

I N S T I T U T E O F B E H A V I O R A L R E S E A R C H

T E X A S C H R I S T I A N U N I V E R S I T Y

A N N U A L R E P O R T

1 9 7 7

personality social psychology environmental psychology
psychophysiology human ecology epidemiology field surveys
population research family planning research drug abuse
and alcoholism research evaluation of treatment for drug
abuse and alcoholism organizational research personnel
research management studies behavior modification social
and health program evaluation multivariate methods in
behavioral research

GOALS

The IBR is a university-based research and consulting organization dedicated to the advancement of scientific knowledge and to the application of the systematic knowledge and methods of the behavioral sciences to human affairs, through laboratory and field research, graduate education, and scientific publication. These goals implement a major principle endorsed by Texas Christian University, that organized research is one of its principal functions, having value both to society and to the educational program of the University.

ORGANIZATIONAL STATUS

The IBR was established formally in 1962 as an independent research unit of the University, to provide needed administration and programmatic direction for the developing of research programs in the behavioral sciences. Since it was founded it has experienced steady growth in staff, budget, and program scope. While providing research opportunities for students and faculty, it has also acquired a full-time staff of research scientists and specialists. In order to recognize the status of these IBR scientific staff members, the University, in 1972, authorized the IBR to include in its budget a number of ranked faculty positions and provided procedures for these faculty members also to serve as teachers and as members of the graduate faculty.

PROGRAM

The IBR research program is supported principally by research grants and contracts, from Federal agencies and industry, in the areas of personality, social and environmental psychology, psychophysiology, epidemiology and human ecology, organizational and personnel research, social and health program evaluation, and population research. Currently the largest single programs involve research in the areas of drug abuse, epidemiology and treatment evaluation and organizational behavior.

FACILITIES

Located on the East Campus of Texas Christian University, the IBR occupies 3 buildings with 12,000 square feet of office and laboratory space. Special features include the IBR LIBRARY with over 3,500 books, 50 journals, and an extensive file of Air Force, Army, Navy, NASA and other technical report series, the document and computer files of the DRUG ABUSE EPIDEMIOLOGY DATA CENTER, a comprehensive COMPUTER PROGRAM LIBRARY, and extensive DOCUMENT STORAGE facilities. The IBR utilizes the Sigma 9 computer system at the TCU Computer Center, both in batch mode and in real time, by means of remote terminals.

PUBLICATIONS

IBR reports, a technical report series based on staff and student research completed under grants, contracts, and independent study, are distributed to a regular mailing list and in most cases are condensed for formal publication. TCU PRESS-BEHAVIORAL SCIENCE MONOGRAPH SERIES, founded in 1971, published irregularly as single volumes, includes substantive studies as well as methodological and theoretical contributions to the behavioral sciences. The IBR also publishes MULTIVARIATE BEHAVIORAL RESEARCH, a quarterly journal of the Society for Multivariate Experimental Psychology.

IBR FACULTY

| | |
|-------------------|---|
| S.B. Sells | Research Professor and Director Ph.D. (Psychology). Columbia University, 1936 Interactional theory, environmental psychology, personality and social, stress, organizational behavior, industrial and aerospace psychology, drug abuse and alcoholism treatment evaluation and epidemiology, multivariate research |
| Robert G. Demaree | Professor of Psychology and Professor in in the IBR Ph.D. (Psychology), University of Illinois 1950 Drug abuse evaluation research, drug abuse and health problems, epidemiology, personality research, psychometrics, measurement theory, mathematical modeling, computer simulation, multivariate and mathematical psychology |
| Steven G. Cole | Associate Professor of Psychology and Associate Professor in the IBR Ph.D. (Psychology), Michigan State University, 1970 Social psychology, conflict and conflict resolution, drug abuse treatment taxonomy, alcoholism treatment research, family planning and population research, community psychology |
| Lawrence R. James | Associate Professor in the IBR Ph.D. (Psychology) University of Utah, 1970 Industrial and organizational psychology, multivariate methods, measurement theory, causal analysis, leadership, motivation, climate and organizational development |
| George W. Joe | Associate Professor in the IBR Ed.D. (Research Design) University of Georgia, 1969 Multivariate and mathematical psychology, measurement theory, drug abuse treatment evaluation research, community health epidemiology and evaluation research |

| | |
|-------------------|---|
| D. Dwayne Simpson | Associate Professor in the IBR Ph.D. (Psychology) Texas Christian University 1970 Drug abuse treatment evaluation research, design, taxonomy of drug abuse patterns, post-treatment followup studies, management information systems, psychophysiology, illness behavior, respiration, smoking |
| B. Krishna Singh | Associate Professor in the IBR Ph.D. (Sociology) University of Kentucky, 1970 Demographic theory and research, mathematical modeling and causal analysis, community dynamics, drug abuse epidemiology and community context effects, social change |
| Roderick Crandall | Associate Professor in the IBR Ph.D. (Psychology) University of Michigan 1974 Group and interpersonal phenomena, applied social psychology, leisure, environment, quality of life and organizations, professional and methodological issues - measurement, reviewing procedures and ethics |
| LaVerne D. Knezek | Assistant Professor in the IBR Ph.D. (Education and Business Administration) North Texas State University 1972 Epidemiology of drug abuse, computerized information systems, educational planning research, personnel management, regional planning, career planning |

RESEARCH STAFF

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Graduate Research Fellow
Graduate Research Fellow
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Specialist
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Specialist
Research Assistant
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Manager/Assistant Manager
Data Processing Analyst
Data Processing Analyst
Programmer
Programmer

