

Opportunities for School-Based Drug Education: Implications From the Ontario Schools Drug Surveys, 1977–1985

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Five Addiction Research Foundation of Ontario student surveys since 1977 have implications for drug education. They show trends in drug use—motivations for it and factors associated with it. This paper describes challenges facing school systems, and ways of meeting them.

Les cinq sondages menés auprès d'élèves par l'Addiction Research Foundation of Ontario depuis 1977 permettent de tirer des conclusions utiles pour les programmes d'éducation antidrogue. Ils révèlent les tendances des jeunes en matière de consommation de drogues—ce qui les pousse à en prendre et les facteurs qui y sont associés. Cet article décrit les défis auxquels l'école doit faire face et les moyens à mettre en oeuvre pour les relever.

INTRODUCTION

Perceptions of and reactions to adolescent drug use in Canada have sometimes reached hysterical proportions during the past twenty years. Whatever the extent of drug use and associated problems, an accurate appreciation of them is essential. How many students are using drugs? When do they start using drugs? Why do they use drugs?

The prevention of drug use and abuse is the natural sequel of identification of problems associated with drug use. Traditionally, school systems have undertaken prevention and identification as part of their responsibility to develop mature and productive citizens. It is especially important that educators be aware of evidence on adolescent drug use and associated factors.

Our discussion of youthful drug use in Ontario is based on data obtained from the longest series of drug surveys conducted anywhere in the world. We discuss the data in light of their implications for educators; wherever possible,

we draw practical conclusions. Although the data are limited to Ontario, they have direct relevance to the rest of Canada since, first, student drug use does not differ greatly across Canada, and second, the educational implications will apply even under different patterns of use.

SURVEY METHODOLOGY

Surveys of drug use among Ontario students have been conducted by the Addiction Research Foundation since 1968. Earlier surveys involved students in greater Metropolitan Toronto; since 1977, biennial surveys have taken a random sample of classes from throughout Ontario—stratified by grade (that is, representative samples of grades 7, 9, 11 and 13) and by geographic region (that is, Metropolitan Toronto, Eastern, Northern, and Western Ontario). Sampling procedures use a stratified single-stage cluster probability design, and data are weighted to account for variable sampling fractions and nonresponse by selected classes and students.

The target population is composed of all students enrolled in regular school systems. It excludes those enrolled in private schools (but does not exclude the private sector, that is, grades 11, 12 and 13 of the Separate school system), special education classes, those institutionalized for correctional or health reasons, those on Indian reserves and Canadian Forces bases, or those in Ontario's far northern regions. Participation by school boards associated with the randomly selected clusters of homerooms was generally conditional upon approval by a board research review committee, the principals of the schools, the homeroom teachers, and parents. If a school board refused, a previously sampled substitute board from the same stratum was approached; if an individual class or student decided not to participate, no substitution took place and the data were statistically weighted to correct for nonresponse. Students were administered questionnaires in class groups in a thirty- to forty-minute session. In 1985, for example, 4154 students were sampled from 205 classes in 193 schools from 20 school boards. The average student response rate has always been high; for example, the response rate in 1985 was 82%. (Surveys since 1981 have been administered by the Institute of Social Research, York University. See Smart, Adlaf, and Goodstadt, 1985, for a complete description of methodology.)

TRENDS IN THE PREVALENCE OF DRUG USE

The 1985 survey showed dramatically significant declines in the reported use of many drugs, use being defined as any use in the previous twelve months (see Table 1).

Comparing the 1985 survey with the previous one (1983), there were

TABLE 1
Percentage of Students Reporting Drug Use at Least Once in Prior Year

<i>Drug</i>	<i>1981</i>	<i>1983</i>	<i>1985</i>
<i>Non-medical drug use</i>			
Alcohol	75	72	70
Tobacco	30	29	25 ¹
Cannabis	30	24	21
Barbiturates	8	6	4 ¹
Tranquillizers	5	5	3 ¹
Stimulants	12	15	12 ¹
Speed	3	4	3
LSD	10	9	7
Other hallucinogens	5	6	5
Cocaine	5	4	5
Heroin	2	2	2
Glue	2	3	2 ¹
Other solvents	3	4	3
<i>Medical drug use</i>			
Barbiturates	13	11	9 ¹
Tranquillizers	8	7	5 ¹
Stimulants	6	5	4

