Psychosocial Changes & Cognitive and Psychological Issues

Topic 4

Normal Age-Related Memory Changes

• Memory peaks between the ages of 20s and 30s
• Followed by a subtle decline until age 60
• After 60, memory difficulties become more pronounced
• Many people assume that as people age their memories must fail
• There are some memory changes that are associated with normal aging; however, the ability to learn new things does not decline.
Normal Age-Related Memory Changes

Thinking:

Slower thinking process (delayed transmission of information to the brain)

• All body systems are less efficient with aging including thinking and problem-solving abilities.
• The speed of learning and recalling decrease so it may require more time to do some cognitive tasks.

Normal Age-Related Memory Changes

Intelligence:

• The basic intelligence (IQ) is maintained
• The abilities for verbal comprehension and arithmetic operations are also unchanged
Attention Span:
• A decrease in the ability to retain attention longer than 45 minutes
• More easily distracted by irrelevant information or stimuli
• Less able to perform tasks that are complicated or require simultaneous performance

Learning:
The ability to learn is not affected by aging; however, the factors that affect learning are:

Motivation
Attention span
Illness
Cognitive and Psychological Issues in Aging

3 Ds:
Delirium, Depression, and Dementia in elders.

Book 2
• Mr. Katz is a 75-year-old White male who enters his primary care provider’s office very confused. He states that he needs to see the doctor “right now” and keeps repeating the request even though the nurse reassures him that the doctor will be right with him. As you take Mr. Katz to the exam room, he continues to be nervous and confused. His vital signs are stable. His wife says he was barely able to get dressed and out of the house this morning and has become increasingly able to do less for himself over the past several months.

• One of the most prevalent myths of aging is all older adults will become senile, or demented as a result of the aging process.

• Many assume that as people age they will ultimately become cognitively impaired. This image is perpetuated by the number of cognitively impaired older adults requiring care in nursing homes, in adult day care, or at home.
Many older adults live well into their 10th decade as sharp as they were in their twenties and thirties. While memory losses are common in older adulthood, the development of dementia is not a normal change of aging.

In older adults, three pathological cognitive and psychological conditions occur frequently that lead to cognitive impairment.

These conditions are commonly known by those who care for older adults as the three **Ds**: delirium, depression, and dementia.

It is important to understand the incidence, prevalence, causes, and treatment of these disorders in order to give appropriate nursing care.
• Delirium, depression, and dementia occur from completely different disease processes, yet, they all tend to result in similar symptoms of cognitive decline.

• It is important to recognize the existence of these conditions in the older adult, screen for them appropriately, and refer the older adult for further evaluation and treatment at the earliest possible point of care.

• Table 8.1
• If an older adult is experiencing signs and symptoms of impaired judgment, difficulty with language and calculation, disorientation or a change in behavior, then the nurse may consider delirium, followed by depression, then dementia.
Delirium

- During illness, hospitalization, or recovery from surgery or stroke, many people experience delirium, a rapidly developing and severe confusion accompanied by altered consciousness and an inability to focus.
- It's the most common complication of hospitalization among people ages 65 and over: 20% of those admitted to hospitals, up to 60% of those who have certain surgeries, and almost 80% of those treated in ICUs develop delirium. When hospital delirium isn't recognized, it can hinder recovery.

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Delirium

- Causes: Anything that interrupts normal brain function can cause delirium. Inflammation or toxic substances can interfere with brain function, for example, by disturbing the neurotransmitters that communicate between nerve cells. Though the causes of delirium are complex, one major pathway involves the neurotransmitter acetylcholine. If blood sugar levels fall too low or the brain doesn't receive enough oxygen, acetylcholine levels plummet.
Recognizing hospital delirium

Ask family members “Is this a change?”

Screening tool (Confusion Assessment Method):
look for several symptoms: a sudden change in mental status; difficulty focusing during conversation; rambling, disorganized, or illogical thoughts; altered consciousness (anything from hyper-alert to unarousable); disorientation of time or place; impaired memory; seeing or visual or hearing hallucinations; increased motor activity (such as restlessness or tapping fingers) or decreased motor activity (such as staring into space or moving very slowly); and disturbed sleep (such as insomnia or daytime sleepiness).

