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DRUG USE AND SCHOOL DROPOUT: A LONGITUDINAL STUDY

ABSTRACT: A longitudinal design was employed to study the relationship between drug use and school dropout in a general high school population. Nine hundred and fifteen students enrolled in Grade 9 classes were initially questioned concerning their use of drugs (Time 1). Thirteen months later, those students who had dropped out of school as well as those students still attending classes were asked to report again on their current drug use practices (Time 2). The results supported previously reported findings by demonstrating greater use of most licit and illicit drug categories by school dropouts *following* their withdrawal from school (Time 2). Furthermore, it was shown that for almost every drug, the trend towards greater drug use within the dropout group was evident and equally strong *before* the dropping out occurred (Time 1). There was, however, some indication that dropouts were additionally more likely to start or initiate some categories of drug use following school dropout. The findings were discussed in terms of a "symptom" versus "cause" view of school dropout in relation to drug use. It was concluded that drug use functions as part of the constellation of contributing factors that precedes dropping out of school, but that dropout status itself may play a causal role in fostering self-identification and/or social group contacts which promote the development of drug abuse patterns.

Adolescent drug use and high-school dropout are two areas of inquiry that have attracted vigorous research activity in recent years. Numerous studies have been conducted on the characteristics of high school drug users (e.g., Russell, 1970; Smart, Fejer, & White, 1973; Wiener, 1970) and on the correlates of student withdrawal from school (e.g., Bachman, Green, & Wirtanen, 1971; Cervantes, 1965; Varner, 1967). There is, however, surprisingly little overlap between these bodies of literature in that few studies have systematically investigated the question of school dropout in relation to drug use.

Retrospective studies of clinical populations of drug users (Carson & Lewis, 1970; Fort, 1954) and of samples of drug users appearing before the courts (Chein, Gerard, Lee, & Rosenfeld, 1964) have suggested that poor school adjustment is a frequent contributing factor

in the development of drug abuse patterns. Surveys of both college and high-school populations have consistently reported a positive association between the use of illegal drugs and dissatisfaction with school, teachers, and course work, and lack of involvement in conventional educational pursuits (Blum, 1969b; Brotman, 1969; Friesen, 1967; Tec, 1972). Furthermore, potential dropouts (i.e., those students who are considering dropping out of school) have been found to report more use of most drugs (Blum, 1969a; Friesen, 1967).

More direct evidence of the relationship between school dropout and drug use is provided by two recent studies investigating actual school withdrawal among populations unselected for deviant behaviour. Robins, Darvish, and Murphy (1970), in a retrospective study of the long-term outcome of adolescent drug use among a sample of young men, found that more adolescent marihuana users than nonusers failed to graduate from high school. A large-scale study of male high-school students conducted by Johnston (1973), reported large differences in the use of all drugs associated with dropout status. Unfortunately, this study failed to assess drug use before and after school dropout to establish whether drug use preceded or followed withdrawal from school.

Popular wisdom variously holds that drug use leads to dropping out of school, or that dropping out leads to increased drug use. A longitudinal design involving repeated measures of drug use over time is uniquely well-suited to investigating these relationships. Such longitudinal designs have been fruitfully employed in the study of school dropout in relation to other deviant behaviours such as delinquency (e.g., Bachman et al, 1971). However, no parallel work on drug use and school dropout has yet been reported.

The present study was designed specifically to measure changes over time in the use of drugs in relation to dropping out of high school.

METHOD

Initial Sample

The study sample represented a census of Grade-9 students (N = 1001) in three public high schools in a small northern Ontario city.

Data Collection Procedures

A questionnaire on drug use was administered to students, on a voluntary basis, at two points in time. The questionnaire enquired about the frequency of use, in the past six months, of tobacco, alcohol, glue (or other solvents), marihuana, speed (or other stimulants), LSD (or other hallucinogens), barbiturates, and opiates.* On the initial administration, information was recorded on sex, course of study, and school grade average of each student respondent. On the subsequent

* Further details concerning the questionnaire employed and the administrative procedures followed are available in the original report (Annis, Klug and Blackwell, 1971).

