

Developmental Psychology



Slide # 1

Developmental psychology traces the course of mental development over a person's life span, from "the womb to the tomb." In this context, "development" does not include transitory changes due to an illness, accident, or drug use. The painting in this slide shows two people at opposite ends of the developmental spectrum: a man and his grandson, to whom he's telling a bedtime story.

Prenatal Development



- Development begins before birth
- Yolk sac, amniotic sac
- Placenta, umbilical cord

Slide # 2

Bullet # 1 Development begins early on in the womb. The drawing in this slide shows a fetus in the embryonic stage, which lasts from conception to about the eighth week of pregnancy. During this stage, major body and organ systems begin to develop.

Bullet # 2 The drawing shows the yolk sac, which provides the fetus with its earliest source of nourishment, still attached to the embryo. The amniotic sac, which surrounds the fetus, is filled with amniotic fluid which protects the fetus and also acts as a shock absorber.

Bullet # 3 The placenta functions as the transfer point between mother and baby, leading some to call it the “physiological depot.” It carries nutrients from the mother’s system to the embryo/fetus and helps remove waste products. The umbilical cord connects the placenta to the abdomen of the fetus and contains two arteries and one vein.

The Fetal Stage



- Begins around the ninth week and continues until birth
- Normal gestation (270–280 days)
- Weight gain, movement, viability

Slide # 3

Bullet # 1 The fetal stage begins about the ninth week of pregnancy and lasts through week 40 (full development).

Bullet # 2 A typical pregnancy lasts between 270 and 280 days, or about nine months. Pregnancy is divided into three trimesters of about 12 to 13 weeks each. All of the major organ systems, even the fingers and toes, have developed by the end of the first trimester.

Bullet # 3 The fetus will increase more than thirty-fold in weight during the second trimester of pregnancy (from about one ounce to two pounds). It will grow from four inches in length to about 14 inches. Typically, a mother will feel her baby move around the middle to the end of the fourth month. By the end of the second trimester, the fetus approaches what is called “viability” (the point at which it could live outside the womb if it were born prematurely). If the fetus does not weigh at least two pounds, its chances of survival are less than 50 percent.

Prenatal Detection



- Amniocentesis
- Chorionic villus sampling (CVS)
- Ultrasound imaging

Slide # 4

Bullet # 1 Amniocentesis is a technique for diagnosing fetal abnormalities. The test is usually performed between the 16th and 18th weeks of pregnancy. The doctor first inserts a syringe into the amniotic sac and withdraws some amniotic fluid, which contains fetal cells. These fetal cells are then cultured and analyzed for chromosomal abnormalities or biochemical imbalances. The test can detect a large number of genetic disorders such as Down's Syndrome and spina bifida.

Bullet # 2 Chorionic villus sampling can be performed by the 13th week of pregnancy, sometimes even earlier. In this procedure, doctors sample and analyze a small amount of tissue from the chorion (the membrane that holds the amniotic sac and fetus).

Bullet # 3 Doctors also use ultrasound imaging to detect fetal abnormalities. The procedure involves bouncing high-pitched sound waves off the fetus, revealing an image of the fetus and the sac. The ultrasound machine then displays this image on a computer screen (as shown in the picture in this slide). Doctors can also use parental blood tests to make predictions about disorders such as Tay-Sachs disease and sickle cell anemia.

3-D Imaging

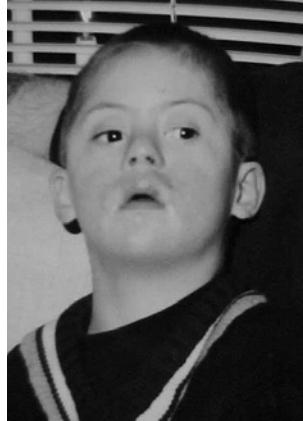


- Using position sensors attached to a probe, the doctor conducts a freehand scan
- A computer takes this information and creates a 3-D image of the fetus

Slide # 5

Doctors can also obtain information about a fetus by employing 3-D imaging. The procedure begins with a scan that produces position and image data. A computer then takes this information and generates a three-dimensional rendition of the fetus' face (as seen in this slide). Doctors can also generate 3-D images of the placenta, or of a fetus' skull, spine, heart, ears, and hands.

Threats to Prenatal Development



- Poor maternal nutrition
- Spina bifida
- Rubella
- Down syndrome
- Smoking

Slide # 6

Bullet # 1 A pregnant woman needs to have an adequate diet in order to insure the health of her newborn. A strong correlation exists between maternal malnutrition and lower infant birth weight. Malnutrition can also cause premature delivery. Babies born prematurely run a much higher risk of infant mortality and SIDS (Sudden Infant Death Syndrome); they are also prone to developing physical afflictions such as asthma and mental problems such as attention deficit disorder (ADD) and hyperactivity.

Bullet # 2 Spina bifida is a neural tube disorder in which the spinal column does not completely close. If pregnant mothers take folic acid daily, it can greatly reduce the risk of their children developing spina bifida.

Bullet # 3 Rubella (also known as German Measles) is a relatively common childhood disease. If a pregnant woman contracts rubella, it can lead to serious problems for her child, including mental retardation and heart disease.

Bullet # 4 Down's Syndrome occurs when a fetus has defects on part of an important chromosome. It can cause serious mental retardation; Down's syndrome children tend to have physical deformities as well. Older women who get pregnant run a much greater risk of giving birth to a Down's syndrome child. The photo in this slide shows an 11-year-old boy with Down's. At this age, he still has trouble talking and has only recently been toilet trained. Because of his limited mental capacity, he has been placed in a special class at school.

Bullet # 5 Pregnant women should not smoke, since a strong correlation exists between cigarette smoking and lower birth size and birth weight, which can be especially problematic for premature babies.

Fetal Alcohol Syndrome (FAS)

What can alcohol do to
an unborn fetus?

Slide # 7

As late as 1970, doctors were unsure of how exactly alcohol affected an unborn fetus. We now know that if a pregnant woman drinks excessively, she puts her baby at risk of developing Fetal Alcohol Syndrome (FAS). FAS can result in children born with heart defects, physical deformities, mental impairment, and/or stunted growth.

In addition, even if a pregnant woman only consumes moderate amounts of alcohol, she increases the likelihood that her child could develop neurological problems.

Artwork by FAS students



Slide # 8

This slide shows an art project completed by a FAS student as a classroom assignment. The assignment used a “step into art” progression for special students. A picture is divided into grids; students then copy what they see grid by grid, step by step until they have completed the picture. This student who made this picture had major neurological problems, including severe seizures. Consequently, the quality of his work here amazed many people—including the district psychologist. Although many FAS students have left-brain cognitive problems, they can still produce creative, artistic work.



Slide # 9

This slide shows a pastel painting created by the same FAS student, again using the “grid-in” technique.

Other Features of FAS

- Difficulties with social interaction
- Epileptic seizures
- Changes in facial appearance and expression



Slide # 10

Milder forms of FAS can cause a child to have difficulties with social interaction. The child often seems less socialized, more timid, and more reclusive. In more extreme cases, FAS children can experience epileptic seizures. FAS can also cause changes in facial expressions: for example, many severe FAS children don't smile very often, their eyes seem too far apart, their upper lip appears abnormally thin, and their nose seems too low on their face. The epicanthus, a vertical fold of skin that extends from the roof of the nose to the inner termination of the eyebrow, usually occurs only in people of Mongolian descent, but its presence in a non-Mongolian child often indicates FAS.

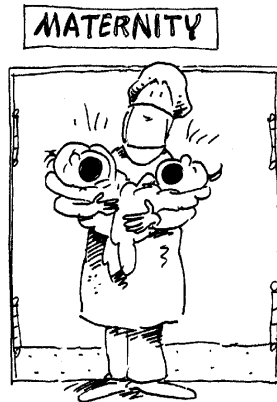
Sociological Problems

- Disrupted school experience
- Inappropriate sexual behavior
- Alcohol and drug problems
- Trouble with the law
- Difficulty caring for themselves and their kids
- Homelessness

Slide # 11

Many FAS students have trouble in regular classes. Sometimes their sexual behavior seems inappropriate. They often lack the social skills necessary for forming meaningful relationships. As they develop into adolescents and adults, they seem predisposed for drug and alcohol-related problems; some even end up frequently getting in trouble with the law. In the most extreme cases, they are unable to care for themselves and require constant supervision. Some end up institutionalized but get released quickly because they usually represent no real danger to themselves or society. Some ultimately become homeless and all but disappear from the general population.

