Considerations in Vocational Training for Individuals with an Autism Spectrum Disorder

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Learning Objectives

• To increase participant knowledge of…
  – characteristics of individuals with autism spectrum disorders (ASD) and learning styles.
  – considerations in vocational training of individuals with ASD.
  – strategies to enhance vocational training to improve outcomes.

A brief overview of……

AUTISM SPECTRUM DISORDERS
Autism Spectrum Disorders

- Refers to a group of *neurodevelopmental* disorders characterized by...
  - Social impairments
  - Communication impairments
  - Restrictive, repetitive, & stereotyped behaviors & interests
- Lifelong impairment for many.
  - Wide variability in development and symptoms.
  - Difficult to predict needs across the lifespan.

Autism Spectrum Disorders

- High rate of co-occurring disorders.
  - Cognitive & neurocognitive.
  - Emotional & behavioral (anxiety/depression).
  - Medical (e.g., seizure, GI, sleep).
  - Sensory-motor.
- Significant impairments in functional life skills….
  - all areas of personal and social self-sufficiency needed for employment and independent adult living.

Autism Spectrum Disorder

- ASD and related delays and impairments can affect…
  - expectations for learning.
  - participation and engagement in learning.
  - opportunity for learning.
Implications

• Goal of vocational training.

EMPLOYMENT

• 50-75% of ASD unemployed.
  – 121% increase in Vocational Rehabilitation services in past 5 years.
  • Generic services
  • Costly
  • Many denied services due to severity of disorder.
• Many underemployed.
• Often experience job instability.
  – Social, behavioral and mental health problems.
• Often earn less than peers, even compared to other disability groups.
### Implications

Several reasons often cited for employment outcomes...

- ASD and related impairments.
- Less than effective transition preparation.
- Less than effective vocational preparation.

### ASD & Related Impairments

#### Social

- Non-verbal behaviors
  - Eye contact
  - Gestures
  - Body position
- Social interest
  - Some may have little interest in others and their activities
  - Some may be overly interested in other’s activities
- Social & emotional reciprocity
  - Social understanding
  - Perspective taking

#### Possible Affect

- May appear odd, aloof, and/or unsocial.
- May not establish cooperative working relationships
  - “Difficult to work with”
- Viewed as too direct.
- May be unaware when behavior is perceived as offensive.
- May not recognize/follow organizational policy/procedure without direct instruction.
- Not motivated by social factors.

### ASD & Related Impairments

#### Communication

- Limited functional communication
- Poor conversational skills
- Unusual or repetitive language or vocalization
- Limited social or leisure skills

#### Possible Affect

- May not communicate support needs or need for assistance.
- May not bring issues or ideas to supervisor or project team.
- May exhibit vocal behavior that is hard for others to understand or is disruptive.
- May not communicate with co-workers when needed—may not initiate.
- May not engage in appropriate behavior during ‘down times’ or ‘break time.’
ASD & Related Impairments

Repetitive Behavior
• Repetitive and restrictive patterns of behavior and/or interests.
• Routines and rituals.
• Stereotypic motor movements.
• Preoccupied with parts of objects.

Possible Affect
• Behaviors may interfere with task initiation and completion.
• Interruption of rituals/routines may cause personal distress and behavior problems.
• May have difficulty with object use due to over focus on parts of objects.

ASD & Related Impairments

Neurocognitive
• Intellectual Disability.
• Memory impairments.
• Executive function.
• Information processing.

Possible Affect
• Difficulty listening to and understanding directions.
• Difficulty remembering multi-step directions.
• Difficulty organizing multiple pieces of information.
• Difficulty initiating & completing tasks.
• Difficulty planning out scope of work.
• Time management
• Difficulty with learning new tasks.

ASD & Related Impairments

Neurocognitive
• Intellectual Disability.
• Memory impairments.
• Executive function.
• Information processing.

