

INSTITUTE OF BEHAVIORAL RESEARCH

ANNUAL REPORT

1973

TEXAS CHRISTIAN UNIVERSITY
FORT WORTH, TEXAS

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 in 1962 as an independent research unit of the University, to provide needed administration and programmatic direction for the developing research program 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, organizational behavior, and epidemiology.

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 3500 books, 50 journals, and an extensive file of Air Force, Army, Navy, NASA and other technical report series, the BIOMEDICAL RESEARCH LABORATORY, with recording equipment, analog-to-digital conversion equipment, special purpose computers, and extensive testing and experimental equipment, 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 three 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 houses the publication office of MULTIVARIATE BEHAVIORAL RESEARCH, a quarterly journal published through the TCU Press by the Society for Multivariate Experimental Psychology.

PONSORS OF FUNDED RESEARCH - 1973

Federal Agencies

National Institute of Mental Health
National Institute on Drug Abuse
US Office of Education
National Center for Health Statistics
Family Planning Services, HEW, Region 6
Office of Naval Research
National Aeronautics and Space Administration
Special Action Office for Drug Abuse Prevention,
Executive Office of the President
U.S. Army Construction Engineering Research Laboratory

Industry

American Airlines, Inc.
Eastern Airlines, Inc.
Air Canada (T. J. Gazda and Associates)
Xerox Corporation (T. J. Gazda and Associates)
Braniff International Airlines
Kaiser-Permanente Medical Care Program

Local Government and Community Agencies

Tarrant County Hospital District
North Texas Tuberculosis and Respiratory
Disease Association

FUNDED RESEARCH. EXPENDITURES IN 1973.

DRUG ABUSE

Drug Abuse Reporting Program. File Maintenance Program Continuation of Contract No. HSM 42-69-6 (NIMH)	\$268,677.
Drug Abuse Reporting Program. Research on Evaluation of Treatment. Contract No. HSM 42-72-132 (NIMH)	361,312.
Drug Abuse Epidemiology Data Center. Special Action Office for Drug Abuse Prevention. Executive Office of the President. (Grant No. DA4RG005).	5,793.
Special Studies Related to Drug Abuse Research and Evaluation. Special Action Office for Drug Abuse Prevention. Executive Office of the President.	16,233.

PERSONALITY

Critical Appraisal of Research in the Personality, Emotions, Motivation Domain. Continuation of OE Grant 2665 (USPE)	27,332.
Objective Scales for the TAT in the Health Examination Survey. Continuation of Contract No. PH 109-66-75 (NCHS)	3,208

INDUSTRIAL AND ORGANIZATIONAL RESEARCH

Airline Organizational and Personnel Research. (American Airlines, Eastern Airlines).	43,154.
Organizational Characteristics and Personnel Effectiveness in the Framework of Social System Analysis. (ONR Contract No. N0011-72-0179-0001) Office of Naval Research.	66,686.
Analysis of Organizational Climate at the Buffalo District Office of the U. S. Army Corps of Engineers. Contract with the Department of the Army, Construction Engineering Research Laboratory.	3,479.
Organizational Climate and Management Studies	4,632.
Organizational Development	14,062.
Social Structure and Group Behavior in Extended-Duration Space Missions. Completion of NASA Grant No. 44-009-008.	940.

FAMILY PLANNING

Evaluation of Tarrant County Family Planning Program. Continuation of Subcontract with Tarrant County Hospital District.	10,407.
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FUNDED RESEARCH. EXPENDITURES IN 1973 - (Continued)

BEHAVIOR MODIFICATION

Smoking Withdrawal Research. North Texas Tuberculosis and Respiratory Disease Association.	4,838.
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Total	\$830,753.
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PROFESSIONAL STAFF DURING 1973

IBR Faculty Members

S. B. Sells, Ph.D.	Research Professor and Director
R. G. Demaree, Ph.D.	Professor of Psychology and Professor, IBR
Norman A. Crowder, M.A.	Visiting Professor, IBR
Douglas K. Spiegel, Ph.D.	Visiting Professor, IBR
Richard Gorsuch, Ph.D.	Associate Professor, IBR
Steven G. Cole, Ph.D.	Assistant Professor of Psychology and Assistant Professor, IBR
E. Alan Hartman, Ph.D.	Assistant Professor, IBR
Lawrence R. James, Ph.D.	Assistant Professor, IBR
George W. Joe, Ed.D.	Assistant Professor, IBR
Allan P. Jones, Ph.D.	Assistant Professor, IBR
Douglas McRae, Ph.D.	Assistant Professor, IBR
D. Dwayne Simpson, Ph.D.	Assistant Professor, IBR