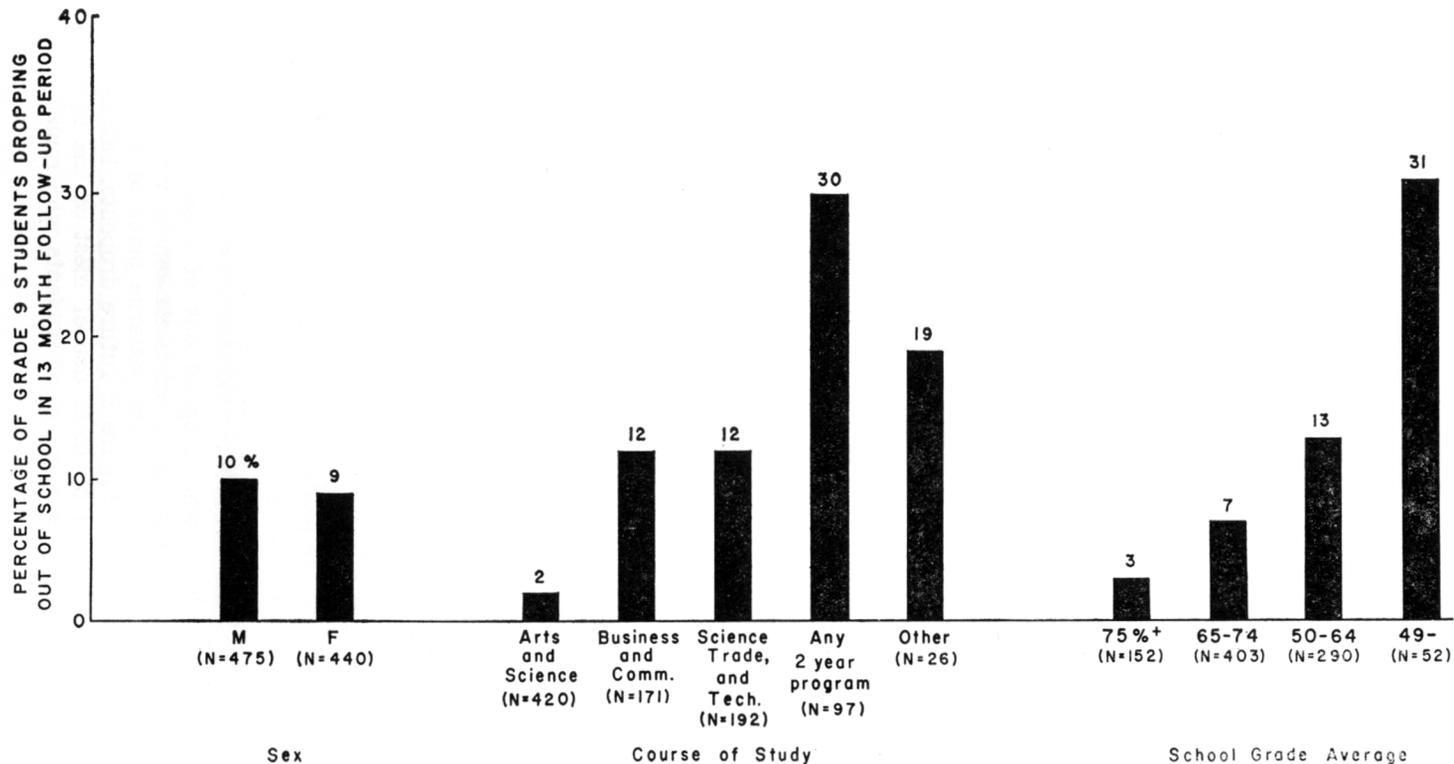


Figure 1: Dropout rate by sex, course of study, and school grade average

NOTE: Course of study information and school grade average were unavailable for 9 and 18 students respectively

administration, employment status was determined for those students who had dropped out of school. All questionnaires were coded to maintain local anonymity while allowing matching of the drug-use information provided by each student at Time 1 and Time 2.

Time 1: The initial administration of the drug-use questionnaire was conducted during the fall term of the students' Grade-9 year.

Time 2: Thirteen months after the initial drug-use survey, the questionnaire on current drug use was readministered to as many of the students as could be located and were willing to participate.

RESULTS

Response Rates Across Questionnaire Administrations

Time 1: Drug use information was obtained from 915 of the 1001 Grade-9 students in the study sample for a response rate of 91 percent. Absenteeism from school on the day the survey was conducted was the major reason for failure to obtain the missing questionnaires.

Time 2: At the end of the thirteen-month follow-up period, current drug-use information was obtained from 99 percent of the students who had participated at Time 1 and were still attending school. Sixty-seven percent of the 88 students who had dropped out of school between Time 1 and Time 2 were located and cooperated in providing follow-up information on their current drug use. These return rates were considered to be satisfactory for purposes of the analyses of drug use presented below.

Characteristics of the Dropout Group

The dropout rate by sex, course of study, and school grade average is presented in Figure 1. No significant difference in dropout rates for males (10.3 percent) and females (8.9 percent) was indicated. The dropout rate between first and second high-school years did vary substantially with type of course enrollment, ranging from a high of 30 percent for students in a 2-year program to only 2 percent for students in a 4- or 5-year arts and science program. Dropout rate was also observed to vary directly with school grade average, with a rate of over 30 percent dropout among students with failing grades, and a rate of only 3 percent among honour students.

