CARE OF CLIENTS WITH MALADAPTIVE PATTERNS OF BEHAVIOR

NCMB317

Sleep Disorders and Neurodevelopmental Disorders

SLEEPING DISORDERS

- SLEEP: is a natural periodical suspension of one's consciousness
  - To restore and maintain homeostasis
  - For body's thermoregulation
  - To conserve energy
- SLEEPINESS: is the urge to fall asleep
- SLEEPING DISORDERS
  - Included in the DSM-5-TR (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision)
  - It is known as **"Sleep-Wake Disorders."**
  - These disorders focus on conditions that significantly impact sleep quality, duration, and timing, leading to distress or impairment in daily functioning.
- SLEEP DEPRIVATION
  - Means a person is not getting an optimal amount of sleep every night
  - Leads to chronic fatigue, memory problems, energy deficit, mood difficulties
- SLEEP DEBT
  - Occurs when there is recurrent long term sleep deprivation

CAUSES OF SLEEP DEPRIVATION

- SOCIAL PROBLEM ISSUES
  - Sleep loss diminishes safety and results in loss of lives and property in occupations in which workers are expected to work shifts around the clock
- MEDICAL CONDITIONS
  - Sleep disturbance may be secondary to the symptoms of disease or related to medical condition
- TREATMENTS ISSUES (DRUGS AND CHEMICAL SUBSTANCES)
  - Alcohol
  - Amphetamines
  - Benzodiazepines
  - Lithium
  - SSRI
  - Antidepressants
  - Barbiturates
  - Cocaine
  - Narcotics
  - Phenothiazine
  - Aspirin
  - Caffeine
  - Diuretics
  - Nicotine
  - Steroids
- PSYCHIATRIC DISORDER
  - Major depression
  - Anxiety
  - Manic episodes
  - Prolong period of sleep deprivation are linked to hallucinations and delusions

SLEEP-WAKE CYCLE

- It is a rhythm that synchronized with the day-night cycle
- The release of the hormones MELATONIN and CORTISOL promotes wakefulness during the day and induce sleep during the night.
- Sleep is regulated by circadian rhythm

CIRCADIAN RHYTHM

- A pattern that repeats itself in a 24 hour cycle
  - PEAK
    - Point at which the rhythm reaches its maximum
  - TROUGH
    - Point at which the rhythm reaches its minimum
  - PERIOD
    - Time it takes to complete the cycle
  - AMPLITUDE
    - Extent of the peak and is half of the distance from peak to trough

STAGES OF SLEEP

- NON-RAPID EYE MOVEMENT (NREM)
  - Occurs about 90 minutes after falling asleep
  - *Stage 1 and 2*
    - First and lightest phase of sleep
    - Person is easily aroused
    - Comprises 45% - 55% of sleep
  - *Stage 3 and 4*
    - Deepest state or slow wave sleep
    - State of restoration of homeostasis and conservation
    - Comprises 10% - 23% of sleep
- RAPID EYE MOVEMENT (REM)
  - Eyes dart back and forth
  - The heart rate, blood pressure and respiratory rate are variable and may increase
  - Muscles are mostly paralyzed (Atonia)
  - Vivid dreams occur

NURSING INTERVENTIONS

- BIOLOGIC DOMAIN
  - Goal: To normalized sleep pattern to improve well being
  - Nursing diagnosis:
    - Sleep pattern disturbance:
      - Insomnia
      - Sleep deprivation
      - Hypersomnia
  - Promote sleep hygiene strategies
    - 1. Set a regular time for sleeping hour
      - Go to sleep at the same time each night and awaken at the same hour each morning
      - Provide a non-interrupted sleep during the night
      - Limit daytime sleep by providing activity that promote wakefulness
      - Provide for naps during the day, if indicated, to meet sleep requirements

- Provide comfort
  - Sleep in loose, comfortable clothing
  - Sleep in a comfortable bed
  - Take a warm bath before going to bed
  - Relaxation techniques: avoid taking worries to bed
  - Exercise daily
- Provide a conducive environment
  - Provide calm, quiet environment
  - Provide dim lights as desired
  - Maintain a comfortable temperature
- Instruct patient what to avoid
  - Avoid caffeine during the day because the stimulating effects of caffeine can linger for as long as 12 hours
  - Avoid heavy meals before bedtime
  - Avoid alcohol before bedtime
- Provide health education
  - Importance of adequate sleep specially during illness, psychosocial stresses, pregnancy, etc.
  - Instruct patient and significant others about factors that contribute to sleep pattern disturbances
  - Example:
    - Psychological
    - Physiological
    - Lifestyle factors
    - Frequent work shift changes
  - Excessive long work hours
  - Provide pamphlet with information about sleep enhancement techniques

TREATMENTS

- BENZODIAZEPINE
  - Triazolam (Halcion)
  - Temazepam (Restoril)
  - Estazolam (ProSom)
  - Quazepam (Doral)
  - Flurazepam (Dalmane)
- NON-BENZODIAZEPINE
  - Zolpidem (Ambien)
  - Zaleplon (Sonata)
  - Eszopiclone (Lunesta)

Absorbed rapidly and reduced sleep latency (time measured from bedtime to the beginning of sleep)

- MELATONIN RECEPTOR AGONIST
  - Melatonin has been shown to shift circadian rhythm, decrease body temperature, alter reproductive rhythm, enhance immune function, and decrease alertness
  - Ramelteon (Rozerem)
    - Has a high affinity for melatonin receptor
    - Has sleep-promoting properties
    - Has a low abuse potential thus not a controlled substance

TYPES OF SLEEP DISORDERS

INSOMNIA DISORDER

- Persistent difficulty falling asleep, staying asleep, or waking up too early despite adequate opportunity to sleep.

