DOCUMENT RESUME

ED 354 425 CG 024 766

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TITLE A Two Year Study of Substance Use among Secondary Students: Analysis of Employment as a Variable.
PUB DATE Oct 92
NOTE 29p.; Paper presented at the Annual Meeting of the Midwestern Educational Research Association (Chicago, IL, October 14-17, 1992).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Drinking; Drug Use; *Incidence; Secondary Education; *Secondary School Students; Sex Differences; Smoking; *Student Employment; *Substance Abuse; Trend Analysis

ABSTRACT

This study, based upon data collected during the 1991-92 academic year, is a follow-up and continuation of a study conducted during the previous 1990-91 academic year. The focus of the study is on substance use and this paper analyzes the responses of secondary school students who work. The 1992 study continued and supported the thesis that students who are employed during the school year are more susceptible to substance use than their non-working peers. This study was conducted using a 52-item survey questionnaire given in several individual school districts in a Midwestern suburban/rural setting. Secondary school students responded anonymously to the questionnaire resulting in a 1992 sample size of 5,639. Data results were analyzed using the Statistical Package for the Social Sciences (SPSS-X) Program. Strong results were established for both the 1991 (N=7,426) and 1992 (N=5,639) studies. The 1992 study found strong relationships between use of tobacco and student employment, and marijuana use and employment. Alcohol continued to be the drug of choice among substances used. Employed students were more likely to use cocaine and crack than not employed students. Results in the 1992 study again statistically linked use of other substances (such as depressants, hallucinogens, etc.) with student employment. Employed students were significantly more likely to have friends who use tobacco, alcohol, and other drugs than students who are not employed. Employed students generally received lower grades on report cards than those not employed. (ABL)

A TWO YEAR STUDY OF SUBSTANCE USE AMONG SECONDARY STUDENTS: ANALYSIS OF EMPLOYMENT AS A VARIABLE

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A Research Paper
Presented at
The Midwestern Educational Research Association
Annual Meeting
October 14-17, 1992
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In America large numbers of secondary school students hold jobs during the school year. For high school juniors and seniors, this has become the norm. Many adults believe employment can teach youth important life skills such as responsibility, management of time and money, and organization skills. Indeed, many students will learn such skills from their work experiences.

However, another side to this issue exists. For numerous working students, work takes precedence over selecting rigorous academic classes, or giving the needed attention to homework and study in the courses for which they are enrolled. It is common for high school seniors to request fewer classes and avoid school activities so they can increase their work schedules. In earlier research we reported working students were more susceptible to substance use than nonworking students. These issues are crucial for both schools and the workforce.

This study, based upon data collected during the 1991-92 academic year, is a follow-up and continuation of a study conducted during the previous (1990-91) academic year. The focus of the study is on substance use. This paper analyzes the responses of secondary school students who work. The 1992 study

continued and supported the thesis that students who are employed during the school year are more susceptible to substance use than their non-working peers.

The purposes of the study were to:

1. Identify the relationship between tobacco use and student employment;
2. Identify the relationship between alcohol use and student employment;
3. Identify the relationship between marijuana use and student employment;
4. Identify the relationship between cocaine use and student employment;
5. Identify the relationship between the use of other drugs and student employment;
6. Identify the relationship between employed students and non-employed students regarding academic goals and expectations; and
7. Compare and contrast data from the 1992 employed students with the 1991 employed student data to determine changes which have occurred.

This study was conducted using a 52 item survey questionnaire given in several individual school districts in a Mid-Western suburban/rural setting. Secondary school students responded anonymously to the questionnaire resulting in a 1992 sample size of 5,639 (See Table 1). Data results were transferred to computer tape from scan sheets and analyzed using the Statistical Package for the Social Sciences (SPSS-X) Program.

