

AN EVALUATION OF THE STATE OF IOWA'S DRUNK DRIVER EDUCATION CURRICULUM

Final Report

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Iowa Consortium for Substance Abuse Research and Evaluation

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TALKING ABOUT ALCOHOL -- DRIVING UNIMPAIRED

IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION DECEMBER 1995 CURRICULUM EVALUATION

Introduction

This report is a final update of statistics on the Iowa Drunk Driver Education Evaluation Project that is scheduled to end on December 31, 1995. The report will include information gathered after the third year of the investigation of the relative effectiveness of the Talking About Alcohol -- Driving Unimpaired (TAADUI) curriculum currently used in the State of Iowa for persons arrested for driving under the influence. The statistics will be supplemental to those presented in the first two intermittent reports. The first recidivism information will be presented along with general summary statements and recommendations.

The Iowa Department of Education requested that the Iowa Consortium for Substance Abuse Research and Evaluation evaluate the curriculum they had purchased from the Prevention Research Institute, inc. (PRI) of Lexington, Kentucky. PRI is a private, non-profit corporation which developed the Risk Reduction Model of Prevention in the early 1980's and has developed a series of risk reduction programs for populations at various school levels and court referrals, particularly driving under the influence.

The TAADUI program is a twelve-hour instructional curriculum consisting of five units, although there is a twenty-hour variant in place in two of the sites in our evaluation. The community colleges of Iowa are one of the educational institutions authorized to teach the TAADUI program, and in order to be a certified instructor a person must attend a four day workshop directed by staff from PRI. During the workshop the program is modeled for them, they practice teach the units, and then must pass a post-test on the content of the curriculum.

Research Design

This evaluation employs a pre- and post-test design. The project is explained to students at the beginning of the first day of class and those who agree to participate are given the necessary informational and permission forms to fill out. Two pre-tests are then administered by instructors, each taking approximately 10 minutes or less to complete. The first assesses attitudes about alcohol and past experience with substance abuse treatment, and the second covers demographics, general knowledge about alcohol, family alcohol abuse history, and substance abuse. The two tests are repeated as post-tests at the end of the last day of class. No one is forced to participate and anyone is free to opt out of any section, test, or question at any time with no repercussions. The information is sent

to the Consortium by the individual instructors where the data is entered and stored in a computer using arbitrary subject code numbers to protect confidentiality.

On October 15, 1995 a recidivism check was performed by the Department of Transportation (DOT) on the subjects who submitted valid social security numbers on the pre- and post-test sections of the evaluation. This check allows the Consortium to assess which subjects incurred further alcohol-related traffic convictions after the completion of the drunk driver educational course. This information can then be matched with other variables to explore how different factors such as race, age, sex, and previous alcohol-related convictions interact with course curriculum outcomes.

Subjects

Subjects totaling 2351 from 14 community colleges across Iowa participated in the Consortium's Drunk Driver evaluation project from January 1, 1994 to September 1, 1995. Twelve of the sites taught the 12-hour version of the curriculum, while the remaining two taught a 24-hour variant. As it is not the intention of this project to distinguish among the performances of the various curriculum institutions, this report will refer to all subjects and outcomes in aggregate, though the effects of the 12 vs. 24 hour courses will be explored.

Participation in this evaluation project consisted of five separate parts: two pre-tests were administered at the beginning of the first class session, two post-tests at the end of the last, and an OWI recidivism check was performed via the Department of Transportation (DOT) computer data bases at the end of the study (copies of the pre- and post-test instruments can be found in Appendix A). Participants were free to opt out of any section of the study at any time, and were told to leave blank any questions at any time that they felt uncomfortable about answering. This resulted in each section of this evaluation having a different number of participants:

Subject Numbers

N = 2351

Evaluation Section	Number	% of Total
Pre-Test	2163	92.0
Post-Test	2130	90.6
Alcohol Pre-Test	2093	89.0
Alcohol Post-Test	2103	89.5
OWI Recidivism Assessment	1598	68.0

All four Pre- and Post-Tests were completed by 77.9% of the participants, with 98.6% completing at least two tests.

Individual comparisons within sections may have smaller numbers still, as a small percentage (<10%) of subjects declined to answer questions regarding race, age, education, or gender. The OWI Recidivism phase had the additional stipulation that subjects must be found in the DOT traffic data base. Any subjects with an incorrect or missing social security number, or who had a record cleared or not yet entered, were not included in this section. In the previous two yearly reports submitted by the Consortium, data were provided separately for both men and women, but since gender was not found to be a significant predictor of success, these data have been collapsed in this report. A further discussion of success predictors can be found in the Recidivism section of this report.

