

Inasmuch as male offspring are a substantially elevated risk to develop a substance abuse disorder, these results suggest that high behavioral activity level may comprise one component of the psychological diathesis.

PARENTAL ALCOHOL PROBLEMS AND EXTERNALIZING DISORDERS OF CHILDHOOD: LABORATORY STUDIES. Alan R. Lang. Florida State University, Tallahassee, FL.

Four laboratory studies were conducted to examine the relationships between adult alcohol consumption and child behavior. Two studies investigated the effects of child behavior on subjective reports of adult distress and the associated amounts of alcohol consumed. Two other studies focused on the effects of alcohol on adults' perceptions of and interactions with a child. In all studies, child behavior was manipulated by having a confederate enact either a scripted ADHD/ODD/CD role or a normal child role. Subjects were parents of either normal (PNC) or ADHD/ODD/CD boys (PDC). The purpose of the experiments was to determine whether the known association between externalizing disorders of childhood and parental alcohol problems was a reciprocal and at least in part psychosocially mediated relationship. Results of the studies in which child behavior was the independent variable revealed that interactions with deviant confederates were rated as significantly more unpleasant and produced significantly more negative affect in all types of parents—mothers and fathers, married and single, and PNC and PDC. Further, among the PNC, fathers and single mothers consumed more alcohol in an ad lib session following exposure to deviant confederates. Despite equivalent levels of distress, PDC did not show increased consumption. However, PDC with a positive family history (FH+) of alcohol problems showed elevated drinking in response to the deviant confederate. Family history exerted no effect in the PNC. The PNC-PDC differences are discussed in relation to alcohol typologies. Results of the studies in which alcohol was the independent variable indicated that intoxicated parents saw less deviance in the deviant confederates than did sober parents, and that alcohol caused all subject groups to exhibit maladaptive parenting behaviors. These effects did not interact with parent type or status, indicating that both PNC and PDC showed the alcohol effects, as did both mothers and fathers.

FAMILIAL INFLUENCES ON ADOLESCENT SUBSTANCE ABUSE. Michael Windle. Research Institute on Alcoholism, Buffalo, NY.

Research focused on children of alcoholics has indicated that sons of male alcoholics are at a four-fold increased risk for alcoholism. As a consequence of this finding, the family has become a focal point of interest for the study of genetic, biological, psychological, and social factors influencing the development of alcohol and other substance abuse disorders. Furthermore, in order to facilitate early problem identification for optimal prevention/intervention, many ongoing studies are using developmental conceptual models, employing prospective, longitudinal research designs, and studying children/adolescents within the familial context. Two compatible approaches that have been used to study familial influences on offspring functioning are the high-risk design approach

(i.e., family history positive versus negative for alcoholism), and the social-interactional approach which focuses on interpersonal exchange processes (e.g., escalating coercive or aversive social exchanges).

Data from the Middle Adolescent Vulnerability Study (MAVS) are used to illustrate familial influences on adolescent substance use via both the high-risk and social-interactional approaches. The MAVS is a four-wave, prospective longitudinal study designed to assess the impact of the distal and proximal risk factors on adolescent substance use and other problem behaviors (e.g., delinquent activity). The sample consists of 1,150 adolescents (high school sophomores and juniors) with a roughly equal distribution of males and females. Data were collected via adolescent self-reports, primary caregiver ratings, and school record data. A range of risk factors were measured, including family history of alcoholism, maternal depression, family support, family conflict, and stressful life events.

With regard to the high-risk approach findings, significant differences in alcohol consumption, illicit drug use, or delinquent activity were *not* indicated for the family history positive (FHP) and family history negative (FHN) adolescents. However, family history of alcoholism did interact significantly with maternal depressive symptomatology in predicting higher levels of adolescent alcohol consumption and marijuana use. In addition, both family history of alcoholism and maternal depression were significant predictors of lower grade point average among adolescents. These findings are discussed with regard to high-risk via co-occurring, or comorbid, disorders, and an effort is made to account for disparate findings in the high-risk research literature with adolescent samples.

With regard to the social-interactional approach findings, structural equation modeling was used to support an interpersonal process model that suggests that childhood externalizing problems (e.g., conduct disordered symptoms) predicts maternal distress, which in turn predicts ineffective parental coping responses, which in turn predicts adolescent substance use. The findings are discussed with regard to the need to study interpersonal, reciprocal (parent-child) exchange processes that may exacerbate risk for substance abuse problems among children/adolescents, as well as among parents.

PAPER SESSION

Clinical Issues in Substance Abuse Treatment.

Chair: *Carolyn M. Mazure*, Yale University School of Medicine, New Haven, CT.

COUNSELING EFFECTIVENESS AND INFORMATION PROCESSING IN ADULT CHILDREN OF ALCOHOLICS. Nanci Jensen, Steven L. Schandler and Nancyann N. Cervantes. Chapman University, Orange, CA.

The factors that place adult children of alcoholics at risk for alcoholism may reduce the effectiveness of counseling interventions. As an initial exploration of this question, this study examined the relationship between counseling effectiveness and a predominant risk factor in a group of patients with a family history of alcoholism. The results indicated that persons with a family history of alcoholism not only are susceptible to alcohol abuse, but also may be less receptive or less responsive to general therapeutic interventions. These per-

sons are less responsive to intervention because of difficulties in attending to information relevant to their counseling.

