

## FINAL REPORT

DRINKING-DRIVING ATTITUDES, KNOWLEDGE AND BEHAVIOR:  
AN ANALYSIS OF THE FIRST TWO TELEPHONE SURVEYS  
OF THE FAIRFAX ALCOHOL SAFETY ACTION PROJECT

by

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## ABSTRACT

The first two telephone surveys for the Fairfax ASAP were conducted during June and December of 1975. During each, 500 ASAP area residents randomly selected from the Northern Virginia phone book were called and were interviewed using a standard questionnaire. The sample was stratified by sex and partially by age.

Differences between survey results were examined through the analysis of individual items and through the construction of four composite scales. The variables measured by these scales included alcohol experience, alcohol awareness, attitudes toward coping with drunk driving, and alcohol-related behavior. The two sets of survey respondents were similar in their demographic characteristics, their previous experience with alcohol, and their alcohol behavior. The groups were not significantly different in their overall alcohol awareness, although there was a slight decline in this scale across time and a marked decline in some individual items, such as specific awareness of the ASAP. There were also significant declines in positive attitudes toward handling drinking drivers. While these differences may be somewhat seasonal, the tentative conclusions of this analysis are twofold. First, there is no evidence that the Fairfax public information and education countermeasure has been successful in disseminating information on the existence of the ASAP locally or in improving support for countermeasure activities. Additionally, there is no evidence that the national campaigns have been effective with the main thrust of the campaigns, that is, changing attitudes toward bystander intervention in drunk driving.



## SUMMARY OF FINDINGS AND CONCLUSIONS

The results of this evaluation are presented below in the order of their inclusion in the report.

Description of the Sample — The June and December groups of telephone survey respondents were similar, not only demographically, but also in relation to their previous experience with alcohol.

Awareness of Alcohol and Alcohol Countermeasures — It appears that alcohol awareness, especially awareness of alcohol countermeasures, has been decreasing over time. While awareness among the target population, drinkers who have higher alcohol experience and who drive, is higher than among other groups, there is a large segment of the community who are still not receiving information. The efforts of the public information and education countermeasure should be especially addressed to these persons. Efforts should be concentrated not only during peak media hours in general, but also during those times when low awareness persons are viewing. In terms of scheduling television advertising, should a choice of donated times be available, not only should prime time (8 p.m. to 11 p.m.) be the focus of national efforts, but also the early evening "local broadcast news" period should be the local focus. In order to reach low awareness persons through television, ads should be concentrated during the daytime hours (8 a.m. to 5 p.m.) when commercial rates are probably lower. For radio, the prime time hours are between 6 a.m. and 9 a.m. Since low awareness persons do not listen to radio as long as do higher awareness respondents, advertising should be concentrated during their peak listening period, again 6 a.m. to 9 a.m., but also during the day (9 a.m. to 5 p.m.).

Knowledge of Alcohol — There was insufficient information concerning the respondents' knowledge of drinking and driving to allow any conclusions. This situation will be remedied during the next survey by the inclusion of additional knowledge items.

Behavior in Relation to Drunken Driving — There were no differences between surveys in the actual behavior of respondents in relation to drunk driving, especially in relation to bystander intervention. The scale for measuring this variable, however, was based on a very small number of items and may produce unreliable results. Again, additional behavioral items will be included in the 1976 telephone surveys.

Attitudes Toward Drinking and Driving — Overall, the positiveness of the respondents' attitudes in relation to bystander intervention to avert drunk driving decreased significantly between surveys. Most of this difference was a result of changes in attitudes toward socially oriented activities, possibly as a reaction to the immediacy

of party situations in December. Support for the various counter-measure activities, especially increased enforcement and more severe penalties for drunk driving, decreased significantly over the six-month period, while support for public information campaigns also declined, but not to a statistically significant degree. Both awareness and experience were found to be related to attitude. In both cases, attitudes were least positive toward bystander intervention at moderate awareness and experience levels and more positive at both the highest and lowest levels. In terms of alcohol experience, low experience attitudes were slightly more positive than high experience attitudes. The reverse was true for awareness.



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## INTRODUCTION

In recent years, the magnitude of the relationship between problem and non-problem drinking and traffic fatalities has become apparent through accident statistics. In 1971, 54,700 Americans died in automobile accidents; approximately half, or 27,350, of these deaths were alcohol-related.<sup>(1)</sup> Although traffic accident death rates have declined across time, and although the numbers of accidents and fatalities have been reduced due to the energy crisis, the involvement of alcohol in traffic crashes has proved particularly resistant to these reductions.<sup>(2,3)</sup> In light of these facts, the National Highway Traffic Safety Administration (NHTSA) and the Highway Safety Division of Virginia have made the reduction of drunk driving through alcohol countermeasures a top priority objective.

The Fairfax (Virginia) Alcohol Safety Action Project was initiated in January of 1972 as one of 35 three-year, federally funded projects designed to implement and evaluate the use of comprehensive community alcohol countermeasures. The Fairfax ASAP was also one of ten projects chosen for a two-year extension. The area of impact of the project includes Fairfax County, Fairfax City, Vienna, Falls Church, and Herndon, an area of more than 400 square miles (1,035 kilometers) and 588,000 residents. The Fairfax project implemented four basic countermeasures: (1) increased police enforcement during nighttime hours, (2) special judicial procedures including probation and diagnosis and revised court procedures, (3) rehabilitation and treatment programs for those convicted of drunken driving, and (4) a campaign of public information and education.

In order to evaluate the effectiveness of the public information and education countermeasure (PI&E), four household surveys were conducted during the first three years of the project. The results of these surveys were reported on a yearly and later, a

bi-yearly basis, (4,5,6) During the continuation period, the personal interviewing technique used in the household surveys was abandoned in favor of telephone interviews. These were conducted at six-month intervals, with a total of four being conducted in June and December of 1975 and 1976. The overall objectives of these telephone surveys were —

1. to yield information on a national level concerning the work of the public information and education countermeasure;
2. to allow for national comparisons of ASAP and non-ASAP areas; and
3. to yield specific information to the local ASAP's concerning their own public information countermeasure.

#### PURPOSE

The purpose of this report is to satisfy the third objective of the telephone survey — that of providing information to the management of the local program concerning the effectiveness of the PI&E countermeasure. The report (1) summarizes the data collected in these two surveys, (2) reports what changes, if any, have occurred in the areas of public knowledge and attitudes toward drinking and driving while under the influence of alcohol, and (3) suggests policy related to the PI&E campaign.

#### METHOD

Subjects — The population from which the sample was drawn consists of all persons over the age of 16 years residing in the ASAP area whose households are listed in the current Northern Virginia telephone book. Of these persons, a sample of approximately 500 were interviewed. Half of the sample were male, and the other half female. The sample was selected so that 5% of the subjects were between the ages of 16 and 21.

Instrumentation — Core questions for the survey were those listed in the interview schedule provided by the NHTSA (see Appendix A). Seven questions pertaining to the specific public information efforts relating to Fairfax were added, three of which were deleted during the December 1975 survey.

Sampling — The sample was chosen from the current Northern Virginia telephone book. Pages were selected on a systematic basis, while columns and names were selected randomly. Only residential phones were included. When a randomly selected subject did not reside in the ASAP area, another was randomly selected until an appropriate subject was located. Since it was anticipated that a number of the persons selected to participate would decline to respond, would not be home, or would have moved since publication of the telephone book, a sample of respondents numbering significantly more than 500 was chosen. A master list of 1,400 to 1,500 names and telephone numbers was initially selected. Each interviewer then received his assigned names randomly ordered so as to avoid a sequential bias.

Interview Procedure — Using the NHTSA questionnaire, telephone interviews were conducted between the hours of 5 p.m. and 9 p.m. Monday through Thursday, and 12 p.m. to 5 p.m. Friday through Sunday. The first survey was conducted between Friday, June 6 and Sunday, June 15, 1975. The second was conducted between Friday, December 5 and Sunday, December 14, 1975. Since the sample had to be stratified by sex and age, interviewers received feedback on a daily basis concerning the fulfillment of these quotas. In this way, attempts to fill quotas were dispersed across the entire period, rather than occurring during the final stages of the project. Data were coded directly onto forms compatible with available optical scanning equipment to allow machine punching (see Appendix B). The forms were checked daily for accuracy.

Statistical Analyses — The survey data consist of counts of the numbers of individuals choosing each response category. Year-to-year variation was analyzed by means of chi-square statistics, generally applied to the whole data table generated by the possible responses to each question. Few differences were expected between the first and second surveys since they were conducted only six months apart. Where possible, an attempt was made to relate findings from the telephone surveys back to results of the used household surveys. These comparisons were rarely possible, however, since the questionnaires used on the household and telephone surveys are radically different.

It was considered desirable to have some simple description of a whole area of interest such as alcohol-related knowledge or drinking attitude. To this end, a series of numerical scales were developed by combining the responses to all questions bearing on a particular area. These scales have the advantage of being amenable to analysis by means of more powerful parametric statistics. The construction of the scales is described in Appendix C.

## RESULTS

The analysis of the survey data is presented in four sections: (1) The description of the sample, (2) an examination of alcohol awareness, (3) an analysis of drinking-driving knowledge, and (4) attitudes concerning alcohol-related social behavior.

Description of the Sample

Several variables could be used to develop demographic or historical descriptions of the respondents of both surveys. The variables used were age, sex, marital status, driver licensing, and alcohol experience.

