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Abridgment

Impact of Drunk Driving Legislation in the State of Alabama

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ABSTRACT

On May 19, 1980, a major revision in the Alabama driving-under-the-influence (DUI) laws went into effect, which gave judges greater discretion in sentencing. In this paper, the period before the revision of the law, in which a DUI conviction automatically resulted in revocation of the driver's license, is compared with the period after the revision. A significant increase was found in the number of DUI convictions of the after period, showing that the new law was being observed. This was accompanied by significant reductions in the number of DUI citations reduced to reckless driving, the proportion acquitted and/or dismissed, and the proportion of revocations. The law required court referral to an education program on the first offense, and these referrals significantly increased in the after period. However, the corresponding change in accidents was not favorable because there was a significant increase in the proportion of alcohol-related accidents in the after period.

On May 19, 1980, a revision of Alabama laws with regard to driving under the influence (DUI) of intoxicating liquor or narcotic drugs became effective. The basic change in the law would appear to weaken its effectiveness in that the former mandatory revocation provision was removed. The former law stated that "The director of public safety shall forthwith revoke the license of any driver upon receiving a record of such driver's conviction (of)...driving a motor vehicle...while intoxicated." This provision was modified to read as follows:

The director of public safety shall forthwith revoke the license of any driver upon receiving a record of such driver's conviction (of)...driving...while under the influence of intoxicating liquor; providing, however, that on a first conviction such revocation shall take place only when ordered by the court rendering such conviction.

In addition to these changes, first-time offenders were required to complete a DUI court-referral educational program approved by the State Administrative Office of Courts. In addition, the law specifically states that charges cannot be reduced to reckless driving or any other offense. (The consistent use of either of the terms "DWI" or "DUI" throughout this paper would be technically incorrect because Alabama used DWI before the law change and DUI after. However, in the remainder of this paper, DUI will be used.)

Although this change might be considered a weakening of the punitive measures related to DUI, the previous circumvention of the mandatory revocation by a large number of judges in Alabama made conviction of DUI on the first offense unlikely. The resulting inaccuracy in the records made recidivism impossible to measure and, thus, multiple offenders were not being consistently punished. In fact, under the situation prior to May 1980, most offenders were

TABLE 1 Alcohol Ticket Convictions Statewide

	Convicted		Cited But Not Convicted		Total Cited
	No.	Percentage	No.	Percentage	
Before May 1980	24,988	35.03	46,353	64.97	71,347 = n_1
After May 1980	55,149	79.74	14,016	20.26	69,165 = n_2
Total	80,137 = n_1		60,369 = n_2		140,506 = N

Note: $\chi^2_0 = 28,646.304$ and $\hat{\alpha} < .00001$.

receiving convictions on reduced charges. A summary of the tickets compiled to date for a study in 1979 showed a conviction rate of DUI of approximately 37 percent (21,206 citations; 7,798 convictions); but while 15,431 drivers were cited for reckless driving, 21,079 were convicted of reckless driving (136.6 percent). Obviously, the previous law was not only being inconsistently (and hence unfairly) applied, it was also preventing proper maintenance of driver history records on habitual offenders. The modification of the law was intended to rectify this condition.

LITERATURE REVIEW

The problems caused by drinking drivers have been documented extensively. Cameron (1) gave the history of driving under the influence of alcohol dating back to the first automobile. Approximately one-half of all driving fatalities occur when the driver has a blood alcohol content (BAC) of 0.1 percent or higher, according to Johnston (2). Considerable work has been done in the area of creating and evaluating DUI countermeasures. Some of the countermeasures involve the prevention of sales of beverages to those who are intoxicated, while other programs center on an educational and motivational approach to the driver. Hayslip, Kapusinski, Darbes, and Zeh (3) discussed certain of these DUI programs.

Over the past 20 years, the arguments over harsher sentences as opposed to educational programs have persisted. A comparison of license revocation versus alcohol treatment was made by NHTSA (4). License revocation seemed to be the most effective alternative among habitual offenders (more than 3 offenses in 5 years). As for an evaluation of more severe penalties, Moore and Gerstein (5) discussed the British Road Safety Act. Results of this program were amazing, at first. In the first three months, automobile fatalities were reduced 23 percent, and the percent of drunk drivers (0.08 BAC or greater) in accidents went from 27 to 17 percent.

While the evaluational research with regard to legal changes was not definitive, one thing was

clear from the literature review: there is a need for a balanced approach with regard to all of the available countermeasures being employed. Such a balance, however, requires considerable study to resolve the conflicts caused by competition by the various programs for the limited resources available. It is hoped that this paper will produce the type of information by which this balance can be more nearly optimized to bring about a maximum reduction in alcohol-related accidents.