¹Prevalence in 1985 statistically significantly less than in 1983 ($p < .05$)

significantly fewer users of tobacco; non-medical barbiturates, tranquillizers and stimulants; medical barbiturates and tranquillizers; and glue and other solvents. There were also significantly fewer users of cannabis and alcohol in 1985 than in 1981. More generally, in the 1985 survey, there was no increase in the use of any of 17 categories of drugs. Moreover, the 1985 results were the lowest for the use of all drugs comparing three surveys going back to, and including, 1979 and, in the 1977 survey, only five drugs showed lower use than in 1985 (that is, "speed," non-medical stimulants, LSD, other hallucinogens, and cocaine).

Although these results are encouraging, it is important to put the 1985 results into perspective. First, the decline in the proportion of those reporting any use of drugs was not accompanied by a reduction in the frequency of drug use among users. Second, the decline in prevalence rates was especially characteristic of some subgroups, namely, males, grade 9 students, and those from the eastern region of the Ontario. However, the downward trend in

TABLE 2
*Percentage of Students Reporting Drug Use at Least Once in Prior Year:
 Grade Differences in Drug Use: 1985*

<i>Drug</i>	<i>Grade</i>			
	7	9	11	13
<i>Non-medical drug use</i>				
Alcohol	43	68	87	89
Tobacco	11	25	35	29
Cannabis	5	18	35	31
Barbiturates	1	4	7	5
Tranquillizers	2	4	5	3
Stimulants	3	11	19	17
Speed	1	3	5	2
LSD	2	6	14	9
Other hallucinogens	1	4	8	6
Cocaine	3	4	5	7
Heroin	2	2	1	*
Glue	3	3	1	*
Other solvents	4	3	1	1
<i>Medical drug use</i>				
Barbiturates	5	9	13	9
Tranquillizers	3	4	7	6
Stimulants	2	5	6	3

* Less than 1%

drug use is supported by other North American research (Johnston, O'Malley, & Bachman, 1986) showing a genuine, rather than artifactual decline in prevalence of drug use among Ontario students.

Although it is impossible to identify the factors responsible for declines in drug use, important influences may include education and public awareness programmes, health-related knowledge, attitudes and values, social policies and norms, the law and its enforcement, and the economics and availability of drugs.

THE NATURE OF DRUG USE

Before discussing drug use it is important to realize that the majority of Ontario students do not use drugs other than alcohol. These results are even more striking when considered separately for the four age-cohorts. Table 2

shows that almost half of grade 7 students reported using alcohol, although 75% of these children drank only on special occasions such as Christmas and weddings; tobacco and cannabis were used by very few of these young students. Among grade 9 students, two thirds reported drinking, while one quarter or fewer used tobacco or cannabis. The prevalence of alcohol and other drug use reaches a peak in grade 11, among whom almost 90% reported drinking and one third used tobacco or cannabis.

From an educational perspective, these results challenge the common impression that “everyone’s doing drugs”; they reinforce the opposing view that, with the exception of alcohol use after grade 7, the majority of students do not use drugs. Recent anti-smoking campaigns have used such results in developing themes such as “Join the Majority; Be a Non-Smoker” to help create more accurate and positive social norms regarding smoking.

Distinguishing Drug Use from Drug Abuse

A large minority (27%) of students did not use any drug (including alcohol and tobacco). In addition, the majority (49%) of those who used drugs reported using only one drug (most commonly, alcohol), with a further 20% using only two drugs.

The majority of drug users are not drug abusers; they use their drug of choice only infrequently. For example, approximately 80% of drinkers drank alcohol 2–3 times a month or less often (in the previous 12 months); one third of smokers reported smoking less than one cigarette a day; one third of cannabis users had used the drug only once or twice in the preceding 12 months. With the exception of LSD, the majority of users of the remaining 14 drugs did so only once or twice in the previous twelve months.

