

Chapter 2

Research Methods in Abnormal Psychology

Chapter-at-a-Glance

DETAILED OUTLINE	INSTRUCTOR'S RESOURCES	PRINT SUPPLEMENTS	MEDIA SUPPLEMENTS	PROFESSOR NOTES
Ethics and Responsibility in Research p. 40 Core Principles of Ethics in Research The Informed Consent Process	Interactive: Ethics and Responsibility Learning Objectives: LO 2.1-2.2	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2	PowerPoint Slides: Chapter 2 Pearson Video: Anatomy of a Neuron Pearson Video: Parts of the Brain Pearson Video Neurotransmitters	
Research in Abnormal Psychology at the Cellular Level p. 42 Neuroanatomy Neurotransmitters Neuroimaging Genetics	Demonstrations: Natural Observation Research Lecture Ideas: “Gimme a Beat” Learning Objectives: LO 2.3-2.6	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2	PowerPoint Slides: Chapter 2	
Research in Abnormal Psychology at the Individual Level p. 56 The Case Study Single-Case Designs	Demonstrations: Conducting a Mini Case Study Lecture Ideas: When Measurements Come to Life Learning Objectives: LO 2.7-2.8	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2	PowerPoint Slides: Chapter 2	
Research in Abnormal Psychology at the Group Level p. 60 Correlational Methods Controlled Group Designs Improvement of Diversity in Group-Based Research Cross-sectional and Longitudinal Cohorts	Demonstrations: The Use of YouTube and the Internet Lecture Ideas: Hot Topics: Student-led Focus Group Learning Objectives: LO 2.9-2.12	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2	PowerPoint Slides: Chapter 2	
Research in Abnormal Psychology at the Population Level p. 69 Epidemiology Epidemiological Research Designs	Demonstrations: Evaluating Cultural Implications Lecture Ideas: Why do some undergraduate students find psychological research interesting and others do not? Learning Objectives: 2.13-2.14	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2	PowerPoint Slides: Chapter 2	
Real Life Real Science: Susan – A Participant in a Randomized Controlled Trial p. 72	Learning Objectives: 2.6	Test Bank: Chapter 2 Practice Tests: Chapter 2 Study Guide: Chapter 2		

Key Terms

ABAB, or reversal, p. 58
beneficence (p. 42)
brain stem (p. 41)
candidate gene association study (p. 54)
case study (p. 56)
central nervous system (p. 42)
cerebral cortex (p. 45)
cohort (p. 67)
comorbidity (p. 71)
consent form (p.73)
control group (p. 63)
controlled group designs (p. 63)
correlation (p. 60)
correlation coefficient (p. 61)
cross-sectional design (p. 67)
dependent variable (p. 63)
effectiveness (p. 64)
efficacy (p. 64)
endocrine system (p. 47)
epidemiology (p. 70)
epigenetics (p. 55)
experimental epidemiology (p. 72)
experimental group (p. 63)
external validity (p. 64)
familial aggregation (p. 52)
forebrain (p. 44)
frontal lobe (p. 46)
functional neuroimaging (p. 50)
genomewide association study (p. 54)
genomewide linkage analysis (p. 54)
HIPAA (p.73)
hippocampus (p. 44)
hormones (p. 47)
incidence (p. 67)
independent variable (p. 63)
internal validity (p.64)
left hemisphere (p. 46)
limbic system (p. 44)
longitudinal design (p. 68)
midbrain (p. 43)
molecular genetics (p. 54)
neuroanatomy (p.50)
neuroimaging (p. 49)
neurotransmitters (p. 48)
nonshared environmental factors (p.54)
occipital lobe (p. 46)
parietal lobe (p. 46)
peripheral nervous system (p. 42)
placebo control (p. 64)
prevalence (p. 70)
proband (p. 52)
random assignment (p. 63)
right hemisphere (p. 46)
shared environmental factors (p. 52)
single-case design (p. 58)
structural neuroimaging (p. 50)
temporal lobe (p. 46)
translational research (p. 40)

Learning Objectives

After reviewing this chapter, students should be able to:

- LO 2.1 Describe three core principles of ethics in the scientific study of abnormal behavior.
- LO 2.2 Understand important features of informed consent.
- LO 2.3 Identify the two main parts of the nervous system and brain/body components of each.
- LO 2.4 Explain the role of neurotransmitters as they relate to abnormal behavior.
- LO 2.5 Recognize new techniques used to study abnormal psychology at the cellular or neuroanatomical level.
- LO 2.6 Understand the differences between family, adoption, and twin studies (which do not study genes directly) and molecular genetics research (which does directly study genes) and the strengths and limitations of both approaches.
- LO 2.7 Describe the strengths and limitations of case studies.
- LO 2.8 Identify two types of single-case designs and the strengths and limitations of each.

LO 2.9 Understand the principles of correlational research and their application to the study of abnormal behavior.

LO 2.10 Describe the factors that influence outcomes of randomized controlled trials.

LO 2.11 Understand the importance of diversity in group-based research in abnormal psychology.

LO 2.12 Explain the difference between cross-sectional and longitudinal cohorts and the strengths and limitations of each.

LO 2.13 Differentiate incidence and prevalence as these terms relate to understanding abnormal behavior.

LO 2.14 Recognize the types of epidemiological research as they relate to understanding abnormal behavior.

