I. HUMAN GROWTH AND DEVELOPMENT

1. **Development** is defined as systematic changes and continuities in the individual that occur between conception and death. These systematic changes occur in three broad areas: physical development, cognitive development, and psychosocial development.

2. **Theories** of how humans grow and develop fall into the following broad categories:
   
a. **learning** including behavioral theories, social learning theories, and information-processing theories
   
b. **cognitive** theories
   
c. **psychoanalytic** including the neo-Freudian and ego psychology theories
   
d. **humanistic** psychology and self theories

3. **Human growth and development** changes can be viewed as:
   
a. **Qualitative**: change in structure or organization (for example, sexual development)

   or

   **Quantitative**: change in number, degree or frequency (content changes, for example, intellectual development).

   b. **Continuous**: changes are sequential and cannot be separated easily (for example, personality development)

   or

   **Discontinuous**: certain changes in abilities or behaviors can be separated from others which argues for stages of development (for example,
language development).

c. **Mechanistic**: this is the reduction of all behavior to common elements
(for example, instinctual, reflexive behavior)

*or*

**Organismic**: because of new stages, there is change or discontinuity; it is
more than Stimulus-Response. The organism is involved including the
use of cognition. Examples would be moral or ethical development.

4. **Self-concept**

Self-concept may be **defined as your perception of your qualities, attributes and traits**.

**At birth**, infants have no sense of self. In early months this quickly changes.

**By 24 months**, most infants show signs of self-recognition; they can identify
social categories they are in such as age and gender, "who is like me and
who is not like me"; they exhibit various temperaments.

The **pre-school child's** self-concept is very concrete and physical. By 8 or so,
they can describe inner qualities.

By **adolescence**, self-concepts (self-descriptions) become more abstract and
psychological. **Stabilization** of self-concept attributes continues.

Cultural and family factors influence the development of attributes and
some traits.

5. **Developmental concepts**

**Nature vs. nurture**: **Nature** includes genetic and hereditary factors.

**Nurture** includes learning and environmental factors.
Genotype and Phenotype: Genotype is the genetic (inherited) makeup of the individual.

Phenotype: the way an individual’s genotype is expressed through physical and behavioral characteristics.

Tabula rasa: John Locke’s view that children begin as a ‘blank slate’ acquiring their characteristics through experience.

Plasticity: for most individuals lifespan development is plastic representing an easy and smooth transition from one stage to the next.

Resiliency: the ability to adapt effectively despite the experience of adverse circumstances. For example, some children, despite experiencing potentially damaging conditions and circumstances, seem to suffer few consequences.

6. Neurobiology

Neuroscience is sometimes referred to as the missing link in the mental health professions. Ivey, D’Andrea and Ivey (2012 – see references) believe that “the mind is the product of the activity occurring in the brain at the molecular, cellular, and anatomical levels, which are in turn impacted by a person’s interpersonal relationships, cultural context, and societal experience.”

Counselors, by using different theories, skills and interventions promote the release of various neurotransmitters which promote related brain changes. Neurotransmitters affect various cognitive, emotional, psychological and behavioral reactions that people have to their life experiences.

Neurotransmitters carry messages between neurons that stimulate reactions in the brain. These chemical reactions stimulate different parts of the brain.
10. **Cognitive and behavioral counseling**

The **leading proponents** of cognitive and behavioral counseling include Joseph Wolpe, Donald Meichenbaum, Aaron Beck, and Albert Bandura. Albert Ellis and his Rational Emotive Behavior Therapy, and Arnold Lazarus with Multimodal Therapy, are often included in this broad category but are presented here separately.

The **stimulus-response and stimulus-organism-response** paradigms are at the basis of this theory.

The belief is that behavior is learned and, consequently, can be unlearned and relearned.

**The goals of counseling** are to identify antecedents of behavior and the nature of the reinforcements maintaining that behavior. The counselor helps create learning conditions and may engage in direct intervention.

Goals of therapy are likely to be **behaviorally stated**.

**Counseling techniques** may include any of the following: operant and classical conditioning, social modeling, problem-solving, direct training, reinforcement, and decision making.

Most counselors would establish a strong, personal relationship with the client.
11. **Dialectical behavior therapy (DBT)**

Marsha Linehan developed this therapeutic approach for the treatment of **borderline personality disorder**. It is now used more widely with a variety of disorders including traumatic brain injury, eating disorders, as well as a range of mood disorders. DBT has been used with adolescents as well as adults. A **group component** usually complements individual work. Used with adolescents, family members may be involved if available and willing.

**A basic principle of DBT**, in addition to the usual cognitive behavioral techniques, is **helping clients increase emotional and cognitive regulation** by learning the triggers that lead to their undesired behaviors. The dialectical principle of recognizing two sides to situations, such as the need for accepting change and recognizing the resistance to change, receives attention.

