

Although numerous studies have demonstrated reliable relationships between various human performance measures and time-of-day, disagreement continues concerning the shape of these relationships and their dependence on task variables. Most perceptual-motor tasks used have emphasized responses to exteroceptive stimuli. We report on the use of a multiple forceband discrimination task (MFDI) that requires the human operator to use both exteroceptive and proprioceptive information. Results indicate that correct task responses were associated with longer response latencies. Caffeine increased morning latencies and correct responses and reduced afternoon latencies and correct responses. The association between response latency and correct responses may be mediated by attention effects of time-of-day and caffeine. Our results also replicate the unique MFDI time-of-day effects we found in a previous study.

NICOTINE'S EFFECT ON AROUSAL IN SMOKERS IS DEPENDENT ON BASELINE LEVEL OF AROUSAL. Kenneth A. Perkins, Leonard H. Epstein, Richard L. Stiller, Joan E. Sexton and Rena Solberg. University of Pittsburgh, PA.

In order to better explain the commonly reported opposite effects of nicotine on subjective vs. cardiovascular arousal ("nicotine paradox"), 10 male smokers were divided into High and Low Baseline (BL) subgroups based on median split of BL self-reported subjective state and on BL cardiovascular measures (heart rate, blood pressure). Subjective measures included a 14-item Arousal scale, "Positive" visual analog scale (VAS) items such as "Relaxed," and "Negative" VAS items such as "Jittery." In 2 counter-balanced sessions, nicotine (15 µg/kg) or placebo was presented via measured dose nasal spray every 20 min for 2 hr and measures taken after each of the six presentations. Results confirmed that magnitude (and in some cases direction) of nicotine's subjective effects were dependent on BL level. Increase in systolic blood pressure was also dependent on BL level, but not diastolic blood pressure or heart rate. No changes were seen following placebo, arguing against a nonspecific explanation for results (e.g., regression to the mean). These results are discussed in light of the phenomenon of rate-dependent drug effects.

PAPER SESSION

Psychological and Psychiatric Issues in Psychopharmacology
Chair: John R. Hughes, University of Vermont, Burlington, VT

BEHAVIOR THERAPY TREATMENT OF HOSPITALIZED POLYDIPSIC SCHIZOPHRENIC PATIENTS. Mary E. DeFerriere. Children's Psychiatric Unit, Austin State Hospital, Austin, TX; Deborah Stanley. University of Austin, TX.

Psychogenic polydipsia is defined as the drinking of large volumes of fluids for no apparent reason. It occurs almost exclusively in psychiatric patients who lose their ability to excrete water adequately, resulting in fluid retention with various symptoms and complications. This symposium will discuss both the symptoms of polydipsia and problems in differential diagnosis. Both the pharmacological and psychological management of polydipsia among chronically hospitalized schizophrenic patients within the Adaptive Daily Living Skills Unit of the Austin State Hospital will be reviewed. Research findings of a ten-month study on the effects of a specific behavioral therapy program for problematic behaviors, specifically for this presentation fluid intoxication, will be discussed.

INCIDENCE OF PSYCHIATRIC DISORDERS AMONG INDIVIDUALS TREATED FOR CHEMICAL DEPENDENCY. Mary Heilbronn.

Thirty-five volunteers with a recent history of chemical dependency were studied at the termination of a residential treatment program to determine incidence of psychiatric disorders, current and lifetime, among both subjects and their families. The Diagnostic Interview Schedule revealed that 89% of the subjects met criteria for one or more psychiatric disorders. The most heavily loaded diagnoses were Generalized Anxiety Disorder and Antisocial Personality Disorder. Seventy-nine percent of the subjects had a positive first-degree family history of chemical dependency and/or mental illness. Findings suggest the need to provide enhanced awareness of comorbidity and to develop dual diagnosis treatment modalities.

IMPULSIVITY AND SUBSTANCE ABUSERS: STATE VERSUS TRAIT? J. M. Jensen, H. M. Pettinati, K. Meyers and V. N. Valliere. Carrier Foundation, Belle Mead, NJ.

Impulsivity is a well-documented characteristic of substance abusers (Lacey and Evans, 1986). Inpatients (n = 104) in treatment for cocaine and/or alcohol use disorders were assessed using self-control questions and the *Structured Clinical Interview for DSM-III-R Personality Disorders (SCID II)*. The aim was to determine whether these patients were more impulsive than controls, and if impulsivity is an enduring personality trait, or a temporary impulsive state. Addictions counselors served as controls. Data points were baseline and 1, 3 and 12 months after discharge. Significantly more patients were impulsive at baseline ($p=0.01$) as compared to controls. Significantly fewer patients were impulsive 1 month after discharge ($p=0.01$). Borderline personality disorder diagnoses were significantly related to high impulsivity scores ($p=0.01$). Differences in impulsivity as a state versus trait have important treatment and prognosis implications in all stages of recovery.

PSYCHOLOGICAL SYMPTOMS AND NEEDLE SHARING AMONG METHADONE PATIENTS. David S. Metzger, George E. Woody, Dominick DePhillips, Patrick Druley and Helen Naveline. University of Pennsylvania, Philadelphia, Veterans Administration Medical Center, Philadelphia, PA.

Despite widespread knowledge of the methods of HIV transmission, needle sharing among intravenous drug users (IVDU) remains a significant problem. Three hundred seventy-nine methadone patients were surveyed regarding their recent needle-sharing behavior. A wide range of patient characteristics was used to identify those patient factors associated with needle sharing. Overall, our data identified characteristics associated with recent needle sharing which may be important considerations in understanding continued high-risk behavior. These characteristics included more arrests and legal difficulties, more severe drug problems, and higher levels of psychiatric symptomatology. When considered together these features describe a group which may require more aggressive interventions than have thus far been implemented.

PAPER SESSION

Psychopharmacology of Stimulants and Their Antagonists
Chair: Alison H. Oliveto, University of Vermont, Burlington, VT