DATA COLLECTION AND PROCESSING

Data collected and processed for this study can be classified into two categories: (a) uniform traffic citation (UTC) records, and (b) accident records. The UTC data were acquired from two sources--the primary source was the computerized UTC file maintained by the Alabama Department of Public Safety (ADPS), and the secondary source was the manually maintained summary of alcohol-related revocations, also kept by ADPS. Other sources of data were the Alabama Uniform Traffic Accident Report and the accident file maintained by the ADPS. This file contains approximately 110,000 records per year, one per accident. Processing of both UTC and accident files was facilitated by the use of the RAPID system (documentation for this system is available from the Alabama Office of Highway and Traffic Safety, Room 741, 11 South Union Street, Montgomery, Alabama 36130). RAPID enables any subset of the data to be created; in this case, the alcohol accidents or DUI tickets were usually the subset of interest. In all cases, the "before" period was from January 1978 through April 1980 (28 months), and the "after" period was from June 1980 through June 1982 (25 months). It must be emphasized that from a statistical design standpoint, it would have been more appropriate to use a 23-month (June 1978 through April 1980) before period and the corresponding months (June 1980 through April 1982) for the after period. However, the deletion of the 7-month data will not alter the results reported herein. The month of May

TABLE 2 Alcohol Tickets for Categories 2 Through 7

	Reduced to Reckless Driving		Reduced to Other Charges or Dismissed		Acquitted		Not Acquitted		Dismissed	
	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
Before May 1980	37,628	81.18	8,725	81.82	9,145	12.81	62,196	87.19	7,736	10.84
After May 1980	7,044	50.26	6,972	49.74	7,986	11.55	61,179	88.45	6,728	9.73
Total	44,672		15,697		17,131		123,395		14,464	
χ^2_0			5,347.473				53.1089			47.2575
$\hat{\alpha}$			<.00001				<.00001			<.00001

^aThese percentages were computed relative to all citations issued (e.g., .1001 = 6,972/69,165).

1980 was discarded because the revision of the law took place on the 19th of this month.

PROBLEM STATEMENT

Because there are potentially many facets of an evaluation of a legislative action, it is essential that the scope of this study be clarified before continuing. Specifically, the objectives of this paper are to investigate the effects, if any, that the change in the law had on the following categories:

1. DUI conviction rates,
2. DUI citations reduced to reckless driving,
3. Acquittals,
4. Dismissals,
5. Revocations,
6. Court referrals, and
7. Changes in alcohol-related accidents.

In the analysis that follows, when reference is made to, for instance, category 3, it refers specifically to the proportion of citations that were acquitted, similarly for categories 1, 2, 4, 5, 6, and 7.

STATISTICAL ANALYSES

The chi-square test was applied to the data to determine if the differences between the before and after periods for the preceding seven categories were significant. Before continuing, however, it should be noted that any inferential statistical technique starts with random samples from one or more populations, and the analysis attempts to generalize any differences found among the samples to the populations. In this research, the size of each sample was almost equal to that of the corresponding population and, thus, any observed differences that are not significant from a practical standpoint may be found significant from a statistical standpoint. However, if one was to consider the data in a time series mode, then the major part of the population (for the after period) would still be forthcoming, and only 28 months of the before period (out of many possible months) would be used in the analysis. It is in this light that the conclusions derived from the statistical tests should be interpreted. Furthermore, the tabulation of the data in a contingency table will help the reader to see the practical differences in the percentages provided in the table.

For the sake of illustration, a detailed description is given of the chi-square test for conviction rates with the aid of the 2 x 2 contingency table (Table 1) and the data and test results are summarized for the other six categories in Table 2. In

Table 1, let P_B and P_A represent the proportion of citations that resulted in convictions before and after May 1980, respectively. It is desired to test the null hypothesis $H_0: P_B = P_A$ versus the alternative $H_1: P_B \neq P_A$. The statistic

$$\chi^2 = [N(0_{11} 0_{22} - 0_{12} 0_{21})^2] / n_{1.} n_{.1} n_{2.} n_{.2}$$

was used to test the null hypothesis $H_0: P_B = P_A$, where 0_{ij} denotes the observed frequency in the i th row and j th column of the table. Table 1 shows that $\chi = 28,646.30$, which is enormously significant. Thus, H is strongly rejected at the critical level

$$\hat{\alpha} = P(\chi^2 \gamma = 1 \geq 28,646.30) \doteq 0$$

That is, in rejecting H_0 , an almost zero chance of committing a type I error (rejecting a true hypothesis) is being taken. Therefore, it is concluded that P_A far exceeds P_B with virtual certainty. Thus, the new law was enormously successful in raising the conviction rate from approximately 35 percent before the change to almost 80 percent after.