SYMPTOMS

- Difficulty initiating or maintaining sleep
- Daytime fatigue, irritability, or impaired concentration
- Sleep dissatisfaction lasting at least 3 nights per week for 3 months

TREATMENTS

- COGNITIVE-BEHAVIORAL THERAPY FOR INSOMNIA (CBT-I)
  - First-line treatment sleep hygiene education (regular sleep schedule, avoiding caffeine/alcohol before bed)

MEDICATIONS (If necessary)

- NON-BENZODIAZEPINE
  - Ex: zolpidem, eszopiclone
- MELATONIN RECEPTOR AGONISTS
  - Ex: Ramelteon
- ANTIDEPRESSANTS
  - Ex: Trazodone, Doxepin

NURSING INTERVENTIONS

- Educate on sleep hygiene (reduce screen time, maintain consistent sleep patterns)
- Encourage relaxation techniques (e.g., meditation, deep breathing)
- Monitor medication use to prevent dependency
- Assist in behavioral changes (e.g., stimulus control, sleep restriction therapy)

HYPERSOMNOLENCE DISORDER

- Excessive daytime sleepiness despite a full night's sleep, often leading to long naps that do not restore alertness.

SYMPTOMS

- Excessive sleepiness for at least 3 months
- Difficulty waking up (sleep inertia)
- Cognitive impairment or automatic behavior

TREATMENTS

- STIMULANTS
  - To promote wakefulness
  - E.g., modafinil, methylphenidate
- BEHAVIORAL THERAPY
  - Scheduled naps, consistent sleep schedule
  - Avoid alcohol and sedating medications

NURSING INTERVENTIONS

- Encourage a structured sleep schedule
- Monitor for medication side effects (e.g., increased heart rate, anxiety)
- Educate on avoiding substances that worsen sleepiness (e.g., alcohol, antihistamines)

NARCOLEPSY

- Chronic neurological disorder causing uncontrollable episodes of sleep during wakefulness, often with cataplexy (sudden muscle weakness).

SYMPTOMS

- Sudden sleep attacks (can last seconds to minutes)
- Cataplexy (sudden loss of muscle tone triggered by emotions)
- Sleep paralysis (inability to move upon waking)
- Hypnagogic/hypnopompic hallucinations (vivid dreams when falling asleep or waking up)

TREATMENTS

- STIMULANTS
  - For daytime wakefulness
  - E.g., modafinil, armodafinil, amphetamines
- SODIUM OXYBATE
  - For cataplexy and sleep regulation
  - Xyrem
- ANTIDEPRESSANTS
  - For cataplexy reduction scheduled naps and sleep hygiene
  - E.g., SSRIs, SNRIs

NURSING INTERVENTIONS
- Educate on safety precautions (e.g., avoid driving, use alarms)
- Monitor response to stimulants (risk of hypertension, insomnia)
- Encourage lifestyle modifications (consistent naps, stress management)

BREATHING-RELATED SLEEP DISORDERS

OBSTRUCTIVE SLEEP APNEA (OSA)
- Cause: Repeated airway obstruction during sleep due to muscle relaxation, leading to snoring, gasping, and disrupted sleep.
  - SYMPTOMS:
    - Loud snoring, pauses in breathing, choking during sleep
    - Daytime sleepiness, morning headaches
    - Hypertension
    - Cognitive impairment
  - TREATMENTS:
    - Continuous Positive Airway Pressure (CPAP) –
      - First-line therapy
    - Weight loss, exercise, avoiding alcohol/sedatives
    - Surgery for severe cases (e.g., Uvulopalatopharyngoplasty - UPPP)
  - NURSING INTERVENTIONS
    - Educate on proper CPAP use and adherence
    - Encourage weight management and lifestyle changes
    - Monitor for cardiovascular complications (e.g., hypertension)

CENTRAL SLEEP APNEA (CSA)
- Cause: Brain fails to send signals to respiratory muscles
  - SYMPTOMS:
    - Irregular breathing pattern during sleep
    - Fatigue, daytime sleepiness
    - More common in heart failure or stroke patients
  - TREATMENT:
    - Adaptive Servo-Ventilation (ASV) - A specialized breathing device
    - CPAP or BiPAP therapy - Treat underlying causes (e.g., heart failure management)
  - NURSING INTERVENTIONS:
    - Assess for signs of worsening heart failure or neurological symptoms
    - Educate on sleep positioning and breathing therapy

CIRCADIAN RHYTHM SLEEP-WAKE DO

- Disruptions in sleep-wake timing due to misalignment of internal body clock and external environment.