Only one-half of the dropouts were found to be employed at the time of testing, with less than one-third having full-time jobs. More than twice as many males as females were employed. The majority of employed female dropouts were involved in clerical work or sales help, whereas employed male dropouts were predominantly in labouring (construction) jobs and mining.

Drug Use Prior to School Dropout (Time 1)

Prevalence: Those students who dropped out of school during the follow-up period ($N = 88$) were compared to classmates who remained in school ($N = 827$) on their drug use patterns prior to withdrawal from school. As can be seen in Figure 2, future dropouts, before leaving school, were characterized by more use of most of the licit and illicit drugs than the comparison group of students who remained in

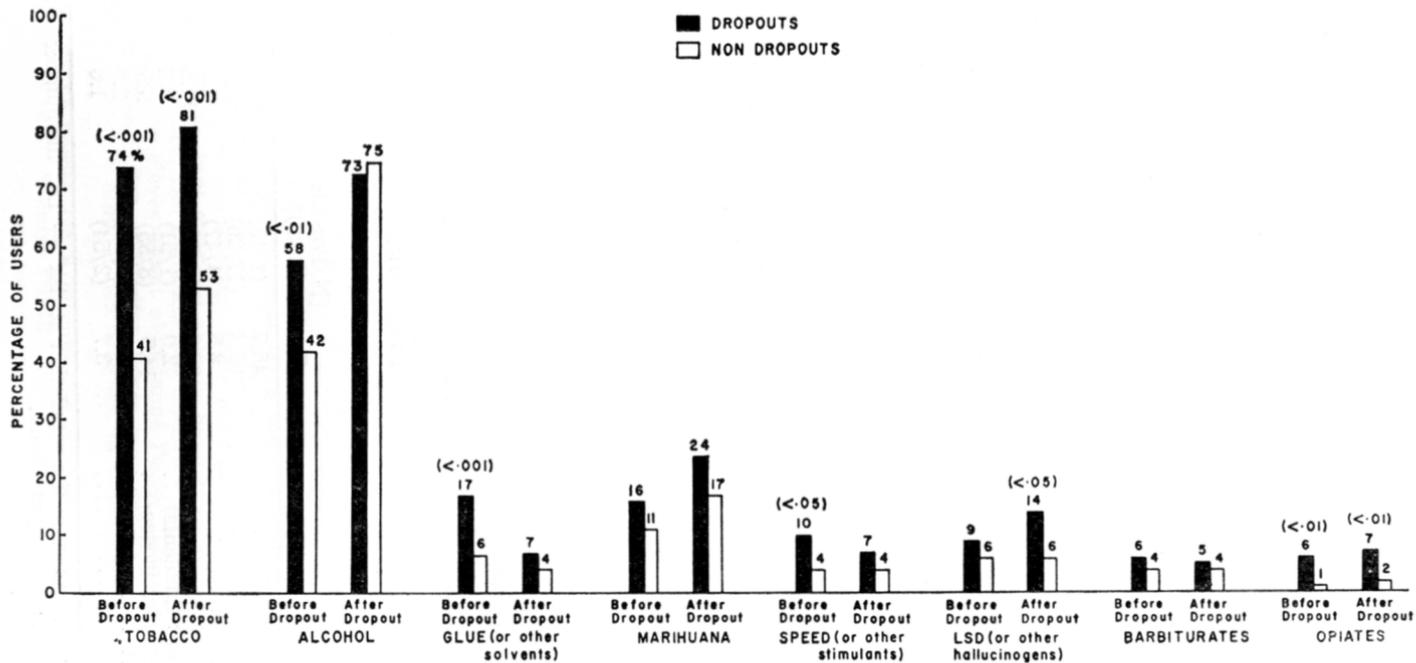


Figure 2: Drug use by dropouts and non dropouts in year prior to leaving school and in year following school dropout

school. Particularly notable were the future dropouts' significantly higher rate of use of tobacco (18:10), alcohol (14:10), glue or other solvents (26:10), speed or other stimulants (26:10) and opiates (52:10), compared to non-dropouts.

Drug Use Following School Dropout (Time 2)

Prevalence: Drug use in the dropout group in the year subsequent to their leaving school was compared to that of their classmates who remained in school. In the year following school withdrawal, dropouts reported more use of tobacco (15:10), LSD and other hallucinogens (23:10), and opiates (40:10) than the comparison group of non-dropouts.