Very few items on either of the telephone surveys dealt with demographic characteristics of the subjects. The samples were stratified by sex and partially by age, in that at least 5% of the people surveyed were to be between 16 and 21 years of age. Thus, there is a built-in similarity in the distributions of sexes of the two samples (see Table 1). While there were no significant differences between the two groups by age, there was a slight reduction in the percentage of respondents in the under 21 age group and a slight increase in the 22-24 age group (see Table 2). This is probably due to the fact that a significant portion of this age group are students who would be more likely to be at home in June than in December.

The two telephone survey samples did not differ as to marital status, but both of these groups were different from the 1973 and 1974 household survey respondents on this variable (see Table 3).

The telephone survey reached a larger proportion of single respondents and a smaller proportion of married respondents than did the household surveys.<sup>(6)</sup> Also, the two telephone survey samples did not differ on the subject's ability to drive (see Table 4). Thus, as far as can be determined from the questionnaire, the June and December samples were demographically similar.

The two groups were also similar in regard to their prior experience with alcohol. Four questions were addressed to the respondents concerning situations in which alcoholic beverages were served. No significant differences between the two samples were found with regard to any of these items. About 80% of the respondents in both surveys had been in a situation in which alcoholic beverages had been served in the three months prior to the survey (see Table 5). Of those persons who had been in a drinking situation, between 6.8% and 7.3% had been in such a

situation on a daily basis, while 21.8% to 24.5% had experienced the situation less than once a month (see Table 6). Respondents were then asked if they had been in a situation in the past year in which someone had been drinking too heavily and was about to drive. Between 40.7% and 44.7% of those who had been in a drinking situation also had been in a drunk driving situation of this type (see Table 7). When asked how often they had been in this type of situation during the preceding three months, between 30.9% and 41.8% responded that they had not been in a drunk driving situation that recently (see Table 8). Another 24.8% to 31.7% had been in such a situation once, while 17.7% to 20.3% had experienced it twice. About 3.0% had been in a drunk driving situation 11 or more times in the three-month period.

TABLE 1

## SEX OF RESPONDENTS

<u>Sex</u>	<u>June 1975</u>	<u>December 1975</u>
Male	251 (49.8%)	255 (51.0%)
Female	249 (50.2%)	245 (49.0%)

TABLE 2

## AGE OF RESPONDENTS

<u>Age</u>	<u>June 1975</u>	<u>December 1975</u>
16-21	72 (14.4%)	59 (11.8%)
22-24	23 ( 4.6%)	35 ( 7.0%)
25-34	123 (24.6%)	122 (24.4%)
35-49	160 (32.0%)	163 (32.6%)
50 or Over	122 (24.4%)	116 (23.2%)

TABLE 3

## MARITAL STATUS OF RESPONDENTS

<u>Marital Status</u>	<u>June 1975</u>	<u>December 1975</u>
Married	368 (73.6%)	366 (73.2%)
Single	86 (17.2%)	92 (18.4%)
Divorced	13 ( 2.6%)	16 ( 3.2%)
Separated	11 ( 2.2%)	7 ( 1.4%)
Widowed	21 ( 4.2%)	16 ( 3.2%)
Other	-	3 ( 0.6%)
Refused	1 ( 0.2%)	-

TABLE 4  
LICENSING AMONG RESPONDENTS

<u>Licensed</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	472 (94.4%)	468 (93.6%)
No	27 ( 5.4%)	32 ( 6.4%)
Refused	1 ( 0.2%)	-

TABLE 5

"In the past three months, have you been in a situation in which alcoholic beverages were served?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	398 (79.6%)	400 (80.0%)
No	100 (20.0%)	100 (20.0%)
Refused	2 ( 0.4%)	-

TABLE 6

"How often . . . have you been in this situation in the past three months?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Daily	29 ( 7.3%)	27 ( 6.8%)
2-6 times a week	54 (13.5%)	49 (12.3%)
Once a week	96 (24.0%)	85 (21.3%)
Once every 2 or 3 weeks	63 (15.8%)	80 (20.0%)
Once a month	70 (17.5%)	61 (15.3%)
Less than once a month	87 (21.8%)	98 (24.5%)
Refused	1 ( 0.3%)	-
Not in a Drinking Situation	100	100

TABLE 7

"In the past year, were you in a situation where someone had been drinking too heavily and was about to drive a car?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	139 (44.7%)	123 (40.7%)
No	172 (55.3%)	179 (59.3%)
Not in drinking situation	189	198

TABLE 8

"How often would you say this happened in the last three months ? "

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
None	59 (41.8%)	38 (30.9%)
1	35 (24.8%)	39 (31.7%)
2	25 (17.7%)	25 (20.3%)
3	8 ( 5.7%)	7 ( 5.7%)
4	3 ( 2.1%)	2 ( 1.6%)
5	1 ( 0.7%)	3 ( 2.4%)
6-10	6 ( 4.3%)	5 ( 4.1%)
11-20	2 ( 1.4%)	3 ( 2.4%)
Over 20	2 ( 1.4%)	1 ( 0.8%)
Not in drinking situation	359	377

In order to make further comparisons, an alcohol experience scale was constructed, summing scores on these items (see Table 9). As would be expected, the two groups did not differ in relation to their previous experience with alcohol. Since the two groups were similar both demographically and experientially, they were combined for intra-variable comparisons involving these factors.

TABLE 9

## ALCOHOL EXPERIENCE SCORES

<u>Score</u>	<u>June 1975</u>	<u>December 1975</u>
1-2	101 (20.2%)	100 (20.0%)
3-4	87 (17.4%)	98 (19.6%)
5-6	93 (18.6%)	106 (21.2%)
7-8	119 (23.8%)	104 (20.8%)
9-10	72 (14.4%)	64 (12.8%)
11-20	24 ( 4.8%)	25 ( 5.0%)
Over 20	4 ( 0.8%)	3 ( 0.6%)
Average Score	5.73	5.59
T Value		0.59, N. S.

Awareness of Alcohol and Alcohol Countermeasures

One of the major objectives of the public information and education countermeasure is to increase public awareness of the drinking/driving problem and of programs designed to reduce incidences of drunk driving. One of the methods used to disseminate this information is drunk driving advertising, either on a national or local level. The public's awareness of the problem and of advertising messages in the media was extensively probed in the telephone survey questionnaire.

Respondents were first asked how important a problem drunk driving was (see Table 10). While 90.4% of the June respondents felt that drunk driving posed an extremely or very serious problem, only 82% expressed equal concern during December ( $X^2 = 16.29$ ,  $p < .001$ ). This decrease in concern or awareness, while not statistically significant in most cases, was exhibited in response to other inquiries. When asked if they had discussed drunk driving with anyone during the previous month, a majority of respondents on both surveys replied that they had not (see Table 11). The percentage that had discussed the topic declined from 37.9% in June to 34.8% in December. This decrease was not statistically significant.

TABLE 10

"How Important A Problem Do You Feel Drunk Driving is?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely important	245 (49.0%)	239 (47.8%)
Very important	207 (41.4%)	171 (34.2%)
Somewhat important	46 ( 9.2%)	82 (16.4%)
Not at all	2 ( 0.4%)	8 ( 1.5%)

TABLE 11

"In The Past Month, Have You Discussed With Anyone The Topic Of Drunk Driving?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	118 (37.9%)	105 (34.8%)
No	193 (62.1%)	197 (65.2%)
Not in drinking situation	189	198



In relation to media advertising, a majority of the respondents had seen or heard at least one drunk driving ad (see Table 12). Again, however, the proportion of the sample who were aware of the advertising declined — 72.8% in June, 69.9% in December. When asked to recall the message of the advertisement, between 36.6% and 39.2% of those who had seen or heard the ads could not recall the messages. In addition, as shown in Table 13, responses varied significantly between the two surveys. In June, the most commonly remembered message stressed that drunk drivers cause fatal crashes, while the least often remembered involved the behavior of hosts and hostesses in relation to their heavy drinking guests. By December, messages other than those specifically listed in the questionnaire were most often remembered and warnings of increased enforcement efforts least remembered.

TABLE 12

"Do You Recall Having Heard or Seen Any Drinking and Driving Advertising in the Past Few Months?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	228 (72.8%)	211 (69.9%)
No	85 (27.2%)	91 (30.1%)
Not in drinking situation	187	198

TABLE 13

"What Was the Message About?"

<u>First Response</u>	<u>June 1975</u>	<u>December 1975</u>
Know your limit	33 (16.8%)	30 (16.4%)
Drunk drivers cause fatal crashes	73 (37.2%)	55 (30.0%)
Party givers shouldn't let drunk friends drive	12 ( 6.1%)	8 ( 4.4%)
If you like someone, you won't let them drive drunk	15 ( 7.7%)	15 ( 8.2%)
More police are patrolling for drunk drivers	21 (10.7%)	5 ( 2.7%)
Other	42 (21.4%)	70 (38.3%)
Refused or no 2nd answer	32	28
Had not heard ads or been in drinking situation	272	289

Respondents were also asked to identify specific advertisements they had seen. The responses to this question appear in Table 14. In most cases, the percentage of persons aware of the particular ad did not change between surveys. However, the percentage who had seen the advertisement in which a woman talks about a friend who always drank after their painting class decreased significantly across time from 27.4% to 17.5% ( $X^2 = 6.09$ ,  $p < .05$ ). On the other hand, the percentage of those persons claiming to have seen an ad in which a man tells how he saved a friend's life by making him stay overnight instead of driving drunk increased from 12.4% to 18.9%. This increase approached significance ( $X^2 = 3.45$ ,  $p < .06$ ).

