

doses (10 and 15 mg). Comorbidity of internalizing symptoms (anxiety and/or depression) with ADHD is not necessarily associated with a lack of response to MPH as has been asserted in previous investigations.

**ATTENTION DEFICIT DISORDER: DOES METHYLPHENIDATE NORMALIZE CLASSROOM FUNCTIONING?** George J. DuPaul. University of Massachusetts Medical Center, Worcester, MA.

This study was designed to investigate whether methylphenidate (MPH) normalizes the classroom behavior and academic performance of children with Attention Deficit Disorder (ADD). MPH was found to significantly reduce the intrasubject variability in task-related attention of 30 children with ADD. Further, teacher ratings of ADD behavior and children's attention to academic tasks were improved to the extent that these measures were no different from those obtained by a 'normal' control group of 25 children. Alternatively, the academic performance of ADD children was improved, but not to the point of normalization, thus implicating the need for adjunctive interventions.

#### PAPER SESSION

*Drug Abuse Treatment: Pharmacological and Psychological Variables*

Chair: *Dace S. Svikis*, The Johns Hopkins University School of Medicine, Baltimore, MD.

**COUPONS BRING UNTREATED ADDICTS INTO DETOXIFICATION.** Maria F. Constantini, Tamara L. Wall, James L. Sorensen and David R. Gibson. University of California, San Francisco, CA.

This study examined the impact of a coupon distribution program designed to attract heroin abusers into treatment. Coupons, redeemable for a free 21-day detoxification, were distributed in the community by outreach workers. Demographic characteristics and length of time spent in treatment were examined for subjects who were recruited into treatment through coupon redemption ( $n=238$ ) and for subjects who entered via other referral sources ( $n=1129$ ). The coupon subjects were less likely to have been in treatment before, more were minorities, and more were practicing needle-sharing. Length of stay in treatment did not differ between the groups, showing their ability to respond to treatment when it is available.

**THE ANALYSIS OF COCAINE CHOICE IN HUMAN SUBJECTS.** Richard W. Foltin. The Johns Hopkins University School of Medicine, Baltimore, MD.

Healthy research volunteers, with histories of cocaine use, participated in laboratory sessions consisting of five to seven-choice trials with the first two or three trials being forced choices where the subject received each of two doses of cocaine (or a nondrug option), while there were no restrictions on choice for the remaining trials. 1) Subjects consistently chose larger doses of cocaine, 2) increasing the response cost for the large doses had no effect on choice behavior, 3) pairing money with small doses had no effect on choice behavior, 4) maintenance on the antidepressant desipramine had no effect on choice behavior, and 5) large smoked doses of cocaine were chosen over large IV doses of cocaine.

**MATCHING ALCOHOLICS TO COPING SKILLS OR INTERACTIONAL THERAPIES.** Mark D. Litt. University of Connecticut Health Center; Ronald M. Kadden. University of Connecticut School of Medicine; Ned L. Cooney. West Haven VA Medical Center; Herbert Getter. University of Connecticut.

This study tested the hypothesis that patients could be matched to effective alcoholism treatments on the basis of pretreatment characteristics. Specifically, it was hypothesized that those who showed greater sociopathy, psychopathology, or neuropsychological impairment would have better outcomes with coping skills training, and those with less impairment in these areas would have better outcomes with interactional treatment. Ninety-six male and female subjects were recruited from an inpatient alcoholism treatment program and randomly assigned to one of these two types of aftercare group treatment. The posttreatment data partially confirmed that coping skills training was more effective for subjects higher in sociopathy or psychopathology, and interactional therapy was more effective for those lower in sociopathy. Generally, both treatments appeared equally effective for subjects lower in psychopathology. Contrary to expectations, those more neuropsychologically impaired appeared to have better outcomes following interactional therapy. Survival analyses, using longitudinal data from a two-year outcome period, provided evidence for the durability of the matching interactions.

**COUNSELOR-TARGETED INTERVENTIONS: EFFECTS ON CLIENT PARTICIPATION IN DRUG TREATMENT.** Mary E. McCaul, Dace S. Svikis and Deborah L. Mangold. The Johns Hopkins University School of Medicine and The Francis Scott Key Medical Center, Baltimore, MD.

Treatment participation and associated outcome in drug-free treatment programs have traditionally been problematic, with most patients dropping out of treatment prematurely. Using behavioral strategies known to improve client treatment participation, we are examining the effectiveness of these interventions for increasing counselor behaviors that should positively impact on client outcome. In one study, each counselor was provided monthly written feedback on the participation of each client on his/her caseload relative to program standards. Counselor feedback significantly increased both clients' individual and group counseling attendance and the proportion of clients meeting minimum program standards. In a related study, counselor wages were changed from a fixed weekly salary to one contingent on the number of clients in attendance at weekly group sessions. Contingent counselor payment significantly increased the number of clients attending group counseling. These data suggest that counselor-targeted interventions offer effective and practical alternatives and/or adjuncts to more traditional client-targeted strategies.

**DETOXIFICATION FEAR: ITS PERSISTENCE AND ROLE IN METHADONE MAINTENANCE OUTCOME.** Jesse B. Milby. VA Medical Center, Birmingham, AL; Mary K. Sims and Mary Gentile. University of Alabama, Birmingham, AL; Ann Hohmann. NIMH, Rockville, MD; A. Thomas McLellan and George Woody. VAMC & University of Pennsylvania, Philadelphia, PA; Neil Haas. VAMC & University of California, Los Angeles, CA.

An original random sample of 271 opioid addicts in methadone maintenance treatment in Birmingham, Philadelphia and Sepulveda were assessed for presence of detoxification fear and

criteria for rehabilitation and followed six years later by chart review and interview. Results were based on 235 chart reviews and 102 interviews. Detoxification fear was found to persist. Those with detoxification fear were found to spend significantly longer periods on methadone maintenance, have fewer detoxification attempts, fewer successful detoxification attempts and to meet the rehabilitation criterion for no use of illicit drugs. Implications of these findings for methadone maintenance treatment are discussed.