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Pamela Playdon
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Mary Ann Poole
Carla Sapenter

Data Terminal Operator
Secretary
Computer Staff Coordinator
Data Terminal Operator
Data Terminal Operator
Statistical Clerk
Secretary
Secretary
Clerical Assistant
Senior Secretary
Mag Card Machine Operator
Secretary
Mag Card Machine Operator
Clerical Assistant
Secretary/Receptionist
Keypunch Operator

Consultants, 1977

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|--|---------------------------|
| John C. Ball, Ph.D., Professor, Dept. of Psychiatry, Temple University | DAEDAC Advisory Committee |
| Richard L. Gorsuch, Ph.D. Professor, Graduate School of Social Work, University of Texas at Arlington | Research Consultant |
| Edward R. Hammock, Chairman New York State Board of Paroles, New York | DAEDAC Advisory Committee |
| Richard Jessor, Ph.D. Institute of Behavioral Science, University of Colorado | Research Consultant |
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| Leonard Savitz, Ph.D., Dept. of Sociology Temple University | DAEDAC Advisory Committee |
| Edward Senay, M.D., Department of Psychiatry University of Chicago | DAEDAC Advisory Committee |

IBR POLICIES

Information for IBR Fellows

A major feature of the wide-ranging program of the Institute of Behavioral Research (IBR) is its emphasis on graduate education in conjunction with the various studies in progress. Some of the IBR faculty teach formal courses in the psychology, sociology, and business programs at Texas Christian University, but all assume research training responsibilities in conjunction with ongoing funded research projects. Within this framework, major emphasis is placed on the development of research skills in students, using an apprenticeship model -- as the student progresses from the first to the fourth year of training, the level of responsibility increases in terms of research planning, conducting data analyses, and writing research reports.

The research training program of the IBR is based on high standards of performance that apply to academic work as well as research development. Progress of each student is reviewed twice a year (at the end of the Fall and Spring Semesters) by the IBR Fellow Committee and includes review of formal grade reports as well as written evaluations submitted to IBR Faculty and staff supervisors. The Committee makes recommendations to the Director of the IBR and to the student involved as special action or information is needed. These recommendations involve academic progress, development of research skills, and amounts of fellowship stipends, as described below.

Academic Progress. Although the principal involvement of the IBR with Research Fellows is often viewed in terms of training in research methodology and application, academic counseling and supervision of students by IBR Faculty is an essential part of the training program and is therefore emphasized. Academic counseling with faculty supervisors is important for addressing student career objectives and insuring academic preparation for IBR research assignments. For this reason, each student is expected to consult with his research supervisor prior to enrolling in courses. In addition to appropriate course selections (generally 9 graduate credit hours per semester), grade reports are expected to average B+ or above. Continuation of an IBR Fellowship is contingent in part upon satisfactory academic work and definite progress toward an advanced degree.

Development of Research Skills. The IBR research training program involves a combination of formal coursework and work experience generally on funded research projects. Within the limitations of the nature and requirements of research projects in progress at any given time, research assignments are made on a basis that seeks to optimize the match between student interests and abilities. As experience and research capabilities

grow, student assignments are adjusted accordingly. Efforts are made to introduce students to all phases of research, from problem definition, planning and design to data gathering, management, and analysis, to the writing and ultimate publication of research reports.

Evaluations are normally requested semi-annually by the IBR Fellow Committee to be provided by each student's immediate supervisor(s). These evaluations are open to the student and each supervisor is encouraged to review his or her evaluation with the student. Together with the evaluations based on academic progress, this information is used by the Committee for recommendations concerning continuation or special provisions regarding fellowships.

Amount of Fellowship Stipends. IBR Fellowship stipends range from \$300 to \$500 per month, plus cost of tuition (costs of student fees are not included). The following schedule has been adopted for determining the amount of stipends paid to students. Stipend increments become effective when the qualifications are met for each successive level of graduate training; fellowships are limited to two years for a Masters degree and four years for the Ph.D.

| <u>Level</u> | <u>Qualifications</u> | <u>Stipend</u> |
|--------------|--|----------------|
| 1st year | Beginning or first year graduate student with less than 15 graduate credit hours. | \$300 |
| 2nd year | Completion of a research Masters degree, or 18 or more graduate credit hours with relevant research experience. Must have completed graduate level coursework or its equivalent in Statistics and Experimental Design. Student must demonstrate satisfactory progress toward either the Masters or Ph.D. degree. | \$375. |
| 3rd year | Completion of two years of graduate study toward the Ph.D. degree. The student will be expected to have completed the Masters degree (or its equivalent or 30 hours of graduate study). This includes successful completion of preliminary evaluations in the relevant academic department. | \$425. |

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|----------|---|--------|
| 4th Year | Fourth or final year of graduate study. The student will have passed his qualifying examinations and be admitted to candidacy for the Ph.D. degree. | \$500. |
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The current IBR Fellow Committee consists of the following members:

Dr. L.R. James
Dr. G.W. Joe
Dr. D.D. Simpson, Chairman.

Faculty Promotion Policy

1. The IBR is a university-based research institute which, by policy, includes students as members of its research staff, and regards training and development of research personnel as part of its mission of contributing to knowledge and understanding of human behavior in modern society. As a consequence, IBR faculty members are expected to be scholars, scientists, writers, lecturers, consultants, and teachers, with substantive as well as methodological expertise in the behavioral sciences. IBR faculty promotion policy is subject to the general policies of Texas Christian University.