Incidence of New Drug Use: In addition to comparing the prevalence of drug use at Time 1 and Time 2 in relationship to dropout, it is also relevant to consider the incidence of new cases of reported use of each drug during the follow-up period. That is, it is important to assess whether or not school dropouts who had not previously used certain drugs were more likely to initiate use of these drugs following school dropout than students remaining in school. The comparable figures for the dropout and non-dropout groups are presented in Table 1. The very small numbers involved in the analyses within the dropout group necessitate caution in the interpretation of the results. Nevertheless, trends toward greater initiation of drug use following school dropout were indicated for most of the illicit drug categories. The largest difference was observed for LSD and other hallucinogenic drugs, with over two and one-half times as many school dropouts initiating use of these drugs following dropout compared to their peers who remained in school.

TABLE 1
INCIDENCE OF NEW DRUG USE AMONG DROPOUTS AND
NON-DROPOUTS DURING THE THIRTEEN-MONTH FOLLOW-UP PERIOD

Drug	Percent Reporting New Use of Each Drug During 13-Month Follow-Up Period			
	Dropouts		Non-Dropouts	
	%	(N/Possible Total)*	%	(N/Possible Total)*
Tobacco.....	46.7	(7/15)	29.5	(144/488)
Alcohol.....	65.4	(17/26)	62.5	(297/475)
Glue (or other Solvents).....	8.5	(4/47)	4.2	(32/762)
Marihuana.....	20.0	(10/50)	11.8	(86/729)
Speed (or other Stimulants)...	2.0	(1/51)	3.2	(25/784)
LSD (or other hallucinogens)...	14.5	(8/55)	5.5**	(42/768)
Barbiturates.....	3.7	(2/54)	2.8	(22/783)
Opiates.....	3.7	(2/54)	1.6	(13/806)

* "Possible Total" refers to the population at risk — i.e., the number of students who had not taken the drug at Time 1.

***p* < .02 (Chi square test)

DISCUSSION

Previous research has reported greater drug use among dropouts than among students who remain in school (Johnston, 1973; Robins et al., 1970). This finding is largely supported by the results of the present study in which school dropouts at Time 2 (following dropout) reported more use of licit and illicit drug categories.

But which came first, the dropping out or the high level of drug use? That is, is school dropout best considered a cause or an effect of drug use? The repeated measures of drug use before and after school withdrawal in the present study shed some light on these questions. *For almost every drug, the trend towards greater drug use within the dropout group was evident and equally strong before the dropping out occurred.* However, although greater drug use was evident in the dropout group prior to their withdrawal from school, there was some indication that dropouts were additionally more likely to start or initiate drug use following school dropout. This appeared to be particularly true in the case of hallucinogenic drugs where the rate of initiation of use was two and one-half times as great among dropouts, during the follow-up period, as among their peers who remained in school.

How may these results, then, be interpreted? Bachman et al. (1971), in a large-scale, longitudinal study of another deviant behaviour, namely delinquency, has argued that school dropout is a *symptom* rather than a cause of problems in that the differences in delinquency between dropouts and their peers are present and fully as large before the dropping out occurs. The present results provide partial support for this contention in relation to drug use by revealing a consistent pattern of greater drug use by dropouts prior to their withdrawal from school. This suggests that drug use functions as part of the constellation of contributing factors that precedes dropping out of school. At the same time, however, evidence of the higher rate of further initiation into some types of drug use following school withdrawal indicates that dropout status itself may play a causal role in fostering self-identification and/or social group contacts conducive of the development of drug abuse patterns.

RESUME: On a effectué une recherche longitudinale pour étudier la relation entre l'usage de drogues et l'abandon scolaire chez des élèves de niveau secondaire. Dans un premier temps, on a interrogé neuf cent quinze élèves inscrits en neuvième année au sujet de leur usage de drogues. Dans un deuxième temps, c'est-à-dire treize mois plus tard, on les a de nouveau interrogés à ce sujet, tant ceux qui avaient abandonné l'école que ceux qui la fréquentaient encore. Les résultats ont confirmé les recherches antérieures démontrant que les élèves ayant abandonné l'école faisaient un plus grand usage de drogues licites et illicites *après* leur abandon. De plus, il a été démontré que pour la plupart des drogues, la tendance vers un plus grand usage était déjà manifeste au début de l'étude chez ceux qui ont éventuellement abandonné l'école. On a discuté des résultats en termes d'une interprétation de la relation entre l'usage des drogues et l'abandon scolaire comme un symptôme plutôt que comme une cause. On a tiré la conclusion que l'usage de la drogue fait partie d'une constellation de facteurs qui précède

dent l'abandon scolaire. Toutefois, une fois acquis le statut de "dropout", ce dernier peut avoir une influence causative dans le développement d'une identification personnelle et d'une appartenance à un groupe qui favorise un usage abusif des drogues.

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