Maternal Drug Use



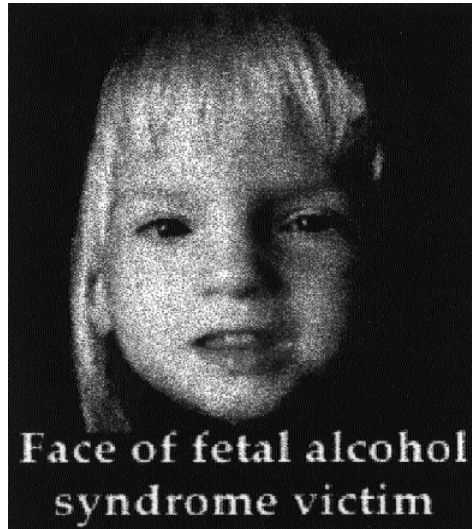
- Recreational drugs
- Born “hooked” (cocaine, heroin)
- Over-the-counter drugs

Slide # 12

Bullet # 1 Nearly all drugs a pregnant woman ingests cross the placenta and reach the fetus; sedatives, narcotics, and cocaine are particularly dangerous.

Bullet # 2 Babies born to addicted mothers usually are born “hooked” or addicted themselves. “Crack babies” run a much higher risk of early death, often because they’re born prematurely. Heroin-addicted babies run a similar risk.

Bullet # 3 The impact of the drugs on an embryo or fetus depends on the how much of a drug the mother ingests, and the prenatal phase when she takes the drug. Even over-the-counter drugs like aspirin should not be taken by pregnant women without their doctor’s consent.



Slide # 13

This slide shows a photograph of an FAS child. Notice the underdeveloped groove in the center of her upper lip, between the nose and the lip edge. Physical characteristics like this are often caused by FAS.

Should Pregnant Women Drink?

- 8.5 drinks per week at most
- One drink a day is probably OK
- FAS occurs mostly when the mother is an alcoholic
- Binge drinking a real concern



Slide # 14

The Royal College of Obstetricians and Gynecologists conducted a large study including 400,000 American women, all of whom had consumed alcohol during pregnancy. Not a single case of FAS occurred and no adverse effects on children were found when the mother's consumption was under 8.5 drinks per week. One drink per day also seemed to be OK. Another recent study found that Fetal Alcohol Syndrome occurs most often in children of alcoholic mothers. In other studies, evidence suggests that there is no known safe level of alcohol consumption. Negative effects on a fetus appear to be related to higher levels of consumption per occasion and hence to higher blood alcohol content levels—in other words, binge drinking.

The Best Advice



- Pregnant women should use the safest option—abstain from drinking during pregnancy

Slide # 15

No scientific evidence supports the type of widespread hysteria that permeates public discussion on FAS. Many people falsely believe that even a single drink during pregnancy can cause FAS. If this were true, cases of FAS would occur much more frequently than they do. In addition, other factors may contribute to FAS. For example, most mothers who give birth to FAS children also smoke, use illegal drugs, often suffer from malnutrition, and rarely receive good prenatal care.

Maternal Disease



- Genital herpes
- AIDS (acquired immune deficiency syndrome)

Slide # 16

Bullet # 1 The fetus is nearly defenseless against infection because of the immaturity of its immune system. Though the placenta usually can filter out many infections and viruses, it doesn't catch everything. Genital herpes, a virus that can be deadly to a fetus or baby, often gets transmitted during the birth process. Consequently, expectant mothers with genital herpes usually have caesarean sections in order to bypass the cervical and vaginal areas. Herpes can cause brain damage, blindness, deafness, and even death for newborns.

Bullet # 2 There is about a 30 percent chance that pregnant women who carry the AIDS virus will pass it on to their baby. Very few AIDS babies survive past their first year.

Special note: "STD" stands for "sexually transmitted disease." Today, many doctors also use the term STI to refer to sexually transmitted infections.

The Birth Process



- Effacement
- Dilation
- Contractions

Slide # 17

Bullet # 1 Effacement is a part of the labor process where the cervix (the neck of the uterus) begins to thin out, or shorten.

Bullet # 2 Dilation refers to how wide the cervix is open. For most births, the cervix has to open up to 10 centimeters (indicating full dilation), since the average baby's head measures approximately 10 centimeters across.

Bullet # 3 The uterine muscle must contract many times in order to expel the fetus. No specific number of contractions are necessary, but some women experience as many as several hundred. As labor progresses, contractions become longer in duration and more frequent.

Delivery



- Clearing the airway
- Cutting the umbilical cord
- Measurements
- Identification
- APGAR

Slide # 18

Bullet # 1 Most babies (96 percent) are born in the cephalic position (head down); the others are either born breech (feet or buttocks first) or transverse (shoulder presenting first). Breech and transverse babies almost always need to be delivered by caesarean section. As soon as the baby's head presents, the doctor uses suction to clear its airways.

Bullet 2 The doctor then severs and ties off the umbilical cord, which contains two arteries and one vein. No nerve endings exist in the cord, so neither the mother nor the baby feels any pain when the cord gets cut.

Bullet # 3 Next, the medical staff measures the baby's height ,weight, and chest and head circumference.

Bullet # 4 Dr. Virginia Apgar developed a test which quickly assesses a newborn's health. The APGAR scale ranges from 1 to 10. The medical staff uses the scale to rate the baby on the following (note that in addition to being named after the doctor who created it, the scale also functions as an acronym): A= activity, P= pulse, G= grimace response, A= appearance or color, R= respiration. The higher the APGAR score, the healthier the baby.



Slide # 19

Full-term newborns are covered with a creamy substance called vernix, which acts as a protective coating. You can see the umbilical cord on the left side of the photo in this slide.



Slide # 20

The photograph in this slide shows a newborn getting ready for a shot of vitamin K to help his blood begin to clot. He has already been measured, weighed, and identified with a name tag.

Premature Infants



Slide # 21

The photo in this slide shows McKenzie, a baby born seven weeks prematurely. McKenzie remained in a special neonatal unit for over a month. In spite of the superior nutrition and prenatal care available in America, premature births still occur much more commonly in the U.S. than in many other countries.



Slide # 22

The photo in this slide shows McKenzie at age six—a healthy, robust first grader. Obtaining quality medical care early in one's pregnancy can greatly lower the risk of a premature birth, but many pregnant women in the U.S. receive little or no prenatal care, primarily because they lack health insurance. Due in no small part to this fact, the U.S. ranks 21st in the world in the prevention of infant mortality. Most psychologists believe that it would be better to spend money on good prenatal care instead of on expensive, specialized neonatal units.

Perceptual Development



Slide # 23

Newborns have blurred vision because their eye muscles have not yet fully developed. Vision is the slowest of the five senses to develop. Psychologists believe that a newborn's vision is about 20/660; a normal adult has 20/20 vision. Newborns can, however, perceive color. The photo at the left in this slide shows a proud dad holding his newborn son. The photo on the right shows the world as the newborn would likely see it. Even though his mom's and dad's faces may seem blurry, the newborn can still distinguish them from the faces of others. By age five, a normal child's vision has nearly reached 20/20.

Sensory Abilities



- Facial recognition develops as early as one month old; depth perception develops at about six months
- “Visual cliff”
- Newborns can hear many sounds
- Newborns also taste and smell

Slide # 24

Bullet # 1 An infant’s world may be blurry, but their ability to recognize and distinguish between faces develops quickly—sometimes as early as one month old. Depth perception develops at about six months. It may develop sooner, but it can be measured more easily once the child has mastered crawling.

Bullet # 2 Scientists can measure depth perception using something called a “visual cliff.” It consists of a glass panel that creates the appearance of a sudden and precipitous drop-off. Most six month-old infants will hesitate and refuse to cross it, indicating that they have developed depth perception.

Bullet # 3 Newborns are particularly sensitive to the human voice—especially their mother’s, which they can soon differentiate from other voices. A newborn’s hearing is more advanced than their vision; even prenatal fetuses can respond to sounds.

Bullet # 4 Development of other senses such as taste has not been as extensively studied as vision or hearing. Newborns do, however, have a rudimentary sense of taste and can detect differences between sweet and sour. Newborns can also recognize familiar odors within the first two weeks of life.

Special note: This slide shows a portrait of a six month-old baby.

