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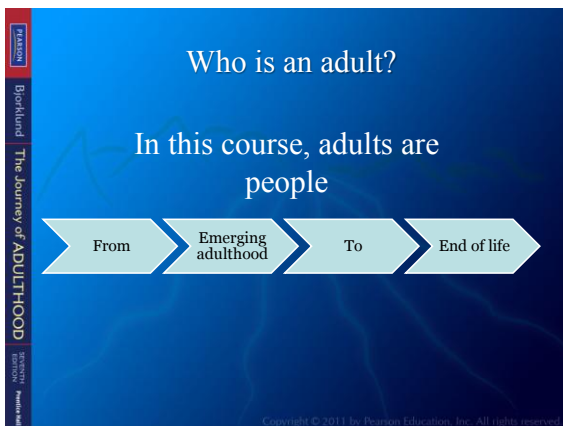
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**Basic Concepts in the Study of Adult Development**

- Stability and change
- Continuous and discontinuous change
- Inner and outer change

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**What influences of adult development result in change?**

- Normative age-graded influences
- Normative history-graded influences
- Non-normative life events

Let's take a closer look at each of these!

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**Normative age-graded influences include:**

- Biology
- Shared experience
- Internal change processes

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**Biological Influences and Development**

- Some are universal (e.g., loss of muscle tone).
- Sequence of physical changes is highly similar.
- Rate of physical changes varies greatly from one individual to another.
- Direct and indirect effects of biological change occur.

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**The Time of Our Lives: Shared Experiences**

- Social clock produces shared changes by dictating timing and sequence of normal adult experiences.
- Age stratification is prominently seen in patterns of experience associated with marriage and family life.

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**Internal Change Processes**

- At deeper level, shared inner changes may result from responses to biological and social clocks.

Can you think of any examples?

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True or false?

*Shared developmental changes based on the social clock are much less likely to be universal than those based on the biological clock.*

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Normative History-Graded Influences

- Culture
- Cohorts

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A Bit About Cultures

- Social environment in which change takes place.
- Vary enormously in expected life patterns.
- Significant variations in adult life experiences from one generation to the next within a given culture.

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**What is a Cohort?**

Group of persons born within some narrow band of years.

- Possess similarity in attitudes, values, skills, or life experiences of individuals within the same generation and differences in these dimensions across generations.
- Help differentiate between apparent age-related change and real developmental change.
- Influence developmental research (cohort effect)

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**If a visitor from another country came to class, how would you explain YOUR cohort?**

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**Can you fill in the blanks?**

A. \_\_\_\_\_ refers to a group of people who share a common historical experience at the same stage of life.

B. \_\_\_\_\_ refers to the large social environments in which development takes place.

C. \_\_\_\_\_ refers to a group of people who share a common historical experience for around 20 years.

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**What do YOU remember?**

- Check out Table 1.1 to see which decade of events is the most salient to you.
- Think about the ways in which people who are younger or older might respond.

Why might responses be the same as or different from yours?

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**In addition to change, adult development is characterized by periods of stability:**

- Different types of stability
- Biology at birth
- Surrounding environment
- Classic nature-nurture dichotomy

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**Biological Factors**

**FACT:** Heredity is a source of stability.

**QUESTION:** Can you think of ways a person remains the same from infancy to old age?

**FACT:** Evidence about biological factors is gleaned primarily from twin studies.

**QUESTION:** What have we learned from the Swedish Twin Study (international database on twins)?

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**Are you a sage about "Age"?**  
Fill in the blanks and see.

A. \_\_\_\_ age = number of years since birth.  
B. \_\_\_\_ age = physical condition.  
C. \_\_\_\_ age = ability to deal with the environment.  
D. \_\_\_\_ age = timing of taking on adult roles.  
E. \_\_\_\_ age = how well a person is functioning.

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**What do you think?**

- Is it possible for people in their 70s to make developmental gains?
- Do people in their 20s experience developmental loss?

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**Theory before research...**  
Broad approaches presented in text

- Life-span developmental psychology approach
- Bioecological model of development

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**Life-span Developmental Psychology Approach**

- Development is lifelong, multidimensional, plastic, contextual, and multiple causal

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**Bioecological Model of Development**

- People develop within context of multiple, interacting environments that change over time.
- Development must be studied in context.

