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Occupational Therapy Considerations for the School-Aged Child

Adolescence
Ages 14-18, High School

Patti Sharp, OTD, MS, OTR/L

- Presenter Disclosure: Financial: Patti Sharp has received an honorarium for presenting this course. Non-financial: Presenter has no relevant non-financial relationships to disclose.
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Pediatric Primer Series

- Child Development, Birth – 5 years
  1. In Utero
  2. Premature Infant
  3. Newborns 0-1 year
  4. Babies 1-3 years
  5. Toddlers 3-5 years

Pediatric Primer Series

- School-Aged Children, 5-18 years
  6. Early Childhood, 5-7 years
  7. Mid-Late Childhood, 8-10 years
  8. Preadolescence, 11-13 years
  9. Adolescence, 14-18 years
  10. Transitions to Adulthood

Learning Outcomes

After this course, participants will be able to:

- List occupations of adolescents, ages 14-18.
- Describe typical and atypical presentation of adolescents, ages 14-18.
- List common conditions presenting in adolescents, ages 14-18.
- Describe OT's role with adolescents, ages 14-18.

Occupation in Adolescents

"The conflict between the need to belong to a group and the need to be seen as unique and individual is the dominant struggle of adolescence,"

- Jeanne Elium, 2011

Occupation in Adolescents

*"A graduation ceremony is an event where the commencement speaker tells thousands of students dressed in identical caps and gowns that **'INDIVIDUALITY'** is the key to success,"*

- Robert Orben

Occupation in Adolescents

For children and youth, occupations are activities that enable them to

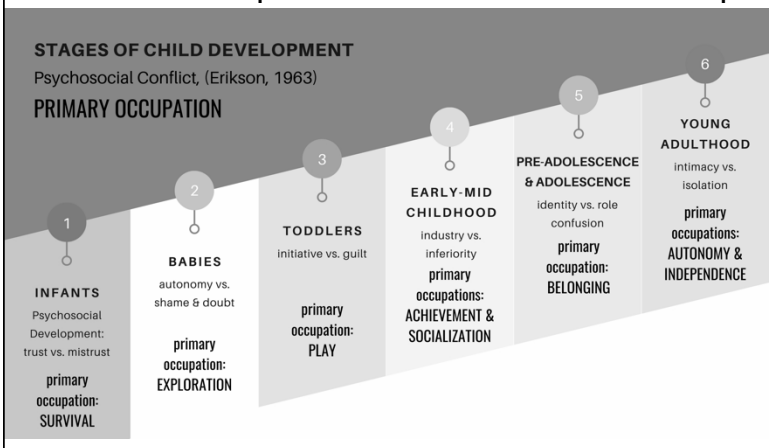
- learn and develop life skills (school, work),
- be creative & derive enjoyment (hobbies, sports),
- and thrive (self-care, communication, relationships)

as both a means and an end (Clark & Kingsley, 2020)

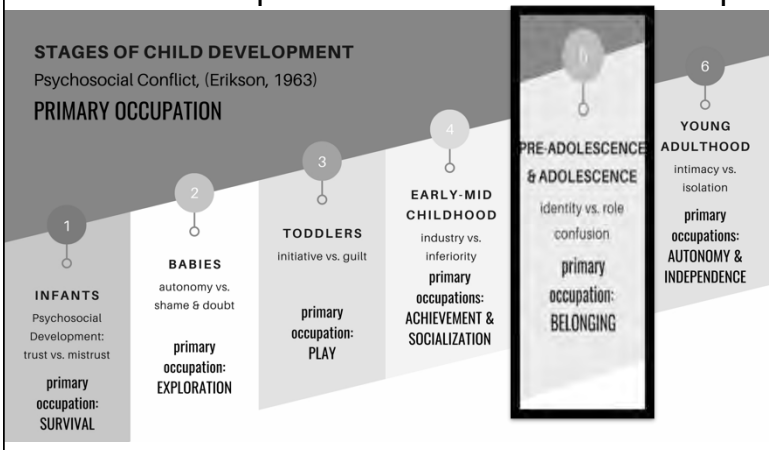
Occupation in Adolescents

- Occupation refers to activities that support the health, well-being, and development of an individual (AJOT, 2017)
- Occupations are created as teens seek to have their needs met at each developmental stage

What shapes adolescent development?



What shapes adolescent development?



Q7

What shapes adolescent development?

