

1970-71 WASHTENAW COUNTY HIGH SCHOOL  
SURVEY ON DRINKING AND DRIVING

SUMMARY REPORT

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16. Abstract <p>This report summarizes the results of a questionnaire completed by 436 tenth, eleventh, and twelfth grade students in six Washtenaw County high schools during the 1970-71 school year. In three schools the questionnaires were filled out by entire classes, and in the other three schools individual students were randomly selected as respondents. Content areas of the survey include: driving experience, driving record, driver education, exposure to drinking and driving information in school and on the mass media, radio listenership and newspaper readership, drinking and driving after drinking experience, role of alcohol in traffic accidents, effect of alcohol on driving ability, factors influencing how alcohol affects an individual, legal aspects of drunk driving, and demographic and background information on the respondent.</p> <p>The survey was carried out in order to obtain baseline information useful to the development and evaluation of the public information program for high school students being carried out by the Washtenaw Alcohol Safety Action Program. Among the salient findings were that two thirds of the students reported drinking at least occasionally, 15% once a week or more; 54% had driver's licenses and 13% had learner's permits; and 22% of the drivers reported driving after drinking two or more drinks in the previous three months, 36% of the male drivers and 9% of the female drivers.</p>		13. Type of Report and Period Covered	
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## SUMMARY

The survey reported here was conducted between November 1970 and February 1971 in six Washtenaw County high schools. It was sponsored by the Washtenaw Alcohol Safety Action Program (WASAP), a three-year federally-funded project which has as its objective a reduction in alcohol-related traffic accidents in Washtenaw County. High school students are considered a key target group for the WASAP public information activities. This survey at the start of the program was intended to provide baseline data on the knowledge, attitudes, and behavior of high school students in regard to various aspects of drinking and driving.

Self-administered questionnaires were completed by 436 students, fairly evenly divided among sophomores, juniors, and seniors. Seven-eighths of these students said they had driven a car at sometime, and almost one-third said they had driven a motorcycle. However, only 54% actually had driver's licenses, while another 13% had learning permits. Almost four-fifths had taken or were currently taking driver education. In regard to drinking, two-thirds of the students said they drank at least occasionally, and 15% said they customarily drank once a week or more. As for quantity of alcohol consumption, 29% indicated that they usually would have three or more drinks, and almost half said they sometimes would drink this much. Forty percent of the respondents said that they had been a passenger within the previous three months with a driver who had had two or more drinks, and 14% said they had turned down a ride with a driver who had had too much to drink.

Turning to the drivers alone, some 22% said they had driven after drinking two or more drinks within the previous three months. This included 36% of the male drivers and 9% of the female drivers. Twelve percent of the male drivers said they did this once a week or more frequently. Some 22% of the drivers reported having been in an accident while they were driving in the previous year, and 14% had received tickets and 18% warnings for moving violations. Only three of the drivers said they had been drinking prior to their accidents.

As mentioned above, about four-fifths of the respondents said they had been exposed to a driver education course. Almost all of these students said they had discussed alcohol and driving in this course. Other courses in which significant numbers of students said they had received some alcohol information include biology (38%), physical education/athletics (31%), health/family life (21%), and civics/government (15%). Eighty-two percent of the respondents reported having seen drinking/driving messages on television in the previous three months, while smaller proportions had seen such messages in newspapers (29%), magazines (30%), or billboards (20%), or had heard such messages on the radio (27%).

Almost all of the students recognized that drinking drivers are one of the most important causes of highway accidents. Only four respondents felt that drinking while driving is not a very serious problem. More than two-fifths of the respondents said they knew someone personally who had been involved in a drinking-related accident.

The students were also asked to respond to a number of knowledge questions concerning the effect of alcohol on driving ability and the legal aspects of drinking and driving. Large numbers of students demonstrated that they were poorly informed on such topics as the number of drinks which would begin to impair driving ability, the importance of body weight and prior food intake in determining how much a given amount of alcohol will affect a person, and the ineffectiveness of coffee and food for counteracting the effects of alcohol. In regard to legal matters, only 21% of the respondents were able to describe the implied consent law correctly, and less than half realized that license suspension was the normal penalty for refusal to take a requested breath test. Larger proportions were correct in thinking that license suspension and fines were usual penalties for a first drunk driving offense, but only one-quarter seemed aware that higher insurance rates were also a common result of a drunk driving conviction.

When the 57 drivers who said they had driven after drinking were compared with the 182 drivers who said they had not done so, the drinking drivers appeared considerably less knowledgeable on a number of these questions. There was far from a one-to-one relationship between level of knowledge and behavior, for some of the well-informed students did report that they drove after drinking. But in general the data do tend to support the hope of the WASAP public information campaign that increased drinking/driving knowledge should lead to decreased drinking/driving behavior.

In order to look at the effect of driver education on drinking/driving knowledge, the sophomores who had taken a driver education course were compared with the sophomores who had not taken such a course. On many, but not all, of the knowledge questions the driver education students evidenced greater knowledge than the students who had not taken driver education. However, it is clear that many students who have had driver education courses are not as well informed in the area of alcohol and driving as would be desirable. If driver education students are to be influenced to avoid driving after excessive drinking in their subsequent driving years, it is obviously important that they gain a more complete understanding of both the potential danger to themselves and to others from driving after drinking various quantities of alcohol and of the undesirable results of apprehension and conviction. On the other hand, it is evident that knowledge alone is not always sufficient to influence behavior very much, so it is important that innovative techniques be found to make this information personally meaningful to the individual student.

#### THE SAMPLE DESIGN

In 1970-71 there were approximately 9400 students in the 10th, 11th and 12th grades of 12 public and private high schools in Washtenaw County (a thirteenth school, Lincoln High School, was inadvertently omitted in making up the sampling design). It was hoped to obtain representative samples of about 200 students in each of the three grades, 175 of whom would be given a self-administered questionnaire and 25 of whom would have a personal interview.

For purposes of administrative efficiency it was decided to start with a sample of classrooms in the hope that class time could be used to administer the questionnaires to all members of a class at once, except for the one out of eight who would be taken out of the room for a personal interview. It was also decided that approximately equal numbers of 10th, 11th and 12th graders should be selected in each of the chosen schools in order to simplify administrative arrangements for the survey.

The first step in the selection process was to list all 116 10th grade English sections in the 12 schools, since this was one course required of all sophomores. The sections were listed in order by school size which ensured that there would be representation from both the urban and the outlying schools. The average size of these English sections throughout the county was 29 students, but it was recognized that due to absences etc. an average of 25 respondents per selected class was a more reasonable number to expect. Accordingly, a sampling fraction of 1/15 was determined, and eight sophomore English sections were randomly selected by taking one from each group of 15 on the list. There were two sections each chosen in Pioneer and Ypsilanti High Schools, and one section each chosen in Huron, Willow Run, Dexter, and Milan High Schools.

The next step was to choose the same numbers of sections of 11th grade American History and 12th grade Problems of American Democracy classes in each of the six chosen schools. This was done in Willow Run, Dexter and Milan High Schools, and class time was made available to carry out the survey in each of the nine chosen class sections in these three schools. However, the estimate of average size proved to be too optimistic, and only 184 of the expected 225 respondents in those three schools were obtained. Only one of the nine sections had more than 25 students present at the time of the survey, and the average was 20.5 (including two small remedial sections treated as one section at Willow Run High School plus a few interviewed respondents chosen in the cafeteria).

However, in the Ann Arbor and Ypsilanti schools this original sampling procedure could not be carried out because the school authorities would not approve the use of class time in the 10th grade English classes, the one course which included all sophomores. These schools also required that parental permission be obtained before a student could participate in the survey, but this did not prove a significant problem to obtaining participation.