TYPES AND TREATMENT
- DELAYED SLEEP PHASE (DIFFICULTY FALLING ASLEEP)
  - Light therapy, melatonin
- ADVANCED SLEEP PHASE (EARLY WAKING)
  - Evening light exposure, schedule adjustment
- SHIFT WORK DISORDER
  - Proper sleep scheduling, avoiding bright lights before bed

NURSING INTERVENTIONS
- Exposure to natural light during the day
- Educate on managing work schedules
- Use blue-light filters at night

PARASOMNIAS

- It is defined as abnormal Behaviors During Sleep

NON-REM SLEEP AROUSAL DO (SLEEP WALKING/TERRORS)
- Cause: Partial awakening from deep sleep with confusion or automatic behaviors.
  - TREATMENT:
    - Safety measures (lock doors, remove hazards)
    - Benzodiazepines (e.g., clonazepam) for severe cases
  - NURSING INTERVENTIONS:
    - Ensure safe sleep environment
    - Educate family on how to manage episodes (avoid waking the person abruptly)

NIGHTMARE DISORDER
- Recurrent, distressing nightmares causing waking anxiety
  - TREATMENT:
    - Imagery Rehearsal Therapy (IRT): Rewriting nightmares into positive scenarios
    - Prazosin (for PTSD-related nightmares)
  - NURSING INTERVENTIONS:
    - Teach relaxation techniques before bed
    - Encourage dream journaling and therapy

SLEEP BEHAVIOR DISORDER (RBD)
- Acting out vivid dreams due to loss of muscle paralysis in REM sleep.
  - TREATMENT:
    - Clonazepam (first-line)
    - Melatonin supplements
  - NURSING INTERVENTIONS:
    - Remove sharp objects, ensure a safe sleeping environment
    - Monitor for neurological symptoms (RBD is linked to Parkinson's disease)

RESTLESS LEGS SYNDROME (RLS)
- Uncontrollable urge to move legs, worsening at night and relieved by movement.
  - TREATMENT:
    - Dopamine agonists (e.g., pramipexole, ropinirole)
    - Iron supplementation if deficient
    - Avoid caffeine and alcohol
  - NURSING INTERVENTIONS:
    - Educate on lifestyle changes (stretching, warm baths)
    - Monitor for side effects of dopamine agonists (e.g., nausea, dizziness)

SUBSTANCE/MEDICATION-INDUCED SDO

- Sleep disturbances due to alcohol, caffeine, stimulants, or sedative withdrawal.

TREATMENT
- Gradual medication withdrawal
- Behavioral therapy

NURSING INTERVENTIONS
- Assess for drug use and withdrawal symptoms
- Educate on avoiding caffeine, alcohol, and improper use of sleep aids

DEFINITION OF TERMS

NARCOLEPSY or DAYTIME SLEEPINESS
- Overwhelming urge to sleep occurring anytime of the day w/ 2-6 sleep attacks a day frequently report dreaming.

- Attacks are usually short, lasting 5-20 minutes, but may last up to an hour if sleep is not interrupted
- A chronic disorder that usually begins between the ages of 15-35 years
- Has no cure and remains stable over the lifetime
- Treatment is designed to control symptoms and depends on clinical presentation

CATAPLEXY
- Brief episodes of sudden bilateral loss of muscle tone precipitated by intense emotions

HYPNAGOGIC HALLUCINATIONS
- Dreamlike hallucination while falling asleep such as seeing images, hearing sounds, smelling, etc

SLEEP PARALYSIS
- Inability to move or speak when falling asleep or waking up.
- Episodes are usually brief, lasting only a few seconds to minutes, and usually terminate spontaneously or when someone touches the individual

BREATHING-RELATED SLEEP DISORDERS

OBSTRUCTIVE SLEEP APNEA SYNDROME
- Report of apparent apneic episodes which last from 10 seconds to several minutes, cause restless sleep and abrupt awakening with feeling of chocking or falling out of bed
- Report of loud snoring
  - TREATMENTS
    - UVULOPALATOPHARYNGOPLASTY: Removal of redundant soft palate tissue, the uvula, and tonsillar pillars
    - CONTINUOUS POSITIVE AIRWAY PRESSURE: Wearing a nose mask that is connected by a long tube to an air compressor

CIRCADIAN RHYTHM SLEEP DISORDER/SLEEP-WAKE SCHEDULE DISTURBANCE
- Characterized by complaints that one cannot sleep when one wishes to sleep but can sleep at other times, or cannot be fully awake when one wants to but is awake at other times
- Characterized by disrupted sleep pattern leading to excessive sleepiness or insomnia
- Mismatch between sleep wake-cycle schedule

DYSSOMNIA NOT OTHERWISE SPECIFIED

MENSTRUAL-ASSOCIATED SYNDROME
- Characterized by marked hypersomnia, a change in behaviors, and voracious eating before or during menstruation

KLEINE-LEVIN SYNDROME
- Rare condition characterized by recurrent periods of prolonged sleep (lasting from one or several weeks) with intervening periods of normal sleep and alert waking
- "Sleeping beauty" disorder

SLEEP DRUNKENNESS
- A rare and abnormal form of awakening in which the individual experiences a confused state that often leads to social inconvenience and sometimes to criminal acts

TYPES OF PARASOMNIAS

NIGHTMARE DISORDER
- Repeated occurrence of frightening dreams that fully awaken an individual
- For some people this is a lifetime condition, for others it occurs at times of stress and illness

SLEEP TERROR DISORDERS
- Also called "night terror" or "pavor nocturnus" in children and often in boys
- May last 1 - 10 minutes
- Characterized by scream or cries and is accompanied by intense anxiety (panic)

SLEEPWALKING DISORDERS
- Referred to as SOMNAMBULISM
- Characterized by repeated episodes of rising from the bed during sleep and moving about
- Amnesia for the episode on awakening which results to confusion and disorientation

PARASOMNIAS NOT OTHERWISE SPECIFIED

SLEEP TALKING
- Common in children and adults

SLEEP-RELATED BRUXISM
- Tooth grinding that occurs throughout the night

SLEEP-RELATED HEAD BANGING
- Sleep behavior consisting of rhythmic to-and-fro head rocking occurring just before or during sleep

REM SLEEP BEHAVIOR DISORDER
- The client may act out his dreams and poses significant risk to the client as well as to the client's bed partner
- Characterized by atonia during REM sleep and followed by the emergence of violent and complex behaviors.
- Chronic progressive condition found mostly in men

NEURODEVELOPMENTAL DISORDERS

- Was formerly known as disorders first diagnosed in infancy, childhood and adolescence
- Are impairments of the growth and development of the brain or the central nervous system.
- Affects emotion, learning ability, self-control and memory which unfolds as the child develops and grows.