It is impossible to know what percentage of the PRI program participants opted to participate in this evaluation since statistics for refusals were not kept, but conversations with individual instructors suggest the number to be rather high, with several commenting on how surprised they were that so many chose to participate.

Demographic Information

There are 1790 male and 464 female participants in this evaluation project, with 97 people declining to specify a gender. The average age is 32.5 years with a standard deviation of 10.5 (meaning that two-thirds of program participants are between the ages of 21 and 43). The racial breakdown is as follows:

Race of Drunk Driver Evaluation Participants

Race	%
White	92.4
African American	3.4
Asian American	0.8
Latin American	2.3
Other	1.1

These figures are fairly consistent with the 1990 Iowa Census data, which show Iowa to be distributed as 96.7% white, 1.7% black, 0.9% Asian, 1.1% Hispanic, and 0.7% other (although the Hispanic category is not mutually exclusive with the other categories). The slight minority over-representation may be accounted for by the fact that many subjects come from the Des Moines area, which has a larger minority base rate.

The educational distribution of the Drunk Driver Evaluation Project participants is as follows:

Educational Achievement of Drunk Driver Evaluation Participants

Educational Level	%
No High School Degree	10.7
High School/GED	50.6
Some College/Two Year-Degree	22.4
College Graduate	14.0
Some Post-College Education	2.4

Please note that in the Year One and Year Two reports, two- and four-year college degrees were lumped into the same category.

These numbers likely under report the eventual educational achievement of this population group, since a number of subjects are young and have not yet completed their current course of studies. Nevertheless, there are large, roughly equivalent segments of three different educational population groups involved in Drunk Driver education: those without high school degrees, those with only high school degrees, and those with some post-secondary education.

Drug and Alcohol Use

The intent of this evaluation project is to study the effects of drunk driver education on first-time offenders. The hypothesis is that those with more than one conviction fall into a chronic category, which by its nature would be harder to educate. Out of a total of 1598 subjects who participated in the recidivism phase, 1037 (64.9%) are first-time OWI offenders while the remaining 561 (35.1%) range from two to seven computer-reported, and two to eleven self-reported prior convictions. An OWI offender, for the purposes of this study, is defined as any subject who either failed or refused to take an OWI test. A subject is classified as a first-time offender if both the DOT computer sweep and the subject's self report indicate no prior convictions, since convictions incurred in other states may not be available in the Iowa computer (though in some cases they are). There is some degree of disagreement between these two sources of information. While clients who overreported incidences are believed to be accurately recalling occasions not included in the Iowa database, those who underreported are more problematic. The numbers are small enough to avoid major concern, but nevertheless reinforce that substance-abuse self report has a degree of inaccuracy which must be taken into account when making interpretations of the data.

Total self-reported lifetime alcohol or drug related convictions range from 0 to 30, though only 7.3% have greater than three and only 0.4% greater than ten. The median number of convictions is one. These figures are taken from questions 9a and 9b on the Alcohol Opinions Pre- and Post-Tests which can be found in Appendix A, with the aggregate subject responses located in Appendix B.

The following chart details previous subject participation in various other alcohol or drug treatment services prior to the Drunk Driver education program. The categories in this chart are not mutually exclusive, since it is entirely possible that a single subject could have been involved in detoxification, clinical treatment, AA, etc. at different times before entering this drunk driver education program.

Self-Reported Subject Involvement with Alcohol- or Drug-Related Treatment Services

Alcohol or Drug Related Service	%
Educational programs	25.2
Outpatient or residential clinical treatment	11.1
Inpatient clinical treatment	7.7
Detoxification	2.9
AA/NA/Other self-help group	17.8

First-time OWI offenders are significantly less likely ($p < .001$) to have been involved with any of the above mentioned groups than multiple offenders.

The pre- and post-tests ask a series of questions pertaining to alcohol and the effects alcohol use may be having on a subject's personal or professional life. By examining the number of positive responses to these questions we are able to build a variable which gives us a good idea of the degree to which a subject may be abusing alcohol. Obviously, this method is not capable of diagnosing alcohol abuse or dependence in a clinical sense, but as time and materials are limited in an evaluation such as this, a symptom count is a good compromise. Alcohol symptoms consist of the sum total of positive responses to questions 12 through 18 on the Pre-/Post-Test. The content of these questions is available in Appendix B, along with the aggregate subject response, and consists of queries regarding legal, social, familial, and personal alcohol-related problems. The time period in question is the 30 days prior to the arrest which brought the subject to the drunk driver education class.

