

OTAT-1330: TECHNIQUES IN DEVELOPMENTAL DISABILITIES

Cuyahoga Community College

Viewing: OTAT-1330 : Techniques in Developmental Disabilities

Board of Trustees:

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Academic Term:

Fall 2023

Subject Code

OTAT - Occupational Therapy Assisting

Course Number:

1330

Title:

Techniques in Developmental Disabilities

Catalog Description:

Application of occupational therapy skills and techniques used in treatment programs planned for persons with developmental disabilities.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

3

Other Hour(s):

0

Requisites

Prerequisite and Corequisite

OTAT-1310 Task Analysis or concurrent enrollment, and departmental approval.

Outcomes

Course Outcome(s):

Describe the normal swallowing process and how it changes from infancy to adulthood.

Objective(s):

1. Explain the influence of medical, motor, and motivational problems on the process of feeding children.
2. Describe the acquisition of feeding, eating and swallowing skills as developmental milestones.
3. Describe the anatomic landmarks and four phases of swallowing or deglutition.
4. Explain the components of feeding, eating, and swallowing evaluation.
5. Explain the team approach to evaluation and treating the child from a biopsychosocial perspective.
6. Recognize some of the common feeding problems that occur in children with developmental disabilities.
7. Describe intervention strategies for feeding, eating, and swallowing deficits.
8. Identify the basic components of a treatment approach to feeding problems.

Course Outcome(s):

Identify the federal laws that govern the provision of educational services to children with disabilities.

Objective(s):

1. Identify and describe major legislation affecting special and general education, including the Individual with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act, and No Child Left Behind for students with and without disabilities.

2. Identify major amendments in IDEA that have been implemented over the last three decades.
3. Define the major provisions of Part B of IDEA - free, appropriate education in the least restrictive environment.
4. Describe the occupational therapy process under Part B of IDEA including referral, evaluation, and individual education plan (IEP), and service provision.
5. Explain how integrated services delivery supports inclusion of students with disabilities.

Course Outcome(s):

Analyze the importance of mobility for growth and child development and the implications of impaired mobility.

Objective(s):

1. Identify alternative methods of mobility appropriate to meet the child's developmental and functional needs.
2. Describe wheelchair features and designs that meet the needs of children with various levels of motor control.
3. Identify power mobility devices currently available.
4. Describe new technology in assessing seating and positioning and new equipment available to children with unique seating and positioning needs.
5. Explain the biomechanical principles important to positioning and teaching.

Course Outcome(s):

Identify standardized test applications to information found in a case study.

Objective(s):

1. List the characteristics of commonly used standardized pediatric tests.
2. Describe the difference between performance and observation-based tests.
3. Describe the difference between norm-and criterion referenced tests and give the purpose of each type of test.
4. Explain the concepts of reliability and validity.
5. Explain ethical considerations involved in the use of standardized tests.
6. Administer standardized and non-standardized developmental tests and evaluations appropriate to the assistant role under the direction and supervision of a licensed occupational therapist.
7. Recognize and understand the need for and use of demonstrating service competencies in screening and assessment.

Course Outcome(s):

Apply the Occupational Therapy Practice Framework to the evaluation process for children and their families.

Objective(s):

1. Identify fundamentals of activity including analysis of activities of daily living, work, and play/leisure of the client with developmental disabilities.
2. Perform and teach selected tasks and activities for clients with developmental disabilities.
3. Apply assessment results in relation to performance areas, activities, and adaptation principles for the client with developmental disabilities.
4. Identify community resources for people with developmental disabilities and their families.

Course Outcome(s):

Examine the challenges the birth of a premature newborn places in the family.

Objective(s):

1. Identify the developmental tasks of neonates, including physiologic and behavioral dimensions.
2. Discuss the impact of the birth of a premature newborn baby on a family.
3. Describe the characteristics of premature at-risk newborns and contrast these with those of term neonates.
4. Define developmental delay, and discuss its significance.

Course Outcome(s):

Explain the importance of using orthoses, orthotic fabrication and elastic therapeutic taping as interventions for the pediatric population.