TABLE 1
POPULATION DEMOGRAPHICS

	1990-91	1991-92
Number Completing Survey: (Combined N =13,065)	7,426	5,639
Percent of Males in Survey:	49.8%	49.6%
Percent of Females in Survey:	50.2%	50.4%
Percent of Population Employed During Academic Year:*	40.1% (N=2948)	39.8% (N=2224)
Percent Employed During Academic Year - Males:	55.1%	51.8%
Percent Employed During Academic Year - Females:	44.9%	48.2%

* Note: Work permits are not issued until the age of 15 for this population.

Employment by Grade Level:

Grade:	8th	9th	10th	11th	12th
1990-91 Employed:	13.9	30.6	48.8	62.9	70.1
1991-92 Employed:	15.2	30.0	51.3	62.4	69.5

*Note: Data presented in all tables are reported in percentages based on frequencies of responses.

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The chi-square statistic was employed to determine if a relationship existed between the variables. Data will be reported using percentages to describe the frequency of responses.

Strong results were established for both the 1991 (N= 7,426) and 1992 (N= 5,639) studies. For example, in both studies extremely high chi-square values were obtained when comparing the employment variable to each of the substances surveyed, with significance beyond .00000 from each correlation. The statistical comparison of students who worked in the 1992 study with those who worked in the 1991 study interestingly revealed mixed results; i.e. both positive and negative conclusions from the data were found.

The demographic characteristics of the population surveyed can be summarized in the following ways (See Table 1). The gender division of the population for both surveys was nearly even. Most of the respondents were caucasian. The socio-economic status of the families crossed the spectrum, ranging from families on welfare to those with high six digit incomes. Most respondents were from working and middle income families. One of every three respondents lived with a step parent or a single parent. Four of every 10 students in both surveys were employed during the academic year. As one would expect, the percentages of students employed increased by grade level. For the population surveyed, work permits are <u>not</u> issued until the age of 15.

In order to maximize clarity of the findings from this massive study, data are presented by surveyed categories. Initially in each section, the 1992 data will compare employed student responses to non-employed student responses. This description will be followed by a comparison of the 1992 employed student responses to the 1991 employed student responses to determine changes or trends which emerge from these studies.

1. USE OF TOBACCO

The 1992 study found a strong relationship between use of tobacco and student employment (See Table 2). For the total population one of every five students used some form of tobacco. Examination of data revealed 26% of the students not employed had experimented with and/or quit using tobacco; whereas for employed students one of every three had experimented with or quit using tobacco. Of those surveyed, who reported using tobacco, employed students were found to more than double the use rate when compared to those students not employed. Thus, a significant difference regarding the employment variable was found: employed students were twice as likely to use tobacco (See Table 2,A.) Examination for gender differences found 23% of the males and 16% of the females used tobacco, also a significant difference (See Table 2,B.) As one might expect, use increased with grade level. Less than one of every twenty sixth grade students used tobacco; for high school seniors four of every ten students used tobacco. Use doubled between 7th and 8th grade, and doubled again between 8th and 12th grades. This increased usage pattern progressed from grade to grade with increases noted at each grade level (See

TABLE 2
USE OF TOBACCO

A. By Employment 1992:

	Not Employed	Employed
Experimented/Quit	25.7	31.9
Use:	13.2	29.2

Value: 318.7 Significance: <.00000

B. By Gender, 1992:

	Males	Females
Experimented/Quit:	31.1	25.2
Use:	23.1	16.0

Value: 97.5 Significance: <.00000

C. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
Use:	4.7	8.4	17.1	22.6	27.4	31.9	41.3

Value: 751.8 Significance: <.00000

D. By grade and Employment:

Grade	8th	9th	10th	11th	12th
Use:	40.2	43.0	47.0	45.7	54.9

Value: 352.6 Significance: <.00000

E. Use of Tobacco by Parent/Guardian, 1992:

	Students Not Employed	Employed Students
Parental Use:	31.6	38.5

Value: 56.8 Significance: <.00000

F. 1992 data Compared to 1991 data:

	1990-91		1991-92	
	Non-Employed	Employed	Non-Employed	Employed
Experimented/Quit:	21.4	23.9	25.7	31.9
Use:	18.4	28.4	13.2	29.2
	Value: 403.4		Value: 318.7	
	Significance: <.00000		Significance: <.00000	

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Table 2,C). Comparison of tobacco use by grade levels and employment status revealed the highest increases in use of tobacco. For employed students four of every ten 8th graders reported using tobacco. This number increased by grade: over half of the employed seniors were using tobacco (See Table 2,D). A correlation was found between student use of tobacco and parent use of tobacco. This was also significant when looking at the student employment variable; employed students were more likely to have a parent who used tobacco (See Table 2,E).