CATEGORIES OF NEURODEVELOPMENTAL DISORDERS
- The DSM 5 categories includes:
  - Intellectual disability disorders (IDD)
  - Autism spectrum disorders (ASD)
  - Attention deficit hyperactivity disorder (ADHD)
  - Motor disorders
  - Communication disorders
  - Specific learning disorders
  - Elimination disorders

CAUSES OF NEURODEVELOPMENTAL DO

GENETIC FACTORS
- Such as genetic mutations and metabolic conditions during conception.

PRENATAL FACTORS
- Such as nutritional deficiencies and maternal infections during pregnancy.

PERINATAL FACTORS
- Such as those due to complications that arise during labor, typically a lack of oxygen (hypoxia).

POSTNATAL FACTORS
- Such as traumatic brain injury, infections like meningitis or exposure to environmental toxins after birth.

SOCIAL FACTORS
- Such as deprivation from social and emotional care which causes severe delays in brain and cognitive development

DX: DEVELOPMENTAL TESTS

- These are tools that are used to help measure a child's developmental progress from birth through adolescence

TYPES OF DEVELOPMENTAL TESTS

- DEVELOPMENTAL SCREENING
  - To identify children with special needs or who may be at risk for developmental delays or school difficulty
- DIAGNOSTIC EVALUATION
  - To screen, confirm the presence and extent of a disability
- READINESS TESTS
  - To assess a child's specific skills and information
- OBSERVATIONAL AND PERFORMANCE ASSESSMENTS
  - To provide ongoing information about a child's development
- NEWBORN SCREENING TEST
  - To detect neurological problems such as cerebral palsy and other developmental problems.

PROCEDURE

- Developmental testing begins at birth in order to identify any problems as early as possible and be correct early.
- NEWBORN SCREENING TEST can be used to detect neurological problems such as cerebral palsy and other developmental problems.
- Testing continues with well-baby visits to the pediatrician. Pediatrics recommends visits at the following ages:

two to four days after birth or discharge from the hospital	Nine months	Yearly between the ages of two and six
1 month	12 months	8 years
2 months	15 months	10 years
4 months	18 months	Yearly until age of 21
6 months		

DEVELOPMENTAL ASSESSMENTS

- Motor skills
- Language development
- Mental development
- Social development
- Emotional development
- Self-help skills, including dressing and toileting

DX: NEUROLOGIC EXAMINATION

- Also called NEURO EXAM, is an evaluation of the child's brain or nervous system

TYPES OF NEUROLOGIC EXAMINATION

- MENTAL STATUS
  - Assess child's level of awareness and interaction with the environment
- MOTOR FUNCTION AND BALANCE.
  - Assess motor functioning and motor movements
- SENSORY ASSESSMENT
  - Assess sensory processing

DX: LABORATORY TESTS

- Are procedures in which samples of blood, urine and other bodily fluid or tissues is examined to get information about a child's health

DX: PHYSICAL EXAMINATION

- Provides head to toe assessment to determine whether the child has the right physical development or the child is developing at a normal rate.

DX: BRAIN SCANS

- Provide more detailed information about brain tissue and brain structures thus providing more data related to diseases of the brain.
- The most commonly used scans in children are:
  - COMPUTED TOMOGRAPHY (CT SCAN)
  - MAGNETIC RESONANCE IMAGING (MRI)

NURSING PROCESS

NURSING DIAGNOSIS SAMPLES

- Risk for injury
- Impaired verbal communication
- Impaired social interaction
- Impaired physical mobility
- Self care deficit
- Ineffective impulse control
- Impaired bladder elimination
- Constipation
- Bowel incontinence

NURSING CARE FOR CHILDREN WITH PSYCHIATRIC DISORDER

- ENSURING THE CHILD'S SAFETY
  - Stop unsafe behavior.
  - Provide close supervision.
  - Give clear directions about acceptable and unacceptable behavior.
- IMPROVED ROLE PERFORMANCE
  - Give positive feedback for meeting expectations.
  - Manage the environment by provide a quiet place free of distractions for task completion
- SIMPLIFYING INSTRUCTIONS/DIRECTIONS
  - Get child's full attention
  - Break complex tasks into small steps.
  - Allow breaks.
  - Step by step instructions
- STRUCTURED DAILY ROUTINE
  - Establish a daily schedule.
  - Minimize changes.
- CLIENT/FAMILY EDUCATION
  - Educate family members about the disorders and on the medications the child is taking.
  - Offer emotional support
  - Arrange for family counseling to help parents better understand the disorder. This also assist them with their coping mechanisms
  - Provide referrals for early intervention and special education programs to increase child's capacity to learn, communicate, and relate to others

INTELLECTUAL & DEVELOPMENTAL DISABILITIES

INTELLECTUAL DISABILITIES (IDs)

- Also known as intellectual disability disorder or general learning disability
- Formerly known as mental retardation
- It is an intellectual developmental disorder characterized by below-average intelligence or mental ability and a lack of skills necessary for day-to-day living.