2. At the entry level (Assistant Professor), these qualities are judged by perusal of educational records, research reports and publications, letters of recommendation, and interviews in which the entire faculty participate and vote. For evidence of growth, the faculty use various sources of information, as follows:

research: Proposals prepared and funded, seminar reports, technical reports, publications accepted by reputable journals, invitations to lecture or report, published reviews, requests for advice and consultation, and the like;

scholarship: theoretical and research papers, references to and citation of work, reputation among colleagues, peers, and students, comments on and reviews of published work, influence on the thought, research, and practices of an area or field, invitations to present colloquia, lectures, and to participate in symposia, and the like;

teaching: quality of students attracted and taught by the professor; scope, level, and reputation of courses, innovative methods and content, and special projects. IBR faculty members are all expected to qualify as members of the graduate faculty and to teach in a preceptor relationship with students, who function as graduate assistants, and to direct independent research as well as dissertations and theses.

Individual, one-to-one teaching is one of the most important teaching functions for all IBR faculty, although some faculty members have contracts to teach formal courses in one or another department or school.

3. As academicians and professionals and as members of the TCU and IBR faculty communities, IBR faculty members are expected to assume responsibility for participating in professional and service activities to facilitate institutional operations and relationships with the lay and professional constituencies to which they and the University have allegiances. This is a means of enhancing individual and institutional influence and also of promoting the goals of the institution through such individual effort. As a result, IBR faculty are expected to participate as members of faculty committees, to attend University functions as representatives of the IBR, to provide speaking, advisory, and consulting services in the Fort Worth community, to participate in the meetings of the appropriate regional and national associations, to present papers, and to communicate with scholars, scientists, and others in matters related to their academic and professional roles.

4. In evaluating faculty members' performance, evidence of growth in productivity and influence is taken into consideration. Influence includes service activities as well as scholarly and scientific work. No one is expected to excel in all aspects equally, and indeed the responsibilities of IBR faculty members vary to an extent that they differ in opportunities to excel in all aspects during any particular year. However, taking duties, opportunities, and particular situations fully into account, recommendations for promotion to Associate Professor will generally reflect strong evidence of growth from the entry level to a senior level of performance such that the individual can be considered as definitely launched on a significant career with full expectation that interests, areas of specialization and special expertise, and proficiencies demonstrated during the first four or five post-doctoral years will materialize into full fruition, recognition, and accomplishment. Recommendations for Full Professor will be made when the evidence indicates that such career expectations have been largely realized.

FUNDED RESEARCH. EXPENDITURES IN 1977.

| <u>DRUG ABUSE</u> | <u>1977 EXPENDITURES</u> |
|--|--------------------------|
| Post-Treatment Followup of DARP Cohorts 1, 2 and 3, Grant No. 1 H81-DA-01598-01 (National Institute on Drug Abuse) | 382,452. |
| Social Factors and Drug Use in an Urban Population, Grant No. DA 01765, (National Institute on Drug Abuse) | 23,669. |
| Drug Abuse Epidemiology Data Center Grant No. 8ROI-DA-01400-01, (National Institute on Drug Abuse) | 304,820. |
| Treatment for Drug Abuse: Use of an Integrating Model, Grant. No. DA 01931, (National Institute on Drug Abuse) | 41,011. |
| Assessment for Combined Treatment for Alcohol and Drug Abuse Clients. Contract No. ADM 281-76-0024 (National Institute of Alcohol Abuse and Alcoholism) | 62,700. |
| <u>INDUSTRIAL AND ORGANIZATIONAL RESEARCH</u> | |
| Organizational Characteristics and Personnel Effectiveness in the Framework of Social System Analysis (ONR) Contract No. N001- 72-0179-0001, (Office of Naval Research) | 77,000. |
| Development of Airline Pilot Selection Battery (American Airlines) | 45,223. |
| City of Fort Worth/Fire Department Selection Study. | 8,523. |
| Frito-Lay, Inc. | 3,861. |
| TOTAL: | \$949,259. |

DRUG ABUSE RESEARCH

Post-treatment Followup Study of DARP Cohorts 1 and 2
(Grant 1 H81 DA 01598-01) National Institute on Drug Abuse
Period.. August, 1974 through July, 1978.
Total Award. \$2,759,284.
1977 Expenditures. \$382,496.

The post-treatment followup research on DARP Cohorts 1 and 2 was funded as a 3-year grant, beginning August 1, 1974. This research, based on samples selected to represent subgroups of each treatment group from each cohort, for which adequate numbers of patients were included in the respective cohort population, carried the research on evaluation of treatment forward to embrace postDARP experience. Followup interviews occurred on the average, over four years following termination of treatment for Cohort 1, and over three years for Cohort 2. This study addressed questions, such as: 1) whether changes observed during treatment continued after patients left the surveillance of the treatment programs and returned to unsupervised community living, 2) whether effects observed in relation to time in treatment and behavioral outcomes during the period of treatment were continued after treatment, 3) comparison of post-treatment outcomes of types of treatment by types of patient.