Objective(s):

1. Describe key principles, materials, and steps of orthotic fabrication.

2. Describe how different types of orthoses can enhance and enable participation of children and adolescents in activities of daily living.
3. Identify common pediatric upper extremity conditions, congenital hand differences and orthotic solutions.
4. Define various upper and lower extremity orthoses by name and positioning.
5. Describe the role of the occupational therapy assistant in orthotic fabrication.
6. Describe terms and trends in the use of elastic therapeutic taping to enhance and enable participation of children and adolescents in activities of daily living.
7. Provide an overview of application techniques, indications, contraindications of elastic therapeutic tape.
8. Describe the role of the occupational therapy assistant in elastic therapeutic taping of children and adolescents.

Course Outcome(s):

Recognize and appreciate the importance for an occupational therapy practitioner to have knowledge of and skills related to working with families.

Objective(s):

1. Describe the differences between prescriptive and consultative professional roles.
2. Discuss how a therapy program for a child always has an effect on the family unit.
3. Describe the key concepts of family systems and life cycle theories and the roles of these concepts in intervention for children.
4. Describe several communications strategies that an occupational therapy practitioner can use to promote familial-professional partnership.

Course Outcome(s):

Compare the roles of the occupational therapist and the occupational therapy assistant during the process of intervention and documentation in a pediatric medical system.

Objective(s):

1. Differentiate among pediatric acute care, pediatric acute rehabilitation, subacute care, long term care, outpatient services and specialty clinics, and home care medical settings.
2. List commonly assessed areas of function in a pediatric medically based occupational therapy evaluation.
3. Identify challenges faced by occupational therapist practitioners working in a pediatric medical practice setting.
4. Describe occupational therapy practice in a medical system
5. Identify the key members of a pediatric medical system.

Course Outcome(s):

Provide examples of the specific performance skills required for a variety of childhood occupations.

Objective(s):

1. Define performance skills.
2. Describe significant physiologic changes that occur at each stage of development.
3. Identify the sequences of motor skill development (gross and fine motor)
4. Outlines the stages of process development (cognitive) as defined by Piaget's theory.
5. Identify the performance skills children and youth use to engage in their desired occupations.

Course Outcome(s):

Apply motor control and motor learning concepts when presented with a pediatric clinical case study.

Objective(s):

1. Describe component of motor control that influence movement including postural control, balance, visual perception and body awareness.
2. Define concepts of motor learning including transfer of learning, feedback, practice, sequencing and adapting tasks, modeling or demonstration, and mental rehearsal.
3. Identify intervention for children with motor control deficits based on current motor control/motor learning research.
4. Define motor control and motor learning.
5. Recognize principles of motor control and motor learning and their application to practice.
6. Identify how motor control and motor learning concepts inform interventions.
7. Apply concepts of feedback, feedforward degrees of freedom, coordination and timing, strength/endurance, and muscle tone to intervention strategies.
8. Build motor learning and motor control concepts into task analysis skills for intervention.

Course Outcome(s):

Explain how handwriting skills affect the ability of children to perform written assignments in the school setting.

Objective(s):

1. Describe the typical development of hand skills in children
2. Articulate the role of the occupational therapy assistant in the screening and intervention of children with handwriting difficulties.
3. Identify factors that contribute to typical or atypical development of hand skills.
4. Explain the implications of hand skills problems for children's occupational performance, particularly in the areas of play, activities of daily living, and school performance.
5. Develop remedial and compensatory strategies to improve a student's performance of written communication. focusing on the actual occupation and the occupational context.
6. Describe how handwriting fits into the educational writing process.
7. Identify evaluation tools and methods useful in assessing hand skills in children.

Course Outcome(s):

Identify/describe intervention methods for children who have sensory processing/integration disorders.

