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Prevalence, attitudes and knowledge of high school pupils towards drugs and other addictions: implications for school health education in Israel

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Abstract

One hundred and fifteen high school pupils from Holon (a city in the center of Israel) participated in a study about the prevalence, knowledge and attitudes of these pupils towards drugs and other addictions (cigarettes and alcohol). Their mean age was 16.13 (±1.59) years; 43.9% were boys and 56.1% were girls. A total of 1.6% of the pupils regularly used illicit drugs, and an additional 11.3% were offered drugs. A total of 24% of the pupils smoked regularly (at least during the past year), and 42% consumed alcoholic beverages regularly. Their knowledge concerning illicit drugs was found to be inadequate; they correctly answered only 50% of the total study questions. A more liberal attitude towards illicit drugs was found with increasing age. Pupils who consumed illicit drugs received a higher scoring for their knowledge concerning the characteristics of various illicit drugs, as well as to having a more liberal attitude. The self image of the pupils who had experience with illicit drugs was lower (in two separate tests) in comparison to their peers. As a result of our study, our recommendation is to include the subject of illicit drugs, their dangers and prevention of their use in the official school curriculum from elementary school and during all subsequent school years.

Keywords: School; Health education; Drugs; Israel

1. Introduction

Substance use and abuse among adolescents is a widespread problem all over the world; the age of beginning of these habits has been lowered among the youth; and alcohol consumption and other drug use are connected with motor vehicle accidents, suicidal behavior, violence, accidental falls, drowning, unprotected sexual behavior and cancer [1–3]. Illicit drugs include uncontrolled substances, such as marijuana, lysergic acid dietryliamide (LSD) and heroin, as well as tranquilizers given by prescription [4]. Their consumption by adolescents often reflect a physical and mental imbalance, accompanied by psycho-social problems. The consumption of these drugs gives them a pseudo sense of relaxation and suffering becomes a detached feeling. They feel that drugs help them to deal with their anxiety and overcome depression. It is their way of erroneously coping with personal difficulties in their social and school life [5].

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During the last decades, an increase in illicit drug availability and consumption with a global trend was noted [6,7]. The prevalence of drug consumption by adolescents in the United States is relatively high. In some studies, for example, 43% of teenagers in the 15–16-year old age group and 25% in 13–14-year-olds had experience with drugs [6,8]. Most studies mentioned that adolescents began to use drugs between ages 13 and 16 years [9,10].

In Israel the prevalence of drug consumption by adolescents is still relatively low in comparison with western countries. In a previous study, 3.2% of academic high school pupils revealed a continuous regular experience with drugs [11]. In other studies and in other young populations in Israel, the prevalence varies between 3 and 7%. The age when drugs are first tried is 14 years, and the prevalence among boys is higher than girls [12–14]. During the last 19 years, the practice of holding ''acid parties'', brought to Israel from the Far East [15], by consuming LSD and amphetamine took hold. This increasing use of LSD has been confirmed by urine analysis from those users who wound up in hospital emergency rooms because of side effects of these drugs. These adolescents find themselves at a dangerous crossroad: they may erroneously relate to their light experimentation with drugs as an introductory step into adult life. Most of the users are involved in drug usage as a means of emotional stimulation and are additionally influenced by their peers in this undertaking [7,16–19]. Drug dealers and ''pushers'' take advantage of this situation. They show up with their merchandise in local clubs, ''acid parties'' and even in schoolyards during recess breaks. As part of the rehabilitation process, the drug user should be examined and undergo psychological counseling regarding the personal stress pressures, as well as any possible personality disturbances or existence of antisocial personality disorders [20].

Some authors have described the characteristics of adolescents who are drug users. These characteristics include: impulsiveness; anti-social behavior; the feelings of failure; past rejection from school and/or work place; previous delinquency; a rebellious character; familial difficulties; spending lots of money without any evident purpose or explanation; alcohol consumption is common in their home of origin; and having friends with psycho-social disturbances (many of which are drug addicts) [10,21–24]. In several works, the authors pointed out the low self image of drug addicted people [23,25]. Some of them had suffered in the past from parental deprivation and lack of love. On the other hand, the young people who consume drugs regularly are at direct and indirect risk, and the mortality rate in this population is high in comparison with their peers [26,27].