The grant authorized a followup sample of approximately 2000 patients for each cohort. The Cohort 1 sample consisted of 1853 former patients from 19 agencies and the Cohort 2 sample, of 2254 patients from 25 agencies, including the 19 from Cohort 1. The field interviews for Cohort 1 were conducted in 18 cities by the National Opinion Research Center (NORC) of the University of Chicago, under a subcontract; in the 19th city (New Haven), a separate subcontract was awarded to the APT Foundation, affiliated with Yale University; the latter group worked in close cooperation with NORC. Field work was initiated in March 1975, after extensive negotiations with the Cohort 1 treatment agencies for release to NORC of patient identification for the purpose of the field study and after extensive field tryout of the interview schedule, prepared collaboratively by the IBR and NORC staffs.

Sample design, data collection, and preliminary results for Cohort 1 were described in the 1976 report. Extensive analytic work on the Cohort 1 and Cohort 2 data was completed in 1977 and this resulted in 12 technical reports based on the followup data as well as additional articles in professional journals and papers presented at meetings. In this research the data for the two cohorts were combined after

preliminary checks indicated that the results were consistent. The larger subgroups resulting enabled more adequate analysis of the data.

The major studies completed during 1977 were as follows:

| <u>STUDY</u> | <u>REPORT NO.</u> | <u>AUTHORS</u> |
|---|-------------------|--|
| Description of sample design and data instrument | 77-8 | Simpson and Joe |
| Outcome Studies | | |
| Alcohol and illicit drug use | 77-2 | Simpson and Lloyd |
| Illicit drug use and return to treatment | 77-3 | Savage and Simpson |
| Racial and ethnic composition of treatment program clients | 77-7 | Joe, Singh, Finklea Hudiburg, Sells |
| Methodological Studies | | |
| Study of treatment history patterns | 77-18 | Joe and Gent |
| Factor Structure of Predictor Measures | 77-15 | Savage and Lloyd |
| Development of Composite Criteria for PostDARP outcomes | 77-17 | Hornick, Demaree, Sells and Neman |
| Evaluation Studies | | |
| Regression study of outcomes for first year postDARP | 77-14 | Simpson, Savage, Lloyd, Sells |
| Multiple discriminant analysis of outcome groups for the first three years postDARP | 77-16 | Neman, Demaree, Hornick, Sells |
| PostDARP outcomes for youth in the DARP | 77-9 | Sells, Simpson |
| PostDARP outcomes by treatment history patterns | 77-19 | Joe |
| Relation of Community variables to outcomes of methadone maintenance programs | 77-10 | Singh |

The results of these studies provided the first definitive evidence indicating the effectiveness of drug abuse treatment as represented by the DARP treatment programs. As a result, members of the research staff were invited to present papers at numerous meetings and to contribute papers to a variety of publications. Among these were the following:

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|----------------------------|---|-------------------------|
| International Conferences: | Rome (ICAA) | Sells |
| | Lisbon (ICAA) | Sells |
| National Conferences: | Washington, D.C. (New York Academy of Sciences) | Sells, Demaree |
| | Miami (Single State Agencies) | Simpson, Joe Simpson |

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|-------------------------|---|--|
| | San Antonio (Single State Agencies) | Simpson |
| | Washington, D.C. (Evaluation Society) | Simpson, Savage, Lloyd |
| | Montreal (American Psychiatric Association) | Sells, Demaree |
| Other: | Seminar (Hoffman-LaRoche, Inc., New Jersey) | Sells |
| | Colloquium (UCLA, Division of Psychiatry) | Sells |
| | Presentation (Texas Department of Community Affairs, Austin) | Simpson |
| | Workshop (Southwestern Psychological Association, Fort Worth) | Simpson, Demaree, Savage, Lloyd, Neman |
| | Presentation (Southwestern Conference on Drug Abuse) | Joe |
| Contributions to Books: | Chapter on Treatment Effectiveness. <u>Handbook on Drug Abuse (ODAP)</u> | Sells |
| | Chapter on Patient Records. <u>Handbook on Epidemiology of Drug Abuse (NIDA)</u> | Sells |
| | Chapter on Problems of Conceptualization and Design in Research on the Evaluation of Treatment For Drug Abuse. <u>The Origins and Course of Psychopathology (Society for Life History Study of Psychopathology)</u> | Sells |
| | Chapter on Issues in the Evaluation of Drug Abuse Treatment. Symposium Issue on Evaluation. Journal: <u>Professional Psychology</u> | Sells, Demaree, Simpson, Joe, Gorsuch |
| | Methadone Maintenance in Perspective. Symposium Issue - <u>Journal of Drug Issues</u> | Sells |

Social-Demographic Factors and the Prevalence of Drug Abuse in an Urban Population.

(Grant No. DA 01765) National Institute on Drug Abuse
Period. 2 years, beginning September 15, 1977.
Total Award. \$503,607. (\$178,628 for Year 1).
1977 Expenditures. \$25,397.

This study was devised to develop new, efficient, and accurate methods of estimating the prevalence in urban settings of the use of specific drugs by population subgroups and residential areas. It consists of a field test of the hypothesis that various measures commonly referred to as indicators of prevalence, such as arrests, treatment admissions, emergency room visits, and others, when related to social and demographic dimensions of residential areas, can be utilized as accurate estimators of prevalence. Previous estimates based on unweighted indicator data, have generally been found to be unreliable and unstable. However, recent research by Drs. Jones and Demaree of the IBR (in 1972) involving social area analysis indicated that other, related health and social problems are distributed as functions of dimensions of social areas and the present study extends this approach to use and abuse of illicit drugs. In this study, data to be obtained by surveys in the public, private, and parochial schools and by household surveys will be used as dependent measures to evaluate estimates based on predictors weighted by social area characteristics.