Much attention has been given to the “stepping-stone” hypothesis of drug use—that the use of some drugs (e.g. “soft” drugs) leads to the use of other drugs (e.g. “harder” drugs). Researchers have recently preferred to talk about gateway drugs (for example, alcohol, tobacco and cannabis), which provide an entry to the use of other drugs. The Ontario student data show clear relationships between the use of various drugs, and suggest a progression of drug use from alcohol to tobacco, cannabis, non-prescription drugs, hallucinogens, and “speed.” For example, 48% of alcohol users used only alcohol, but only 3% of smokers used only tobacco. Twenty-eight percent of cannabis users used two other drugs (usually alcohol and tobacco), and a further 24% used three other drugs. Twenty-nine percent of “speed” users used five other drugs, while a further 32% used six other drugs.

Although there is validity to the notion of gateway drugs, the link between first-used and later-used drugs is not a causal one. Not all drug users *inevitably* progress from the use of “softer” drugs to the use of “harder” drugs. It is true

that the majority of users of heroin, for example, have used marijuana; it is not true, however, that all users of marijuana will progress to the use of heroin. Adolescents, having passed through the gateway, may choose to retrace their steps, or take an alternative non-problematic path. The lack of causality in the progression of drug use, however, should not lead to complacency, since present evidence is inconclusive regarding the factors associated with progression from the use of gateway drugs to more serious forms of drug use; we are, at present, unable to predict which individuals will go on to problematic use. Research also suggests that it is important to prevent or retard the onset of gateway drug use: earlier initiation into drug use is often associated with later more serious drug-related problems.

Distinguishing Previous Drug Use from Current Drug Use

The surveys (see Goodstadt, Chan, Sheppard, & Cleve, 1986) indicate that a large proportion of those who try a drug do not continue to use it. In 1985, 62% of those who reported having tried cannabis also indicated that they no longer used the drug. Cessation of drug use has also been documented for other drugs, for example, alcohol (Statistics Canada, 1981), tobacco (U.S. Surgeon General, 1982), and heroin (Robins, Davis, & Goodwin, 1974). This finding has important educational implications. First, for the educator, it corrects the impression that any use implies continued or addictive use. Second, from the students' perspective, it allows reinforcement of the notion that quitting drug use is an achievable objective.

Reasons for Using and Not Using Drugs

There are many ways to distinguish between drug users and nonusers and between those who have quit using drugs and those who have never tried them.

Students differ in their reasons for trying drugs, in particular for trying cannabis. Most of those who try cannabis do so out of curiosity ("to see what it was like"). Current users were less likely to give this as a reason (52%) than quitters (69%); although percentages were small, current users were more likely than quitters to try it for fun (8%), to calm them down (8%), or to make them feel good (5%). Current users also more often cite internal rather than external or social reasons for continuing cannabis use.

Little attention has been given to why people do not use drugs, either not trying or quitting. These reasons are, however, as important as the reasons for using drugs; nonuse should be considered as much an active choice as is use. Prevention programmes should not neglect nonusers but, rather, should be designed to support and help students to articulate their reasons for not

using. The most common reason students give for not trying cannabis is lack of interest in using the drug and a corresponding interest in other things—"I am not interested" (33%), "I have other things I enjoy doing" (10%). They are also concerned about the possible health consequences—"I think it might be harmful to my health" (28%). Similar reasons are given for quitting cannabis use.

The reasons which were *not* endorsed as motivations for not using cannabis have important educational implications; many education programmes emphasize factors which are only rarely reported by students as reasons for nonuse. Fewer than 5% of nonusers gave the following reasons for not using cannabis: it is illegal, it would (or did) get them into trouble with parents, teachers or the police, they could not get any or could not afford it, it might be addictive, parents made them stop or because friends stopped using it. More extensive analysis also showed that students' perceptions of the likelihood and the seriousness of getting into trouble (at home, outside the home, or with the law) did not act as deterrents to cannabis use. It could be argued that programs that emphasize these low-frequency reasons for not using marijuana will be less salient to students.

FACTORS ASSOCIATED WITH DRUG USE

Analysis of the factors associated with cannabis use suggest guidelines for the development and implementation of drug education programmes. A large number of individual factors are associated with cannabis use. Only a few of these factors, however, are strong enough to stand on their own in competition with other factors (that is, in a multivariate statistical analysis such as the Multiple Classification Analysis employed in this research—see Goodstadt et al., 1986). Among these more powerful variables are the reasons students endorse for using or not using cannabis, students' grade level, and their use of tobacco and other illicit drugs—factors to which we have already given attention. Some remaining factors also have direct educational implications, namely, school programmes, leisure-time activities, peer pressure to use cannabis, perceived availability of cannabis, and attitudes towards cannabis use and the laws regarding its use.