The following chart details the percentage of subjects who have varying degrees of problems with alcohol, with zero meaning no problems and seven meaning many. The percentages listed here are from the post-test which is assumed to be more accurate for reasons outlined in the Subject Response section.

Number of Self-Reported Alcohol Symptoms in Subjects

Symptoms	%
0	34.4
1	20.8
2	15.3
3	11.3
4	7.7
5	6.5
6	3.4
7	0.6

This chart clearly shows that there is a large number of program participants who are having a serious problem with alcohol. As in the previous section, the number of symptoms in first-time offenders was significantly less ($p < .001$) than in multiple-time offenders, suggesting that people who commit multiple OWI's have a more serious problem with alcohol than those who do not. In the recidivism section of this report, the nature of this relationship will be examined in greater detail.

Familial History of Alcoholism

Subjects were asked about alcohol abuse by their parents and grandparents (questions 10 and 11 on the Pre-/Post-Test) as supplementary data regarding possible environmental and genetic substance abuse risks. These questions assessed any job, addiction, or general health problems a parent or grandparent may have had, and can be found along with subject aggregate response in Appendix C. The following table details subject responses:

Incidence of Parental Alcohol Problems

Parent	%
Neither	64.0
Father only	22.7
Mother only	2.8
Both Parents	6.9
Biological Parents unknown	3.6

Incidence of Grandparental Alcohol Problems

Grandparent	%
Neither	63.0
Grandfather only	19.4
Grandmother only	2.2
Both Grandparents	5.5
Biological Grandparents unknown	9.9

It is obvious from these figures that a large number of drunk driver education subjects come from a background of increased genetic and environmental exposure to substance abuse. A total of 44.5% of program participants who knew their biological parents or grandparents had a family background of alcohol abuse.

Drug Use

The following charts list the percentage of those who have used either marijuana or cocaine, and the frequency with which those two drugs were employed in the month prior to the arrest which brought the subject to the PRI class:

Self-Reported Marijuana and Cocaine Use and Frequency in the 30 Days Prior to Arrest

Number of Days	Marijuana %	Cocaine %
Never in the month prior to arrest	84.6	96.1
On 1 to 4 different days	9.1	2.6
On 5-9 different days	2.1	0.5
On 10-19 different days	1.5	0.1
On 20 or more different days	2.7	0.7

This information shows that there is a small but significant number of drunk driver education participants who are using drugs in addition to alcohol. Whether this combination has any effect on eventual re-arrest will be examined in the Recidivism section of this report.

Gains from Pre-Test to Post-Test

In order for any curriculum to be considered effective, it is necessary to demonstrate that subjects retain the presented information. Two pre-tests were administered at the beginning of the first class session, and the subsequent post-tests were given at the end of the last class session. By comparing the changes in attitudes about and knowledge of alcohol from pre- to post-test, we can examine to what degree this learning took place.

The pre- and post-test questionnaires can be found for examination in Appendix A, and subjects aggregate response from pre- to post-test can be viewed in Appendices B and C.

The Alcohol Opinions test deals with alcoholism and the mechanisms through which alcoholism affects human beings. A learning scale ranging from 8 to 40 was created by summing the questions, giving five points when a subject strongly agreed with the correct answer down to one point when the subject strongly disagreed (and vice versa for questions where Strongly Disagree was the correct choice). The results indicate that from pre- to post-test, 16.3% of subjects regressed, 7.1 % remained the same, and the remaining 76.6% made a gain from 1 to 17 points. The average pre-test score is 26.2 and the average post-test score is 29.3, indicating an average gain of 3.2 points for each subject. In the 76.6% of subjects making a gain, the average gain is 4.8 points. An examination of the individual questions is also interesting. Each question moved in the desired question, with the largest gains being made in the Undecided category, suggesting that people who haven't already made up their minds are more receptive to the course materials.

The largest jump in the Strongly Agree category, from 19.3% to 59.5%, resulted in reference to the question "Anyone who drinks can develop alcoholism," which is perhaps the central message of the program. Only 5.1% of the subjects remained undecided or worse, indicating that the materials are getting through to the vast majority of program participants. Other questions indicating the largest pre- to post-test gains are as follows:

"People's ability to handle alcohol is more important than how much they drink," from 44.5% Disagree/Strongly Disagree to 72.3% Disagree/Strongly Disagree.

