Chapter Four:

Mental and Emotional Well-Being

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Aging and Cognitive Function

- **Intelligence** is defined as the “theoretical limit of an individual’s performance.” Environmental opportunities and constraints—as well as biological and genetic factors—also make a difference.

- **Primary mental abilities**: These abilities are a subset of intellectual skills that include mathematical reasoning, the ability to generalize from specific facts to concepts, spatial relations, the capacity to retain and recall content from readings, and perceptual speed.
  - Fluid intelligence
  - Crystallized intelligence
Aging and Cognitive Function: Intelligence and Aging

- **Classic aging pattern**: Most intelligence tests taken by older people show a classic aging pattern of scores: lower functioning on performance tests of skills such as perceptual speed, but stable scores on verbal scales.

- It does appear that performance-related aspects of intellectual function decline somewhat independently of psychomotor or sensory factors.

- However, our ability to recall stored verbal information and to use abstract reasoning tends to remain constant.
Aging and Cognitive Function: What Else Besides Age Affects Intelligence?

- Multiple factors, which are not age-related, affect intelligence.
  - A biological factor—some people are innately more intelligent
  - Anxiety about test performance
  - Education
  - Occupation
  - Physical health
  - Nutritional deficits
  - Nearness to death
  - Cautiousness in recall situations that involve risk and uncertainty
  - Numerous problems measuring intelligence
Aging and Cognitive Function: How Aging Affects Learning and Memory

- **Memory** is the process of recalling information that was once stored; it also refers to a part of the brain that retains what has been learned throughout our lives.

- **Sensory memory** is the first step in receiving information from the long-term storage of memories via our touch, taste, or smell.

- **Working or primary memory** is a temporary state of holding, processing, and organizing information.

- **Secondary or long-term memory** is where we keep everything we have learned throughout our lives; it has an unlimited capacity.
Aging and Cognitive Function: How Aging Affects Learning and Memory

• **Learning** occurs when the new information or skills that we acquire through our sensory and primary memories becomes encoded or stored in secondary memory.

• **Perceptual speed** is the time required to recognize and respond to a stimulus; it deteriorates with age.

• **General slowing hypothesis** states that aging causes a slowing of information processing in the nervous system.

• **Attentional Resources**: Aging may cause a decline in attentional resources of mental energy needed to organize newly acquired information to retain it in secondary memory.

• **Tip-of-the-tongue states**: When one experiences TOT, a specific type of difficulty in retrieval, one may remember the word through spontaneous retrieval or may use search strategies such as cues.
Executive Function is the ability to organize our learning and then efficiently use the information stored in our secondary memory to plan and make decisions and shift attention from one task to another.

- Normal aging is associated with only mild declines in executive function.
- Older adults, however, with dementia and those who have experienced major changes in their environments, experience significant impairment in this ability.
Aging and Cognitive Function: Factors that Affect Learning in Old Age

- **Attention** is a critical first step in learning. Three of its components are central to people’s ability to learn.
  - **Selective attention** is being able to select information relevant to a task while ignoring irrelevant data.
  - **Attentional control** refers to our ability to determine how much attention should be directed at specific stimuli and when to shift our focus to other stimuli.
  - **Divided attention** tasks involve stimuli in the same sensory mode or different sensory systems.
Aging and Cognitive Function: Strategies to Promote Older Adults’ Learning

- Create supportive conditions for learning and test taking.
- Use positive feedback.
- Pace the rate of information flow to allow opportunities to practice the new information.
- Allow self-pacing and extra time to reduce fatigue.
- Offer material perceived by the older learner to be relevant.
- Chunk or break long bits of information into smaller units.
Aging and Cognitive Function: Age-Related Changes in Memory

- **Recall** is the process of searching through the vast store of information in our secondary memory, perhaps with a cue or a specific orienting question.

- **Recognition** requires fewer searches because a stimulus in the environment triggers retrieval of that information, such as multiple-choice tests.

- **Disuse theory** states that not using the information results in its loss.

- **Interference theory** states that poor retrieval may be due to a combination of distraction during the learning stage and interference by new information with the material stored over many years.

- **Spatial memory** is the ability to recall where objects are in relationships to each other in space; also declines with age.
Aging and Cognitive Function: Improving Cognitive Abilities

- **Cognitive retraining** involves teaching older adults how to use techniques to keep their minds active, and maintain memory, problem-solving, and decision-making skills.

- When we use our brains, this makes connections between neurons stronger and may even create new neurons.
Aging and Cognitive Function: Memory Mediators

- **Mediators** are visual and verbal links between information to be encoded and information already in secondary memory.

- **Visual mediators** are useful for learning new words, names, or concepts.

- **Imaging** is useful in everyday recall situations; we can remember by visualizing.

- **Verbal mediators or mnemonics** are riddles, rhymes, and codes associated with new information.
• **Lists** can help older persons recall names, words, phone numbers, and daily chores.

