

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 6

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 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, 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, 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 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 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

Allan P. Jones	Associate Professor in the IBR Ph.D. (Psychology) University of Colorado, 1971 Social psychology and personality research, group processes, organizational psychology, attitudes, deviant behavior, military social psychology, social area studies, multivariate research
D. Dwayne Simpson	Associate Professor in the IBR Ph.D. (Psychology) Texas Christian Univer- sity, 1970 Drug Abuse treatment evaluation research, design, taxonomy of drug abuse patterns, post-treatment followup studies, manage- ment 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, mathe- matical modeling and causal analysis, community dynamics, drug abuse epidemiology and community context effects, social change
E. Alan Hartman	Assistant Professor in the IBR Ph.D. (Psychology) Michigan State University, 1972 Social and industrial psychology, multi- variate statistical methods and computer analysis, organizational psychology, program evaluation, conflict and conflict resolution
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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Research Associate, Field  
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FUNDED RESEARCH. EXPENDITURES IN 1976.

DRUG ABUSE

Drug Abuse Reporting Program. Research on Evaluation of Treatment. Continuation of Contract No. HSM 42-72-132 (National Institute on Drug Abuse)	\$ 83,219.
Drug Abuse Epidemiology Data Center Grant No. 8ROI-DA-01400-01, (National Institute on Drug Abuse)	269,380.
Post-Treatment Followup of DARP Cohorts 1 and 2, Grant No. 1 H81-DA-01598-01 (National Institute on Drug Abuse)	845,957.
Assessment for Combined Treatment for Alcohol and Drug Abuse Clients. Contract No. ADM 281-76-0024 (National Institute of Alcohol Abuse And Alcoholism)	37,946.

INDUSTRIAL AND ORGANIZATIONAL RESEARCH

Organizational Characteristics and Personnel Effectiveness in the Framework of Social System Analysis (ONR) Contract No. N001-72-0179-0001 Office of Naval Research	56,172.
Development of Airline Pilot Selection Battery (American Airlines)	40,004.
Organizational Climate and Management Personnel Study (Air Canada)	18,500.
Organizational Climate and Management Study (Fort Worth National Bank)	5,888.
Other Studies	29,309.
Total	1,486,375.

## IBR RESEARCH PROGRAM - 1976

### DRUG ABUSE RESEARCH

DARP-Based Research Program on the Evaluation of Treatment for Drug Abuse (Contract No. HSM-42-72-132), National Institute on Drug Abuse

Period. April, 1976 to April, 1977

Total Award. \$1,227,262.

1976 Expenditures. \$83,219.

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 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 since 1972 has funded only the during-treatment stage; a series of research reports based on studies of Cohort 1 was summarized in the 1973 Annual report and incorporated in 1974 in the two-volume Ballinger publication edited by Sells; two further series of reports, those for Cohort 2 completed in 1974, and those for Cohort 3 completed in 1975, have been published in Volumes 3, 4, and 5, in 1976, by the Ballinger Publishing Company, edited by Sells and Simpson. A 3-year grant for the post-treatment followup of samples of Cohorts 1 and 2 was funded in 1974.

This project was started on 1 August, 1974 and is reported next in this section. (Subsequently, in June, 1977 approval was received for the followup of a sample from Cohort 3, to begin August 1, 1977.)

The continuing research on the DARP file in 1976 involved mainly a study on the effects of racial and ethnic composition of treatment programs on treatment outcomes. This was directed by Drs. G. W. Joe and B. K. Singh, with the assistance of graduate fellows Dianne Finklea and Richard Hudiburg.

This study (IBR Report No. 77-7) examined during-treatment outcomes for methadone maintenance and outpatient drug free treatment programs in relation to race-ethnicity, race variables reflecting treatment composition, race variables reflecting community structure, and a profile of variables representing demographic characteristics, patient background, treatment type, and tenure. The primary purpose was to determine the predictive influence of race-ethnicity and treatment race composition in relation to community structure, patient background, and treatment type and tenure. It was found that a "race" factor is important to the understanding of during-treatment outcomes, and that the nature of this factor may be more strongly rooted in the community environment than is generally considered in treatment evaluation research. Race, race-ratio, and majority-minority status of an individual patient did not generally account for statistically significant portions of the during-treatment criterion variance beyond that represented in the other variables in the study. It was thought that this was explained by the correlations of race-ratio and of race with the community "race" variables, such as percentages of Blacks, Whites, and other groups in the community.