SCHOOL PROGRAMMES

Our survey findings indicate that school programmes are significantly related to whether students try, quit or continue to use cannabis. Students in Advanced Level programmes are less likely to use cannabis and are more likely to quit than those in the General and Basic Level programmes. The challenge to educators and researchers is to determine, and then influence,

the direction of these associations: Are students in the more advanced programmes because they do not use drugs, or do they abstain from drug use because they are in the more advanced programmes? Our survey data do not allow us to solve this conundrum; longitudinal data is required. As educators, we can also ask how we might identify those students whose academic performance or change in performance indicates that they are at risk? What might be done to reduce risk of drug use among General and Basic Level students?

LEISURE-TIME ACTIVITIES

Most parents and teachers believe that there is a strong relationship between the way adolescents spend their leisure-time and the likelihood that they will get into trouble. Our results support this view and show that a greater percentage of nonusers than users spend their after-school time at home or in supervised or purposeful activities. In contrast, fewer than 10% of users spend their leisure time either at home or in supervised activities; they are much more likely to spend their time “hanging around,” having a part-time job, or going out with a friend. These findings, and those already summarized concerning the reasons given for not using cannabis, reinforce the value of efforts to organize family, school and other community recreation/activity programmes for young people.

PEER PRESSURE

“Peer pressure” has been frequently cited as a factor contributing to drug use. Our research shows that there are substantial differences among students in this respect. Although 40% of all students reported that someone had tried to get them to use cannabis, there were significant differences in this regard among those who never tried (25%), quitters (75%) and current users (67%). However, it is important to note that only 12% of quitters and 8% of current users initially tried cannabis because their friends used the drug. Furthermore, if we consider only those who reported that someone had tried to get them to use cannabis, we find that 44% had never tried cannabis, 36% no longer used it, and only 20% were still using the drug.

These figures and other Ontario-based research (Sheppard, Wright, & Goodstadt, 1985) suggest that peer pressure and similar forms of influence are not as strong as is frequently assumed. In addition, the concept of peer pressure as an explanation for behaviour is usually so indiscriminate that it is unable to explain differences between individuals’ behaviours. In statistical terms, peer pressure fails to explain enough of the variance; in layman’s terms, it does not explain why one individual is marching to the beat of one

drummer rather than to that of another drummer—not all adolescents use drugs, play basketball, wear bluejeans, or like rock music. In reality, it could be argued that adolescents, like most people, seek peer groups that engage in behaviour which is compatible with their own wishes; they might, however, use the notion of peer pressure to rationalize their behaviour or to avoid responsibility for behaviour that may not be socially acceptable. The concept of peer *influence*, in contrast, is more useful since it connotes neither inevitability nor exclusively negative influences; it recognizes that students play an active role in shaping their own behaviours, and that peers can have a positive influence on each other.

AVAILABILITY OF DRUGS

It is instructive to note that the majority of students (47%) reported that they would find it impossible or very difficult to obtain cannabis. Even more striking is the finding that 60% of those who had never tried cannabis, in contrast to 12% of quitters and 1% of current users, expressed this opinion. This does not necessarily mean that students do not know where or from whom they might obtain drugs; students may find it psychologically or personally difficult to take the action to obtain it. These results also suggest, in agreement with the absence of peer pressure (see above), that it is incorrect to view the adolescent's world as populated by drug pushers who force their way on innocent youngsters. It is also encouraging to note that perceived access to cannabis is not *necessarily* associated with its use—as evidenced by the 78% of quitters who reported that they would find it easy or very easy to obtain cannabis.

ATTITUDES TOWARDS DRUGS, DRUG USE AND THE LAW

We are encouraged by the current state of students' attitudes. The majority of students, being nonusers, hold negative attitudes towards cannabis use. Fifty-nine percent of the total sample considered that the use of cannabis by people their own age is "always wrong." However, as would be expected, there were significant differences in the attitudes of non-triers and triers. The overwhelming majority (89%) of non-triers were opposed to any cannabis use by students their own age, and even 15% of current users shared this view—with a further 43% of users believing that it is "sometimes wrong."