ALCOHOLISM RISK, ALCOHOL USE, AND SPINAL CORD INJURY. Steven L. Schandler, Michael J. Cohen, Julia Cavin-Stice, Michael Mardis and Sherry Rascoe Frank. Veterans Affairs Medical Center, Long Beach, CA.

This study examined: a) the relationship between the spinal cord injured and their personal and family history of alcohol use and abuse; and b) whether these alcoholism risk factors are related to the cause of the spinal cord injury. Relative to the noninjured population, there was a significantly higher probability that spinal cord-injured persons were at risk for alcoholism prior to their injury. Spinal cord-injured persons with a family history of alcoholism displayed personality profiles similar to those of noninjured adult children of alcoholics and recovering alcoholics. The data further indicated that this personality profile, together with certain information-processing deficits, is associated with enhanced susceptibility to catastrophic injury.

BEHAVIORAL APPROACHES ASSURING COMPLIANCE WITH TUBERCULOSIS-TREATMENT REGIMEN IN METHADONE-MAINTAINED PATIENTS. Ronith Elk. University of Texas Health Science Center, Houston, TX.

Tuberculosis (TB) is on the rise in the United States with IV drug users being one of the groups most at risk. Treatment is lengthy, has toxic side effects, and simultaneous drug use places patients at grave medical risk. Two behavioral interventions, aimed at assuring patient compliance with TB treatment and decreasing concomitant drug use, were implemented. In the first, positive reinforcers for drug-free urines (patient-determined methadone dose) and punishers (methadone dose decrease, with discharge at <40 mg) were implemented. Nine patients participated. After varying time periods, seven were discharged due to drug use. The second, ongoing intervention, consists of a shaping procedure, in which successive decreases in cocaine use are reinforced with immediate payment. Three patients are currently enrolled, with effective initial decrease in drug use. Compliance with TB treatment in both interventions was very effective. We will report on attendance, compliance with tuberculosis regimen, drug screen results, and other related data.

CUMULATIVE VERSUS STABILIZING EFFECTS OF METHADONE MAINTENANCE. Keiko I. Powers and M. Douglas Anglin. University of California, Los Angeles, CA.

A repeated treatment design, a methodologically sophisticated quasiexperimental design, was applied to longitudinal self-report data to examine whether methadone maintenance treatment demonstrates cumulative improvement or merely stabilizing effects on behavior over multiple treatment episodes. Nearly 1,000 narcotics addicts in Southern California provided retrospective self-report information on their narcotics addiction histories. Eight measures were examined: 1) daily narcotics use, 2) abstinence from narcotics use, 3) property

crime involvement, 4) dealing, 5) alcohol use, 6) marijuana use, 7) employment, and 8) marriage. Repeated measures ANOVAs demonstrated stabilizing effects on most measures, particularly narcotics use variables. However, no cumulative effects were observed.

PAPER SESSION

Psychopharmacology.

Chair: *John R. Glowa*, National Institutes of Health, Bethesda, MD.

CHRONIC AND ACUTE TOLERANCE TO SUBJECTIVE EFFECTS OF NICOTINE. K. A. Perkins, J. E. Grobe, L. H. Epstein, A. Caggiula, R. L. Stiller and J. E. Goettler. University of Pittsburgh School of Medicine, Pittsburgh, PA.

Subjective responses to nicotine as a function of smoking status (chronic tolerance) and immediately preceding nicotine exposure (acute tolerance) were determined. Smokers and nonsmokers participated in four morning sessions, involving 0, 5, 10, or 20 $\mu\text{g}/\text{kg}$ nicotine via nasal spray at 30 min for four presentations (trials 1-4), with doses presented on separate days and order of doses counterbalanced across days. In addition, on each day subjects subsequently received a challenge administration of 20 $\mu\text{g}/\text{kg}$ nicotine. Dose-dependent increases during trials 1-4 were observed with Profile of Mood States (POMS)-Tension and visual analog scales of "head rush," "dizzy," and "jittery." Smokers tended to show smaller increases from pre-drug baseline than nonsmokers, consistent with chronic tolerance. However, nicotine tended to have *opposing* effects in smokers vs. nonsmokers on other POMS measures. For smokers, nicotine increased POMS-Vigor and Arousal but decreased Fatigue and had no effect on Confusion. For nonsmokers, nicotine decreased Vigor, increased Confusion, and had no effect on Fatigue, while the effect on Arousal appeared to be curvilinear (increased at low doses, decreased at high dose). In general, smokers, but not nonsmokers, showed acute tolerance to most effects, as responses to the challenge dose were smaller as a function of increasing dose amount during preceding trials 1-4. Thus, long-term nicotine exposure via smoking can lead to chronic tolerance to nicotine's aversive effects and enhancement of positive effects. Long-term exposure also appears necessary for the development of acute tolerance to subjective effects.

TIME-SENSE AND SUBJECTIVE INTOXICATION: A NEW BALANCED PLACEBO DESIGN. William M. Lapp, R. Lorraine Collins, William H. Zywiak and Charles V. Izzo. Research Institute on Alcoholism, Buffalo, NY.

A new balanced placebo design will be presented that permits the use of high dosages while preserving the control, pure drug and pure expectancy conditions found in the original design. The observed patterns of objective and subjective intoxication conformed to the desired manipulations in the new balanced placebo design. In addition, a covariance structure model was computed to evaluate the contribution of alcohol-related time distortion to subjective intoxication. Both the dose and expected effects of alcohol affected subjects' time perception as well as their subjective levels of intoxication; however, the effect of time distortion on subjective intoxication was constant.