

DOES ALCOHOL REDUCE TENSION IN HETEROSEXUAL INTERACTION? Sandra A. Brown and John C. Schafer. Dept. of Psychiatry, University of California, San Diego.

Recent investigations have reported that alcohol is expected to reduce tension and facilitate social interaction (Brown, Goldman & Christiansen, 1985). While this expectancy is consistent with tension reduction and stress response dampening theories of alcohol abuse, laboratory investigations of heterosexual interaction have yielded mixed results. In particular, while behavioral and physiological measures of social anxiety may decrease for males, alcohol and its expectancy may increase anxiety for women. Similarly, sexual arousal and perceived reactivity may vary as a function of alcohol expectancy and gender. Few studies have explored these influences simultaneously or in a laboratory setting which is familiar to the subject and designed to reduce extraneous error variance due to novelty of the physical or social environment. The present study was designed to examine the effects of alcohol, expecting alcohol and gender on behavioral and physiological responses to a familiar structured social interaction.

CNS STIMULANT EFFECTS ON AGGRESSION IN ADD AND ADD/AGGRESSIVE CHILDREN. William E. Pelham. Florida State University; and Debra A. Murphy. Dept. of Psychiatry, University of Mississippi Medical Center.

One of the common deviant behaviors exhibited by many hyperactive (ADD) children is aggression, which is exhibited

towards property (e.g., destruction thereof), peers, (e.g., fighting) or adults (e.g., defiance). Although the most common treatment for ADD for 25 years has been treatment with a CNS stimulant and although it has long been known that stimulants improve the classroom demeanor of ADD children, the effects of stimulants on the children's aggressiveness has been only recently described. The purpose of this presentation will be to review a series of studies that have examined the effects of stimulants on ADD children's aggressive behavior, primarily as directed towards peers and adults. The studies (1) have involved both methylphenidate and pemoline, (2) have included single doses and dose-response analyses, (3) have involved dyadic, small group, and large group interactions, and (4) have been conducted both in laboratory and natural settings. A fairly consistent pattern of results has emerged. Most of the highly aggressive ADD children respond to stimulants with a decrease in aggressiveness. In contrast, nonaggressive ADD children show either no effect or an increase in aggressiveness in response to stimulants. For example, in one study of ADD children in playgroups with unfamiliar nonADD peers, highly aggressive children showed mean rate of 19.8, 13.25, and 3.4 occurrences of aggression during 36-minute observations of the effects of placebo, 0.3 mg/kg, and 0.6 mg/kg methylphenidate, respectively. Comparable rates for nonaggressive children were 2.7, 1.75, and 4.25 occurrences. Similar, divergent responses to 0.3 mg/kg methylphenidate were obtained when low and high aggressive ADD children's responses to perceived peer aggression were examined on a laboratory task. Even within aggressive subgroups of ADD, however, considerable individual differences were apparent in response to stimulants on measures of aggression.

ABSTRACTS

Paper Session: Linda Dykstra, chair
Monday, August 25, 12:00-1:50 p.m.
Caucus Room, Washington Hilton

THE EFFECTS OF ALCOHOL ON THE SPEED OF MEMORY RETRIEVAL. Jennifer Stempel, Bill E. Beckwith and Thomas V. Petros. University of North Dakota.

The present study investigated the effect of alcohol on retrieval from long-term memory by using a set of cognitive decision tasks. Subjects were administered 0 or 1 ml/kg of alcohol, and then made physical, lexical, and semantic decisions about pairs of words. Intoxicated subjects responded significantly slower than placebo subjects for the lexical and semantic decisions. The results suggest that alcohol induced memory deficits may be the result of a slower rate of cognitive operations on the part of intoxicated subjects that impairs the efficiency of their working memory operations.

METHADONE AND ACETYLMETHADOL: SYSTEMATIC VERSUS DIFFERENTIAL EFFECTS ON AFFECTIVE STATES. Frederick R. Snyder. National Institute on Drug Abuse, Baltimore, MD; and Mark A. Reynolds. University of Maryland Dental School.

Patient records of participants in a multi-center, Phase II Clinical Trial comparing the efficacy of methadone (50 mg or

100 mg) versus 1-alpha-acetylmethadol (80 mg), were examined to investigate changes in affective states as a result of drug-maintenance treatment for heroin addiction. Patients were randomly assigned to treatment groups and all medications were dispensed in a double-blind fashion. The Symptom Checklist-90 (SCL-90) was administered at time of admission (week-0) and again at 12 weeks. Results indicated that methadone treatment (50 or 100 mg) failed to produce a change in somatic complaints while acetylmethadol resulted in a significant reduction in patients' somatization scores. However, this effect of acetylmethadol was a differential one as indicated by the nonsignificant correlation of scores at weeks 0 and 12. All treatment groups exhibited a significant reduction in mean depression scores. Anxiety and paranoid ideation scores were significantly lower after 12 weeks within the M-50 and L-80 treatment groups but not within the M-100 group. Results are discussed in terms of the need for examining changes due to drug treatments at the individual, as well as the group level, in order to maximize the efficacy of such treatments.

EFFECTS OF MARIJUANA AND TASK PERFORMANCE ON CARDIOVASCULAR RESPONSIVITY. Richard M. Capriotti, Richard W. Foltin, Joseph V. Brady and Marian W. Fischman. Dept. of Psychiatry & Behavioral Sciences, Johns Hopkins University School of Medicine.