- Intellectual disability has limitations in two areas.
  - Intellectual functioning.
  - Adaptive behaviors.

DIAGNOSTIC TEST

- DSM 5: severity is defined by the ability to meet the demands of daily life, as compared with peers.
- DSM IV-TR: severity is defined by IQ test.
- IQ TEST is use to measure human intelligence
  - Intellectual Disability is defined by an IQ under 70 (Wikipedia)
- The average IQ is 100, with the majority of people scoring between 85 and 115

$$IQ = \frac{\text{Mental age}}{\text{Chronological age}} \times 100$$

70 below	Intellectually Disabled
70 - 79	Borderline/deficiency intelligence
80 - 89	Dullness
90 - 109	Average or normal intellect
110 - 119	Superior intelligence
120 - 140	Very superior intelligence
140 and above	Genius or almost genius

IQ	CATEGORIES	OTHER NAME	LEVEL OF DEVELOPMENT
50 - 70	MILD	Moron	Educable
35 - 50	MODERATE	Imbecile	Trainable
20 - 35	SEVERE	Idiot	Needs close supervision
Below 20	PROFOUND		Needs custodial supervision

TREATMENT AND MANAGEMENT

- The primary goals of treatment:
  - To develop the child's potential to the fullest
  - To allow them to participate in as many aspects of their social and community life as possible
- Treat the underlying cause of ID
  - Ex: phenylketonuria- restricting phenylalanine in the diet
- Treat comorbid physical and mental disorder to improve the patient's functioning and life skills.
- Behavioral and cognitive interventions
  - Special education and training
  - Psychosocial supports

GLOBAL DEVELOPMENTAL DELAY (GDD)

- It is an intellectual developmental disorder characterized by significant delay in two or more developmental domain.
- 6 main areas of development in which kids can have delays:
  - Language or speech
  - Vision
  - Gross motor and fine motor skills
  - Thinking and cognitive skills
  - Social and emotional skills
  - Daily skills
- Diagnosed when children are less than 5 year old

UNSPECIFIED INTELLECTUAL DISABILITY

- It is characterized by the presence of associated sensory of physical impairments, such as blindness or prelingual deafness; locomotor disability; or presence of severe behavioral problem or comorbidity with mental disorder.
- This category should only be used in exceptional circumstances and requires reassessment after a period of time
- This category is reserved for children over the age of 5 years

AUTISM SPECTRUM DISORDER (ASD)

- Autism spectrum disorder is previously as one of the different types of pervasive developmental disorders which previously includes:
  - Autistic Disorder
  - Rett's Disorder
  - Childhood Disintegrative Disorder (CDD)
  - Asperger's Disorder
  - PDD not otherwise specified
- In DSM 5, previous PDDs such as Rett disorder, childhood disintegrative disorder, and Asperger disorder are now viewed on a continuum of autism spectrum

NURSING CARE TIPS FOR CHILDREN WITH ASD

- Choose words carefully when speaking to verbal autistic child because they are likely to interpret words concretely.
- Advise parents to have close, face-to-face contact with child to promote communication.
- Maintain a regular and predictable daily routine to prevent outbursts. Prepare child for changes of routine.
- Educate parents on behaviors that signal tantrums such as increased hand flapping. Emphasize the importance of intervening and anticipating needs before a tantrum occurs.
- Advise patients on ways to provide a safe environment for the child (e.g. installing locks and gates).
- Educate family members on the medications (e.g. stimulants, selective serotonin reuptake inhibitors, lithium, etc.) the child is taking.
- Offer emotional support and information to parents.
- Arrange for family counseling to help parents better understand the disorder. This also assist them with their coping mechanisms.
- Provide referrals for early intervention, homecare assistance, and support groups, as needed. Early intervention and special education programs increase child's capacity to learn, communicate, and relate to others. This also reduce the severity and frequency of disruptive behaviors. Special schools for behavior modification is alright but educational mainstreaming is preferred.

AUTISM SPECTRUM DISORDER (ASD)

- Formerly known as mind blindedness.
- It is a developmental disability characterized by significant impairment in social, communication and behavior
  - Onset: identified usually by 12 months and not later than 3 years old
  - Incidence: 5x more prevalent in boys than in girls
  - Characteristic: impairment of reciprocal interaction skills
  - Etiology: Unknown but could be genetic or mechanical trauma of the birth process itself

SYMPTOMS OF AUTISM

Each child with autism may have slightly different symptoms.