TABLE 14

"Have You Seen the Advertisement Where ...?"

<u>Advertisement</u>	<u>June 1975</u>	<u>December 1975</u>	<u>Significance</u>
	(Number and percentage answering "yes")		
A couple rush to the hospital to see a friend	68 (29.8%)	59 (28.6%)	N.S.
A woman talks about a friend who drank after painting class	62 (27.4%)	36 (17.5%)	$p < .05$
A group of men coming home from a card game	72 (31.7%)	78 (37.9%)	N.S.
A woman worries about her brother's drinking	99 (43.8%)	97 (47.1%)	N.S.
A man tells how he made his friend stay overnight	28 (12.4%)	39 (18.9%)	$p < .06$
A bartender tells how he sent a customer home in a taxi	52 (23.0%)	56 (27.2%)	N.S.
A woman guest tells how she drove a guest home	14 ( 6.2%)	14 ( 6.9%)	N.S.

Most of the respondents who were aware of this advertising campaign had seen the ads. Each of the other media sources were named by between 7% and 15% of the respondents (see Table 15). There were no statistically significant differences between surveys.

TABLE 15

## "Sources of Drinking-Driving Advertising Information"

Response	June 1975		December 1975	
	<u>First</u>	<u>Second</u>	<u>First</u>	<u>Second</u>
Radio	24 (10.5%)	13 (14.8%)	23 (10.9%)	5 (6.%)
Magazine	16 (7.0%)	21 (23.9%)	16 (7.6%)	22 (27.2%)
Newspaper	13 (5.7%)	18 (20.5%)	16 (7.6%)	16 (19.8%)
TV	136 (59.6%)	19 (21.6%)	101 (47.9%)	20 (24.7%)
Radio & TV	21 (9.2%)	3 (3.4%)	33 (15.6%)	3 (3.7%)
Other	18 (7.9%)	14 (15.9%)	22 (10.4%)	15 (18.5%)
Had not been in a drinking situation, had not heard ads, or no second answer	272	412	289	419

To assess the possible impact of this campaign, respondents were questioned as to whether having seen the ads would have some effect upon their behavior (see Table 16). In June a majority of the respondents (56.6%) answered affirmatively, while in December a slight majority (50.2%) answered in the negative. This difference approached significance ( $\chi^2 = 3.71$ ,  $p < .06$ ).

Finally, in an attempt to assess specific program awareness, subjects were asked if they had heard of a program designed to reduce drunken driving (see Table 17). This is one of the few questions on the telephone survey questionnaire which was also asked during the household surveys (1971 through 1974). During the year before the ASAP began in Fairfax county, 47% of the respondents had heard of some sort of alcohol countermeasures campaign. By 1974, this proportion had risen to 53%. However, in June only 48% had heard of a program, and in December a similar proportion answered "Yes." When questioned concerning sponsorship of the program, the largest group of respondents in each survey had not heard of the program or could not recall the name of the program of which they were aware (see Table 18). In all but the baseline household survey, the next largest group of respondents named the ASAP, while between 11% and 16% named some other program. However, the percentage of respondents naming the ASAP has been decreasing across time, from 16% in 1974 to 13.2% in December of 1975. This decrease in awareness of the ASAP program would indicate that the PI&E countermeasure has become less successful in publicizing the existence of the Fairfax ASAP.

TABLE 16

"As a Result of this Advertisement, Are You Likely to Take Some Kind of Action in a Drinking Situation Which You May Not Have Taken Before?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	129 (56.6%)	99 (46.9%)
No	95 (41.7%)	106 (50.2%)
Refused	4 (1.8%)	6 (2.8%)
Had not heard ads or been in drinking situation	272	289

TABLE 17

"Have You Heard of a Program that is Trying to Reduce Alcohol Related Traffic Deaths?"

<u>Response</u>	<u>Household Surveys</u>		<u>Telephone Surveys</u>	
	<u>1971</u>	<u>1974</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	236 (47%)	263 (53%)	240 (48.0%)	243 (48.6%)
No	262 (52%)	237 (47%)	258 (51.6%)	257 (51.4%)
Refused	-	-	2 (0.4%)	-

TABLE 18

"Do You Recall What Agency or Organization is Sponsoring the Program?"

<u>Response</u>	<u>Household Survey</u>		<u>Telephone Survey</u>	
	<u>1971</u>	<u>1974</u>	<u>June 1975</u>	<u>December 1975</u>
ASAP	15 (3%)	78 (16%)	82 (16.4%)	66 (13.2%)
Other	77 (15%)	82 (16%)	55 (11.0%)	58 (11.6%)
Can't recall	109 (22%)	101 (20%)	100 (20.0%)	188 (23.6%)
Had not heard of a program	264 (53%)	238 (48%)	263 (52.6%)	258 (51.6%)
No response	35 (7%)	1 (0%)	-	-

For use in further comparisons, an alcohol awareness scale similar to the alcohol experience scale was constructed. The frequency of scores for each survey appears in Table 19. The mean alcohol awareness score for the first survey was 8.27, while the mean score for the second was 7.80. While this difference was not significant, it does indicate, when taken in conjunction with several other awareness type items, that awareness of drunk driving as a problem and awareness of alcohol countermeasures may be on the decline.

Alcohol experience scores and alcohol awareness scores were then compared for each respondent to establish if a relationship existed between experience and awareness (see Table 20). While these data are not amenable to statistical analysis due to the large number of empty cells, by inspection it can be seen that those persons with low alcohol experience scores also scored low on alcohol awareness. In fact, no respondent scoring less than 3 on experience scored higher than 5 on awareness. As experience scores increase, so do awareness scores, until among those persons scoring higher than 11 on experience, no one scored less than 4 on awareness. This finding would indicate that a positive relationship exists between awareness and experience. It also indicates that although awareness of alcohol seems to be on the decline, the ASAP's target population, those persons with extensive drinking experience, are more aware of alcohol countermeasures than are non-drinkers or those who are low in drinking experience.

Not only does alcohol awareness vary with the respondent's experience but also with his demographic characteristics as seen in Table 21.

Young persons tend to score higher on alcohol awareness than do older persons ( $X^2 = 65.84$ ,  $p < .001$ ). This finding corresponds to those from the five annual ASAP roadside surveys<sup>(7)</sup> and may be attributable to required driver education courses which young drivers have taken recently. Alcohol awareness also varies with marital status (see Table 22). Single persons tend to score higher than married persons, who in turn tend to score higher than respondents in the "other" category ( $X^2 = 101.33$ ,  $p < .001$ ). Finally, the respondents' driving status is related to their awareness (see Table 23). Drivers are more aware of alcohol and alcohol countermeasures than are nondrivers ( $X^2 = 29.37$ ,  $p < .001$ ). This is a very positive indication in that both persons with alcohol experience and persons who drive are more aware of alcohol problems and countermeasures than are other groups.

TABLE 19  
ALCOHOL AWARENESS SCORES

<u>Score</u>	<u>June 1975</u>	<u>December 1975</u>
0	1 (0.2%)	0 -
1	101 (20.2%)	118 (23.6%)
2	45 (9.0%)	37 (7.4%)
3	60 (12.0%)	66 (13.2%)
4	37 (7.4%)	43 (8.6%)
5	14 (2.8%)	15 (3.0%)
6-10	17 (3.4%)	15 (3.0%)
11-15	126 (25.2%)	108 (21.6%)
16-20	97 (19.4%)	98 (19.6%)
21 and over	2 (0.4%)	0
Average Score	8.27	7.80
T-Value	1.12, N.S.	

TABLE 20  
ALCOHOL EXPERIENCE SCORES BY ALCOHOL AWARENESS

<u>Alcohol Experience Score</u>	<u>Alcohol Awareness Score</u>						
	<u>0 - 1</u>	<u>2 - 3</u>	<u>4 - 5</u>	<u>6 - 10</u>	<u>11 - 15</u>	<u>16 - 20</u>	<u>20 +</u>
0 - 1	120	55	25	-	-	-	-
2 - 3	100	66	20	-	-	-	-
4 - 5	-	13	9	5	48	27	-
6 - 10	-	71	47	25	169	144	-
11 - 15	-	-	7	1	17	16	-
16 and over	-	-	1	1	3	6	4

TABLE 21  
ALCOHOL AWARENESS BY AGE

<u>Age</u>	<u>Awareness Score</u>					
	<u>0 - 1</u>	<u>2 - 3</u>	<u>4 - 5</u>	<u>6 - 10</u>	<u>11 - 15</u>	<u>16 and over</u>
16-21	17 (13.0%)	19 (14.5%)	14 (10.7%)	4 (3.1%)	35 (26.7%)	42 (32.1%)
22-24	11 (18.0%)	11 (18.0%)	8 (13.1%)	2 (3.3%)	13 (21.3%)	16 (26.2%)
25-34	43 (17.6%)	47 (19.2%)	22 (9.0%)	8 (3.3%)	65 (26.5%)	60 (24.5%)
35-49	64 (19.9%)	77 (24.0%)	35 (10.9%)	15 (4.7%)	79 (24.6%)	51 (15.9%)
50 or over	84 (35.3%)	56 (23.5%)	29 (12.2%)	3 (1.3%)	38 (16.0%)	28 (11.8%)