Affiliated Faculty Members

James R. Henley, Ph.D.	Assistant Professor of Sociology
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Research Staff

Arthur K. Berliner, M.S.S.A.	Research Sociologist, IBR
Janice Neman, M.A.	Assistant Research Psychologist
Anne D. Olsen, B.A.	Assistant Research Psychologist
Deena D. Watson, M.A.	Assistant Research Psychologist
Marcia Glick, B.A.	Field Investigator
May D. McReynolds, B.A.	Research Assistant

Graduate Fellows and Assistants

Tomme R. Actkinson	Graduate Research Fellow
David Arno	Graduate Research Fellow
John Bruni	Graduate Research Fellow
David Bryon	Graduate Research Fellow
Mark Butler	Graduate Research Fellow
Anthony S. Centore	Graduate Research Fellow
Karen Collins	Graduate Research Fellow
Arthur Covert	Graduate Research Fellow
Bill Curtis	Graduate Research Fellow
Jimmy Fleming	Graduate Research Fellow
Bobby Gant	Graduate Research Fellow
Gary Giles	Graduate Research Fellow
Candyce Greer	Graduate Research Fellow
Kurt Helm	Graduate Research Fellow
Christopher Hornick	Graduate Research Fellow
Gary L. Long	Graduate Research Fellow
Thomas Hammond	Graduate Research Fellow

Arnold Nelson*
Michael Rainone
Judy Rosner
Olive Watterson
J. Arthur Woodward*

Graduate Research Fellow
Graduate Research Fellow
Graduate Research Assistant
Graduate Research Fellow
Graduate Research Fellow

Computational Staff

Charles R. Kee, B.S.
Michael Abbamonte, M.S.
David McMillan, B.A.
Donald S. Willis, M.A.
James E. Ray, B.B.A.
David Deal, B.A.
Garland Jones

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Computational Scientist
Research Programmer, Fellow
Research Programmer, Fellow
Systems Analyst
Research Programmer
Computer Services Coordinator

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Louise McQuade
Byerly Woodward
Nancy Bruce

Administrative Officer
Secretary
Secretary
Editorial Assistant, MBR
Editorial Assistant, MBR
IBR Librarian

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Linda Beauchamp
Francis Castleberry
Mollie Fleming
Ellen Flexman
Joan McGhee
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Betty O'Neal
Patti Schoenlank
Rebecca Sparks
Janice K. White
Jo Ann Wier
James Williams
Marcia Butler

Editor, DARP
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Research Assistant
Research Assistant
Research Assistant
Editor, DARP
Editor, DARP
Editor, DARP
Editor, DARP
Editor, Trainee
Research Assistant
Editor, DARP
Research Assistant

*Ph.D. 1973

Clerical and Keypunch Staff

Patsy Andress
Betty Cole
Rutholene Davis
Faye Dennie
Shannon Grissom
Mary Hostvedt
Pamela Jackson
Carolyn Kelly
Cynthia Kelly
Angela Lowe
Virginia Lederer
Judi Morton
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Sandra Rabinowitz
Betty Regian
Brenda Roden
Wanda Sherman
Elizabeth B. Dodge

Keypunch Operator
Research Assistant
Keypunch Operator
Keypunch Operator
Keypunch Operator
Secretary, DARP
Statistical Clerk
Clerk Typist/Clerk
Statistical Clerk
Computer Tape Librarian
Secretary
Secretary
Research Clerk
MT/ST Operator/Clerk Typist
MT/ST Operator/Clerk Typist
Keypunch Operator, Supervisor
Keypunch Operator
Clerk Typist

Undergraduate Assistants

Elizabeth B. Dodge
Jeffrey R. Guy
Kathryn Kelly
Richard C. Markham
Thomas Sander
Kathleen Monahan