Possible Affect
• May not take in all the information presented.
• May miss relevant stimuli or stimulus characteristics because of over focus on irrelevant stimulus components.
ASD & Related Impairments

Emotional & Behavioral
- Anxiety
- Mood
- ADHD
- Oppositional Defiant
- Adjustment Disorders

Possible Affect
- Low motivation.
- Low frustration tolerance.
- Poor coping skills.
- Poor problem-solving skills.
- Easily stressed.
- Self-injury.
- Explosive.
- Agitation.

ASD & Related Impairments

Adaptive Skills
- All areas of independent living.
  - Personal
  - Domestic
  - Social
  - Leisure
  - Community

Possible Affect
- Poor ‘work survival skills’
- Poor/less than adequate grooming.
- Poor/less than adequate hygiene.

Transition Preparation

- Inadequate or less than effective transition preparation….
  - Lack of evidence-based transition guidelines for ASD.
    - Personnel may lack of knowledge of ASD and how to modify transition practices to improve outcome.
    - Current models may not be most effective for ASD.
  - Limited opportunity to develop essential employment skills.
    - Professional, parent, and/or student may not be knowledgeable of strategies and/or resources to assist in vocational preparation.
Vocational Training

- Insufficient capacity in state/regional vocational rehabilitation services.
  - Limited personnel to meet need.
  - Personnel may lack knowledge of current recommendations for ASD vocational preparation practices.
  - Student, parent, and/or personnel not knowledge of resources to assist in vocational preparation.
    - Reduced opportunity to develop skills.

ASD & Employment

Considerations in Vocational Training for ASD
Considerations

• May require enhanced transition preparation.
  – Begin early and focus on increasing student participation and engagement.
    • Reduce barriers.
  – Develop, implement and evaluate comprehensive preparation plan.
    • Ensure multiple opportunities for learning and use of evidenced-based instructional methods.
  – Professional development and parent education and training.

Considerations

• May require enhanced vocational training practices...
  – Ecological Model.
    • Accommodations to reduce barriers to participation & supports to increase engagement and learning.
  – Professional development.
    • ASD and evidenced-based training methods.
  – Comprehensive training plan.
    • Needed skills using evidence-based methods.
    • Multiple opportunities for learning.
  – Progress monitoring and team meetings for planning & problem-solving.
Considerations

- Descriptive/clinical reports recommend the following……
  - Ecological Assessment
    - Identify interests, preferences, and barriers to participation in training.
  - Comprehensive Training Plan
    - Learning objectives.
    - Structured Training Environment-accommodations & supports.
    - Evidence-based instructional methods & multiple opportunities for learning skills.
  - Progress Monitoring
    - On-going problem-solving and plan adjustment

Ecological Assessment

Person + Environment = Employment Outcome

- Autism Spectrum Disorder.
- Cognitive profile.
- Adaptive Skills.
- Social & Communication.
- Mental Health Status.
- Vocational Interests & Skill Set:
  - Preference Assessment
  - Situational Assessment

- Contextual assessment
  - Identify barriers & needed accommodations and supports.
  - Identify skills needed for each context.
- Job analysis
  - Identify specific skills needed to complete task.
Comprehensive Training Plan

• Training Objectives.
  – Specify work tasks & job related survival skills.
• Specify accommodations & supports needed.
  – To increase participation and engagement in learning.
• Specify instructional methods.
  – Use methods demonstrated to be effective in teaching individuals with ASD.
• Specify the training format.
  – When, where, who, how often etc.

Training Objectives

• State in objective and measurable terms.
  – Work Task Skills.
    • Task analysis, based on assessment data.
  – Job Related Skills.
    • Use assessment data to identify social, communication and behavior regulation skills needed.
  – Establish benchmark performance criteria for each task and job related skill you are targeting.