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 1977  
Total Award. \$1,789,739.00  
1976 Expenditures. \$ 845,957.00

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 cohort for which adequate numbers of patients were included in the respective cohort population, carried the research on evaluation of treatment forward to embrace post-DARP 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 patients.

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 original 19. 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 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.

A major problem was encountered in arranging for the field work as a result of the safeguards of privacy and confidentiality originally incorporated in the DARP. Since the DARP data were reported by agency code numbers only and individual identities were not included, it was necessary to go back to the agencies to identify the patients in the sample. A plan was developed with the major subcontractor, NORC, that involved disclosure of names and addresses to NORC only, to implement the field work, and reporting to IBR by the original agency numbers. The identity information is to be destroyed on completion of the research. A link file was established at York University (Toronto, Canada) where patient identities could be related to identification numbers; the field interview forms used NORC-numbers and did not directly connect respondents

to the DARP. These arrangements were made to protect the files against subpoena or other efforts by any criminal justice authority to obtain any of the data concerning patients included in the study.

The development and pretesting of the field interview was a joint effort of NORC and IBR and the resulting form and manual represents the product of the expertise of the two staff groups. Extensive field tryouts were held both in Chicago and Fort Worth after each revision and the final interview represents an impressive combination of the inputs of the two professional groups. A Spanish translation was prepared for use in Puerto Rico and in the United States, for Spanish-speaking patients.

In conjunction with the followup studies, a major new phase of work was initiated, to take account of community context factors that might influence treatment outcomes. To this end, the IBR staff has conducted a series of area studies of community structure, attitudes, and other factors and extracted population, economic, and crime statistics for DARP cities from Census and other published sources. This project has been the responsibility of Dr. B. K. Singh. Anne Olsen supervised the field work conducted by a team composed of Patti Schoenlank, Julie Lopez-Gomez, and Carol Ward.

The performance of NORC and APT in the locating and interviewing of the followup samples has been excellent. The completion rate of location of sample clients and interviews exceeded 85%. The professional caliber of the field staff was clearly indicated both by the quality of the data received and the absence of any incidents related to privacy, confidentiality, or personal indignity throughout the period of interviewing.

The initial gross results for the Cohort 1 sample presented a generally favorable picture of the status in 1975-76 of this cohort of patients who entered treatment in 1969-71. Most of them (53%) had terminated their relations with their respective programs between 4 and 6 years prior to the followup interview and 31% were out for 3 to 4 years. Despite the overall favorable impression, some of the detailed outcomes had sobering implications. First, although the post-treatment levels of opioid and nonopioid drug use, illegal activities, time spent in jail, and unemployment showed dramatic improvements compared to pretreatment levels, there was still substantial residual deviance in the sample. This was differentially distributed, as discussed below, but indicates overall that although the rehabilitation observed was extensive it was not by any means complete.

The post-DARP decreases in opioid and nonopioid use occurred after an initial rise above during-treatment levels. However, by contrast, marihuana use continued to rise above

even pre-DARP levels and at the time of the followup interview about 55% of the total Cohort 1 sample reported some marihuana use, compared to 43% pre-DARP. Alcohol use overall showed no remarkable trends and there was much variation among subgroups. Second, a large percentage (61%) of the Cohort 1 sample returned to treatment after DARP. And third, over 25% reported living with other regular drug users at the time of the followup interview. These results were interpreted to imply that despite considerable reduction of their drug habits and success in finding jobs, many of these individuals continued to have close ties with the drug culture and further need for treatment, either voluntarily or under coercion.

As mentioned earlier, the DARP during-treatment research indicated that drug use during DARP treatment was reduced appreciably from pretreatment levels, the followup study found further that a significant drop in drug use also occurred during other, post-DARP treatments. Furthermore, the beneficial effects of treatment in terms of reduced drug use generally continued beyond the end of treatment. For instance, comparisons of mean drug use levels before, during, and after post-DARP treatment revealed significant reductions from pretreatment in opioid and nonopioid (but not marihuana) drug use.