- DIFFICULTY WITH SOCIAL INTERACTIONS
  - Unaffectionate
  - Prefer to be alone
  - Inappropriate attachments to objects
  - Lack of interest in the environment
  - Inappropriate laughing or giggling
  - Upset by minor changes in routine
  - Avoid eye contact
- DIFFICULTY WITH COMMUNICATION
  - Difficulty in expressing needs
  - Unrelated responses to questions
  - Delayed or does not develop language (echolalia)
  - May not use language to communicate instead may use gestures
  - Produce abnormal intonation pronoun reversal
- STEREOTYPE BEHAVIOR (SPAN)
- **S** - Sustained repetitive motor movements
  - spin objects or self
  - rocking
  - hand or finger flapping
  - body twisting
- **P** - Prefer sameness
  - preoccupied usually with lights, moving objects or parts of objects
- **A** - Apparent insensitivity to pain
- **N** - No real fear of dangers

DIAGNOSTIC TEST

- For the first two years of life, the child should be checked for the following developmental deficits:
  - 12 MONTHS: No babbling, pointing, or gesturing/not responding to own name
  - 14 MONTHS: not showing interest by pointing to object or people
  - 18 MONTHS: No single word spoken/doesn't play pretend games
  - 24 MONTHS: No two-words spoken, just repeating words or sounds of others
  - 3 - 4 MONTHS: no eye contact
  - Loss of any language or social skills at any age

TREATMENT

- REDUCE BEHAVIORAL SYMPTOMS
  - Reduce temper tantrums, aggressiveness, self-injury, hyperactivity and stereotyped behaviors
    - Haloperidol (Haldol)
    - Risperidone (Risperdal)
  - Diminish self-injury, hyperactivity and obsessive behaviors
    - Catapres (Clonidine)
    - Anafranil (Clomipramine)
- PROMOTE LEARNING AND DEVELOPMENT
  - Behavior change programs.
    - These programs teach social, movement, and cognitive skills. They can help a child change behavioral problems.
  - Special education programs.
    - These focus on social skills, speech, language, self-care, and job skills.
- FAMILY THERAPY
  - Parental education

RETT SYNDROME

- Rett syndrome is a rare genetic neurological and developmental disorder that affects the way the brain develops, causing a progressive loss of motor skills and speech
  - Incidence: Common in girls
- Children with Rett disorder develop normally for the first 6 to 18 months of age, and then lose skills they previously had — such as the ability to crawl, walk, communicate or use their hands.

RETT DISORDER	AUTISM
Common in girls	Common in boys
Loss of previously acquired language	Delayed/inappropriate language development
Loss of hand function	Preserved hand function
Ataxia is common	Ataxia is rare
Seizure is common	Seizure is not common
Microcephaly	Normal/large head
Delayed physical growth & function	Normal physical growth and function

ASPERGER'S SYNDROME

- AS is considered to be on the mild end of the autism spectrum.
- Children with AS exhibit 4 primary symptoms:
  - Obsession focusing on a narrow topic of interest
  - Having difficulty with social interaction
  - Engaging in repetitive behavior
  - Focusing on rules and routines
    - Incidence: common among boys
    - Onset: appears to have a later onset
- Some people with AS are classified as high-functioning.
- High-functioning autism means they don't have delayed language skills and cognitive development that is typical of many people with ASDs.
- Often, individuals diagnosed with AS have normal or above normal intelligence and are frequently able to be educated in mainstream classrooms and hold jobs.
- AS cannot be cured. Early diagnosis and intervention can help a child make social connections, achieve their potential, and lead a productive life.

SAVANT SYNDROME

- Rare condition
- When an individual with multiple cognitive disabilities has extraordinary proficiency in one isolated skill

CHILDHOOD DISINTEGRATIVE DISORDER

- Also called Heller's Syndrome or Dementia Infantialis
- A rare condition characterized by late onset of developmental delays (or severe and sudden reversal) in language, social function and motor skills
- Marked regression in multiple areas of functions after at least 2 years of normal growth and development
  - Incidence: common in boys
  - Cause: Unknown

ATTENTION DEFICIT HYPERACTIVITY DO (ADHD)

CAUSES

- BRAIN ANATOMY AND FUNCTION. A lower level of activity in the parts of the brain that control attention and activity level may be associated with ADHD.
- GENES AND HEREDITY. ADHD frequently runs in families.
- Prematurity increases the risk of developing ADHD.
- Prenatal exposures, such as alcohol or nicotine from smoking, increase the risk of developing ADHD.
- Toxins in the environment may lead to ADHD in rare cases.

DIAGNOSTIC TEST

- Based on symptoms after other possible causes were ruled out

TREATMENT

- PSYCHOPHARMACOLOGY (CARDS)
  - *Stimulants* use to reduce hyperactivity, inattentiveness, impulsivity and lability of mood
    - **C** - Cylert (Pemoline)
      - Last drug to be prescribed due to its hepatotoxicity (liver damage)
    - **A** - Adderall (Amphetamine)
      - SE: addictive
    - **R** - Ritalin (Methylphenidine)
      - SE: have a high potential for abuse and dependence
    - **D** - Dexedrine (Dextroamphetamine)
      - SE: insomnia, loss of appetite, weight loss, irritability & increase self-injury during the highest dose week
  - *Non-stimulant drugs*
    - **S** - Strattera (Dapoxetine)
      - help to increase the ability to pay attention, concentrate, stay focused, and stop fidgeting
      - an antidepressant (selective norepinephrine reuptake inhibitor) approved in 2002
      - SE: loss of appetite. N/V, fatigability, abdominal distress
- PSYCHOTHERAPY AND PSYCHOSOCIAL INTERVENTIONS
  - *Behavioral therapy*: aims to help the child change his/her behavior
  - *Cognitive behavioral therapy*: aims to teach the child mindfulness techniques to improve focus and concentration.
  - *Specific behavioral classroom management interventions:* aims to help the child manage his/her symptoms and improve his/her functioning at school and with peers.
- PARENTING EDUCATION
  - *Family and marital therapy:* to help family members and spouses find better ways to handle disruptive behaviors, to encourage behavior changes, and improve interactions with the patient.
  - *Parenting skills training*: to teach parents the skills needed to encourage and reward positive behaviors in their children.