• Other simple external cognitive aids for people of all ages are:
  - Associate specific behaviors as part of our daily routines.
  - For those with serious memory problems, use a bracelet or necklace imprinted with important information.
Aging and Cognitive Function: Physical Exercise

- Exercise improves blood flow to the brain and increases the efficiency of its neuronal networks.
Aging and Cognitive Function: Do Chemical Aids Improve Memory?

- Research has concluded that chemical aids like gingko biloba, Vitamins E and B12, lecithin, and folic acid do not help in improving memory.

- Use caution when taking any kind of supplement to improve memory as they may have harmful side effects.
Aging and Cognitive Function: Wisdom and Creativity

- **Creativity** is the ability to bring something new and valued into existence, such as applying unique solutions and coming up with original ideas or products.

- “Creativity is like chocolate for the brain.”—Dr. Gene Cohen

- Creative activities may improve older people’s physical health; people age 65-100 who participated in a two-year structured arts program had better physical health, fewer signs of depression, used fewer medications, reported less loneliness and went to the doctor less.
Personality in Later Years

- **Personality** is a unique pattern of our innate and learned behaviors, thoughts, and emotions that influence how we interact with our environments.

- Essentially, the qualities of who we are.
Erikson’s Psychosocial Model of Personality

- **Ego integrity vs. despair** involves looking inward to integrate the experiences of earlier stages and to realize that one’s life has meaning, whether or not it was “successful.”

- **Generativity** is the desire to help and mentor younger persons and leave a legacy; may be the most critical component of achieving ego integrity.

- **Life review** is a form of therapy that can help older adults attain ego integrity; a process of sharing one’s memories and experiences with others, whether orally or in writing.
The Baltimore Longitudinal Study (BLS) identified specific personality traits—relatively stable dispositions such as optimistic/pessimistic—in the middle and later years.

Costa and McCrae identified five core personality traits among BLS participants: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness.
Personality in Later Years: Emotional Expression and Regulation

- Positivity effect means elders are more likely to remember positive emotional content than negative.

- Socioemotional Selectivity Theory (SST) posits that when we are aware of our mortality and that our time is limited, we are more likely to pursue emotional satisfaction rather than focus on simply acquiring more information.
Personality in Later Years: Self-Concept and Self-Esteem

- **Self-concept** is our cognitive image of the self.

- Older people confirm or revise self-images by:
  - Assimilating new experiences or roles into their self-concept, such as community volunteer or grandparent
  - Accommodating or adjusting their self-concept to fit the new reality, such as letting go of trying to impress others with past accomplishments

- **Self-esteem** is how we feel about our identity relative to some ideal standard.
Personality in Later Years: Successful Robust, Resilient, or Positive Aging

- **Successful aging** is a combination of physical health and functional ability, high cognitive functioning, and active involvement with society.

- **Self-efficacy** means feeling competent to deal with new situations.

- **Robust aging** is characterized by productive involvement, high physical functioning, and no cognitive impairment or depression.

- **Resilience** means the ability to thrive under difficult situations, turning adversity into a catalyst for growth and emotional well-being.

- **Positive aging** is characterized by being adaptable and proactive in coping with change; taking life in stride.
Mental Disorders Among Older Persons: Depression

- **Depression**: The most frequently diagnosed mental disorder among older adults.
  - Unipolar depression—the most common—is in response to a significant negative life event.
  - Major depressive disorders persist beyond six months, are likely to have originated earlier in life, and are diagnosed in a very small percent of older adults living in the community. In contrast, nearly 50% of nursing home residents suffer from major depressive episodes.
Mental Disorders Among Older Persons: Depression

- Risk factors for depression:
  - Being female
  - Prior history of depression
  - Being unmarried or living alone
  - Comorbidity and difficulty performing ADLs
  - Inadequate social supports
  - Multiple role losses, including chronic financial strain
Mental Disorders Among Older Persons: Depression

• Diagnosing depression is difficult because symptoms of grief and depression overlap.

• Therapeutic interventions:
  – Pharmacological interventions or use of antidepressants
  – Reminiscence therapy
  – Cognitive-behavioral intervention
  – Problem-solving therapy
Mental Disorders Among Older Persons: Suicide

- Depression is the primary cause of suicide in older adults.
- Signs that an older adult may consider suicide:
  - A serious physical illness with severe pain
  - The sudden death of a loved one
  - A major loss of independence
  - Financial instability
  - Persistent depression
  - Statements that indicate frustration with life and a desire to end it
  - A sudden decision to give away one’s most important possessions
  - A general loss of involvement in one’s environment
  - Isolation and feeling cut off from others
Mental Disorders Among Older Persons: Anxiety

- **Anxiety disorders:**
  - Almost as common in later life as depression
  - Approximately 4.3% of older adults living in the community have symptoms of anxiety
  - Rates are higher among nursing home residents
  - There are problems with diagnosis because elders tend to minimize or underreport anxiety symptoms
  - Can be masked by physical health complaints, symptoms with no known medical cause, behavior changes, symptoms of depression and other medical conditions such as dementia
Mental Disorders Among Older Persons: Paranoia and Schizophrenia

- **Paranoia** is an irrational suspiciousness of other people. It may result from social isolation, a sense of powerlessness, a steady decline in sensory abilities, memory loss, and problems with managing day-to-day activities.