The aims of this study were as follows: (1) to evaluate the prevalence of pupils who had experience with illicit drugs, as well as with other addictions, (2) to determine their level of knowledge about illicit drugs, as well as their attitudes towards drug users, and (3) to examine the self image of pupils who consume illicit drugs in comparison with other pupils in their class.

2. Study population and methods

One hundred and fifteen high school pupils 14–17 years of age, in Holon (the fourth largest city in Israel) from the 9th to 11th grades participated in the study. They were pupils in three classes which were randomly chosen among 30 classes in that school. Three pupils who were new immigrants did not complete the questionnaire because of language difficulties. The data of the pupils are shown in Table 1. The questionnaire included 262 items under the following headings: general information (19); addiction habits (smoking, alcohol and drugs) (68); knowledge concerning illicit drugs (19); attitudes towards illicit drugs (11); self image (92 items on two separate questionnaires); anxiety (state and trait) (40); and relationship with social environment (13). The items on the questionnaire were taken from published studies [27–29]. Pupils completed the questionnaire during a 60 min time span in their class day. The statistical analysis was done by the third and fourth authors. The results represent a 95% confidence interval around the estimate.

3. Results

The prevalence, knowledge and attitudes of pupils concerning additions are shown in Tables 2–4.

Smoking and alcohol consumption increases with age ($P < 0.005$). The prevalence of boys who smoke

Table 1
The data of pupils who had participated in the study

(a) Grade	Age (years)[a]	*n*	(%)
9	14–15	38	33
10	15–16	32	27.8
11	16–17	45	39.1
Total	14–17	115	
(b) Ratio of boys to girls		50:64	43.9:56.1
(c) Economic state			
Mean number of rooms in home	4.6 ± 1.18		
(d) Parental education	Father (%)	Mother (%)	
Elementary school	11.3	7	
High school	36.5	45.2	
Academic	42.6	41.7	
(e) Parental status (%)			
Married	89		
Divorced	10		
Expired	1		
(f) Academic achievements			
Average scholastic marks of pupils (%)	75.3		
(g) Behavioral marks of pupils (%)	97.2		

[a] Mean age (years): 16.13 ± 1.59.

and drink alcoholic beverages is higher than that of girls ($P < 0.005$). In 75% of the homes, there is least one parent who smokes regularly. An additional 11.3% of pupils were offered illicit drugs. A correlation was found between smoking and alcohol consumption ($P < 0.005$), as well as with the use of hashish ($P < 0.005$).

The knowledge of pupils who smoke and use illicit drugs was higher in comparison with their peers ($P < 0.005$).

Table 3
Pupils knowledge concerning illicit drugs[a]

Grade	Age (years)	Knowledge
9	14–15	6.29 ± 3.3
10	15–16	7.38 ± 3.5
11	16–17	8.29 ± 3.6
Total	14–17	7.37 ± 3.5

[a] $P = 0.03$ (Anova test).

Table 4
Pupils attitudes towards illicit drugs and their users[a]

Grade	Age (years)	Attitudes
9	14–15	1.77 ± 0.6
10	15–16	1.94 ± 0.8
11	16–17	2.09 ± 0.7
Total	14–17	1.95 ± 0.7

[a] Low scoring reflects a negative attitude and high scoring a liberal and sympathetic attitude.

The liberal attitude score of pupils who smoke and use illicit drugs was higher than that of their peers ($P < 0.005$). The self image of pupils who had experience with illicit drugs in the first specific questionnaire was lower in comparison with their peers (2.71 ± 0.78 versus 3.18 ± 0.52 ($P < 0.03$)). In the second specific questionnaire, the attitude score for self image of pupils who had experience with drugs was lower in comparison with their peers (2.62 ± 0.81 versus 3.09 ± 0.49 ($P < 0.05$)). A higher level of anxiety was not found among pupils who use illicit drugs.

