

## I B R 1 9 7 2

### GOALS

The IBR is dedicated to the advancement of scientific knowledge and to the application of 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 of the university in order to provide needed administration and programmatic direction for the developing research program in the behavioral sciences. During its first ten years of operation the IBR has grown in size 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 by research contracts, as well as grants 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 program involves research on the evaluation of treatment for drug abuse.

#### FACILITIES

Located on the East Campus of Texas Christian University, the IBR occupies 3 buildings with 12,000 square feet. Special features include the IBR LIBRARY, with over 3000 books, 40 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.

#### 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.

## SPONSORS OF FUNDED RESEARCH - 1972

### Federal Agencies

- National Institute of Mental Health
- US Office of Education
- National Center for Health Statistics
- Family Planning Services, HEW, Region 6
- Office of Naval Research
- National Aeronautics and Space Administration

### Industry

- American Airlines, Inc.
- Eastern Airlines, Inc.
- Braniff International
- Fort Worth National Bank
- Allied Radio Shack Division, Tandy Corporation

### Local Government and Community Agencies

- City of Fort Worth
- Tarrant County Hospital District
- Tarrant County Mental Health - Mental Retardation Center
- North Texas Tuberculosis & Respiratory Disease Association

FUNDED RESEARCH. Expenditures in 1972.

Drug Abuse Reporting Program. File Maintenance Program. Continuation of Contract No. HSM 42-69-6 (NIMH)	290,123.
Drug Abuse Reporting Program. Research on Evaluation of Treatment. Contract No. HSM 42-72-132 (NIMH)	134,174.
Critical Appraisal of Research in the Personality, Emotions, Motivation Domain. Continuation of OE Grant 2665 (USOE)	16,306.
Objective Scales for the TAT in the Health Examination Survey. Continuation of Contract No. PH 109-66-75 (NCHS)	7,539.
Evaluation of Tarrant County Family Planning Program. Continuation of Subcontract with Tarrant County Hospital District	38,177.
Social Structure and Group Behavior in Extended-Duration Space Missions. Completion of NASA Grant No. 44-009-008	28,990.
Airline Organizational and Personnel Research. (American Airlines, Eastern Airlines)	37,710.
Organizational Research in Industry. (Tandy Corporation, Fort Worth National Bank, City of Fort Worth)	25,066.
Demographic and Epidemiological Aspects of Patient Demands Upon Public Mental and Physical Health Facilities in Tarrant County, Texas. (Tarrant County Hospital District and Tarrant County MH-MR Center).	10,000.
Organizational Characteristics and Personnel Effectiveness in the Framework of Social System Analysis (ONR Contract No. N0011-72-A-0179).	42,771.
Smoking Withdrawal Research. North Texas Tuberculosis and Respiratory Disease Association	1,458.
Total	\$632,314.

## IBR STAFF

### PROFESSIONAL STAFF

#### Faculty Members

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

#### Research Staff

Edwin T. Cornelius, Ph.D.	Assistant Research Psychologist
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Anne D. Olsen, B.A.	Assistant Research Psychologist
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#### Graduate Fellows and Assistants

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## IBR RESEARCH PROGRAM

### DRUG ABUSE

#### Drug Abuse Reporting Program-Computer File Research Program on the Evaluation of Treatment for Drug Abuse

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 Drug Abuse Reporting Program (DARP) was conceived as a data base for the evaluative research and included initially only six treatment programs. However, as the drug abuse problem in the United States accelerated, it was expanded to receive reports from over 50 treatment programs and to provide reports 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, as of November, 1972, included 33,363 patients from 54 treatment programs, in its master file. 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) 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 in statistical reports and 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 the 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 evaluative research requires classification of patients and of treatments into homogeneous, discrete groups, independent of particular organizations or locales, and measurement of patient outcome for criterion



purposes. It also requires patient samples, designed as cohorts, that are homogeneous with respect to time of admission and observed over a long enough period so that all patients included are comparable in respect to the criterion measures used. Through 1972, research has been completed on a number of special projects related to the implementation of the research; these include the development of a set of nine patient background indices, integrating information from the Admission Form (Dr. Joe), a taxonomy of preadmission drug abuse patterns (Dr. Simpson), a patient typology (Mr. McRae), a treatment typology (Dr. Simpson and Miss Watson), quantification of during-treatment criterion measures (Dr. Demaree), a comprehensive patient population description (Dr. Spiegel), a study of differential death rates and causes of death among narcotic addicts (Dr. Sells, in cooperation with Dr. Chatham and Mr. Retka of NIMH). Dr. Joe, in cooperation with Dr. Person of NIMH, Dr. Sells, and Mr. Retka, has also completed an evaluative study of treatments for narcotic addiction, based on data for the year 1969-1970.

