Lecture Objectives:

- Describe the physical, cognitive, and moral changes that take place during the middle childhood years.
- Describe the ways to help children develop a sense of accomplishment.
- Relate knowledge of the changing interpersonal relationships of school-aged child.
- Discuss the role of schools in the development and socialization of the school-aged child.

Lecture Objectives: (cont.)

- Differentiate the types, causes, and prevention of sports injuries in the school-aged child.
- Describe the most common causes of growth and maturation failure in late childhood.
- Identify the causes and discuss the preventive aspects of injury in middle childhood.
- Discuss the manifestations and nursing management of selected emotional and behavioral problems in middle childhood.
Promoting Optimum Growth and Development

- “School age” generally defined as 6-12 years
- Physiologically begins with shedding of first deciduous teeth; ends at puberty with acquisition of final permanent teeth
- Gradual growth and development
- Progress with physical and emotional maturity

Biologic Development

- Height increases by 2 inches a year
- Weight increases by 2-3 kg per year
- Males and females differ little in size
Maturation of Systems
- Bladder capacity increases
- Heart smaller in relation to the rest of body
- Immune system increasingly effective
- Bones increase in ossification
- Physical maturity not necessarily correlated with emotional and social maturity

Prepubescence
- Defined as 2 years preceding puberty
- Typically occurs during preadolescence
- Varying ages from 9-12 (girls about 2 years earlier than boys)
- Average age of puberty is 12 in girls and 14 in boys

Psychosocial Development
- Relationships center around same-sex peers
- Freud described it as “latency” period of psychosexual development
Erikson: Developing a Sense of Industry

- Eager to develop skills and participate in meaningful and socially useful work
- Acquire sense of personal and interpersonal competence
- Growing sense of independence
- Peer approval is strong motivator

Erikson: Inferiority

- Feelings may derive from self or social environment
- May occur if incapable or unprepared to assume the responsibilities associated with developing a sense of accomplishment
- All children feel some degree of inferiority regarding skill(s) they cannot master

Piaget: Cognitive Development

- Concrete operations
  - Use thought processes to experience events and actions
  - Develop understanding of relationships between things and ideas
  - Able to make judgments based on reason (“conceptual thinking”)
Kohlberg: Moral Development
- Development of conscience and moral standards
- Age 6-7: reward and punishment guide choices
- Older school age: able to judge an act by the intentions that prompted it
- Rules and judgments become more founded on needs and desires of others

Spiritual Development
- Children think in very concrete terms
- Children expect punishment for misbehavior
- May view illness or injury as punishment for a real or imagined misdeed

Social Development
- Importance of the peer group
- Identification with peers is a strong influence in child gaining independence from parents
- Sex roles strongly influenced by peer relationships
Relationships with Families

- Parents are primary influence in shaping child’s personality, behavior, and value system
- Increasing independence from parents is primary goal of middle childhood
- Children not ready to abandon parental control

Play

- Involves physical skill, intellectual ability, and fantasy
- Form groups, cliques, clubs, secret societies
- Rules and rituals
- See need for rules in games they play

Play (cont’d)

- Team play
- Quiet games and activities
- Ego mastery
Developing a Self-Concept

- Definition: a conscious awareness of a variety of self-perceptions (abilities, values, appearance, etc.)
- Importance of significant adults in shaping child’s self-concept
- Positive self-concept leads to feelings of self-respect, self-confidence, and happiness

Developing a Body Image

- Generally children like physical selves less as they grow older
- Body image influenced by significant others
- Increased awareness of “differences” may influence feelings of inferiority

Coping with Concerns Related to Normal Growth and Development

- School experience
  - Second only to the family as socializing agent
  - Transmission of values of the society
  - Peer relationships become increasingly important
Coping with Concerns Related to Normal Growth and Development

- Teachers
- Parents
- Limit-setting and discipline
- Dishonest behavior
- Stress and fear

Promoting Optimum Health during the School Years

- Nutrition
  - Importance of balanced diet to promote growth
  - Quality of diet related to family’s pattern of eating
  - “Fast food” concerns

Sleep and Rest

- Average 9½ hours/night during school age but highly individualized
- May resist going to bed at ages 8-11
- 12 years and up generally less resistant to bedtimes
Exercise and Activity

- Sports
  - Controversy regarding early participation in competitive sports
  - Concerns with physical and emotional maturity in competitive environment
- Acquisition of skills
- Generally like competition