NURSING INTERVENTIONS FOR ADHD

- ENSURE SAFETY OF CLIENT AND THAT OF OTHERS
  - Stop unsafe behavior
  - Provide close supervision
  - Give clear directions about acceptable and unacceptable behavior
- IMPROVED ROLE PERFORMANCE
  - Give positive feedback for meeting expectations
  - Manage the environment (ex: provide a quiet place free of distractions for task completion)
- SIMPLIFYING INSTRUCTIONS/DIRECTIONS
  - Get child's full attention
  - Break complex tasks into small steps
  - Allow break
- STRUCTURED DAILY ROUTINE
  - Establish a daily schedule
  - Minimize changes
- CLIENT/FAMILY EDUCATION AND SUPPORT
  - Listen to parent's feelings and frustrations

NURSING CARE TIPS FOR CHILDREN WITH ADHD

- Establish a trusting relationship with child and family by conveying your acceptance.
- Provide clear behavioral guidelines, including consequences for disruptive and manipulative behavior.
- Talk to the child about making acceptable choices.
- Teach child on effective problem-solving skills, and have him or her demonstrate them in return.
- Identify abusive communication (e.g. threats, sarcasm, and disparaging comments). Encourage child to stop using them
- Teach child on constructive methods of releasing negative feelings to express anger appropriately.
- Help the child accept responsibility for behavior rather than blaming others, becoming defensive, and wanting revenge.
- Use role-playing so he can practice ways of handling stress and gain skill and confidence in managing difficult situations.
- Instruct patients on how to deal with child's demands. This might include learning how to reinforce appropriate behaviors. Ways to bond more strongly with the child should be encouraged.

MOTOR DISORDERS

- DSM 5 classification of Motor Disorders includes:
  - Developmental Coordination Disorder
  - Stereotypic Movement Disorder
  - Tic Disorder
    - Provisional Tic Disorder
    - Persistent (Chronic) Motor or Vocal Tic Disorder
    - Tourette's Disorder
    - Other Specified Tic Disorder
    - Unspecified Tic Disorder

DEVELOPMENTAL COORDINATION DISORDER

- Also known as motor skills disorder, motor coordination disorder or motor dyspraxia
- It is diagnosed when motor skills problems significantly interfere with academic achievement or activities of daily living.
  - Onset: may be first identified when the child is a preschooler or kindergartner
- Impairment can be extremely disabling both in academic settings (school) as well as in everyday life due to impairment of functioning

SYMPTOMS

- Children with this disorder have variable symptoms, depending on the age of diagnosis
  - Young infants may present with non-specific findings, such as hypotonia (floppy baby) or hypertonia (rigid baby).

- Older infants may be delayed in their ability to sit, stand or walk.
- Toddlers may have difficulty feeding themselves.
- Older children may have a hard time learning to hold a pencil, and tend to knock over drinking glasses more often than expected
- As children with this disorder age,they often avoid physical activities, especially those requiring complex motor behaviors

TREATMENT

- Multimodal treatment that involves occupational therapy and physical therapy to improve their motor skills
- Special gym activities at school to promote hand- eye coordination, motor development and improve specific skills.
- Medical treatment which includes screening and management for potential comorbid conditions such as:
  - Speech and language disorders
  - Tourette's syndrome
  - ADHD
  - Mood disorders
  - Psychosis
  - Autism spectrum disorders
  - Developmental disabilities
  - Learning disorders.

STEREOTYPE MOVEMENT DISORDER

- Characteristics: repetitive, purposeless movements that is non-functional thus interfere with the normal daily activities or may results in self-injury.
- Stereotypic movements may include:
  - Body rocking
  - Biting fingernails
  - Biting oneself
  - Twirling self
  - Twirling objects
  - Thumb sucking
  - Teeth grinding
  - Nose picking
  - Breath holding
  - Air swallowing
- Onset: First seen within the first three years of life

CAUSES

- Cause: Unknown
- Genetic factor
- Social isolation may lead to self-stimulation in the form of stereotypic movements
- Environmental stress, such as difficulty in school or at home
- Due to certain medications
- Head injury

TREATMENT

- BEHAVIORAL STRATEGIES
  - To reduce repetitive movements and minimize the risk for self-harm.
    - Differential Reinforcement is a therapy to modify the child's behavior through positive reinforcement
- MEDICAL TREATMENT
  - Focus on screening and managing potential comorbid conditions

TIC DISORDERS

- Tic disorder is characterized by a sudden, rapid, recurrent, non-rhythmic, stereotyped motor movement or vocalization
- Example of motor tics:
  - Blinking
  - Grimacing
  - Neck jerking
  - Shoulder shrugging
- Example of vocal tics
  - Grunting
  - Sniffing
  - Coughing
  - Clearing of the throat
  - Snorting

PROVISIONAL TIC DISORDER

- Previously known as TRANSIENT TIC DISORDER
- Characterized by single or multiple vocal or motor tics, but for no longer than 12 months
- Have tics that start before age 18 years.
- Provisional tics go away by themselves in less than a year. However, some may get worse with anxiety, tiredness, and some medications.
- Affects up to 10% of children during the early school years.