- Adolescents 12-18 years struggle with identity vs. role confusion according to Erikson (1963)
  - As they transition from childhood to adulthood, teens may begin to feel confused or insecure about themselves and how they fit into society.
  - Adolescents explore their independence and develop a sense of self in asking, “Who am I?”

What shapes adolescent development?

- To resolve the developmental struggle at this stage, they must commit to a particular identity
  - Work, social groups, personal style, etc.
  - Teen identity is shaped by more abstract concepts, such as interpersonal traits, values, and preferences (Erikson, 1968)

Occupation & Identity

- *Defining lives: Occupation as identity: An essay on competence, coherence, and the creation of meaning* (Christiansen, 1999)
  - 4 propositions about how occupation is the principle means in which people develop & express personal identity

Occupation & Identity

1. Identity is an overarching concept that shapes and is shaped by our relationships with others.
2. Identities are closely tied to what we do and our interpretations of those actions in the context of our relationships with others.

Occupation & Identity

3. Identities provide an important central figure in a self-narrative or life story that provides coherence and meaning for everyday events and life itself.
4. Because life meaning is derived in the context of identity, it is an essential element in promoting wellbeing and life-satisfaction.

Identity → Fidelity

- Those who are successful at establishing identity during adolescence develop the virtue of fidelity
  - the ability to relate to others and form genuine relationships (Arnold, 2017)
  - "the ability to sustain loyalties freely pledged in spite of the inevitable contradictions of value systems," (Erikson, 1964)

Identity → Fidelity

- Successful development of fidelity is correlated with increased participation
  - Active community members
  - Committed to others
  - Fosters intimate relationships (Cote, Lerner & Steinberg, 2009)

OT's Role

- Occupational therapists partner with the preadolescent and their caregivers to improve occupational performance and competence in their natural environments.
- OT's can be considered "technologists and custodians of meaning," (Englehardt,1986), facilitating identity development

OT & Identity

"Biomedicine will experience many great advances in the years ahead. But no genetic code, no chemical intervention, and no microsurgical technique will be invented to repair **broken identities and the meaning that accompanies them**. Because of this, the new millennium will realize the **health-enabling, restorative potential of occupation**, and the promise of occupational therapy will be fulfilled," *(Christansen, 1999, p. 556)*

OT & Identity

- OT helps build identity in clients by
  - Providing environments that facilitate exploration
  - Enabling performance in tasks that are essential to identities people strive to achieve
  - Allowing clients to validate identities they have worked hard to achieve in the past

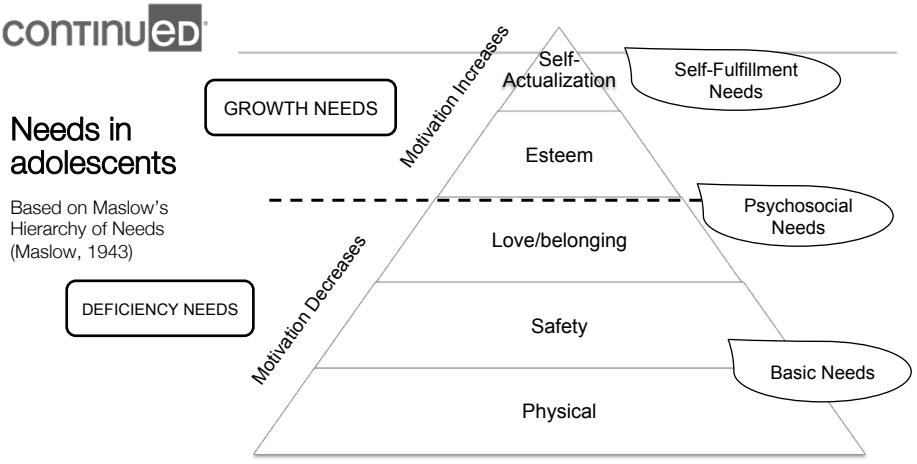
Q8

Occupation in Adolescents

- Occupation refers to activities that support the health, well-being, and development of an individual (AJOT, 2017)
- Occupations are created as teens seek to have their needs met at each developmental stage

Needs in adolescents

Based on Maslow's Hierarchy of Needs (Maslow, 1943)