Chapter Outline

➤ *See Lecture Idea #1 and #2; Demonstration/Activity #2*

Research in Abnormal Psychology at the Cellular Level

Cellular Level:

1. Definition of Neuroanatomy

- a. Two main parts of the nervous system
 - i. Central Nervous System (e.g., brain and spinal cord)
 - ii. Peripheral Nervous System (e.g., somatic nervous system which controls sensations and muscle movements)
 - iii. Autonomic Nervous System (e.g., controls involuntary movements and returns the body to resting levels)
- b. Psychology is the scientific study of behavior and mental processes.
- c. **Translational research** is a scientific approach that focuses on communication between basic science and applied clinical research.
- d. **Beneficence** is the core ethical principle ensuring that researchers do no harm and maximize possible benefits and minimize possible harms.
- e. **Institutional Review Board (IRB)** also known as an independent ethics committee (IEC), or ethical review board (ERB)

2. The Neuron

- a. Dendrites (e.g., tree-like branches that receive messages from the neurons)
- b. Soma (e.g., keeps the cell alive)
- c. Neuron (e.g., nerve cells found throughout the body and brain that sends and receives messages).
- d. Axon (e.g., tube-like structure that carries the message to the cells)
- e. Synapse (e.g., spaces between neurons)
- f. Neurotransmitters (e.g., chemicals that transmit information to and from neuron).
- g. The Neuron (see Figure 2.1)

3. The Structure of the Brain

- a. Brain stem (e.g., controls fundamental biological functions such as breathing)
- b. Medulla, pons, and cerebellum (e.g., regulates breathing, heartbeat, and motor control)
- c. Midbrain (e.g., coordinates sensory information and movement).
- d. Thalamus (e.g., brain's relay station, directing nerve signals that carry sensory information to the cortex)
- e. Hypothalamus (e.g., responsible for maintaining homeostasis)
- f. Forebrain (e.g., includes the limbic system, basal ganglia, and cerebral cortex).
- g. Amygdala, the cingulate gyrus, and the hippocampus (e.g., deals with primarily emotions and impulses)
- h. Hippocampus (e.g., plays a role in memory formation and has been linked with memory deficits)
- i. Basal ganglia (e.g., caudate, putamen, nucleus accumbens, globus pallidus, substantia nigra, and subthalamic nucleus, thoughts to inhibit movement)
- j. Limbic system is the amygdala, the cingulate gyrus, and the hippocampus which is involved in emotions and impulses

4. The Cerebral Cortex and the Four Lobes of the Cerebrum

- a. Cerebral cortex (e.g., contains structures that contribute to higher cognitive functioning including reasoning, abstract thought, perception of time, and creativity)
- b. Left hemisphere
 - i. Responsible for language and cognitive functioning.
 - ii. Tends to process information in a more linear and logical manner.
 - iii. Processes information in parts sequentially.
 - iv. Uses both language and symbols including numbers.

- c. Right hemisphere
 - i. Processes the world in a holistic manner.
 - ii. Includes spatial context, creativity, imagery, and intuition.
- d. Each hemisphere consists of four lobes (e.g., temporal, parietal, occipital, and frontal).
- e. **Lobes of the brain**
 - i. **Temporal Lobe** (e.g., understanding auditory and verbal information, labeling of objects, and verbal memory)
 - ii. **Parietal Lobe** (e.g., integrates sensory information from various sources and may be involved with visuospatial processing)
 - iii. **Occipital Lobe** (e.g., center of visual processing)
 - iv. **Frontal Lobe** (e.g., reasoning, impulse control, judgment, language, memory, motor functioning, problem solving, and sexual and social behavior)
- f. **Corpus Callosum** (e.g., allows both of the hemispheres to communicate)
- g. Peripheral Nervous System (e.g., PNS)
 - i. Sensory-somatic nervous system (e.g., SNS cranial nerves which control sensation and muscle movement)
 - ii. Returns the body's functioning to resting levels after they have been activated by the SNS.
- h. Autonomic Nervous System (e.g., ANS)
 - i. Includes the sympathetic and parasympathetic nervous systems.
- i. The Endocrine System (e.g., a system in the body that sends messages to the bodily organs via hormones)
 - i. Pituitary gland (e.g., is known as the master gland)
 - ii. Thyroids (e.g., regulates metabolism, body temperatures, and body weight)
 - iii. Hormones (e.g., chemical messengers that are released in the bloodstream and act on target organs)
 - iv. Adrenals (e.g., release epinephrine in response to external and internal stressors)
 - v. Islets of Langerhans (e.g., gland within the pancreas that secretes insulin and glucagon to regulate blood sugar)
- j. Neurohormones and Neurotransmitters
 - i. Communication in the nervous system is both electrical and chemical.
 - ii. **Neurotransmitters** (e.g., chemical substances that relay electrical signals between one neuron and the next)
 - iii. The field of psychiatry uses this information to study the use of drug treatments on specific neurotransmitters.
- k. **Neuroimaging** (e.g., technology that takes pictures of the brain)
 - i. CT or CAT Scans (e.g., computerized axial tomography)
 - ii. MRI (e.g., Magnetic Resonance Imaging)
 - iii. Other technology used (e.g., Positron Emission Tomography and functional MRI).
 - iv. **Neuroanatomy** (e.g., brain structure)
- l. Genetics
 - i. Deoxyribonucleic acid (e.g., DNA)
 - ii. The collection of DNA is the human genome.
 - iii. Gene (e.g., section of DNA that make an organism unique)
 - iv. Sex chromosomes (one chromosome from the mother and one from the father
XX equals female and XY equals male)
 - v. Gregor Mendel (e.g., 1822-1884, the Law of Segregation meaning dominant versus recessive)
 - vi. Influence of genes on characteristics (e.g., height, eye color, personality, attitudes, and abnormal behavior).
- m. Behavioral Genetics (e.g., describes approaches to the study of behavior that do not examine genes directly, but infer the action of genes and environment)
 - i. Family studies (e.g., familial aggregation, family history, and family study)
 - ii. Adoption studies (e.g., biological parents versus adopted-away offspring and adoption placement)