During 1972 data samples have been prepared for a major evaluative study of the 12,000 admissions during 1969-1971 and Dr. Spiegel has developed computer programs for general linear analysis for this purpose. This study is scheduled for completion by May, 1973. Further studies are contemplated, carrying forward the analyses mentioned to later cohorts, following the 1969-1971 terminated sample for a period of time post-treatment, to evaluate outcomes after return to unsupervised community living, and investigating special samples in depth.

Key Staff. Principal Investigator, Dr. Sells; File Maintenance: Projector Director, Mrs. Olsen; Assistants, Miss Glick, Mrs. Brittain, Mrs. Harris, Mrs. Flexman and Mrs. Fleming. Research Staff, Drs. Demaree, Spiegel, Joe, Simpson, Mr. McRae, Miss Watson, Mrs. McReynolds and Mr. Retka. Programming and Data Processing, Mr. Kee, Mr. Abbamonte, Mr. Willis and Mr. McMillan.

## FAMILY PLANNING

### Family Planning Program Evaluation and Research (Subcontract to TCHD)

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 (IBR) as a subcontractor, with a 1972 budget of \$60,000.

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 integral parts 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. Dr. Cole, with the assistance of Candyce Greer, Rosemary Nelson, and David Bryon, Research Fellows, carried out three special studies designed to investigate pressing operating problems: (1) to identify factors that discriminate between participants who continue in the program and others who drop out, (2) to assess attitudes of community leaders in Tarrant County toward family planning and the family planning program, and (3) to investigate significant aspects of the vasectomy clinic at JPSH with respect to individual as well as community acceptance. The vasectomy project was completed, and the experience gained from the JPSH clinic was utilized in the establishment of a similar clinic in Arlington, Texas, as well as in the construction of an information packet that has been used by other programs to assist in the establishment of their vasectomy clinics. Reports of the other studies were presented at the 1972 meeting of the Southwestern Psychological Association in Oklahoma City and at the 1972 meeting of the American Psychological Association in Honolulu, Hawaii. In addition, a monograph entitled "A Sourcebook of Vasectomy" was published in the TCU Press, Behavioral Science Monographs series.

Key Staff. Project Director, Dr. Cole; Research Fellows, Candyce Greer, Rosemary Nelson, David Bryon; Research Assistant, Ellen Flexman.

#### PERSONALITY AND SOCIAL PSYCHOLOGY

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

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 Robert W. Beezer (USOE), 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.

To date, seven task group reports have been completed. The problem areas and task group chairmen for these reports are as follows: Interpersonal Processes (Donn Byrne, Purdue Univ.); Behavior Genetics (John C. Loehlin, Univ. of Texas); Character Development (Richard L. Gorsuch, Peabody College); Stress and Anxiety (Charles D. Spielberger, Univ. of So. Florida); Interests and Vocational Guidance (David P. Campbell, Univ. of Minnesota); Personality Trait Structure (Desmond S. Cartwright, Univ. of Colo.); and, Behavioral-Expressive Aspects of Emotions (Carroll E. Izard, Vanderbilt Univ.). These reports and additional forthcoming reports are being distributed as IBR Technical Reports. Later, they will be combined for publication in book form.

Key Staff. Principal Investigator, Dr. Sells; Co-Director, Dr. Demaree.

#### Objective Scales for the TAT in the Health Examination Survey (NCHS)

The IBR has for several years been engaged in research 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, two 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 6 to 18) of the Health Examination Survey (Sells and Cox, 1966, and Brown and Sells, 1970). A revised report based on the Brown and Sells study was completed by Ronald Neman and is in press for publication by NCHS (Neman, Brown, and Sells, 1971). The final phase of the project, concerned with the Cycle III data, has been the primary responsibility of Janice Neman since April 1971. This phase has consisted of (1) the scoring of TAT responses and the construction of language and emotional adjustment scales for the TAT; (2) the selection and development of criterion measures from questionnaire and psychometric data obtained in the Cycle III Health Examination Survey; (3) the validation of the TAT scales against the criterion measures; and (4) the construction of national norms for the adolescent age group.

