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Comorbid Disorders & Intervention Techniques for Children/Adolescents with Autism Spectrum Disorder (ASD)

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University Hospitals Cleveland Medical Center
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DSM-5 Criteria for ASD

1. Persistent deficits in social communication and social interaction, have to have all 3 (currently or by history):
   a. Deficits in social-emotional reciprocity
   b. Deficits in nonverbal communicative behaviors used for social interaction
   c. Deficits in developing, maintaining and understanding relationships

** Specify current severity

DSM-5 Criteria

2. Restricted, repetitive patterns of behavior, interests or activities as evidenced by at least 2 of the following (currently or by history):
    a. Stereotyped or repetitive motor movements, use of objects or speech
    b. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of behavior of verbal or nonverbal behaviors
    c. Highly restricted, fixated interests that are abnormal in intensity or focus
    d. Hyper-or hypo reactivity to sensory input or unusual interest in sensory aspects of environment

DSM-5 (cont'd)

3. Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life).
4. Symptoms cause clinically significant impairment in social, occupational or other important areas of current functioning.
5. Not better explained by intellectual disability or global developmental delay. Intellectual disability and ASD frequently co-occur; to make co-morbid diagnosis, social communication should be below that expected for developmental level.

"Those with well-established DSM-IV diagnosis of ASD, AS, or PDD,NOS should be given the diagnosis of ASD."

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Autism Spectrum Disorder

- ASD- can be conceptualized as a heterogeneous group of symptoms.
- No agreed upon single cause.
- Every child with ASD is unique.
- Key is to identify the symptoms so we can intervene.
- While symptoms are evident to parents by 12 months, the majority of children with ASD are not diagnosed until age 3-4 years.

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Causes

- Genetic predisposition-most heritable disorder (risk for siblings is greater than 18%); in identical twins if one child has ASD risk is 40-90% the other will have it also.
- Some children with known genetic disorders have ASD (Fragile X)
- The pathogenesis of ASD is complex (not a single gene disorder)
- May be more than 1000 genes involved (less than 5% of all genes)

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Brain Differences

- Too many neurons (brain cells) in areas responsible for social/emotional behavior and learning
- Too few cells in cerebellum
- Early differences in brain size
- Connectivity problem-white matter or fiber tracts not developing normally
- Structural differences in the brain

(Ozonoff, Dawson, & McPartland, 2015)

Environmental

- Correlation with maternal and paternal age
- Decreased risk in females
- Decreased risk if taking prenatal vitamins (especially folic acid)
- Exposure to toxins
- No support for vaccine (MMR) as a cause

(Autism Speaks, 2017))

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Prevalence

- Increased by 119 percent from 2000 to 2010
- Prevalence in US is 1 in 54 (10% increase over 2014)
- Fastest growing developmental disability
- 4 times more common in boys than girls
- 35-50% of young adults (19-25) with ASD have not had a job or received postgraduate education after high school.

(CDC, 2020)

DSM-5 Criteria for Social (Pragmatic) Communication Disorder (SCD)

A. ***Difficulties in social use of verbal and nonverbal communication as manifested by:***

1. Deficits in using communication for social purposes, such as greeting and sharing information, in a manner that is appropriate for the social context.

2. Impairment in the ability to change communication to match context or the needs of the listener and avoiding use of overly formal language.

3. Difficulties following rules for conversation and storytelling, such as taking turns in conversation, rephrasing when misunderstood, and knowing how to use verbal and nonverbal signals to regulate interaction.

DSM-5 Criteria for SCD (cont'd)

B. Deficits result in functional limitations in effective communication, social participation, social relationships, academic achievement, or occupational performance, individually or in combination.

C. Onset is early in the developmental period.

D. Symptoms are not attributable to another medical or neurological condition or to low abilities in the domains of word structure and grammar, and are not better explained by ASD, ID, global delay, or another mental disorder.