Dental Health

- Eruption of permanent teeth
- Good dental hygiene
- Prevention of dental caries
- Malocclusion
- Dental injury
- Dental evulsion—replacement/reattachment

Sex Education

- Sex play as part of normal curiosity during preadolescence
- Middle childhood is ideal time for formal sex education
  - Life span approach
  - Info on sexual maturity and process of reproduction
  - Effective communication with parents
Nurse’s Role in Sex Education

- Treat sex as normal part of growth and development
- Questions and answers
- Differentiation between “sex” and “sexuality”
- Values, problem-solving skills
- Open for communication with parents

School Health

- Responsibilities of parents, schools, and health departments
- Ongoing assessment, screening, and referrals
- Routine services, emergency care, safety and infection control instruction
- Increase knowledge of health and health habits

Injury Prevention

- Most common cause of severe injury and death in school-age children is motor vehicle crashes—pedestrian and passenger
- Bicycle injuries—benefits of bike helmets
- Appropriate safety equipment for all sports
Anticipatory Guidance—
Care of Families

- Parents adjust to child’s increasing independence
- Parents provide support as unobtrusively as possible
- Child moves from narrow family relationships to broader world of relationships

Health Problems Related to Sports Participation

- Acute overload injuries
- Overuse syndromes
  - Repetitive microtrauma
  - Inflammation of the involved structure
  - C/O pain, tenderness, swelling, disability
  - Examples: tennis elbow, Osgood-Schlatter disease

Stress Fractures

- Occur as result of repeated muscle contraction
- Seen most often in repetitive weight-bearing sports
- Common symptoms
  - Sharp, persistent, progressive or deep, dull ache
  - Pain over the involved bony surface
- Diagnosis based on clinical observation, possibly bone scan
Therapeutic Management of Stress Fractures

- Rest—alleviate repetitive stress that initiated symptoms
- Training with alternative exercise regimens
- PT, cryotherapy, cold whirlpools
- Rx: NSAIDs for discomfort

Nurses’ Role in Sports for Children and Adolescents

- Evaluation for activities
- Prevention of injury
- Treatment of injuries
- Rehab after injuries
- Instruction to student and parents

Altered Growth and Maturation

- Often are the result of simple physiologic (“constitutional”) delay
- Endocrine dysfunction
- Chromosomal aberration
- Chronic disease, e.g., malabsorption, asthma
- Stress
- Poor nutrition
Tall Stature

- May cause anxiety, perceived social handicap among some clients
- Gender perceptions related to height
- Use of estrogens to control height if initiated before menarche
- Use of hormone therapy is controversial

Short Stature

- May be first manifestation of serious disorder
- May be of no consequence to health
- Most common cause worldwide is inadequate nutrition
- Also chronic disease, endocrine dysfunction, primary gonadal failure

Short Stature: Other Causes

- Congenital defects and disorders
- Inborn errors of metabolism
- Psychosocial (deprivation) dwarfism
  - Definition: growth retardation in children >2 years old
  - Environmental stress and delayed development
  - When children are removed from deprived environment, growth proceeds at normal or increased rate
Skeletal Disorders Affecting Growth

- Replacement therapy for treatment of growth hormone deficiency
- Management of deprivation dwarfism
  - Testosterone therapy
  - Growth hormone therapy
  - Hormone therapies highly controversial in children with constitutional delay

Sex Chromosome Abnormalities

- Occur with relatively high frequency
- Most caused by altered number of sex chromosomes

Turner Syndrome

- Absence of one of the X chromosomes (45,X)
- Females
- Incidence 1:2500 female births
- Manifestations
  - Sterile
  - Short stature
  - No secondary sex characteristics
  - Webbed neck, shield-shaped chest, widely spaced nipples, low posterior hairline
Klinefelter Syndrome

- Most common of all chromosomal abnormalities (1 in 850 male births)
- Presence of one or more additional X chromosomes (47,XXY most common)
- Occurs in males
- Rarely seen before puberty
- Adolescent virilization fails

Klinefelter Syndrome

Manifestations

- May not be diagnosed until they present for infertility
- Azoospermia, small testes
- Defective development of secondary sex characteristics
- Cognitive impairment of varying degrees, behavioral problems, possibly gross motor difficulties

Treatment of Klinefelter Syndrome

- Testosterone administration to enhance masculine characteristics
Attention Deficit Hyperactivity Disorder (ADHD) and LD