In these three schools a new procedure was devised involving individual sampling from the grade lists of each school. The 1/15 sampling fraction was used in Pioneer and Huron High Schools, but as a result of the low initial response rate at these schools the fraction was changed to 1/10 at Ypsilanti High School. In the two Ann Arbor schools the selected students were to participate in the survey during their study periods, but it turned out that many of the students either did not have any study period or did not report to study hall. As a result, less than 50% of the designated students were actually contacted in the study halls of these schools. In Ypsilanti permission was obtained to contact the selected students during class time and to have them step into the hall to receive the questionnaire, but then they were to fill it in on their own time and turn it in to the office. This also resulted in a rather low initial response rate. However, two mailed follow-ups were made to nonresponding students in all three schools, and these brought the total response rate for the three individual sample schools to a respectable 78% (including the interviewed students), or 76% for the questionnaire sample alone. The questionnaires were filled out anonymously, but the respondents were checked off on a list when they turned in the questionnaires in school. With the mail questionnaires the respondents were sent a postcard to mail separately when they posted their questionnaires in the pre-stamped envelopes.

Table 1 details the expected and obtained responses by grade and school for the total sample. The 436 questionnaires and 57 interviews obtained are somewhat less than the 525 questionnaires



TABLE 1. EXPECTED SAMPLE SIZE AND NUMBER OF QUESTIONNAIRE AND INTERVIEW RESPONDENTS, BY SAMPLE TYPE, SCHOOL AND GRADE

School	Tenth Grade		Eleventh Grade		Twelfth Grade		Total <sup>a</sup>		Response Rate <sup>b</sup> (%)
	Expected	Obtained Ques. Int.	Expected	Obtained Ques. Int.	Expected	Obtained Ques. Int.	Expected	Obtained Ques. Int.	
<u>Individual Sample</u>									
Pioneer	48	33 3	51	35 3	48	36 4	147	105 10	72
Huron	36	26 4	36	21 2	30	29 2	102	77 8	82
Ypsilanti	57	27 5	51	40 4	39	29 2	147	96 11	73
Subtotal	141	86 12	138	96 9	117	94 8	396	278 29	78 <sup>c</sup>
<u>Classroom Sample</u>									
Willow Run	25	12 2	25	13 2	25	16 7	75	42 11	69
Dexter	25	18 3	25	20 3	25	21 3	75	59 9	91
Milan	25	23 4	25	20 2	25	13 2	75	56 8	85
Subtotal	75	53 9	75	53 7	75	50 12	225	157 28	82
TOTAL	216	140 21	213	149 16	192	144 20	616	436 57	80

a) Totals include three cases for which grade was not ascertained and one case for which name of school was not ascertained.

b) Total number of questionnaires and interviews obtained divided by the original expected sample size.

c) Response rate for questionnaires in individual sample = 76% (278/367).

and 75 interviews that had been originally desired, and the change in sampling fraction means that Ypsilanti students are somewhat over-represented in the total sample. Nevertheless, the questionnaire sample seems large enough and representative enough to provide some reasonably accurate information on the knowledge and behavior of Washtenaw County high school students in regard to drinking and driving. If the 436 cases in the questionnaire sample were a simple random sample of Washtenaw County high school students, the total sample percentages given in this report would not be expected to vary from the true percentages in the total population of high school students by more than five percentage points at a 95% confidence level. However, given the variations in sampling procedures and the likelihood that non-respondents are somewhat different from respondents in their drinking and driving behavior, a cautious approach would assume the possibility of a 6-10% "error" in percentages based on the total sample, an 8-15% "error" in percentages based on the grade samples, and 15-25% "error" in the percentages based on the school samples. Therefore, almost all grade and school differences shown in the subsequent data must be considered as suggestive rather than conclusive indications of differences among the grades and schools.

The sampling design, questionnaire construction, interviewing, and coding were carried out by the staff of the Alcohol Studies Program in the Highway Safety Research Institute (which is responsible for the evaluation of the WASAP program) and by The University of Michigan students in Prof. Donald Pelz's course in Survey Research Methods (Psych.-Soc. 583) who used this high school survey as a class learning project. Dr. James Swinehart served as a valued consultant to the project. The tabulations and analysis have been completed by the HSRI staff.

#### DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS

Table 2 provides information on the distributions of age, grade, sex, type of curriculum, father's occupation, and father's education within each of the school samples and in the total

TABLE 2. DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS OF HIGH SCHOOL SAMPLE, BY SCHOOL  
(IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	No answer	High School							Total
		Pioneer	Huron	Ypsilanti	Willow Run	Dexter	Milan		
<u>Age<sup>a</sup></u>									
14-15 years	(4)	34	29	25	23	26	41	30	
16 years		31	31	34	23	35	36	32	
17 years		32	32	38	47	34	16	33	
18 years & over		3	8	3	7	5	7	5	
<u>Grade<sup>b</sup></u>									
10th	(3)	32	34	28	29	30	41	32	
11th		34	28	42	32	34	36	35	
12th		34	38	30	39	36	23	33	
<u>Sex<sup>c</sup></u>									
Male	(4)	43	43	43	49	49	32	43	
Female		57	57	57	51	51	68	57	
<u>Curriculum<sup>d</sup></u>									
Vocational	(8)	3	1	8	3	35	4	8	
General		34	26	31	34	7	29	28	
College		62	72	59	61	54	65	62	
Other		1	1	2	2	4	2	2	
<u>Father's Occupation<sup>e</sup></u>	(57)								
Blue Collar		34	21	52	65	56	62	44	
White Collar		65	78	48	32	40	39	54	
Farmer		0	0	0	0	2	7	1	
Not Employed		1	1	0	3	2	0	1	
<u>Father's Education<sup>f</sup></u>	(18)								
No high school diploma		4	10	35	62	32	29	24	
High school diploma		33	15	30	20	31	42	29	
Post high school (no college degree)		18	18	13	15	23	22	18	
College degree		45	57	22	3	14	7	29	

\*Number in parentheses indicates how many of the 436 respondents did not provide a codable answer to the question. In addition name of school was not ascertained for one respondent.  
(a) Question 36; (b) Question 35; (c) Question 37; (d) Question 38; (e) Question 39;  
(f) Question 41.

sample. Some differences in age and grade distributions among the six schools are apparent. In the three individual sample schools this is due mainly to real differences in grade sizes but there was also some variability in response rate among the different grade samples. In the three classroom sample schools the variations are a result of the real differences in size of the classes which happened to be sampled. However, taken all together the age and grade distributions seem fairly close to what one would expect for the entire high school population.

However, in regard to sex it is clear that the sample slightly underrepresents males. In each of the individual sample schools and in the total sample only 43% of the respondents were males. While it is true that there are somewhat more girls than boys in high school, the difference is certainly not as great as a 4:3 ratio. That males were less likely than females to respond to the questionnaire is corroborated by a perusal of the first names of the sample nonrespondents in the individual sample schools. Whether this under-responding of male students represents a greater reluctance concerning the content of the questionnaire, or just a greater general dislike of paper-and-pencil tasks, can not be demonstrated. However, it does suggest that such male-female differences as are found in drinking and driving behavior would be even greater if a response had been obtained from all sample members.

Turning to father's occupation and education, substantial differences in background are apparent among the different school samples. Whereas more than two-thirds of the fathers of Ann Arbor students had white collar occupations, less than one-half of the fathers in the other schools had white collar occupations. These differences were even greater in father's educational background, with half of the Ann Arbor fathers having college degrees, while less than one-quarter of the fathers in the other schools had college degrees. However, in contrast to the background differences, the schools seemed generally similar in the proportions of sampled students who were taking a college preparation

curriculum (which may be an indication of the potential for social mobility in high school programs).

#### DRIVING EXPERIENCE AND RECORD

Table 3 shows that most of the students (87%) who answered the questionnaire said that they had driven a car at some time, and over half of them were frequent drivers (eight or more times in the previous month). In addition almost one-third reported driving a motorcycle at some time, and 9% had done so in the previous month. However, no information was sought about actual ownership of cars or motorcycles.