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Delirium

• The typical scenario of delirium occurs as follows: an older adult is admitted to the hospital for necessary or elective surgery. When she arrives, the nurse asks her questions to complete the history, and she is able to quickly recall dates and procedures, such as the onset of arthritis or cataracts. She is prepared for surgery, uneventfully undergoes the procedure, and is sent to the recovery room. Upon awakening from the anesthesia, she begins calling out for a person who is not present. She randomly pulls at her IV lines and pulls off her oxygen tube, alternating with periods of quiet rest. Because she is an older adult, the health care providers assume she is demented, give her sedative medications, and transfer her to a medical unit. In fact, although this scenario occurs frequently, the myths that surround the older adult’s development of cognitive impairment could lead to inappropriate care for this woman.

Delirium

• She is clearly experiencing the sudden onset, short-termed cognitive impairment known as delirium, but she may be diagnosed with dementia and sent to a nursing home for custodial type care.
• Due to the myths of aging and lack of knowledge about this cognitive disorder, delirium, like depression, is extremely underdiagnosed among older adults.
• Inouye et al. (2001) originally reported that nurses’ sensitivity for detecting delirium in hospitalized elderly patients was low.

• McCarthy (2003) supported the need for strong environmental management of delirium in order to enhance patient outcomes.

• Delirium is defined as a transient state of global cognitive impairment (American Psychiatric Association [APA], 1994)

• The diagnostic criteria for delirium includes
  • (a) reduced ability to maintain attention to external stimuli and to shift appropriate attention to new external stimuli;
  • (b) disorganized thinking;
  • (c) at least two of the following: reduced level of consciousness; perceptual disturbances; disturbance of the sleep–wake cycle; increased or decreased psychomotor behavior; disorientation to person, place, or time; or memory impairment.
• The symptoms of delirium are best classified using a delirium assessment tool, such as the Confusion Assessment Method (CAM).
• The specific symptoms of delirium that separate it from dementia are **the acute onset and the fluctuating course of this disorder**.

• In comparison, dementia **develops over a long period of time, with fairly stable cognitive symptoms**. For a diagnosis of delirium to be made, the older adult must also have difficulty concentrating on tasks, or conversations and either display disorganized thinking or altered level of consciousness. Delirium may develop in both cognitively intact and impaired older adults.
• The cause of delirium is not fully known but is believed to be multi-factorial (Balas et al., 2007).

• The presence of previous brain pathology, decreased ability to manage change, impaired sensory function, as well as the presence of acute and chronic diseases and changes in pharmacodynamic responses to medications, are all suggested causes.

• Short and Winsted (2007) also found that medications, and surgical procedures predicted delirium.

• Balas et al. (2007) report that older patients are at high risk for the development of delirium during acute care hospitalization.
• Delirium has vast implications for older adults, their families, and the healthcare economy.
• Rizzo et al. (2001) report that delirium complicates hospital stays for more than 2.3 million older persons each year, involving more than 17.5 million hospital days and accounting for more than $4 billion of Medicare expenditures.

• The most appropriate way to assess delirium is to understand its frequent occurrence in all settings, especially acute and long-term care.
• The use of a standardized delirium assessment tool, such as the Confusion Assessment Method (CAM), is essential for effectively detecting delirium.
Interventions to prevent delirium focus on best practices in care of older adults.

While research on the causes and interventions for delirium is available, little has been done on work to prevent the onset of delirium in hospitalized older adults.

Inouye et al. (2007) studied 491 patients age 70 years or older who were admitted to acute care units of large teaching hospitals. The researchers found that dementia, vision impairment, functional impairment, high comorbidity, and the use of physician restraints predicted delirium in the sample.

The authors stated that four of these five risk factors are amenable to clinical protocols that could be successfully implemented on the unit to prevent the onset of delirium in hospitalized patients, were implemented on the intervention units, and delirium was measured daily on all subjects. The researchers suggest that prevention of delirium is the most effective treatment strategy.