Key Personnel. Principal Investigator, Dr. Sells; Project Director, Mrs. Janice Neman; Statistical Analyst, Dr. Ronald Neman.

## INDUSTRIAL PERSONNEL AND SOCIAL PSYCHOLOGY

### Airline Organizational and Personnel Research

Since 1962 the IBR has maintained a program of personnel and organizational research related directly to airline and aerospace operations. The principal sponsors have been American and Eastern Airlines. Airline personnel research programs have included continuing investigations for development of personnel selection batteries (pilot, stewardess, mechanic, agent, management, specialist, unskilled, and semiskilled), personnel assessment studies, performance measurement, and related research. Organizational studies have included the development and extensive administration of measures of organizational climate for normative and analytic purposes, and the conduct of training evaluation and management studies. The benefit of the selection studies to the airlines has involved compliance with Federal requirements concerning nondiscrimination in hiring and maintenance of higher standards of quality and efficiency in the assignment and utilization of personnel. The organizational studies have provided a basis for organizational development and improved utilization of personnel by management.

Key Personnel. Principal Investigator, Dr. Sells; Project Directors, Dr. Murdy, Dr. Cornelius and Dr. Hartman; Research Assistants, Mr. Norton, Mr. Giles, Miss Wier and Mr. Fleming.

### Research on Organizational Characteristics and Organizational Effectiveness in the Framework of a Social Systems Model. (Office of Naval Research).

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 perceived climate conditions which relate to health and ship-board performance and effectiveness.

During this first year, of a three year effort, data have been collected from ten ocean-going minesweepers, two destroyers, and an aircraft carrier. These data were used primarily in a pilot study to refine and modify instruments to be used in later stages of data collection. The second year entails the collection of data from a sample of approximately ten thousand subjects. Data will be gathered from thirty ships and from a number of shore installations in order to examine variations of organizational climate and habitability factors in a variety of situations.

Key Personnel. Principal Investigator, Dr. S. B. Sells, Project Director, Dr. A. P. Jones, Secretary, Mrs. Judi Morton, Research Fellows, Mr. Tomme Atkinson, Mr. Kurt Helm and Mr. Chris Hornick.

## Management Surveys

IBR staff members have carried out a number of management surveys for organizations such as the Fort Worth National Bank and the First National Bank of Fort Worth. A similar study was initiated for the Allied Radio Shack Division of the Tandy Corporation, in December, 1972. The typical format of these studies involves 1) consultation with management to define problem areas, 2) preparation, administration, and analysis of survey instruments 3) reporting of results for feedback to employee groups and management, employee discussions and recommendations to management, based on their interpretation of results, 4) management response and action, and 5) followup survey to measure change in attitudes and satisfaction. These surveys were first conducted with airline clients and are now available for corporations, institutions (hospitals, schools), and other types of organizations (military units, naval ships, clinics).

Key Personnel: Dr. Sells, Dr. Murdy, Dr. Cornelius and Dr. Hartman.

## Social Structure and Group Behavior in Extended-Duration Space Missions (NASA)

Previous research under this grant resulted in the development of a social system model for organizational study and in particular, for the extended-duration space ship, that has been instrumental in focusing attention on the unique environment-crew interaction of the space ship as distinct from small groups "in general" and from isolation and confinement "in general." Dr. Sells, Principal Investigator of this project, was a member of the Steering Committee of the National Academy of Science Committee on Long Duration Space Flight, organized in 1967. This Committee, chaired by Donald B. Lindsley (UCLA) undertook a study of the behavioral, psychological, physiological, and medical factors of manned space missions up to two years' duration and completed its study with a book published in 1972. Dr. Sells' contributions include two chapters, 3. Skilled Performance, with N. Findikyan (updated from an earlier paper in 1967), and 9. A Social System Approach to Long-Duration Missions, with E. K. Gunderson.