"People are either born with alcoholism or they can never get it," from 41.6% Strongly Disagree to 60.2% Strongly Disagree.

"In preventing alcoholism, how much people drink is more important than anything else," from 21.7% Agree/Strongly Agree to 56.3% Agree/Strongly Agree.

It is clear from these figures that many subjects have gained knowledge about alcoholism, more than likely as a result of the program curriculum, unless substantial independent outside learning is occurring in conjunction with this course.

The standard Pre- and Post-Tests (the second tests, given in addition to the Alcohol Opinions Pre- and Post-Tests) deal with the proper role of alcohol use in a person's life. The same type of scale was constructed for this set as for the above tests, ranging from 9 to 45 points, with the lower end of the scale indicating a pro-use orientation and the higher end an anti-use orientation (questions number 1 through 9, Appendix B). As above, subject-response indicates that gains were made from pre- to post-test with 25.0% regressing, 9.6% remaining the same, and 65.4% gaining between 1 and 22 points. The average pre-test score is 32.7 and the average post-test score is 35.1, indicating an average gain of 2.4 points. This gain doesn't appear to be as large as the gain for the

Alcohol Opinions Test, which suggests that it is easier to impart knowledge than to get people to use that knowledge to change their attitudes.

The questions making the biggest positive gain from Pre- to Post-Test are:

“It is OK to drink as much as you want as long as you can handle it,” from 63.1% Disagree/Strongly Disagree to 86.6% Disagree/Strongly Disagree.

“I think that some people can actually drive better after a few drinks,” from 46.4% Strongly Disagree to 60.6% Strongly Disagree.

One important thing to keep in mind when interpreting pre- to post-test changes is that they are all based on self-reported data. There are several issues regarding this type of data that should be kept in mind, and are discussed in the following section.

Subject Response

Integrity of subject response and willingness to participate were two of the Consortium’s main concerns at the beginning of this evaluation, especially since this project relies heavily on subject self report in sensitive areas such as substance abuse. The findings from this year reinforce the conclusions of the Year One and Year Two reports: subject response integrity appears high, though as always, it is important to remember when making statistical interpretations that there will be a degree of error when dealing with subject self report. This is especially true when subjects are asked to remember behaviors occurring in a specific time period (in this case, the 30 days prior to arrest) after some time has elapsed. Some subject are bound to have forgotten the details and will be making a “best guess.”

Conversations with individual instructors as well as written instructor comments which accompany each packet of information show that subjects are usually cooperative if not eager to participate in this evaluation. This situation is preferable to its alternative, and leads to better quality data than if the subjects were filling out the questionnaires grudgingly. Examination of redundant information from pre- to post-test indicates that subjects tend to be fairly consistent in their responses, though they tend to report slightly more alcohol symptoms and drug use on the post-test than on the pre-tests. This is one of the reasons the Consortium chose to use the post-test data when performing statistical analyses. The higher post-test symptom rate may indicate that subjects are more reserved about admitting the problems alcohol has caused them in their lives in the unfamiliar setting at the beginning of a class, but that would not be unexpected. In the Consortium’s opinion, the differences are smaller than one would expect to find had subjects attempted a systematic deception in this area. Nevertheless, they suggest that the examination of large rather than small pre- to post-test differences is probably wise.

The fact that the pre- and post-test redundant information is fairly consistent indicates that subjects are not filling out the questionnaires at random in an attempt to hurry through them, but rather are taking time to read and think about the questions. It is also unlikely

that subjects are filling out false information, at least not on a large scale, as the aggregate gains made from pre- to post-test are all in the direction one would expect from students exposed to drunk driver educational materials. Also, if subjects were doing so, either out of a fear of reprisal or a genuine desire to deceive, it is likely that we would detect a larger shift in scores from pre- to post-test than the items we are seeing. This would occur because the student-instructor rapport, which is established as a result of working together on the PRI curriculum, would lessen the incidence of lying just for the sake of lying, and responses on a post-test carry no threat of reprisals as the interaction between students and those who will be seeing the tests is over at that point.

There will always, however, be those who answer questions with a different agenda than would be wished for by the examiners. It is unlikely, for example, that the 0.9% who answered "Strongly Agree" on the Post Test to the question "I think that some people can actually drive better after a few drinks," really feel that way after a drunk driver education course.