Only 54% of the students reported having a driver's license while a further 13% reported having a learning permit. But almost four-fifths reported taking a driver education course, so this could account for most of the students who said they had driven without a license or permit. Still these figures suggest some illegal driving as well.

In spite of the fact that only a little over one-half of the respondents had a license and only one-quarter had had it for over a year (3% for over two years), some 13% of the total sample reported having been involved in an accident as a driver in the previous 12 months. For the licensed drivers this figure was 22%. Only three of the drivers (two males and one female) admitted they had been drinking prior to their accident involvement. Seven percent of the total sample (14% of the licenses) reported having been ticketed for moving violations in the previous year, while 10% (18% of the licenses) had received warnings in the previous year. This compares rather unfavorably with a general sample of Washtenaw County drivers, 23% of whom reported accident involvement and 29% reported being ticketed over a three year period.

Looking at differences among the grade levels, one finds that all but one senior had driven at some time, while 97% had taken driver education, and 94% had a license or a permit. As would be expected, these figures were much lower among sophomores, only two-thirds of whom had ever driven. Almost half of the sophomores were taking driver education in the fall semester, and

TABLE 3. DRIVING EXPERIENCE OF HIGH SCHOOL SAMPLE, BY SCHOOL, GRADE, AND SEX  
(IN PERCENT OF ALL RESPONDENTS ANSWERING THE QUESTIONS)

	No Answer	High School						Grade			Sex		Total
		Pioneer	Huron	Ypsilanti	Willow Run	Dexter	Milan	10th	11th	12th	Male	Female	
<u>Use of Car/Motorcycle<sup>a</sup></u>													
Car driven ever	(1)	79	87	88	86	97	95	68	94	99	90	85	87
Car driven 8 or more days past month	(12)	50	53	57	39	66	52	10	67	78	56	50	53
Car driven 22-30 days in past month	(12)	24	29	29	27	33	25	1	32	47	30	25	27
Motorcycle driven ever		31	25	29	42	44	25	28	37	29	56	12	32
Motorcycle driven in past month		12	7	4	12	14	11	7	14	8	19	2	9
<u>Driver Education Course Taken or In Process<sup>b</sup></u>													
	(4)	81	90	69	63	93	75	46	93	97	78	80	79
<u>Possession of Driver License/Permit<sup>c</sup></u>													
Driver's license held	(2)	53	52	60	49	63	46	3	74	84	58	52	54
Learner's permit held		9	7	10	7	25	23	20	9	10	9	16	13
Driver's license held one or more years	(4)	23	29	28	29	29	14	1	7	67	27	24	26
<u>Driver Record for Past 12 Months<sup>d</sup></u>													
Ticketed for moving violations	(16)	6	8	7	15	7	6	0	6	15	13	3	7
Warned for moving violations	(15)	13	3	5	15	15	13	1	15	14	14	6	10
Involved as driver in accidents	(16)	13	8	18	10	14	11	1	13	24	16	11	13

(a) Questions 1 & 2; (b) Question 30; (c) Question 29; (d) Questions 31-33.

only 3% already had a driver's license, while 20% had a learning permit. Juniors were more similar to seniors than to sophomores in their current use of motor vehicles, in being licensed, and in having taken driver education. However, with a year less time behind the wheel they were only half as likely to have been involved in accidents or to have been ticketed. The 94% of seniors who were licensed or who had a learning permit is very close to the 93% of the general public 16 and over in Washtenaw County who are or have been licensed (according to an HSRI household survey).

In regard to sex differences, male students seem only slightly more likely to drive cars than female students but much more likely to drive motorcycles. The girls also seem slightly less in a hurry to obtain their driver's licenses, since proportionately fewer girls than boys were licensed while proportionately more girls than boys had learning permits. In their driving records, however, the girls appear to be safer drivers than the boys with only two-thirds as many accidents and one-quarter as many tickets. Since information is not available on the average mileage driven by the girls and the boys, one does not know for sure whether these apparent differences in safer driving are real or not.

#### SOURCES OF DRINKING/DRIVING INFORMATION

Before looking at student attitudes and knowledge on drinking and driving it seems useful to look at their exposure to information on this subject. The student respondents were asked to check on their questionnaires any courses in which they had received some information about alcohol and in which they had discussed driving after drinking. Table 4 shows the answers to this question by school, grade and sex. The most common source of information on alcohol and on drinking and driving was the driver education course. Almost every student who reported taking driver education said that alcohol information was given in this course, and all but 13 of these said driving after drinking was discussed there. The next most frequent school source of information on alcohol as well as on driving after drinking was

TABLE 4. COURSES TAKEN IN WHICH ALCOHOL AND DRIVING AFTER DRINKING WERE DISCUSSED BY SCHOOL, GRADE AND SEX  
(IN PERCENT OF ALL RESPONDENTS ANSWERING THE QUESTIONS)\*

Courses <sup>a</sup>	No Answer	High School						Grade				Sex							
		Pioneer		Huron		Ypsilanti		Willow Run		Dexter		Milan		10th	11th	12th	Male	Female	Total
Physical Education/ Athletics	(14)	18-6	23-12	44-31	64-33	27-9	21-2	37-16	25-14	31-15	41-17	24-14	31-15	41-17	24-14	31-15	41-17	24-14	31-15
Health/Family Life	(6)	14-7	17-14	9-5	64-53	20-14	27-18	20-12	13-10	29-21	18-13	23-15	29-21	18-13	23-15	29-21	18-13	23-15	29-21
Biology	(12)	23-12	31-15	50-29	40-19	32-16	62-26	33-16	42-21	41-21	42-18	36-20	41-21	42-18	36-20	41-21	42-18	36-20	38-19
Civics/Government	(5)	18-13	13-9	23-18	17-12	5-2	4-0	14-8	12-9	19-14	13-8	16-12	19-14	13-8	16-12	19-14	13-8	16-12	15-10
Sociology/Psychology	(1)	5-5	4-3	6-4	7-2	7-2	4-4	2-1	3-2	10-7	7-5	4-2	10-7	7-5	4-2	10-7	7-5	4-2	5-3
Home Economics	(1)	2-0	8-3	7-5	7-2	9-5	9-0	5-0	8-3	7-4	2-1	10-4	7-4	2-1	10-4	7-4	2-1	10-4	6-3
Driver Education	(3)	78-74	90-88	69-68	71-69	88-81	77-73	47-45	94-91	93-89	78-75	79-75	93-89	78-75	79-75	93-89	78-75	79-75	78-75
Other	(3)	8-4	7-5	14-14	5-2	15-10	9-5	14-9	8-7	8-6	12-9	8-6	8-6	12-9	8-6	8-6	12-9	8-6	10-7

\* The first number is the percent of students who took that type of course and discussed alcohol in it; the second number is the percent of students who discussed alcohol in relation to driving.

+ The number of respondents who said they discussed alcohol but did not answer whether or not they discussed drinking after driving.

(a) Question 3.

TABLE 5. EXPOSURE TO MEDIA MESSAGES ABOUT THE EFFECTS OF DRIVING AFTER DRINKING, BY SCHOOL, GRADE, AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

Saw or Heard Driving After Drinking Message(s) <sup>a</sup>	High School						Grade				Sex							
	Pioneer		Huron		Ypsilanti		Willow Run		Dexter		Milan		10th	11th	12th	Male	Female	Total
Media for Messages	91	91	94	81	93	93	93	93	91	90	92	90	93	91	90	92	90	91
Newspapers	27	32	31	26	32	25	32	32	24	32	28	30	32	24	32	28	30	29
Magazines	37	33	36	21	20	20	20	28	24	38	25	34	28	24	38	25	34	30
Radio	25	25	35	17	27	24	27	18	28	34	25	28	27	28	34	25	28	27
Television	83	80	88	74	86	76	86	86	80	82	86	80	86	80	82	86	80	82
Billboards	28	20	23	17	17	6	17	14	16	30	16	22	14	16	30	16	22	20

(a) Question 4.



biology (38% of respondents), followed by physical education/athletics (31%), health/family life (21%), and civics/government (15%). No information was obtained on the numbers of students who had taken these courses without receiving any alcohol information.