Clerk Typist
Coder
Research Clerk
Coder
Programming Assistant
Clerical Assistant

Consultants

Torrey C. Brown, Ph.D., East Baltimore Drug Abuse Center, Baltimore, Md.	Research Consultant
Morton Casson, Ph.D., Eagleville Hospital and Rehabilitation Center, Eagleville, Pa.	Research Consultant
Isidor Chein, Ph.D., Professor of Psychology, New York University	Research Consultant
Robert Ennis, M.S.W., Psychotherapeutic Treatment Clinic, Flint, Michigan	Research Consultant
Daniel Glaser, Ph.D., Professor of Sociology and Anthropology, University of Southern California	Research Consultant
Fred Glaser, M.D., Eastern Pennsylvania Psychiatric Institute	Research Consultant
Robert Hickey, Ph.D., Director, Division of Drug Abuse, New Jersey College of Medicine	Research Consultant
Richard Jessor, Ph.D., Institute of Behavioral Science, University of Colorado	Research Consultant
Herbert D. Kleber, M.D., Project Director Connecticut Mental Health Center	Research Consultant
James F. Maddux, M.D., University of Texas, Health Science Center, San Antonio, Tx.	Research Consultant
John M. Martin, Ph.D., Professor of Sociology and Chairman, Institute for Social Research, Fordham University	Research Consultant
Alex Richman, M.D., New York, New York	Research Consultant
Edward Senay, M.D., Director, Illinois Drug Abuse Program	Research Consultant

O. Jim Adair, President Pacer Company	Consultant in Systems Programming
George R. Brooks, B.S. Sytems Analyst, Pacer Company	Consultant in Systems Programming
Carl Peters, B.S., Manager of Operations, Telpar, Inc.	Consultant in Systems Programming
James E. Wicker, M.A., Head, Human Factors, General Dynamics	Consultant in Systems Programming

IBR RESEARCH PROGRAM - 1973

DRUG ABUSE RESEARCH

Drug Abuse Reporting Program (DARP)

(Contract No. HSM-42-69-6), NIMH

Period. January 1969 through August 1974

Total Award. \$1,009,215.00

1973 Expenditures. \$268,677.00

This is a national program, supported by NIMH, which was started in June, 1969, as an unsolicited research project, following a pilot study funded under a previous grant. The DARP was conceived as a data base for research on the evaluation of treatment for drug abuse and at its initiation in June, 1969, included only six treatment programs. However, as the drug abuse problem in the United States accelerated, it was expanded to receive patient reports from over 50 treatment programs and to provide information for program management purposes in addition to the research. In May of 1972, the file maintenance and research functions were separated and funded under different projects (DARP file maintenance under continuation of HSM 42-69-6, and research on evaluation of treatment under HSM 42-72-132).

The DARP reporting of new admissions was discontinued on March 31, 1973 but Status Evaluation reports were continued for all patients then in treatment, for another year. At the time of discontinuation of new admissions, the file included a total of 43,931 patients. The reporting program involves a system for accounting for individual patients, prospectively and longitudinally, from admission to final termination (with provision for readmission at any time). This is accomplished by means of two reporting forms, which were revised in October, 1971 (beginning of Report Period 15). The Admission Form, a background history, describes patient characteristics and is the basis for patient classification and baseline measures in the evaluative research. The bi-monthly Status Evaluation Form provides progress information on treatment delivered as well as on patient behavior during treatment in respect to employment, drug and alcohol abuse, family relations, illegal activities, arrests, and time in jail; it is used both for classification of treatment and for the computation of during-treatment criterion measures for research.

Reports received are checked by staff editors, key punched, and checked further by special computer programs for consistency and reasonableness of information before being entered into the computer file. The file is updated periodically with each period-increment of information and continually as information is received in response to correspondence resulting from the editing and checking procedures. Summary statistical reports are prepared for each period and on a semi-annual and annual basis. Beginning with period 19 (June, July, 1972) a Management by Exception Report was initiated which provides feedback information to the reporting agencies as well as to the Washington NIMH staff that enables comparison of individual agency performance with other agencies and with system averages, by age-race-sex patient groups.

The final report period for the DARP (Period No. 29) for patients admitted during February-March, 1973, ended on March 31, 1974. Between that date and August 31, 1974, overdue reports will be received and the master file edited and completed. At that time, the file for year 4 will be made available to the IBR drug abuse treatment evaluation research staff and the total DARP file will be transferred to the Drug Abuse Epidemiology Data Center; the evaluation research and the data center are discussed below.

The key staff members have been Anne Olsen, Project Director, Marcia Glick, and Ellen Flexman. Charles Kee and Ed Ray of the Computational Staff have provided continuing data processing expertise and support.

