Course Learning Outcomes for Unit I

Upon completion of this unit, students should be able to:

1. Define psychology and discuss the history of the field.
   1.1 Relate psychology and science and be familiar with the broad scientific attitudes utilized by psychologists in their studies.
   1.2 Recall psychology’s historical roots in philosophy and the natural sciences.
   1.3 Recall psychology’s seven contemporary perspectives.

2. Describe the research methodology used in the field of psychology.
   2.1 Apply the scientific method to the field of psychology.
   2.2 Identify the three (descriptive, correlational, experimental) main types of psychological research.
   2.3 Identify the benefits and limitations of the three (descriptive, correlational, experimental) main types of psychological research.
   2.4 Apply ethical considerations psychologists must use when conducting research.

Reading Assignment

Chapter 1:
The Science of Psychology

Unit Lesson

Psychology As Science

Welcome to psychology! Your first question might be, “what is psychology, anyway?” Psychology, according to King (2013), “is the scientific study of behavior and mental processes” (p. 2). As you will see throughout Chapter 1 and the remainder of our course, psychology’s relatively brief history has included a swinging pendulum in terms of which schools of thought emphasized behavior and which emphasized mental processes. Despite these changes, the field has stayed consistently committed to taking a scientific approach to understanding how people think, feel, and act. Psychologists are driven by curiosity and are critical thinkers, constantly asking questions, developing hypotheses, and testing what they think they know (or what popular opinion says) regarding behavior and mental processes. This is not too surprising, considering that psychology has some of its earliest roots in the ancient philosophies of Socrates, Plato, and Aristotle (King, 2013).

From Natural Science to Social Science

In today’s society, psychology is considered a social science, so you might be surprised to find out that some of its original contributors had backgrounds in the natural sciences. For example, Wilhelm Wundt (considered by some to be the “father” of psychology) was a biology instructor and a physician. His background led him to approach understanding the mind by trying to identify its most elemental parts (think: the periodic table), and his school of thought was called structuralism. Across the pond, William James was busy bringing psychology to United States. James was greatly influenced by another natural scientist, Charles Darwin, and as a result, his school of thought, called functionalism, focused on how our minds can help us best adapt to our changing environments.
Modern Schools of Psychological Inquiry: Applications in the Criminal Justice System

Contemporary psychologists have been influenced by these earlier schools of thought. There are seven modern schools of thought in psychology. Remember, each school of thought is concerned with applying the scientific method to understanding human thoughts, actions, and feelings. Rather than competing, each approach can provide us with a complementary understanding of various issues.

Let’s use the context of the criminal justice system to briefly consider each approach. The biological approach is interested in what goes on in our bodies as we think and feel different things. Perhaps a biopsychological researcher would be interested in studying the physiological responses of a suspect while he or she is being interrogated (a presumably stressful situation).

B.F. Skinner, a prominent psychologist who endorsed the behavioral approach, believed that rewards and punishments from our environments are what ultimately guide our actions. A behavioral researcher, therefore, might be interested in finding out if different kinds of punishment (e.g., fines, jail time, capital punishment) really changed how people acted.

Freud—many of you have probably heard of this psychologist as he is often referenced in popular culture—was the founding father of the psychodynamic approach. Since this approach emphasized the power of the unconscious mind, a psychoanalytic researcher might be interested in applying therapeutic techniques that would allow a convicted felon to explore an unresolved childhood conflict that led to his or her criminal behavior.

The next contemporary perspective, called the humanistic approach, would make a lot of sense applied to the rehabilitation of individuals in the criminal justice system. This approach has a more optimistic view of humans and emphasizes people’s positive qualities—including the capacity to change for the better.

The cognitive approach is concerned with how we think and issues such as how we learn, create memories, process information, and solve problems. A researcher from this approach might be interested in understanding the accuracy of eyewitness accounts of crimes based on an understanding of how memories can become distorted.

Similar to William James’s consideration of how our minds help us to adapt, the evolutionary perspective looks at changing pressures in our ancestral environments that may have contributed to the emergence of certain behaviors in modern society. This approach could shed light on the gender differences in types of crimes committed. Were men who were more physically aggressive when threatened better equipped to survive, and does this help explain why more violent person-to-person crimes are committed by men (versus women) today?

Lastly, the sociocultural approach considers the influence of culture on people’s thoughts and behaviors. Remember, culture does not necessarily equate country. Within the United States, there are many cultures and sub-cultures. A sociocultural researcher might notice that there are differences in the rates at which members of different ethnic groups are incarcerated for drug-related crimes. They would then use this information to develop research questions that examined differences in family structure, cultural beliefs about health behaviors, and other factors that might help explain their observations.

As you can see, each of these perspectives can help develop questions and hopefully help answer some of the challenges facing our increasingly complex societies. What type of research can most ethically and appropriately provide empirical support for a researcher’s proposed hypothesis is the subject of our next section.

Which Design Is Best?

Ask around and you will find that just about everyone has an opinion regarding why people do what they do. Do birds of a feather flock together, or do opposites attract? Does misery love company? Does practice make perfect? These are all commonsensical claims about human behavior that psychologists attempt to answer using the scientific method and research design.

The scientific method is simply a self-correcting process for asking questions and observing the answer. Psychologists make observations, form theories, and test hypotheses so that they can refine the knowledge
we have about behavior and mental processes. A few important things to note about theories include the following:

1. *A theory cannot predict more than one outcome.* For example, you cannot have a theory that predicts that breastfed babies will have higher IQs, advanced motor skills, and more sociable personalities. Each of these claims would need a separate theory.