Other previous research involved a series of studies on "personal space," by Dr. James Rawls, Dr. Ronald Trego (Ph.D. 1971), and Dr. Thomas McGaffey (Ph.D. 1972). During 1971 emphasis was placed on personnel selection of crew members for simulated space missions of long duration and on related research. In relation to selection a research review of factors related to endurance of isolation and confinement, by Ronald Trego, was used as the basis for composition of a comprehensive battery of personality inventories and scales that was administered to several hundred Army ROTC cadets at TCU and at the University of Texas at Arlington. A research report, presenting normative data and personality factors derived from this study has been

under preparation by Dr. Demaree and Dr. Cornelius.

In relation to selection, as well as to endurance of long-duration confinement and isolation, attention has been devoted to another area, involving psychophysiological measurement and experimentation. Research by Dr. Simpson, assisted by Graduate Research Assistants James McGuinness and Air Force Captain Dickie Harris, investigated meditation, biofeedback, and relaxation techniques, particularly with reference to the notion of developing control over physiological functions. The behavioral benefits and potential application of such techniques involve identification of skills in their use as well as ability to practice them in the stressful, enforced isolation of space flight. Studies under the present grant employed cardiovascular feedback, such as finger pulse volume, as a means of promoting voluntary control. A potentially important finding stemming from this research revealed that the detection of signals appears to be more likely for signals presented during exhalation phase of respiration than during the inhalation phase. During 1972 several lines of investigation were completed which were initiated under former NASA Grant No. NGR44-009-008. The research undertaken was focused on individual differences in personality which may be related to the adaptability of personnel for missions characterized by long duration, isolation, and confinement. A total of 116 measures of personality, obtained from the 8-hour battery of 18 instruments administered to 198 Army ROTC cadets and officers, were factor analyzed and the results disclosed major dimensions of individual differences in personality; studies were undertaken of the reliability of selected instruments and an investigation was made of differential responses to 216 pairs of duplicate, opposite, and similar items. The latter investigation led to the identification of groups of illogical, discriminative, and consistent responders. The personality measures which discriminated among these groups pointed to sources of individual differences which may have much potential value in selecting personnel for isolated, confined environments.

Key Staff. Principal Investigator, Dr. Sells; Research Scientist, Dr. Demaree, and Dr. Simpson; Research Fellows, Dr. Cornelius, Mr. Nelson, Mr. McGuinness, Captain Harris and Mr. Giles; Cooperating Scientist, Dr. Dansereau.

## URBAN STUDIES

### Social Health Indicators and Quality of Life Research

This study, under the joint direction of Dr. Demaree and Dr. Jones, used census tracts in Tarrant County as the unit measurement and predicted the magnitude of a number of community social and health problems using population measures for individual tracts. As part of the research, a computer program was developed for the assignment of patients to census

tracts on the basis of residence address. Seven social indicators were constructed for census tracts and each tract was given a score on these indices. On the basis of such scores, tracts were grouped into meaningful social areas. Social index scores were found to be highly effective predictors of incidence rates of hospitalization at John Peter Smith Hospital referral to the Tarrant County Mental Health Mental Retardation Center, of tuberculosis, venereal disease, and other problems. Plans have been made to present papers on the results of the research to the annual conference on Mental Health Statistics, to the American Psychological Association Convention, and to the Southwest Regional Meeting of the American Orthopsychiatric Association. A research proposal for continuation and expansion of this effort has been submitted to the Department of Health, Education, and Welfare.

Key Staff. Co-Directors, Dr. Demaree and Dr. Jones; Research Fellows, Mr. Giles and Mr. Neil; Research Assistant, Mrs. Rosner.

#### BEHAVIOR MODIFICATION

Development of a Program for the Treatment of Smoking Behavior (North Texas Tuberculosis and Respiratory Disease Association)

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

Based on information obtained in an extensive survey of the literature, several of the most promising treatment parameters have been incorporated into treatment programs which are now being evaluated. Analysis of smoking behavior associated with the different treatment groups during the course of treatment and at periodic follow-ups will provide information for developing a maximally efficient and effective procedure for helping people to stop smoking. After its development and refinements, it is anticipated that the smoking program will be operated on a regular basis by personnel at the North Texas TC-RD Association.

Key Personnel: Mr. Curtis, Dr. Simpson and Dr. Cole.