Adolescent Needs

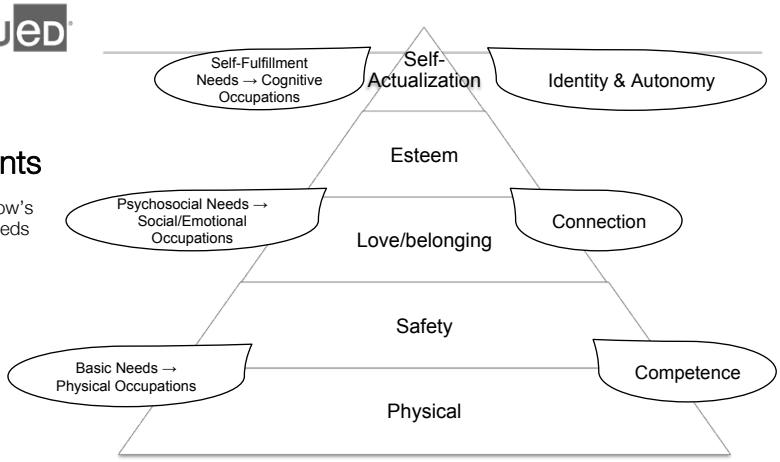
Pre-Adolescence → Adolescence

- Physical → Competence → → →
- Social/Emotional → Connection →
- Cognitive → Autonomy → → → →

} IDENTITY

Needs in adolescents

Based on Maslow's Hierarchy of Needs (Maslow, 1943)



Physical Occupations

- Engagement in and mastery of daily skills which foster growth and health
  - Activities of Daily Living (ADLs)
  - Instrumental Activities of Daily Living (IADLs)
- Mastery over basic needs/physical occupations leads to a sense of competence

Physical Occupations

- Adolescent IADLs
  - Increased responsibility & independence
  - Chore management, accountability
  - Basic home management – help with shopping, home maintenance
  - Adult privileges – driving, managing bank account

Physical Occupations

- Adolescents begin to take responsibility for health care maintenance between 15-18 years
  - Recognize need for care or change in care
  - Begins to balance nutrition, exercise, sleep
  - Starts participating in making appointments
  - Medication management
  - Use of birth control

Physical Occupations

- Establishment of performance patterns which support health
  - Roles, rituals, habits
  - Physical activity, nutrition, sleep, medical care
- Engagement in consistent performance patterns builds trust & emotional security (AJOT, 2017)

Physical Occupations

- Body changes that occur during puberty may be uncomfortable
- Adolescents strive to socialize & define sexual identities according to accepted contextually based sex roles

Social Occupations

- Supportive roles, supportive environment
  - Family - positive parent-adolescent communication
  - Parental involvement in school activities
  - Caring, inclusive neighborhood & school environments

Social Occupations

- Friendship Skills
  - Understands others' points of view
  - Talks about feelings and problems with friends
  - Talks about personal & social issues
  - Provides mutual support

Emotional Occupations

- Middle years of adolescence encompass the most intense period of psychosocial development
- Routines are crucial to facilitating emotional security (Kingsley, Sagester, & Weaver, 2020)
- Development of emotional regulation is crucial for social competence (Zalewski et al., 2011)

Q3

Emotional Occupations

- Adolescents strive for independence & may start emotionally distancing from caregivers
- Discovery of strengths & weaknesses; moody fluctuations between pride & failure
- Spend increased time with friends, may date

Emotional Regulation

- The capacity to modulate or maintain an emotion in service of a goal
- Impacted by
  - Heightened emotions
  - Fluctuating hormones
  - Immature brain pathways that play a key role in emotional regulation and cognitive function (Kelley, Schochet, & Landry, 2004)

Emotional Occupations

- In searching for identity, adolescents seek new experiences, higher levels of stimulation, and often engage in risky behaviors, without considering future outcomes or consequences

Emotional Regulation

- Risky behaviors
  - Adaptive benefits - development of independence and survival without parental protection
  - Negative consequences - risk of injury or death is higher during the adolescent period than in childhood or adulthood

Cognitive Occupations

- Formal Operational Stage of cognitive development (Piaget, 1972); ages 12-adulthood
- Development of complex sophisticated & advanced thinking

Cognitive Occupations

- Formal Operational Stage
  - Deductive logic: general principle → outcome
  - Abstract thought: consider possibilities
  - Problem-solving: systematic & organized approach
  - Hypothetical-deductive reasoning: “What if?”