4. Discussion

A total of 42% of the pupils in local high schools smoked regularly during the past year, and the

Table 2
Prevalence of regular smoking, alcohol and drug consumption during the last year

Grade	Age (years)	Regular smokers (%)	Regular alcohol consumers (%)	Regular illicit drug consumers (%)
9	14–15	11	24	0
10	15–16	15	48	3.13
11	16–17	47	54	1.74
Total	14–17	42	42	1.62

frequency of this addiction increased with age; 11% in the group: 14–15 years as compared with 47% in the 16–17 years age group. This prevalence corresponds to the results of other studies among Israeli adolescents [30,31], but it is still lower in comparison with youths smoking in the United States (71%; variation between 49% and 82%) [2].

A total of 42% of the pupils regularly consume alcoholic beverages, and frequency of this addictive behavior also increases with age; if a quarter of the pupils consume alcoholic beverages in the 14–15 age group, then the prevalence is doubled in the 16–17 age group. This prevalence is identical to the results of other Israeli studies [32], but is still lower in comparison with the United States adolescents' alcoholic consumption (77%; tanging from 50% to 87%) [2]. In spite of preventive educational programs in school and the media, this prevalence did not change over an extended period of time as shown in the study by Morris et al. [33].

Only 1.6% of pupils in the academic high school admitted to using illicit drugs regularly in the past year. This number is lower in comparison with other Israeli studies [11–14,34,35], but a further 11.3% can be considered as being potentially at risk since they have been offered drugs. The relative low prevalence can be explained by the use of a small sample size study (115 pupils) and its applying to an academic high school, which inherently may be different from a vocational high school. However, even 14.9% is low in comparison with marijuana use among United States adolescents: 26% (range from 8% to 41%), 11% of those students having used it during the previous month [2].

Pupils demonstrated partial and inadequate knowledge about illicit drugs. They correctly answered only half of the total items. This result shows that pupils have a low level of knowledge, e.g. about the origin and characteristics of illicit drugs and their dangers to the nervous system. The rationale is probably that this subject is not covered regularly in school programs. They received only sporadic lectures at school or viewed an occasional film concerning people who had become illicit drug users. This is compatible with the results of other studies which demonstrated inadequate knowledge about illicit drugs among young people [7,16,19].

We found a correlation between pupils' liberal attitudes towards illicit drugs and increasing age. This corresponds to the findings of Osuna et al. [36]. The attitudes towards drugs of pupils who had experience with illicit drugs were more positive and more liberal in comparison with their peers. Osuna et al. [36] pointed out that attitudes on drugs use are influenced by cultural and social norms. A liberal attitude may be a certain risk factor for future illicit drug use.

Two separate tests on the self image of illicit drug users demonstrated lower scoring in comparison with their peers; this may be one of the main origins of the problem of addiction. This corresponds to the results in other studies [23,25], but disagrees with the findings of Lalinec-Michaud et al. [37] which did not find a lower self image among illicit drug users in Quebec. Cohen [10] had found among illicit drug users also a decreased level of optimism in comparison with their peers.

5. Practical implications

A high correlation was found between these addictions: cigarette smoking and alcohol consumption ($P < 0.0001$), as well as with hashish and marijuana cannabis usage ($P < 0.01$). As a result, we suggest that the topic of addiction and its dangers be obligatory in the school curriculum so that pupils can be familiar with the physical and mental risks of that dangerous first step in the direction of chronic illicit drug addiction.

School physicians, social workers, psychologists and education advisors should conduct informational lectures during regular class periods in an attempt to instill a negative attitude towards illicit drug usage. The target population among pupils in school will be those with social problems and a low self image as identified by both psychologists, educational advisors and teachers. They should receive individual attention in order to restore their self-confidence so that they can resist the temptations of illicit drug addiction.

Besides school prevention programs, there should be additional community prevention projects and mass media promotion. These efforts should include teenagers taking driving lessons as a target population by emphasizing the risk of driving under the influence of drugs and/or alcoholic beverages; they should also

identify other Israeli high risk groups, especially young new immigrants from the former Soviet Union and Ethiopia [38].

Lastly, it should be remembered that adolescent drug addiction is most likely a response to internal stress, psychopathology and unhappiness, and these pupils should be helped with counseling and emotional support and not be just punished [39].

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