- iii. Twin studies (e.g., monozygotic and dizygotic twin pairs)
- n. **Molecular Genetics** (e.g., the study of the structure and function of genes at a molecular level)
 - i. **Genomewide linkage analysis** (e.g., allows research to narrow the search for genes from the whole genome to specific areas on specific chromosomes)
 - ii. **Candidate gene association study** (e.g., compares a large group of individuals who have a specific trait or disease with a well matched group of individuals without a trait or disease)
 - iii. **Genomewide Association study** (e.g., unbiased search of the human genome comparing cases and controls on genetic variants scattered across the genome for evidence of association)

➤ *See Lecture Idea #3; Demonstration/Activity #2 and #3*

➤ *See Lecture Idea #4 and #5; Demonstration/Activity #1, #2, and #3*

Research in Abnormal Psychology at the Individual Level

Individual Level

1. Definition of Case Study

- a. A comprehensive description of an individual or group of individuals that focuses on assessment or description of abnormal behavior or its treatment.
- b. Benefits of a Case study:
 - i. Can focus on the assessment and description of abnormal behavior or its treatment.
 - ii. Examination of rare phenomenon.
 - iii. Generate hypothesis for group studies.
 - iv. Allow practitioners to be involved in research.
 - v. Illustrates important clinical issues.
- c. Limitations of a Case Study:
 - i. Amount and type of data may vary.
 - ii. Impossible to replicate.
 - iii. Limited in ability to understand abnormal behavior.
 - iv. Inability to make any firm conclusions.
 - v. Do not include control groups.
 - vi. **Experimental variable** (e.g., the variable being tested in an experimental study)
 - vii. **Control group** (e.g., comparison group for an experimental study in this group variable to be studied is absent).

2. Single-Case Designs

- a. Experimental studies conducted with a single individual, most common ABAB.
- b. Limitations of Single-case designs:
 - i. Do not allow researchers to generalize the results to heterogeneous groups of people.
 - ii. They do not address the impact of individual differences such as age, sex, and ethnicity.

➤ *See Demonstration/Activity #3, #4, and #6*

Research in Abnormal Psychology at the Group Level

Group Level

- 1. Benefits of conducting this type of research:
 - a. The most common types of research which allow researchers to draw conclusions.

- b. Allows researchers to evaluate the impact of different treatments.
- c. **Correlations** (e.g., relationships between variables)
- d. **Correlational coefficient** (e.g., statistical figure that describes the direction and strength of a correlation)
 - i. Positive correlation
 - ii. Negative correlation
 - iii. Ranges from -1.0 to 1.0 (e.g., the closer to either of these indicates a stronger relationship).
- e. Correlation is not causation, only explains the degree to which a change in one variable is associated with a change in the other.

➤ ***See Lecture Idea #6 and #7***

2. **Controlled Group Designs**

- a. Experiments in which groups of participants are exposed to different conditions at least one of which is experimental and one of which is a control.
- b. **Independent variable** (e.g., variable controlled by the experimenter)
- c. **Dependent variable** (e.g., variable assessed to determine the effect on the independent variable)
- d. **Random assignment** (e.g., the most critical feature of a randomized controlled design wherein each participant has an equal probability of being assigned to each experimental or control condition)
- e. Internal validity (e.g., the extent to which the study design allows conclusions that the IV caused the DV)
- f. External validity (e.g., ability to generalize findings to situations or people outside of the study).
- g. Reliability (e.g., ability to measure a particular variable consistently over time and across patients).
- h. Validity (e.g., ability to measure a variable accurately)
- i. **Placebo control** (e.g., a control group in which an inactive treatment is provided)
- j. Clinical significance is the practical or clinical value of the findings.
- k. Statistical significance is the mathematical probability that after treatment changes in the treatment group did not occur by chance.

3. **Racial, Ethnic, and Cultural Groups**

- a. One major limitation of group-based research is that diverse populations are not represented.
- b. Exclusion of women
 - i. Medication trials (e.g., effect on the fetus and ensuring that women do not become pregnant).
 - ii. Hormonal changes as a result of the menstrual cycle.
- c. Exclusion of older adults
 - i. Abundance of research conducted with white samples, particularly college students.
 - ii. Need for diverse populations and groups of individuals.
 - iii. It is important to be culture sensitive when conducting research with diverse populations.

4. **Cross-Sectional and Longitudinal Cohorts**

- a. **Cross-sectional design** (e.g., a research design in which participants are assessed once for the specific variable under investigation)
- b. **Cohort** (e.g., a group of people who share a common characteristic and move forward in time as a unit)
- c. **Longitudinal Design** (e.g., a research design in which participants are assessed at least two times and often more over a certain time interval)
- d.

➤ ***See Lecture Idea #5 and #7; Demonstration/Activity #5 and #6***

Research in Abnormal Psychology at the Population Level

1. Population Level:

- a. The goal is to understand abnormal psychology at the broadest possible level.
- b. **Epidemiology** (e.g., focuses on the prevalence and incidence of mental disorders)
- c. **Prevalence** (e.g., number of cases of a disorder in a given population at a designated time)
- d. **Incidence** (e.g., number of new cases that emerge in a given population during a specified period of time)
- e. **Comorbidity** (e.g., the co-occurrence of two or more disorders existing in the same person, either at the same time or at some point in the lifetime)

2. Epidemiological Research Designs

- a. How often do certain disorders occur in the population?
- b. What are the prevalence rates in the general population?
- c. **Observational epidemiology** (e.g., documents the presence of physical or psychological disorders in human populations)
- d. **Experimental epidemiology** (e.g., method in which scientist manipulated exposure to either causal or preventative factors)