Comparison of the 1992 data to the 1991 data revealed an interesting pattern (See Table 2,F). The use rate for students not employed dropped by five percent; however, for employed students a slight increase in tobacco use was found. For all students an increase in the experimented/quit category was noted. This data would support the view that secondary students are beginning to change patterns of tobacco usage. The exception to this trend, however, are the students who work during the academic year.

2. USE OF ALCOHOL

Alcohol continues to be the drug of choice among substances used by secondary school students. The 1992 data substantiated the earlier findings (1991 study) regarding alcohol usage (See Table 3). Of the 1992 survey respondents who were not employed, 42% reported they had either experimented with alcohol or quit using it; this compared to about one of every two employed students who responded this way. Continued use of alcohol was reported by 10% of the not employed population compared to 23% of

TABLE 3
USE OF ALCOHOL

A. By Employment, 1992:

	Not Employed	Employed
Experimented/Quit:	41.5	48.6
Use:	9.6	23.0

Value: 309.0 Significance: <.00000

B. By Gender, 1992:

	Males	Females
Experimented/Quit:	44.7	43.8
Use:	16.9	12.7

Value: 25.5 Significance: <.00000

C. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
Use:	1.5	5.1	9.6	12.7	24.6	23.4	46.2

Value: 1177.4 Significance: <.00000

D. By Grade and Employment:

Grade:	8th	9th	10th	11th	12th
Use:	53.5	58.9	70.1	57.9	75.9

Value: 767.2 Significance: <.00000

E. Use of Alcohol by Parent/Guardian, 1992:

	Students Not Employed	Employed Students
Parental use, but no problem:	61.6	60.6
Problem:	5.4	7.7

Value: 12.7 Significance: .0017

F. 1992 Data Compared to 1991 Data:

	1990-91		1991-92	
	Not Employed	Employed	Not Employed	Employed
Use:	21.6	33.0	9.6	23.0
	Value: 301.5		Value: 309.0	
	Significance: <.00000		Significance: <.00000	

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those employed (See Table 3,A). Thus, a significant difference for use was attributed to the employment variable. Analysis of gender difference for alcohol use also revealed significance (See Table 3,B). Males were more likely (17%) than females (13%) to use alcohol. The grade level of respondents was also significant; the older students reported higher rates of alcohol use (See Table 3,C). Large increases were found between the 6th grade (1.5%) and 8th grade (9.6%), 9th grade (12.7%) and 10th grade (24.6%), and between 10th and 12th grade (46.2%). High school students not employed compared to those employed also revealed interesting differences. Sizeable percentage increases in alcohol use by grade and employment were noted (See Table 3,D). Over half of the employed 8th graders indicated they used alcohol, this compared to over three-fourths of working seniors who reported using alcohol. A significant decrease in alcohol use was reported by high school juniors in the 1992 study. Nevertheless, employment was a significant variable in the use of alcohol by secondary school students.

A correlation was explored between use of alcohol by a parent or guardian and student employment. Approximately 60% responded their parents used alcohol without a perceived problem (See Table 3,E). However, working students reported greater incidences of problems with alcohol for their parent or guardian.

Comparison of the 1992 data to the 1991 data revealed an interesting decrease in alcohol use by secondary school students (See Table 3,F). For both the not employed and the employed categories, the 1992 data revealed a 10% drop in use. This is

significant both from a statistical perspective and a programmatic perspective. Possibly the efforts these school districts have been placing upon substance abuse programs are beginning to have an impact which can be assessed during the next few years.