Cognitive Occupations

- Formal Operational Stage
  - Decreased egocentrism
  - Development of metacognition - ability to be aware of personal thoughts as well as others’ thoughts
  - Increased awareness of others can lead to self-doubt, self-comparison, and inhibition

Social-Emotional Learning (SEL)

- How students regulate their emotions, communicate with others, use compassion and empathy to understand the needs of others, build relationships and make good decisions
- Skills can be taught & learned

Social-Emotional Learning Needs

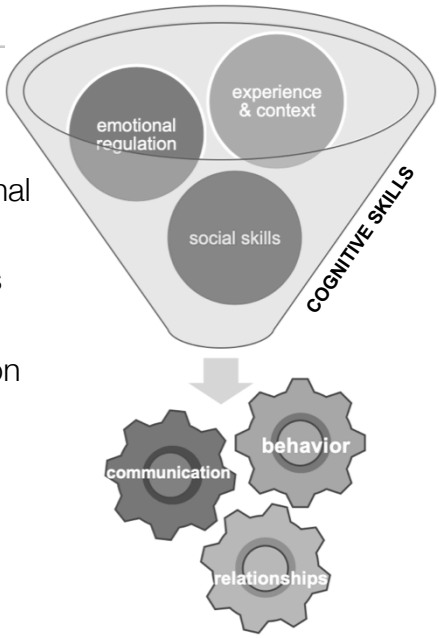
- 5 main social and emotional competencies
  1. self-awareness
  2. self-management
  3. social awareness
  4. relationship skills
  5. responsible decision-making

Social-Emotional Competency/Literacy

- Provides foundation for social relationships and supports academic achievement (Tan et al., 2018)
- Competent teens show more positive social behaviors, fewer conduct problems, less emotional distress, and improved test scores and grades (Greenberg et al., 2003)

Social-Emotional Learning

- Development of social & emotional skills with respect to context
- Regulated by cognitive functions
- Expressed in communication, behavior, interpersonal interaction



Educational Occupations

- High School Readiness:
  - Critical thinking; analysis of writings on all subjects; math formulas; organization & independence

Educational Occupations

- Education may address life skills
  - Vocational preparation
  - Community mobility
  - Money management

High School, 9-12th grade

- Executive Functioning – Self-advocacy, goal-setting, more complex time management & prioritization, consistent follow-through, manage group & independent work, engage in learning

High School, 9-12th grade

- Reading – Expanding vocabulary; analyze characters; determine themes; use evidence from text to support analysis; identify imagery & symbolism; understand subtext

High School, 9-12th grade

- Writing – Continue to develop typing skills, grammar knowledge, vocabulary; write long, complex papers on various subjects; use planning strategies to search for and combine information from multiple sources

High School, 9-12th grade

- Math – Understand various ways numbers can be represented, see how math concepts build on each other, use graphs to represent information, some move onto geometry & calculus

OT's Role

- Occupational therapists partner with the adolescent and their caregivers to improve occupational performance and competence in their natural environments

Typical Development

- Children & adolescents develop on somewhat predictable timelines, though progressions vary by many contextual factors (Smet & Lucas, 2019)
- These can help identify any performance problems

14 Years - Physical

- Most 14-year-olds have hit puberty
- Females have started menstrual periods and breast development
  - Males have experienced enlargement of the testicles and penis and may experience nocturnal emissions

14 years - Social/Emotional

- More likely to confide in friends than parents
  - Shift in parent/child relationship
- Anxious to be liked and feel accepted by peers
- Increasing interest in romantic relationships
- May prefer electronic communication with friends

14 Years - Cognitive

- Long-standing interests
- Desire to explore the world beyond community
- Find justice and equality to be important issues

14 Years - IADLs

- Strong interest in earning money
- Independent with all basic chores

15 Years - Physical

- Physical changes still occurring
  - Girls have reached their full height, become insecure about appearance (weight)
  - Boys: start to rapidly gain muscle, voices grow deeper

15 Years - Social

- Interest in romantic relationships
  - May evolve over text message/social media
  - Aware of sexuality, may show interest in sexual activity
- Decreased conflict with parents

15 Years - Emotional

- May experiment with different personas
- “Know-it-all” attitude
- Increased stress from school & peer relationships
- Developing emotional regulation

15 Years - Cognitive

- Understanding of wrong vs. right
- Can explain rationale behind choices

15 Years - IADLs

- May take responsibility for more complex chores
  - Laundry
  - House cleaning
  - Yard care
  - Meal preparation