➤ *Lecture Idea #3, #5 and #7; Demonstration/Activity #3 and #6*

A Participant in a Randomized Controlled Trial

Real science Real life: Susan—A Participant in a Randomized Controlled Trial

1. Before you start conducting any research, you must have approval from the Institutional Review Board to make sure that participants will not be harmed and that the study is needed, which will benefit the field.
2. Once your study has been approved, it is important to conduct a randomized assignment, meaning that every participant has an equal chance to being assigned to the experimental group or control group.
3. Next, before actually conducting the study you must obtain informed consent from every patient as well as the HIPPA form if medical history or other information is necessary.
4. Remember that a research participant has the right to stop participating in the study at any point in time during the research.
5. It is always important to make sure you are following ethical codes related to conducting research with participants.
6. For psychological research, it may necessary to conduct an initial screening or evaluation session to gather some information from the participant before the research study begins.
7. Assess the correlation (e.g., positive or negative) between the independent variable and the dependent variable and note the statistical significance or clinical significance found in the study.
8. Evaluate the reliability and validity (e.g., internal versus external) of the findings, for example were you able to generalize your findings, was your hypothesis supported or not, and did you come up with any alternative explanations for your findings?
9. List some recommendations for future studies.
10. What were some limitations of your study?
11. Conduct a follow-up with your research participants.

Lecture Starters or Discussion Points

1. “Gimme a Beat”

Psychology instructors tend to look for innovative ways to teach students course-related material as a way to reach the different learning styles, enhance motivation, and increase participation levels for all students. This can be done by utilizing a variety of different teaching formats, activities, lecture material, the use of multimedia, and even pop culture. Potkay (1982) described the use of popular song lyrics as a way to (a) highlight the importance of a concept, (b) provide a concrete illustration of the concept, (c) demonstrate the relevance of an idea in contemporary context, (d) increase general awareness of psychological aspects of everyday media, (e) stimulate classroom discussion, (f) encourage personal involvement by students, who may also may find new songs on their own, (g) add an alternative to film, television, and print media for use in the classroom, and, (h) offer a novel, entertaining stimulus with which to break fatigue or monotony during lengthy class sessions (p. 233).

According to Albers and Bach (2003), 74% percent of students felt the use of music not only challenged expectations, but “set the stage for the day’s lecture.” It also allowed the instructor to appear, “less regimented, less formal, and thus less daunting (especially for younger students)” (pp. 239–242). A list of popular songs is provided. It may even be helpful as a homework assignment to ask students to select a popular song about the current chapter readings to incorporate the student’s perception of this process. The Medical News Today (2009) discussed a recent research study conducted by Richard Harris, a professor of psychology at Kansas State University, and Elizabeth Cady, a 2006 doctoral student. They conducted a research study on the influence of music as powerful memory cues for the journal of *Psychology of Music*. The study mentioned some popular songs, such as Vanilla Ice’s “Ice Ice Baby,” Coolio’s “Gangsta’s Paradise,” the “Happy Birthday” song, and the “Eve of the Tiger,” all songs with powerful memory cues for their research participants. These may be some songs to use as well to conduct some in-class research on the influence of music and memories. Play a couple minutes of each one of the songs listed and ask students to record their initial thoughts, feelings, emotions, or memories associated with them. After the music clips have been played, ask for the students to share their reactions with the class.

Albers, B. D., & Bach, R. (2003). Rockin soc: Popular music to introduce sociological concepts. *Teaching Sociology*, 31, 237–245.

Potkay, C. R. (1982). Teaching abnormal psychology concepts using popular song lyrics. *Teaching of Psychology*, 9(4), 233–234.

The Medical News Today (2009, January 22). *K-State psychology research shows that popular songs can cue specific memories*. Retrieved on October 3, 2009, from <http://www.medicalnewstoday.com/articles/136332.php>.

2. Movies and Mental Illness

Films provide great opportunities to introduce and expand on the key concepts outlined throughout each chapter. Given classroom time restraints, it is best to show movie clips ranging from five to ten minutes. The utilization of popular films can be a way to capture your students’

attention by applying chapter content to real-world pop cultural settings, thus facilitating class discussion. Zimmerman (2003) listed several examples of popular feature films, both new and older releases (see films discussed and/or cited), to consider. Although Hollywood films tend to distort the realities surrounding mental health issues, they can be used as “classroom assets rather than liabilities” because films offer a visual representation as to how it would be to live with a mental disorder, including being socially excluded and experiencing discrimination (Livingston, 2004, p. 119).

Livingston, K. (2004). Viewing popular films about mental illness through a sociological lens. *Teaching Sociology*, 32, 119–128.

Zimmerman, J. N. (2003). *People like ourselves: Portrayals of mental illness in the movies*. Laham, MD: Scarecrow Press, Inc.

3. Why do some undergraduate students find psychological research interesting while others are less interested in psychological research?

Abnormal psychology tends to be one of the most popular psychology courses offered on campuses across the nation. An integral part of creating an effective learning community in the classroom is to be able to hold and peak student interest. Vittengl, Bosley, Brescia, Eckardt, Neidig, Shelver, and Saperoff (2004) reported that students frequently show the most interest in the topics of mental illness and criminal behavior. Vittengl et al. (2009), further espoused that interest in research deals with extroversion, conscientiousness, openness to experience, and academic aptitude.

You can start by writing the following terms on the chalkboard, white board, or on large pieces of paper taped to the walls around the room: Pros of conducting Research, Cons of Conducting Research, Extroversion, Conscientiousness, Openness to Experience, and Academic Aptitude. Then ask students to come up and write their first thoughts when they read each of these terms. This will provide you insight into your students’ perceptions about research and may help you in preparing lectures. After the students have completed making their lists for each of the topics, review the “Pros and Cons” of research and ask the students to discuss why they believe these to be true. Next, discuss the findings that Vittengl et al found to be indicators of undergraduate interest in psychological research: “extroversion (e.g., active and engaging behavior, positive emotion and cognition), conscientiousness (e.g., responsible behavior, hard work, and achievement motivation), openness to experience (e.g., curiosity, appreciation of and affinity for intellectual pursuits), and academic aptitude (e.g., academic achievement)” (p. 91).