The research was planned initially to be conducted in the city of Fort Worth but was shifted to Dallas after consideration of data resources available in municipal agencies, schools, hospitals, and other institutional sources. Approval was received to begin operations on September 15, 1977; although this included the household survey, in which samples of school dropouts and nonattendees of school age were an integral part, funding of these activities was not available in Year 1. The study was initiated with the understanding that application for restoration of those funds would be made at a later date, most likely in the application for Year 2 funds if not feasible earlier.

Activities during 1977 consisted of organizing the project staff and making arrangements for data collection and analysis. The Project Director is Professor Robert G. Demaree, whose earlier social area analysis (Demaree and Jones) furnished the conceptual basis for the approach taken. Dr. E.D. Stackfleth is Associate Director. The key professional staff include Janice Neman, Research Psychologist, Christopher Hornick, Bennett Fletcher, and Richard Hudiburg, doctoral candidates and research fellows, and Anne D. Olsen, Coordinator of Field Work and Budget Officer. Permission was granted for the school survey in the Dallas Independent School District by Superintendent of Schools Dr. Nolen Estes and most of the arrangements in DISD and the private and parochial schools in Dallas were well along before

the end of 1977. Plans were developed for negotiations for the indicator data and for the collection of census and other data for the social area analysis. In relation to the latter, extensive use can be made of analyses by city planning staff members and DISD staff members in Dallas who have divided the city into statistical areas based on characteristics of component census tracts.

Drug Abuse Epidemiology Data Center (DAEDAC)

(Grant No. DA4 RG008) Special Action Office for
Special Action Office for Drug Abuse Prevention. (Grant
No. 2ROI-DA-01400-04) National Institute on Drug Abuse
Period. November, 1973 - December, 1978
Total Award. \$1,028,496
1977 Expenditures. \$310,860.

Objectives

DAEDAC was conceived as a research-oriented data center to provide a central professional research and technical information archive for the rapidly accumulating literature and data on drug abuse, an area of major national importance. Among the needs recognized that this archive would address were the following:

1. Preservation of original data of major surveys and major record sources;
2. Organization of these original data files, together with the relevant data collection instruments, documentation, reports, and publications to facilitate further analyses and secondary research to enable significant contributions based on data available and also to respond to pressing informational needs of administrative agencies in Washington and throughout the country;
3. Development and maintenance of a library of research reports of special interest and concern to medical and social scientists, professionals, and administrators working in the drug abuse area;
4. Development of a computer file, with appropriate retrieval software based on a useful taxonomy, to provide bibliographies, statistical tables, and other relevant information on drug abuse problems addressed in the research literature;
5. Organization and integration of drug abuse knowledge by strategic compilations and analyses of accumulated data and reports.

Scope. The term epidemiology was chosen for the central theme of this archive with the intent that it would deal not only with estimates of incidence and prevalence of the use of various drugs of interest in the population, but also with the broad spectrum of factors having putative or demonstrated causal relations with the onset, continued use, transition to other use, dependence patterns, and discontinuance of use of these drugs. This conceptualization of the problem was extremely broad and included virtually the entire drug-related literature except that involving specifically pharmacology and pathology.

The DAEDAC maintains two files that are available for scientific and general information; 1) The Original Data File, and 2) The Aggregate File. These files and the policies and procedures of the Center, developed for the use of contributors to and users of the files, are described as follows:

Original Data File

The original Data File consists of a set of raw data files of surveys, evaluation studies, and other large-scale drug abuse data sources that have potential for secondary analyses related to the research and informational purposes of the Center. The holdings in this file have been published and procedures have been established for their use by the scientific community.

The Research and record files acquired by the Center are retained subject to the conditions of agreements concluded with contributors. Prior to acquisition all files are edited to remove identification of individual respondents and a major commitment of the center assumes a policy of confidentiality of all data files. The Center follows procedures that will prevent disclosure of the identity or infringement on the privacy of any person for whom data are included in the files. All information that might identify the respondents from whom the data were gathered, such as names, social security numbers, and other unique identifiers, is systematically removed prior to accession and additional measures have been adopted to prevent inadvertent identification of individual respondents.

The files of the Center are available to the general scientific community (including graduate students) with a minimum of restrictions.

An index, referred to as a data dictionary, enables understanding of the classification and accession of data in each original data file. Raw data tapes, computer cards, copies of questionnaires, published reports, the data dictionary, and analyses are supplied to investigators by DAEDAC. Thus, the Original Data File aids investigators in carrying out secondary research using raw data of large-scale, well-planned, major surveys to solve identified problems not addressed in the

original investigations. Arrangements can also be made for analyses to be conducted on a service-bureau basis by the DAEDAC research staff; the IBR has available its extensive computer program library, including major statistical packages and analysis models as well as original programs developed by the IBR staff.

By the end of 1977 there were 75 major data sets in the Original Data File, of which 15 were added during the year. Approximately 20 others were promised for later delivery or in negotiation.

Aggregate File

The Aggregate File is a computerized file of retrievable data abstracted from books, reports, reprints, and other documents acquired by DAEDAC for the purposes of the Center. Information retrieved from this file is available to scientific investigators and to administrative users.

A coding manual was developed for transforming and incorporating data reported in the drug abuse literature and for search and retrieval of the information to be stored on tapes. The IBR computational staff developed procedures to catalogue and retrieve the survey literature data.