16 Years - Physical

- Girls begin to slow down in physical development, while boys continue their physical changes
- Need for sleep increases

16 Years - Social

- Spends more time with friends and romantic partners
  - Enters into deeper platonic or romantic relationship in exploration of intimacy
  - Spends less time with family
  - May prefer to spend more alone time

16 Years - Emotional

- Emotional challenges
  - Concerns about physical development and looks
  - May experience periods of sadness
- Increased feelings of freedom & autonomy
  - Begins driving
  - May begin to have some income

16 Years - Cognitive

- Begins to consider how the entire world works and how they fit into it
- Exhibits defined work habits, though may procrastinate
- Appropriately changes language and behaviors between school, home and other settings

16 Years – IADLs/Work

- Companionship
- Mental support
- Transportation – driving, navigating, fueling
- Volunteer and/or paid work

17 Years - Physical

- Most teens have reached their full height by 17
- Nearing completion of puberty
- May still be uncomfortable with physical changes that occur following childhood

17 Years - Social

- Strong relationships
- Texting & social media are major forms of communication
- Increased dependability
  - Want to take on adult leadership roles
  - Able to make and keep commitments

17 Years - Emotional

- Mood swings become less extreme
  - Hormonal shifts
  - Brain development
  - Increased sense of control

17 Years - Cognitive

- New experiences
  - Driver's license, car, part-time job, extracurricular activities, social participation
- Expectation to balance multiple demands

17 Years – IADLs/Work

- Meal planning, grocery shopping
- Medication management, pharmacy refills
- Communication – phone, mail, e-mail, text
- Volunteer and/or paid work
- College and/or employment applications

18 Years - Physical

- Boys and girls have physically matured and usually have reached their full height
- Begin to become more comfortable with all the rapid body changes faced in adolescence
- Have reached sexual maturity

18 Years - Social

- Have close friends of both genders
  - Begin to have sexual urges and may become sexually active
- Able to manage emotions in a socially acceptable manner

18 Years - Emotional

- More comfortable seeking adult advice
- Accepts adult responsibilities
- Able to manage emotions in a socially acceptable manner
- May experience fear of future and/or failure

18 Years - Cognitive

- Ongoing brain development
- Beginning to participate in adult-like thinking
  - Plans for personal future
  - Shows concern for future of community, country, world

18 Years – IADLs/Work

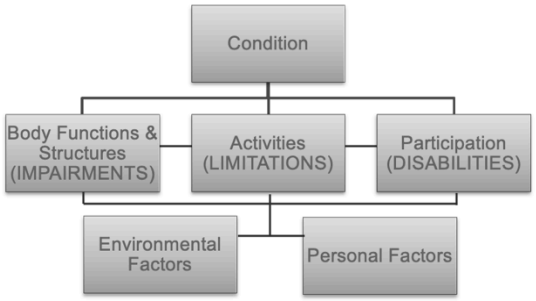
- Make healthy choices & plan accordingly
- Understand health implications of sexual activity and use of drugs/alcohol
- Broad community navigation
- Managing schedule and long-term plans

Impairment in Adolescents

- May be caused by
  - Chronic conditions
  - Evolution of a progressive disease process
  - Acute illness/injury
    - May include mental health concerns

ICIDH Model (WHO, 1980)

Mental functions are categorized under Body Functions & Structures, though Mental Health Disorders impact typical body functions as well.



OT Referrals in Adolescents

- Usually at this age
  - Chronic
  - Acute
  - Traumatic
- Generally teens with developmental conditions would have been identified prior to this age

OT Referrals in Adolescents

- New referrals may reflect difficulty with skills expected for this age
  - Children who have functioned at an acceptable level with supports may struggle as supports are removed
  - Subtle difficulties that may have been ignored in the past may pose a bigger barrier as expectations increase

12-17 Yrs. – Common Diagnoses

- Most prevalent developmental disabilities in adolescents in the US (Zablotsky et al., 2019)
  - ADHD (12%)
  - Learning Disability (10%)
  - Developmental Delay (4%)
  - Autism Spectrum Disorder (2%)

Mental Health Disorders - US

- Prevalence of at least 1 mental health disorder in youth under 18 years
  - US national average: 16.5%
  - By state, ranged 7.6% (Hawaii) – 27.2% (Maine) (Whitney & Peterson, 2019)