DARP-Based Research Program on the Evaluation of Treatment for Drug Abuse
(Contract No. HSM-42-72-132), NIMH
Period. April 16, 1972 to June 24, 1974
Total Award. \$663,667.00
1973 Expenditures. \$361,312.00

The research program on evaluation of treatment for drug abuse, based on the DARP file, was established to investigate the overall effectiveness of various treatments represented among the agencies reporting for the various types of patients admitted to these treatments. Although the DARP file was initiated in June, 1969, it was not feasible for the formal research program to begin until the data had matured to the point that a full year's information on experience in treatment was available for a substantial number of patients. A preliminary analysis of the first years' admissions was completed during 1971 (Joe, Person, Sells, and Retka, 1972); this was based on a total sample of 3134 cases and was of major importance in providing background for the design of subsequent studies.

The year 1 admissions were combined with those of year 2 to form the first cohort for the major evaluative research effort; the remaining two cohorts were: 2 - the year 3 admissions, and 3 - the year 4 admissions. The total samples for the three cohorts were:

cohort 1 (years 1 & 2)	11,385
cohort 2 (year 3)	15,810
cohort 3 (year 4)	16,736
Total	43,931

The grand strategy of the research program conceptualized the evaluation problem as involving two stages: 1) during-treatment, and 2) post-treatment. The contract (HSM-42-72-132) under which this research has operated has funded only the during-treatment stage; a series of research reports based on studies of cohort 1 was completed in 1973 (see titles listed in bibliography for IBR reports, 72-14, 72-18, 73-2, 73-3, 73-4, 73-5, 73-6, 73-7, 73-8, 73-9, 73-10, 73-12); the research on cohort 2 has been in progress since June, 1973, and the studies on cohort 3 are scheduled to start in June, 1974. Proposals have been submitted for funding of post-treatment followup studies for samples of cohorts 1 and 2; if approved, these studies will start in August or September, 1974. A summary report of the cohort 1 studies was scheduled for presentation in March, 1974 at the National Drug Abuse Conference, in Chicago (Chatham and Sells) and contracts

were signed with the Ballinger Publishing Company, of Cambridge, Massachusetts, a subsidiary of J. B. Lippincott Company, for book publication of the 12 technical reports on cohort 1 in two volumes; these are scheduled to be published in July or August, 1974.

This research program includes taxonomic studies for patient classification (by demographic characteristics, background factors, and drug abuse patterns) and treatment classification, research on the construction of criterion measures, analytic studies of patient background and development, and treatment outcome evaluation in terms of retention in treatment, differential death rates and causes of death, and behavioral outcome (criterion measures), as well as a number of special studies of substantive interest, such as the characteristics of readmitted patients and the relationships of alcohol and drug use.

The principal research staff has included Professors Cole, Demaree, Gorsuch, James, Joe, McRae, Sells, Simpson, and Spiegel, and Miss Watson. Dr. Spiegel participated full time during the 1972-1973 academic year as a Visiting Professor, on leave from the University of South Dakota, and continues in a consultant capacity. He was replaced on the full time staff by Professor Gorsuch. Dr. McRae participated in a visiting capacity during the last six months of 1972. Miss Watson moved to a new position and was replaced by Dr. Cole. Dr. James undertook a special multivariate study of treatment programs in coordination with Dr. Cole. Professor Norman Crowder participated as technical editor of the Ballinger books. The Computational Staff, including Charles Kee, Michael Abbamonte, Donald Willis, Ed Ray, Kathlyn Bice, and David Deal with the assistance of consultants Jim Adair and George Brooks, deserve major credit for the successful completion of this research. The Research Fellows, including Janice Neman, Olive Watterson, Judith Rosner, Gary Long, Mark Butler, Bill Curtis, and Tom Hammond, have proved to be outstanding aides to the respective study directors, as were May McReynolds, assistant to Miss Watson, and Marcia Glick, assistant to Dr. Cole, who made many of the agency site visits that formed a basis for the treatment classification research.

Both of these projects have been aided by the work of Mrs. Anne Olsen, project director of the DARP and administrative manager of the IBR drug abuse program.

Drug Abuse Epidemiology Data Center (DAEDAC)

(Grant No. DA4 RG008) Executive Office of the President, Special Action Office for Drug Abuse Prevention.

Period. 2 years, beginning November 15, 1973.

