

the available evidence makes it difficult to support the position that state level control measures influence attitudes. States with low on-premise availability (i.e., negative factor loadings) are also states with large concentrations of fundamentalist religions, e.g., Georgia and Alabama. Logic dictates that attitudes of fundamentalist groups led to their restrictive state and county level control measures and not the converse. States like Vermont and Nevada had high levels of on-premise availability, positive factor loadings. These states cater to tourists, and their liberal control law configuration serves rather than shapes tourist interests. It was thus suggested that control measures are probably an index of extant norms rather than a readily manipulable social policy variable. Thus, the control of legal availability is no guarantee that such measures are enforced or that evasion will not take place (e.g., home brewing or purchasing beverages outside a jurisdiction). Our experience with national prohibition also demonstrates this point.

The central questions investigated by this study were the dimensional configuration or coherence of availability measures, and the collective relationship of such measures to cirrhosis mortality rates.

The factor analysis demonstrates that social policy models based on a uniform conception of availability may be seriously flawed. This is especially true of the single distribution model which makes such a strong case for the control of availability.

The study found further that only one availability dimension was significantly associated with the various cirrhosis mortality rates. Even here, statistical significance should not be confused with substantive import. At best, the on-premise availability dimension "explained" only about 10 per cent of the variance (r^2) in any of the cirrhosis rates.

It is not being argued here that cirrhosis mortality or alcoholism is independent of consumption. Consumption and some minimal level of availability are necessary conditions but not sufficient causes of abusive drinking patterns.

Dr. Douglass' reference to my use

of the minimum legal purchase of 1976 represents a misreading. The method section states, "Nine state-level alcohol control measures for the year 1970 were used to represent availability."¹ The text then enumerates the measures which include the minimum legal purchase age. Cirrhosis mortality rates and not the purchase age were for 1976. This time lag aspect of the design was also explained in the method section. Dr. Douglass' contention that there was little variance in the purchase age variable is based on the same misreading. In 1970 the purchase age variable had the largest variance of all the policy variables as indicated by the ratios of means to standard deviations (see Table 1).¹ The rationale in using the purchase age variable was to examine it in relation to the other control variables and not its isolated relationship to cirrhosis rates. To speak about the purchase age after it was factor analyzed would, of course, be methodologically unsound.

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REFERENCE

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OSHA Criteria for Laboratory Proficiency in Blood Lead Analysis

The US Department of Labor's Occupational Safety and Health Administration (OSHA) lead standard, 29 CFR 1910.1025, was established to protect the health of workers exposed to the hazards of lead. The standard lists specific requirements to ensure that blood lead analyses—critical indicators of workers at risk—be performed reliably by laboratories. Employers must use laboratories that meet OSHA performance criteria in blood lead proficiency testing programs monitored by the US Department of Health and Hu-

man Services' Centers for Disease Control (CDC) and certain states.

Laboratories licensed for blood lead analysis by the Health Care Finance Administration under the Clinical Laboratory Improvement Act must participate in the CDC blood lead proficiency testing program (PbB-PT); others may enroll as voluntary participants. Participation in certain state PbB programs, subject to the same performance criteria, may also qualify laboratories to do worker blood leads. Working with CDC, OSHA has developed performance criteria for the PbB-PT program which are equivalent to the level of accuracy required by the lead standard.

Quarterly, CDC sends at least three samples of lead-containing bovine blood to laboratories in the program. To maintain a satisfactory performance rating, a participating laboratory must obtain results within ± 15 per cent of each sample's target concentration, or $\pm 6 \mu\text{g}/\text{dl}$ for samples with lead concentrations of less than $40 \mu\text{g}/\text{dl}$, for eight out of nine samples in the most recent three consecutive surveys.

CDC uses reference laboratories to establish the lead concentration of each sample. Following each survey, CDC furnishes a report to each participating laboratory with an analysis of the survey results and a rating of the laboratory's individual results. Then quarterly, a list of laboratories meeting the criteria is forwarded to OSHA for verification and distribution to the OSHA field offices. This list is available on request from the OSHA national office, regional offices, or field offices.