Examination of drug use and treatment during the first 3 years post-DARP revealed several different and noteworthy outcome profiles. Thirty-nine percent of the DARP Cohort 1 followup sample had rather successful outcomes; these individuals had no further drug treatment during the 3 years after DARP, and almost half (42%) of this group used no opioid or nonopioid drugs at all during this time period. An additional 14% of the followup sample had some post-DARP treatment but were out by Year 3, and their opioid use during that year was low and comparable to that of the group that had no further treatment. However 32% of the followup sample showed relatively poor outcomes in that these persons were back in treatment at least by Year 3 and the majority reported 1 month or more of daily opioid use in each of the first 3 years following DARP.

In general, return to treatment appeared as a negative outcome for evaluation of DARP treatment since it was usually preceded by a rise in opioid use and other indications of deviant behavior. However, early post-DARP return was associated with less deviance than return two or three years after DARP termination. Favorable post-DARP outcomes were associated with longer time in DARP treatment and also those reported in DARP as having completed treatment (and who tended to remain in treatment longer) tended to have more favorable outcomes than others.

The followup sample for Cohort 1 included persons who had been patients in MM (methadone maintenance), TC (therapeutic community), and DT-OP (outpatient-ambulatory detoxification) programs in DARP, as well as an IO (Intake Only) group, who



had been admitted but did not enter into treatment. Of these four groups, the overall post-treatment outcomes for the first full year following treatment were most favorable for TC, followed closely by MM and were poorest for DT-OP and IO. They were most favorable for the small Puerto Rican subsample, followed by Whites, and Blacks, and poorest for the small Mexican-American subsample; however, the differences among ethnic groups were not as great as those between TC and MM, at the high extreme, and DT-OP and IO at the lower extreme. Sex differences were not remarkable, but overall, females had slightly higher outcomes than males. Although these group differences were clearly indicated by the data it should be understood that they do not reflect the more detailed results taking into account variations related to treatment type, age, drug use pattern, and total treatment history reflect research in progress. That will be presented in the full report, in 1977.

The key personnel of this project have been Dr. Simpson, Dr. Joe, Dr. Demaree, Dr. Singh, Anne Olsen, James Savage, Michael Lloyd, Michael Gent, Pamela Jackson, Olive Watterson, Patti Schoenlank, Julie Lopez-Gomez, and Carol Ward. Charles Kee and Donald Willis were principally responsible for computer programming support.

Drug Abuse Epidemiology Data Center DAEDAC  
(Grant No. DA4 RG008) Executive Office of the President,  
Special Action Office for Drug Abuse Prevention. (Grant  
No. 2ROI-DA-01400-02) National Institute on Drug Abuse  
Period.  
Total Award. \$476,000.00  
1976 Expenditures. \$269,380.00

### 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 epidemiological 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. In view of the research objectives of the Center, there is no need for identification of individual respondents; at the same time the nature of the 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 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, is systematically removed prior to accession and additional measures have been adopted to prevent inadvertent identification of individual respondents.

Consistent with the canons of scientific practice, and in view of the public sources of funds already invested in most of the data submitted by contributors, 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 to address research problems formulated by investigators, using DAEDAC files; for such purposes 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.

### 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, 1976, over 3,000 documents had been collected and classified.

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.

The DAEDAC staff in 1976 included LaVerne D. Knezek, Ph.D., Assistant Professor, IBR and Project Supervisor, Marianne W. Babitch, M.L.S., Acquisitions Librarian, Eloisa A. Garcia, M.L.S., Editor (up to September, 1976), Sharon D. Shelton, M.S., Editor, Otto Heuckeroth, Ph.D., Research Analyst, Stephen L. Williams, M. A., Retrieval Specialist, Arthur W. Covert, M.ED., Editorial Assistant, Audrey V. Vanderhoof, M.A.T., Assistant Editor, Roleigh H. Martin, B. S., Research Assistant, Jerry M. Itzig, M. A., IBR Research Fellow, Bennett W. Fletcher, B. S., IBR Research Fellow, Patricia L. Covert, Project Secretary, Karen M. Kroh, Data Coder, Pamela J. Fisher, Data Entry Operator, and Jeanneane Huey, Data Entry Operator. Support by the IBR computational staff is given by Charles Kee, Manager, Kathlyn Bice, analyst, and Diane Koperski, programmer. Professors Demaree, Joe, Singh, and Knezek form the data review and selection committee. Anne Olsen is the Project Budget Officer.