If delirium is assessed and determined to be the cause of cognitive impairment, the first line of treatment is to **identify and remove the cause of the delirium**.

Delirium is a temporary and reversible condition, and full recovery is possible.

A change in one medication is often the reason for the development of delirium, and a comprehensive analysis of medication should be conducted.

While medications themselves may not be the cause of the delirium, the interaction of a medication with another medication or with nutrients may trigger a delirium in an older adult.
• **Translocation syndrome**, resulting from a change in surroundings from a home to a nursing home or assisted-living facility, may also trigger the onset of delirium.

• Language barriers common to various cultural groups within the United States may precipitate delirium, as well as sensory deficits and deprivation.

These frequent causes should be examined in the older adult with new onset cognitive impairment:

• If a new medication is added and an interaction is suspected, remove the medication, if possible, to allow the delirium to resolve.

• If a change in environment was the trigger, adding familiar items to the new environment and having family around may resolve the delirium.

• The older adult should also be assessed for the presence of infection or fractures and treated appropriately.

• Immediate detection and removal of the cause of delirium will enhance the patient’s recovery to the quickest extent.
Safety & delirium

*Nursing and Family Role:*

- **Bring a full medication list to any new health professional.** Many drugs that act on the brain can cause delirium, including narcotic painkillers, sedatives (particularly benzodiazepines), stimulants, sleeping pills, antidepressants, and Parkinson’s disease medications.
- **Make things familiar.** Take a few family photos or comforting objects (such as a blanket, or favorite relaxation or soothing music tape) to the hospital. Calm conversations about current events or family activities can be reassuring.

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Safety & delirium

- **Stay close.** Family members not only provide comfort, familiarity, and reassurance, they’re also more likely than others to recognize when the patient isn’t behaving normally. If possible, have someone there night and day while the patient is in a state of delirium.

- **Assert on using sensory aids.** Eyeglasses, hearing aids, and dentures are often put away during a hospital stay, but that can leave the patient disoriented and less able to function.

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Safety & delirium

• **Promote activity.** Encourage family members get up the client to walk if possible. Talk to the client in simple language or help them exercise their brains with simple conversations or word games.

• **Meal times.** Assistance will help a patient eat and drink an adequate amount of nutrients.

• **Family participation in discharge planning.** Patients are sometimes sent home while they are still delirious. A patient with delirium can't fully understand discharge instructions. Nurses should invite family members to be involved in receiving discharge instructions.

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Dementia

• Dementia is a term for a group of over 60 different pathological disease processes.
• These cognitive impairments develop as a result of disease, lifestyle, and perhaps environmental influences; they do not develop as normal changes of aging.
• Dementia is a chronic loss of cognitive function that progresses over a long period of time.

• Alzheimer’s disease (AD) is the most common cause of dementia among older adults, making up about 50% of all dementia diagnoses.
• There are approximately 4.5 million U.S. residents with AD.
• Definitive diagnosis of all but multi-infarct dementia formerly was limited to post-mortem brain autopsy. However, recent advances in computed tomography (CT) scans, magnetic resonance imaging (MRI), and, most importantly, positron emission tomography (PET) scans have improved the ability to diagnose AD with more than 90% accuracy.

• Symptoms of dementia include difficulty communicating, forgetfulness, inattentiveness, disorganized thinking, altered level of consciousness, perceptual disturbances, sleep–wake disorders, psychomotor disturbances, and disorientation.
• Working with older adults with cognitive disorders is very challenging and often frustrating. The focus is on maintaining function and independence as much as possible, while keeping the older adult safe.
• Nurses who work with older adults are developing interventions to increase the quality of life for those who suffer from dementia, including environmental manipulations, such as coverup aging doors and installing door alarms, applying guards, and providing safe wandering areas.

• Restraints are not an appropriate alternative for cognitively impaired older adults. Instead, placing mattresses directly on the floor, using carpeting to decrease injury from falls, and using commonly recalled signs and symbols to orient the older adult to the environment are a few of the appropriate interventions.