PERSISTENT TICS DISORDER

- Also known as CHRONIC MOTOR OR VOCAL TIC DISORDER
- Characteristic: Rapid, recurrent, uncontrollable movements or vocal outburst (but not both)
- Affect less than 1% of children and may be related to a more complex tic disorder called Tourette's disorder.
- To be diagnosed with a persistent tic disorder, a person must:
  - Have one or more motor tics or vocal tics but not both.
  - Have tics that occur many times a day nearly every day or on and off throughout a period of more than a year.
  - Have tics that start before age 18 years.
  - Have symptoms that are not due to taking medicine or having other medical conditions that can cause tics
  - Not have been diagnosed with Tourette syndrome

TOURETTE'S SYNDROME

- Diagnostic criteria:
  - Have two or more motor tics and at least one vocal tic although they might not always happen at the same time.
  - Have had tics for at least a year. The tics can occur many times a day (usually in bouts) nearly every day, or off and on.
  - Have tics that begin before age 18 years.
  - Have symptoms that are not due to taking medicines or having other medical condition (Ex: seizures, Huntington disease or post-viral encephalitis
- Onset: between ages 2 and 15, with the average being around 6 years of age.
- Incidence: Males are about 3-4 x more likely than females
  - TREATMENT:
    - Psychotherapy: to improve school, work or social life
    - Medication: clonidine, neuroleptics,
    - Treat comorbid disorders
    - Deep brain stimulation

COMMON MOTOR TICS SEEN IN TOURETTE SYNDROME	
Simple tics	**Complex tics**
Eye blinking	Touching or smelling objects
Head jerking	Repeating observed movements
Shoulder shrugging	Stepping in a certain pattern
Eye darting	Obscene gesturing
Nose twitching	Bending or twisting
Mouth movements	Hopping

COMMON VOCAL TICS SEEN IN TOURETTE SYNDROME	
Simple tics	**Complex tics**
Grunting	Repeating one's own words or phrases
Coughing	Repeating others' words or phrases
Throat clearing	Using vulgar, obscene or swear words
Barking	

COMMUNICATION DISORDERS

- Communication disorders involve persistent problems related to language and speech.
- Language competence involves two main elements
  - PRODUCTION: is the ability to encode one's ideas into language forms and symbols.
  - COMPREHENSION: is the ability to understand meanings that others have expressed using language.
- Speech refers to production of sounds produced orally.

TYPES OF COMMUNICATION DISORDER

- DSM 5 Classification of Communication disorders includes:
  - Language disorder
  - Speech sound disorder
  - Childhood-onset fluency disorder
  - Social (pragmatic) communication disorder

LANGUAGE DISORDER

- Previously known as expressive and mixed receptive-expressive language disorders involves deficits in language production or comprehension causing limited vocabulary and an inability to form sentences or have a conversation
- Onset: Symptoms first appear in the early developmental period when children begin to learn and use language

CAUSE

- Genetic and could be associated with other neurodevelopmental disorders

TREATMENT

- Speech and language therapy
- Psychotherapy

SPEECH SOUND DISORDER

- Previously known as PHONOLOGICAL DISORDER
- Characterized by persistent difficulty producing words or sounds correctly
- Onset: Symptoms begin early in life

CAUSE

- Unknown but could be genetic

TREATMENT

- Speech and language therapy

CHILDHOOD-ONSET FLUENCY DISORDER

- Previously known as stuttering
- It is a disturbance of fluency and patterning of speech with sound and syllable repetition
- Onset: between the ages of 2 and 7, with 80 to 90 percent of cases developing by age 6.
- Symptoms can be exacerbated by stress, anxiety, or feeling self-conscious

CAUSE

- Unknown

TREATMENT

- Speech and language therapy
- CBT

SOCIAL COMMUNICATION DISORDER

- It is a new condition described in DSM 5
- Also called pragmatic communication
- Characterized by persistent difficulties in the social uses of verbal and nonverbal communication

SYMPTOMS

- Problems in understanding and using language for social purposes

CAUSE

- Unknown

TREATMENT

- Speech-language therapy to promote social communication skills

SPECIFIC LEARNING DISORDER

- Also referred to as LEARNING DISORDER or LEARNING DISABILITY
- It is characterized by problems in one of three areas, reading, writing and math, which are foundational to one's ability to learn.
- Onset: begins during school-age

CAUSE

- Unknown

DIAGNOSTIC CRITERIA

- The child have difficulties in at least one of the following areas for at least six months despite targeted help:
  - Difficulty reading
  - Difficulty understanding the meaning of what is being read
  - Difficulty with spelling
  - Difficulty with written expression
  - Difficulty understanding number concepts, number facts or calculation
  - Difficulty with mathematical reasoning

TREATMENT

- Special education in school and CBT

ELIMINATION DISORDERS

ENURESIS

- Commonly known as BED WETTING.
- Characterized by repeated voiding of urine into inappropriate places
  - NOCTURNAL ENURESIS: bed wetting at night, is the most common type of elimination disorder.
  - DIURNAL ENURESIS: daytime wetting
- Diagnosed: when the child is 5 years or older

CAUSE

- Medical conditions, stress, developmental delays

TREATMENT

- Urine alarm, bladder training and reward

ENCOPRESIS

- Also known as stool soiling or fecal incontinence
- Characterized by repeated passage of feces into inappropriate places
- Diagnosed: children ages 4 and older who have already been toilet trained.
- Incidence: affects boys more than girls

CAUSE

- Chronic constipation

TREATMENT

- Manage constipation, behavior modification