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 April, 1977.

Total Award. \$81,578.00

1976 Expenditures. \$37,946.00

This study to assess combined treatments for alcohol and drug abuse clients was funded as a ten month contract beginning July 1, 1976. The 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. 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 twenty programs were visited, five of each program type.

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, 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 301 drug clients and 291 alcohol clients were examined. In all, 41 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 November, 1976, site visits were made to the 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. Data were gathered on program philosophy and goals, treatment strategy, counseling strategy, sanctions and privileges, accessibility of treatment, and ancillary services. Treatment staff and clients were included in the survey. 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 was scheduled for completion in March, 1977.

Key personnel included Dr. S. G. Cole, Elizabeth Cole, Patti Schoenlank, Greg Nelson, and Virginia Lederer.

## INDUSTRIAL AND ORGANIZATIONAL RESEARCH

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. The scope of the program includes research on individual differences, psychological testing, attitudes, organizational change, organizational and individual performance, organizational and psychological climate, and organizational development. Drs. Hartman, James, Jones, and Sells comprised the staff group in this area; the 1976 group of graduate research fellows included John Bruni, Elizabeth Cole, Chris Hornick, John Hater, and Walter Booth; Leslie James and Marcia Butler have been research assistants and Pamela Jackson, research clerk. Current research activities involved three overlapping categories: (1) personnel selection and validation studies, (2) program evaluation studies, and (3) studies of organizational functioning and effectiveness.

### Organizational Effectiveness

#### Study of Organizational Characteristics and Personnel Effectiveness.

(Contract No. N00014-76-C-0008), Office of Naval Research  
Period. July 1, 1975 - October 31, 1976  
Total Award. \$94,800.00  
1976 Expenditures. \$56,172.00

This study of conditions aboard ship as they affect crew health and performance was undertaken as a joint project of the Institute of Behavioral Research and the Navy Health Research Center (formerly the Navy Medical Neuropsychiatric Research Unit) in San Diego, California, under a three year contract. The primary focus of this study was upon the organizational structure, habitability and organizational climate conditions that influenced individual satisfaction and performance as well as organizational performance and effectiveness of personnel on U. S. Navy ships.

Major efforts during 1976 involved the conclusion of data analyses and the writing of technical reports. Comparisons were made between results in the navy sample and results obtained from samples of civilian firemen, health managers, and civil engineers. Other studies addressed racial differences in attitudes and perceptions of climate, and correlates of retention for first enlistment sailors. A compendium of the



technical reports is being edited for publication as a book to be authored collaboratively by Dr. Eric Gunderson (Navy, San Diego), and Drs. James, Jones, and Sells of IBR.

Key Personnel. Dr. James, Dr. Jones; Secretary, Janell Johnston; Research Fellow, Mr. Bruni. Dr. Sells is Principal Investigator for IBR and Dr. Gunderson, for NHRC.

### Organizational Studies

#### Organizational Management Study (Fort Worth National Bank and Texas American Bancshares, Inc.)

A survey of organizational climate, job satisfaction and employee motivation was administered to all employees of the Fort Worth National Bank and the corporate office of Texas American Bancshares. This was the third in a series for the Bank. Separate survey instruments were used for the bank and the holding company. The survey was completed by 840 employees, identified only by work unit; responses were obtained from over 95 percent of the total work force. The data were analyzed for each total organization, by divisions and by work units. Tabulations for each work unit were provided to employees and were the basis for a series of feedback sessions conducted by staff members of the Bank employee relations department and the IBR. The feedback sessions were designed to inform employees concerning the questionnaire responses of members of their respective work units to enable them to identify problems in the work environment requiring remedial action by management, and to make recommendations for such action for consideration by management. The recommendations were edited by IBR and classified by exempt and non-exempt work units within each division. They were then presented to division managers in private sessions by IBR faculty members. Separate reports were made to the President and Chairman of the bank and holding company.