Articles are selected for the statistical summaries in the Aggregate File by a selection committee consisting of IBR faculty members. These documents consist mainly of reports from original data collected in 1960 or later, that pertain to the illicit use of drugs in the United States, Canada, Mexico, or Puerto Rico or U.S. citizens in foreign countries. Studies on tobacco, alcohol, and caffeine are included, provided that these are studied in conjunction with other drugs.

The Aggregate File can be searched by use of the Computerized Index or the Classified Index. Data are retrieved through the Computerized Index by use of four classification schemes singly or in combination: (1) study descriptors or delimiters, (2) drugs, (3) drug use and related dimensions, and (4) drug user attributes. In addition, a Classified Bibliography updated monthly is available as an index to the Aggregate File, using sixteen broad subject categories. Special-purpose bibliographies are also provided by DAEDAC upon request. Photocopies of entire studies and reports are furnished on a cost-reimbursable basis. The Aggregate File is a rapidly growing file; as of December, 1977, over 4500 documents had been collected and classified (1300 during 1977).

Available services provided to users at cost include providing computer printouts of statistical data (tables), general and specialized bibliographies, and photocopies of reports. Thus investigators and administrators may easily search the literature on a focused basis to obtain research

results and also to identify trends, patterns, and gaps in the data available.

By the beginning of 1977 (the fourth year of the project) the holdings of DAEDAC were extensive enough in both files to justify high quality professional service to users and the existence and capability of the Center had been widely publicized. As a result, user requests to both files increased enormously above previous levels and have grown continuously ever since. In the Spring of 1977 a quarterly newsletter, DAEDAC DATABASE, was initiated and now goes to a mailing list of over 5000 interested persons and institutions. In brief, DAEDAC came of age in 1977 and has played a significant role in the national drug abuse scene.

The key professional staff in 1977 included Dr. LaVerne Knezek, Associate Director, Marianne W. Babitch, M.L.S., Acquisitions Librarian, Dr. Otto Heuckeroth and Tom A. Matthews (doctoral candidate), Research Analysts, Audrey Vanderhoof, M.A., and Sharon Shelton, M.S., Editors, and Guelma Hopkins, M.A., Information Specialist. Bennett Fletcher and Jerry M. Itzig were research fellows. Professors Demaree, Singh, and Joe served on the review committee that advised on acquisitions to the Original Data and Aggregate Data Files. Charles R. Kee, Jr., M.S., Donald S. Willis, M.M.S., Kathlyn Bice, M.Ed., Roy C. Baird, Diane Koperski, and Keith Helfrich provided system programming and computer advice and assistance.

Treatment for Drug Abuse: Use of an Integrating Model.

(Grant No. DA 01931) National Institute on Drug Abuse
Period. 2 years (July 1, 1977 to June 30, 1979)
Total Award. \$331,999. (\$170,600 for Year 1).
1977 Expenditures. \$41,011.

This project reflects a combination of the interest and expertise of the IBR staff in organizational research and also in research on the effectiveness of drug abuse treatment. The theoretical model, research design, and instruments are patterned after those developed in earlier studies by Dr. Sells and Professors James and Jones with respect to military and industrial organizations. In the present research the interaction of individual (treatment staff members and clients) and situation (treatment environment) is studied in samples of two types of drug treatment programs (methadone maintenance and outpatient drug-free). The specific focus is on the impact of different organizational and psychological climates on the generality of conclusions concerning the effects of staff attitudes and behavior on clients' treatment motivation and outcomes. It is intended to delineate the interaction of both situational and individual attributes as they affect treatment outcomes.

The design of this research makes it possible with the same data to address both theoretical and applied issues. On the theoretical side, it represents a further test of the integrating models formulated by James that are believed to have generality for behavior in human organizations of all kinds. On the applied side, it brings important theory and methodology developed in different organizational contexts to the study of drug treatment programs. The theoretical papers resulting from this research have the potential of contributing to the scientific literature of organizational psychology while the applied reports will add to the understanding of the treatment process and of factors in the physical and social environment of the treatment program that affect attitudes and behaviors of staff members and clients.

The first six months of the project (July-December, 1977) involved staffing, extensive literature reviews and instrument development, and search for and negotiation with treatment programs that fit the sampling plan for their participation in the study. The project is directed by Professor Lawrence R. James, Co-Principal Investigator, and Professor R.P. Crandall was appointed Associate Director.

The instruments developed for this study include five survey forms and a counselor outcome rating for every client included in the study. The five surveys include; (1) Agency Supervisor Survey, concerned with breadth of control and responsibility of this executive, managerial style, treatment philosophy and goals, and interactions with other community agencies, (2) Treatment Supervisor Survey, which explores in depth the work and interpersonal environment of the treatment unit, perceptions of the agency, span of control and responsibility of the unit head, assessment of staff members, their work, and their jobs, and program philosophy and goals, (3) Drug Treatment Program Checklist (completed by each unit head) describing the program, treatment policies, methods, and processes, and community context of the program, (4) Treatment Staff Survey, administered to treatment staff members (therapists, counselors, nurses, pharmacists, secretaries, and others), covering unit structure and process, attitudes toward work, other staff, and management, personality and personal goals, group norms, perception of the physical environment and philosophy and goals of the organization, and items concerning demographic classification of the respondent, career attitudes, and respondent's propensity to leave the organization, (5) Client Survey, administered to samples of clients and covering client perceptions of the treatment environment, interactions with staff and other clients, general life adjustment, drug use history and current problems, attitudes, and behavior, and client ratings of therapy, therapists, and the program. These instruments were completed, field tested, and readied for use in 1977.