Recidivism

It would be unrealistic to expect every student who went through the State of Iowa's drunk driver education course to be "cured." The question, then, becomes how many subjects will be re-arrested, and what variables and time frames are most likely to contribute to recidivism. It is very hard to decide what degree of recidivism is "good" and what degree is "too much." This report cannot make that type of distinction. But it can provide the appropriate statistics for others to examine, along with a profile of who tends to succeed in drunk driver education and who tends to fail.

The recidivism computer check was performed on October 15, 1995, and gave the Consortium a list of all subjects who had been arrested for an alcohol-related driving offense after their participation in drunk driver education. Since this evaluation project received subjects from January 1, 1994 to September 1, 1995, some subjects had a long time in which to recidivate while others had hardly any time at all. For the majority of the analyses, the Consortium decided that a minimum of 180 days between conclusion of drunk driver education and October 15, 1995 was necessary since 180 days is between the mean and median recidivism times of those subjects who were re-arrested. At any rate, recidivism rates were examined at 30, 180, 360, and 450 days, the results of which follow.

Of the 1598 total subjects for which recidivism data is available, 99 (6.2%) have been re-arrested as of October 15, 1995. The mean time of recidivism is 196 days with a standard deviation of 143 days (meaning two-thirds of subjects who recidivated did so between 53 and 339 days). The median recidivism time is 168 days. The following chart details the recidivism rate at various points in time. Each group has a smaller number of subjects than the group before, because a subject had to have at least the necessary time period elapse between the last day of education and October 15, 1995 to qualify for inclusion in the analysis.

Recidivism Rates Over Various Time Periods

Number of Days	Recids	Total	%
within 30 days	6 /	1598	0.4
within 180 days	51 /	1350	3.8
within 360 days	49 /	844	5.8
within 450 days	42 /	604	7.0

As expected, the more time that elapsed, the higher the recidivism rate. What happens after the 450-day period is uncertain and should be the subject of further analysis.

The hypothesis that the drunk driver educational curriculum would be more effective on first-time offenders than on multiple offenders has some interesting results. It appears that the recidivism rates are not statistically significantly different until 450 days when the multiple offenders rate increases to 10.9% vs. 5.0% for first-time offenders ($p < .001$). This is extremely interesting, as it suggests that though first-time and multiple offenders do equally well through the first year, the retention of first-time offenders is better in the long run.

An original concern of this evaluation was whether the course curriculum works better with members of some demographic groups than others. But demographic analysis shows that there is no significant difference in outcome between members of different age, gender, race, education, and socio-economic groups, though the variable age nears significance ($p < .10$). In this case, younger students tend to do less well than older, with 18-year olds having a failure rate of 70.0% and 19-year olds of 88.4%, though again this difference is not statistically significant. It appears that the course materials are equally effective with the various demographic groups studied.

Another factor which does not appear to affect success rate is the length of the drunk driver course, as the twenty-hour course did not lead to a higher success rate than the twelve-hour course. The two rates were statistically identical with the exception of the 180-day recidivism count where the twelve-hour course was actually statistically superior ($p < .05$). However, since the two courses had been statistically identical before 180 days and continue to be identical after 180 days, this is most likely due to a statistical anomaly.

It does not appear that those who gain the most from pre- to post-test succeed at a statistically significantly higher rate than their counterparts, although the Alcohol Opinions Test does come close ($p < .10$). This is not particularly surprising though, as the subjects who had the greatest potential for gain are also those who entered the program with the greatest deficiencies, and would presumably therefore be at the greatest risk for recidivism. So rather than look only at the changes brought about by the program, the Consortium has examined the individual questions as predictors, in order to build a profile of the type of knowledge and attitudes that lead to success. People who answered the

following questions correctly on the post-tests succeeded at a significantly higher rate than those who did not:

“I believe that getting drunk for kicks is just a part of being young,” ($p < .05$).

“It is OK to drink as much as you want as long as you can handle it,” ($p < .01$).

“Drinking is a good way to have fun,” ($p < .05$).

“It is hard to have a good time with people who don’t drink at all,” ($p < .05$).

“I would not like it if someone I were dating never drank at parties,” ($p < .05$).

“Anyone who drinks could develop alcoholism,” ($p < .01$).

“People’s ability to handle alcohol is more important than how much they drink,” ($p < .01$).

“People are either born with alcoholism or they can never get it,” ($p < .05$).