- **Schizophrenia** is less prevalent than depression or dementia in old age. Older schizophrenics are more likely to experience cognitive decline, depression, and social isolation than young adults with this condition.
Mental Disorders Among Older Persons: Older Adults Who Are Chronically or Severely Mentally Ill

- If you see a chronically mentally ill person, know that:
  - She may have suffered mental or emotional disorders throughout life that impairs her ADLs, self-direction, and social interactions.
  - He may have survived major upheavals and social neglect, including substance abuse, and traumas such as war.
Mental Disorders Among Older Persons: Dementia

- **Dementia** includes a variety of conditions caused by or associated with damage of brain tissue. Sufferers have a marked deterioration in cognitive function and problems with at least one of the following abilities:
  - Speaking coherently or understanding language
  - Recognizing or identifying objects
  - Recalling events in recent memory
  - Paying attention
  - Disorientation to time, place, and person
  - Understanding a symbolic language
  - Thinking abstractly and performing executive functions
  - Showing good judgment
Mental Disorders Among Older Persons: Reversible and Irreversible Causes of Dementia

- Some dementias are **reversible** and can be “cured.” These dementias are caused by reactions to medications; alcohol, hormonal, or nutritional problems; infections; thyroid problems; depression; diabetes; or other diseases.

- **Irreversible dementias**, such as Alzheimer’s or vascular dementia, have no discernible environmental cause and cannot yet be cured.
Mental Disorders Among Older Persons: Alzheimer’s Disease (AD)

- One out of 8 Americans have symptoms of AD.
- Another American develops AD every 69 seconds; this will increase to one every 33 seconds in 2050.
- AD is the 5th leading cause of death for older adults.
- Familial AD appears in multiple generations of the same family, usually in middle age.
Mental Disorders Among Older Persons: Potential Causes of and Risk Factors for Alzheimer’s Disease

- Inflammatory processes associated with aging that result in amyloid, a hard protein deposit
- Chemical changes that result in age-related loss of dopamine, the brain chemical associated with pleasure
- Genetic factors—AD is more common among persons with Down syndrome
- Strokes
- Low estrogen levels
- Recurring episodes of depression
- Lifestyle factors
Mental Disorders Among Older Persons: The Importance of a Thorough Diagnosis

- The most conclusive diagnosis of AD today can only be made at autopsy.

- Diagnosing AD:
  - A medical and nutritional history
  - Lab tests, including those for thyroid function
  - A CT scan, a PET scan, or MRI
  - Standardized tests of cognitive functioning
Mental Disorders Among Older Persons: Stages of Alzheimer’s Disease

- **Early stages:**
  - Difficulty in remembering new information
  - Confusion as to time and place
  - New problems with words in speaking or writing
  - Misplacing things and losing the ability to retrace steps
  - Difficulties with planning, organizing, and performing tasks and solving problems
  - Decreased or poor judgment
  - Changes in mood and personality
Mental Disorders Among Older Persons: Stages of Alzheimer’s Disease

• Intermediate stages:
  • Forgetfulness of recent events and of one’s personal history, although a person may be able to describe vividly events from years ago
  • Difficulty performing complex tasks
  • Becoming moody or withdrawn from social activities
  • Inability to perform challenging mental arithmetic
  • Needing help with daily activities
Mental Disorders Among Older Persons:
Stages of Alzheimer’s Disease

• Late stages:
  • Repeating the same phrases and thoughts
  • Losing awareness of recent experiences and surroundings
  • Failing to recognize partners, children, and long-time friends
  • Dramatically disrupted sleep patterns
  • Major personality changes
  • Needing help dressing, toileting, bathing
  • Trouble controlling bladder or bowels
  • Wandering or become lost
  • Experiencing agitation
Mental Disorders Among Older Persons: Parkinson’s Disease

- Parkinson’s Disease is a neurodegenerative disorder that begins as a loss of muscle control and impaired balance and coordination with tremors in the feet and hands. Speech can become impaired, muscles rigid, and the person moves slowly with a shuffling gait.
Mental Disorders Among Older Persons: Substance Abuse

- Unhealthy drinking patterns are defined as four or more drinks in any single day during a typical month.

- Some older alcoholics have had the problem since middle age but increasing age may exacerbate the problem.

- Older alcoholics tend to experience other co-occurring health problems.
Mental Disorders Among Older Persons: Drug Abuse

- **Polypharmacy** is the use of multiple medications or when more drugs are prescribed or taken than is clinically needed.

- “Brown-bag review” a good technique for assessing older patients for medication misuse.