Vittengl, J., Bosley, C. Brescia, S., Eckardt, E., Neidig, J., Shelver, K., & Saperoff, L. (2004). Why are some undergraduates more and others less interested in psychological research? *Teaching of Psychology*, 31(2), 91–97.

4. Alphabet Brainstorming: What do psychologists study in the field of abnormal psychology?

First, start by breaking the class into small groups of 5–6 students or, depending on the size of your class, you could have students work individually. Eggleston and Smith (2004) stated that the object of the game is “to come up with as many topics, things, issues that a psychologist studies that begin with the assigned letter,” and they suggest using the letters, “P, D, T, C, S, and B.” If you want to increase the class participation or competition level, try offering extra credit or

candy as an option. This activity can be modified by changing just psychologists in general to include “what do psychologists study in the field of abnormal psychology.” Allow about 10–15 minutes for students to work on this activity and then allow individuals or group members to share their ideas with the class. This provides an opportunity to clarify what areas will be covered in the course as well as address areas that will not be covered. You may also add other letters of the alphabet.

Eggleston, T., & Smith, G. (2004). Office of teaching resources in psychology (OTRP online): *Building community in the classroom through ice-breakers and parting ways*.

5. When Measurements Come to Life: The Living Likert Scale (see Handout 2-1)

This activity is modified from Eggleston and Smith (2004) as a way to let students migrate around the room to express attitudes and opinions, while providing an opportunity to interact with peers. You will first need large pieces of paper with 1 (strongly disagree), 2 (disagree), 3 (undecided/neutral), 4 (agree), and 5 (strongly agree) represented, each on separate sheets of paper. Then before class starts hang the 1-5 sheets of paper across one side of the room in order. Once class has started, tell students that a series of statements (see Handout 2-1) will be read aloud and after each one move to the number that represents their attitudes and opinions. Mention that if the student feels uncomfortable sharing their true feelings that they may decide to go to number 3 (undecided/neutral). Ask the students to not talk during the activity and simply observe their peers attitudes and opinions. It may be helpful to start with some simple questions and progress to more controversial statements. You can add your own statements, use the ones provided, or you may modify the statements to meet your lecture needs.

Eggleston, T., & Smith, G. (2004). Office of teaching resources in psychology (OTRP online): *Building community in the classroom through ice-breakers and parting ways*. Retrieved from <http://teachpsych.org/otrp/resources/eggleston04.pdf> on July 20, 2009.

6. Use of Technology as a Class Opener (e.g., Blackboard, ecollege, WebCT, Frontpage, etc.)

If you come across an interesting research study in a scholarly journal article or if you find a research study that was conducted in a popular magazine, post a copy of the article or the major findings. Then have students post and share their opinions and thoughts online regarding the findings that were reported by the study (journal or popular magazine). Allow students to provide feedback to each other. In the beginning of the class, pull up the discussion and review the responses in class. Questions to ask: Do you agree with the findings, why or why not? How do you think this study could have been improved? Did you notice any limitations, if so, what? Could this study be replicated in the future? If so, what recommendations would you make for future researchers? This activity can also be modified as an in-class demonstration by asking the students to bring in popular magazines or newspapers with research studies included. If you decide to go with this option, break the class into small groups of 4–6 and allow the students to share their research with the group members still touching on the same questions mentioned above.

7. Hot Topics: Students Conducting a Student-Led Focus Group

Ask students to volunteer some “hot topics” related to college students, maybe something that has been discussed on campus, a controversial issue, or something they have witnessed in the media and write these on the board. It may be best to conserve time by limiting the selections to 3 or 4 “hot topics.” Then after assessing the topics allow students to vote by writing their selection on a scrap sheet of paper anonymously for one option. Ask students to fold the paper and have 2–3 students volunteer to calculate the top voted “hot topic” among the students. After the topic has been selected, ask students to brainstorm and come up with five open-ended questions related to the “hot topic.”

Once five questions have been established, ask for volunteers of 6, 8, or 12 students, then ask the students to move their chairs in a circle for all the volunteers to sit. After all of the student volunteers have been chosen, ask for two more volunteers to be the researchers. Hand the student researchers/facilitators who will be conducting the focus group the 5 questions that were established based on the “hot topic,” and ask these two student volunteers to come up with some basic ground rules for the focus group (only one person shares at a time, be respectful of others opinions, etc). While the student-led focus group is being conducted, have the remainder of the class take notes on their observations from the focus group. For example, noting the similarities or differences in opinions of group members, capture essential information, information related to consensus, surprises or contradictory statements, how the process could be improved, document nonverbal behavior etc. Allow for 15–20 minutes for the focus group to be conducted with an additional five minutes for discussion. The sample focus group can be conducted in the following order after the student volunteers are selected:

1. Introductions of facilitators
2. Explain how you plan to record the responses
3. Purpose (finding information on the “hot topic”)
4. After each question is read, reflect back a summary of what you heard
5. Ensure everyone has equal opportunity to share, using rounds
6. Close the session