“How many total drug or alcohol related offenses have you been convicted of in your lifetime?” ($p < .01$).

In the case of this last question, as expected, the fewer number of lifetime offenses, the better the prospect for success. It is interesting to note that drug use within the 30 days prior to arrest, as well as parental and grandparental alcohol abuse were not significant predictors of success.

With the above information it is possible to built a profile of who succeeds after participating in drunk driver education, or conversely, who fails. The largest at risk group for failure appears to have the following characteristics: multiple alcohol-related driving offenses; multiple, non-driving related drug and alcohol offenses; a belief that alcohol plays an important, non-replaceable role in having fun; and a belief that alcoholism can be “handled” through force of will. The latter two characteristics can be gleaned from the aforementioned questions.

Recommendations

The Consortium is not able to make a “thumbs up” or “thumbs down” recommendation with regard to the PRI drunk driver educational curriculum, and in fact it would be inappropriate to do so in a criterion-referenced evaluation such as this. It is hoped instead that the information provided, particularly in the Pre- to Post-Test Gains and Recidivism sections, will afford policy makers and others access to insight not normally available to aid in making their curriculum decisions. Nevertheless, there are certain recommendations and observations that can be made and are presented as follows:

There is no question that learning is taking place from pre- to post-test, with students demonstrating increased knowledge about the mechanisms of alcoholism and improved attitudes about the appropriate use of alcohol for recreational purposes. It is not possible to say that this knowledge is directly a result of the PRI curriculum, but it seems highly likely that this is the case, unless substantial outside learning is occurring. It is further true that this learning is equally distributed among members of different ages, races, education levels, socio-economic levels and genders.

It is not possible to tie conclusively an increase in knowledge and attitudes to an increased chance of success, for reasons outlined in the Recidivism section. However, it is possible to demonstrate that subjects who have a higher score in key questions succeed at a significantly higher rate than those with a lower score, and that participation in drunk driver education raises scores in these and other questions. As such it seems likely that participants succeed at a higher rate as a result of drunk driver education than they would with no intervention at all.

First-time offenders appear to do better than multiple-time offenders upon completion of the curriculum, although the nature of this difference is not as straight forward as originally hypothesized. Since the effect occurs only after 450 days, the upper limit of this investigation, it is necessary to compile more and better long-range data before deciding whether this is a true reflection of events or merely a statistical artifact. It would be premature to suggest that multiple-time offenders be excluded from drunk driver education, especially since the success rate is not that different from first-time offenders in any case.

The twenty-hour course does not appear at this juncture to provide a better outcome than the twelve-hour course. Since this course is more expensive both in terms of time and resources, the Consortium recommends against statewide adoption if such is being considered. It is, of course, possible that the twenty-hour course provides benefits not seen in an evaluation limited to the time period of this one, and further examination of recidivism data at a later date could prove useful.

In conclusion, the Consortium recommends that the recidivism phase of this evaluation be considered for future re-investigation, as in a year's time long-range data for over a thousand extra subjects will become available. Furthermore, 630- and 810-day recidivism information could be obtained and used to further explore the first- vs. multiple-time offender success issue.

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The Iowa Consortium wishes to thank all those who gave their valuable time and resources to aid in the evaluation of this curriculum, particularly the instructors and participants. This project could not have been carried out without your efforts and enthusiasm.

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IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION DECEMBER 1998 CURRICULUM RE-EXAMINATION

Introduction

The following report re-examines the recidivism rate of the 1995 GASA Talking About Alcohol – Driving Unimpaired (TAADUI) curriculum data set that the Consortium and the Iowa Department of Education assembled and examined from 1993 to 1995 as part of a curriculum program evaluation.

Project Overview

The original TAADUI project evaluation began in 1993 as a way for the Department of Education to evaluate the effectiveness of the TAADUI drunk driving curriculum and its effects on different demographic cross-sections of its clientele. It was constructed as a pre- and post-test design, where a set of instruments to measure a subject's knowledge and attitude were given to each subject at the beginning of the course (the pre test), and again at the end (the post test), to determine to what extent a subject's attitude toward alcohol changed and whether the client learned the information that was taught. The Department of Transportation (DOT) then looked each subject up in their computer database on October 15, 1995, to see which subjects had incurred further alcohol-related traffic offenses after their completion of the TAADUI curriculum.

