# NARRATIVE

# CHANGING NORMATIVE ENVIRONMENTS AND ALCOHOL-RELATED BEHAVIORS

TIAS-4-25-3

# FINAL REPORT

## Objectives

The major objective in the research was to examine the effects of changing alcohol beverage control laws upon alcohol related behaviors. Four Eastern Kentucky counties were chosen for analysis. Each of these counties lies east of U.S. Interstate 75. Two wet counties experienced local option change at approximately the same time and the other two counties remained dry. At this juncture of this research the counties will remain anonymous because of two factors: Specifically, as will be noted shortly, the effects are not yet clear-cut. The data need to be collected over a longer time frame because the monthly variation within counties nearly surpasses the monthly variation between counties. Secondly, several news reporters and regional politicians have contacted me relative to supporting a wet or a dry view. I'm not willing to take any stance or even publically report my data until they are collected over a longer time frame. This will clearly occur as a result of broader research funding by the Distilled Spirits Council during fiscal year 1984-1985.

## Findings

Data were collected on a monthly basis for 24 months. For counties experiencing local option change the time series began 12 months prior to change and ended 12 months post-intervention. Control county data were collected over the same time frame. Indicators selected to measure alcohol-related behaviors included: arrests for driving under the influence, arrests for public intoxication, arrests for drinking in public and arrests for other alcohol-related offenses (illegal transportation, sales to minors.) These data were obtained from the Kentucky State Police, official court records

records as reported in local newspapers, and from local police agencies when available.

The data in Tables 1 and 2 are mean offense rates. Specifically, a mean of 17 under DUI represents 17 DUI offenses per month per every 10,000 residents of the counties. Table 1 shows that DUI's and "other alcohol offenses" increased after local option repeal but arrests for public intoxication and drinking in public declined. Of additional concern is the tremendous variability between monthly arrest rates. In one county 8 DUI's were recorded in one month and two months later 84 occurred. Such dispersion could substantially be altering any impression that could be made from Table 1. I'm currently in the process of lengthening the time series to include at least 60 months. Using this strategy one can statistically sort out cyclical and extraneous factors affecting the data.

Table 1
Mean Monthly Arrests Rates
per 10,000 Population in West Counties

| | Before Legislative Change | After Legislative Change |
|---|---|---|
| DUI's | $\bar{X}$ = 17<br>s.d.=9.1 | $\bar{X}$ = 25<br>s.d.=10.3 |
| P.I.'s | $\bar{X}$ = 19<br>s.d.=8.2 | $\bar{X}$ = 17<br>s.d.=6.7 |
| Drinking in Public | $\bar{X}$ = 3.56<br>s.d.= 1.62 | $\bar{X}$ = 2.78<br>s.d.= 1.41 |
| Other Alcohol-Offenses | $\bar{X}$ = 2.98<br>s.d.= 1.24 | $\bar{X}$ = 3.76<br>s.d.= 1.10 |

Other offenses include: illegal transportation, sales to minors and illegal drinking establishments.

The data in Table 2 also reflect fairly high standard durations and thus limit analysis. Of the four arrest rates two show increases, but these are less than the increases in "wet" counties. Not only are the increases smaller but also the monthly averages are also lower. However, the magnitude of these differences is not overwhelming to say the least.

Table 2
Mean Monthly Arrest Rates Over
10,000 Population in Dry Counties

| | 1st Year | 2nd Year |
|---|---|---|
| DUI's | $\bar{X}$ = 15<br>s.d.= 6.9 | $\bar{X}$ = 20<br>s.d.= 8.3 |
| PI | $\bar{X}$ = 16<br>s.d.= 7 | $\bar{X}$ = 14<br>s.d.= 4.6 |
| Drinking in Public | $\bar{X}$ =2.93<br>s.d.= .95 | $\bar{X}$ =3.62<br>s.d.=1.21 |
| Other Offenses* | $\bar{X}$ =3.42<br>s.d.=1.04 | $\bar{X}$ =2.98<br>s.d.= .86 |

*Other offenses include: illegal transportation, illegal drinking establishments.

## Conclusion

The examination of arrest rates for driving under the influence, public intoxication, drinking in public and other alcohol offenses in two wet and two dry eastern Kentucky counties suggests an increase of alcohol related problems with increasing availability. Extreme caution is necessary with this interpretation because of the short time frame of data collection and because of the high monthly variability of the arrest rate data.