Other than in driver education there were only minor differences among the three grades in the percentages receiving alcohol education in the various courses. Apparently if students received alcohol information in courses other than driver education this was likely to happen before they were second semester sophomores. A look at sex differences shows that males were more likely than females to have received alcohol information in physical education classes or athletic programs, while, as would be expected, females were more likely to have received such instruction in home economics classes. The data also suggest that there may be real differences among the schools in how much alcohol information is included as part of certain courses. For example, in Willow Run and Ypsilanti High Schools larger proportions of students had learned about alcohol in their physical education classes or athletic programs, while Milan High School appears to provide alcohol information more frequently in its biology classes.

The student respondents were also asked if they had seen or heard any drinking/driving advertisements, spot commercials, articles, films, etc. in the previous three months. Table 5 demonstrates that almost all of the respondents (91%) reported having seen or heard drinking/driving messages on the mass media. Television was the most frequent media source with 82% having seen such messages on TV. Substantial numbers had also seen drinking/driving messages in newspapers (29%), magazines (30%), or billboards (20%), or had heard such messages on the radio (27%). This alertness to the safety messages among the high school respondents compares favorably to the 80% of the Washtenaw County general public who reported having seen or heard such mass media messages in the previous year.

TABLE 6. LOCAL NEWSPAPER AND RADIO USE BY SCHOOL, GRADE, AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	Pioneer		Huron		Ypsilanti		High School		Dexter	Milan	Grade			Sex		Total
							Willow	Run			10th	11th	12th	Male	Female	
<b>NEWSPAPER READING<sup>a</sup></b>																
School Newspaper: Ever	80	85	78	62	81	79	71	77	87	73	83	79				
1-7 Days Per Week	10	22	26	36	59	7	26	22	25	24	24	24				
Ann Arbor News: Ever	100	96	28	17	93	73	69	67	76	73	70	71				
3-7 Days Per Week	78	84	9	0	74	45	51	49	55	53	51	52				
Ypsilanti Press: Ever	7	12	99	97	12	27	33	45	42	40	40	40				
3-7 Days Per Week	0	1	83	79	2	9	22	32	29	27	28	28				
Huron Valley Advisor: Ever	64	71	50	55	68	31	49	56	71	58	59	59				
1-7 Days Per Week	28	27	23	30	41	16	24	28	29	33	23	27				
Other Local Newspaper: Ever	35	58	41	41	59	61	49	44	51	43	51	48				
3-7 Days Per Week	12	32	26	29	14	27	18	21	27	20	24	22				
<b>RADIO LISTENING<sup>b</sup></b>																
WAAM: Ever	53	64	50	31	34	20	38	48	49	47	44	45				
3-7 Days Per Week	17	16	6	14	7	5	9	12	11	14	9	11				
WPAG: Ever	32	22	5	10	37	21	19	22	23	21	22	22				
3-7 Days Per Week	9	3	1	0	12	9	7	5	5	4	7	6				
WNRS: Ever	40	47	16	12	56	27	32	34	33	37	31	33				
3-7 Days Per Week	24	29	6	7	34	21	18	21	22	24	18	20				
Other (mainly CKLW): Ever	65	75	87	83	80	84	80	80	74	74	81	78				
3-7 Days Per Week	58	73	83	80	64	75	71	76	66	66	75	71				
Generally 7-9AM	40	52	43	43	56	73	44	46	57	44	54	49				
Generally 9AM-3PM	6	9	2	17	9	7	5	5	10	9	6	7				
Generally 3-5PM	42	48	38	43	58	41	41	43	49	41	47	44				
Generally 5-7PM	37	39	23	45	34	34	35	34	34	29	39	34				
Generally 7-9PM	51	61	40	52	42	39	49	48	47	45	50	48				
Generally 9-11PM	41	55	52	29	37	54	41	50	47	46	46	46				
Generally Later	11	18	21	14	20	20	14	25	13	18	17	17				

(a) Question 42; (b) Questions 42 & 43.

That a large proportion of high school students might be reached by local media campaigns on drinking and driving is evidenced in Table 6 which shows patterns of local media use by the high school students. Almost four-fifths of the students reported reading their school newspapers, and 71% reported reading the Ann Arbor News at least occasionally. In Ann Arbor, 78% of the Pioneer students and 84% of the Huron students reported reading the Ann Arbor News fairly regularly (3-7 times a week), as did 74% of the Dexter students and 45% of the Milan students. Similarly, in the Ypsilanti area 83% of the Ypsilanti students and 79% of the Willow Run students reported reading the Ypsilanti Press fairly regularly. In addition, 27% of all the students reported reading the Huron Valley Advisor once a week, and 22% reported reading other local newspapers at least three times a week. How much they read of what sections of these papers was not ascertained, but at least substantial proportions in each school did say they occasionally or regularly look at local newspapers.

None of the Washtenaw County radio stations received as high listenership ratings as the local newspapers. Still 45% of the students reported listening to WAAM at least occasionally, 33% said they listen to WNRS, and 22% said they listen to WPAG. Only 5% reported ever listening to WYSI and 3% to WUOM. In regular listenership (three or more days per week) WNRS was in first spot with 20%, followed by WAAM with 11%, and WPAG with 6%. However, a much larger proportion of respondents, some 71%, said they listen regularly to other local radio stations, among which Windsor's CKLW was by far the preferred choice. Only 5% of the respondents said they seldom or never listen to the radio. CKLW and WPAG seemed to be particularly popular among the female students, while WAAM and WNRS were relatively more popular among the male students.

#### ROLE OF ALCOHOL IN TRAFFIC ACCIDENTS

Most of the student respondents indicated recognition of the important role of alcohol in traffic accidents. In Table 7 it can be seen that over one-third called drinking while driving

TABLE 7. KNOWLEDGE, ATTITUDES, AND EXPERIENCE REGARDING THE INVOLVEMENT OF DRUNK DRIVING IN TRAFFIC ACCIDENTS, BY SCHOOL, GRADE, AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	High School						Grade			Sex		Total
	Pioneer	Huron	Ypsilanti	Willow Run	Dexter	Milan	10th	11th	12th	Male	Female	
<u>CONSIDERED SCOPE OF DRINKING WHILE DRIVING AS A HIGHWAY SAFETY PROBLEM<sup>a</sup></u>												
A major problem	54	46	48	45	43	53	50	48	50	43	54	49
The most serious problem in highway accidents	31	42	32	45	28	40	37	34	34	39	32	35
<u>ESTIMATED INVOLVEMENT OF DRUNK DRIVERS IN TRAFFIC CRASHES RESULTING IN FATALITY<sup>b</sup></u>												
39 percent or less	26	17	27	24	29	22	18	27	29	28	22	24
40-59 percent	33	38	20	38	35	31	38	25	33	35	29	32
60 percent or more	37	42	41	22	28	42	36	40	33	27	44	37
No idea	4	3	12	17	9	6	8	8	6	10	5	7
<u>PERSONAL ACQUAINTANCE WITH SOMEONE INVOLVED IN A DRINKING DRIVER ACCIDENT<sup>c</sup> *</u>	42	33	45	39	46	45	33	47	43	37	45	42
Person was an immediate family member	2	7	3	0	3	2	3	3	3	3	3	3
Person was a relative or well-known friend	27	22	35	32	34	29	23	33	32	25	33	29
Accident involved death or major injury, and/or totalled car	18	18	25	19	36	20	17	23	27	19	26	22

\* The row of percentages adjacent to the main heading represents all the respondents who were acquainted with someone who had been involved in a drinking driving accident. The three subcategories are subsumed within this main category.  
(a) Question 26; (b) Question 27; (c) Question 28.

the most serious problem in highway accidents, and another 49% labelled it a major problem. Only 1% felt it was not a very serious problem, while 15% called it a moderately serious problem. Proportionately more males than females considered it the most serious problem, but males were also more likely than females to downgrade the importance of alcohol in crashes. Almost three-quarters of the females and five-eighths of the males did guess correctly that drunk drivers are involved in about half or more of the fatal accidents. However, juniors and seniors (most of whom had taken driver education) were more likely to underestimate the role of alcohol in fatal crashes than were sophomores (less than half of whom had been exposed to driver education). Ypsilanti, Willow Run, and Dexter High Schools had the largest proportions of students who guessed low or did not guess as to the involvement of drunk drivers in fatal crashes; but clearly there is need for more education in this regard in all the schools.