Objective(s):

1. Explain the neurobiological concepts that are the basis to an individual's sensory integrative function.
2. Explain the link between sensory input from the environment and the child's adaptive response.
3. Describe atypical vestibular-bilateral functions and the types of behaviors that children with these problem often demonstrate.
4. Define developmental dyspraxia, and identify examples of behaviors that might be observed in a child with this problem
5. Discuss the evaluation of sensory integration within varying contexts such as home and school.
6. Identify the expected outcomes of an occupational therapy program using active sensory intervention (ASI).
7. Describe screening, assessment, and sensory integration-based intervention strategies for sensory discrimination challenges.
8. Describe sensory-motor, perceptual motor, environmental adaptations, and other approaches used in alleviating sensory processing disorders.
9. Describe general principles of occupational therapy screening, observational assessment, and intervention strategies for addressing sensory processing disorders.

Course Outcome(s):

Categorize intervention strategies for assisting children in improving or compensating for problems with visual-perceptual skills.

Objective(s):

1. Define visual perception.
2. Describe the typical development of visual-perceptual skills.
3. Identify factors that contribute to typical or atypical development of visual perception.
4. Explain the effects of visual-perception problems on occupation and life activities.
5. Describe models, frame of reference and theories that may be used in structuring intervention plans for children who have problems with visual-perceptual skills.
6. Identify assessment tools and methods useful in evaluation of visual-perceptual skills in children.

Course Outcome(s):

Develop intervention strategies to improve engagement in Activities of Daily Living (ADL's) and sleep/rest for children and youth.

Objective(s):

1. Describe the effects of context on a child's performance and parental expectations for activities of daily living.
 2. Identify evaluation procedures and methods in ADLs that target child and family preference for intervention.
 3. Describe intervention strategies and approaches, both general and specific.
 4. Describe the progression of ADL's
 5. Explain the concept of co-occupation as it relates to designing and implementing intervention for ADLs and sleep/rest.
 6. Describe remediation, compensatory, and adaptive strategies to help children perform ADLs.
 7. Identify adaptive equipment and devices that help children perform ADLs.
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Course Outcome(s):

Identify and evaluate therapeutic activities that an occupational therapy practitioner might use to address difficulties in occupational performance in the Instrumental Activities of Daily Living (IADLs).

Objective(s):

1. Define IADLs and community participation for children and youth.
2. Describe how participation in IADLs and community participation contributes to occupational development for children and youths.
3. Explain occupational performance by developmental age ranges and disabilities.
4. Identify personal and environmental influences.
5. Discuss and apply professional reasoning, evaluation procedures, and intervention approaches for IADLs and community integration.

Course Outcome(s):

Explain the characteristics of play and playfulness and differentiate between the two.

Objective(s):

1. Demonstrate the importance and relationship of play to occupational therapy.
2. Describe play theories in terms of form, function, meaning and context.
3. Identify play assessments and determine their usefulness for assessment and treatment planning.
4. Verbalize how play is used in intervention.
5. Identify potential barriers to play that children with disabilities may encounter.
6. Describes ways to facilitate play and playfulness in children who have special needs.
7. Describe techniques that promote play and playfulness.

Course Outcome(s):

Explain specific classes of assistive technology available to children with disabilities.

Objective(s):

1. Explain legal mandates regarding assistive technology service delivery.
2. Identify guiding framework/models that influence decisions about assistive technology.
3. Recognize and participate in a collaborative team approach for providing assistive technology services.
4. Recognize cultural differences and their impact on acceptance of assistive technologies.
5. Apply evidence-based practice throughout the occupational therapy service delivery process.

Methods of Evaluation:

- a. Exams
- b. Written activity analyses: toy and self-care device
- c. Fabrication of adapted toy/game
- d. Fabrication of adapted self-care device
- e. Oral presentation of adapted toy/game
- f. Oral presentation of adapted self-care device
- g. Professional behavior rating scale

Course Content Outline:

- a. Family Systems
 - i. The importance of families
 - ii. Reasons families are important
 - iii. Current issues affecting OT practitioners and families
 1. Changes in policies and service delivery models
 2. Expansion of Practitioners' roles
 3. Demographic changes in the U.S. population
 4. Implications for practice
 - iv. Family systems theory
 - v. Family life cycle

