Comparison of Multiple DUI Offenders Selecting Either Antabuse or 12-Step Treatment Programs

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Antabuse (also known by its generic name disulfarim) has been used as a treatment for alcoholism for several decades. This agent inhibits the metabolism of alcohol and causes nausea or other aversive reactions when alcohol is consumed. Supervised antabuse ingestion, in combination with counseling has been shown to increase treatment outcomes for alcoholics (Chick, Gough, Falkowski, Kershaw, Hore, Mehta, Ritson, Ropner, & Torley, 1992).

At Occupational Health Services (OHS) Multiple DUI Offender Program in Alameda County, California, Antabuse ingestion has been used as one means for participants to maintain abstinence from alcohol use, a program requirement. Program participants select one of two programs: Program A, which requires the ingestion of Antabuse, or Program B, which, rather than Antabuse, requires twice as many 12-Step (Alcoholics Anonymous) meetings and periodic blood testing for gamma-glutamyl transpeptidase. In addition, all participants are required to attend educational meetings, group counseling, and private interviews for a period of up to 18 months.

This study examined the differences between participants selecting each of these programs.

Methods

Subjects: Five hundred forty eight convicted multiple DUI offenders, enrolled in the drinking driver program were participants in the present study. Eighty six percent were male and 14% female. The sample was 61% White, 17% Hispanic, 13% African American, and 9% other.

Procedure: All English speaking participants in the multiple offender program at OHS were asked to participate in a face-to-face interview lasting approximately 90 minutes. The Health Attitudes and Practices (HAP) interview (Perrine, 1989) included 323 questions regarding drinking behaviors, driving behaviors, drug use,
family history, and attitudes. The HAP also comprised a self-administered battery of tests including the Mortimer-Filkins (1973), the Alcohol Dependence Scale (Skinner, 1981), and a series of personality assessments (Donovan, Marlatt, & Salzberg, 1983). Because the program required abstinence from alcohol consumption and many of the questions were about alcohol use, all questions were phrased "Prior to your last arrest . . ."

Results

Demographics: Overall, 36% of the multiple offenders selected Program A (Antabuse). There was no significant difference in program selection based on gender ($x^2 = 1.37, p = .24$).

There were significant differences on several demographic variables, including age, ethnicity, education, and marital status. An analysis of variance (ANOVA) revealed a significant age difference between participants in each of the programs ($F = 12.46, p < .001$), with those in the Antabuse program ($x = 33.9$) younger than those in the 12-Step program ($x = 37.2$).

A chi square analysis revealed that while 48% of Hispanics and 46% of the combined groups of Native Americans, Asians, and others selected the Antabuse program, only 32% of the Whites and 27% of the African Americans did so ($x^2 = 16.09, p = .007$).

Program A was selected significantly less often by college graduates (22%) than by non-graduates (38%) ($x^2 = 7.54, p = .02$).

Forty three percent of divorces offenders selected Program A compared to 38% married, 25% separated, and 39% single (never married) ($x^2 = 11.45, p = .02$).

Substances used: Thirty nine percent of those who said beer was their alcoholic beverage of choice, 34% of those who said liquor, and 20% of wine drinkers selected the Antabuse program ($x^2 = 7.82, p = .05$).

There were no differences between groups with regard to either the quantity or frequency of drinking.

Respondents were asked a series of questions regarding drug use history. Thirty nine percent of those who used marijuana in their lifetime selected Program A while only 30% of those who never used marijuana did so ($x^2 = 4.21, p = .04$). Of those who had used barbiturates, 23% selected Antabuse, compared to 37% of those who had never used ($x^2 = 5.10, p = .02$). There were no differences in program selection for any other drugs (cocaine, amphetamines, etc.)
Personality/Behaviors: Participants were asked how often (prior to their last arrest) they engaged in each of a list of behaviors when they were upset. An ANOVA yielded a main effect for program choice on how often respondents drink alcohol when upset ($F = 8.06, p = .005$). Program A participants ($x = 2.77$) drank more often when upset than those in the 12-Step program ($x = 2.43$).

For the question "How often do you work harder when upset?" a significant gender by program choice interaction was found with females in Program A more likely to work harder than those in Program B ($F= 11.12, p = .02$)(see Figure 1).

Respondents were also asked how often (prior to their last arrest) drinking alcohol resulted in each of a list of outcomes. Those in the Antabuse program reported that drinking made them feel relaxed less often ($x = 2.16$) than those in the 12-Step program ($x = 2.37$)($F = 4.18, p = .04$).

Males in Program A ($x = 2.47$) reported that drinking made them feel more argumentative than females in Program A ($x = 1.95$), while for respondents in Program B, females ($x = 2.84$) reported this outcome as occurring more often than did males ($x = 2.25$)($F=4.20, p = .04$)(see Figure 2).

Analysis of the Mortimer-Filkins and the Alcohol Dependence scales revealed no significant differences between participants in each of the programs. The personality assessments differed on one scale: females in Program A ($x = 1.95$) scored lower on the emotionality scale than those in Program B ($x = 2.76$)($F = 5.73, p = .02$).

No differences were found between the groups for BAC at the time of most recent arrest nor for the number of previous convictions.

Program Compliance/Program Completion: No difference between groups was found for the number of dismissals from the program for non-compliance with program requirements (including insobriety, excessive absences, failure to pay, or subsequent alcohol-related offenses). Nor was there a difference between groups in the percentage who completed the program.

Discussion

There are some apparent differences between the participants in each of the programs, particularly with regard to demographics. Those who selected the Antabuse program tended to be non-White and non-Black, younger, non-college graduates, and divorced. There were also differences between the groups based on beverage choice, personality and behavioral measures. However, these preliminary results suggest there were no differences in program compliance or
completion. Further investigation into the driving records is required to examine if recidivism rates of participants in each program are comparable.

After the analyses were completed, a discussion was held with some of the facilitators and the director of the program. When asked what they thought made participants select one program over another, the following ideas emerged: those who selected Antabuse did so because (1) they had tried 12-Step programs (such as Alcoholics Anonymous) before and did not like them, (2) they did not want their blood drawn (a requirement for Program B). Those who selected Program B may have done so because they believed they would be able to avoid the program requirement of abstinence from alcohol.

Additionally, the ideas was presented that the main difference in program selection was how the intake person presented the two programs. Those who believed the Antabuse program was more effective managed to convey their enthusiasm for the program and more participants selected it, those who did not had more participants select Program B. These issues need further investigation.

The importance of understanding the differences between those in each of the programs lies in the development of more effective programs. If there are differences, particularly in expected outcomes of drinking and personality factors, better intervention strategies can be developed for each program which address relevant issues, thereby providing better services.

Acknowledgements

Preparation of this paper was supported by PHS research grant R01-AA06926-07 from the National Institute on Alcohol Abuse and Alcoholism to M.W. Perrine, Principal Investigator.

The authors would like to thank Steven Schmitz and Ann Costanza for their assistance in compiling and organizing the data.

References


Figure 1: Works Harder When Upset x Program Selection

Figure 2: Argumentative When Drinks x Program Selection