Mental Health Disorders - US

- Prevalence per disorder in teens 13-17 years,
  - Anxiety – 32%
  - Depression – 13%
  - Eating Disorders – 3% (McCance-Katz, 2019)

Mental Health Disorders - US

- Prevalence of suicidal behaviors in high school students 1991-2017
  - Ideation – 18.8%
  - Plan – 14.7%
  - Injury – 7.9%
  - Attempt – 2.5% (Lindsey et al., 2019)

Mental Health Disorders - China

- Prevalence of any mental health disorder in Chinese adolescents - 17.6% (Cui et al., 2020)

Mental Health Disorders - China

- By disorder, prevalence of depressive symptoms was 19.85% in Chinese children & adolescents (Rao, et al., 2019)

Mental Health Disorders - China

- Mental health symptoms in Chinese medical students
  - Depression – 29%
  - Anxiety – 21%
  - Suicidal ideation- 11%
  - Eating disorders – 2% (Zeng, et al., 2019)

Mental Health Disorders

- Biological Risk Factors for Adolescents
  - Amygdala – brain region associated with emotions
  - Prefrontal Cortex – complex thinking, inhibition
  - Adolescents have increased amygdala activity compared to children & adults
  - Adolescents have limited connectivity between the amygdala & prefrontal cortex due to less life experience and exposure to emotional stimuli

Mental Health Disorders

- Biological Risk factors for Adolescents
  - ⬆ amygdala activity + ⬇ prefrontal connectivity =
  - ⬇ ability of the amygdala to habituate to stimuli =
  - Increased experience & perception of anxiety
  - (Hare et al., 2008)

Mental Health Disorders

- Socioeconomic Risk Factors for Adolescents
  - Associations between SES and adolescent mental disorders are most directly the result of **perceived** social status (McLaughlin et al., 2012)
  - **Subjective** socioeconomic status was most consistently associated with mental disorders (Chen et al., 2019)

Mental Health Disorders

- Occupational Risk Factors
  - Depression, anxiety, and self-harm can be categorized as **diseases of meaning**
  - Loss of identity & sense of purpose can be linked to
    - Social conditions (environmental factors)
    - Emotional & physical conditions (personal factors)

OT's Role in MH Disorders

- Research on psychosocial theories of depression & anxiety have shown that symptoms can be averted when
  - people are given an opportunity to gain meaning from everyday activities
  - Sense of optimism is renewed
  - They feel some choice & control in life

  (Baumeister, 1990; Brewer, 1993; Kapci, 1998; Rodin, 1986).

OT Intervention for MH Disorders

- Exercise (especially climbing) increased affective valence (self-perception of mental capability of doing & intending) teens with mental health disorders (Frühauf et al., 2020)

OT Intervention for MH Disorders

- Strong evidence supports use of **Cognitive Remediation** strategies in OT intervention
  - Quicker recovery
  - Prevention of illness progression & cognitive decline
  - Increased engagement (Read, Roush & Downing, 2018)

Cognitive Remediation

- "A behavioral-training based intervention that aims to improve cognitive processes (attention, memory, executive function, social cognition, or metacognition) with the goal of durability and generalization," (Benedict et al., 1994)

Cognitive Remediation

- Can be delivered via computerized programs, of varying length and complexity, or can be undertaken one-on-one by a trained clinician
- Generalization to functional competence and real-world behavior is more likely when completed in conjunction with meaningful activities (Bowie et al., 2012)

Cognitive Remediation

- Cognitive Reappraisal
  - techniques target adaptive emotional regulation abilities
  - OT that facilitated positive reappraisal of adversity was associated with improved coping skills for combat-exposed student veterans (Kinney et al., 2020)

Cognitive Remediation

- Cognitive Reappraisal
  - Cognitive ability to reappraise increases with age
  - Adolescents may not normally recruit regions associated with mental state regulation
  - This can be reversed with reappraisal instructions (McRae et al., 2012)

Cognitive Remediation

- Emotional Regulation Training seeks to improve
  - Acceptance
  - Distraction
  - Cognitive reappraisal
  - Problem-solving
- Good immediate effect, minimal long-term effect (Volkaert et al., 2019)

OT Intervention for MH Disorders

- Strong evidence supports **family psychoeducation** (FPE) to
  - Prevent relapse and rehospitalization
  - Improve problem-solving skills
  - Increase functioning (Read, Roush & Downing, 2018)