- vi. Family adaptation
- vii. Essential skills for successful intervention with families.
- b. Medical systems
 - i. Medical care settings
 - ii. Levels of medical care
 - 1. Primary medical care
 - 2. Secondary medical care
 - 3. Tertiary medical care
 - 4. Quaternary medical care
 - iii. Neonatal intensive care unit
 - iv. Pediatric intensive care unit
 - v. Medical/surgical/general care unit
 - vi. Specialty services
 - 1. Hematology/oncology unit
 - 2. Palliative care
 - 3. Subacute setting
 - 4. Pediatric acute rehabilitation programs
 - 5. Home care
 - 6. Outpatient services and specialty clinics
 - 7. Long Term Care
 - 8. Parent and child support groups and community programs
 - 9. Assistive technology
 - vii. Moving through the medical system
 - viii. Role of occupational therapy in the pediatric medical system
 - ix. Interpersonal collaboration
 - x. Documentation
 - xi. Modalities
 - xii. Reimbursement
 - xiii. Challenges for OT practitioners working in the medical system
 - 1. Infection control
 - xiv. Legal and ethical considerations in a medical care system
- c. Educational systems
 - i. Clinical models versus educational models
 - ii. Federal laws
 - 1. Education of the Handicapped Act (Public Law 94-142)
 - 2. Rehabilitation Act and American with Disabilities Act
 - 3. Public Law 99-457
 - 4. Individuals with Disabilities Education Act (IDEA)
 - 5. No Child Left Behind Act
 - iii. Rights of parents and children
 - iv. The OT process
 - v. Individual educational program (IEP)
 - vi. Roles of the occupational therapist and the occupational therapy assistant
 - vii. Types of services
 - 1. Direct
 - 2. Monitoring
 - 3. Consultation
 - viii. Discontinuing therapy services
 - ix. Tips for working with parents and teachers
- d. Community services
 - i. Community based and community built practice
 - ii. Therapeutic use of self
 - iii. Public health influence
 - iv. Community mental health movement
 - v. Community occupational therapy interventions
 - vi. Challenges in practice in community systems
- e. Development of performance skills

- i. Performance skills
- ii. Motor skills
 - 1. Process skills
 - 2. Social interaction skills
- iii. Infancy
- iv. Early childhood
- v. Middle childhood
- vi. Adolescence
- f. The Occupational therapy process
 - i. Roles of the occupational therapist and the occupational therapy assistant
 - ii. Intervention planning, goal setting, and treatment implementation
 - iii. Legitimate tools
 - 1. occupation
 - 2. purposeful activities
 - 3. activity analysis
 - 4. activity synthesis
 - a. Adaptation
 - b. Gradation
 - c. Activity Configuration
 - iv. Therapeutic Use of Self
 - v. Multicultural implications
 - vi. Reevaluation and discontinuation of intervention
 - vii. Occupation - centered top-down approach
- g. Positioning and Handling: A Neurodevelopmental Approach
 - i. Typical Motor Development
 - ii. General considerations
 - 1. Skeletal alignment
 - 2. Typical development
 - 3. Perception and body awareness
 - 4. Postural control for balance and functional activity
 - iii. Positioning as a therapeutic tool
 - 1. Prone position
 - 2. Supine position
 - 3. Prone on elbows and prone on extended arms position
 - 4. Side-lying position
 - 5. Sitting position
 - 6. Wheelchairs
 - iv. Mobility
 - 1. Quadruped position
 - 2. Half-knee/Kneel position
 - 3. Standing position
 - v. Therapeutic positioning
 - vi. Neurodevelopmental Treatment (NDT)
 - 1. What is NDT?
 - 2. NDT principles
 - 3. Therapeutic handling
 - 4. Handling technique
 - 5. Practice application using NDT
 - 6. Current state of evidence for using an NDT approach
- h. Activities of daily living and sleep/rest
 - i. ADLs and sleep/rest: A collaborative approach to intervention
 - ii. Developmental perspectives of ADLs and Sleep/Rest
 - iii. Co-Occupation
 - iv. Evaluation to Intervention
 - v. Intervention strategies to promote ADLs and Sleep/Rest
- i. Instrumental activities of daily living
 - i. Cognitive and executive functioning
 - 1. Intervention strategies
 - ii. Developmental considerations and transition