TABLE 22  
ALCOHOL AWARENESS BY MARITAL STATUS

<u>Marital Status</u>	<u>Awareness Score</u>					
	<u>0 - 1</u>	<u>2 - 3</u>	<u>4 - 5</u>	<u>6 - 10</u>	<u>11 - 15</u>	<u>16 and over</u>
Married	168 (23.1%)	165 (22.7%)	78 (10.7%)	24 (3.3%)	171 (23.5%)	122 (16.8%)
Single	17 (9.6%)	27 (15.2%)	24 (13.5%)	7 (3.9%)	46 (25.8%)	57 (32.0%)
Other	35 (39.8%)	16 (18.2%)	7 (8.0%)	1 (1.1%)	17 (19.3%)	12 (13.6%)

TABLE 23  
ALCOHOL AWARENESS BY DRIVING STATUS

<u>Status</u>	<u>Awareness Score</u>					
	<u>0 - 1</u>	<u>2 - 3</u>	<u>4 - 5</u>	<u>6 - 10</u>	<u>11 - 15</u>	<u>16 and over</u>
Driver	191 (20.3%)	198 (21.1%)	102 (10.9%)	30 (3.2%)	229 (24.4%)	190 (20.2%)
Non driver	29 (49.2%)	10 (16.9%)	6 (10.2%)	2 (3.4%)	5 (8.5%)	7 (11.9%)

To pinpoint peak viewing or listening hours among adults in the Fairfax area, respondents were asked when they listened to the radio and when they generally watched television. Since a majority of the respondents had received their alcohol information via these modes, it was reasoned that heavy viewing and listening hours should mark the times when the maximum number of persons could be reached by alcohol advertising. While radio listening habits did not change significantly between surveys, there were significant differences in television viewing habits (see Table 24). While the proportion of respondents found to be watching daytime TV was higher in the June survey than the second survey, there was more evening viewing among December respondents. Also, there were fewer nonviewers during December than during June, probably as a reaction to seasonal differences ( $X^2 = 29.94$ ,  $p < .001$ ). While there was a decline between surveys in the percentage of respondents who did not listen to the radio, this difference was not significant (see Table 25).

TABLE 24

## HOURS DURING WHICH RESPONDENTS WATCHED TELEVISION

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
8 a. m. - 5 p. m.	33 (6.6%)	18 (3.6%)
5 p. m. - 8 p. m.	53 (10.6%)	52 (10.4%)
8 p. m. - 11 p. m.	204 (40.8%)	215 (43.0%)
11 p. m. or later	11 (2.2%)	6 (1.2%)
8 a. m. - 8 p. m.	17 (3.4%)	8 (1.6%)
8 a. m. - 11 p. m.	15 (3.0%)	22 (4.4%)
8 a. m. - 11 p. m. or later	0 (-)	3 (0.6%)
5 p. m. - 11 p. m.	63 (12.6%)	95 (19.0%)
5 p. m. - 11 p. m. or later	4 (0.8%)	8 (1.6%)
8 p. m. - 11 p. m. or later	12 (2.4%)	14 (2.8%)
Doesn't Watch TV	83 (16.6%)	57 (11.4%)
No Answer	5 (1.0%)	2 (0.4%)



TABLE 25

## HOURS DURING WHICH RESPONDENTS LISTEN TO THE RADIO

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
6 a. m. - 9 a. m.	126 (25.2%)	131 (26.2%)
9 a. m. - 5 p. m.	77 (15.4%)	85 (17.0%)
5 p. m. - 7 p. m.	19 (3.8%)	21 (4.2%)
7 p. m. - 12 a. m.	16 (3.2%)	16 (3.2%)
12 a. m. - 6 a. m.	4 (0.8%)	14 (2.8%)
6 a. m. - 5 p. m.	40 (8.0%)	36 (7.2%)
6 a. m. - 7 p. m.	69 (13.8%)	64 (12.8%)
6 a. m. - 12 a. m.	20 (4.0%)	45 (9.0%)
6 a. m. - 6 a. m.	4 (0.8%)	7 (1.4%)
9 a. m. - 7 p. m.	15 (3.0%)	14 (2.8%)
9 a. m. - 12 a. m.	12 (2.4%)	5 (1.0%)
5 p. m. - 12 a. m.	10 (2.0%)	5 (1.0%)
Other	4 (0.8%)	0 (-)
Doesn't Listen to Radio	84 (16.8%)	57 (11.4%)

There are two primary goals of the PI&E countermeasure: (1) to reach as many ASAP area residents as possible with alcohol information, and (2) to reach as many persons who are low in alcohol awareness as possible. These goals are not always easily met, since "air time" is not bought using ASAP funds but is donated by the various radio or television stations. It is possible, however, that decisions could need to be made between several possible time donations. In order to assist in such a choice, an analysis of viewing patterns of the two major media sources, radio and television, was performed. Simple viewing and listening patterns such as those displayed in Tables 24 and 25 could be used to choose times when advertising can do the most good. In this case, most respondents watch TV during prime time (8 p.m. to 11 p.m.), while a substantial number watch in the early evening hours, probably when the evening news is broadcast. In terms of radio coverage, most respondents listen in the early morning, probably while getting ready and going to work. Alcohol information presented at these times would at least be available to the maximum number of persons, although it is not known if they will absorb the information at these times. However, since reaching the most people is not the only goal of public information, information must be made available to the subgroup of persons who are not currently being reached, persons who are low in alcohol awareness. In order to present information to this group, their specific viewing patterns must be known.

To gain this knowledge, respondents' viewing data were arranged by their awareness scores to find out when high and low awareness persons could be reached. The television viewing habits of low awareness respondents is significantly different from those of high awareness persons (see Table 26). Significantly more low awareness respondents watch daytime television than do high awareness persons. These highly informed subjects watched more prime time television ( $X^2 = 35.84$ ,  $p < .05$ ). Also, a large proportion of subjects scoring low in awareness did not watch television. Radio listening patterns were also significantly different for the two groups, although these patterns are somewhat more difficult to interrupt (see Table 27). More low scoring respondents than high scoring residents listen to early morning radio (6 a.m. - 9 a.m.). A larger percentage of the former also listen during the day, while the latter listen for a longer period of time, which encompasses both these periods and part of the early evening ( $X^2 = 51.94$ ,  $p < .001$ ). In general, it appears that the longer a person listens to the radio, the more aware of alcohol he is (as indicated by the average awareness score, or index). This notion is supported by the fact that persons not listening to the radio scored lower in awareness than did any listening group.

In summary, it appears that alcohol awareness, especially awareness of alcohol countermeasures, has been decreasing over time. While awareness among drinkers who have a high alcohol experience and who drive is higher than among other groups, there is a large segment of people who are still not receiving information. The efforts of the PI&E countermeasure should be especially addressed to these persons. These efforts should be concentrated not only during peak media hours in general, but also in those times when low awareness persons are viewing.

TABLE 26

## AWARENESS BY HOURS DURING WHICH RESPONDENTS WATCH TELEVISION

<u>Response</u>	<u>Awareness Score</u>			<u>Index</u>
	<u>Low</u>	<u>Medium</u>	<u>High</u>	
8 a. m. - 5 p. m.	27 (19.3%)	12 (8.5%)	12 (2.8%)	6.7
5 p. m. - 8 p. m.	43 (10.0%)	12 (8.5%)	50 (11.7%)	10.2
8 p. m. - 11 p. m.	165 (38.6%)	57 (13.3%)	197 (46.0%)	9.7
11 p. m. +	4 (0.9%)	6 (1.4%)	7 (1.6%)	8.9
8 a. m. - 8 p. m.	17 (4.0%)	2 (0.5%)	6 (1.4%)	6.0
8 a. m. - 11 p. m.	21 (4.9%)	2 (0.5%)	14 (3.3%)	7.9
5 p. m. - 11 p. m.	76 (17.8%)	16 (3.7%)	66 (15.4%)	8.7
8 a. m. - 11 p. m. +	8 (1.9%)	5 (1.2%)	13 (3.0%)	10.5
Doesn't Watch TV	62 (14.5%)	27 (6.3%)	51 (11.9%)	8.2
Other	5 (1.2%)	2 (0.5%)	15 (3.5%)	

Note: While data presented in this table are for a composite of both survey groups, the relationships depicted hold for each set of respondents.

TABLE 27

## AWARENESS BY HOURS DURING WHICH RESPONDENTS LISTEN TO THE RADIO

<u>Response</u>	<u>Awareness Score</u>			<u>Index</u>
	<u>Low</u>	<u>Medium</u>	<u>High</u>	
6 a. m. - 9 a. m.	115 (26.9%)	39 (27.7%)	103 (23.9%)	7.9
9 a. m. - 5 p. m.	74 (17.3%)	22 (15.6%)	66 (15.3%)	7.9
5 p. m. - 7 p. m.	15 (3.5%)	8 (5.7%)	17 (3.9%)	8.5
7 p. m. - 12 a. m.	13 (3.0%)	6 (4.3%)	13 (3.0%)	8.2
12 a. m. - 6 a. m.	5 (1.2%)	6 (4.3%)	7 (1.6%)	8.8
6 a. m. - 5 p. m.	30 (7.0%)	5 (3.5%)	41 (9.5%)	9.4
6 a. m. - 7 p. m.	40 (9.3%)	18 (12.8%)	75 (17.4%)	10.1
6 a. m. - 12 a. m.	24 (5.6%)	9 (6.4%)	32 (7.4%)	9.1
9 a. m. - 7 p. m.	13 (3.0%)	2 (1.4%)	14 (3.2%)	8.6
9 a. m. - 12 a. m.	5 (1.2%)	1 (0.7%)	11 (2.6%)	10.9
5 p. m. - 12 p. m.	6 (1.4%)	2 (1.4%)	7 (1.6%)	8.8
Other	3 (0.7%)	2 (1.4%)	10 (2.3%)	11.6
Doesn't Listen to the Radio	85 (19.9%)	21 (14.9%)	35 (8.1%)	5.8

### Knowledge of Alcohol

An attempt was made to at least partially assess the respondents' knowledge concerning alcohol through four questions on the questionnaire. These questions were numbers 6, 7, 10 and 11 (see Appendix A). Although the four were more knowledge oriented than attitudinally oriented, they were scored on an attitudinal scale. In addition, the questions tended to be ambiguous; some had several interpretations and some were worded such that a telephone respondent might become confused in his answer. It was decided that rather than attempt to evaluate alcohol knowledge through these data, more comprehensive questions would be constructed for inclusion in the June 1976 telephone survey.