Demonstrations/Activities

1. Conducting a Mini Case Study

Conradsen (2004) reports that “case studies are routinely used in Abnormal Psychology classes to augment textbooks” and that both conducting a written analysis of a case study and processing the case study verbally in-class are both effective in improving the “students’ ability to simulate clinical diagnosis” (pp. 43–48). The current activity is designed to allow students to use their creativity and work as a group to analyze the importance of conducting case studies as psychologists and the limitations of conducting case studies. There are several ways you can implement this activity: (a) use your clinical expertise and come up with a generic case study to give each student group the same case study to review, (b) ask the students to search the Internet to find an interesting person or group of people who they feel would warrant a good case study (e.g., a famous figure or someone who displays a unique situation, characteristics, abnormal behavior, symptoms), or (c) ask the students to come up with a case study. The text defines case study as a comprehensive description of an individual or group of individuals that focuses on assessment or description of abnormal behavior or treatment. Before beginning the activity, split the class into small groups of three to four students. Ask the students either to review the case example; search for an individual or group of people to conduct a case study on by utilizing the Internet, their book, or personal knowledge; or allow the students to create their own case study. Ask students to provide a detailed account of this individual or a group of individuals’ lives by creating fictional clinical data as well as information related to background, description of abnormal behavior, and treatment. What are the benefits of case studies? What are the limitations? Can this study be replicated in the future? How can you apply this knowledge to a group of people? Why are these important for psychologists to conduct? You may also reflect back on the case of Ted Bundy as highlighted in the text. Why would he be a good case study to assess?

Conradsen, S. L. (2004). How useful are case studies in teaching abnormal psychology? *North American Journal of Psychology*, 6(1), 43–50.

2. Natural Observation Research/Observing and Writing Field Notes (see Handouts 2-2a and 2-2b)

As shown in the text, research is an important aspect of entering the field of psychology. This exercise allows for students to receive some practical experience conducting research and working on documentation. Please see Handouts 2-2a and 2-2b for the activity. Before you send the students out on campus to complete their naturalistic observation, first go over the importance of documentation by either writing the two examples by Fontes and Piercy (2000) on the board, using an overhead projector, doc cam, or by passing out copies to examine the two reports based off of the same person (see Handout 2-2b). Then explain the assignment as listed in Handout 2-2a. The exercise also allows students to practice coding research based on placing the data from the observations into categories.

Fontes, L.A., & Piercy, F. P. (2000). Engaging students in qualitative research through experiential class activities. *Teaching of Psychology*, 27(3), 174–179.

3. Research Study—Hershey’s Chocolate Kisses vs. Reese’s Peanut Butter Cups (see Handouts 2-3a and 2-3b)

This demonstration uses some humor and fun to get the students involved in some critical thinking related to conducting research. Start off by reviewing and defining the “scientific method” as a refresher from Introduction to Psychology. Please see Handouts 2-3a and 2-3b to help with this activity after you have reviewed the basics of the scientific method. Make copies of Handout 2-3a for every student, and pass these out after you have discussed the purpose of the study and asked the students to come up with their own hypothesis as a class. Ask students to complete the questionnaires anonymously. Handout 2-3b is just an outline of things you as the instructor want to cover throughout the exercise or afterward. You may also add and modify this list. After the students have completed the questionnaires, ask the students to work together as a class to compile the data based on the different questions asked. After the questions have been tallied, ask the students to break up the data by questions and the gender of students. Then after the students have divided, for example, the favorite candy bar of the male students versus the female students, ask the students to convert these numbers into percentages. It is important to mention that the students are supposed to go by **ONLY** the data written and recorded on the questionnaires, not by the observations in the classroom (it frequently happens that students just want to count the number of male vs. female students in the class instead of reviewing the data from the questionnaires). This also allows for you as the instructor to talk about the biases with research and the importance of coding, as well as the benefits of SPSS when reviewing data. After the students have compiled their data and listed these findings on the board, doc cam, or overhead projector, discuss the findings. Was your hypothesis supported, what are some alternative explanations, etc.? How was this experience?

4. Review Validity and Reliability of Current Scholarly Research Journal

This activity allows students to explore current research and evaluate a refereed journal. One of the primary goals of undergraduate psychology programs is to assist students in the ability to read and think critically about empirical research conducted in the field of psychology. Varnhagen and Digdon (2002) list some helpful questions in Table 1 related to factual versus critical thinking. For example, a factual question would be “Who did the research?” and an example of a critical-thinking question would be “Where did the research questions come from?” In Table 2, “list some modal responses to the questionnaire items.” Some examples of questions would be, “What is your overall impression of reading the research?” or “How interesting did you find reading the research?” (pp. 161–162). Use these two tables to assess a refereed journal article. You may select a scholarly journal article to best meet your students’ needs.

Varnhagen, C. K., & Digdon, N. (2002). Helping students read reports of empirical research. *Teaching of Psychology*, 29(2), 160–164.

5. Evaluating Cultural Implications When It Comes to Research

The text already mentioned that one of the major limitations of group-based research is the lack of visible studies including diverse populations regarding race, ethnicity, and culture. Fontes and Piercy (2000) mentioned that it is important for students to “understand the implicit cultural assumptions that shape their and other’s world views,” which can be done by participating in some exercises that acknowledge and explore different cultural positions (p. 176). This is done by completing ethnomethodologies to assess everyday behavior or unspoken socially accepted

norms. Fontes and Piercy (2000) ask students to select from the following tasks described below and write a short paper describing their reactions to conducting the experiment outside of class:

1. Get into a crowded elevator and stand with your back to the door.
2. Challenge someone to a game of tic-tac-toe. When the other person marks an X or O, erase it and put it in another place, then proceed with our own mark.
3. Stand within 6 inches of someone you know slightly and begin a normal conversation.
4. Start singing in a public bus.
5. Introduce yourself and shake the hands of strangers in a line to buy movie tickets.
6. Talk to the fruit or vegetables in a supermarket.
7. Wear pajamas all day as you go about your regular activities (p. 177).

Then ask the students to report in-class how it was to engage in one of these behaviors. How did others react to you? Was it difficult to engage in these behaviors that are not seen as the “norm”?

Fontes, L.A., & Piercy, F. P. (2000). Engaging students in qualitative research through experiential class activities. *Teaching of Psychology*, 27(3), 174–179.