**DBT is viewed as a long-term therapeutic intervention** in part because it requires the learning, practicing and acquiring of a number of skills by the client.

The **skills are conceptualized in the following four modules:**

a. **Mindfulness** – paying attention to the present moment nonjudgmentally, and experiencing one’s emotions and senses fully.

b. **Distress tolerance** – accepting and tolerating oneself and the current situation, often painful and negative, in a non-evaluative way.

c. **Interpersonal effectiveness** – developing effective strategies for asking for what one needs, saying no as appropriate, and coping with interpersonal conflict.

d. **Emotion regulation** – identifying emotions and obstacles to changing them, reducing vulnerability, and increasing positive emotions.

The **DBT practitioner might also use such tools as diary cards** (tracking interfering behaviors), **chain analysis** (analyzing sequential events that lead to
behaviors), and the dynamics of the milieu or culture of the client’s group. For effective use of dialectical behavior therapy, the counselor must obtain training in order to teach the required skills and facilitate the application of these skills on an individual and group basis with a variety of clients.

12. **Rational emotive behavior therapy – REBT (Albert Ellis)**

   REBT is based on the philosophy that it is not the events we experience that influence us, but rather it is our interpretation of those events that is important.

   Individuals have the potential for rational thinking. In childhood, we learn irrational beliefs and re-indoctrinate ourselves on a continuing basis. This leads to inappropriate affect and behavior.

   **Belief system, self-talk and ‘crooked thinking’** are major concepts.

   Therapy follows an **A-B-C-D-E** system as follows:

   - **A** = external event (an activity or action)
   - **B** = belief—in the form of a self-verbalization.
   - **C** = consequent affect—which may be rational or irrational.
   - **D** = disputing of the irrational belief which is causing the affect/behavior.
   - **E** = effect (cognitive)—which is a change in the self-verbalization.

   **Emotive techniques** in therapy include role-playing and imagery.

   This theory teaches that self-talk is the source of emotional disturbance.

13. **Multimodal therapy (Arnold Lazarus)**

   This is a comprehensive, holistic approach sometimes classified as eclectic. It
VI. ASSESSMENT

SAMPLE FROM THIS SECTION

11. True and error variance

Tests measure “true” and “error” variance. You want to measure true variance, the actual psychological trait or characteristic that the test is measuring.

For example: Two tests are administered. Each one measures true variance ($T_1$ and $T_2$) and error variance ($E_1$ and $E_2$).

If the correlation between two tests or two forms of the same test is, for example, $0.90$, then the amount of true variance measured in common is the correlation squared ($0.90^2 = 81\%$).

Coefficient of Determination is the degree of common variance. It is the index (81%) that results from squaring the correlation (.90).

Coefficient of Nondetermination is the unique variance, not common. For the above example, it would be 19% and represents the error variance.

12. Standard error of measurement

The standard error of measurement (SEM) is another measure of reliability and useful in interpreting the test scores of an individual. The SEM may also be
referred to as Confidence Band or Confidence Limits.

The standard error of measurement helps determine the range within which an individual’s test score probably falls.

For example: A person scores a 92 on a test. The test’s SEM = 5.0.

Chances are about 2 in 3 (67%) that the person’s score falls between 87 and 97. (Refer to the normal curve: 34% and 34% of the cases fall within one standard deviation, positive and negative, for a total of 68%).

For the same test with the same SEM of 5.0, you can say that 95% of the time the person’s score would fall within the range of 82 and 102.

Every test has its own unique value of SEM which is calculated in advance and may be reported on the test's score profile.

13. Validity

Validity is the degree to which a test measures what it purports to measure for the specific purpose for which it is used. In other words, validity is situation specific – depending on the purpose and population. An instrument may be valid for some purposes and not others.

14. Types of validity

a. Face: the instrument looks valid.

For example: A math test has math items. This ‘validity’ could be important from the test-taker's perspective.

b. Content: the instrument contains items drawn from the domain of items which could be included.
For example: Two professors of Psychology 101, devise a final exam which covers the important content that they both teach.

c. Predictive: the predictions made by the test are confirmed by later behavior (criterion).

For example: The scores on the Graduate Record Exam predict later grade point average.

d. Concurrent: the results of the test are compared with other tests’ results or behaviors (criteria) at or about the same time.

For example: Scores of an art aptitude test may be compared to grades already assigned to students in an art class.

e. Construct: a test has construct validity to the extent it measures some hypothetical construct such as anxiety, creativity, etc.

Usually several tests or instruments are used to measure different components of the construct or of the hypothesized relationships between that construct and other constructs.

Convergent validation occurs when there is high correlation between the construct under investigation and others.

Discriminant validation occurs when there is no significant correlation between the construct under investigation and others.

The construct validation process is best when multiple traits are being measured using a variety of methods.