### Behavior in Relation to Drunk Driving

While respondents were questioned extensively concerning the likelihood of behaving in several ways, they were rarely asked to describe their actual behavior. Only two of the items on the telephone survey questionnaire related to actual behavior when confronted with a situation involving drunk driving. After having said that he had been in a situation in which a friend was about to drive after drinking too much, the respondent was asked if he had stopped the person from driving (see Table 28). About 70% of the respondents from both surveys who had been in this situation stated that they had stopped the person. By far the most popular method for stopping the driver, named by between 40.2% and 44.7% of the subjects, was to drive them home (see Table 29). Each of the other methods were named by between 2.0% and 13.0% of the respondents. Other popular methods for averting drunk driving included offering the person a room for the night and taking his keys. Least popular on both surveys was to call a taxi.

A composite scale was constructed from these items and one other (see Appendix C) and the results appear in Table 30.\* There was no significant difference between surveys.

As seen in Tables 31 and 32, behavior was positively related to both experience and awareness ( $X^2 = 624.51$  and  $X^2 = 503.01$  respectively,  $p < .001$ ). As experience and awareness increased, the positive aspects of alcohol related-behavior (bystander intervention) also increased. However, since the behavior scale is based on so few items, these results must be considered tentative.

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\*While the reliability of this scale, based on so few items, is questionable, a tentative analysis was performed as a basis for subsequent reports in which additional behavior-related questions will be included.

TABLE 28

"When in a Situation Where a Friend was About to Drive After Drinking too Much, Did you Stop the Driver?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	96 (70.1%)	83 (70.9%)
Not	41 (29.9%)	34 (29.1%)
Not in Drinking Situation	363	383

TABLE 29

"What Action Did You Take to Stop the Driver?"

<u>Response</u>	<u>June 1975</u>		<u>December 1975</u>	
	<u>Initial Action</u>	<u>2nd Action</u>	<u>Initial Action</u>	<u>2nd Action</u>
Drove the Person Home	37 (40.2%)	—	38 (44.7%)	—
Offered to Drive	12 (13.0%)	—	8 (9.4%)	1
Offered a Room for the Night	10 (10.9%)	—	10 (11.8%)	2
Called a Taxi	2 (2.2%)	—	2 (2.4%)	—
Took the Person's Keys	10 (10.9%)	3	7 (8.2%)	10
Restrained the Person	7 (7.6%)	—	5 (5.9%)	2
Got Another to Help Restrain the Person	6 (6.5%)	—	7 (8.2%)	2
Gave the Person Coffee	—	2	—	1
Gave the Person Food	—	1	—	1
Other	8 (8.7%)	6	8 (9.4%)	1
Had not Been in a Drinking Situation or no 2nd Answer	408	488	415	480

TABLE 30  
ALCOHOL BEHAVIOR SCORES

<u>Behavior Score</u>	<u>June 1975</u>	<u>December 1975</u>
1	62 (24.1%)	71 (30.6%)
2	85 (33.1%)	69 (29.7%)
3	31 (12.1%)	20 (8.6%)
4	34 (13.2%)	29 (12.5%)
5	41 (16.0%)	34 (14.7%)
6	4 (1.6%)	9 (3.9%)
Not enough alcohol experience to construct score	243	268
Average*	2.68	2.62
T Value	0.44, N.S.	

\*T-tests were performed both with and without zero items and were not significant in either case.

TABLE 31  
BEHAVIOR SCORE BY PREVIOUS ALCOHOL EXPERIENCE

<u>Behavior Score</u>	<u>Experience Score</u>			
	<u>1-6</u>	<u>7-8</u>	<u>9-10</u>	<u>11 and Over</u>
0	452 (77.3%)	49 (22.0%)	10 (7.4%)	0 (-)
1-2	128 (21.9%)	103 (46.2%)	45 (33.1%)	11 (19.6%)
3-4	2 (0.3%)	43 (19.3%)	45 (33.1%)	24 (42.9%)
5-6	3 (0.5%)	28 (12.6%)	36 (26.5%)	21 (37.5%)

TABLE 32  
BEHAVIOR SCORE BY LEVEL OF AWARENESS

<u>Behavior Score</u>	<u>Awareness Score</u>			
	<u>1-5</u>	<u>6-10</u>	<u>11-15</u>	<u>16 and Over</u>
0	487 (90.7%)	17 (53.2%)	3 (1.3%)	4 (2.0%)
1-2	25 (4.7%)	7 (21.9%)	149 (63.7%)	106 (54.4%)
3-4	25 (4.7%)	8 (25.0%)	47 (20.1%)	33 (16.9%)
5-6	—	—	35 (14.9)	52 (26.7%)

Attitudes Toward Drunk Driving

The ultimate aim of any public information campaign is to make some sort of impact upon attitudes which could subsequently affect behavior. Most of the items on the telephone survey which deal with attitudes are phrased in terms of objective behaviors and require the respondent to assess the likelihood of his performing each. Thus, if questions are answered candidly, it should be possible to assess the overall impact of the public information countermeasure in terms of reactions to drunk driving. Several other items are countermeasure specific, asking if the respondent would support a given type of effort, while two questions are purely attitudinal. The nonbehavioral questions will be dealt with first.

The first questions asked the respondents to identify to which lengths they thought someone should go to stop a friend from driving while drunk. As shown in Table 33, between 90.1% and 91.7% of the respondents believed strongly that it was a person's responsibility as a good citizen to stop a friend or relative from driving drunk.\*

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\*Unfortunately, this is a two part question, and it is not always certain whether the subject is responding to the behavior mentioned — stopping the drunk driver — or to the motivation — "as a good citizen." The questions are interpreted here as if motivation were not a factor in the respondent's answer.

Only 1.9% disagreed with this statement during the first survey and only 1.3% disagreed on the second. There was no significant difference between responses on the two surveys. However, in the responses to the question regarding the use of physical measures to restrain the driver, there were significant differences between surveys ( $X^2 = 13.34$ ,  $p < .001$ ). About 62.3% of the first survey respondents strongly agreed, while only 51.3% of the second survey respondents did so (see Table 34). Between 11.2 and 11.9% of the respondents disagreed with this statement. Fewer respondents tended to answer using the extreme categories (strongly agree, strongly disagree) in December than in June. However, a majority of respondents in both surveys believed that a person should stop a friend from driving drunk even if he had to use physical force to do so.

TABLE 33

"It's a Person's Responsibility as a Good Citizen to Stop a Friend or Relative from Driving When Drunk"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Strongly Agree	287 (91.7%)	272 (90.1%)
Somewhat Agree	20 (6.4%)	26 (8.6%)
Somewhat Disagree	4 (1.3%)	1 (0.3%)
Strongly Disagree	2 (0.6%)	3 (1.0%)
Had Not Been in Drinking Situation	187	198

TABLE 34

"When Friends are Involved, a Person Should be Willing to Take Even Physical Action to Stop the Person from Driving Drunk"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Strongly Agree	193 (62.3%)	155 (51.3%)
Somewhat Agree	80 (25.8%)	113 (37.4%)
Somewhat Disagree	18 (5.8%)	24 (7.9%)
Strongly Disagree	19 (6.1%)	10 (3.3%)
Refused	3	-
Had Not Been in Drinking Situation	187	198



Respondents were then asked to rate their probability of using five specific measures for stopping a person from driving after heavy drinking. Although there were no significant differences in responses between surveys, all but one case resulted in a net decrease in the probability of using a particular technique. As seen in Table 35, a majority of respondents in both surveys were extremely or very likely to suggest to the drunken person that they drive him home; however, by December, fewer respondents were extremely likely to follow this course, while more indicated that they were very likely. This is also true in terms of suggesting that the person stay overnight (see Table 36). Respondents from both surveys were much less in favor of calling a taxi for the drunken person (see Table 37). Between surveys, respondents' answers shifted away from the three positive categories and more subjects indicated that they were not at all likely to call a taxi for the person. The only case in which the overall probability of using a technique increased was in the case of taking the person's keys (see Table 38). This solution was even less popular than calling a taxi, on both surveys. A slight net increase in probability did occur across time, since the increase in the percentage of persons indicating extreme likelihood slightly outweighed the increase in respondents who were not at all likely to take the persons keys. The least popular method for dealing with a drunken driver on both surveys was to get assistance to restrain him (see Table 39). While the percentage of respondents who were extremely likely to restrain the person increased slightly, the percentage who were not at all likely greatly increased. As previously mentioned, none of the decreases in probability of using a particular technique to stop a drunken person were statistically significant.