6. The Use of YouTube and the Internet to Conduct Research: Twilight (Stephenie Meyer) versus Harry Potter (J. K. Rowling)

The media and technology are such driving forces in today’s society. Before class write the two topics: Twilight and Harry Potter on the board, doc cam, or the overhead projector. Then ask students to come up with 3–5 research questions related to these two topics. Write the research questions on the board for the students to see and then ask the students to state their hypotheses or educated guesses to each question. Then ask students to work in small groups of 2–3 students and either using the computers in the classroom or the library try to find the answers to the research questions listed in class by utilizing the Internet, YouTube, etc. Mention that it might be helpful to review the sales of Harry Potter books, box office profits from Harry Potter movies, the sales of the Twilight Saga books, box office profits from Twilight Saga movies, number of hits for each, surveys, polls, trivia, fan websites, blogs, forums, media articles, etc. as some avenues to explore. Usually students know what areas to search and are very familiar with the Internet and technology, but if you think they made need a little assistance, you can mention the above as a good starting place.

Chenail (2008) stated that “YouTube, the video hosting service, offers students, teachers, and practitioners of qualitative researchers a unique reservoir of video clips introducing basic qualitative research concepts, sharing qualitative data from interviews and field observations, and presenting completed research studies” (p. 18).

Chenail, R. J. (2008). YouTube as a qualitative research asset: Reviewing user generated videos as learning resources. *The Weekly Qualitative Report*, 1(4), 18–24

7. Exploring the Cause of Behavior: Case Studies Involving Some of the Most Prolific Serial Killers

The textbook goes on to discuss Ted Bundy as it defines the use of case studies in psychological research as a way of collecting a detailed description of a single person that may help us better understand one's behavior. Provide the students with a list of the most famous serial killers such as: John Wayne Gacy, Jr. (March 17, 1942–May 10, 1994), Theodore Robert Bundy (November 24, 1946–January 24, 1989), Serhiy Tkach (1952–Present), Donald Harvey (April 15, 1952–Present), Moses Sithole (November 17, 1964–Present), Belle Sorenson Gunness (November 11, 1859–April 28, 1908), Ahmad Suradji (1951–July 10, 2008), Alexander Pichushkin (April 9, 1974–Present), Gary Leon Ridgway (February 18, 1949–Present), Anatoly Onoprienko (July 25, 1959–Present), Andrei Romanovich Chikatilo (October 16, 1936–February 14, 1994), Pedro Alonso López (October 8, 1948–Present), Yang Xinhai (July 1968–February 14, 2004), Pedro Rodrigues Filho (1954–Present), Elizabeth Báthory (August 7, 1560–August 21, 1614), Javed Iqbal (1956–October 8, 2001), Thug Behram (ca. 1765–1840), Luis Alfredo Garavito Cubillos (January 25 1957–Present), Gilles de Rais (1404–1440), or Harold Frederick “Fred” Shipman (January 14, 1946–January 13, 2004) to name some examples. This activity can be done in small groups or individually. Then if you do not have access to the Internet in your classroom, reserve a computer classroom on campus. Ask the students to assess the following during their Internet search:

1. Family background including information about parents, siblings, home environment, SES, ethnicity, age, family dynamics, etc.
2. Family and personal medical history
3. Childhood experiences and attachment to parents
4. Description of behaviors that appeared abnormal starting in childhood to the time the crimes/murders were committed
5. Personality traits
6. Education level and intelligence
7. Types of crimes committed
8. Methods used and victimology
9. Trauma history if applicable

Then ask the students to condense the above information into a written or typed summary to share with the class. After you have volunteers, share, or have each small group share, with the class. Look for the repeated themes found across the serial killers. How would this information be used? Can this predict a profile of someone who may commit these types of abnormal behaviors? What can be concluded from the information discovered?

8. Understanding the Four Lobes of the Brain

Take 4 cards and write each of the four parts of the brain on each one of the cards (e.g., occipital lobe, etc.). Ask for volunteers from the class. Have each student randomly choose one of the cards without showing the class. Ask the student to pretend to be that part of the brain and then to explain his/her function without giving away the name of the brain region. The task of the class will be to guess which brain region the student is talking about.

9. Understanding the Limitations of Research

Divide the class into two groups – label one group the “pros” and one group the “cons.” Choose some of the research designs from the text, such as “correlations” and “case studies.” For each term, have the groups take turns providing the pros and cons for each type of design. Keep score so that the group with the highest score wins.

10. The Importance of Ethical Research

Divide the class into groups of 3-4 students. Present the following case: John is participating in a new experiment on depression for class credit. When he arrives for his session, the experimenter explains that John is required to fill out several surveys for class credit and immediately hands him the papers. When John asks to leave, the experimenter says that if he leaves then he will lose class points. John feels himself getting depressed while taking the tests, but is too embarrassed to say anything. When he is finished the experimenter thanks him and asks him to leave. Have each group discuss the ethical problems with this procedure and then compare and contrast their views.

When Measurements Come to Life: The Living Likert Scale

Statements to use:

1. I think video games can make children act aggressive.
 2. I think psychological disorders are primarily caused by biological factors (genetics and heredity).
 3. I think psychologists and psychiatrists prescribe too much medication for mental health problems.
 4. I think there is stigma and shame associated with mental illness.
 5. I think children should not be prescribed antipsychotics and other psychotropic medications.
 6. I think marijuana should be legalized.
 7. I think electroconvulsive therapy (ECT) is useful.
 8. I think dreams are useful in treatment for understanding a person.
 9. I think people with serious mental illness should be hospitalized in an institution.
 10. I think mental insanity should not be a valid legal defense.
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In-Class Exercise

General: Practice the art of collecting and analyzing data as a psychologist would. Find a partner in the class and together observe a short, naturally occurring phenomenon. This is to be done on campus at a mutually agreed upon location. Take field notes independently and analyze information together. You will each turn in your own field notes, reliability considerations, and analysis ideas.