Secondary school students are often involved in varied social functions. A series of survey questions focused upon the presence of alcohol at such functions (See Table 4). Correlation was established by grade level and presence of alcohol at social functions (See Table 4,A). The higher grade levels found an increase in the presence of alcohol. By the senior year 75% of the respondents reported alcohol was "often" or "always" found at social functions. A correlation was established for employment and alcohol at social functions (See Table 4,B). Employed students were more likely to have alcohol at social functions they attended than were not employed students. The percentage of employed students responding "always" was twice that of the not employed student responses. When asked if parents served alcohol at student social functions surprisingly only 44% of the senior respondents stated "never". Comparing total responses of not employed to employed students, parents of employed students were more likely to serve alcohol at social functions (See Table 4,C).

The amount of alcohol consumed by students was also surveyed. Again comparison of the data for not employed and employed students revealed the employed students consumed more alcohol. For example, 27% of the employed students compared to 15% of those not employed responded they had three or more

TABLE 4
PRESENCE OF ALCOHOL AT SOCIAL FUNCTIONS

A. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
Never:	82.0	62.0	47.2	32.8	22.6	15.8	11.3
Seldom:	12.3	24.5	29.3	38.2	23.8	22.0	14.0
Often:	2.1	9.0	15.9	19.1	33.5	37.3	40.8
Always:	3.6	4.5	7.6	9.9	20.0	24.8	33.9

Value: 1857.4 Significance: <.00000

B. By Employment, 1992:

	Not Employed	Employed
Never:	51.4	32.4
Seldom:	25.4	21.6
Often:	14.9	26.6
Always:	8.3	19.4

Value: 339.3 Significance: <.00000

C. Parents Serve Alcohol:

	Not Employed	Employed
Never:	78.7	63.0

Value: 165.9 Significance: <.00000

D. Had 3 or More Drinks in Previous Two Weeks:

	Not Employed	Employed
Yes:	14.6	26.8

Value: 124.3 Significance: <.00000

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consecutive drinks within the past two weeks (See Table 4,D). For high school seniors this increased to 43% for those employed.

The 1992 study found a significant correlation regarding coming to school under the influence of alcohol and employment (See Table 5,A). Employed students had approximately double the percentage rates of not employed students coming to school under the influence. For employed seniors, almost one of five responded he/she had come to school under the influence at least once.

When asked, have you ridden in a vehicle driven by a driver under the influence of alcohol, responses indicated significance for the employment variable again (See Table 5,B). One in five not employed students had ridden in a vehicle with a driver under the influence. This compared to more than one in three of employed student respondents. For high school seniors employed this statistic increased to about one of every two respondents had ridden with a driver under the influence. Grade level was significantly correlated to this question (See Table 5,C). This pattern of riding with such a driver is one that needs to be discussed with secondary school youth.

In summary, correlation between alcohol use and the employment variable are significant. Correlations to grade level, employment, presence of alcohol at social functions, and, coming to school or driving under the influence are strong. A decrease in alcohol use from the 1992 survey is a good sign, but much attention still must be directed to the substance abuses of this population.

TABLE 5
UNDER THE INFLUENCE OF ALCOHOL

A. Come to School Under Influence, 1992:

	Not Employed	Employed
Never:	93.5	86.6
Once:	4.8	10.3
Frequently:	1.7	3.1

Value: 75.6 Significance: <.00000

B. Ridden in Vehicle Driven by DUI by Employment:

	Not Employed	Employed
Never:	79.5	64.8
Once:	14.3	23.3
Frequently:	6.2	11.9

Value: 150.1 Significance: <.00000

C. Ridden in Vehicle Driven by DUI by Grade:

Grade:	6th	7th	8th	9th	10th	11th	12th
Never:	84.8	80.8	80.0	73.7	64.8	63.8	53.1
Once:	10.5	13.7	13.7	17.7	23.6	26.2	29.0
Frequently:	4.7	5.5	6.3	8.7	11.7	10.0	17.9