TABLE 35

"How Likely Are You to Suggest to the Person that You Drive Him Home?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	229 (74.1%)	206 (68.7%)
Very	57 (18.4%)	75 (25.0%)
Somewhat	18 (5.8%)	11 (3.7%)
Not at All	5 (1.6%)	8 (2.7%)
Had Not Been in Drinking Situation	191	200
Mean Response	3.68	3.60

TABLE 36

"How Likely Are You to Suggest to the Person That He Stay Overnight at Your Home?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	176 (56.8%)	157 (52.5%)
Very	76 (24.5%)	94 (31.4%)
Somewhat	42 (13.5%)	36 (12.1%)
Not at All	16 (5.2%)	12 (4.0%)
Had Not Been in a Drinking Situation	190	201
Mean Response	3.33	3.32

TABLE 37

"How Likely Are You to Call a Taxi for the Person Who Drank Too Much?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	94 (30.4%)	85 (28.3%)
Very	70 (22.7%)	64 (21.3%)
Somewhat	79 (25.6%)	69 (23.0%)
Not at All	66 (21.4%)	82 (27.3%)
Had Not Been in a Drinking Situation	191	200
Mean Response	2.62	2.51

TABLE 38

"How Likely Are You to Take the Person's Keys Away?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	66 (21.4%)	74 (24.7%)
Very	57 (18.5%)	50 (16.7%)
Somewhat	98 (31.8%)	79 (26.3%)
Not at All	87 (28.2%)	97 (32.3%)
Had Not Been in a Drinking Situation	190	200
Mean Response	2.33	2.34

TABLE 39

"How Likely Are You to Get Assistance to Restrain the Person?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	53 (17.3%)	54 (18.1%)
Very	56 (18.3%)	46 (15.4%)
Somewhat	107 (35.0%)	98 (32.8%)
Not at All	90 (29.4%)	101 (33.8%)
Had Not Been in Drinking Situation	194	201
Mean Response	2.24	2.18

There were, however, significant differences across time in terms of social behaviors related to drinking and driving. Respondents were asked to assess the likelihood of behaviors which they would exhibit as host of a party. In all cases, a net decrease in probability of using each technique was experienced. In three of the five cases, this decrease was significant.

As seen in Table 40, a majority of the respondents in both surveys felt that they were extremely likely to serve food along with alcoholic beverages at a party. However, a significantly smaller proportion of the second sample said that they would be likely to serve food ( $X^2 = 13.97$ ,  $p < .001$ ). This was also true in the case of replacing alcoholic beverages with nonalcoholic beverages and food at a given time during the party (see Table 41). This alternative was less popular with respondents of both surveys than simply serving food, possibly because it interferes with the image of the hospitable host supplying all of a guest's needs. In addition, the self-reported likelihood of respondents actually closing the bar early decreased significantly between the June and December surveys ( $X^2 = 13.96$ ,  $p < .01$ ). The likelihood of the host or hostess asking who was driving home also decreased, but not significantly (see Table 42). When asked how likely they were not to offer drinks to a guest who was becoming intoxicated, a large proportion of respondents in both surveys stated that they were either extremely or very likely to behave in this manner (see Table 43); however, the probability of behaving this way decreased over time. Finally, a large percentage of respondents stated that they were very likely to plan who would drive home ahead of time and that the designated driver would limit his drinking at the party (see Table 44). This was among the most popular socially oriented behaviors. However, as

with the other party behaviors, the tendency to delegate driving responsibility decreased across time, in this case significantly ( $X^2 = 21.26$ ,  $p < .001$ ). The general decreases in the probability of positive social behavior to deal with drunken drivers may not be part of an overall trend but rather a seasonal difference. During the holiday season in December, party situations are more immediate than in June, and responses may be more realistic in terms of actual behaviors and party plans.

TABLE 40

"How Likely Are You to Plan to Serve Food with the Drinks to Reduce the Effects of Alcohol?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	215 (69.1%)	164 (54.8%)
Very	59 (19.0%)	80 (26.8%)
Somewhat	19 (6.1%)	27 (9.0%)
Not at All	18 (5.8%)	28 (9.4%)
Had Not Been in a Drinking Situation	189	201
Mean Response	3.51	3.27

TABLE 41

"How Likely Are You to Plan a Party Where Drinking is Cut off at a Certain Time and Replaced with Nonalcoholic Beverages and Food?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	56 (18.0%)	39 (13.1%)
Very	62 (19.9%)	54 (18.1%)
Somewhat	77 (24.8%)	52 (17.4%)
Not at All	116 (37.3%)	153 (51.3%)
Had Not Been in a Drinking Situation	189	202
Mean Response	2.19	1.93

TABLE 42

"How Likely Are You to Ask Who is Driving Home?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	58 (18.6%)	48 (16.1%)
Very	79 (25.4%)	78 (26.2%)
Somewhat	72 (23.2%)	69 (23.2%)
Not at All	102 (32.8%)	103 (34.6%)
Had Not Been in a Drinking Situation	189	202
Mean Response	2.30	2.24

TABLE 43

"How Likely Are You to Not Offer Drinks to a Guest Who is Becoming Intoxicated?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	109 (35.3%)	94 (31.5%)
Very	117 (37.9%)	102 (34.2%)
Somewhat	55 (17.8%)	75 (25.2%)
Not at All	28 (9.1%)	27 (9.1%)
Had Not Been in a Drinking Situation	191	202
Mean Response	2.99	2.88

TABLE 44

"How Likely Are You to Agree Ahead of Time that When Two of You Go to a Party, One of You Will Limit Their Drinking and Drive Home?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Extremely	140 (45.8%)	132 (44.1%)
Very	104 (34.0%)	66 (22.1%)
Somewhat	25 (8.2%)	27 (9.0%)
Not at All	37 (12.1%)	74 (24.7%)
Had Not been in a Drinking Situation	194	201
Mean Response	3.13	2.86

After being asked to make predictions concerning possible behavior, subjects were asked if they would endorse various alcohol related countermeasure activities (see Tables 45, 46, and 47). Increased police enforcement received most support on both surveys, followed by public information campaigns. More severe penalties for drunken drivers received least support, with 75% responding affirmatively in June and 68% in December. This decrease in support for more severe penalties was significant ( $X^2 = 17.89$ ,  $p < .001$ ), while the decrease in support for greater enforcement activity approached significance ( $X^2 = 3.03$ ,  $p < .08$ ). The support for public information also decreased, but not significantly.

TABLE 45

"Would You Support Greater Police Enforcement of Drunk Driving Laws?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	466 (93.2%)	453 (90.6%)
No	32 (6.4%)	47 (9.4%)
Refusal	2 (0.4%)	—

TABLE 46

"Would You Support Public Information Campaigns About Drunk Driving?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	458 (91.6%)	447 (89.4%)
No	41 (8.2%)	53 (10.6%)
Refusal	1 (0.2%)	—

TABLE 47

"Would You Support More Severe Penalties for Drunken Drivers?"

<u>Response</u>	<u>June 1975</u>	<u>December 1975</u>
Yes	381 (76.2%)	341 (68.2%)
No	94 (18.8%)	158 (31.6%)
Refusal	25 (5.0%)	1 (0.2%)

In order to determine whether a person's assessment of his probability of using a particular method was related to the methods he actually used, likelihood responses were arrayed for persons who actually used the techniques (see Table 48). In all cases except for the method requiring physical restraint, those persons who said they were "extremely likely" to use the method really were the most likely to use it, followed by persons who were "very likely," "somewhat likely", and finally those who were "not at all likely." In the case of restraining the person, more persons in the "somewhat" or "not at all likely" categories used the behavior than did those who said they were "extremely" or "very likely." (It is possible that negative repercussions from using this technique have persuaded the respondent that he would not be likely to use it in the future.) However, while there is a relationship between self-reported likelihood and behavior, this relationship is not of a predictive nature. Of all the persons saying that they were extremely likely to drive a drunken friend home, 46% drove the person home and 54% used some other technique.

TABLE 48

NUMBER OF PERSONS IN EACH LIKELIHOOD CATEGORY ACTUALLY USING THE METHOD

<u>Method</u>	<u>Likelihood</u>			
	<u>Extremely</u>	<u>Very</u>	<u>Somewhat</u>	<u>Not at All</u>
Drove the Person Home	59 (78.7%)	12 (16.0%)	2 (2.7%)	2 (2.7%)
Offered the Person a Room	12 (60.0%)	1 (35.0%)	1 (5.0%)	0 (-)
Called a Taxi	3 (75.0%)	1 (25.0%)	0 (-)	0 (-)
Took the Person's Keys	9 (52.9%)	6 (35.3%)	2 (11.8%)	0 (-)
Restrained the Person	3 (25.0%)	1 (8.3%)	4 (33.3%)	4 (33.3%)

In order to summarize trends in attitudes toward coping with drunk driving, a crude attitude scale was constructed (see Appendix C). Respondents' scores on this scale appear in Table 49. As indicated within the individual items, the attitudes toward coping with drunk driving have become significantly less positive, even over as short a period as six months. These attitude scores were arrayed by the respondents' drinking experience and by their awareness score to determine what bearing these variables have upon attitudes. Alcohol experience was found to be significantly

related to alcohol attitude (see Table 50). At the lowest and highest levels of experience, attitudes tend to be more positive toward coping with drunk drivers than at the middle experience levels, although the most positive attitudes occur with the lowest amount of experience ( $X^2 = 49.46$ ,  $p < .001$ ). A similar relationship exists between awareness and attitude (see Table 51), although there is much more of a tendency for the most positive attitudes to coincide with the highest level of awareness and mildly positive attitudes with low awareness levels ( $X^2 = 23.29$ ,  $p < .05$ ). The relationship between attitude and behavior approaches significance (see Table 52). In general, positive attitude tends to be related to positive behavior, although this relationship is not strictly significant ( $X^2 = 16.92$ ,  $p < .06$ ). Again, since the behavior scale is based on so few items, this finding must be considered tentative.

