainings for teachers were given at 78% schools. As to the regulation it is required that students should have a role in these trainings.

It is also important to provide families with this education. According to a study carried out on the students of a vocational school for girls, the parents of more than one quarter of all students were using drugs.<sup>4</sup>

Drug use in a family causes a negative effect on children and adolescents. Therefore, as families have significant responsibilities for preventing substance abuse, they should be invited to these courses to develop appropriate behavioural attitudes against substance abuse and understand their meaning and importance. On the other hand, according to a study done on the media, it can promote high risk behaviours such as smoking and drinking alcohol.<sup>22</sup>

Therefore media should also be better informed about substance abuse.

The motive of the training is that persons who know the adverse effects of drugs and illegal substances would stay away from them.<sup>23</sup> But studies have shown that most of the people who start using drugs believe that they would never get addicted, although they have been informed about drug dependency.<sup>24</sup>

In terms of the diagnosis and therapy of drug addiction early intervention is recommended.<sup>25</sup> Given that drug users usually experience problems with their families and the community, teachers need to take this into account.<sup>15</sup> Considering that the drug use is not rare in young people, the knowledge and abilities of management to solve the problems is important.<sup>26</sup> However the capacity of the school (such as budget, human resources, facilities) would affect the capabilities of the administrative and educational staff.<sup>27</sup>

In the US prevention programmes for substance abuse have been conducted in many high schools.<sup>28</sup> These were evaluated and it was observed that the most successful programmes were those where the teachers were supported by the experts.<sup>29</sup>

In the city center of Sivas in 1998 a questionnaire was completed by a sample of 476 second grade high school students selected randomly (38.7% girls and 61.3% boys); it was found that 67.7% of students had smoked at least once, 12.4% used volatile substances, and 1.9% reported use of cannabis. Reports of ever smoking is significantly higher in boys than girls but the use of volatile substances is significantly higher in girls. The findings have shown that substance abuse is an important public health problem. Further research is needed and prevention programmes should be developed and implemented.<sup>30</sup>

According to regulations of the Ministry of National Education, when staff suspect a student to be substance dependent, they should first discuss this with the parents of the student. Drug dependency is considered a family disease.<sup>31</sup> In such cases principals should contact the parents.

The use of boardmarkers containing ethyl acetate and xylene should be prohibited and instead the boardmarkers containing alcohol should be used. The former may tempt students into inhaling.

The percentage of the schools with a risk score of 0 is little more than 10 (11.1%). The elements posing risks to the schools should be investigated extensively.

The methods of attaining more healthful and safe environments in the schools are discussed in the literature. For example, in the US there are laws and regulations prohibiting the use of tobacco, alcohol and other drugs by

youth. In some school districts students can be tested for substance abuse.<sup>32</sup>

According to a review of 43 articles published between 1972 and 1996 which evaluate the correlation between drug use in elementary, middle and high schools and the schools themselves, a negative correlation was found between the score average of the students and substance use, i.e. the lower the scores of the student the more frequent substance use. Other factors affecting substance use are the student's educational aspirations, high frequency of absenteeism, the guidance counseling provided to the student, the school's drop out rate, the atmosphere of the school, and the intellectual capacity of the school.<sup>33</sup> According to this article the other variables of the school affecting the drug use were students' perception about the teachers, the discipline in the classroom, social interactions between the students.

The media coverage showing deaths due to drug use which made a tremendous impact recently on the public as it was shown that children as young as 7years were involved.

It has been emphasized that in the fight against substance use the school management and the families are the most important partners with law enforcement.<sup>34</sup>

## Conclusion

The majority of principals included in the survey consider substance abuse to be a problem in Turkey, which involves children in the primary and high school too.

In general the schools are aware of the circular on drug addiction, but additional comprehensive inservice training would be very helpful.

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