Value: 307.0 Significance: <.00000

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3. USE OF MARIJUANA

The 1992 study found a strong relationship between marijuana use and employment for secondary school students. (See Table 6,A). The percentage of employed students who experimented with and/or quit using this substance was double the percentage of those not employed. Current use patterns followed the same trend: employed students were twice as likely to use marijuana. Examination of data for high school seniors revealed one of every seven seniors used marijuana; again the percentage for working students was significantly higher than for those seniors not employed. The study did not find significance by gender for marijuana use (See Table 6,B). However, significance was obtained for the grade level variable (See Table 6,C). Interestingly, a drop in use again occurred during the high school junior year. This change certainly did not continue into the senior year where the highest use levels for all students occurred. Examination of grade level by employment found the same pattern (See Table 6,D). Employed students consistently reported higher rates of use.

Comparing the 1992 data to the 1991 data revealed an interesting use pattern (See Table 6,E). A decrease in use was reported in 1992; in fact, use for both employed and not employed students decreased to almost half the 1991 reported levels of use. These data are again significant not only statistically, but also programmatically for these school districts.

TABLE 6
USE OF MARIJUANA

A. By Employment, 1992:

	Not Employed	Employed
Experimented/Quit:	7.7	16.9
Use:	2.4	5.9

Value: 163.0 Significance: <.00000

B. By Gender, 1992:

	Males	Females
Experimented/Quit:	11.7	10.9
Use:	4.2	3.4

Not Significant

C. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
Experimented/ Quit:	2.6	2.7	8.3	12.5	17.7	22.6	26.7
Use:	0.4	1.3	1.4	5.0	5.8	3.8	14.4

Value: 679.3 Significance: <.00000

D. By Grade and Employment, 1992:

Grade:	8th	9th	10th	11th	12th
Use:	9.0	11.5	14.5	5.0	15.5

Value: 500.1 Significance: <.00000

E. 1992 Data Compared to 1991 Data:

	1990-91		1991-92	
	Not Employed	Employed	Not Employed	Employed
Use:	6.2	10.6	2.4	5.9

Value: 44.6 Significance: <.00000

Value: 163.0 Significance: <.00000

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4. USE OF COCAINE

Cocaine and crack usage were found among surveyed respondents, but in smaller numbers during the 1992 study. Employed students were more likely to use these substances than not employed students (See Table 7,A). Gender was significant; males reported higher rates of cocaine/crack use than females (See Table 7,B). Examination of data by grade level did not produce the increased use pattern which was found for other substances (See Table 7,C). Nevertheless, significance was established for this variable.

Comparison of the 1992 data to the 1991 data revealed a significant drop in use of cocaine/crack for the not employed respondents, and a slight decrease in use for employed students (See Table 7,D). In actual numbers the 1991 data reported 83 students of the 7,426 respondents used cocaine/crack; the 1992 figure was 33 of the 5,639 respondents responding affirmative to cocaine/crack use. Employment as a variable was statistically significant: employed students were more likely to use this substance than were those not employed.

5. USE OF OTHER SUBSTANCES

The use of numerous other substances was also surveyed (See Table 8). Students were questioned about their use of: stimulants such as amphetamines, speed, uppers; depressants such as barbiturates, downers, reds; inhalants such as glue, gasoline, aerosols; narcotics such as heroin, morphine, opium, crack; hallucinogens such as LSD, peyote, PCP, mushrooms; over-the-counter drugs such as diet pills, sleeping pills, tranquilizers,

TABLE 7
USE OF COCAINE

A. By Employment, 1992:

	Not Employed	Employed
Use:	.2	1.1

Value: 26.1 Significance: < .00000

B. By Gender, 1992:

	Male	Female
Use:	1.0	.3

Value: 22.3 Significance: .00001

C. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
Use:	.6	.6	1.0	.5	1.5	.2	.2

Value: 66.8 Significance: < .00000

D. 1992 Data Compared to 1991 Data:

	1990-91		1991-92	
	Not Employed	Employed	Not Employed	Employed
Use:	1.2	1.3	.2	1.1

Value: 80.1 Significance: < .00000

Value: 26.1 Significance: < .00000

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and alcohol-based cough medications; and steroids. Examination of use by grade produced mixed pattern results (See Table 8,A). For example, analysis of stimulant use basically followed the pattern found for alcohol and tobacco, i.e. a gradual increase occurred with grade level. However, this pattern did not follow with other substances. Use of hallucinogens dropped in 7th grade and again in 11th grade, but 12th grade use then increased to 9% of the senior class, an amazing change to the established patterns. Nevertheless, a decreased use of other substances was reported by respondents from the senior class. Conjecture as to why this dramatic increased use of hallucinogens occurred, has not been made.