Motor Development



Slide # 25

Motor development involves the progression of muscular coordination required for physical activity. Motor development follows a very specific path; however, each child moves along this path according to his or her own developmental timetable. Parents often pay very close attention to early motor development and may compare their child's progress with that of other children the same age. Some parents get overly worried if their child seems "behind."

Prone, Lifts Head



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Time span: one month to two months (on the average).

Prone, Chest Up, Arms Supported



Slide # 27

Time span: two months to four or five months.

Rolls Over



Slide # 28

Time span: two months to five months.

Bears Weight on Legs



Slide # 29

Time span: three months to seven months.

Sits Without Support



Slide # 30

Time span: five months to seven months.

Stands with Assistance



Slide # 31

Time span: five months to ten months.

Pulls Self to Stand



Slide # 32

Time span: six months to ten months.

Walks By Holding on to Furniture



Slide # 33

Time span: seven months to 13 months.

Stands Well Alone



Slide # 34

Time span: 10 months to 14 months.

Walks Well Alone



Slide # 35

Time span: 11 months to 14 months.

Walks Up Steps



Slide # 36

Time span: 14 months to 22 months.

Temperament

- The characteristic moods of a child
- Types of temperament (happy, slow to warm up, difficult)
- Jerome Kagan



Slide # 37

Bullet # 1 Infants show a variety of temperamental differences very early on in their development. These temperamental patterns may be established as early as two to three months of age.

Bullet# 2 According to researchers Thomas and Chess (1977), children can develop three basic types of temperament:

1. The happy child, who maintains regular sleep and eating habits and does not get upset easily
2. The slow-to-warm-up infant, who is less regular in sleep, eating, and temperament
3. The difficult or sensitive child, who has trouble maintaining normal sleep and eating habits and exhibits more extreme behavior

Of course, mixtures and combinations of the three styles occur quite frequently.

Bullet # 3 Jerome Kagan, a Harvard psychologist, relied more on direct observations of children as opposed to using parental reports like Thomas and Chess did, although he did reach similar conclusions.

Emotional Development

- Attachment: the close bonding between infant and caregiver
- The mother is primary
- Behaviorist ideas



Slide # 38

Bullet # 1 Throughout their lives, children form many emotional attachments, but none is as close as the first attachment they develop with their mothers.

Bullet # 2 Since the mother is usually the primary caregiver, this first emotional attachment is extremely powerful, but the attachment does not occur instantaneously.

Bullet # 3 Behaviorists have argued that infant-mother attachments develop because infants associate their mothers with a powerful reinforcement: being fed.

Separation Anxiety

- Emotional distance caused when infants are separated from their mothers
- Seems to peak between 14 and 18 months



Slide # 39

Bullet # 1 An infant's attachment to its mother takes time to develop. In the first half year of life, infants generally show little discomfort when handed over from their mother to other people. When they reach six to eight months of age, infants start to become "clingy" and fearful.

Bullet # 2 By the time children reach 14 to 18 months of age, separation anxiety appears to peak, and they become extremely afraid of being handed over to strangers.

Why Do Infants Develop These Attachments?



Slide # 40

Why do infants develop these special attachments to their mothers? This question seems simple, but it has actually been the subject of much debate.

The Harlows



- Harry and Margaret Harlow's studies using rhesus monkeys (1962)
- Substitute or surrogate mothers

Slide # 41

Bullets # 1–2 Researchers Harry and Margaret Harlow removed baby rhesus monkeys from their mothers at birth and replaced them with substitute or surrogate mothers. They wanted to assess the importance of attachment.

The Surrogate Mother



- The experiment: “contact comfort”
- The wire “mother” vs. the terrycloth “mother”
- The findings

Slide # 42

Bullet # 1 After they had taken the baby rhesus monkeys away from their mothers, the Harlows then gave the babies a choice between two surrogate “mothers.” One was made only of wire, but it had a nursing bottle attached to it. The other “mother” was made from terrycloth, but had no food delivery device attached. The Harlows hypothesized that most monkeys would gravitate to the terrycloth “mother” because it provided more of what they called “contact comfort”

Bullet # 2 In the experiment, though monkeys did go to the wire “mother” for food, most would quickly scamper to the comfort of the cloth “mother” when the Harlows used certain stimuli to make them anxious or frightened. Since both “mothers” had been heated, the monkeys didn’t simply choose the terrycloth one because of warmth. For some reason, the terrycloth one better satisfied the monkey’s intrinsic desire for physical contact and comfort.

Bullet # 3 The Harlows concluded from their research that reinforcement through feeding was not what produced attachment or bonding. They instead stressed how “contact comfort” was a basic need on a par with physical needs like food and sleep.

Other Theories/Ainsworth



- Ainsworth contended that attachment emerges out of a complex interplay between mother and child
- Sensitivity
- Difficult children

Slide # 43

Bullet # 1 The Harlows' work came under fire from a number of psychologists, in particular from Mary Ainsworth. Ainsworth felt that attachment involved far more than mere "contact comfort." She believed that attachment resulted from a complex interplay between mother and child.

Bullet # 2 Other factors can positively or negatively affect the strength of a child's attachment: for example, a child would most likely form a more powerful attachment if its mother remained sensitive to the child's needs and wants. Correspondingly, a child with an insensitive mother would most likely have a weaker bond with its mother.

Bullet # 3 If a child is "difficult," it can also affect the bonding/attachment process. Children who are always fussy, have trouble taking a bottle, or don't sleep well can end up creating a distance between themselves and their caregivers. The parent may pull back and become distant, believing that the child does not like them. As the child grows, he or she may often tell a parent "I don't like you," especially when mad or disappointed.

Day Care and Attachment Theory



- 53% of U.S. moms work outside the home
- Working instead of staying home with one's child: Is it harmful to a child's development?
- Day care and preschool

Slide # 44

Bullet # 1 It has been estimated that 53 percent of mothers in the U.S. with infants under the age of one work outside the home. What impact does this have on the attachment process? Does day care interrupt the ongoing bonding process? Years ago, psychologists believed that a form of “instant bonding” at birth was critical. Today, much of this early research has come into question. We do know, however, that children need to learn to love—the ability does not develop automatically.

Bullets # 2–3 Not all psychologists believe that a mother working has a negative effect on her child. Things such as day care and preschool can provide opportunities for a child to begin the process of “socialization,” which is a critical ingredient in the developmental process.

Special note: The picture in this slide depicts a high school student working with a child in her school's day care program.

Freud's Stages of Development



- Oral: ages 0–2
- Anal: ages 2–3
- Phallic: ages 3–6
- Latent: ages 7–12
- Genital: puberty through adulthood

Slide # 45

Sigmund Freud believed that all humans pass through successive stages of development. Each stage focuses on a different part of the body.

The Oral Stage



- Ages: birth through two years
- The pleasure principle
- The infant focuses on the mouth

Slide # 46

Bullet # 1 According to Freud, the first stage lasts for the first 18 months to two years of a child's life.

Bullet # 2 Freud theorized that babies in this stage acted accordingly to what he called the "pleasure principle." Essentially, this principle involves seeking pleasurable stimuli while avoiding painful stimuli.

Bullet # 3 Freud claimed that children this age derived the most pleasure from sensations involving the mouth such as nursing, sucking, and biting (once their teeth start to come in).

The Anal Stage



- Ages: 18 months–3 years
- Toilet training
- An infant's pleasure centers around the functions of elimination

Slide # 47

Bullet # 1 The anal stage begins around a 18 months and lasts until age three.

Bullet # 2 During this stage, a typical child has matured enough both physically and mentally to undergo toilet training. Mastery of elimination and other bodily functions provides the child with a sense of independence. As this sense of independence makes them more confident, children start to assert themselves more and more. They also often become unruly and irritable when they don't get their way—a fact which leads many to refer to this stage of life as the “terrible twos.”

Bullet # 3 Because mastering toilet training boosts a child's self-esteem and sense of independence, children in the anal stage tend to derive pleasure primarily from the functions of elimination.

Special note: Children at this age often develop fears about disappearing down the toilet or bathtub drain. It never dawns on them that they are too large to fit.

The Phallic Stage

- Ages 3–6
- Awareness of physical differences between boys and girls
- Boys' sexual interest develops and focuses on the mother
- The infant's pleasure seeking focuses on the genitals



Slide # 48

Bullets # 1–2 According to Freud, between the ages of three and six children go through the phallic stage. During this stage, both boys and girls start to become aware of physical and anatomical differences between the sexes, a realization which Freud believed caused them great concern. He theorized that as girls come to understand they do not possess a penis, they experience feelings of inferiority. Freud called this “penis envy.” Similarly, he believed boys developed “castration anxiety” and fear that their penis might be taken away.