The field staff were also selected and trained for the sensitive and critical data collection tasks. They included Elizabeth Cole, M.A., and John Bruni, M.A., Thomas Hilton, M.A., and Olive Watterson, M.A., doctoral candidates and research fellows.

Assessment of Approaches for Combined Treatment for Alcohol and Drug Abuse Clients.

(Contract No. ADM 281-76-0024) National Institute on Alcoholism and Alcohol Abuse
Period. July 1976 through June, 1978.
Total Award. \$116,578.00
1977 Expenditures. \$62,700.

This study to assess inpatient combined treatments for alcohol and drug abuse clients was funded as a ten month contract beginning July 1, 1976, and was later extended for 14 months to include outpatient programs. The inpatient study was designed to focus on programs that simultaneously treat alcohol and drug abusers in the same treatment groups in integrated treatment facilities using the same treatment staffs and with no segregation of drug and alcohol clients for therapeutic purposes. Programs that treat alcohol and drug abuse clients under the same administrative structures but that segregate them by treatment therapies or facilities were also examined as comparison groups. Four types of residential programs were examined: (1) combined treatment programs that were originally combined treatment programs, (2) combined treatment programs that were originally restricted to alcohol abusers, (3) separate drug treatment programs under an umbrella agency that also included separate alcohol treatment programs, and (4) the separate alcohol programs under those same agencies. For the outpatient study, two types of programs were examined: (1) outpatient combined treatment programs that were originally alcohol treatment programs and (2) outpatient alcohol abuse treatment programs. It was required that all of the programs included must have been in existence at least two years under their present structure. A total of thirty programs were visited, five of each program type. That inpatient treatment was not a prerequisite for acceptance in the program was a necessary condition for inclusion as an outpatient program.

For the combined treatment programs, field staff interviewed the directors, up to ten treatment staff members and up to ten alcohol and drug abuse clients currently being treated by the program. In addition, the records of up to twenty drug abuse clients and twenty alcohol abuse clients were examined to provide information concerning the types of clients that were treated by the programs as well as reasons for discharge and negative incidents that occurred during treatment. For the separate treatment programs a similar schedule of interviews

and examination of records was followed. In addition, where necessary, the directors of the parent agencies that provided the administrative oversight of the separate alcohol and separate drug treatment programs were also interviewed and the records of 503 drug clients and 650 alcohol clients were examined. In all, 55 agencies were identified and verified as combined treatment programs which had been providing service for more than two years. The separate treatment programs were selected to be similar to the combined programs with respect to the area of the country in which they were located, types of client population served and major drugs of abuse.

Between August and December, 1977, site visits were made to the outpatient agencies included. The major thrust of data collection was to obtain views on the relative merits of separate treatment as compared to combined treatment in terms of program effectiveness and efficiency, and perceived differences considered to be related to whether the treatment was provided in an inpatient or an outpatient setting. Data were gathered on program philosophy and goals, treatment strategy, counseling strategy, sanctions and privileges, accessibility of treatment, and ancillary services. Four general dimensions of organizational climate were also assessed: (1) characteristics applying to the job task and immediate work environment, (2) characteristics related to supervision at levels immediately above the counselor, (3) characteristics related to the work group, and (4) characteristics related to the total organization and its larger subsystems. The final report of the inpatient phase of the study was completed in July of 1977. The final report of the outpatient study was scheduled for completion in June of 1978.

These studies have contributed considerable weight to the conceptual strength of the combined treatment model, which focuses on people with problems who use alcohol or drugs as a method of coping rather than on particular substances as defining aspects of the problems. They have shed light on biases manifested by treatment staffs and clients, on the circumstances that appear to support or impede the effective development of combined treatment programs, including bureaucratic structures in the Federal government, and on problems to be expected in the development of combined treatment programs. They help explain why combined programs have up to the present been predominant and why most combined programs to date have operated without federal funds.

Key personnel included Dr. S.G. Cole, Co-Principal Investigator, Elizabeth Cole, M.A., Patti Schoenlank, B.A., Field Investigator, Anne D. Olsen, Budget Officer, Virginia Lederer and Sherry James, Secretaries, Olive Watterson, M.A. (doctoral candidate and research fellow), and Wayne Lehman, B.A., Research assistant.

The IBR research program includes a broad spectrum of personnel and organizational research funded by research grants and contracts from corporations, military and other government organizations, and institutions. In addition to the objective of providing high quality research and services to meet the applied needs of clients, this program assumes a major responsibility in the training of graduate students and in the advancement of scientific knowledge about organizational behavior and the utilization of personnel in organizational situations. In order to accomplish these complementary objectives most of the research in this program is planned to have relevance at both the theoretical and applied levels, based on analysis of essentially the same data. The model for this approach was taken from the field of molecular biology in which the significant research on the genetic code and the mechanism of hereditary transmission was conducted on preparations that were simultaneously relevant to the understanding of particular diseases and therefore had significant applied clerical importance.

This program is broad in scope and includes research on individual differences, psychological testing, attitudes, organizational and individual performance, organizational and psychological climate, and organizational development. During 1977 the principal projects conducted were in the areas of (1) organizational behavior and organizational effectiveness and (2) personnel selection. The research in this area was under the direction of Professor Lawrence R. James, who also serves as Director and Co-Principal Investigator of the ONR, NIDA, and American Airlines studies (see below). Professor R.P. Crandall has been Associate Director of the NIDA study and Dr. E.D. Stackfleth, of the Firefighter Selection study. Direction of the American Airlines Pilot Selection study was shared by Dr. Sells and Dr. James.