- ADHD: inattention, impulsiveness, and hyperactivity
- ADHD typically onset before age 7
- LD (learning disability): a heterogeneous group of disorders with difficulties in acquisition and use of listening, speaking, reading, writing, reasoning, math, and/or social skills

Diagnostic Evaluation

- Quality of motor activity
- Developmentally inappropriate inattention, impulsivity, and hyperactivity
- Wide variation of severity
- Diagnostic criteria developed by American Psychiatric Association

Battery of Tests for LD and ADHD

- IQ
- Hand-eye coordination
- Visual and auditory perception
- Comprehension
- Memory
Therapeutic Management of ADHD
- Classroom
- Family education and counseling
- Behavioral and/or psychotherapy for child
- Environmental manipulation
- Medication

Medications for ADHD
- Not all children benefit from pharmacologic therapy
- Stimulants
  - Dexedrine, Adderall
  - Ritalin
- Side effects
  - Insomnia, anorexia and weight loss, hypertension
  - LT may suppress growth

Therapeutic Management of LD
- Primarily educational interventions
- Wide variation of diagnostic severity
Nursing Considerations

- Community settings
- School nurses
- Hospital settings

Enuresis

- Bed wetting
- More common in boys
- Usually ceases between 6 and 8 years of age
- Diagnosis
  - Developmental age of more than 5 years
  - Two times per wk or more for 3 months
  - May have urgency, frequency

Enuresis (cont’d)

- Organic causes
  - Structural defects
  - UTI, impaired kidney function, chronic renal failure
  - Neurologic deficits, endocrine disorders (diabetes)
  - Sickle cell disease
- Bladder volume of 300-350 mL is sufficient to hold a night’s urine
Normal Bladder Capacity in Child

- Child’s age + 2 = expected bladder capacity in ounces

Psychologic Factors

- Sleep more soundly than other children
- Emotional factors
- Familial tendency

Treatment for Enuresis

- Drugs
  - Tofranil
  - Oxybutynin
  - DDAVP
- Bladder training
- Fluid restriction in evenings
- Interruption of sleep to void
- Conditioned reflex response device
Encopresis
- Repeated voluntary or involuntary passage of feces of normal or near normal consistency into places not appropriate for that purpose
- Not caused by any physiologic effect, e.g., laxative or medical problem
- Primary encopresis = fecal incontinence after age 4
- Secondary encopresis = >4 years old fecal incontinence after period of prior established fecal continence

Encopresis (cont’d)
- More common in males
- May follow psychologic stress
- May be secondary to constipation or impaction
- Therapeutic management
  - Determine cause
  - Dietary intervention, management of constipation
  - Psychotherapeutic interventions

Posttraumatic Stress Disorder (PTSD)
- Development of characteristic symptoms following exposure to extremely traumatic experience or catastrophic event
- May function adequately, but have foreboding regarding the future
PTSD: Response to the Event

- Initial response
  - Intense arousal; lasts 1-2 hours
  - “Fight or flight” response
- Second phase
  - Lasts approximately 2 weeks
  - Denial, period of quiescence
- Third phase
  - Appear to get worse; lasts 2-3 months

PTSD Symptoms

- Depression, anxiety, conversion reactions
- Phobic symptoms, repetitive actions
- Flashbacks are common
- Inquiry about what has happened
- Nursing considerations

School Phobia

- Defined as extreme reluctance to attend school for a sustained period of time as a result of severe anxiety or fear of school-related experiences
- Also called “school refusal” and “school avoidance”
- Most common in ages older than 10 years
School Phobia (cont’d)

- Physical symptoms
- Symptoms subside after staying at home
- No symptoms on weekends, holidays, etc.
- Nursing considerations

Recurrent Abdominal Pain (RAP)

- May have psychogenic origin
- May have real pain
- Psychologic aspects
- Nursing considerations

Conversion Reactions

- AKA hysteria, hysterical conversion reaction, and childhood hysteria
- Sudden onset, traced to a precipitating event
- Symptoms: abdominal pain, fainting, pseudoseizures, paralysis, headaches, visual field restriction
- R/O true seizures with EEG
Childhood Depression

- Temporary: acute depression precipitated by a traumatic event
- Chronic depression
  - May accompany chronic illness or disability
  - Familial circumstances
- Nursing considerations

Childhood Schizophrenia

- Severe deviation in ego functioning
- Psychotic disorders that appear after age 4 or 5
- Characterized by gradual onset of neurotic symptoms
- Lack of contact with reality; “a world of their own”
- Nursing considerations