Bullet # 3 Freud also theorized that a child's sexual interest begins in the phallic stage rather than at puberty, and that these early sexual feelings focus on the mother. He postulated that boys between the ages of three and six experience erotic desires toward their mothers and intense jealousies and hatred toward their fathers. He called this the “Oedipus complex” after the legendary Greek king who murdered his father and married his mother. Correspondingly, girls can experience an “Electra complex” in which they desire their fathers and hate their mothers.

Special note: In all fairness to Oedipus, he did not know that he had married his mother. Modern psychologists do not believe that a boy's attachment to his mother is possessive rather than erotic. When children learn to identify with the parent of the same sex, this feeling goes away. According to Freud, parents are rarely aware of when the Oedipus complex takes place in the phallic stage of our development and is unconscious. The parent rarely is aware this is even going on. A critic of Freud, Karen Horney believed that “biology is not destiny.” She rejected his ideas early on.

Bullet # 4 Children in this stage also discover that they can derive pleasure from their genitals, and may even engage in masturbation.

The Latent Stage

- Age six through puberty
- Sexual thoughts repressed
- Social and intellectual development outweigh sexual interest



Slide # 49

Bullet # 1 Typically, the latent stage begins at about age seven or eight and lasts until puberty. Girls and boys develop and mature at different times, however, with girls usually one year to 18 months ahead of boys. This differential may be tied to fertility, since men are capable of becoming fathers for a much longer period of time than women are capable of becoming mothers.

Bullet # 2 Freud believed that by the time children reach grammar school, they repress the sexual feelings and thoughts from the phallic stage, pushing them into the unconscious. These thoughts and feelings reappear later with the onset of puberty.

Bullet# 3 Freud believed that in the latent stage, a defense mechanism he called “sublimation” begins to overpower any sexual urges. Sublimation involves channeling unacceptable thoughts and urges into socially approved avenues such as school or sports. In addition, as a child’s independence grows, intellectual and social development become more powerful than any sexual interest. Children come to view acquiring knowledge as an end in itself.

The Genital Stage

- Ages: puberty throughout adulthood
- Sexual desires rekindled, forming relationships
- Rebelling against rules/authority



Slide # 50

Bullet # 1 Freud believed that the genital stage began with the onset of puberty and continued through adulthood. Puberty involves powerful physical and psychological changes. Hormones kick into overdrive. Boys and girls start to develop secondary sexual characteristics, and feelings towards the opposite sex begin to change. All of these developments can lead teens to often feel confused; questions about identity and self-worth also arise.

Bullet # 2 Most teens at this stage start to feel attracted to opposite sex, and many form relationships in order to experiment and test the powers of intimacy.

Bullet # 3 Freud believed that during the genital stage, teens start to realize that not all rules are equally important. Consequently, they try to test many of these rules and many adults perceive them to be “rebellious” against authority.

Adolescence



Slide # 51

Adolescence marks the transition between childhood and adulthood. In some cultures, there is no such thing as adolescence: children move from childhood immediately into adulthood. In the early 1800s, many children (some as young as nine or ten) had to work. In a popular expression of the time, people would say of coal miners, “He has his boy to carry around with him.” The expression referred to the physical deformity that many boys experienced because they had to slouch over in coal bins for long hours. By the mid 1800s attitudes had begun to change. Until that time, no popular conception of adolescence existed, and childhood was relatively short.

Attitudes about child development can reflect powerful cultural changes. In this section, we will explore the second stage of human development—adolescence.

Before 1850



- The concept of adolescence didn't exist
- Children were dressed and treated as "miniature adults"
- "Seen and not heard"

Slide # 52

Before about 1850, adolescents didn't exist—at least as far as most of society was concerned. Children were expected to move directly into the role of an adult when they came of age. Children also didn't have distinct clothing styles; instead, parents usually dressed their children to look like "miniature adults." Though generally regarded as "miniature adults," children of this time didn't receive any of the privileges of adulthood. They were expected to be quite and obedient, or "seen and not heard."

Note: Sigmund Freud's work helped to change the notion of childhood.

Anna Freud's Observations



- Adolescents are extremely egoistic, self-centered
- Capable at the same time of self-sacrifice
- Solitude vs. involvement
- Rebellion vs. submission

Slide # 53

Bullets # 1—2 Anna Freud, Sigmund Freud's daughter, wrote in her book *The Ego and the Mechanisms of Defense* (1946) that though adolescents can often be extremely self-centered, they are also capable of self-sacrifice and devotion at the same time.

Bullet # 3 She also noted that teens demand solitude at one moment then want interaction and involvement at the next moment.

Bullet # 4 According to Anna Freud, teens also fluctuate between out-of-control rebellion and nearly blind obedience to authority. All of these seemingly contradictory behaviors reveal how difficult it can be for teens to navigate their way through adolescence.

Adolescence Is Like an Unfinished Portrait



- Initiation, rites of passage
- The end of adolescence is the beginning of adulthood
- Major adolescent changes

Slide # 54

Bullets # 1—2 Adolescence witnesses many initiations and rites of passage: getting a driver's license, graduating from high school, living away from home, entering college, or even marriage. Each of these rites of passage leads adolescents further and further toward confirming their status as an adult.

Bullet # 3 Adolescence produces major changes in the life cycle. We will examine some of these changes in the next few slides.

Theories of Adolescence

- G. Stanley Hall (1904): Adolescence is a transitional stage in evolutionary development
- “Storm and stress”
- Margaret Mead: disagreed with Hall; culture is a major factor in determining the character of adolescence

Slide # 55

Bullet # 1 Psychologist G. Stanley Hall theorized that adolescent development represented a transitional stage in human evolutionary development.

Bullet # 2 Hall believed that adolescence was a period of “storm and stress” which made teens feel troubled and highly frustrated.

Bullet# 3 Margaret Mead rejected Hall’s notion of adolescence. A preeminent anthropologist, Mead had studied many different cultures in which adolescence was often a highly enjoyable time of life. Whereas Hall had a rigid, monolithic view of adolescence, Mead felt that culture could strongly influence the ways in which children experienced adolescence.

Havinghurst: Developmental Tasks



Tasks specific to adolescence:

- Appropriate relations with both sexes
- Achieving a masculine or feminine social role
- Emotional independence
- Values

Slide # 56

In 1972, Robert Havinghurst postulated that during each stage of life we face certain “developmental tasks.” Succeeding at these tasks can lead to happiness and success with future tasks. Havinghurst believed failure led to “unhappiness in the individual, disapproval by the society, and difficulty with later tasks.” According to Havinghurst, adolescents’ tasks include developing appropriate relations with age-mates of both sexes, accepting the changes in one’s body, achieving a masculine or feminine social role, becoming emotionally independent from parents and other adults, and adopting a personal set of values.

Havinghurst (cont.)

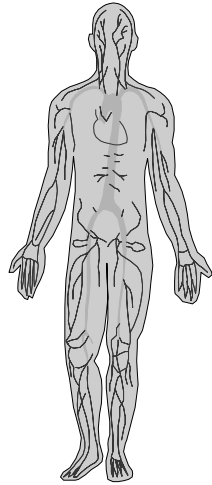


- Deciding on a vocation
- Developing better cognitive skills
- Becoming socially responsible
- Preparing for marriage and family

Slide # 57

This slide lists other adolescent tasks Havinghurst identified. According to Havinghurst, most teens master these tasks well. Of course, exceptions do occur, but for the most part teens who face stress manage to cope.

Physical Development



- Puberty starts: around age 13 for boys, as early as nine or ten for girls
- Sexual maturation, Menarche/spermarche
- Weight/height increases

Slide # 58

Bullet # 1 Most children—boys in particular—undergo puberty around age 13. For many girls, the onset of puberty can begin as early as age nine or ten.

Bullet # 2 In puberty, hormones trigger major physical changes that start children on the path to sexual maturity. Menarche refers to a girl's first menstrual period, and spermarche is the period during which males first achieve ejaculation.

Bullet # 3 Children undergoing puberty experience a growth spurt. For girls, this growth increase begins between the ages of 10 and 14. Fatty tissue begins to deposit in the hip and breast areas, which sometimes causes girls at this age to appear chubby. Boys lose their childhood "baby fat" and begin to develop a long and lanky appearance. During adolescence, a child can grow two to four inches in a year. For boys, this growth spurt can begin as much as two years later than it does for girls, but it may last up to three years longer.

