

Research methods in Psychology; fields of psychology (week 2)

Types of Research

What we've focused on is called Experimental Methods, the true experiment. It involves randomized assignment of subjects, standardized instructions, and at least one IV and one DV. There are several other types of research that are not as rigorous, but that you need to be aware of.

Perhaps the simplest form of research is **Naturalistic Observation**.

Observing behavior in their natural environment

Often involves counting behaviors, such as number of aggressive acts, number of smiles, etc.

Advantages: Behavior is naturally occurring and is not manipulated by a researcher and it can provide more qualitative data as opposed to merely quantitative information.

Limitations: Even the presence of someone observing can cause those being observed to alter their behavior. Researcher's beliefs can also alter their observations. And, it is very difficult to coordinate multiple observers since observed behaviors must be operationally defined (e.g. what constitutes an aggressive act)

Case Study

Following a single case, typically over an extended period of time can involve naturalistic observations, and include psychological testing, interviews, interviews with others, and the application of a treatment or observation

Advantages: Can gather extensive information, both qualitative and quantitative and it can be helpful in better understanding rare cases or very specific interventions

Limitations: Only one case is involved, severely limiting the generalization to the rest of the population. Can be very time consuming and can involve other problems specific to the techniques used, including researcher bias.

Survey

Everyone has probably heard of this and many of you have been involved in research involving surveys. They are often used in the news, especially to gather viewer opinions such as during a race for president

Advantages: Can gather large amounts of information in a relatively short time, especially now with many surveys being conducted on the internet.

Limitations: Survey data is based solely on subjects' responses which can be inaccurate due to outright lying, misunderstanding of the question, placebo effect, and even the manner in which the question is asked

Correlational Studies

Correlation means relationship, so the purpose of a correlational study is to determine if a relationship exists, what direction the relationship is, and how strong it is.

Advantages: Can assess the strength of a relationship. Is popular with lay population because it is relatively easy to explain and understand.

Limitations: Can not make any assumptions of cause and effect (explain how third a variable can be involved, or how the variables can influence each other).

Psychological Testing

Utilizing testing to gather information about a group or an individual

Advantages: Most tests are normed and standardized, which means they have very reliable and valid results. Popular with businesses looking for data on employees and with difficult or specific therapy cases

Limitations: Tests which are not rigorously normed and standardized can easily result in inaccurate results.

Fields of Psychology

There is an astoundingly diverse range of issues with which psychologists are concerned and settings in which American psychologists work. Let's look at the various subfields of psychology, keeping in mind that within each subfield, psychologists can engage in many different activities. Most conduct research, teach, and/or apply psychological principles to the solution of the real life problems of individuals and society. Psychologists in some major subfields within psychology are described in the booklet, "Psychology: Careers in the 21st Century" (APA, 1997, free):

Biopsychologists: take a comparative and ontogenetic perspective in the experimental analysis of basic psychological processes as they relate to the many ways in which animal species adapt, survive, reproduce and evolve.

Child Psychologists: See Child Clinical Psychologists, Developmental Psychologists, School Psychologists, and Social Worker.

Child Clinical Psychologists: have about the same preparation as clinical psychologists; in addition, they have the responsibility of becoming acquainted with the developmental characteristics of preadolescent.

Clinical Psychologists: are concerned with the diagnosis and treatment of psychological disturbances. After graduate preparation in an accredited university or school of professional psychology, supervised postdoctoral experience, and licensure or certification by the state, some clinical psychologists enter independent practice/consulting roles. Others find themselves responsible for a complete range of psychological services in public settings. Their responsibilities range from administering and scoring psychological tests, to engaging in therapy, to supervising the training of graduate students in the delivery of mental health services, to administering a community mental health program. Some clinical psychologists obtain faculty positions in a college or university where they perform research and train graduate students. Others serve as adjunct (or part-time) faculty, while maintaining independent clinical practices. Many serve as consultants. Ph.D. or Psy.D. needed.

Cognitive Psychologists: are concerned with what organisms know and how they come to know it. They study how people perceive objects and events, how they can store past events in memory, how they transform and manipulate knowledge by thinking, and how they analyze their experience to emerge with new and abstract notions.

Community Psychologists: are concerned with the application of concepts, tools and skills from the fields of counseling, guidance and rehabilitation psychology. Community psychologists are trained to counsel, treat and/or refer outpatients and to assist in the development of community resources for their clients.

