PSYCHOLOGY

Def: Scientific Study of mind and behavior

* Mind-internal property that is unobservable
* Behavior-external property that is observable

Evolution of psychology as science

1879 - first lab for psychology experiments

*Wilhelm Wundt* – sensory physiology

1890’s – structuralism

*Edward B. Titchener*

-interested in the “anatomy” of mind

-introspection as a way to study the mind

1890’s – functionalism (mainly in US)

*William James*

1920’s – Behaviorism

-How dos one study something abstract?

Challenges:

Reliability – consistency of measurement/observation

Validity – accuracy of measurement/observation

*John B Watson* – ‘little Albert’ experiment

*Ivan Pavlov* – how dog training works

*B F Skinner* – rat

1920’s – Freudian psychology

*Sigmund Freud*:

-the unconscious: ld, ego, and superego

-psychosexual: theories of human behavior

-psychoanalysis

1960’s – Humanism

*Carl Rogers*: Emphasis on client centered therapy and student centered learning.

*Abraham Maslow*: Behaviors influenced by hierarchy of needs

1960’s – Cognitive revolution

World’s first computer, 1946 (how to let machine behave like people want it to)

Subfields of psychology

* Abnormal: Developmental, Experimental, Quantitative, Evolutionary, Cognitive, Neurocognitive, Personality
* Clinical: Educational, Biological, Social, Industrial-Organizational, Counseling, School, Cultural

Four foals of psychological research

* Description
* Prediction
* Explanation
* Application

Why do we need science in psychology?

1. Hindsight bias
2. Overconfidence of own knowledge
3. Seeing patterns and orders from random events

We need to think critically in order to generate and extent knowledge about human mind and behavior.

What is science?

-knowledge and practice based on evidence

-also the process of generating knowledge from evidence

What is Scientific research?

Systematic selection and processing of information

Scientific method

1. Theory
2. Hypothesis
3. Test hypothesis by research and observe
4. Confirm or reject
5. Repeat

Falsifiability

Significance difference (not by chance)

Correlation

Relationship between variables

Positive vs negative correlation vs none

Correlation does not imply causation

The nerve system

Central(CNS):

Brain

Spinal cord

Peripheral(PNS):

Somatic(SNS)

Autonomic(ANS)

Sympathetic(SN)

Parasympathetic(PN)

Neurons – Basic Structure

Neurons communicate with each other electrochemically

-chemical signals (neurotransmitters) between neurons

-electrical signal within a neuron

Chemicals have electrical charges (ions)