Psychological Reactions to Growth



- Early development:
An advantage?
- Gender differences
- Body image and
depression

Slide # 59

Bullet # 1 Early maturation can confer certain advantages that may provide a short-term boost in a child's self-esteem. Children who mature early physically but not psychologically can face difficulties. Because they begin to look more and more like adults, people start to treat them more and more like adults—a development for which they may not yet be ready for psychologically. Those who mature early often feel more pressure to “grow up,” which can hinder formation of their own individual identity.

Bullet # 2 Early maturation seems to benefit boys more than girls. Research indicates that boys who mature at an early age become better athletes and leaders in school. Their peers look up to them and even adults treat them with more respect. They become more self-confident. Some late-maturing boys, however, may withdraw or even rebel. Because they don't face as much pressure to “grow up” as early maturing boys do though, they can emerge from adolescence with a firmer sense of individual identity. Girls who mature earlier may feel embarrassed rather than proud of their physical changes. Some may date older boys. Some late-developing girls tend to be more quarrelsome.

Note: Early development may have long-lasting results. Adults who matured early tended to achieve higher occupational and social status.

Bullet # 3 Teenagers are very much aware of the changes occurring in their bodies. Many also feel pressured to live up to societal notions of ideal body type. If teens don't feel they can achieve this ideal, they may suffer a drop in self-esteem and can even fall into a depression. Though teens of both sexes focus on body image, girls tend to evaluate themselves more harshly and place more importance on measuring up to an ideal body type.

Sexual Attitudes and Behavior



- Increased sexual awareness and activity
- Role of society
- Does sex education promote promiscuity?

Slide # 60

Bullets # 1–2 With teens' increasing sexual awareness comes the temptation to actually engage in sexual activity. This raises some important questions: what roles (if any) should family, church, school, and government play in educating teens about sex? How much information should be provided and by whom? Sex education classes first appeared in schools in the late 1960s. Educators believed that enlightening teens about human sexuality would help them make informed, responsible decisions.

Bullet # 3 Many people, however, didn't want schools to take on the task of sex education. A substantial number of parents felt that they should be the ones teaching their children about sex. Some religious leaders urged that sex education should only be taught in a context of values and right versus wrong. Others believed sex education would encourage promiscuity, reasoning that teaching teens about sex would only make them more eager to try it. The government, concerned about the high number of teen pregnancies, also had an interest in the issue. Each year in the U.S., there are more than one million teen pregnancies. Half of all teen pregnancies end in abortion, a fact which also greatly concerned government officials.

Sexually Transmitted Diseases



- Three million cases of STDs each year in the U.S.
- Fears about STDs/AIDS
- Preventive measures
- Abstinence

Slide # 61

Bullet # 1 Each year, three million cases of sexually transmitted diseases occur in the U.S. There are more than 20 different sexually transmitted diseases and infections.

Bullet # 2 Fears about contracting STDs have changed adolescent behavior—especially the fear of AIDS. In the early years of the disease, many believed that only homosexuals and intravenous drug users contracted AIDS. Consequently, the disease was more or less ignored. Today, however, people realize that AIDS doesn't only afflict certain segments of the population—almost anyone can be at risk. Attitudes have slowly begun to change, and the number of AIDS cases in the U.S. has only recently started to decline.

Bullet # 3 Educational efforts at increasing condom use among teens have been successful. Condom use has more than doubled since the beginning of the AIDS epidemic.

Bullet # 4 In addition, many teens have examined the risks and concluded that abstinence is the safest way to avoid both STDs and unwanted pregnancies.

Developmental Problems

- Asynchrony
- Anorexia nervosa
- Bulimia (gorging and purging)

Slide # 62

Bullet # 1 Asynchrony refers to uneven growth or maturation. It can occur when an adolescent's mental maturity outpaces their physical maturity, or vice versa. It can also occur when some body parts grow more quickly than others, making one's body appear out of proportion; for example, sometimes a teenager's hands and feet seem too large for the rest of his or her body. As an adolescent grows, the rest of the body catches up to the asynchronous body parts.

Bullet # 2 Anorexia nervosa is a serious eating disorder. It typically appears first in puberty and mostly afflicts women. People with anorexia nervosa starve themselves because they have an extreme fear of becoming fat. Experts categorize anyone who is 15 percent below normal body weight as anorexic. Many anorexics also combine starvation with strenuous exercise. Anorexia often stems from some unconscious childhood problem or trauma. It may also represent an unconscious desire not to attain full physical maturity; severe anorexia can even cause women to stop menstruating. One case in 10 ends in death. Most anorexics are good students and people pleasers; they also tend to be perfectionists.

Bullet # 3 Bulimia, a disorder related to anorexia, occurs when people go on eating binges and then vomit, repeating the ritual over and over again. It is also extremely dangerous. Bulimics often suffer from lowered potassium levels, extreme dental decay, even severe heart problems. As with anorexia, most bulimics are female, perhaps because women are more conscious of how society judges their appearance. Many dancers and performers have fallen prey to bulimia, including actress Jane Fonda and singer Karen Carpenter, who died at age 32 from cardiac arrest caused by anorexia/bulimia.

The Life Cycle



Slide # 63

According to psychologist Erik Erikson, each stage of life presents a new psychosocial crisis that people must overcome. Erikson based much of his theory upon Freud's ideas, but he felt that Freud did not go far enough in his explanation of human development. In this next section, we will explore Erikson's theories on human development.

Note: The photos in this slide show a female's physical progression over the course of nearly 50 years.

Erik Erikson



- Freud believed personality was set by age five
- Erikson believed that personality continues to evolve
- Stages

Slide # 64

Bullet # 1 Freud believed that personality became relatively fixed as early as age five. Erikson challenged this view.

Bullet #2 Unlike Freud, Erikson believed that personality continued to develop and change throughout our lives.

Bullet # 3 Like most developmental theorists, Erikson believes that people pass several distinct stages of development.

Erikson's Theory



- Eight stages in the life span
- Each stage presents a psychosocial crisis
- Personality is shaped by these crises

Slide # 65

Bullets # 1–2 Erikson divided the human life span into eight stages. He believed that each stage presented a unique challenge which he called a “psychosocial crisis.”

Bullet # 3 According to Erikson, each psychosocial crisis involves two opposing personality traits, such as trust versus mistrust. Each stage of development thus becomes a tug of war between two antagonistic tendencies.

Childhood Stages



- Trust vs. mistrust
- Autonomy vs. shame and doubt
- Industry vs. inferiority

Slide # 66

No special notes. There will be specific information about each stage in the slides that follow.

Trust vs. Mistrust



- The first year of life
- Meeting needs, learning to trust
- Not meeting needs leads to mistrust

Slide # 67

Bullet # 1 In the first year of life, infants become completely dependent on their caregivers to provide for their most basic needs (food, shelter, warmth, etc.).

Bullet # 2 If their caregivers meet their needs, children learn not only to trust their caregivers but also to be more trusting about the world in general.

Bullet # 3 Children whose caregivers don't fulfill most basic physical needs tend to become generally distrustful. Erikson believed that the way in which we resolve this early psychosocial crisis affects all of our future relationships.

Autonomy vs. Shame and Doubt



- Second year of life
- Toilet training and efforts to regulate a child's behavior
- Parents' reactions

Slide # 68

Bullets # 1–2 By age two, children have developed to the point where they have more physical control over their bodies, and most usually begin toilet training. Parents at this time also try to help their child learn other things such as controlling temper and accepting limitations. In addition, parents teach their children skills like dressing and bathing.

Bullet # 3 If children can master these new skills and behaviors, they feel an increased sense of autonomy and independence. If parents are dissatisfied or disappointed with a child's progress, the child may develop shame or doubt about his or her abilities in general.

Initiative vs Guilt



- Ages 3–6: Finding independence from parents
- Children learn how to take the initiative
- Overcontrolling and/or overdemanding parents can cause guilt

Slide # 69

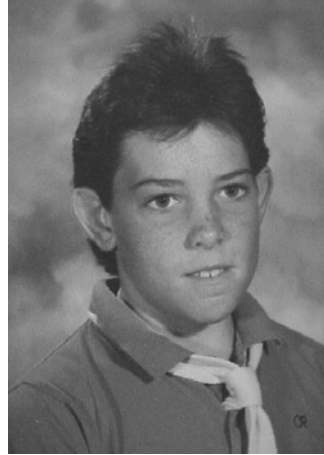
Bullet # 1 Between the ages of three and six, a child passes through Erikson's third stage and begins to move away from complete reliance upon his or her parents.