• The Alzheimer’s Association (2000) recommends the techniques in Table 8.2 for caring for older adults with dementia.

Topic 4 Part 2: Dementia & Depression

Dr. Maha Albqoor
Alzheimer’s Disease

• The Alzheimer’s Association reports that there are 10 early warning signs of AD, including:
  (a) misplacing items, (b) loss of initiative, (c) changes in personality, (d) poor judgment, (e) changes in mood or behavior, (f) disorientation to time and place, (g) memory loss that affects job skills, (h) difficulty performing familiar tasks, (i) difficulty with finding the right words, and (j) problems with abstract thinking.

• AD may be difficult to detect by family and friends at early stages.

Alzheimer’s Disease

• The first sign of AD occurs when more difficult tasks need to be completed, such as writing checks to pay bills, scheduling appointments, or using the bus to get from one location to another.

• As the moderate stage of AD develops, the older adult will experience difficulty (a) finding the proper words to articulate thoughts or needs (aphasia); (b) performing fine motor tasks, such as household tasks or ADLs (apraxia); and (c) remembering (agnosia).
Alzheimer’s Disease

• As the disease progresses, the aphasia, apraxia, and agnosia are enhanced; older adults in the final stage of AD often do not speak at all, or it is garbled and incoherent.

• Finally, there is often no memory left, and the patient’s level of consciousness declines into a comatose state.

Dementia

• Symptoms of dementia include difficulty communicating, forgetfulness, inattentiveness, disorganized thinking, altered level of consciousness, perceptual disturbances, sleep–wake disorders, psychomotor disturbances, and disorientation.
Nursing Role

• One of the most important considerations in working with the AD population is the need to plan for structure and consistency.
• Maintaining a specific daily schedule may aid in reducing frustration or uncertainty, because environmental changes or alteration in daily routines may exacerbate dysfunction and worsen behavioral symptoms.
• Once a patient progresses beyond the mild to moderate stages of AD, increasing amounts of direct care and supervision are often needed.

Nursing Role

• Translocation from one environment to another may potentially upset the patient, so attempting to transition the patient smoothly to this environment is important.
• Speak directly to the older client with AD and listen respectfully, observing cues in facial expression, tone, and repetitive phrases or behaviors to obtain insight into what the patient is feeling.
Nursing Role

• Maintaining function as long as possible is an important goal in the care of AD clients. This may require cuing or modeling when the client attempts to complete tasks such as ADLs.

• Environmental factors may also contribute to the patient’s well being. For example, placing a patient who needs a quiet environment in a room close to a busy nursing station can overwhelm that patient and cause problematic behaviors.

Nursing Role

• Acetylcholine (ACh), a neurotransmitter essential for processing memory and learning, is decreased in both concentration and function in patients with Alzheimer's disease.

• Several medications known as cholinesterase inhibitors have recently been developed to increase the levels of acetylcholine in the brain. These medications work to prevent further loss of cognitive function and to improve cognitive status in older adults with dementia. They are most effective when started in the early stages of the disease.
Nursing Role

- There are many cultural variations in the care decisions made for older adults.
- Some cultural backgrounds lead to the belief that older adults with cognitive disorders, such as AD, must be cared for at home, by family.
- It is estimated that family members provide approximately 80% of the care for older adults.

Nursing Role

- Effective evaluation of the cognitive function of older adults is the benchmark of excellence in geriatric nursing care.
- Frequent evaluation of cognitive status will allow the presence of delirium and dementia to be detected at an early stage, which facilitates the most effective possible treatment.
- If cognitive decline is detected, consistent reassessment of the progression of the disease and development of a plan of care is necessary for appropriate disease management.
Depression

DEPRESSION

• Older adults experience many losses, including health, home, job, friends, family, spouse, and financial resources.
• These frequent losses are blamed for the high incidence of depression among older adults.
• It is not uncommon for a nurse or health care professional to state: “Of course they’re depressed! I would be depressed too, if I went through what they did.”
• In fact, one of the most prevalent myths of aging is that depression is a normal response to the many losses older adults experience.
Depression

- About 12% of older persons hospitalized for problems such as hip fracture or heart disease are diagnosed with depression.
- Rates of depression for older people in nursing homes range from 15% to 25%.