Table 2 clearly shows that the legislative action had a similar significant effect on categories 2 through 5 (i.e., significant reduction took place in the proportion of tickets issued for alcohol-related offenses when the charges were reduced to reckless driving, citations that were acquitted, and dismissals and revocations). However, the change in the law resulted in a significant increase in the proportion of court referrals and the number of alcohol-related accidents.

INTERPRETATION OF RESULTS

The complex nature of the DUI countermeasure cause-effect mechanisms defies any simple solution to this problem. The presentation of these results to officials of the judicial and enforcement communities confirmed some of their obvious practical expectations. However, they warned against any radical action that would upset the delicate balance that now exists within the system.

To understand the situation as it currently exists within Alabama, it is necessary to first abstract the total criminal justice system as it relates to the DUI offender. The goal of this system is to totally eliminate the DUI menace to society. To approach this goal within the environment of political and societal attitudes toward the recreational use of alcohol, a primary objective of deterrence has been established. To accomplish this primary objective, secondary objectives have been established

Not Dismissed		Driver Licenses Revoked		Driver Licenses Not Revoked		Referred to School		Not Referred to School		Alcohol-Related Accidents		All Other Accidents	
No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
63,605	89.16	32,145	45.44	38,926	54.56	7,443	10.43	63,898	89.57	35,922	12.21	258,311	87.79
62,427	90.21	17,350	25.08	51,815	74.92	11,836	17.11	57,329	82.89	30,097	13.74	189,005	86.26
126,032		49,765		90,741		192,79		121,227		66,019		447,316	
			6,359.1193				1,323.585					261.581	
			<.00001				<.00001					<.00001	

in the areas of publicity, apprehension, conviction, punitive measures, and rehabilitation. Although it might seem that a radical change in one of these areas might lead to an ideal, quick, and inexpensive solution to the problem, a favorable long-term effect will not be realized unless it has a direct impact on the primary objective of deterrence. This comes about because the result of increasing concentration on one countermeasure is not independent of the other countermeasures. Publicity and education will quickly lose much of their credibility without effective apprehension, conviction, and punitive measures. Apprehension and enforcement can similarly become ineffective if, for example, officers who, knowing that conviction and punishment are unlikely, become disillusioned and redirect their efforts to what they perceive as an area of greater demand by society, or officers (especially on the local level), recognizing that conviction and harsh punishment will surely follow, become unwilling to arrest in cases that they perceive will result in severe hardship. Rehabilitation, when it is viewed as an alternative to traditional punitive measures, may be regarded as a weakening of public resolve to place the blame for DUI on the offender as opposed to society as a whole.

It is obvious from the preceding hypotheses that because of a change in the Alabama DUI law on May 19, 1980, there was a radical increase in the proportion of DUI citations that resulted in convictions. The cause of this, however, cannot be ascribed solely to the mandate of the new law. Rather, it was another provision of the law—that which gave judges greater discretion over sentencing—that must be heavily credited, as evidenced by the inverse relationship between convictions and revocations.

Thus, this study has tended to confirm and quantify that which has been the opinion of officials within Alabama for many years. That is, the willingness of judges to convict for DUI on the first offense is largely a function of punitive measures mandated by law. Because harsher punitive measures are often cited as a deterrent to DUI accidents, it is reasonable to ask whether such measures would have a positive effect of reducing DUI accidents in Alabama.

The rationale for the law change was that consistent application of a higher conviction rate should have a positive effect in reducing the proportion of alcohol-related accidents. Unfortunately, the data in Table 2 provide evidence to the contrary. Some of the proportional increase in alcohol-related accidents, however, could be attributed to the fact

that such accidents were on the rise nationwide from 1978 through 1981 and decreased in 1982 and 1983, and the change in Alabama law went into effect in the middle of a period when alcohol-related accidents were generally increasing. However, the fact that the punitive measures were weakened considerably by the law cannot be discounted as a causative factor. Alabama has since taken steps to restore the mandatory revocation provisions on the first offense, and this change will be evaluated when data are available.

To close on a positive note, it was the opinion of all officials interviewed that significant gains were made by the law change in terms of the accuracy of driver history records and the increased fairness and equity in the judicial handling of DUI cases. Consistency is essential to fairness, and the evidence presented shows that much of the former inconsistencies between judges has been eliminated. Records now accurately reflect the true conviction and, as a result, more stringent punitive measures can be taken on the second and third offenses.

ACKNOWLEDGMENT

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