Bullet # 2 During this stage, children start to experiment and learn how to take the initiative in situations. This behavior can often conflict with their parent's restrictions.

Bullet # 3 Children need lots of praise at this stage. Erikson believed that parents who are too demanding and overcontrolling can cause the child to feel guilty or even worthless, causing the child's self-esteem begins to suffer. Erikson felt that parents should support their child's growing independence while still establishing boundaries for behavior.

Industry vs. Inferiority

- The fourth stage: ages six to puberty
- Learning how to function in social situations
- Failure of socialization causes inferiority



Slide # 70

Bullet # 1 The fourth stage of growth and development begins at about age six and ends with the onset of puberty. Today, it roughly coincides with the years a child spends in elementary school.

Bullet # 2 At this stage, a child learns that a whole world exists beyond the immediate nuclear or extended family. They also discover that the larger world has a multitude of rules and regulations.

Bullet # 3 As long as a child works hard to understand how social situations work (Erikson refers this as the “industry” in his description of this stage’s psychosocial crisis), he or she fits in and gains a sense of accomplishment and pride. If the child does not fit in or fails to pick up key social skills, he or she feels a sense of inferiority. Children at this stage also begin to compare themselves to their friends and classmates.

Identity vs. Role Confusion

- The fifth stage
- Adolescence
- “Who am I, and where am I going in my life?”



Slide # 71

Bullet # 1 According to Erikson, the fifth stage of development—adolescence—presents a very difficult transition.

Bullet # 2 Erikson called this psychosocial crisis, “identity versus role confusion.” The crisis challenges teens to form a clear sense of identity and direction.

Bullet # 3 According to Erikson, adolescents ponder major life questions such as, “Who am I and where am I going?” Erikson acknowledged that identity begins to form well before adolescence, but he also believed that during this stage it becomes clearer and more multifaceted.

Special note: Erikson’s mother was Jewish and had been abandoned by her Danish husband. She later remarried a Jewish doctor. Erikson was considered a Jew by his classmates, but seen as a Gentile at temple because of his blue eyes and Scandinavian appearance. So Erikson himself had to struggle with an extreme identity crisis.

Psychosocial Crises in Adulthood

- Intimacy vs. isolation
- Generativity vs. stagnation
- Integrity vs. despair



Slide # 72

No special notes. See the following slides.

Intimacy vs Isolation

- “Shall I share my life with someone else or live alone?”
- Social clocks
- Stress caused by timing



Slide # 73

Bullet # 1 The main psychosocial crisis young adults deal with is deciding whether to marry or remain single. The majority of Americans do marry at least once. Most psychologists believe marriage generally helps people become happier and better adjusted.

Bullet # 2 As people pass through the stages of adulthood, they ask themselves questions such as, “How am I doing for a person my age?” Psychologists believe such questions reveal the existence of “social clocks:” unconscious schedules that individuals internalize. Social clocks focus on accomplishments and create markers. They raise questions such as, “Should I be married by age 30?” and “Should I be working for a large corporation by the time I reach 35?”

Bullet # 3 Social clocks are a product of our culture. If important transitions don’t occur when a person thinks they should, that person may experience stress.

Generativity vs. Stagnation

- Stage 7
- How stable is personality throughout the life cycle?
- Concern for the welfare of future generations
- Midlife crises



Slide # 74

Bullet # 1 Middle-aged adults face a psychosocial crisis Erikson called “generativity versus stagnation.” People at this stage of life ask themselves questions such as, “Am I still productive?” “Am I still creative?” and “Am I willing to learn anything new?”

Bullet # 2 Sometimes radical transformations take place as a person matures. Jerry Rubin is a classical example. A radical political protester in the 1960s, he went on to become a Wall Street businessman and prominent social conservative. Researchers have discovered people as old as 50 who have undergone a major change in personality. Normally, however, personality does not change significantly between 20 and 40.

Bullet # 3 The key challenge in later adulthood is to acquire a genuine concern for the welfare of future generations. To achieve this, people need to overcome stagnation or self-absorption, which may lead them to focus solely on meeting their own needs instead of also trying to help others meet their needs.

Bullet # 4 Many researchers now question Erikson’s notion of the “midlife crisis.” Psychologists now believe that such crises are not as severe as Erikson had imagined. Though middle-aged people do have to cope with the prospect of getting old and losing the vitality of their youth, not everyone goes through a midlife crisis in which they dump their spouse for a new mate half their age, buy a Harley, and go cross country.

Integrity vs. Despair

- Stage 8: The retirement years
- Research in this area is incomplete
- Ageism and stereotypes



Slide # 75

Bullet # 1 The psychosocial crisis of a person's retirement years involves keeping oneself from dwelling on past mistakes or focusing on imminent death. Successfully navigating this crisis allows a person to maintain integrity even though their body is deteriorating and they know they don't have much time left. Failure can result in depression and despair—a common thread for many people in convalescent homes. The retirement years represent the last stage in Erikson's model of human development.

Bullet # 2 There needs to be more research in this area of developmental psychology, especially since adults today live so much longer than they used to. One area of significant concern focuses on what could happen when the “baby boomers” move into old age. Will society be able to handle the increased demands of such a huge increase in the number of elderly Americans?

Bullet # 3 “Ageism” refers to prejudice toward the elderly. Young people tend to believe that the old suffer from poor health and memory loss, live in poverty, and just sit around and vegetate. This stereotype is false—many senior citizens manage to remain quite active.

Moral Development/Kohlberg

- How children develop a sense of right and wrong
- Kohlberg borrowed from Piaget
- He focused on moral reasoning (three levels)



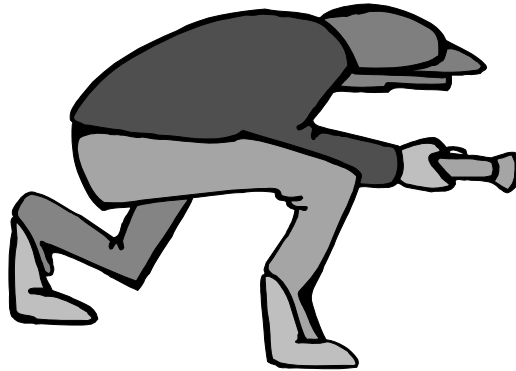
Slide # 76

Bullet # 1 Psychologist Lawrence Kohlberg came up with a stage theory for moral development. It lists the different levels of moral reasoning, each of which can be divided into two stages.

Bullet # 2 Kohlberg borrowed heavily from Jean Piaget. Piaget felt that cognitive development determined moral development. In other words, how an individual approaches and reasons with moral issues depends upon that individual's level of cognitive development.

Bullet # 3 In one experiment, Kohlberg presented his subjects with a hypothetical situation that involved a difficult moral question and then asked them what they thought the actor in the dilemma should do and why. He found that individuals progress through a series of three levels of moral development, each of which has two sub-levels.

Heinz's Dilemma



Slide # 77

Kohlberg used “Heinz’s Dilemma” in his experiments. It goes something like this: “In Europe, a woman was near death from cancer. One drug might save her, a form of radium that a druggist in the same town had recently discovered. The druggist was charging \$2000, ten times what the drug cost him to make. The sick woman’s husband, Heinz, went to everyone he knew to borrow money, but could only get together about half of what the drug cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later, but the druggist said, “No.” Heinz then got desperate and broke into the man’s store to steal the drug for his wife. Should he have done that? Why or why not?”

Note to teacher: Take some time to discuss how students would respond to this dilemma.

Stages 1–2: Preconventional Level



- Stage 1: Punishment orientation
- Stage 2: Native reward orientation

Slide # 78

Bullets # 1–2 Younger children are at what Kohlberg called the preconventional level. Children at this level think in terms of rewards and punishments. If an act is wrong, then the person who committed the act gets punished; if it is right, it leads to positive consequences and/or rewards for the person.

Stages 3–4: Conventional Level



- Stage 3: Good boy/good girl orientation
- Stage 4: Authority orientation

Slide # 79

Bullet # 1 Older children are at what Kohlberg called the conventional level. They begin to see rules as necessary for maintaining order and then internalize these rules in order to win approval from others (the “Good boy/Good girl” orientation). According to Kohlberg, moral thinking at this stage remains relatively inflexible. Children see rules as absolute, and right and wrong is determined by someone else’s approval or disapproval.