Organizational Effectiveness

Principles and Guidelines for Management and Development of Enlisted Personnel

(Contract No. N00014-76-C-0008), Office of Naval Research
Period. January, 1977 to December, 1977.
Total Award. \$77,000.
1977 Expenditures. \$77,000.

This study was a sequel to prior research on organizational characteristics in relation to personnel effectiveness aboard Navy ships. These studies advanced knowledge concerning the conceptualization and measurement of organizational structure, context, and climate and their relations of performance of

enlisted personnel. They also pointed out the importance of leadership style on the part of superiors and its reciprocal relation to perceptions of personal influence, psychological climate, and other variables relating to subordinates, that were addressed in the present study. The 1977 research was undertaken with special focus on the relevance of the intended results to the Navy Human Resources Management Program.

The primary goal of the project was to develop management principles and guidelines aimed at improving the utilization of personnel. It focused on the study of situational and individual contingencies, and their reciprocal interactions, as they affect employee performance, satisfaction, motivation, and retention.

The study adopted a cognitive theoretical orientation, emphasizing psychological climate (PC) as a key concept. PC constructs are believed to represent the situation as cognized. PC is defined as "the individual's cognitive representations of relatively proximal situational conditions, expressed in terms that reflect psychologically meaningful interpretations of the situation." PC acts as a link, therefore, between system conditions/events (such as technology, structure, supervisory style, workgroup processes, etc.) and individual outcomes (such as performance, satisfaction, etc.). One of the fundamental assumptions of this research project is that increased understanding of the causal antecedents and the effects of PC will aid in designing organizational conditions and/or selecting individuals in order to achieve the best "person-environment fit."

Field data collection was carried out in civilian industrial settings with the expectation that the results would later be validated with Naval personnel in Navy settings. Data were obtained from a high technology sample of systems analysts and computer programmers in a health care organization on the west coast, a mid-level of technology sample of firefighters in a southwestern city, and low technology sample of production line workers in four paper box factories operated by a national corporation headquartered in the northwest. The final samples consisted of 212 systems analysts, 408 firefighters, and 307 production line workers (total: 927). Feedback reports were made to management for data collected on two occasions and a series of theoretical and technical reports was completed based on extensive analysis of the data.

This study carried over in 1978 during which the instruments developed were to be employed in studies of enlisted personnel at naval air training stations. Dr. Lawrence R. James was Co-Principal Investigator and Project Director. Other staff included John J. Hater, Kevin E. Coray, John R. Bruni, and Michael J. Gent, doctoral candidates and research fellows. Secretrial and clerical support was provided by Jannell Johnston, Pamela Jackson, and Leslie James.

(Grant No. DA 01931) National Institute on Drug Abuse

Personnel Selection

Selection of Airline Pilots - American Airlines

Period. 1974--

Total Cost through 1977. \$184,649.

1977 Expenditures. \$45,223.

This study was initiated in 1974 but the major field studies took place starting in 1976. A survey to formulate the psychological requirements for the position of Captain was completed in 1975. At the same time, an experimental test battery, consisting of cognitive and performance test, biographical inventories, and personality and interest measures, was developed and pretested and instruments and procedures were designed for performance measurement for criterion purposes. During 1976 several samples of pilot applicants were tested and training and field criterion data were collected and preliminary validity analyses were undertaken with available data.

Work during 1977 included initial validation of the test battery for two relatively small samples, of 147 recalled from furlough and of 52 in training. Additional applicants were tested and arrangements were made to test a volunteer group of minority pilots (members of the Organization of Black Airline Pilots). This research continued into 1978 as additional applicants were tested and criterion measures were collected. During 1977 several new tests were developed and revisions of existing tests were made on the basis of early data.

The key professional staff in this study were Dr. Lawrence R. James, Project Director, Dr. E. Dean Stackfleth, David Arno, Kevin Coray, and Walter Booth, doctoral candidates and research fellows, Leslie James and Pamela Jackson were the principal support staff.

Fire Department Selection Study

City of Fort Worth

Period. May, 1977 to September, 1978

Total Cost. \$15,000.

Expenditures in 1977. \$8488.

In 1972, the IBR developed and validated a firefighter selection battery for the City of Fort Worth that has been in use since the completion of the original study (Murdy, Lee B. and Norton, Richard P. Fire Private Test Validation Study, City of Fort Worth Fire Department, 1972, IBR Report No. 72-2). At

the time of that study there were virtually no minority fireman employed in Fort Worth and the battery could not be assessed in relation to differential validity. With funds obtained from the U.S. Civil Service Commission, the new study is focused particularly on the development and inclusion of behavioral measures and other instruments that would minimize differential treatment of minority applicants. The developmental work during 1977 was focused principally on test selection and construction and tryout in training situations. This project continued into 1978.

The professional staff responsible were Dr. E. Dean Stackfleth David Arno, and Christopher Hornick, doctoral candidates and research fellows.

Internship Project at Frito-Lay, Inc.

Period. 9 months, October, 1976 - June, 1977.
Total cost. \$3861.

Under a cooperative arrangement with Frito-Lay, Inc. IBR reserach fellow and doctoral candidate John Bruni was assigned to work with Dr. Thomas Brittain of Frito-Lay on the validation of selection tests that had been administered to job applicants for managerial positions in previous years. Mr. Bruni's work was supervised by Dr. Lawrence R. James. Although considerable analysis was completed no publications were feasible from this research.

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