IBR Publications and Reports - 1972

BOOKS:

Roff, Merrill, Sells, S. B. and Golden, Mary M. Social Adjustment and Personality Development in Children. The University of Minnesota Press, Minneapolis, Minnesota, 1972.

BEHAVIORAL SCIENCE MONOGRAPHS

Bryon, David and Cole, Steven G. A Sourcebook of Vasectomy, Family Planning Research Group, Institute of Behavioral Research, Texas Christian University, Fort Worth, Texas.

IBR TECHNICAL REPORTS

Demaree, R. G. and Jones, Allan P. Demographic and Epidemiological Aspects of Patient Demands Upon Mental and Physical Health Facilities in Tarrant County, Texas. IBR Report No. 72-1, 1972.

Murdy, Lee B. and Norton, Richard P. Fire Private Test Validation Study, City of Fort Worth Fire Department. IBR Report No. 72-2, 1972.

Nelson, Rosemary, Cole, Steven G. and Woodward, J. Arthur. Community Leaders Attitudes Toward Family Planning: A Report of the Results from the First of Four Questionnaires. IBR Report No. 72-3, 1972.

Institute of Behavioral Research, Texas Christian University. Research Reports from the Joint NIMH-TCU Drug Abuse Reporting Program. IBR Report No. 72-4, April 1971, 1972.

Simpson, D. Dwayne and Nelson, Arnold E. Breathing Control and Attention Training: A Preliminary Study of a Psychophysiological Approach to Self-Control of Hyperactive Behavior in Children. IBR Report No. 72-5, 1972.

Benjamin, Ludy T. The Effects of Response Set Development in a Word Recognition Task. IBR Report No. 72-6, 1972.

Simpson, D. Dwayne. Relaxation and Bio-Feedback Using Finger Pulse Volume. IBR Report No. 72-7, 1972.

Greer, Candyce, D. and Cole, Steven G. An Evaluative Investigation of the Initial Clinic Session at John Peter Smith Hospital and Planned Parenthood. IBR Report No. 72-8, 1972.

Gorsuch, Richard L., Parke, Ross D., Turiel, Elliot, Kohlberg, Lawrence, Mussen, Paul, and Bronfenbrenner, Urie: Edited by S. B. Sells and R. G. Demaree. Needed Research on Child Socialization. A Special Report of the USOE - Sponsored Grant Study: Critical Appraisal of Research. In the Personality-Emotions-Motivations Domain. IBR Report No. 72-9, 1972.



- Spielberger, C. D., Averill, James R., McReynolds, Paul, Zuckman, Marvin, Hodges, William F., Goulet, Larry R., Philips, Beeman N. and Martin, Barclay. Edited by S. B. Sells and R. G. Demaree. Needed Research on Stress and Anxiety. A Special Report on the USOE - Sponsored Grant Study: Critical Appraisal of Research in the Personality-Emotions-Motivations Domain. IBR Report No. 72-10, 1972.
- Sells, S. B. and Fleming, Jimmy L. The Corporate Personnel Assessment Center. A Review and Evaluation of Potential and Performance. IBR Report No. 72-11, 1972.
- Byrne, Donn, Livingier, Goerge, Baron, Robert A., Mehralian, Culbert and Guffett, William. Edited by S. B. Sells and R. G. Demaree. Needed Research on Interpersonal Behavior Processes. A Special Report of the USOE-Sponsored Grant Study: Critical Appraisal of Research in the Personality-Emotions-Motivation Domain. IBR Report No. 72-12, 1972.
- Loehlin, John C., Vandenburg, S. G., Scarr, Sandra, Horn and Joseph M. Needed Research on the Genes and Environment in Human Psychological Development: Perspectives from Behavior Genetics. A Special Report of the USOE - Sponsored Grant Study: Critical Appraisal of Research in the Personality-Emotions-Motivations Domain. IBR Report No. 72-13, 1972.
- Joe, G. W., Person, Philip, Jr., Sells, S. B. and Retka, R. L. An Evaluative Study of Methadone and Drug Free Therapies for Opiate Addiction. IBR Report No. 72-14, 1972.
- Jones, Allan P. and Hornick, Christopher W. A Social System Analysis of the Naval Organization: Organizational Characteristics and Effectiveness of Naval Ships. IBR Report No. 72-15, 1972.
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