Bullet # 2 Children at this level learn to obey authority, and they also begin to comprehend how societies make rules and laws that prohibit “wrong” acts.

Stages 5–6: Post-conventional Level



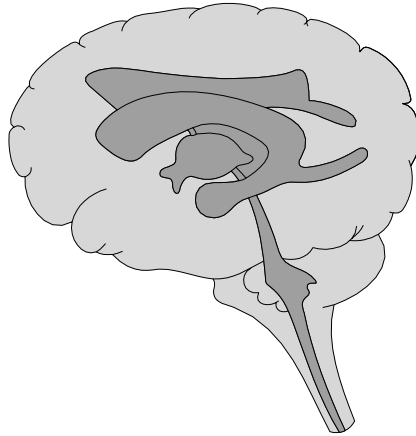
- Stage 5: Social contract orientation
- Stage 6: Individual principles and conscience orientation

Slide # 80

Bullet 1 During adolescence, teens begin the process of working out their own personal code of ethics. They no longer view rules as completely rigid. They start to understand that society's rules governing right and wrong are fallible and not absolute.

Bullet # 2 Teens also learn that sometimes people don't comply with society's rules if these rules violate their own personal principles or go against their conscience. Adolescents begin to view right and wrong as determined not by society's rules and laws, but by abstract principles that emphasize justice and equal treatment.

Cognitive Development



Slide # 81

Cognitive development refers to age-related transitions in modes of thinking. It includes reasoning, remembering, and problem solving. Jean Piaget was a giant in the field of cognitive thought; he developed an influential theory that explained how we think, reason, and solve problems.

Jean Piaget



- Children are not “blank slates” or “empty vessels”
- Instead, children are like little scientists
- Observations of children’s minds

Slide # 82

Bullet # 1 Some psychologists believe that a newborn infant is a *tabula rasa* (a Latin phrase meaning “blank slate”) onto which life’s experiences have yet to be written or an “empty vessel” into which knowledge can be poured. Piaget felt that all too often education ignored how children think and just tried to fill up the blank slate or empty vessel.

Bullet # 2 According to Piaget, children do not think like adults; instead, they act like “little scientists” and invent their own logic.

Bullet # 3 Much of Piaget’s research consisted of observing children. He believed that observation could provide the key to life’s mysteries—such as what goes on in a child’s head. Piaget reasoned that we cannot truly understand children’s behavior until we get to know how children think.

Lessons Piaget Learned from Children



- Children taking IQ tests made similar errors
- Knowledge builds as children grow

Slide # 83

Bullet # 1 While working with researchers Alfred Binet and Theodore Simon on IQ tests, Piaget noticed that children the same age made similar mistakes on the tests.

Bullet # 2 Piaget turned to the question of how knowledge grows. He spent lots of time watching and playing with children, telling them stories and listening to the stories they told, asking them tons of questions, and creating problems for them to solve. He came to the conclusion that knowledge builds as children grow; in other words, it develops in stages. This idea went against the behaviorist belief that environment determined behavior and influenced the acquisition of knowledge.

A Simple Experiment



- The principle of conservation (ages 5–7)
- Children under age five are egocentric
- By age seven, they recognize object permanence

Slide # 84

Bullet # 1 According to Piaget, as children grow they become capable of understanding increasingly complex concepts. Piaget believed that between the ages of five and seven, children begin to understand the principle of conservation (i.e. a given quantity does not change when its appearance changes).

Bullet # 2 Piaget characterized children under the age of five as “egocentric” and incapable of understanding the principle of conservation. In the photo in this slide, Noah (age three) is indicating to a psychologist that he believes the tall cylinder contains more water than the shallow bowl, even though he watched the psychologist pour equal amounts into each container. Even if you pour the water back into containers of the same size, a child this age will not see the discrepancy.

Bullet # 3 By age seven, this egocentric logic disappears and the child comprehends the principle of conservation.

Stage 1: Sensorimotor



- Simple motor responses to sensory stimuli/no concept of object permanence
- Use of schemas

Slide # 85

Bullet # 1 An infant's (birth to age one) intellectual activity consists primarily of simple motor responses to things that stimulate their senses. They can't yet grasp the concept of object permanence and thus don't realize that objects still exist even when they can't see them.

Bullet # 2 In the sensorimotor stage, a child also begins to use schemas, which are specific plans for understanding the world around them. Schemas represent an early attempt at categorization.

Stage 2: Preoperational



- Ages 18 months to 7 years
- Exhibits egocentric thinking
- Lacks concept of conservation
- Uses symbols, words, and mental images

Slide # 86

Bullets # 1–3 Children enter the preoperational stage when they begin to use mental images and symbols to try to understand their world. Children in this stage are “egocentric”—they are incapable of viewing things from another person’s point of view. They also can’t understand the concept of conservation (described earlier). Since children these ages are learning how to use symbols, words, and images to increase their understanding of different things, play and pretending becomes very important. In the drawing in this slide, McKenzie is pretending to be a pirate with a hook instead of a hand.

Stage 3: Concrete Operations



- Ages 7 to 11
- Begins to understand the concept of conservation
- Still has some trouble with abstract ideas
- Classification

Slide # 87

Bullet # 1 By this stage, children have developed their own schemas, but their understanding of the world remains limited to tangible, concrete objects or problems.

Bullet # 2 Children in this stage begin to understand the concept of conservation, though they may not grasp it completely.

Bullet # 3 A child's ability to develop abstract ideas also remains limited.

Bullet # 4 Children at these ages start to learn how to classify objects based on certain properties.

Stage 4: Formal Operations



- Ages 11 to adult
- Understands abstract ideas and hypothetical situations
- Capable of logical thinking
- Nervous system connection

Slide # 88

Bullets # 1–4 By this last stage, a person can understand and solve abstract problems. According to Piaget, a person's progression through the four stages of development depends on both the maturation of the nervous system and the kinds of experiences they have as children. Piaget believed that everyone passes through these four stages, but not necessarily at the same time in their development.

Gender Roles



Slide # 89

Many people take the differences between boys and girls for granted. In this next section, we will investigate factors that contribute to gender roles. “Gender roles” can be defined as sets of behaviors that society considers appropriate for each sex.

Gender Roles



- Gender stereotypes
- Role and gender expectations
- Psychological differences between males and females

Slide # 90

Bullet # 1 Mass media has become thoroughly ingrained in our culture, and it can greatly influence how a person views the world. In many ways, it tells both adults and children how to act and behave. It also shapes perceptions of how boys and girls should appear differently. The media perpetuate many stereotypes, including ones about gender roles.

Bullet # 2 Social and cultural standards strongly influence gender expectations, and prescribe specific roles for men and women.

Bullet # 3 Do children learn gender role identity or are they born with it? Is gender identity purely biological, or does a psychological component exist as well? Though there are many obvious differences between boys and girls, the two genders also share many similarities.

Gender Roles

- Sets of behaviors that society considers appropriate for each sex
- Gender roles determine behavior



Slide # 91

Bullet # 1 According to developmental theorists, though genetic makeup contributes to gender roles, they are primarily defined by the society or culture in which a person lives.

Bullet # 2 Gender roles tell children that society expects them to behave in a certain way simply because they're male or female.

Traditional Male Stereotypes

- Active, adventurous, ambitious, aggressive, competitive, dominant, outspoken, leadership, likes math and science, makes decisions easily, self-confident, takes a stand, stands up under pressure, not easily influenced

Slide # 92

No special notes. Have students write down these stereotyped notions, then ask them to identify which of these traits are being demonstrated in the next few slides.