Chemical imbalances caused by the decrease of certain neurotransmitters are the primary cause of depression among older adults.

While a chemical component is the most likely cause of depression, role changes in aging, such as retirement, translocation, illness, and loss, may precipitate depression in at-risk individuals.

The National Institute of Mental Health (2007) reports that 75% of older clients who successfully committed suicide had visited their health care provider within one month of the suicide. This indicates the great need for nurses to effectively assess for depression and suicidal ideation among older adults.
Depression

• Changes in mood and thinking are the primary characteristics of depression.
• There are differences among individuals, clients with depression differ in their emotional states. These differences may be based on cultural, ethnic, religious, or gender factors.
• Physical symptoms of sleep impairment and appetite changes could easily be indicative of serious medical conditions, therefore, it is necessary to first rule out any primary medical concerns.

Depression

• A complete history, including family history, is essential to begin the assessment of depression and should include questions about usual activities of daily living and any recent lifestyle changes.
• Use of the diagnostic criteria for depression is one way to ask about symptoms. There are also several depression scales, such as the Geriatric Depression Scale, which are easy to administer and assist with assessment of the client’s condition.
• Depression often manifests itself as an alteration in cognition among older adults.
Depression

- The National Institute of Mental Health (2007) reports that in older adults with depression-related memory loss, drug treatment for the disease resulted in improvement. This syndrome, known as pseudo-dementia, may occur in both cognitively intact and cognitively impaired older adults.

- There are many treatment options for depression, including medication and psychotherapy as well as electric shock therapy. The most frequently used form of treatment is medication.
Depression

• Medication intervention in depression is extremely helpful.

• There are several classes of antidepressants, including selective serotonin reuptake inhibitors, tricyclic antidepressants, monoamine oxidase inhibitors, and other atypical antidepressants.

• It is important to note that antidepressant medications taken in large amounts may result in death.

• In older individuals with depression, the risk of suicide is real; it needs to dispense medications cautiously in older adults who exhibit suicidal ideation to avoid overdosing.

Depression

• Electroconvulsive therapy (ECT) is often poorly regarded among the unprofessional public because of negative media attention surrounding it.

• Despite its poor reputation, ECT is often an effective form of therapy among older adults. ECT may replace the use of multiple antidepressant medications and may benefit clients who have treatment-resistant depression.

• Prior to receiving ECT, older adults are administered an anesthetic and a muscle relaxant.

• Side effects include some initial confusion and disorientation, which typically resolves within a few days of treatment.

• The ECT treatments are usually given every other day for 6–12 treatments, with rapid resolution of depression exhibited.
Memory: People who are depressed may have trouble concentrating. They may even suffer occasional memory lapses, which can make their mood worse. But people with Alzheimer's disease consistently have trouble storing new information, such as the recent visit of a close relative or what they ate for dinner. They may not remember eating dinner at all.
• **Orientation:** Most people who are depressed generally know with whom they're speaking, what time and day it is, and where they are. People with dementia tend to be confused about some or all of this.

• **Language use:** Depressed people use language properly, although they may speak slowly at times. People who are demented because of Alzheimer's disease or strokes often have lots of language problems. Particularly hard: remembering the names of common objects such as "pen" or "lamp" or "birthday cake."

• **Use of familiar objects:** Again, not a problem for people with depression. Someone with dementia may not recall how to get a pullover sweater on, for example. This is called apraxia—trouble remembering how to perform previously learned and routine motor activities.

• **Negativity:** Depressed people have a general tendency to put a negative spin on events. For example, if asked to take a test designed to screen for depression or Alzheimer's, they may jump to the conclusion that they did quite badly, and they often overestimate the problem. In contrast, someone with dementia may try to fabricate some story or excuse for a memory lapse or poor performance on a memory test.