The students were also asked if they knew anyone personally who had been involved in a drinking-driver accident. Forty-two percent of the students said that they did know such a person. Only 3% said this person was an immediate family member, but another 29% said they knew this person well. As mentioned earlier, only three respondents said they themselves had been drinking prior to an accident. The 29% is somewhat less than the 45% of a general public sample who said they themselves or a close friend or relative had been involved in a serious drinking-driver accident. Twenty-two percent of the students reported knowing someone involved in a very serious drinking-driving accident (death, major injury, totalled car). Surprisingly, female students tended to report this knowledge of drinking-driving accidents more frequently than did male students, even though males are more heavily involved in such accidents.

#### ALCOHOL CONSUMPTION AND DRIVING ABILITY

The students were asked to estimate the driving ability of persons of their own age and sex who consumed two drinks in half an hour. Two-thirds said driving ability would be worse

(Table 8), while 25% said it wouldn't be affected much, and only 3% claimed it would be better because the driver would be more relaxed. Five percent had no idea. The Borckenstein study in Grand Rapids\* indicates that in general the risk of accident of persons over 130 pounds who have consumed two drinks (under .05% Blood Alcohol Concentration) is no greater than for persons who have not been drinking. However, this would probably not be true for younger and less experienced drinkers. Thus it is difficult to evaluate the correctness of the students' answers to this question.

The answers to the questions on the number of drinks it would take to become unsafe as a driver and to become drunk or intoxicated are also difficult to evaluate because of the lack of a weight referent. However, unless they had extremely high body weights in mind it is clear that some of the respondents greatly overestimated the minimum number of drinks which would make a person unsafe as a driver. One-quarter of the male students and one-fifth of the female students chose five or more drinks as the number needed to make persons of their age and sex unsafe as drivers. Most students seemed to recognize that driving impairment would begin at a lower level of alcohol consumption than would intoxication, for most said it would take more drinks to become drunk or intoxicated than it would to become unsafe as a driver. However, there was a great range of responses to the intoxication question, with 5% saying they would consider persons of their age and sex drunk after two drinks (three respondents said after one drink), while 12% chose nine or more drinks as needed before becoming drunk.

#### FACTORS INFLUENCING ALCOHOL EFFECT

The students were asked a number of questions about the importance of various factors in influencing how a given amount of alcohol consumption would affect an individual drinker. The results are shown in Table 9. Interestingly, more students were

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\*Borckenstein, R.F. and Crowther, R.F. "The Role of the Drinking Driver in Traffic Accidents: A Summary". Traffic Digest and Review, 12,6:4-7,29, June 1964.

TABLE 8. KNOWLEDGE OF THE EFFECT OF INCREASING QUANTITIES OF ALCOHOL ON A PERSON'S ABILITY TO DRIVE A CAR SAFELY AND HIS DEGREE OF INEBRIATION, BY SCHOOL, GRADE AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	High School			Dexter	Milan	Grade			Sex		Total
	Pioneer	Huron	Ypsilanti			Willow	Run	10th	11th	12th	
ESTIMATION OF DRIVING ABILITY OF A PERSON LIKE THE RESPONDENT WHO HAS CONSUMED 2 DRINKS IN HALF AN HOUR a											
Better than usual as a driver because he is more relaxed	2	1	5	0	3	2	3	2	5	1	3
Worse than usual as a driver because he is less alert	70	75	66	69	53	68	63	69	59	74	67
NUMBER OF DRINKS, CONSUMED AT A RATE OF ONE EVERY FIFTEEN MINUTES, AT WHICH A PERSON LIKE THE RESPONDENT WOULD BE UNSAFE AS A DRIVER b											
1-2	36	44	33	24	22	29	35	32	31	35	33
3-4	42	34	43	34	31	36	35	41	39	37	38
5 or more	15	21	16	34	38	29	22	22	26	20	22
NUMBER OF DRINKS, CONSUMED AT A RATE OF ONE EVERY FIFTEEN MINUTES, AT WHICH A PERSON LIKE THE RESPONDENT WOULD BE CONSIDERED INTOXICATED c											
1-2	7	4	8	7	0	9	7	3	5	7	6
3-4	27	36	25	17	22	16	26	24	22	28	25
5-6	37	23	30	26	26	27	28	29	31	27	29
7-8	14	21	20	26	28	27	17	20	23	20	21
9 or more	11	10	7	19	21	14	14	12	13	12	12

(a) Question 7; (b) Question 8; (c) Question 9.

TABLE 9. KNOWLEDGE OF PHYSIOLOGICAL AND PSYCHOLOGICAL CONDITIONS WHICH MIGHT MAKE A DIFFERENCE IN BEHAVIOR AND JUDGMENT AFTER DRINKING THE SAME AMOUNT OF ALCOHOL AND KNOWLEDGE OF EFFICACY OF SOBERING UP METHODS, BY SCHOOL, GRADE, AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

CONDITION AND ESTIMATED EFFECT a	High School							Sex		Total		
	Pioneer	Huron	Ypsilanti	Willow Run	Dexter	Milan	10th	11th	12th		Male	Female
Eating:	A lot	31	43	30	28	36	45	33	36	37	35	35
	Some	46	44	53	36	51	30	43	43	48	43	45
	None	10	5	10	24	2	5	8	10	5	9	6
Sex of Drinker:	No idea	13	8	7	24	12	20	16	11	10	13	12
	A lot	16	14	19	12	24	20	12	22	20	19	16
	Some	28	30	34	33	49	39	34	37	33	36	34
Weight of Drinker:	None	42	40	37	41	12	23	32	31	32	30	36
	No idea	14	16	10	14	15	18	17	10	15	15	14
	A lot	25	43	34	38	22	36	34	33	31	38	29
Age of Drinker:	Some	41	37	34	26	37	25	28	37	40	35	34
	None	13	10	18	17	15	21	17	13	14	14	16
	No idea	21	10	11	19	26	12	20	12	16	13	18
Changing Kind of Alcohol:	A lot	22	16	16	24	40	30	27	21	21	27	21
	Some	36	43	45	38	31	45	35	38	48	40	40
	None	25	27	26	29	12	16	24	27	18	19	26
Speed of Drinking:	No idea	17	14	13	9	17	9	14	14	13	14	14
	A lot	38	48	32	48	59	57	39	47	49	40	49
	Some	31	25	37	36	24	20	28	30	29	30	28
Psychological Feeling:	None	11	10	17	7	7	14	22	11	12	13	9
	No idea	20	17	14	9	10	14	22	11	12	17	14
	A lot	54	51	52	38	63	43	48	43	62	55	48
Taking Medicine:	Some	29	34	28	33	22	30	30	33	25	26	33
	None	8	11	13	19	7	20	15	16	6	11	12
	No idea	9	4	7	10	8	7	7	8	7	8	7
Smoking Marijuana:	A lot	40	47	35	43	48	28	33	40	47	39	41
	Some	33	31	37	21	41	41	41	31	32	36	33
	None	12	16	16	17	3	22	11	18	13	12	15
Using a Strong Drug:	No idea	15	6	12	19	8	9	15	11	9	13	11
	A lot	50	61	55	55	65	50	48	61	58	49	60
	Some	27	22	24	24	20	29	26	23	25	23	27
Actions of Companions:	None	6	4	5	9	0	2	7	5	1	5	4
	No idea	17	13	13	12	15	19	19	11	16	23	9
	A lot	51	49	56	57	70	55	53	58	57	52	58
SOBERING UP METHOD AND ESTIMATED EFFICACY b	Some	18	21	14	12	10	16	16	15	16	16	15
	None	4	8	6	2	3	2	4	6	3	5	5
	No idea	27	22	24	29	17	27	26	21	24	28	21
Waiting 4 hours:	A lot	59	73	61	64	66	60	62	64	65	59	67
	Some	10	3	10	7	8	11	9	9	7	7	9
	None	3	3	4	0	2	4	3	4	1	4	2
Walking Around Block 4 Times:	No idea	28	22	25	29	24	25	26	23	27	30	22
	A lot	18	25	13	10	22	16	13	18	21	20	16
	Some	47	43	36	36	52	43	38	40	51	42	44
4 Servings of Carbohydrates:	None	21	29	39	33	17	29	34	28	27	27	29
	No idea	14	3	12	21	9	12	15	14	6	11	11
	A lot	10	7	12	19	3	19	12	13	8	12	11
Coffee:	Half	49	54	41	43	44	45	47	42	50	43	46
	Little	33	35	40	24	19	29	32	38	34	34	35
	No idea	8	4	7	14	14	7	9	7	8	11	6
Waiting 4 hours:	Entirely	47	50	25	19	41	32	31	34	46	37	37
	Half	30	35	41	24	30	41	37	37	30	35	34
	Little	13	12	24	40	22	22	22	21	17	20	20
Walking Around Block 4 Times:	No idea	10	3	10	17	7	5	10	8	7	8	9
	Entirely	7	9	1	2	5	5	3	7	6	6	4
	Half	26	27	26	27	19	26	20	28	28	28	24
4 Servings of Carbohydrates:	Little	56	57	55	49	47	49	60	50	50	47	53
	No idea	11	7	18	22	29	20	17	15	16	19	14
	Entirely	4	5	8	5	5	2	1	6	7	5	4
Carbohydrates:	Half	13	18	21	17	31	7	14	23	17	20	16
	Little	47	52	36	38	37	59	50	42	44	43	47
	No idea	36	25	35	40	27	32	34	29	32	32	32

