

analysis that grouped coping techniques and differentiated between Abstainers and Relapsers will be reported.

SMOKING CESSATION CHANGES PSYCHOSOCIAL FACTORS. Suzy B. Gulliver, John R. Hughes and Laura M. Solomon. University of Vermont, Burlington, VT.

To date, psychosocial variables (e.g., self-efficacy, social support, daily hassles) have been relatively weak predictors of smoking cessation. Most studies have used prequit baseline measures of psychosocial factors to predict outcome. Smoking cessation has recently been described as a more dynamic process (Prochaska, 1988); thus, we decided to test whether cessation itself can change psychosocial factors. In a large study of self-initiated quitters, self-efficacy was measured by DiClemente's Self-Efficacy Scale, level of stress was measured by DeLongis' Daily Hassles Scale and social support was measured by Coppotelli and Orlean's Partner/Closest Friend Inventory. These scales were collected at a precessation baseline, and at 7, 14, and 30 days postcessation. Data are available for 225 7-day quitters, 185 14-day quitters and 113 30-day quitters as well as a control group of 57 nonquitters. Cessation was associated with decreased Hassles Scores at 7, 14, and 30 day follow-ups (-3.0 , -5.3 , -3.6 , $p < 0.001$) compared to an increase in Hassles scores in nonquitters. Cessation also was associated with an increase in self-efficacy ($+1.0$, $+1.4$, $+1.5$, $p < 0.001$) compared to a decrease in nonquitters. Cessation did not change partner support. These results suggest psychosocial factors are effected by the very behavioral change researchers are often trying to predict. Perhaps future research should focus on *change* in psychosocial variables immediately after cessation as predictors of abstinence rather than a priori absolute values.

STAGES OF SELF-CHANGE: TREATMENT IMPLICATIONS. James O. Prochaska. University of Rhode Island, Kingston, RI.

Six conclusions and supporting data on self-initiated attempts at smoking cessation are presented. Six stages of change exist: a) precontemplation, b) contemplation, c) action, d) relapse, e) maintenance, and f) termination. Change is cyclical rather than linear. Successful self-changers recycle 3 to 4 times through the stages over a 7- to 10-year period. Self-changers use 8 to 10 processes of change but more than 130 techniques. Successful change involves an integration of the stages and processes. Who you are does not matter as much as what you do and when you do it: Process variables are better predictors than demographics, smoking history or health history variables. Self-changers cope with their environments better than their emotions: Two-thirds of relapses are due to emotional distress. These six conclusions have important implications for interventions. Four implications are: 1) Match treatment programs and processes to the stage clients are in. For example, excellent action programs fail miserably with people in the precontemplation, contemplation, and relapse stages. 2) Do not treat chronic behaviors as if they are acute problems. (a) One trial of an excellent treatment will fail with a majority of participants. (b) Recycle clients through several trials of treatment. 3) Processes of change clients use between therapy sessions account for more progress than processes therapists use within sessions. Impacting on processes clients initiate between sessions is an excellent way to increase the power of our interventions. 4) Relapse is not the major challenge for interventions. Major challenges include: (a) Overcoming resistance to change when treating precontemplators; (b) Getting contemplators to take ac-

tion; (c) Sustaining action long enough to learn something; (d) Learning to cope with emotions in the maintenance stage; (e) Learning from relapse rather than becoming demoralized is a major challenge for clients and practitioners alike; (f) Across all stages, the biggest challenge is getting more people to participate in excellent interventions.

SYMPOSIUM

An Animal Model for the Development of Drug Abuse Pharmacotherapies

Chair: Robert L. Balster, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA

Discussant: Charles R. Schuster, National Institute on Drug Abuse, Rockville, MD

INTRODUCTION.

There is increasing scientific interest in new treatments for substance abuse disorders, including new pharmacotherapies to be used as adjuncts to treatment. As is the case in developing any new medications, it is important to have animal models which can be used to predict efficacy. This symposium will present the results of studies using intravenous drug self-administration procedures in rhesus monkeys to evaluate pharmacological modification of drug-taking behavior. The first three speakers will show data primarily on drug effects on cocaine self-administration. The last speaker will summarize the results of an unpublished investigation some years ago where drugs currently in use in opiate treatment were evaluated in an animal model which involved both opiate and stimulant self-administration. The papers will be discussed by the Director of the National Institute on Drug Abuse, who was an early pioneer in the use of drug self-administration as an animal model in drug abuse research.

DRUG MODIFICATION OF COCAINE SELF-ADMINISTRATION: ACUTE EFFECTS. Robert S. Mansbach and Robert L. Balster. Medical College of Virginia, Virginia Commonwealth University, Richmond, VA.

(Abstract not available)

MODIFICATION OF COCAINE SELF-ADMINISTRATION BY LONG-TERM DRUG TREATMENT. William L. Woolverton and Mark Kleven. Drug Abuse Research Center, University of Chicago, Chicago, IL.

(Abstract not available)

DRUG SELF-ADMINISTRATION MODELS FOR EVALUATING NEW PHARMACOTHERAPIES. Nancy K. Mello, Jonathan B. Kamian, Jack H. Mendelson and Scott E. Lukas. Harvard Medical School-McLean Hospital, Belmont, MA.

(Abstract not available)

METHADONE, BUPRENORPHINE AND NALTREXONE EFFECTS ON OPIATE SELF-ADMINISTRATION. David A. Downs. Pharmaceutical Research Division, Parke-Davis, Ann Arbor, MI.

(Abstract not available)

SYMPOSIUM

Behavioral Modification of the Effects of Abused Drugs

Chair: Charles W. Schindler, National Institute on Drug Abuse, Addiction Research Center, Baltimore, MD