2. *A theory cannot predict contradictory outcomes.* Continuing with our breastfeeding example, you cannot predict that breastfed babies will either have above or below average intelligence. You have to choose one outcome to test.

3. *A theory cannot be proven but merely supported.* A theory is not the same as a “truth.” We would not say that we *proved* breastfeeding leads to the best outcomes for babies but simply that we found empirical *support* that *suggests* it is a beneficial practice.

Now that we have cleared that up, let’s talk about the three main ways that psychologists try to find support for their theories: *descriptive studies, correlational research,* and *experiments.*

There are three main types of descriptive studies: a case study, naturalistic observation, and surveys. Let’s briefly discuss the benefits and disadvantages of each of these methods. Ever seen a movie where an FBI agent is trying to track down a serial killer using profiling? Often times, the way we come to understand unique individuals (such as the famous and the infamous) is through *case studies.*

A case study is an in-depth look at one individual. The benefit is that we can come to understand a great deal about a rare phenomenon. The biggest drawback is that since we are only looking at one person, we cannot generalize our findings to any other person (and in psychology, the more you can generalize to the larger population, the better).

The next type of descriptive study is called *naturalistic observation.* Ever find yourself sitting on a bench in the mall, waiting for a friend, and after a few minutes, you begin watching the people walking by, coming in and out of stores? You are actually engaging in what could be psychological research. Naturalistic observation is simply recording the behavior of people (or in some cases, animals) in their natural settings. Although we do not typically draw conclusions from naturalistic observation, it often provides terrific insight for developing further research questions.

The last form of descriptive study is called the *survey* method. This may be the form of psychological research that you are most familiar with. In today’s society, whether we are purchasing a product, browsing the internet, or trying to speak to a customer service representative, we are constantly asked to complete surveys. That is one of the biggest benefits from the psychologist’s perspective—surveys allow us to ask lots of people, lots of questions, without a lot of time or money! Since we can ask so many people, we can often generalize our findings to large populations. However, we can never be sure if people were being truthful in their survey answers (Were they in a hurry? Were they embarrassed?). We also know that sometimes the way a survey is administered affects the results (people are more likely to answer a survey when asked to take it by someone they think is physically attractive, but they are also more likely to want to make a good impression).

The next research methodology commonly used in psychology is called *correlational research.* What if I were to tell you that research has indicated that the more ice cream that is consumed by people, the greater their chances of being murdered? Would you wish you were lactose intolerant? Would it conjure up images of ice cream trucks and kidnappings? Would you just assume that I am full of it? The truth is that there is a statistical relationship between ice cream consumption and homicide rates, but there is also statistical evidence of a relationship between increased temperature and increased aggression. Could it be that the time when people eat the most ice cream (summer) is the time when the temperature is hottest, and therefore, the time that people are most likely to be violent? Or is there an explanation we have not even considered yet? All correlational research can tell us is that a *relationship* exists between two variables. It can also tell us which *direction* these variables move. As ice cream consumption increases, homicide rates increase. We call this a *positive correlation* because both variables are moving in the same direction (not because they are both going up).

Let’s move away from murder and use a happier expression to explain the next type of correlation. Most of us have heard the expression, “an apple a day keeps the doctor away.” As apple consumption increases (apples and ice cream—anyone hungry yet?), visits to the doctor’s office decrease. We refer to this as a
negative correlation (the variables are moving away from each other). Researchers determine the strength of a correlation (how closely related the movement of the variables seems to be) using a correlation coefficient which ranges from +/- 1.00. As mentioned, the biggest drawback to correlational research is that we cannot tell which variable is causing the movement in the other variable. However, correlational research is often a starting point to determine if further investigation should be done using an experiment.

An experiment is a type of research methodology during which the psychologist attempts to manipulate a variable in order to observe its effect on another variable. This is the only type of research that can tell us if there is a causal relationship between two (or more) variables. The variable that the research is attempting to manipulate is called the independent variable (IV). This is the variable that the researcher thinks is causing a change in the dependent variable (the outcome). In order to be sure that it was the manipulation that led to the difference in variables, the researcher must randomly assign participants to each of the research conditions (otherwise, it might have been something about the individuals that led to the differences).

Let’s imagine that a researcher thinks that there is a relationship between the amount of aggressive media (e.g., television, movies) that a parent is exposed to and the likelihood that the parent will use physical discipline on his or her child. First, we need to randomly assign the parents to two groups (otherwise, we might end up with all parents who like action movies in one group and all parents who like documentaries in another—this would mean it was something about the parents’ preferences, not the aggression in the media that led to the differences). Then, the parents in the experimental group (the group that is receiving the manipulation of the IV) might be asked to watch a violent action film. The parents in the control group (the group we want to compare to) might be asked to watch a neutral nature documentary.

After this, perhaps the researcher would have both groups read a scenario about a child who is misbehaving. The experimenter asks the parents a series of questions regarding the kind of discipline they would administer to the child. If there are statistically significant differences between the two groups (such that parents who watched the violent film were much more likely to endorse physical discipline), then the researcher can conclude that he or she found support (remember, we can only support our theories, not “prove” them) for the impact of aggressive media exposure on discipline.

Reference


Suggested Reading

Click here to access a PowerPoint presentation of the Chapter 1 material. Click here to access a PDF version of this presentation.


Learning Activities (Non-Graded)

Textbook Chapter 1 Self-Quizzes:
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Page 13
Page 17
Page 29
Page 37

Non-graded Learning Activities are provided to aid students in their course of study. You do not have to submit them. If you have questions, contact your instructor for further guidance and information.