(a) Question 51 (b) Question 41



aware of the role of food consumption in influencing the effect of alcohol than were aware of the importance of body weight. One-third of all the respondents said that weight was of almost no importance or that they had no idea about its importance, and another 35% said that weight made some difference. Only 32% said that weight would make a lot of difference in how a person would be affected by the consumption of four drinks in an hour, less than the 45% who thought that changing the type of alcohol would make a lot of difference and the 52% who thought that the speed of alcohol intake would make a lot of difference. Clearly many of the students have a lot more to learn about the physiology of alcohol effect on the body.

The factors checked most frequently as making a lot of difference in the alcohol effect were using strong drugs (64%), smoking "pot" (56%), and taking medicine (56%). Research is still being conducted as to the effects of the interaction of various types of chemicals with alcohol, but it is interesting that so many students suspect that these factors are quite important. Also substantial numbers of students (40%) thought that their own psychological mood at the time of drinking would make a lot of difference in how the alcohol affected them, but only 18% thought the behavior of companions would make a lot of difference in how the alcohol affected them.

The students were also asked to rate the effectiveness of four different methods of sobering up following the consumption of four bottles of beer in an hour. Only 37% correctly indicated that waiting four hours would sober such a person up almost entirely. About the same number said waiting four hours would sober him up about half-way, while one-fifth said it would have little or no sobering effect. On the other hand, 57% of the students incorrectly thought that drinking four cups of black coffee would sober him up almost entirely (11%) or about half-way (46%), and smaller proportions incorrectly thought that walking four times around the block (30%) and eating four servings of carbohydrates (23%) could have significant sobering

influences. Again it is clear that many of the student respondents are in need of better information about how alcohol affects the body and about the ineffectiveness of anything but time in counteracting that effect.

#### LEGAL ASPECTS OF DRUNK DRIVING

In Table 10 it can be seen that most of the students tended greatly to underestimate the number of drinks they could consume at a rate of one every 15 minutes without being convicted of drunk driving. Four percent said one drink before driving was enough for a DUIL conviction, 15% said two drinks, 41% said 3-4 drinks, and 26% said 5-6 drinks. Since six drinks in  $1\frac{1}{2}$  hours would be sufficient for conviction only of persons weighing 120 pounds or less, it is evident that the vast majority of student respondents tended to be unrealistically apprehensive concerning the amount of alcohol they could consume without violating the law (.15% BAC was the presumed minimum for drunk driving at the time of the survey). When asked the actual percentage of alcohol in the blood which was the lowest legal minimum, only 22% of those who made a guess checked the correct .15-.24% range, not much more than would be expected by chance in choosing among the seven categories. However, 31% did say they believed the then legal limit was too low, while 48% thought it was about right, and only 6% thought it was too high.

Knowledge about the implied consent law was also rather spotty. Table 11 shows that only 21% of the respondents correctly described the implied consent law in an open question on its meaning, although a further 24% were partially correct. Looking specifically at situations relevant to breath testing, only 47% said the breath test could be required if a driver was arrested for drunk driving, while 55% said it could be required if the policeman had evidence that the driver had been drinking. Twenty-four percent thought it could be required if the driver violated a traffic law, 16% thought it could be required in a random spot check, and 13% thought it could not be required in any of these situations. Technically this last group might be considered

TABLE 10. KNOWLEDGE AND ATTITUDES ABOUT THE LEGAL LIMITS OF ALCOHOL CONSUMPTION BEFORE DRIVING BY SCHOOL, GRADE AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	High School						Grade			Sex		Total
	Pioneer	Huron	Ypsilanti	Willow Run	Dexter	Milan	10th	11th	12th	Male	Female	
<u>NUMBER OF DRINKS FOR DRUNK DRIVING CONVICTION OF PERSON LIKE THE RESPONDENT<sup>a</sup></u>												
1-4	63	60	59	52	56	63	59	60	59	61	58	59
5-6	25	34	25	26	22	25	26	24	29	23	29	26
7 or more	6	4	3	7	5	5	4	4	6	6	4	5
No idea	7	3	13	14	17	7	11	12	6	9	10	9
<u>BAC AT WHICH DRIVER IS PRESUMED DRUNK<sup>b</sup></u>												
.01-.09	32	34	27	31	19	30	30	25	34	30	29	29
.10-.14	29	21	25	21	14	29	18	32	20	25	23	24
.15-.24	18	32	14	12	12	13	17	15	20	18	16	17
.25 or above	4	4	7	5	19	5	7	5	10	9	6	7
No idea	17	9	28	31	37	23	28	24	16	18	26	23
<u>BAC LAW<sup>c</sup></u>												
Too strict	7	4	4	5	12	7	6	7	5	7	6	6
About right	41	42	50	60	52	57	49	55	42	47	49	48
Too lenient	46	48	28	19	14	14	26	27	41	34	29	31
No idea	7	7	18	17	22	21	19	11	13	12	16	14

(a) Question 17; (b) Question 18; (c) Question 19.