Total Award. \$252,730.00

1973 Expenditures. \$5,793.00

The DAEDAC is a federally supported, computerized data center at the IBR. DAEDAC was established with the following goals:

1. To create a comprehensive data file of nationally significant data concerned with epidemiological and social science aspects of drug use and abuse.
2. To make such data available to members of the scientific community for possible further research analysis.

3. To compile significant information from these files and from public reports in order to provide answers to inquiries as well as a substantive information base for resolving questions of national policy concerning drug abuse.

The policies and procedures of the Center, developed for the use of contributors to and users of the file, are as follows:

The DAEDAC program will involve two files that will be available for scientific and general information used when the initial developmental phase is completed. These are 1) The Data File, and 2) The Aggregate File.

The 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 epidemiological purposes of the Center. For the first year of operation, the major emphasis will be on the acquisition of suitable files. Beginning around January, 1975 the holdings in this file will be published and procedures will be established for their use by the scientific community.

The Aggregate File represents sets of aggregate and summary data reported in the research literature and in statistical series that focus primarily on the major epidemiological aspects of drug abuse. When it reaches the initial stage of completion (also around January 1975) it will be available to scientific investigators and to administrative inquiries. Responses will be channeled through the National Clearinghouse for Drug Abuse Information at the National Institute on Drug Abuse.

The files acquired are to be retained subject to the conditions of agreement to be concluded with contributors and subject to the following constraints.

Confidentiality of Data. In view of the research objectives of the Center, there is no need for identification of any individual respondents; at the same time the nature of this Center requires a major commitment to a policy of confidentiality of all data files. This is essential to the integrity of the Center and is the basis for its data organization and procedures. The Center policy is therefore to accomplish editing of data files prior to their accession and to follow 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 will be removed and additional measures will be adopted to prevent identification by profile information.

Types of Files Included. Data acquired by the Center will be restricted primarily to files that are considered relevant to the epidemiology of drug abuse and that have national significance, alone or in combination with other data, for questions of incidence, prevalence, morbidity and mortality. Such data will also be acceptable with regard to validity, reliability, completeness, sampling adequacy, and recency.

Arrangements with Contributors. Contributors are encouraged to specify a period of time (the length to be negotiated with DAEDAC) before their data will be made available to others, so their own data analyses may be completed.

Contributors are also asked to furnish information qualifying their data in terms of "soft" areas or other identified limitations. These will be called to the attention of potential users as appropriate.

Contributors will be advised of all releases of their data and arrangements will be made for them to receive copies of published reports based directly or indirectly on use of their materials. They will have the opportunity to respond to any commentary on or analysis of their data by receiving information copies of such commentaries or analyses prior to publication. They will receive credit through citation when publications are generated by others using their data, and will be kept informed of all data acquisitions and studies received by DAEDAC. Finally, they will receive copies of all reports generated by DAEDAC staff.

Release of Data to Investigators. To be consistent with canons of scientific practice, and in view of the public sources of funds already invested in most of the data submitted by contributors, it is planned that the files of the Center will be made available to qualified investigators in the general scientific community with a minimum of restrictions.

Qualified investigators are considered to include social and medical scientists and others who demonstrate the training, capability and resources to carry out significant substantive research on epidemiological and social science problems related to drug abuse. It is planned to include graduate students among those eligible to use the DAEDAC files.

Data will be prepared by the Center in accordance with the needs of proposed projects and charges will be billed at cost to the requester. Estimates of costs will be provided and accepted by users prior to preparation of information. Monies received will be deposited to the Center account.

Advisory Committee. The policies and plans adopted by the Center have been developed with the advice of a committee consisting initially of the following persons:

John C. Ball, Ph.D., Department of Psychiatry, Temple University
Health Science Center

Lois Chatham, Ph.D., Division of Resource Development, National
Institute on Drug Abuse

Daniel Glaser, Ph.D., Professor of Criminology, University of
Southern California

William Pollin, M.D., Director, Research Division, Division of
Narcotics & Drug Abuse, N.I.D.A.

Alex Richman, M.D., Utilization and Review Activities, Department
of Psychiatry, Beth Israel Medical Center

Leonard Savitz, Ph.D., Department of Sociology, Temple University

Edward C. Senay, M.D., Drug Abuse Programs Director, Illinois
Drug Abuse Program.

The Center was founded in November, 1973 and up to the end of the
year the Advisory Committee was formed and several staff members appointed.
The initial staff included Mr. Berliner, Dr. Henley, Mr. Kee, Mrs. Bice,
and Mrs. Betty Cole, Research Fellow. Dr. Michael Backenheimer of the
Research Division of N.I.D.A. is the Project Officer. Mr. Charles B.
Lawrence, Jr., former Deputy Director of the U.S. Census Bureau, has
served as a consultant on data base management systems.