OT Intervention for MH Disorders

- Moderate to strong evidence supports use of **supported employment and supported education** (SE/E) to improve
  - Social and occupational outcomes
  - In work and school settings (Read, Roush & Downing, 2018)

School OT for Adolescents

- Services for struggling learners in general educations
  - Multi-tiered approach
  - Screenings
  - Environmental changes
- Services for individual students in special education
  - Individualized Education Program (IEP)

School OT for Adolescents

- Training & resources for school staff and families
  - Typical and atypical child development
  - Impact of physical and mental health on learning and participation in school
- Participating on collaborative teams
- Partnering with districts
  - Focus on helping students achieve their academic success and prepare for the future

OT Intervention for MH Disorders

- Mixed evidence on **Cognitive-Behavioral Therapy**
  - Short-term improvement, though unknown if CBT benefits are sustained over time
  - CBT (which targets thoughts) may be fortified if used as an adjunct to engagement in meaningful occupations as opposed to a conversational intervention alone (Read, Roush & Downing, 2018)

Mental Health Assessments

- Allen Cognitive Levels Screen (Allen, 1982)
  - Provides an estimate of an individual's ability to follow directions, to solve problems, and to learn
  - Results in Levels of Performance

1) Awareness	4) Familiar activity
2) Gross body movements	5) Learning new activity
3) Manual actions	6) Planning new activity

Mental Health Assessments

- Children's Assessment of Participation & Enjoyment (CAPE; King et al., 2004)
- Preferences for Activities in Children (PAC; King et al., 2004)
- Self-report measures of children's participation in recreation and leisure activities outside of school

Mental Health Assessments

- Behavior Rating Inventory of Executive Function-2 (BRIEF-2; Gioia, 2000)
  - Measures aspects of a child or adolescent's behavior
  - Results on 8 clinical scales: Inhibit, Shift, Emotional Control, Initiate, Working Memory, Plan/Organize, Organization of Materials, Monitor

Case Study

- Finley is a 16 year-old girl referred to OT during an inpatient stay on the psychiatric unit of the local children's hospital following frequent expressions of suicidal ideation. She was diagnosed with depression & anxiety at age 14, but symptoms have recently worsened.

Finley - Evaluation

- Motor skills – Slight deconditioning due to decreased participation, otherwise WNL
- Education skills – History of good grades, recent declines and increased absences
- Executive functioning – Poor organization, unable to prioritize, limited goal-directed activity

Finley - Evaluation

- Mental functions – Poor thought control & emotional regulation, limited motivation
- Social & Leisure skills – No formal participation, decreasing engagement with others

Finley - Assessments

- ACLS – 5.4 (self-directed learning)
- CAPE - Participation profile reveals number & frequency of activities slightly below average, enjoyment significantly below typical peers

OT for Children

- Key Concepts (Case-Smith & Kuhanek, 2019)
  - Family-Centered Care
  - Strength-Based Focus
  - Cultural Competence & Humility
  - Therapeutic Use of Self

OT Intervention with Children

- Essential Concepts (Case-Smith & Kuhanek, 2019)
  - Emphasis on a top-down approach
  - Use of multiple methods
  - Importance of context
  - Creating the "just right challenge"
  - Enable inclusion, engagement, participation

Finley – Problematic Occupations

- Self-Care – neglect, unhealthy habits
- Education – declining grades & engagement
- IADLs – decreased accountability, responsibility
- Social – unhealthy relationships
- Leisure – decreased participation

Finley – Barriers to Function

- What is getting in the way of Finley's participation in her adolescent life?
  - Limited coping skills, poor emotional regulation
  - Unsupportive environment
  - Unhealthy performance patterns

Finley – Interventions

- Facilitate adaptive coping skills
  - Cognitive Remediation
  - Social skills training
- Re-establish normative life roles
  - Family Psychoeducation
  - Environmental modification
- Engagement in age-appropriate occupations
  - Leisure skills exploration
  - Performance skills & performance patterns

Finley - Outcomes

- OT helped Finley identify unhealthy relationships, social environments, and performance patterns. She explored previous interests and was able to make some occupational engagement goals. She learned strategies for cognitive reappraisal, stress-management, and social communication.

Finley - Outcomes

- Inpatient OT worked with Finley and her family to plan for transition back to home and made a referral to outpatient OT to help maintain healthy performance patterns and work through social-emotional challenges in the natural environment.

Thank you!

- Patti Sharp, OTD, MS, OTR/L