In summary, there was a significant decline in positive attitudes toward coping with drunken drivers over the last six months of 1975. While the self-reported likelihood of using recommended techniques to avert drunk driving declined slightly, the most significant decreases in likelihood involved socially oriented party behaviors. While respondents were also significantly less likely to support increased police enforcement and more severe penalties for drunken drivers in December than in June, they were also less likely to support public information campaigns, but not significantly less.

TABLE 49

## ALCOHOL ATTITUDE SCALE SCORES

<u>Score</u>	<u>June 1975</u>	<u>December 1975</u>
0-10	—	2
11-15	1	—
16-20	2	1
21-25	10	20
26-30	46	62
31-35	94	89
36-40	85	79
41-45	62	38
46-50	11	11
No Score (Had No Prior Drinking Experience)	189	198
Average Score	35.48	34.10
T Value	2.77, $p < .01$	



TABLE 50

## ATTITUDE SCORE BY LEVEL OF ALCOHOL AWARENESS

<u>Attitude Score</u>	<u>Experience Score</u>				
	<u>0-4</u>	<u>5-6</u>	<u>7-8</u>	<u>9-10</u>	<u>11 &amp; Over</u>
Low		10 (4.9%)	12 (5.3%)	12 (8.5%)	4 (7.8%)
Medium		139 (68.5%)	178 (78.4%)	111 (78.2%)	36 (70.5%)
High		54 (26.6%)	37 (16.3%)	19 (13.4%)	11 (21.6%)
No Score*	387				

\*Insufficient alcohol experience.

TABLE 51

## ATTITUDE SCORE BY ALCOHOL AWARENESS

<u>Attitude Score</u>	<u>Alcohol Awareness Score</u>				
	<u>0-3</u>	<u>4-5</u>	<u>6-10</u>	<u>11-15</u>	<u>16 &amp; Over</u>
Low	8 (9.3%)	6 (9.4%)	1 (3.1%)	12 (5.2%)	9 (4.6%)
Medium	63 (73.3%)	48 (75.0%)	30 (93.8%)	181 (77.7%)	133 (67.5%)
High	15 (17.4%)	10 (15.6%)	1 (3.1%)	40 (17.2%)	55 (27.9%)
No Score*	220	123	45	—	—

\*In those cases where there is insufficient experience, there is also low awareness.

TABLE 52

## ATTITUDE SCORE BY ALCOHOL-RELATED BEHAVIOR

Alcohol Awareness Score

<u>Attitude Score</u>	<u>0</u>	<u>1-2</u>	<u>3-4</u>	<u>5-6</u>
1-20	3 (2.3%)	3 (1.0%)	0 (-)	0 (-)
21-30	35 (27.1%)	64 (22.2%)	29 (25.4%)	9 (11.0%)
31-35	30 (23.3%)	85 (29.5)	37 (32.5%)	31 (37.8%)
36-40	36 (27.9%)	70 (24.3%)	32 (28.1%)	20 (24.4%)
41-45	23 (17.8%)	52 (18.1%)	13 (11.4%)	19 (23.2%)
46-50	2 (1.6%)	14 (4.9%)	3 (2.6%)	3 (3.7%)
No Score				

## SUMMARY

The first two telephone surveys for the Fairfax ASAP were conducted during June and December of 1975. During each, 500 ASAP area residents randomly selected from the Northern Virginia phone book were called and administered a standard questionnaire. The sample was stratified by sex and partially by age. The two sets of survey respondents were similar in their demographic characteristics, their previous experience with alcohol and their alcohol behavior. The groups were not significantly different in their overall awareness, although there was a slight decline in this scale across time and a marked decline in some individual items, such as specific awareness of the ASAP. There were also significant declines in positive attitudes toward handling drinking drivers. While these differences may be somewhat seasonal, the tentative conclusions of this analysis are twofold. First, there is no evidence that the Fairfax Public Information and Education Countermeasure has been successful in disseminating information on the existence of the ASAP locally or in improving support for countermeasure activities. Additionally, there is no evidence that the national campaigns have been effective in changing attitudes toward bystander intervention in drunk driving, the main thrust of their campaign.



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APPENDIX A

ASAP TELEPHONE SURVEY

CORE QUESTIONS

INTRODUCTION

READ: Good (Morning/afternoon/evening). My name is \_\_\_\_\_.  
We are conducting a survey for Fairfax County.

INTERVIEWER: USE YOUR QUOTA SHEET TO DETERMINE IF YOU NEED A MALE  
OR FEMALE RESPONDENT.

READ: May I speak with a person (MALE, FEMALE AS NEEDED TO FILL QUOTA)  
present now in your household who is 16 years of age or older?

READ: I would like to ask you a few questions. Your responses will be very valuable  
and will remain strictly confidential. They will be used for statistical purposes  
only.

Column Number

Site ID  
Questionnaire No.

RECORD: SELECTED RESPONDENT IS:

Male ..... 1  
Female ..... 2

READ: There are many problems and social issues facing our country at this time.  
I'd like to know how important you feel some of them are.

1. How important a problem do you think crime in the street is?

Extremely important ..... 1  
Very important ..... 2  
Somewhat important . ..... 3  
Not at all ..... 4

2. How important a problem do you think drug abuse is ?

- Extremely important ..... 1
- Very important ..... 2
- Somewhat important ..... 3
- Not at all ..... 4

3. How important a problem do you think drunk driving is ?

- Extremely important ..... 1
- Very important ..... 2
- Somewhat important ..... 3
- Not at all ..... 4

READ: I would like to talk to you about occasions where alcoholic beverages are served.

4. In the past three months, have you been in a situation where alcoholic beverages were served?

- Yes ..... 1 CONTINUE
- No ..... 2 SKIP TO QUESTION 42

5. Which one phrase best describes how often you have been in this type of situation in the past three month period? Would you say it was \_\_\_\_\_?

(READ LIST UNTIL YOU GET AN ANSWER)

- Daily ..... 1
- 2-6 times a week ..... 2
- Once a week ..... 3
- Once every 2 or 3 weeks .... 4
- Once a month ..... 5
- Less than once a month ..... 6 SKIP TO QUESTION 42

READ: I'm going to read you a series of statements describing some aspect surrounding the use of alcoholic beverages. Do you strongly agree, somewhat agree, somewhat disagree, strongly disagree with each statement? READ STATEMENT FOLLOWED BY: DO YOU STRONGLY AGREE, DO YOU SOMEWHAT AGREE, DO YOU SOMEWHAT DISAGREE, DO YOU STRONGLY DISAGREE.

- |   | Strongly<br>Agree | Somewhat<br>Agree | Somewhat<br>Disagree | Strongly<br>Disagree |
|---|-------------------|-------------------|----------------------|----------------------|
| 6. A can of beer is less intoxicating than an average drink of liquor ..... | 1                 | 2                 | 3                    | 4                    |

INTERVIEWER: MAKE SURE YOU HAVE ASKED ALL PHRASES



READ ALL QUESTIONS

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
7. Drinking black coffee helps sober a person .....	1	2	3	4
8. It's a person's responsibility to stop a friend or relative from driving when drunk .....		2	3	4
9. When friends are involved, a person should be willing to take even physical action to prevent them from driving drunk .....	1	2	3	4
10. An average glass of wine is less intoxicating than an average drink of liquor .....	1	2	3	4
11. When a person has been drinking, you can tell more about his ability to drive by the way he walks and speaks rather than by the amount of alcohol he has consumed .....	1	2	3	4
12. In the past month, have you discussed with anyone the topic of drunk driving?				
Yes .....	1			
No .....	2			
13. In the past year, were you in a situation where someone had been drinking too heavily and was about to drive a car?				
Yes .....	1			
No .....	2	SKIP TO QUESTION 18		

14. How many times would you say this happened in the past three months?

Number

Past three months ..... \_\_\_\_\_

15. In the most recent situation, did you take any kind of action to stop the drunk person from driving?

- Yes ..... 1 ASK NEXT QUESTION
- No ..... 2 SKIP TO QUESTION 18

16 and 17. Please tell me what actions you took?

DO NOT READ LIST – CHECK OFF ANSWERS

- Drove the person home ..... 1
- Offered to drive him/her home ..... 2
- Offered to let him/her stay over ..... 3
- Called a taxi ..... 4 (431)
- Took his/her keys away ..... 5
- Physically restrained him/her ..... 6
- Got someone else to drive them ..... 7
- Gave him/her coffee ..... 8
- Gave him/her a cold shower ..... 9 (4e2)
- Gave him food ..... 10
- Called the police ..... 11
- Other \_\_\_\_\_ 12  
(Please Specify)

READ: I'd like you to imagine a situation in which a close friend or relative is very drunk and is about to drive a car.

[FOR EACH PHRASE READ:]  
HOW LIKELY ARE YOU TO \_\_\_\_\_ (QUESTION) \_\_\_\_\_ ?