Special Studies Related to Drug Abuse Research and Evaluation

(Grant No. DA3AC383). Special Action Office for Drug Abuse Prevention.

Executive Office of the President

Period. February, 1973 through February, 1974.

Total Award. \$16,517.00

1973 Expenditures. \$16,233.00

This small grant was awarded to enable the IBR drug abuse treatment
evaluation staff to carry out several special studies, using the DARP data,
that were of interest to the Special Action Office but not funded under
the NIMH contract. These were mainly on problems of trends with respect
to year of onset of drug abuse and of analysis of criminological data
available on the DARP population. These studies, by Dr. Sells, Dr. Demaree,
and Mr. Kee, were scheduled for completion in the first quarter of 1974.

PERSONALITY

Critical Appraisal of Research in the PEM (Personality, Emotions, Motivation)

Domain.

(Grant No. OE 2665), USOE

Period. November 2, 1970 to December 31, 1973.

Total Award. \$83,983.00

1973 Expenditures. \$27,332.00

The purpose of this grant study is to survey the current state of research
in the PEM domain and to make recommendations for needed research. Following
consultation with an advisory committee consisting of Drs. Robert W. Beezer
(USPE), Raymond B. Cattell (U. Illinois), J. McV. Hunt (U. Illinois), Donald
W. Mackinnon (U. Cal., Berkeley), Warren T. Norman (U. Michigan), and
S. B. Sells (TCU), Principal Investigator, it was agreed that literature
review would be inappropriate. The approach adopted was to invite leading
investigators in selected problem areas to form task groups to consider the
state of research in their areas, identify gaps in existing knowledge,

point to promising investigative approaches, and make recommendations concerning needed research.

The studies completed during 1973 are listed in the list of IBR 1973 publications. They include the following task group reports:

Trait Structure, Multivariate Approach	IBR No. 73-21	Cartwright, Krause, Fiske, Comrey and Hundleby
Interests and Vocational Guidance	IBR No. 73-22	Campbell, Sharf, Harmon, and Zytowski
Emotions as Variables in Teaching, Learning and Development of Social Skills	IBR No. 73-23	Izard, Tomkins, Singer and Savitsky
Creativity	IBR No. 73-24	Torrance, Phillips, Davis, Aliotti, and Treffinger
Child Development	IBR No. 73-25	Meyer, Hall, Lewis and Sigel
Psychological Processes	IBR No. 73-31	Fiske

Key Staff. Principal Investigator, Dr. Sells; Co-Director, Dr. Demaree, Editor, Mr. Crowder, Secretary, Mrs. McQuade.

Objective Scales for the TAT in the Health Examination Survey.
(Contract No. PH 109-66-75), NCHS
Period. June 1966 through January 1973.
Total Award. \$130,308.00
1973 Expenditures. \$3,208.00

The IBR has for several years been engaged in continuing research efforts related to the national health survey activities of the National Center for Health Statistics. This research produced a monograph evaluating the psychological measures in Cycle II of the Health Examination Survey, published by the Center in 1966 (NCHS Series 2, No. 15), and in addition, three IBR technical reports that summarized previous research on the development of objective scoring scales for the Thematic Apperception Test, a major psychological measure used in Cycle II (age range 6 to 11) and again in Cycle III (age range 12 to 18) of the Health Examination Survey (Sells and Cox, 1966; Brown and Sells, 1970; Neman, Brown and Sells, 1971). The latter report, based on the Brown and Sells Cycle II study and completed by Dr. Ronald Neman, was recently published by the Center (NCHS Series 2, No. 58, December, 1973).

The final phase of the project, research on the Cycle III data, was carried out by Janice Neman and completed in 1973. The Cycle III study

involved (1) scoring of TAT responses and construction of language and emotional adjustment scales for the TAT; (2) selection and development of criterion measures from questionnaire and psychometric data obtained in the Cycle III Health Examination Survey; (3) validation of the TAT scales against the criterion measures; and (4) construction of national norms for the adolescent age group. An IBR technical report summarizing the final phase of the TAT research (Neman, Neman, and Sells, 1973) is scheduled for publication by NCHS in 1974.