Similar differences in attitudes were expressed regarding five possible changes in cannabis laws, ranging from no change in current penalties to making the drug completely legal. The majority (79%) of non-triers, in contrast to only 14% of users, felt that cannabis laws should continue to include a maximum jail sentence of seven years for cannabis use. It should

also be noted that, even among current cannabis users, only 28% felt that cannabis use should be completely legal. In response to another question, 97% of nonusers stated that if the law were made less severe (e.g., "if the greatest penalty was a fine of \$50") they still would not use the drug; only 17% of users stated that they would use cannabis more if the law were liberalized, while 11% of quitters would use it again.

The above evidence suggests that educators are starting from a very favourable position in relation to students' attitudes. The majority of students are already opposed to the use of cannabis; many cannabis users also reflect this viewpoint. The educational challenge is how to capitalize on this advantage, reinforcing these attitudes, and encouraging the making of firm and informed decisions on their foundation.

EDUCATION ABOUT DRUGS

Each of the surveys has enquired about students' recall of their exposure to drug education. In 1977 the questions were concerned with drugs in general, in 1979 and 1981 we asked about alcohol education, and in each of the last three surveys (1981–1985) we enquired about cannabis education. Students were asked about their exposure to classes and lectures within their lifetime, as well as during the previous school year; they were also asked about the content and processes of their classes, and their preferences in this regard.

Results have been consistently mediocre, at best. Grade 9 students reported higher exposure to drug education than those in other grades (65%–75% exposure in the previous year). However, the majority (40%–50%) of grade 7 and grade 13 students reported no cannabis or alcohol education in the previous year. Twenty-five percent of grade 13 students also reported no cannabis or alcohol education in their entire school careers. It was also found that 75% of all students who received drug education reported only one or two classes in the school year. (One might question the validity and reliability of students' recall of their exposure to drug education. However, one could also argue that students should recall at least having received drug education, even if they cannot recall the content of their classes.) The teaching of drug education reflects the emphasis on drug education in grades 7 through 10 in the Ontario Ministry of Education curriculum guidelines. Drug education is infrequently taught in other grades because, on the one hand, health education is usually not compulsory after grade 10 and because, on the other hand, there is competition for teachers' time from other health topics. The survey results suggest an opportunity for great improvements in the proportion of grade 7 students who receive drug education, and some improvement in the other grades. There is also a need to increase the frequency of drug education in Ontario.

The actual content of classes contrasted greatly with students' stated preferences. Two thirds of cannabis classes were led by teachers. Half of all classes dealt only with the harmful effects of cannabis, while another third was concerned with a variety of topics such as what cannabis is, how it is used, and what effects (good and bad) it might have. In contrast, more than one quarter of students did not want to learn about cannabis; these students tended to be those who had never used the drug. Of the remainder, nearly 40% preferred to learn about a balanced variety of topics, while only one quarter wanted to hear about the harmful effects of drugs—again, these latter students tended to be those who had decided not to use drugs. Similar results were found with respect to alcohol education. These findings suggest that drug education could be recast to represent a more balanced consideration of drugs, including the social functions of drugs, and the positive and negative aspects of their use. While we would not advocate that programmes be dictated by student preferences, it is important in planning drug education that attention be paid to student input. Students are likely to pay less attention to programmes that they perceive to be biased or irrelevant.

Even though programme content did not satisfy their preferences, students' evaluations of their drug education classes provide encouragement insofar as most students gave positive ratings: two thirds rated them from good to excellent. Only 11% gave them a poor rating. Once again there was a difference between users and nonusers. As might be expected, nonusers tended to give more favourable ratings than users—38% of non-triers gave a very good/excellent rating in contrast to 13% of current users. These results suggest, however, a need for more attention to the needs of drug users. Classes they perceive as being poor are not likely to have much impact.

Drug educators frequently face questions about the impact of their programmes. Concern is sometimes expressed that drug education may increase the likelihood of drug use. Our surveys, in fact, have consistently found that exposure to drug education is more likely to be reported by those who also report using drugs. This might suggest that drug education does, indeed, encourage drug use. We must, first, qualify our results: this relationship is only found in the youngest cohort (that is, grade 7). Second, statistical correlation between reported drug education and reported drug use does not necessarily imply that the two phenomena are *causally* linked; there are several possible explanations for the relationship, other than the most disturbing one that drug education "turns kids on" to drugs:

1. Drug users may be more sensitive to anything having to do with drugs and, therefore, may pay more attention to their drug education;
2. For similar reasons, drug users may be more likely to recall having had drug education;

3. Those exposed to drug education may be more likely to *admit* that they have used drugs;
4. Drug education may deliberately be directed at those students considered by teachers to be at risk; or
5. Both reported drug education *and* reported drug use may be related to a third factor (for example, socio-economic status) but may, otherwise, be unrelated to each other.