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**Can you find each system on the following slide?**

- Bronfenbrenner's theory and systems
  - Microsystem
  - Exosystem
  - Macrosystem
  - Mesosystem
  - Chronosystem

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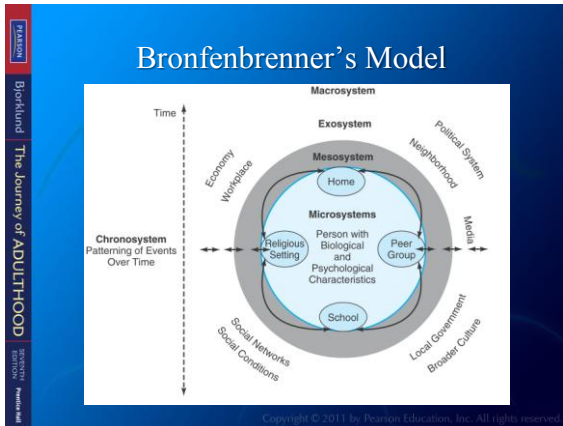
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**All research begins with questions.**

**Can you think of a question that:**

- Deals with basic research methods?
- Addresses research measures?
- Focuses on research analyses?
- Points to overall conclusions?

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**Choosing the appropriate research design is essential to the scientific study of development:**

- Cross-sectional Designs
- Longitudinal Designs
- Sequential Designs

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## Cross-Sectional Designs:

- Include different groups of subjects at different ages.
- Inform about potential age differences.
- Do not provide direct information regarding age-related changes.
- Are limited by cohort effects.

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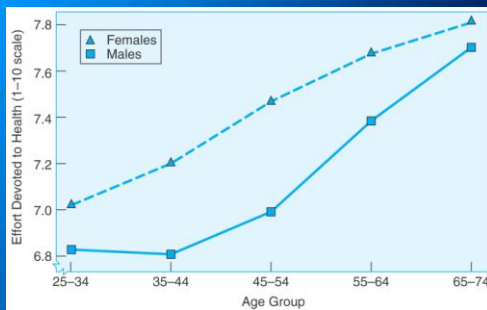
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## Cross-sectional Data



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## Cross-sectional Designs: Advantages and Disadvantages

### Advantages:

- Relatively quick
- Highlight possible age differences

### Disadvantages:

- Age and cohort are confounded.
- Cannot draw conclusions about individual consistency and change over time.

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## Longitudinal Designs:

- Solve many problems of cross-sectional studies.
- Follow the same subjects over time.

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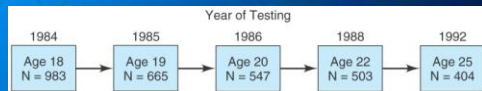
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## Model of Longitudinal Study



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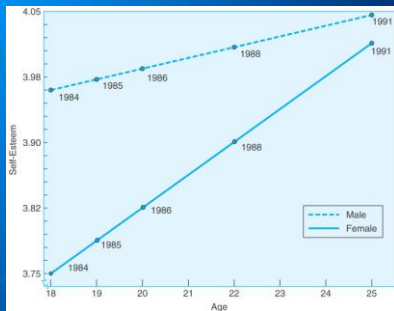
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## Galambos' Longitudinal Study



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## Longitudinal Designs: Advantages

### Advantages:

- Age and cohort not confounded.
- Changes seen can be inferred to be real changes.
- Non-change reflects real stability.
- Enable researcher to look at change or stability within individual.

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## Longitudinal Designs: Disadvantages

### Disadvantages:

- Selective attrition can weaken findings.
- Weakened by time-of-measurement effects.
- Often have smaller samples.

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## Sequential Designs:

- Family of research designs involving either multiple cross-sectional comparisons or multiple longitudinal comparisons, or both.
- Used to mitigate cohort and time-of-measurement effects.
  - Time-Lag Design
  - Time-Sequential Design
  - Panel Studies

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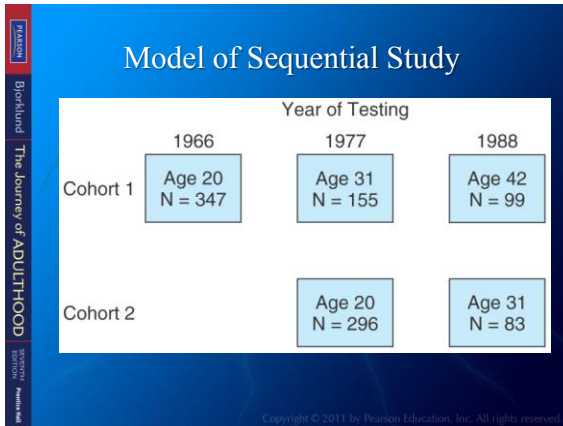
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**Sequential Designs: Advantages and Disadvantages**

**Advantages:**

- Can analyze age changes and their variations.
- Separate the impact of unique cohort experiences from that of more enduring developmental patterns.