TABLE 11. KNOWLEDGE AND ATTITUDES ABOUT THE USE OF THE IMPLIED CONSENT LAW BY SCHOOL, GRADE, AND SEX  
(IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	Pioneer	Huron	High School		Dexter	Milan	10th	Grade			Sex		Total
			Ypsilanti	Willow Run				11th	12th	Male	Female		
<b>A BREATH TEST CAN/SHOULD BE REQUIRED: * a</b>													
In a random spot check	11-16	24-21	15-16	12-17	12-20	23-21	11-17	22-25	14-13	16-20	15-17	16-18	
With evidence of the driver's drinking	58-64	45-51	57-70	41-55	54-66	75-68	54-62	47-60	66-68	49-57	61-69	55-63	
When the driver has committed a traffic violation	57-36	32-30	22-32	14-19	15-25	25-23	21-26	22-32	26-30	25-30	23-29	24-29	
When a driver has been arrested for drunk driving	52-58	43-42	53-61	33-43	36-58	50-57	50-54	38-49	51-59	43-49	50-58	47-54	
None of these; a breath test cannot/should not be required	15-5	16-9	8-2	10-5	24-7	2-2	11-7	19-4	8-4	16-7	10-3	13-5	
<b>PENALTY FOR REFUSING BREATH TEST b</b>													
License suspension	47	43	44	31	49	46	40	58	35	48	42	44	
Jail	26	33	30	45	32	36	28	33	36	30	34	32	
<b>UNDERSTANDING OF THE IMPLIED CONSENT LAW c</b>													
Correct	30	28	29	17	7	7	14	27	25	21	22	21	
Partially Correct	21	32	28	21	14	24	19	27	25	23	25	24	
Incorrect	41	22	32	52	58	60	52	36	36	43	41	42	
Don't know	8	18	11	10	21	9	15	10	13	13	12	13	

\*The first number is the percent who say a procedure can be followed; the second number is the percent who say a procedure should be followed.

(a) Questions 20 & 21; (b) Question 22; (c) Question 16.

correct because of the ambiguity of the word "required" in the question. However, it is obvious that many of the students were poorly informed as to the situations in which policemen are entitled to request a breath test under the penalty provisions of the implied consent law. In each of these situations slightly larger percentages of respondents thought the breath test should be required than thought it could be required, and only 5% thought it should not be required in any of these situations. As to the consequences of refusing to take a breath test, less than half of the students realized that license suspension was the normal penalty for such refusal.

The students seemed somewhat better informed about the consequences of being convicted of drunk driving (Table 12). For a first offense 70% thought license suspension or revocation would result, and 65% thought that a fine would be levied. However, surprisingly similar numbers (23% and 25% respectively) thought jail and an increased insurance rate were likely results--even though jail is actually an extremely rare penalty for a first offense, while higher insurance rates are a very common result. For each listed penalty very similar percentages thought that it was an appropriate result of a first offense drunk driving conviction and thought it was a likely result. When asked about appropriate penalties for a third offense, the students expressed somewhat harsher attitudes. One-third supported permanent license revocation and 53% supported license suspension, while two-fifths supported jail. Surprisingly, only 22% were in favor of increased insurance rates as a penalty, but 61% saw fines as appropriate. Also, whereas only 2% had seen medical treatment as a likely result and only 7% had seen it as a desirable result of a first offense, more than one-fifth of the respondents checked medical treatment as desirable for a third offender. Clearly, even more students should be made aware that the repeating drunk driver is probably a person with a drinking problem who needs medical help, not just harsher penalties.

TABLE 12. KNOWLEDGE AND ATTITUDES TOWARD PENALTIES FOR DRUNK DRIVING CONVICTIONS, BY SCHOOL, GRADE, AND SEX  
(IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	Pioneer	Huron	High School				10th	Grade			Sex		Total
			Ypsilanti	Willow Run	Dexter	Milan		11th	12th	Male	Female		
<b>PENALTY WHICH IS/SHOULD BE GIVEN FOR FIRST DUIL CONVICTION* a</b>													
License suspension or revocation	76-80	70-68	69-75	74-67	64-61	66-62	66-68	81-72	63-72	76-73	66-70	70-71	
Jail	20-12	25-20	24-20	19-24	25-31	23-25	19-17	28-22	21-24	19-19	26-22	23-20	
Increased insurance rates	33-20	28-24	20-19	12-12	32-15	16-16	17-14	26-20	31-22	33-24	18-13	25-18	
Fine	71-68	74-75	67-74	45-55	54-61	63-64	65-67	58-65	73-72	60-66	69-70	65-68	
Medical treatment	6-11	1-8	2-6	0-5	2-3	0-2	4-8	2-6	1-6	2-4	3-8	2-7	
<b>PENALTY WHICH SHOULD BE GIVEN FOR THIRD DUIL CONVICTION<sup>b</sup></b>													
License suspension or revocation	90	91	81	79	85	88	82	88	88	86	86	86	
Jail	35	29	44	52	37	48	34	42	44	42	38	40	
Increased insurance rates	25	17	28	17	17	21	19	21	25	25	19	22	
Fine	63	59	66	55	53	66	55	66	63	61	61	61	
Medical treatment	29	26	24	12	17	7	20	20	24	24	20	21	

\*The first number is the percent who answered that a penalty usually is given; the second number is the percent answering that a penalty should be given.  
(a) Questions 23 & 24; (b) Question 25.

## REPORTED DRINKING AND DRIVING BEHAVIOR

The students were asked a number of questions about their own drinking behavior and that of their classmates. As can be seen in Table 13, one-third of the respondents said they never drank, one-third said they drank quite infrequently, and one-third said they drank at least once a month (15% at least weekly). Interestingly, larger proportions of the respondents perceived drinking as more common among all their classmates than among members of their own social group. Forty-one percent said that either three-fourths or nearly all of the students in their grade drank once a month or more, while only 29% said that either three-fourths or nearly all of their "crowd" drank once a month or more. As far as quantity of alcohol consumption, only 29% said they usually would have three or more drinks (12% five or more, 5% seven or more), but almost half indicated that they sometimes would have three or more drinks (31% five or more, 20% seven or more, 11% nine or more, 7% twelve or more). Thus substantial numbers of students reported drinking heavily at least occasionally, and a significant number reported drinking beyond safe driving levels fairly often.

Turning directly to driving after drinking, 13% of all the respondents reported driving after drinking two or more drinks at least once within the previous three months. Only 3% said they did this once a week or more (7% of the males and none of the females). However, much larger numbers said that in the previous three months they had ridden with a friend who had had two or more drinks. Forty percent of both the male and the female respondents reported this behavior. In contrast, only 14% said they had turned down a ride in the previous three months because a driver had been drinking too much--13% of the male respondents and 16% of the female respondents. As would be expected, both drinking and driving after drinking were reported more frequently by juniors and seniors than by sophomores.

When one looks just at the 54% of the sample who said they had driver licenses, these percentages increase considerably.

TABLE 13. DRINKING AND DRIVING AFTER DRINKING BEHAVIOR BY SCHOOL, GRADE, AND SEX (IN PERCENT OF RESPONDENTS ANSWERING THE QUESTIONS)

	Pioneer	Huron	High School				Grade			Sex		Total
			Ypsilanti	Willow Run	Dexter	Milan	10th	11th	12th	Male	Female	
<u>DRINKING BEHAVIOR OF RESPONDENTS <sup>a</sup></u>												
<u>Frequency of Drinking</u>												
Never Drink	32	30	44	45	22	33	41	31	32	30	39	34
Less Than Once a Month	35	34	38	26	29	29	32	32	33	29	35	33
1-3 Times a Month	21	18	9	12	21	26	14	20	18	21	15	18
Once a Week or More	13	17	9	17	28	13	12	17	16	21	11	15
<u>Quantity at a Sitting</u>												
Usually 1-2 drinks	34	42	35	31	26	39	35	34	35	33	36	35
Usually 3-4 Drinks	17	20	16	17	21	13	13	18	20	18	16	17
Usually 5 or more Drinks	16	7	4	7	29	13	9	15	11	19	7	12
Sometimes More Than 2 Drinks	49	44	35	41	68	45	37	51	50	53	40	46
<u>PERCEIVED DRINKING BEHAVIOR OF OTHER STUDENTS <sup>b</sup></u>												
3/4 of More of Grade Mates Drink	36	49	33	50	38	48	29	46	48	38	43	41
3/4 or More of Social Group Drink	36	34	13	20	43	30	22	32	35	33	26	29
<u>DRIVING AFTER DRINKING BEHAVIOR OF RESPONDENTS IN PAST THREE MONTHS <sup>c</sup></u>												
Ridden as Passenger With Drunk Driver	48	35	29	31	57	50	33	48	43	41	41	41
Turned Down Ride With Drunk Driver	15	9	14	21	17	13	14	17	13	13	16	14
Driven After 2 Drinks or More at Least Once	14	7	7	10	29	20	4	18	18	23	6	13
Driven After 2 Drinks or More Once a Week or More	3	0	2	5	7	5	0	6	4	7	0	3

(a) Question 12; (b) Questions 10 & 11; (c) Questions 13, 14 & 15.