#### POSTER SESSION

Chair: *David M. Penetar*, Walter Reed Army Institute of Research, Washington, DC.

**A PSYCHOPHYSICAL TASK TO QUANTIFY SMOKING CESSATION-INDUCED IRRITABILITY.** Jane B. Acri and Neil E. Grunberg. Uniformed Services University of the Health Sciences, Bethesda, MD.

A psychophysical rating scale using magnitude estimation was developed as a tool to quantify irritability as one index of drug withdrawal. The scale measures irritability by using sounds as a probe for reactivity. Three experiments are described in which target and reference stimuli are selected, tested for reliability and presented to cigarette smokers abstaining from smoking, cigarette smokers who are not abstaining, and nonsmokers. The task was found to have test retest reliability, cross-validity with other withdrawal scales, and significantly differentiated abstaining smokers from both nonsmokers and smokers allowed to smoke. The technique may be of value in the study of withdrawal from nicotine and other drugs of abuse.

**LIKERT OR NOT: TWO ANSWER FORMATS FOR THE ALCOHOL EXPECTANCY QUESTIONNAIRE.** Toby A. Ansfield and Vincent J. Adesso. University of Wisconsin-Milwaukee; Bruce A. Christiansen. Blue Cross and Blue Shield of Wisconsin, Milwaukee, WI.

The present study investigated the reliability and relative predictive accuracy of two answer formats (true/false and Likert) of the Alcohol Expectancy Questionnaire (AEQ). Eighty college students completed the questionnaire in the true/false answer format; three weeks later a different experimenter administered the questionnaire with a five-choice Likert format along with the Cahalan Drinking Practices Questionnaire. Preliminary analyses indicate that the Likert format has higher internal consistency on all subscales, and is expected to have higher relative utility for predicting scores on the Cahalan.

**ACUTE PHYSICAL DEPENDENCE IN OPIATE-EXPERIENCED AND OPIATE-NAIVE MALES.** Julian L. Azorlosa and Maxine L. Stitzer. The Johns Hopkins University School of Medicine, Baltimore, MD.

Acute physical dependence to morphine occurs after a single dose in postaddict males. In the present study, ten opiate-experienced males and ten opiate-naive males received a single dose of morphine (15 mg/70 kg, IM) followed 4.3 hours later by naloxone (30 mg/70 kg, IM). Ten additional opiate-experienced males and ten opiate-naive males received two morphine injections spaced 24 hours apart, with the second injection followed 4.3 hours later by naloxone. Naloxone produced significant elevations in both subjective and observer-rated withdrawal symp-

toms which were much more pronounced after two morphine injections. This study demonstrated acute physical dependence in opiate-naive subjects after a single dose of morphine and a dramatic increase in withdrawal with two doses. There were few differences between opiate-experienced and opiate-naive subjects.

**ALCOHOL EXPECTANCY, BEVERAGE PREFERENCES AND CONSUMPTION PATTERNS AMONG COLLEGE STUDENTS.** Bertrand D. Berger and Vincent J. Adesso. University of Wisconsin-Milwaukee, Milwaukee, WI.

Little work has investigated the relation between alcohol-related expectancies and specific alcohol consumption measures. Using multiple regression equations, the Alcohol Expectancy Questionnaire (AEQ) was used to predict quantity-frequency-variability, frequency, and quantity of beer, liquor, wine and overall alcohol consumption. Results revealed that expectancies of increased social and physical pleasure and tension reduction significantly predicted overall alcohol consumption across all beverages. Expectancies of increased power predicted frequency of liquor consumption, expectancies of increased assertiveness predicted quantity of beer consumed, and expectancies of increased tension reduction were not predictors of frequency and quantity of wine consumption.

**DISCRIMINATIVE LEARNING WITH A COMPOUND DRUG AND EXTEROCEPTIVE STIMULUS.** D. J. Bobelis and R. L. Balster. Departments of Psychology and Pharmacology and Toxicology, Virginia Commonwealth University, Richmond, VA.

A two-lever operant procedure was utilized to examine the relative salience of an external versus a drug discriminative stimulus in rats trained to discriminate compound (internal + external) stimuli. Injections of phencyclidine (1.25 mg/kg IP) or saline served as the interoceptive stimuli; illumination of cue lamps above the correct lever served as the external stimuli. Despite training with lights illuminated over the correct lever, some subjects evidenced no stimulus control by the lights and responded during test sessions predominantly on the lever associated with PCP or saline. In other subjects, drug stimulus control was markedly affected by the conditions of the exteroceptive stimuli. These results support other studies showing the strength of interoceptive drug stimuli, but indicate that their salience can be altered by exteroceptive stimulus events.

**ASSESSMENT OF CAFFEINE AND NICOTINE USE IN COCAINE-DEPENDENT INDIVIDUALS.** Alan J. Budney, Stephen T. Higgins, John R. Hughes and Warren K. Bickel. University of Vermont, Burlington, VT.

Caffeine and nicotine use was examined in 50 persons seeking outpatient treatment for cocaine dependence. Seventy percent of the males and 56% of the females were regular caffeine users and reported consuming an average of 4.6 caffeinated beverages per day. This prevalence rate and consumption estimate do not appear to differ from those observed in the general population. Preliminary data collected during treatment suggest that caffeine consumption does not systematically covary with cocaine use. Seventy-four percent of the males and 88% of the females were regular cigarette smokers and reported using an average of 1.1 packs per day. This prevalence rate is higher than the general population and similar to smoking rates observed in the alcohol-