The TAADUI data base contains demographic and recidivism information on 1598 subjects from 14 community colleges from across Iowa. For a further description, consult the original 1995 evaluation which reports these figures in detail. As they are unchanged, that information is omitted here.

Previous Findings

One of the more interesting findings of the 1995 study was that subjects who had been arrested multiple times for alcohol-related driving offenses did not recidivate at a greater rate than first-time offenders through twelve months, but at sixteen months the rates diverged to 10.9% and 5.0% respectively. This was statistically significant ($p < .001$), though the Consortium only had 16 month data on 604 of the 1598 subjects, and no data was available at all for periods longer than 16 months since the length of the evaluation precluded longer follow-up times.

Re-Evaluation

This follow-up report re-investigates the TAADUI database by gathering the long-range data that was not possible in 1995. A computer database sweep was again performed by

the DOT, this time on January 15, 1998, allowing for recidivism follow-ups from 30 to 49 months, distributed as follows:

Years of Data	Subjects	%
2.5 to 3.0	520	32.6
3.1 to 3.5	474	28.7
3.6 to 4.1	602	38.7

Previous Offenses

There is a wide range in the number of times a subject had been previously arrested for alcohol-related driving offenses before the arrest that resulted in the TAADUI course enrollment. The latest recidivism sweep provided the following numbers:

Offenses	Number	%
No previous offense	1197	75.0
2	306	19.2
3	54	3.4
4	28	1.8
5	9	0.6
6	1	0.0
9	1	0.0

The 1993 recidivism sweep provided 1037 (64.9%) first-time offenders and 561 (35.1%) multiple-time offenders as opposed to the above 1197 (75.0%) and 399 (25.0%). This discrepancy is interesting – the above figures represent the same people over the same period of time (life history prior to incarceration), but apparently there are differences in the values the DOT database returns. Possible reasons for this, as well as implications, are discussed in the discussion section at the end of this report.

Recidivism

As stated in the 1995 report, it would be unrealistic to expect every student who went through the State of Iowa's drunk driver education course to be "cured." The question, then, becomes how many subjects will be re-arrested, and what variables and time frames are most likely to contribute to recidivism. It is very hard to decide what degree of recidivism is "good" and what degree is "too much." A program evaluation such as this one cannot make that type of distinction, but it can provide the appropriate statistics for others to examine. By re-opening the drunk driver database three years after the conclusion of the 1995 study, we are able to get high quality, long range data on the

recidivism rates of subjects to answer some of the questions raised by the initial evaluation.

The 1998 recidivism sweep revealed that 19.4% of subjects were arrested at some point following their completion of the TAADUI program, up from 6.2% of subjects in the 1995 database. Because of the longer period of follow-up, higher numbers are to be expected. A point-by-point comparison of similar time periods between the 1995 and 1998 data is as follows:

	1995 data	1998 data
Within 30 days	0.4%	1.5%
Within 180 days	3.8%	5.2%
Within 360 days	5.8%	8.5%
Within 450 days	7.0%	10.4%

It is obvious from the above that the 1998 dataset shows higher recidivism rates at each individual point, but the figures are pretty close to each other. Reasons for higher recidivism at equal points could include the following, though it is difficult to determine the exact cause:

- Different mix of people. The 1995 dataset only has 604 subjects in its highest category while the 1998 dataset has 1596. Any time you compare different subjects, you expect to find slight differences. Furthermore, the additional subjects all come from 1994-1995, should there have been an increased interest during that period in apprehending and prosecuting OWI cases.
- Longer time after follow-up period. If it takes a while for the OWI charges to go through the court system, the fact that the 1998 dataset is several years removed from the data (as compared to several months for a subset of the 1995 data), allowed for more cases to conclude and be recorded into the DOT computer database.

Some subjects were re-arrested more than once following completion of the TAADUI curriculum. The distribution of re-arrest numbers as found in the DOT computer database is as follows:

Re-Arrests	Number	%
0	1286	80.6
1	226	14.1
2	67	1.2
3	15	1.0
4	1	0.0
6	1	0.0

The average time to re-arrest following TAADUI education for the 310 subjects who were re-arrested is 476 days, with a standard deviation of 364 days. Re-arrests ranged from zero days (for a subject who was re-arrested the day he graduated from class) to 1395 days, which is almost four years. The median, or point at which half of the recidivists were above and half were below, is 420 days.