Counseling Psychologists: are concerned with counseling, teaching, consulting research, and/or administration. In their work, they are particularly concerned with the role of education and work in an individual's functioning, and with the interaction between individuals and the environments in which they live. Typically, counseling psychologists work with normal or moderately maladjusted persons, individually or in groups. This work includes use of traditional counseling interview methods, interest, ability and personality tests, and educational and occupational information. Most counseling psychologists are employed in educational settings and most of those in colleges or universities. A minority are employed in hospitals, (e.g., the VA), community mental health or rehabilitation centers, industry, government, or in private or community counseling agencies.

Developmental Psychologists: are concerned with growth and development from conception through death. All aspects of the animal or human organism (physiological, biological, physical, cognitive, emotional, social, cultural) may be studied.

Educational Psychologists: are concerned with a range of activities from initial design through development and evaluation of both materials and procedures for education and training. Such positions exist in public schools, in the military, in private research and development companies, and in industrial concerns. They may deal with analyzing education and training needs, with developing materials for instruction in various media, with designing the best conditions for instruction, and with evaluating the effectiveness of instructional programs.

Engineering Psychologists: are concerned with designing and using environments and systems with which human beings live and work. Their job is to improve the interaction between people and their environments. They may help design work areas, equipment, and human-machine systems, as well as the training devices, aids, and requirements needed to prepare people to make such systems function. They work in many different settings, such as the aerospace industry, communications and transportation industries, the military, and other governmental, commercial and industrial enterprises.

Experimental Psychologists: a general title applied to a variety of psychologists who are trained in designing and conducting research in specific basic areas like learning, sensation and perception, human performance, and motivation and emotion. A research oriented doctoral degree (Ph.D.) is usually needed.

Health or Medical Psychologists: are concerned with understanding how psychological factors can affect physical health. Some representative issues: how certain attitudes and behaviors may cause heart disease; how the state of physical health affects one's psychological well-being; and how living with cancer can affect one's attitude and behavior. They also study the psychology of how people can better cope with physical disease

Industrial / Organizational Psychologists: are concerned with the relation between individuals and work. They are employed in business and industry, in government, and in colleges and universities, and may perform a variety of jobs. An industrial/organizational psychologist working in industry may study how work is organized; suggest changes to improve the satisfaction of employees, the quality of the organization's services, and productivity; consult with management on the development of effective training programs for employees; design programs for the early identification of management potential; administer career counseling and preretirement counseling programs; develop affirmative action programs; recommend changes in job definition; design a system of performance evaluation. A master's degree in industrial/organizational psychology is a minimum requirement for a position as a psychological associate but a position as a psychologist requires a Ph.D.

Personnel Psychologists: Compared to industrial/organizational psychologists, personnel psychologists focus more specifically on the hiring, assignment, and promotion of employees. Such a psychologist may be involved in the continued development and validation of assessment tools for selection, placement, classification and promotion of employees. Although positions as test administrators and interviewers are available for those with B.A.'s and M.A.'s, a Ph.D. is a general prerequisite for a position as a psychologist.

Psycholinguists: are concerned with discovering the psychological significance of the properties of language, of linguistic organization, the meaning of words, syntax and how children acquire language.

Psychometric (Quantitative) Psychologists: are directly concerned with the measurement of behavior (mostly through the use of tests) and the design of research investigations. Such a psychologist may be analyzing complex sets of data; designing, developing pilot testing, or validating versions of intelligence, personality, or aptitude tests; or deriving new statistics with which to analyze data. The psychometric psychologist is typically well-trained in mathematics, statistics, and in the programming and use of computers.

Psychotherapists: A very broad term. Generally, anyone can call him or herself a "Psychotherapist", but **ONLY** a person with a Ph.D. in Psychology and a license can use the term "Psychologist". Psychotherapists can include anyone without a Ph.D. who tries to help people deal with their problems. Counselors and Social Workers are psychotherapists, but **not** Psychologists.

School Psychologists: are concerned with increasing the effectiveness of schools in improving the intellectual, social and emotional development of children. They may also serve as consultants in education for the handicapped, mentally disturbed or mentally retarded; or in developing special programs in adult education. They typically function in various roles within the school system. They may assist in implementing and evaluating

special education programs, may serve as leaders of in-service training programs for teachers, or as consultants to teachers regarding specific teaching or classroom related problems. They may also help to treat children's psychological and educational problems that influence problems in school. They may also administer tests and interpret their results. An M.A. and certification by the State Board of Education are generally required, and a Ph.D. may be required for supervisory positions.

Social Psychologists: study the ways in which the social context affects the behavior of the individual and groups in the real world and the laboratory. Social psychologists focus on topics such as social roles, attitude formation and change, affiliation, interpersonal attraction and interaction, conformity, and group processes.