Three-quarters of the male drivers and two-thirds of the female drivers said that they drink alcoholic beverages at least occasionally, and 36% of the males and 9% of the females said they had driven after drinking two or more drinks in the previous three months (22% of all the drivers). Altogether the drivers were not more likely to be frequent drinkers (once a week or more) than were the non-drivers; but, as would be expected, the 57 drivers who said they had driven after drinking were far more likely to be frequent drinkers than the 182 drivers who said they had not driven after drinking (54% compared to only 3%).

In regard to other behavioral comparisons of the two groups, the drinking drivers were considerably more likely to have been passengers with other drinking drivers (75%-35%); somewhat more likely to have turned down a ride (19%-13%); somewhat more likely to know persons involved in drinking driver accidents (60%-39%); considerably more likely to have received tickets (24%-10%), and warnings (37%-10%); and slightly more likely to have been involved in accidents (23%-21%). The drinking drivers were also somewhat more likely to have had their licenses for a year or more (57%-43%) and to come from families in which the father had not been to college (65%-47%).

Turning to knowledge comparisons of the drinking drivers and the non-drinking drivers, there were some significant differences. Forty-seven percent of the drinking drivers thought that a person of his age and sex could still drive safely after consuming five drinks at the rate of one drink every 15 minutes, compared to only 16% of the non-drinking drivers. Similarly, 36% of the drinking drivers compared to 7% of the non-drinking drivers considered nine or more drinks as necessary for intoxication of a person of their age and sex. There were also some differences in regard to legal knowledge. Only 35% of the drinking drivers compared to 50% of the non-drinking drivers said that a breath test can be required when one is arrested for drunk driving, and 68% of the drinking compared to 74% of the non-drinking drivers were aware that license suspension is the normal penalty for

refusal to take the breath test. Drinking drivers were also slightly more likely to be in that minority of respondents who felt that drinking while driving is a moderately serious or not very serious problem.

It is somewhat disturbing that the data do not demonstrate a closer correspondence between drinking/driving knowledge and behavior. Clearly a large number of drivers who are at least superficially aware of the dangers of drunk driving, of the quantities of alcohol which can be safely consumed before driving, of legal aspects of drunk driving, etc., do drive after drinking. Nevertheless the data do show that students with higher levels of drinking/driving information are less likely to report driving after drinking. Thus there are reasonable grounds to hope that efforts to increase knowledge levels in this area will have some impact in reduced driving after excessive drinking, especially if innovative methods can be found for imparting this information in a personally meaningful manner.

#### DRIVER EDUCATION AND DRINKING/DRIVING KNOWLEDGE

Only two of the drinking drivers and one of the non-drinking drivers had not taken a driver education course, so the data do not give any useful information about the effect of taking a driver education course on drinking/driving behavior. However, only 46% of the sample of sophomores had taken or were taking a driver education course at the time of filling out the questionnaire, and thus one can compare the two groups of sophomores who had (N=62) and had not (N=74) taken driver education in terms of their information levels concerning drinking and driving.

In Table 14 these two groups are compared on their answers to a number of knowledge type questions. There is only one question which shows really dramatic differences between the two groups. On the open question in which the respondents were asked to describe the implied consent law in their own words, the students who had taken driver education demonstrated far more understanding than did the students who had not taken driver education. One could wish that even more than 54% of the driver

TABLE 14. SOPHOMORE KNOWLEDGE OF SOME DRINKING DRIVING QUESTIONS FOR 628 STUDENTS WHO HAD TAKEN A DRIVER EDUCATION COURSE AND FOR 74 STUDENTS WHO HAD NOT TAKEN A DRIVER EDUCATION COURSE (IN PERCENT OF RESPONDENDENTS ANSWERING THE QUESTIONS)

<u>Difference in Alcohol Effect</u>	<u>Body Weight</u>		<u>Eating Food</u>		<u>Sex of Driver</u>	
	<u>Taken</u>	<u>Not Taken</u>	<u>Taken</u>	<u>Not Taken</u>	<u>Taken</u>	<u>Not Taken</u>
A lot	45	26	34	30	10	12
Some	24	30	43	45	29	38
Almost none	10	24	5	11	39	37
No idea	21	20	18	15	23	14

<u>Effectiveness as a Method of Sobering Up</u>	<u>Waiting 4 Hrs.</u>		<u>4 Cups Coffee</u>		<u>Walking 4 Blocks</u>		<u>Eating 4 Servings</u>	
	<u>Taken</u>	<u>Not Taken</u>	<u>Taken</u>	<u>Not Taken</u>	<u>Taken</u>	<u>Not Taken</u>	<u>Taken</u>	<u>Not Taken</u>
Almost entirely	42	21	7	15	3	3	2	1
About halfway	31	42	40	53	13	25	11	14
Little or none	21	23	42	26	66	56	45	53
No idea	6	14	11	7	18	16	42	32

	<u>Taken</u>	<u>Not Taken</u>
Completely correct description of implied consent law	22	6
Partially correct description of implied consent law	32	6
Estimate of alcohol involvement in half or more of fatal crashes	80	67
License suspension as penalty for refusing breath test	52	30
Presumptive minimum blood alcohol concentration for DUIL in .15-.25% range	19	14
Belief breath test can be required for DUIL arrest	56	47
Belief breath test cannot be required	13	7
Estimate of 1-4 drinks as sufficient for DUIL conviction of person of same age and sex as respondent	63	55

education students would have been at least partially correct in their descriptions, but that percentage is far superior to the 13% at least partially correct answers from the students who had not taken driver education.

Other significant knowledge differences which were found concerned the importance of body weight in influencing the effect of a given amount of alcohol, the effectiveness of waiting four hours in sobering up a person who has had four drinks, the ineffectiveness of coffee for sobering purposes, the proportion of fatal accidents which involve alcohol, and the use of license suspension as the normal penalty for refusal to take a breath test when properly requested to do so. The driver education students were also somewhat more likely to know the minimum blood alcohol concentration for presumed driving under the influence of liquor; to think the breath test can be required when a person is arrested for drunk driving; and to think that the breath test cannot be required under any of the given conditions.

There were almost no differences between the two groups in recognition of the importance of alcohol as a traffic safety problem; in estimating the number of drinks which would make a person of the respondent's age and sex unsafe as a driver; in knowledge of the importance of prior food intake in influencing alcohol effect; in knowledge of the unimportance of the sex of the drinker in influencing alcohol effect; and in awareness of the ineffectiveness of walking and of eating carbohydrates for sobering purposes.

The only information-type question in which more driver education students gave less realistic answers than the students who had not taken driver education concerned the number of drinks necessary to be convicted of drunk driving. The driver education respondents were somewhat more likely to underestimate this number--but perhaps this type of incorrect information is more desirable from a deterrent standpoint than would be an accurate understanding of the large number of drinks one could consume before reaching a blood alcohol concentration in excess of the 1971 presumptive drunk driving minimum.

Undoubtedly driver education teachers in the six schools would like to have found higher levels of drinking driving information in the students who had received the benefit of their instruction, but they can take some comfort in the finding that their students did show significantly greater knowledge on some important questions than did students who had not taken a driver education course. So this survey gives support for the belief that driver education courses have been at least somewhat effective in imparting knowledge on drinking and driving issues, although this single survey cannot offer any evidence that the driver education courses have actually influenced driving after drinking behavior. Hopefully, future surveys will find both higher levels of drinking driving knowledge and lower levels of driving after drinking behavior in Washtenaw County high school students.