Formatting guidelines: You will turn in your field notes, the name of your partner, and your analyses. The field notes may be handwritten.

Guidelines:

1. Give the first and last names of your partner and yourself.
2. Choose a location on campus where you can be unobtrusive, but can observe people behaving naturally. Be honest with anyone who asks what you are doing. There are many places around campus that would be appropriate, such as the courtyards, the library, etc. Do not enter any restricted areas and be sensitive to the participants. **List the location.**
3. Make sure you and your partner have the same views of the environment, but do not share notes initially. Observe “participants” for 10–15 minutes. Record observations with your own reactions and thoughts—make sure I can tell the difference. These will be turned in. Maintain confidentiality for participants (If you see someone you know, do not put their name just female/male student etc.) **Choose some words to describe this location together.**
4. After data collection (soon after, for best memory when you come back to class) meet with your partner and discuss both of your observations to discuss the reliability. Did you see/record the exact same behaviors? Why, and were there any disagreements?
5. Consider how you would analyze this data as a psychologist. You do not need to do a complete analysis of what you saw, but present a few categories that a researcher might expand upon and want to know more about. Include at least 3 categories with at least 2 examples for each.

Some example categories: age, gender, dress/clothing, hair styles, shoes, equipment, group components alone or with other people, ethnicity, surroundings, environment, setting, etc.

Sample Field Note Reports

Adapted from:

Fontes, L.A., & Piercy, F. P. (2000). Engaging students in qualitative research through experiential class activities. *Teaching of Psychology*, 27(3), 174–179.

1. A rich man got onto the elevator. He looked like he was rushing to a job interview.
 2. The first person to step into the elevator was a bearded brown-haired man who wore a dark blue suit, white shirt, and shiny shoes. He clutched a polished leather briefcase to his chest and looked at his watch twice while on the elevator. After pressing the button for the eighth floor, he examined his reflection on the metal elevator wall and straightened his tie. He shifted from foot to foot and squirted breath spray into his mouth (Fontes & Piercy, 2000, p. 175).
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RESEARCH STUDY

Please select the answer that applies to you:

1. Gender: ☐ Male ☐ Female
2. Ethnicity: ☐ Anglo/White ☐ African American ☐ Hispanic ☐ Asian
☐ Other, please specify
3. My favorite of the two candy bars is ONLY SELECT ONE:
☐ Hershey Chocolate Bar
☐ Reese's Peanut Butter Cups
4. My least favorite of the two candy bars is ONLY SELECT ONE:
☐ Hershey Chocolate Bar
☐ Reese's Peanut Butter Cups
5. I think male students would most prefer which candy bar: ONLY SELECT ONE:
☐ Hershey Chocolate Bar
☐ Reese's Peanut Butter Cups
6. I think the female students would most prefer which candy bar: ONLY SELECT ONE:
☐ Hershey Chocolate Bar
☐ Reese's Peanut Butter Cups

What is the scientific method?

Definition: A system of gathering data so that bias and error in measurement are reduced.

Steps in the Scientific Method:

1. First, you form The Question, which is when want to know more about what interests you. Second, you review the psychological goal of “description,” which is defined as the “what.” For this study, the research question would be, “Which is better: Hershey’s Chocolate Bar or Reese’s Peanut Butter Cups?”
2. Next, form a hypothesis, which is defined as the tentative explanation of a phenomenon, or an “educated guess.”

For this study, an example of a hypothesis would be: “Hershey’s Chocolate Bar is better than Reese’s Peanut Butter Cups,” or “males prefer vs. women prefer,” or “college students prefer...”

3. Third, test the hypothesis (i.e., by using surveys, questionnaires, observations, interviews, or an experiment, depending on if the research is qualitative or quantitative).
4. Fourth, draw conclusions. Did the results support the hypothesis or not? Can you think of any alternative explanations for what you observed in the research study?

Keep in mind:

- ✓ An *experiment* is the only research method that will allow researchers to determine the cause of behavior.
- ✓ A *population* is defined as a group of people or animals in which the researcher is interested.
- ✓ *Participants* are defined as the people who are randomly selected and who are a part of the study.

Films and Videos

Anatomy of a Neuron

<http://visual.pearsoncmg.com/mypsyhlab/index.html?clip=2&tab=tab0&episode=episode03>

Parts of the Brain

http://mediaplayer.pearsoncmg.com/assets/psychology-E03_S03C

Evidence-Based Treatment: What Does It Mean?

http://www.audio.va.gov/ptsd/MP4/Whiteboard_Evidence-Based.mp4

Neurotransmitters

<http://visual.pearsoncmg.com/mypsyhlab/index.html?clip=2&tab=tab0&episode=episode03>

Web Links

<http://www.psychology.org/>

- ✓ Encyclopedia of Psychology
- ✓ Offers information on careers, resources, publications, organizations, etc., that deal with various topics related to the scientific study of psychology by researchers and practitioners in the field.

<http://www.apa.org/>

- ✓ The American Psychological Association
- ✓ This professional website includes information on psychological topics, beneficial databases, and an assortment of information related to publications and research.

<http://psych.hanover.edu/>

- ✓ Hanover College: Psychological Research on the net
- ✓ Provides an array of information related to research topics in the field of psychology separated by topic area which is maintained by Dr. John H. Krantz.

<http://www.psych.org/>

- ✓ American Psychiatric Association
- ✓ This site reviews an abundance of information related to research including information on current research projects, research funding, health policy analysis, and several other topics.

<http://www.nimh.nih.gov>

- ✓ National Institute of Mental Health
- ✓ Analyzes the different types of research grants, training, research areas, contacts, and future research plans related to mental health.