A participating laboratory will be dropped from OSHA's list of qualified laboratories if it: 1) fails to participate in a survey; 2) fails to meet the deadline for reporting its results (exceptions can be made for unusual circumstances); or 3) reports an incorrect analysis for more than one of nine samples in a three-quarter period. Approved laboratories may be excused from participating in a survey owing to circumstances beyond their control.

Laboratories interested in participating should contact: Dr. Joe Boone, Centers for Disease Control, Bureau of Proficiency Testing, Atlanta, GA

30333; telephone: 404/329-3111. Further information on the OSHA requirements is available from the writer.

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Recall 'Error' in Interview Studies of Past Drug Use

Since the discovery of the relation between diethylstilbestrol exposure in utero and the development of vaginal cancer many years later,¹ there has been increased interest in the study of the possible effects of past (distant) exposure to drugs. In studies reported to date, the primary source of information on past discontinued exposure to drugs has come from personal interview,²⁻⁵ although review of clinical records has also been used.^{6,7}

Record review is used infrequently to review past drug use history because this technique is normally far more expensive than patient interview and because the records frequently do not contain information on the distant past. The major validity problem with regard to drug exposure information in such studies is that false negative exposure histories may result from records that are themselves incomplete or from incomplete abstraction of the records.

Information obtained by patient interview may lead to both false positive and false negative exposure histories. It is reasonable to assume that in a study of the drug etiology of congenital malformations, mothers of babies with a deformity will, on the average, have a different recall perception, after delivery, of drugs taken at the time of or early in pregnancy than will mothers of normal infants. When the hypothesis under study is known to the interviewer(s), bias may be expected, particularly where distant history is involved. Where the interviewer is unaware of the hypothesis under study, this bias is considerably less of a problem.⁸

Recall "error," however, may represent the biggest validity problem of all in interview studies. Klemetti and

Saxén⁹ interviewed women about their early pregnancy drug intake at the fifth month of gestation and again after delivery. Interview results were compared with recorded documentation of drug intake. There was about a 10 per cent recall error for drugs when the interview took place during the fifth gestational month. After delivery, there was virtually no correlation between the information obtained at this later interview and the documented drug intake.

It is evident that recall error for events, and particularly drugs taken only in the past (beyond three months), is high, and the longer the interval between the event and the interview, the greater the error. Such error, if nonsystematic, of course, tends to lead to a null result.

While studies of "current" recent drug use may be carried out with considerable validity utilizing data obtained by patient interview, studies of past discontinued drug use must, in most instances, rely on prerecorded, reasonably complete documentation of use.

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Another Experience with Breast Cancer Survey

With regard to the article "Patient Attitudes Following Participation in a Health Outcome Survey,"¹ I would like to relate a somewhat comparable experience in which differing patterns emerged when the data were analyzed by sex and health status.

In order to assess the prevalence of breast cancer among women university faculty members and wives of faculty members, a brief questionnaire consisting of approximately a dozen questions relating to present age, menopausal status, age of diagnosis of breast cancer, age of birth of first child, etc., was sent out to all faculty. Response rates of 80 per cent (651) for the women and 72 per cent (1,718) for the men were obtained.

To ensure anonymity for the respondents, "ballot" envelopes were enclosed for the return of the questionnaire. The outside "ballot" envelope had a marked space for identification but on the inner envelope were instructions that identifying information was to be put only on the outside envelope. These "ballot" envelopes are commonly used at the university so there was little likelihood of the recipients not understanding their function.

Of the 2,382 that responded, 4.7 per cent replied anonymously; i.e., they did not put their name on the outside envelope. When looking only at the responses for those women who did have breast cancer, however, the results were somewhat different. Fourteen per cent of the faculty women who had had the disease and 22 per cent of the faculty men whose wives had had the disease did not identify themselves. This is in contrast to those that were disease free where only 2.7 per cent of the women and 4.9 per cent of the men replied anonymously.

It would seem from these results that the diagnosis of breast cancer still