The most widespread substances used in this category were the over-the-counter drugs. Frequency of use of these substances undoubtedly is related to their accessibility. This category for the total population was the third highest in the survey following use of alcohol and tobacco.

Results in the 1992 study again statistically linked use of these substances with student employment (See Table 8,B). For each of these substances, employed students recorded higher use rates.

Comparing 1992 data to 1991 data revealed interesting results. In **every** category, except hallucinogens used by 12th grade students, decreases in use were found. For many of the substances the decreased use was dramatic. For example, over-the-counter drug use dropped from 17% of the population in 1991 to approximately 3% in 1992. Decreased use of these substances

TABLE 8
USE OF OTHER SUBSTANCES

A. By Grade, 1992:

Grade:	6th	7th	8th	9th	10th	11th	12th
(1) Use of: Stimulants	.7	.7	1.2	2.1	2.1	2.4	2.1
(2) Use of: Depressants	.5	.4	1.1	1.1	2.1	.9	1.1
(3) Use of: Inhalants	.9	1.5	1.4	1.8	1.5	1.9	.2
(4) Use of: Narcotics	.3	.6	.9	.6	1.1	.7	.2
(5) Use of Hallucinogens	.9	.2	.5	1.8	2.9	1.0	9.0
(6) Use of: Over-the Counter Drugs	1.8	1.3	2.5	1.9	3.0	4.1	3.2
(7) Use of: Steroids	.9	.7	1.6	1.7	1.9	2.4	.5

Values:		Significance:	
(1)	201.8	(1)	< .00000
(2)	96.2	(2)	< .00000
(3)	43.3	(3)	.00002
(4)	198.4	(4)	< .00000
(5)	350.1	(5)	< .00000
(6)	107.7	(6)	< .00000
(7)	20.8	(7)	.05

B. By Employment, 1992:

	Not Employed	Employed
(1) Stimulants:	1.1	2.0
(2) Depressants:	.8	1.2
(3) Inhalants:	1.3	1.5
(4) Narcotics:	.4	.9
(5) Hallucinogens:	1.5	2.7
(6) Over-the-counter Drugs	1.7	3.3
(7) Steroids	1.1	2.0

Values:		Significance:	
(1)	47.0	(1)	<.00000
(2)	17.9	(2)	.0001
(3)	16.3	(3)	.0002
(4)	44.4	(4)	<.00000
(5)	52.7	(5)	<.00000
(6)	76.4	(6)	<.00000
(7)	19.5	(7)	.00006

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was noted for employed students; but such changes were not as strong as the comparable data for those students not employed. Nevertheless, this data may become a bellwether of changing attitudes and use of such substances. Additional longitudinal data must be collected to determine if this is a developing trend or merely a one-year aberration in secondary school student substance use.

6. SUBSTANCE USE AND FRIENDS

Research studies often include questions which are similar to check for consistency of responses. Both the 1991 and 1992 data had several questions which could be used for such checks. For example, if students agree they use alcohol regularly, they usually agree they have friends who use alcohol regularly too. Such a link becomes an indicator that students are probably responding accurately. It is possible individuals may not follow the same patterns as their friends, but this is not typical. The 1992 data used the concept of friends who use substances and crosstabbed this with both employment and grade (See Table 9).

Examination of these data indicated employed students were significantly more likely to have friends who use tobacco (See Table 9,A), alcohol (See Table 9,B), and other drugs (See Table 9,C) than students who were not employed. This substantiates earlier correlations described for employed students and substance use.