Since the 1995 evaluation found differences in recidivism between first-time and multiple-time offenders, a similar analysis was performed on the 310 subjects who were re-arrested to determine if multiple previous offenders were re-arrested more times than first-time offenders. It was found that of the 310 subjects who recidivated, those who had committed multiple previous offenses before being enrolled in the TAADUI course were almost three times as likely to commit multiple offenses after the TAADUI course ($p < .001$). In percentage terms, 45/89 (50.56%) of the multiple previous offenders who recidivated were re-arrested more than once, whereas only 39/221 (17.65%) of the first-time offenders were.

First-Time versus Multiple Offenders

The 1993 evaluation discovered that first-time offenders (no previous arrests for alcohol-related driving offenses) and multiple-time offenders (at least one previous offense) recidivated at equal rates up to 12 months after completing the TAADUI curriculum, but at 16 months, their recidivism rates diverged to 5.0% and 10.9% respectively. The Consortium re-ran the analyses using the improved data from the 1998 database and came up with some mixed results.

At the 16 month period in the 1998 database, there was no statistical difference between first-time offenders (10.6%) and multiple-time offenders (12.0%). It appears that the 5.0% previously associated with the first-time offenders may have been an artifact of the small number of subject for which 16-month data was available in 1995. However, when the groupings are changed slightly, there is a significant difference between the recidivism rates of first- and second-time offenders (10.6%) versus greater-than-two time offenders (17.2%) at a ($p < .05$) level. In the 1998 data set, first- and second-time offenders recidivate at a very similar rate at sixteen months, since each recidivates at 10.6%.

An analysis similar to the above was run on first- versus multiple-time offenders using 30- and 36-month time periods, and using recidivism in general without respect to when it occurred. Thirty months was chosen as that is the maximum time span for which data was available on each subject, and 36 months was the longest period of time that could be analyzed and still retain two-thirds of the subject population group. None of these intervals was statistically significant at the ($p < .05$) level, however all three were significant at the ($p < .10$) level. The percentages broke down as follows:

	30-Month Recidivism	36-Month Recidivism	Total Recidivism
First-Time Offenders	15.4%	16.6%	18.5%
Multiple-Time Offenders	19.3%	21.3%	22.3%

When the categories are re-defined as first- and second-time offenders versus more-than-two time offenders, significance is achieved at the 30-month and the total recidivism intervals ($p < .05$), but not the 36-month interval.

Factors Affecting Recidivism

As in the 1993 evaluation, a series of tests was run to determine whether or not subjects recidivated at a statistically different rate based on demographic group membership. This is important in determining whether a program needs to adjust its teaching to reach the broad range of students that are sent into it. The first evaluation examined age, gender, education level, race, and genetic history of alcohol problems, and found that none of these factors were associated with different recidivism levels. A re-analysis of those same factors using the 1998 data confirmed those findings. There was no statistical difference among members of the above groups.

Discussion

Re-evaluating the TAADUI dataset three years after the initial conclusion of the project has allowed us to get a clearer picture of the nature of recidivism, particularly what happens during the longer follow-up periods that were not available during the first evaluation. Recidivism rates can now be plotted out to two-and-a-half years minimum for all subject, and a 16.4% recidivism rate can be assigned at this point.

The 1995 conclusion that sixteen months was a threshold between first- and second-time offenders did not hold out, though the degree of significance ($p < .10$) suggests that such thinking is not too far off of the mark. When previous offenses are categorized into a high/low dichotomy rather than first/multiple, we do see the effects uncovered in 1995, as the significance level ($p < .05$) is reached. This suggests that the original hypothesis of this program evaluation, that those with a greater history of alcohol-related driving offenses would have their behavior affected less by the TAADUI course than those with a lesser history, was correct. It is especially interesting that of those multiple-previous offenders who go on to recidivate, 50.56% of them will become multiple recidivists as opposed to only 17.65% of those without a previous offense ($p < .001$).

It is always important to make sure that course materials are equally effective with members of different demographic groups. Of particular concern has always been that a traditional, academic-style course would be more effective with people of a higher educational level than those who had not completed high school. Demographic profiling

again shows no difference among different demographic groups (age, race, education level, biological history of alcoholism, and gender), so curriculum readjustments do not appear to be necessary to ensure that all subjects receive the benefit of the course.

Of concern in this evaluation is the fact that there are fewer multiple-offenders on record during the 1998 re-evaluation than there were during the 1995 evaluation. Most likely, this is happening because past records are changed as a result of the legal system. This should be kept in mind for future analyses, as it lessens the accuracy of the DOT figures.

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