Several research studies were completed with these data. These involved comparisons of different methods for assessing agreement on climate perceptions by members of various workgroups and the prediction of workgroup effectiveness based on structural, process, and aggregated climate measures. The research was conducted by John Hater and Michael Gent under the supervision of Drs. Hartman and James.

### Program Evaluation

#### Evaluation of the Family Intervention Program for the Trinity Valley Mental Health-Mental Retardation Agency.

During 1974, the MHMR Center of the Tarrant County Hospital District implemented a Family Intervention Program for mentally

retarded youth who were progressing too slowly through the MHMR program for reasons believed to be related to improvable family relations. The essential feature of this program involves the intervention of family counselors who visit the homes to help the families cope with their problems. The IBR has undertaken the evaluation of the effectiveness of this program, using as a principal data source weekly evaluations that are required for all clients in the MHMR program. In conjunction with the design of the evaluation project the IBR staff consulted on the definition of program goals and policies.

In 1976, graduate research fellow Walter Booth collected and analyzed data on over 100 youth and families in this program. An evaluation questionnaire was developed and administered to these clients in an effort to obtain better understanding of the intervention effects. The final report included analysis of the intervention efforts and an extensive literature review of program evaluation in the mental health and mental retardation field.

This study was conducted by Dr. Hartman with the assistance of Walter Booth and Marcia Butler.

#### Management Survey (Air Canada).

In 1972 the IBR assisted Air Canada in an organizational climate survey of a specially selected sample of upper and middle level managers representing major divisions of the company. The survey results were a major part of the data base for an extensive organizational development program over a three year period. A second survey was planned during 1975 to evaluate the interventions accomplished and IBR and Air Canada staff members collaborated in the general design. Essentially the same survey instrument was used. During the fall of 1975 the basic components of the new survey were defined and the specific questions to be included were reviewed. Questions were added that addressed particular aspects of the organizational development program. The main body of the questionnaire again covered the basic areas of organizational climate, training programs needed, and critical areas of job performance. For research purposes, a set of questions was developed and included to probe individual perceptions and feelings about the employee's life space. Concern with this area reflected interest in the relations of perceptions of organizational climate and general as well as corporate economic conditions. The effects of change in economic conditions on climate perceptions are important as external factors in organizational development evaluation. This part of the study was intended to enhance understanding of the sources of dissatisfaction and to enable differentiation of organizational and other external sources. Data collection and analysis were completed in the Spring of 1976. A final report is under review.

Dr. Hartman was IBR project director for this study and was assisted by Elizabeth Cole and Marcia Butler.

### Personnel Selection

#### Selection of Airline Pilots (American Airlines).

This study was initiated in 1974. During 1975, a study of desired characteristics of airline pilots was completed, an experimental test battery based on these characteristics was assembled, and the battery was administered to a sample of pilots under experimental conditions. During 1976 several additional samples of American Airline pilots were tested. Later in 1976, training and field criterion ratings were collected for the initial samples. Receipt of these data made possible preliminary validity studies, provided the opportunity to compare sample characteristics, and allowed examination of existing selection procedures. Additional field criterion data are being collected and will be included in further analyses.

This study is under the general direction of Dr. Sells, with Drs. James, Hartman, and Stackfleth participating, assisted by Walter Booth, Kevin Coray, Chris Hornick, Leslie James, Pam Jackson, Janell Johnston, and Marcia Butler.

## 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 \$250 to \$400 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.	\$250.
1st Year (Advanced)	Completion of a Masters degree or 15 or more graduate credit hours, but with little or no relevant research experience.	\$275.
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.	\$300.
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 or graduate study). This includes successful grades on preliminary evaluations in the relevant academic department.	\$350.

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.	\$400.
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The IBR Fellow Committee consists of the following members:

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

### 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.

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