Significance was also established for grade levels. As expected, increased use of tobacco (See Table 9,D), alcohol (See Table 9,E), and other drugs (See Table 9,F) was related to grade

TABLE 9
FRIEND WHO USES SUBSTANCES

A. Friend who uses tobacco by Employment

	Not Employed	Employed
Occasionally:	23.6	21.4
Frequently:	30.8	53.3

Value: 316.7 Significance: < .00000

B. Friend who uses alcohol by Employment

	Not Employed	Employed
Occasionally:	33.4	37.0
Frequently:	20.8	37.5

Value: 283.5 Significance: < .00000

C. Friend who uses other drugs by Employment

	Not Employed	Employed
Occasionally:	19.7	26.3
Frequently:	9.5	21.0

Value: 218.9 Significance: < .00000

D. Friend who uses tobacco by Grade

Grade:	6th	7th	8th	9th	10th	11th	12th
Frequently:	10.6	28.1	32.0	44.6	56.8	62.7	70.8

Value: 1257.6 Significance: < .00000

E. Friend who uses alcohol by Grade:

Grade:	6th	7th	8th	9th	10th	11th	12th
Frequently:	6.8	17.6	18.0	27.8	43.4	46.1	57.1

Value: 1529.8 Significance: < .00000

F. Friend who uses other drugs by Grade:

Grade:	6th	7th	8th	9th	10th	11th	12th
Frequently:	4.9	7.5	7.3	16.6	20.7	19.9	35.0

Value: 792.1 Significance: < .00000

G. 1992 Data Compared to 1991 Data for Employed Students

	1990-91		1991-92	
	Not Employed	Employed	Not Employed	Employed
Friend who uses substances frequently:	23.3	31.2	29.5	40.4
	Value: 59.7		Value: 51.2	
	Significance: < .00000		Significance: < .00000	

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level; in other words, seniors were more likely to have friends using these substances than younger students. Increases were obvious between 6th and 7th grade, between 8th and 9th grades, followed by consistent increases in percentages from 9th through 12th grades. This is consistent with earlier reported data.

Comparisons of the 1992 data to the 1991 data revealed an increased substance use pattern for friends during 1992 (See Table 9,G). Employed students were more likely in 1992 to have a friend who used substances than was the case in 1991. Those students not employed followed this pattern, however the increase was not as high for this group. For the total population, the 1992 data found respondents were more likely to have friends who use substances. This finding stands in contrast to the earlier data reported which found decreased use patterns for survey respondents themselves in 1992 as opposed to 1991.

7. EDUCATIONAL PERSPECTIVES OF EMPLOYED STUDENTS

Several questions were asked to develop an understanding of the educational perspectives for secondary school students. When comparing the responses of employed to not employed students, significant differences emerged.

Employed students generally received lower grades on report cards than those not employed (See Table 10,A). Of all the C's, D's, and F's given, 45% were given to employed males and 32% to employed females. Thus, over three-fourths of the report card grades that were either C, D, and F, were received by employed students.

TABLE 10
EDUCATIONAL PERSPECTIVES

A. Grades on Report Cards by Employment

	Not Employed	Employed
More A's	32.2	23.3
More C's, D's and F's	31.1	39.0

Value: 141.6 Significance: <.00000

B. Involvement at School by Employment

	Not Employed	Employed
Athletics:	25.5	22.2
Gov't/Clubs:	4.8	9.2
Music/Drama	14.4	11.5
None:	27.9	30.6

Value: 132.3 Significance: <.00000

C. Expectation of Educational Attainment by Employment

	Not Employed	Employed
Not finish school:	1.4	1.7
Graduate from High School:	5.9	6.8
Vocational School:	4.1	8.9
College or further Training:	88.6	82.6

Value: 133.2 Significance: <.00000

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Employed students were not involved in school activities as frequently as those students not employed (See Table 10,B). One-third of employed male respondents were involved in no school activities; one-fourth of responding employed females were not involved in school activities. Analysis of the "not involved" response and the grade level of employed respondents found an increase in those students selecting this response in grades 10, 11, and 12. Interestingly, these grade levels reflect increasing percentages of the total population holding jobs during the academic year.