- iii. Communication management
 - 1. telephones
 - 2. Low-tech communication
 - 3. Using pictures to communicate to the child
 - 4. Picture exchange communication system
 - 5. High tech voice output communications AIDS
 - 6. Computer systems for communication
- iv. Community mobility and driving
 - 1. Developmental stages of mobility
 - 2. Transportation for the infant, toddler, and young child
 - 3. Transportation for the school age child
 - 4. Transportation for the adolescent driving
 - 5. Public transportation
 - 6. Wheelchair mobility
 - 7. Walkers, canes crutches, and miscellaneous mobility devices
 - 8. Bicycles, scooters, roller blades
 - 9. Street safety
- v. Financial management, shopping, and care of pets
- vi. Health management and maintenance
- vii. Meal preparation and cleanup
- j. Play and playfulness
 - i. Play
 - ii. Playfulness
 - iii. Play development of children with disabilities
 - iv. Influence of the environment on play
 - v. Relevance of play
 - vi. Role of occupational therapist and the occupational therapy assistant during play assessment
 - vii. Techniques to promote play and playfulness
- k. Functional task at school: handwriting
 - i. Developmental sequence
 - ii. Performance skills and client factors that influence handwriting
 - iii. Evaluation of handwriting skills
 - iv. Consideration for handwriting intervention
- l. Motor control and motor Learning
 - i. Principles of motor learning
 - ii. Principles of motor control
 - iii. Applying motor learning concepts to practice
 - 1. Feedback
 - 2. Modeling or demonstration
 - 3. Verbal instruction
 - 4. Practice and repetition
 - 5. Transfer of learning
 - iv. Applications of motor control concepts to practice
 - 1. Degrees of freedom
 - 2. Coordination and timing
 - 3. Strength and endurance
 - 4. Muscle tone
- m. Sensory processing/integration and occupation
 - i. Impact of sensory processing dysfunction on infant and early childhood occupation
 - ii. Causes of sensory processing disorders
 - iii. Screening and assessment of sensory processing
 - iv. Sensory modulation disorder
 - v. Sensory-based movement disorder
 - 1. Postural-ocular
 - 2. Bilateral integration dysfunction
 - 3. Developmental dyspraxia
 - vi. Intervention
 - 1. General principles of sensory integration intervention

- n. Orthoses, orthotic fabrication, and elastic therapeutic taping for the pediatric population
 - i. Definitions
 - ii. Goals of orthotic fabrication
 - iii. Types of orthoses
 - iv. Naming systems
 - v. Principles of orthotic fabrication
 - vi. Fabrication tips
 - vii. Safety precautions
 - viii. Elastic therapeutic taping
 - 1. Application
 - 2. Removing

Resources

Case-Smith, J., S. Allen, and P. Pratt. *Occupational Therapy for Children and Adolescents*. 7th ed. Maryland Heights; Mosby Elsevier, 2014.

Cronin, A. Mandich, M.B. *Human Development and Performance Throughout the Lifespan*. 2nd ed. Boston, Cengage Learning, 2016.

Bathshaw M.L., Pellegrino, L. Roizen, N.J. *Children with Disabilities*. 7th ed. Baltimore; Paul H. Brookes Publishing Co., 2012.

Kramer, P. Hinojosa, J. *Frames of Reference for Pediatric Occupational Therapy*. 3rd. ed. Baltimore; Lippincott Williams Wilkins, 2010.

Christiansen C.H., Townsend, E.A. *Introduction to Occupation The Art and Science of Living*. 2nd. ed. Upper Saddle River; Pearson, 2010.

Solomon, J.W. Clifford O'Brien, J. *Pediatric Skills for the Occupational Therapy Assistant*. 4th, ed. St. Louis; Elsevier Mosby, 2016.

Wagenfeld, A. *Foundations of Theory and Practice for the Occupational Therapy Assistant*. {ts '2016-11-16 00:00:00'}.

Resources Other

- a. Netscape.
- b. Videos (updated as appropriate)

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