We cannot identify, at the present time, which of these explanations is correct, or under which conditions they might hold true. A review of the research evidence regarding the impact of drug education (see Goodstadt, 1980) indicates that we cannot conclude that drug education encourages drug use, although there are many examples of programmes that result in unexpected or “undesirable” outcomes.

CONCLUSIONS

The Addiction Research Foundation’s surveys of drug use and related issues among Ontario students provide information for educators about trends in students’ drug use and insights into what we might do to prevent or ameliorate problems. Of special significance is the increased understanding of the nature and extent of drug problems. Drug use is not occurring in epidemic proportions, although even infrequent use might be considered to be unacceptable. The majority of students do not use drugs other than alcohol; most drug users are not problem drug users. Students’ attitudes are generally opposed to drug use. We have been able to identify factors that are strongly related to cannabis use (and, probably, to other illicit drug use). Finally, school-based drug education can provide an opportunity for a more intensive and creative effort to reduce the risks associated with drug use.

More specifically, evidence supports the importance of distinguishing between those who have never tried the drug, those who have tried and quit using it, and those who continue to use cannabis. In practical terms, without wanting to encourage or condone even experimental use of drugs, educators should guard against reinforcing the idea that initiation of drug use necessarily results in continued use. It is also important that current drug users do not feel hopeless about reducing or quitting their drug use; students should understand that they are not “hooked” on drugs merely because they have experimented with them. In educational terms, programmes that fail to recognize what many students know from experience are likely to lack the credibility they require to be effective.

Appreciation of the differences in motivations for using and not using drugs has significant practical implications for the planning of drug education programmes. It is evident that fear of the health, legal or social risks

associated with cannabis use is a very weak motivation for not using the drug; exclusive emphasis on these aspects of drug use will be less effective than those which include consideration of the more powerful motivation for nonuse, namely, the value students attach to their alternative activities and interests. Evidence also suggests that programs directed at drug users should address the internal needs that play a role in motivating their drug use; they require assistance in coping with the problems and stress they experience in life. The positive use of leisure time and involvement in alternatives to drugs are channels through which schools may be able to help such students. Schools, in addition to and in cooperation with community organizations, are in an advantageous position to develop and foster the use of such programs.

Educational systems could heighten the impact of drug education through improving the content, process and the intensity of programs. Evidence indicates that students recall receiving little drug education during their school careers; programs also tend to be teacher-led and focused on the negative aspects of drug use. Recent drug education research supports the value of more extensive programs. The new generation of drug education programs includes a variety of components designed to influence students' knowledge, feelings, skills and behaviours. This greater richness of program elements includes attempts to develop or enhance skills of a general nature, or those related specifically to drug use, such as assertiveness and refusing to use drugs, interpersonal skills, and coping skills. Other developments have included the involvement of peer leaders in the implementation of programs.

One of the challenges for the educational system and for researchers is to identify more precisely the etiological causal chain. Although we are able to specify some factors that are related to drug use and drug abuse, for example, school programme, we do not yet understand the development of drug use in a way that allows us to predict which individual students are at risk of developing drug problems; nor do we yet know which programmatic approaches are most effective in addressing the needs of these students. In this we face the challenge common to all educators: Why do students, of otherwise equal ability, perform so differently in relation to academics or other behaviours such as drug use?

On a positive note, we can also conclude that the average Ontario student exhibits favourable attitudes and behaviours. The majority of students do not use drugs, other than alcohol; most of those who do try drugs do not continue on to problematic drug use; most possess attitudes and values which are opposed to drug use; and students are not slaves to peer pressure. It would appear that the typical student could be an ally, not an enemy, for drug educators. How, then, can teachers use this resource in reinforcing already

existing attitudes and behaviours, and in counteracting the negative influence of the minority of student drug users?

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