The present study investigates the interactive effects of smoked marijuana administration and task performance on cardiovascular responsivity. Nine healthy male marijuana users (ages 23–31) smoked either a placebo or active marijuana cigarette during 5 daily testing sessions. Ten minutes after drug administration, 5 subjects (Group I) performed a 10 minute modified repeated acquisition task and 4 subjects (Group II) rested quietly. Mean arterial blood pressure (MAP) was sampled at 2 minute intervals and heart rate was recorded continuously. Although both marijuana and task performance administered independently produced elevated MAP, the combination of drug and task produced MAP increases of consistently greater magnitude while sustaining marijuana induced heart rate elevations.

CONTRAST ADDICTION THEORY: RIDING THE ESCALATOR TO PARADISE LOST. John M. Bercz. Andrews University.

Contrast Addiction Theory (CAT) is an experiential-perceptual theory in which *contrast* is a primary construct. Users seek to enhance contrast between existing body concentrations of a drug and self-dispensed concentrations. The users attempt to maintain the potency of the original high is constantly eroded by the organism's adaptational processes, necessitating ever higher levels of drug ingestion in order to experience a "buzz." Like a dog chasing it's tail, this turns out to be futile, since increasing dispensed concentrations simultaneously increases tissue drug concentrations—reducing instead of enhancing contrast. A "marriage" is proposed between CAT and TSD (Theory of Signal Detection). The well-developed mathematical technology of TSD and the integrative constructs of CAT provide the basis for innovative research in addictive disorders.

COMPLIANCE FOR PHARMACOTHERAPY AND PSYCHOTHERAPY IN ADD CHILDREN. Ronald T. Brown. Dept. of Psychiatry, Emory University School of Medicine; Kathi A. Borden. Roosevelt University; and Philip Jenkins. University of Houston.

Patient adherence to treatment protocols has only recently been recognized as an important consideration in pediatric psychopharmacology research. The present study examined demographic, child, and family characteristics of patients who fully adhered, partially adhered, or prematurely discontinued treatment in one such project studying the effects of methylphenidate and adjunct treatment on Attention Deficit Disorder (ADD) children. Approximately one-fourth of the participants adhered to the treatment protocol. The preponderance of nonadherence is discussed as a possible explanation for the rather dismal findings of long-term treatment studies with ADD children. Several characteristics of adherents and nonadherents were reported.

EFFECTS OF PIMOZIDE, CLOZAPINE AND AMPHETAMINE ON MULTIPLE RANDOM INTERVAL PERFORMANCE. Joseph H. Porter and Heidi B. Freese. Virginia Commonwealth University.

Fifteen rats at 80% body weight were tested on a four

component MULTIPLE RANDOM INTERVAL food reinforcement schedule with mean intervals of 10, 40, 80 and 160-sec. Both pimozide and clozapine produced a significant dose-dependent decrease in barpressing, while amphetamine had no effect. Motor capacity (as measured by response duration, Matching Equation parameter k , and an independent measure of photocell activity) was decreased by pimozide and clozapine. Amphetamine produced an increase in photocell activity. Reward performance (as measured by the parameter, R_e) was not significantly changed by any of these drugs. Possible motor and reward effects of neuroleptic drugs on operant performance are discussed.

Paper Session: Maxine L. Stitzer, chair
Tuesday, August 26, 1:00–1:50 p.m.
Monroe East, Washington Hilton

SMOKING SATISFACTION: SENSORY AND PHARMACOLOGIC COMPONENTS. Jed E. Rose and Carol Hickman. University of California, Los Angeles.

The sensory and pharmacologic actions of cigarette smoke were dissociated in order to compare their relative importance in mediating smoking satisfaction. Two conditions of smoke inhalation were compared: (1) deep inhalations of large volumes of extremely dilute smoke (33 cc puff of smoke in 2 liters of air). These puffs delivered a pharmacologically effective dose of nicotine, but were intended to have little sensory impact; (2) shallow inhalations of concentrated smoke (60 cc of air followed each 35 cc puff of smoke). These puffs delivered little nicotine, as only a small fraction of smoke particles are absorbed in the upper airways. The dilute smoke inhalations produced significant physiological effects (increased heart rate and expired air carbon monoxide concentrations); however, puffs were rated weak and did not reduce craving for cigarettes. In contrast, shallow inhalations of smoke were rated strong and satisfied craving for cigarettes, despite the absence of nicotine effects. Under conditions of mild cigarette deprivation (30 min), the sensory reinforcing effects of cigarette smoke overshadowed the pharmacologic reinforcing effects of nicotine.

EFFECTS OF MECAMYLAMINE ON SUBSEQUENT SMOKING AND PLASMA NICOTINE LEVELS. Cynthia S. Pomerleau, Ovide F. Pomerleau and Mark J. Majchrzak. Dept. of Psychiatry, University of Michigan School of Medicine; Jean-Jacques Hajjar, M.D. and William R. Shanahan, M.D. Dept. of Internal Medicine, University of Connecticut.

Mecamylamine, a centrally active nicotinic antagonist, has been shown to block in a dose-related fashion certain behavioral and physiological responses to nicotine. Acute administration, however, has also been shown to increase amount of smoking, a phenomenon interpreted as compensatory behavior designed to overcome mecamylamine's blocking effects. We now report significantly greater increases in plasma nicotine following smoking of high-nicotine (2.87 mg) research cigarettes in subjects when pretreated with mecamylamine than when pretreated with placebo, even in the absence of significant differences in puff