**Disadvantages:**

- Complex, expensive and time-consuming.

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**Knowledge of strategies for collecting and analyzing data is important to understand research on adult development:**

- Subject Selection
- Data Collection
- Data Analysis
- Study Type

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**Subject Selection**

- Goal is sample that enables depth and generalizability of findings.
- Small samples increase depth of study but limit generalizability.
- Larger samples (if representative) can increase generalizability, but often limit depth due to practical considerations (time, expense, etc.).

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**Data Collection**

- Observation
- Interviews
- Questionnaires
- Standardized Tests

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**Data Analysis**

- The two most common ways of looking at results of studies of adult change and stability:
  - comparison of mean scores
  - correlational analysis

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**Comparison of Means**

- Means (averages) analyzed to look for differences or continuities.
- Comparison of means can highlight possible age changes, but cannot determine stability or change within individuals.

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**Correlational Analysis**

- Correlation indicates extent to which two sets of scores covary.
- Correlations ( $r$ ) can range from +1.00 to -1.00.
- **Positive correlation** shows high scores on the two dimensions occur together.
- **Negative correlations** indicate high scores on one dimension go with low scores on the other.

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**Study Type**

- Correlational Studies
- Experimental Studies
- Quasi-Experimental Studies

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**Study Type**

**Correlational Studies:**

- Shows relationship; does not prove causality.

**Experimental Studies:**

- Tests if independent variable caused change in dependent variable.

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**Study Type**

**Quasi-Experimental Studies:**

- Conducted as if true experiments, but no random assignment of groups.
- Can provide valuable information, but cannot prove factor of interest causes change in dependent variable.

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**Other Designs**

**Descriptive research**

- Informs current state of participants on measure of interest
- Lacks high level of experimenter control

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**Other Designs**

**Qualitative research**

- Research without numbers
- Case studies, interviews, participant observations, direct observations, and exploration of documents, artifacts, and archival records
- Requires time, precision, objectivity

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**Chapter Review**

1. Developmental psychology includes the study of \_\_\_\_ and \_\_\_\_ over time during childhood, adolescence, and adulthood.
2. The study of adult development covers the time from emerging adulthood to the end of life and is based on \_\_\_\_ research.

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**Chapter Review**

3. Sources of change in adulthood are classified into three types: normative age-graded influences are linked to \_\_\_\_ and happens to most people as they grow older.
4. \_\_\_\_ influences are factors that only affect some people or groups.

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**Chapter Review**

5. \_\_\_\_ are unique to the individual and cause developmental changes not shared by many.

6. Sources of stability include \_\_\_\_ and \_\_\_\_ influences and the interaction between the two.

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**Chapter Review**

7. Developmental psychologists rarely depend on \_\_\_\_ age alone. Most use age groups or stages in life.

8. The text uses the tenets of \_\_\_\_ and the \_\_\_\_.

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**Chapter Review**

9. \_\_\_\_ studies gather data on a group of people representing different age groups.

10. \_\_\_\_ studies follow the same people over a long period of time, gathering data at several points along the way.

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**Chapter Review**

11. \_\_\_\_ studies combine the preceding methods by combining two longitudinal studies during different time periods.

12. Some of the most common methods in developmental research include personal interviews, survey questionnaires, and \_\_\_\_ tests.

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**Chapter Review**

13. \_\_\_\_ involves computing the means of the measurement scores for each group and then statistically testing for significant differences.

14. \_\_\_\_ compares scores for several measurements to see if there is a relationship.

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**Chapter Review**

15. \_\_\_\_ combines data from previously published studies on the same research question.

16. \_\_\_\_ designs include true experiments, pre-experiments, and quasi-experiments.

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**Chapter Review**

17. \_\_\_\_\_ follows an inductive research process and involves the collection and analysis of non-numerical data to search for patterns, themes, and other features.

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