Traditional Female Stereotypes

- Aware of other's feelings, considerate, creative, cries easily, devotes self to others, emotional, enjoys music and art, excitable in a crisis, feelings hurt easily, gentle, home-oriented, likes children, neat, needs approval, tactful

Slide # 93

Source: Adapted from Ruble (1983)

Elements of Traditional Gender Stereotyping



Slide # 94

As you view these slides, try to pick out elements that relate to traditional gender stereotypes. For example, in this slide we see a little girl playing with a doll.
Possible answers: Gentle, home-oriented, likes children, considerate



Slide # 95

Possible answers : Active, adventurous, aggressive



Slide # 96

Possible answers: Likes children, devotes self to others



Slide # 97

Traditionally most firefighters are men. Possible answers: Mechanical aptitude, active



Slide # 98

Boys tend to love to throw rocks in lakes, ponds, streams, and other bodies of water. Often adults encourage such behavior. Possible answers: Active, adventurous, independent



Slide # 99

Possible answers: Active, adventurous



Slide # 100

Possible answers: Likes art, creative



Slide # 101

Possible answers: Active, aggressive, competitive



Slide # 102

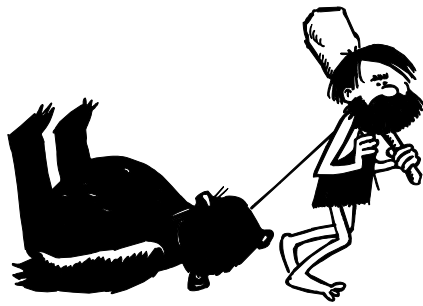
Possible answers: Emotional, gentle, kind



Slide # 103

Possible answer: Active, aggressive, competitive, dominant, leadership qualities

Changing Standards



- Gender stereotypes are oversimplifications
- Gender roles are rooted in the past
- Changes in technology

Slide # 104

Bullets # 1–2 Like all generalizations, gender stereotypes are oversimplifications. Males and females of all different age groups do not always follow traditional patterns or roles. Stereotypical notions like “men are always strong and rugged” or “only women can be sensitive” are deeply rooted in our historical past, when a clear-cut division of labor existed along gender lines.

Bullet # 3 Technology has dramatically changed our perceptions of which gender should perform different kinds of jobs. We no longer need to consider any particular occupation as “women’s work” or “man’s work.” Consequently, our notions of masculine and feminine roles have undergone major alterations.

Sandra Bem's Research



- Androgynous: combining or confusing traditionally male and female traits
- Bem Sex Role Inventory (BSRI)

Slide # 105

Bullets # 1–2 According to psychologist Sandra Bem, our standards of acceptable gender roles need to become more flexible. She developed a measurement known as the Bem Sex Role Inventory (BSRI). In the inventory, she asked college students “how desirable they considered various characteristics for a man and for a woman” and had them rate themselves on each characteristic. She found that stereotypical traits for men included ambition, self-reliance, and assertiveness. She also found that college students wanted women to be gentle, affectionate, and understanding. Of the more than 1500 Stanford undergraduates who completed the BSRI, about one half stuck to “appropriate” gender roles, 15 percent were “cross-sexed typed” (women who described themselves in traditionally male terms or men who checked feminine adjectives), and 36 percent were considered androgynous (they checked off both male and female characteristics to describe themselves).

Androgyny— Is It More Accepted Now?



- Adolescents have more choices as to how they define themselves
- Not all people agree

Slide # 106

Bullet # 1 According to Bem's research, adolescents today can define themselves in many different ways and no longer feel as restricted by society's traditional gender roles.

Bullet # 2 Not everyone in society accepts the idea of making traditional gender roles more androgynous. Those people believe that society functions well using traditional gender roles, and therefore no compelling need exists to change these roles. They also view the move toward androgyny as a rejection of traditions and cultural mores which helped shape their identities.

Personality and Gender



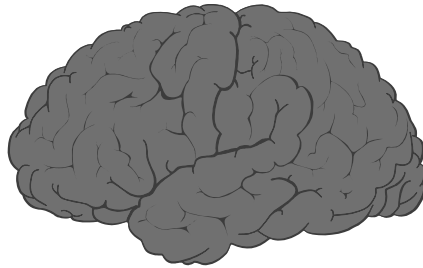
- There are obvious biological and physical differences
- Personality
- Aggression: non-verbal vs. physical

Slide # 107

Bullets # 1–2 There are obvious physical and biological differences between men and women, but recent studies (Mednick & Thomas, 1993) have found that men and women differ in personality as well. According to this research, males tend to be more confident than females, especially in academic areas like math and science.

Bullet # 3 Aggression appears to be what really separates the men from the ladies. Females tend to express aggression verbally, while men tend to express it physically (Turner & Gervai, 1995). We can see these differences when we watch children play: girls use more indirect forms of aggression such as taunting or ignoring, while boys are much more direct, using hitting and shoving.

What Causes Aggression?



- Lower levels of serotonin
- Society encourages boys to be more aggressive than girls
- Communication issues

Slide # 108

Bullet # 1 Studies using identical twins have shown that men have lower levels of the neurotransmitter serotonin than women do (Berman & Tracy & Coccaro, 1997). Other studies have linked lower levels of serotonin with higher levels of aggression.

Bullet # 2 In our culture, boys are often encouraged to handle things in more aggressive ways. Sayings like “Fight back,” “Stand up for yourself,” and “Don’t be a wimp” are usually addressed more towards men than women.

Bullet # 3 Stereotypes portray women as talkative, but current studies have demonstrated that men actually talk more than women do and are more inclined to interrupt women while talking. Women, however, do more of the talking when they feel they have power within a relationship.

Gender and Cognition



- Verbal skills vs. spatial/math
- Hyde & Linn study (1988)
- Very few cognitive differences between males and females

Slide # 109

Bullet # 1 Traditional gender notions assume that women do better at tasks involving verbal skills, while men excel at spatial and mathematical tasks. Females do begin speaking at an earlier age than males and usually have larger vocabularies. They also have higher reading scores at the elementary grade school level.

Bullets # 2–3 Researchers Hyde and Linn conducted a study in which they tried to determine if any cognitive differences existed between men and women. They found that both performed equally well at tasks involving verbal and spatial skills and concluded that gender doesn't create any appreciable cognitive differences between men and women.

Heredity vs. Environment



Slide # 110

Psychologists have long tried to assess the relative importance of heredity versus environment, or “nature versus nurture.” Most have concluded that both play a crucial role in our development.

Nature vs. Nurture/Twin Studies



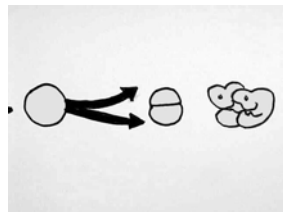
- Researchers can assess the importance of heredity vs. environment using “separated twin” studies
- Identical/monozygotic

Slide # 111

Bullet # 1 Studies of twins separated at birth have helped psychologists to assess the importance of heredity versus environment. They have often found that even though the separated twins had been reared in very different environments, they still developed very similarly, sharing the same temperament, tastes, habits, and more.

Bullet # 2 Identical twins emerge when one zygote splits in the womb. Identical twins not only look alike, they also have exactly the same genotype and their genetic relatedness is 100%. The picture in this slide shows identical twins Megan and Katie, who were born three minutes apart.

Identical Twins

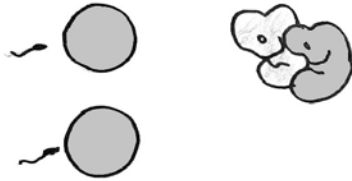


- One sperm, one egg
- Share 100% of their genes
- Account for about one in 250 births

Slide # 112

No special notes. The picture in this slide shows Megan and Katie as toddlers.

Fraternal Twins



- Twice as common as identical twins
- Two eggs are released at once
- If both eggs are fertilized by separate sperm = two fetuses

Slide # 113

Bullet # 1 Fraternal (dizygotic) twins result when two eggs are fertilized simultaneously by different sperm cells, forming two separate zygotes.

Bullet # 2 Fraternal twins are no more alike in genetic makeup than any other pair of siblings: their genetic relatedness is only 50%.

Fraternal Twin Studies

- Same environment
- Useful comparisons with identical twins

Slide # 114

Bullet # 1 Psychologists find fraternal twin studies quite useful because the twins usually grow up in the same environment and share the same parents, peers, teachers, etc.

Bullet # 2 If identical twins tend to share traits more closely than fraternal twins do, psychologists can conclude that the similarity is due to heredity rather than environment.

Adoption Studies

- Assess the importance of heredity vs. environment
- Given up for adoption early in infancy and raised without having contact with their biological parents

Slide # 115

Bullets # 1–2 When an adopted child resembles its biological parents even though they didn't raise the child, this shows the importance of heredity and genetics. When an adopted child resembles its adoptive parents even though they inherited no genes from them, this shows the importance of environment.

Special note: Adoption studies have helped psychologists understand the relative importance of heredity versus environment. Research (Vandenberg & Vogler, 1985) has shown that significant similarities exist between adopted children and their biological parents (an average correlation of .36), but adopted children resemble their adoptive parents nearly as much (.31).