Expectations for educational attainment were also related to the employment variable (See Table 10,C). Generally, employed students had lower educational expectations for themselves than did those who were not employed. Examination of the 1992 data revealed an unusual pattern. The percentage of employed students who responded they expected to drop out before their senior year increased; the percentage of those who responded they expected to go to college also increased. Decreases in percentage of responses were noted in the expectations to graduate from high school, and to attend vocational school. Employed females exhibited higher educational expectations for themselves than did employed males.

The educational perspectives of employed students must be further examined. Generally employed students, especially high school seniors, take easier or fewer courses and do less homework than their non-employed peers. For many employed students, the value of their work has overwhelmed any value for school based

learning. It is common for employed students to earn money to purchase things they or their families do not need; consequently, this focus on work often results in a personal sacrifice of academic achievement. One can only speculate whether or not these students and their families see secondary education as important. Students without strong academic backgrounds potentially become those adult workers about which business and industrial leaders complain and for which they are often required to provide remediation. If students continue to depreciate the value of learning through their work experience, then this trend may become the late twentieth century version of American anti-intellectualism.

The purpose of this study was to identify the relationships between different substances and student employment in the secondary school setting. The findings which have emerged from this study support the thesis that employed students are significantly more susceptible to substance use than their non-employed peers. The 1992 study, when compared to the 1991 study, found significant decreases in use for substances surveyed except for the category of hallucinogens used by high school seniors. In each correlation the percentage of decrease for employed students was not as strong as was the case for those not employed. Thus, secondary school student employment is a significant variable related to substance use.

Some findings from the current study need additional attention. One of these was the increase in the number of friends who use varied substances. This could be an indicator

respondents under-reported their own substance use. Disturbing findings regarding employed student attitudes and perspectives toward schooling also need to be addresed. This study found employed students received lower grades, were less involved, and had lower educational expectations. Each correlation found high significance to support these concerns. Another area needing attention is the reasons why students use substances. When asked the major reason why students used substances, the responses of "fun" and "feel good" were either ranked as first or second for each substance. The "friends use" response usually ranked third. Few respondents selected the items of "need to" or "to cope with problems". Most secondary students do not see or understand problems created as a result of substance use.

Perceptions of parent use of the substances surveyed was revealing. Approximately one of every three parents currently used tobacco, and additionally one of every four parents had stopped using tobacco. Respondents reported two of every three parents used alcohol. Interestingly, respondents reported one in twenty parents currently used illegal drugs. Such findings underline the importance of parents as role models for their children. This area of parental substance use also needs additional study.

The findings from these studies do not imply students should not work. In fact, limited employment (10 hours per week or less) during the academic year may have value to help students learn to develop skills necessary for success in the workplace. However, too much work during the academic year can lead to a

reduced academic emphasis and subsequently lower achievement. Also, work and the freedom which follows, puts students in a position for greater substance exposure and abuse. Parents and guardians need to monitor behavior of students who do work to see that school work is not neglected or rigorous courses avoided, and that money earned through employment is spent in constructive ways. It is necessary for parents, educators, and employers to help adolescents develop both a realistic view of the present and more understanding of the future as influenced through work experiences and educational commitment. Such issues need to be discussed with working students by parents and educators alike. This dialog is an essential step to communicate concern and support for students in school and work environments.

Patterns of substance abuse will not be changed by "just saying 'No'", or using scare tactics. Educators and parents must concentrate on building communication bonds between the home, school, and workplace, and on helping students develop good problem-solving and decision-making skills. Both schools and parents must be involved in these efforts. This study found a decreased incidence of substance use by secondary school students. Yet, employed students consistently reported the highest substance use rates for this population. Changing substance use patterns of employed secondary school students will take time and effort. Recognition of this problem is a crucial first step. Awareness, combined with changing behavior patterns, can reduce the risks of students falling into the substance abuse trap.