Extremely    Very    Somewhat    Not at All

18. Suggest to the person that you drive him home?                    1                    2                    3                    4

	Extremely	Very	Somewhat	Not At All
19. Suggest to the person that he stay overnight at your home?..	1	2	3	4
20. Call a taxi for the person who drank too much .....	1	2	3	4
21. Take the person's keys away ..	1	2	3	4
22. Get assistance to restrain the person .....	1	2	3	4

READ: Now using the same phrases, I would like you to think of yourself as giving a party. How likely are you to \_\_\_\_\_

	Extremely	Very	Somewhat	Not At All
23. Plan to serve food with the drinks to reduce the effects of alcohol .....	1	2	3	4
24. Plan a party where drinking is cut off at a certain time and replaced with non-alcoholic beverages and food .....	1	2	3	4
25. Ask who is driving home ...	1	2	3	4
26. Not offer drinks to a guest who is becoming intoxicated .....	1	2	3	4
27. Agree ahead of time that when two of you go to a party one of you will limit their drinking, and drive home? .....	1	2	3	4

28. Do you recall having seen or heard any drinking and driving advertising in the past few months?

- Yes ..... 1
- No. .... 2    SKIP TO QUESTION 42

29 and 30 Where did you see or hear it?

READ LIST — MAY HAVE MORE THAN ONE ANSWER

- Radio ..... 1
  - Magazine ..... 2 (8b1)
  - Newspaper ..... 3 (8b2)
  - TV ..... 4
  - Radio and TV ..... 5
  - Other \_\_\_\_\_ 6
- (Specify)

READ: What was the message about?

31, 32 & 33

DON'T READ LIST — CHECK OFF RESPONSES GIVEN

- People should know how much they can drink ..... 1 (8c1)
- Many fatal crashes are caused by drunk drivers ..... 2
- People who give parties should see that their friends don't drive home drunk ..... 3 (8c2)
- If you are really a person's friend you'll stop him from driving drunk, no matter how reluctant you are ..... 4 (8c3)
- More police are patrolling the street at night to watch for and arrest drunk drivers ..... 5
- Other ..... 6

34. As a result of seeing this advertisement are you likely to take some kind of action in a drinking situation that you may not have taken before?

- Yes ..... 1
- No ..... 2

READ: Though you may have mentioned it before, do you remember seeing an ad where:

- |   | 1          | 2         |
|---|------------|-----------|
|   | <u>YES</u> | <u>NO</u> |
| 35. A husband and wife rush off to the hospital to see a friend who has been in an accident ..... | 1          | 2         |
| 36. A woman is talking about her friend who always drank too much after painting class .....      | 1          | 2         |
| 37. A group of men in a car coming home from a card game .....                                    | 1          | 2         |

	<u>1</u> <u>YES</u>	<u>2</u> <u>NO</u>
38. A woman in bed who is worried about her brother's drinking and the phone rings ....	1	2
39. A man telling how he saved his friend's life by having him stay over instead of driving drunk .....	1	2
40. Bartender describes sending a drunk customer home in a taxi .....	1	2
41. A woman tells how she drove an intoxicated guest home .....	1	2

READ: Just a few more questions for classification purposes.

42. In which of the following groups does your age fall?

READ LIST UNTIL YOU GET AN ANSWER

16 through 21 .....	1
22 through 24 .....	2
25 through 34 .....	3
35 through 49 .....	4
50 and over .....	5
Refused .....	6

43. Are you:

Married .....	1
Single .....	2
Divorced .....	3
Separated .....	4
Widowed .....	5
Other .....	6

44. Do you drive?

Yes .....	1
No .....	2

45. On an average day during what hours do you watch Television?

DO NOT READ LIST! CHECK OFF RESPONSES GIVEN

8 a. m. to 5 p. m. ....	1	
5 p. m. to 8 p. m. ....	2	(11a)
8 p. m. to 11 p. m. ....	3	
11 p. m. or later .....	4	(11b)
Doesn't watch TV .....	5	

DO NOT READ LIST! CHECK OFF RESPONSES GIVEN

46. On an average day, during what hours do you listen to the radio?

6 a. m. to 9. a. m. ....	1	
9 a. m. to 5 p. m. ....	2	(12a)
5 p. m. to 7 p. m. ....	3	(12b)
7 p. m. to midnight .....	4	
Midnight to 6 a. m. ....	5	
Doesn't listen to radio .....	Blank	

47. If you drive after drinking too much, what do you think your chances of being stopped by the police are?

High .....	1
50-50 .....	2
Low .....	3
Don't know .....	4

Would you support the following actions?

48. Greater police enforcement of drunk driving law	Yes	1
	No	2
49. Public Information Campaign about drunk driving	Yes	1
	No	2
50. More severe penalties for drunk drivers	Yes	1
	No	2

51. Have you heard of a program that is trying to reduce alcohol related traffic deaths?

Yes  
No SKIP TO END

52. Do you recall what agency or organization is sponsoring the program?

- (a) ASAP
- (b) Other
- (c) Can't recall

This survey is sponsored by the  
Alcohol Safety Action Project

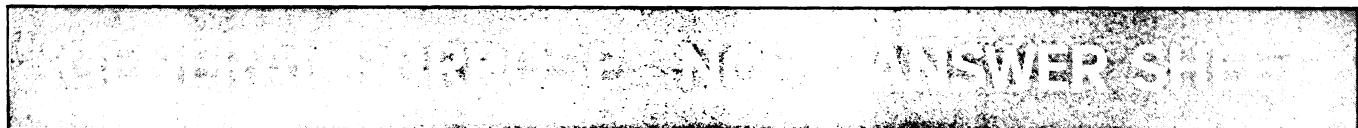
Thank you for your cooperation

Phone # \_\_\_\_\_

Interviewer \_\_\_\_\_

Date \_\_\_\_\_

NAME \_\_\_\_\_



FOR PROCESSING BY **NATIONAL COMPUTER SYSTEMS** 4401 West 76th St., Minneapolis, Minn.

**EXAMPLE**

- WRONG  
1  A  B  C  D  E
- WRONG  
2  A  B  C  D  E
- WRONG  
3  A  B  C  D  E
- RIGHT  
4  A  B  C  D  E

**IMPORTANT DIRECTIONS FOR MARKING ANSWERS**

Use black lead pencil only (#2½ or softer).  
 Make heavy black marks that fill the circle completely.  
 Erase clearly any answer you wish to change.  
 Make no stray marks on this answer sheet.

**PRACTICE**

- 1 2 3 4 5  
1  A  B  C  D  E
- 1 2 3 4 5  
2  A  B  C  D  E
- 1 2 3 4 5  
3  A  B  C  D  E
- 1 2 3 4 5  
4  A  B  C  D  E

← REFER TO THESE EXAMPLES BEFORE STARTING PRACTICE EXERCISES →

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1 2 3 4 5<br>1 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E  | 1 2 3 4 5<br>11 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 1 2 3 4 5<br>21 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 1 2 3 4 5<br>31 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 1 2 3 4 5<br>41 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 1 2 3 4 5<br>51 <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E |
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| 182 (A) (D) ( ) ( ) ( ) | 192 (A) (D) ( ) ( ) ( ) | 202 (A) (D) ( ) ( ) ( ) | 212 (A) (D) ( ) ( ) ( ) | 222 (A) (D) ( ) ( ) ( ) | 232 (A) (D) ( ) ( ) ( ) |
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## CONSTRUCTION OF NUMERICAL SCALES

All scales constructed for this survey are of a simple Likert type and were not refined using statistical scaling techniques. They were used for relative comparisons only.

A. Alcohol Experience Scale — The experience scale measures the extent to which the respondent has been involved in alcohol-related incidents. It is based upon how often the respondent had been in a situation where alcoholic beverages were served (Questions 4 and 5) and how often he had been in a situation where someone had been drinking too heavily and was about to drive (Questions 13 and 14). The items are coded as follows:

Questions 4 and 13: 2=yes, 1=no

Question 5 : 5-2 to 6 times a week, 4=once a week, 3=once every 2 or 3 weeks, 2=once a month, 1=less than once a month

Question 14 : Numerical Answer

B. Alcohol Awareness Scale — This scale measures three aspects of alcohol awareness. These are: (1) whether the respondent has discussed the topic of drunk driving in the past month (question 12), (2) whether the respondent has seen or heard any drunk driving advertising (question 28), and can recall the ads themselves (questions 35-41) or the messages they convey (questions 31-33), and (3) whether the respondent has heard of the ASAP program (questions 51 and 52). The respondent is awarded 'points' as follows:

Questions 12, 28 and 51: 2=yes, 1=no

Questions 31-33 : 1-remembered message, 0-couldn't recall

Questions 35-41 : 2-recalled seeing ad, 1-couldn't recall

Question 52 : 3-ASAP, 2-other, 1-couldn't recall

C. Alcohol Behavior Scale — The behavior scale is based upon four items from the questionnaire which ask the respondent to report on his past behavior in relation to bystander intervention in drunk driving situations (questions 15, 16, and 17), and to assess his future behavior in the same regard (question 34). The items are coded as follows:

Questions 15 and 34: 2=yes, 1=no

Questions 1 and 17 : 1-used technique, 0=did not use

D. Alcohol Attitude Scale (oping with drunk driving) — This simple attitude scale measures such aspects of bystander attitude as (1) whether the respondent feels it's his responsibility to stop a person from drunk driving (question 8), even if it requires physical action to do so (question 9), (2) how likely he is to use certain techniques to stop someone from drinking and driving (questions 18-22), and (3) how likely he is to exhibit certain behaviors as a host in order to stop a guest from driving drunk (questions 23-27). The items are coded as follows:

- Questions 8-9 : 4-strongly agree, 3-somewhat agree, 2-somewhat disagree  
1-strongly disagree
- Questions 18-27 : 4-extremely likely, 3-very likely, 2-somewhat likely,  
1-not at all likely

E. Alcohol Knowledge Scale — This scale used items 6, 7, 10 and 11. It was determined that these were not suitable knowledge items and the scale was discarded.