Accommodations & Supports

• Structure the work training environment.
  – Physical lay out should support task initiation and completion.
  – Activity Schedule/Task Lists posted.
  – All materials available.
  – Social-communication support available and visual supports posted.
  – Expectations posted (where appropriate).
  – Support personnel contact name and number.
Accommodations & Supports

• Scheduling systems.
  – Daily Schedule.
    • Depicts work training activities for the day and other relevant activities.
    • Can build in scheduled breaks to maximize participation.
    • Format based on developmental levels.
    • Post in appropriate location(s).

Accommodations & Supports

• Scheduling systems (cont.).
  – Activity Schedule/Task List (for work tasks).
    • Should align with task analysis.
    • Format based on developmental levels.
    • Post where training is occurring.

Accommodations & Supports

• Social-Communication Supports.
  – Joint Action Routines.
    • Identify and create opportunities for social-communication to occur during work routines.
    • Place visual prompts into Activity Schedule(s)/Task List(s).
  – Social and communication scripts.
    • Communication needed for work task(s) & setting.
      – Complexity based on developmental levels.
Accommodations & Supports

• Social-Communication Supports (cont.).
  – Social Stories & Social Skill Stories.
    • Provides description of relevant work environment and social expectations.
    • Embed scripts into story to prompt for understanding when skills will be needed.
  – Incidental teaching methods.
    • Model-prompt/coach-error correct-reinforce.
  – Choice or Leisure Board.
    • Visual depiction of activities for downtime.

Accommodations & Supports

• Behavior Supports.
  – Clear behavioral expectations (work rules).
    • Post and review regularly.
  – Reinforcement system(s).
    • Contingency Management.
      – Specify work rule and consequence for meeting/not meeting the rule/expectation.
    • Differential reinforcement schedules.
      – Reinforce appropriate work behaviors.

Common Training Methods

• Task Analysis.
  – Break task down into steps.
    • Number of steps should be based on individual developmental ability.
      – Use assessment data.
• Chaining.
  – Forward
  – Backward
  – Full task presentation
Common Training Methods

- Prompting & Fading.
  - Most to least
    - New skill
  - Least to most
    - Acquired skill
  - Shadowing & graduated guidance
    - Acquired skills & maintenance.

- Direct Instruction & Coaching
  - On-site and/or simulation.
    - Instruct-model-rehearse-error correct/reinforce.

Training Format

- Location
  - On-site and/or simulation.
    - For simulation training, include common stimuli in training format.

- Trainer(s)
  - Specify who will train what skills.

- Frequency & Duration.
  - Specify when and how often training will occur and for how long.

Progress Monitoring

- Formalized data collection system.
  - Method(s) and frequency based on the individual’s rate of learning.

- Team meetings.
  - Regular schedule to review data.
  - Planning for additional training needs identified by data.
  - Problem-solving for learning and other problems.
PUTTING IT ALL TOGETHER

ASD & Vocational Training:
Summary

- Poor adult employment outcomes.
  - Nature of ASD and related impairments.
  - Current transition and vocational training practices.
  - Lack of evidence-based guidelines.
  - Less than adequate capacity.
- Require consideration for enhancing current practice based on guidance from the field.

Resources

- Alpine Learning Group.
  - Download a free copy of their supported employment guide.
    - http://www.alpinelearninggroup.org/
- Missouri Disability Policy & Studies.
  - Download a free copy of their Adult Autism & Employment guide.
    - http://dps.missouri.edu/Autism.html
Resources

• Autism Speaks
  – Multiple resources including a Transition Toolkit, Visual Supports, & an Autism Apps listing.
  • http://www.autismspeaks.org/
• Organization for Autism Research
  – Multiple resources including a Guide to Transition.
  • http://www.researchautism.org/

Resources

• Geneva Center
  – Various tip sheets for visual supports and choice board (see Visual Aids Gallery).
  • http://www.autism.net/
• Rochester Regional Center for Autism
  – Training DVD for Schedules & Direct Instruction for Social Skills.
  – Various links to other resources.
  • http://www.urmc.rochester.edu/childrens-hospital/developmental-disabilities/RRCASD.aspx

Question & Answer