Key Personnel. Principal Investigator, Dr. Sells; Research Supervisor, Mrs. Janice Neman; Statistical Analyst, Dr. Ronald Neman; Secretary, Mrs. Mary Hostvedt.

INDUSTRIAL AND ORGANIZATIONAL RESEARCH

The research activities of the IBR encompass 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 services to meet the applied needs of clients, this program assumes a major responsibility to contribute to the advancement of scientific knowledge about organizational behavior and the utilization of personnel in organizational situations. The scope of this program includes research on individual differences, psychological testing, attitudes, organizational change, organizational and individual performance, and organizational development. Four faculty members, Drs. Hartman, James, Jones, and Sells, comprise the staff group in this area; in addition, there are 4 fellows, John Bruni, Kurt Helm, Chris Hornick, and Michael Rainone, as well as a clerical staff of four. Current research activities involve four overlapping categories: 1) personnel selection and validation studies, 2) organizational climate surveys, 3) organizational development and 4) organizational effectiveness.

Organizational Climate and Management Surveys

Organizational climate is a developing concept reflecting the global environmental influence of the total organizational situation, management, supervision, work conditions, procedures, and relations in an organization, which is expressed in terms of a number of quantitative dimensions that have implications for the attitudes, health, behaviors, and effectiveness of organizational members. The IBR staff have pioneered in the measurement of organizational climate and in research on its dimensions. Two major organizational climate surveys for industrial clients were begun in 1973, one of the Reservations Department of Eastern Airlines, was completed in December. The second study for the Kaiser Permanente Medical Care Program in Southern California was started in the Fall of 1973 and will continue through 1974. Both studies included personnel and criterion data, in addition to organizational climate variables, to enable research on significant relationships, over and above the applied reports for management purposes. A third study was carried out for the U. S. Army Corps of Engineers, Construction Engineering Research Laboratory (CERL). This study investigated organizational climate in a district office of the U. S.

Army Corps of Engineers. A personnel climate questionnaire was administered to employees of that district office. Profile scores for separate sub-agencies were constructed and reported back to sponsoring personnel along with recommendation for interpretation and use of the data.

Organizational Development

A number of organizational development studies have been carried out for client corporations, to assess training needs of management employees within the context of the current organizational climate. In these studies organizational climate measures are used as comparison data in future comparisons, to assess the effects of the training intervention.

Organizational development became a major area of study for the IBR in 1973 through its association with T. J. Gazda and Associates of Fort Lauderdale, Florida. The organizational development studies conducted in this program included measures of organizational climate as well as training needs of a random sample of the employees. Two major studies were performed in this area; one for Air Canada and one for Xerox Corporation.

Organizational Effectiveness

Study of Organizational Characteristics and Personnel Effectiveness.

(Contract No. N00014-72-A-0179-0001), ONR

Period. January 1972 through June 1974.

Total Award. \$170,542.00

1973 Expenditures. \$66,686.00

A study of conditions aboard ship as they affect health and performance has been undertaken as a joint project of the Institute of Behavioral Research and the Navy Medical Neuropsychiatric Research Unit in San Diego, California. The primary focus of this study is upon the U. S. Navy ship and the habitability and climate conditions which relate to health, satisfaction and performance of individuals and to the performance and effectiveness of the ship.

During this second year of a three year study, instruments revised on the basis of thirteen ships during the first year were administered to an additional twenty-one ships and approximately 6,000 subjects in the Mediterranean and Pacific. Data were also gathered from several shore installations in the West Coast and from the installation in the Indian Ocean. Comparison data were obtained from two fire departments, a group of civil engineers and to a large hospital related organization. In addition, an abbreviated form of the questionnaire instrument and several performance measures were readministered to all ships following the completion of their tour of duty.

Key Personnel. Principal Investigator, Dr. Sells; Project Director, Dr. Jones, Dr. James; Secretary, Mrs. Morton; Research Fellows, Mr. Actkinson, Mr. Bruni, Mr. Helm, and Mr. Hornick.

FAMILY PLANNING

Family Planning Program Evaluation and Research
(Subcontract with Tarrant County Hospital District)
Period. June, 1970 to June, 1973.
Total Award. \$131,220.46
1973 Expenditures. \$10,407.29

The Institute's activity in population research began in June of 1970 when John Peter Smith Hospital (JPSH), a unit of the Tarrant County Hospital District, in cooperation with the Planned Parenthood Center of Fort Worth and other related community agencies, initiated a family planning program for the medically indigent population of Tarrant County. A HEW grant to the TCHD included the Institute of Behavioral Research (IB) as a subcontractor, with an initial budget in 1972 of \$60,000; the budget for 1973 was \$20,000.

Under the direction of Dr. Cole, the evaluation of the family planning program has been divided into separate but overlapping phases. One phase, with Ellen Flexman as Research Assistant, focused on the development of a computerized data and case file. The major case records were designed as an integral part of this data system to permit efficient measurement and analysis of outcomes as well as maintenance of the case files. The data collected in this phase of the project are currently being analyzed to determine which variables or combinations of variables best describe the successful family planning participant.

The second phase has focused on problem areas in the operation of the family planning programs and on diagnosis as well as development and testing of appropriate solutions. During 1972 Dr. Cole and Rosemary Nelson completed an assessment of the attitudes of community leaders in Tarrant County toward family planning and the family planning program. The results of this research were reported in an IBR technical report and in a paper presented at the 1972 American Psychological Association in Honolulu, Hawaii. In the same year, Dr. Cole and David Bryon produced "A Sourcebook of Vasectomy", published in the TCU Press Behavioral Science Monograph series; this has been distributed as a guide to other vasectomy clinics.

Dr. Cole, with the assistance of Candyce Greer, carried out a study in 1972 to account for attitude change as related to the stage in the clinic visit and the type of family planning clinic (neighborhood vs. hospital). The results of the investigation has been reported in an IBR technical report and will be published in the January 1975 issue of the American Journal of Public Health. This investigation led to the design of a further study of the predictability of longterm family planning participation on the basis of initial attitudes toward the clinic. This was presented as a research proposal to the Department of Health, Education, and Welfare and approved in 1973, but funding was delayed. It has since been funded for a nine-month period, beginning April 1, 1974.

Based on previous project research and psychological theory, Dr. Cole along with Candyce Greer and Janice Neman, developed scales to measure attitudes of teenage mothers toward using birth control. A preliminary

report was presented at the 1973 meeting of the Southwestern Psychological Association. Further investigation in the area has been conducted by Janice Neman and will be completed in 1974.

In addition to the scientific endeavors, the Evaluation project has provided practical services. With the assistance of Dr. Cole, the Family Planning Program initiated a unique record keeping system which was designed to minimize the usual paperwork while maximizing patient care. Dr. Cole and Candyce Greer prepared a description and documentation of the new system as a way to orient new staff members to the clinic and to communicate the information to other clinics.

Key Personnel. Project Director, Dr. Cole; Research Fellow, Candyce Greer.

BEHAVIOR MODIFICATION

Smoking Withdrawal Research.

Period. September 1, 1972 through August 30, 1973.

Total Award. \$5,000.00

1973 Expenditures. \$4,837.72

As a result of the interest on the part of the North Texas Lung Association to offer a treatment program for individuals wishing to stop smoking, the IBR undertook a project aimed at developing an effective smoking-modification program. The program was developed by Bill Curtis, under the direction of Dr. Dwayne Simpson and Dr. Steven Cole.

An extensive review of the smoking modification literature was conducted from which promising techniques were selected for investigation. Therapy involved a group interaction situation and the rapid puffing of cigarettes. Clients were followed for 5 months post-treatment in order to evaluate treatment effectiveness. A summary of the results obtained in this program has been prepared for publication.

As an outgrowth of their involvement in this research, Drs. Simpson and Cole and Mr. Curtis have recently assisted a local chapter of the American Cancer Society in implementing and evaluating a smoking elimination program.

Key Staff. Principal Investigator, Dr. Simpson; Co-Director, Dr. Cole; Graduate Student, Mr. Curtis; Secretary, Mrs. McQuade.

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3. Joe, George W. Patient Background Indices for a Drug-Abusing Population. Development and Distribution Characteristics of a Set of Patient Background Index Measures, Based on the DARP Population Admitted to Treatment Between June 1969 and June 1971. IBR Report No. 73-3, February 15, 1973.
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6. Watterson, Olive, Sells, S. B., and Simpson, D. Dwayne. Death Rates and Causes of Death Among Opiate Addicts in the DARP During 1971-1972. IBR Report No. 73-6, May, 1973.
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33. Sells, S. B. Critical Appraisal of Research in the Personality-Emotions-Motivation Domain. Final Report. IBR Report No. 73-33, December 31, 1973.
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