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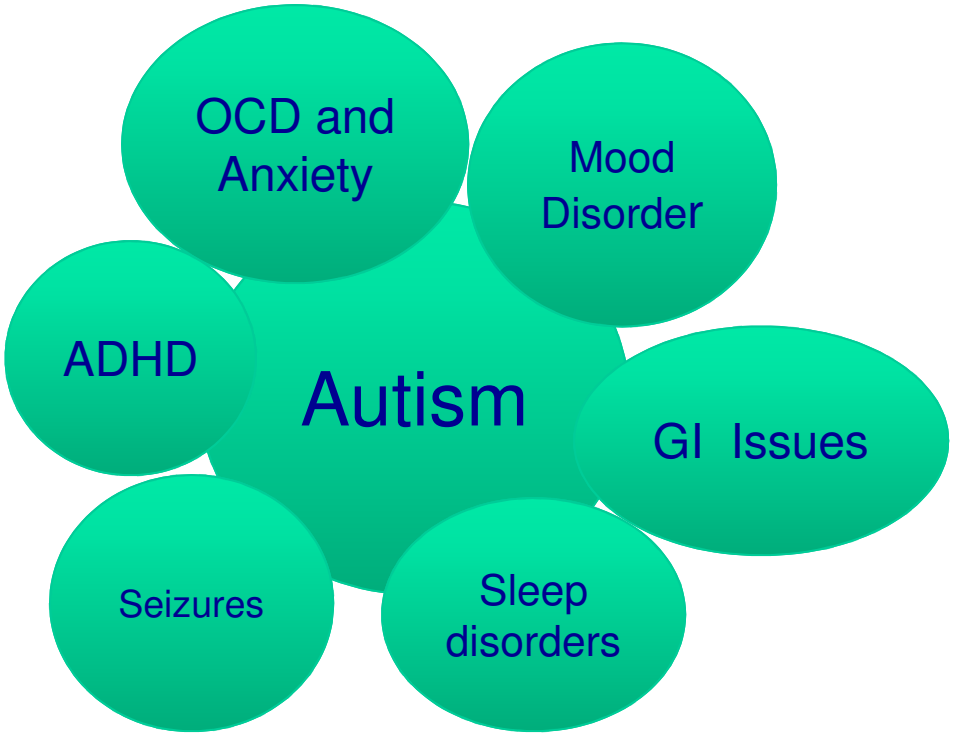
Comorbidity

- 30-60% have ADHD
- 43-88% unusual preoccupation
- 16-37% obsessive/compulsions or rituals
- 50-89% stereotypic utterances/mannerisms
- 11-40% with an anxiety disorder
- 9-44% depressive mood, irritability
- 43% self-injurious

Comorbid Conditions



ADHD Statistics

- Most commonly diagnosed behavioral disorder of childhood
- Affects 5-8 % of school-aged children (30-60% of children with ASD)
- Brain damage 5-10%
- Genetic predisposition 40-50%
- Altered brain chemistry-problem with neurotransmitters (dopamine, serotonin and norepinephrine-too little or ineffective)
- 2/3 of individuals with ADHD have a comorbid condition

DSM-V Criteria of ADHD

- Symptoms present prior to age 12
- Impairment from the symptoms in 2 or more settings
- Clear evidence of clinically significant impairment in social, academic or occupational functioning
- Symptoms do not occur exclusively during the course of schizophrenia/psychotic/mood disorder

DSM-V Criteria for ADHD

- Inattention persistent for at least 6 months and is not consistent with developmental level
  - 6 or more symptoms of inattentiveness as listed
    - fails to give close attention to details
    - difficulty sustaining attention
    - poor listening skills

DSM-V Criteria for ADHD

- poor follow through on instructions
- poor organizational skills
- avoids tasks that require sustained attention
- often loses things
- is easily distracted
- forgetful

DSM-V Criteria for ADHD

- Either hyperactivity/impulsivity persistent for at least 6 months and is not consistent with developmental level
  - 6 or more symptoms of hyperactivity as listed
    - fidgets or squirms
    - leaves seat without permission
    - runs or climbs excessively

DSM-V Criteria for ADHD

- has difficulty playing quietly
- is often "on the go"
- talks excessively
- blurts out answers before question is finished
- difficulty awaiting turn
- interrupts or intrudes on others

ADHD Subtypes

- Predominantly inattentive
- Predominantly hyperactive/impulsive
- Combined

Making the diagnosis

- Clinical diagnosis - no blood test
- Based on past and present history given both by parents and teachers
- Checklists or rating scales may be used
- Physical examination to rule out any medical problem
- Developmental history

Anxiety

- Apprehensive anticipation of future danger or misfortune:
  - dysphoria
  - somatic symptoms of tension
  - focus of anticipated danger being internal or external

Anxiety Disorders

- Social Anxiety Disorder

1. Marked fear or anxiety about social situations (that is out of proportion) in which the individual may be exposed to scrutiny by others (i.e., speaking in public, eating around others, initiating a conversation).
2. Fear that one will say or so something or display anxiety, and will elicit a negative reaction.
3. Social situations almost always provoke fear or anxiety.
4. Individual will avoid the situations or endure them with extreme anxiety/fear.

- 6 month duration for all ages
- Not attributed to effects of a substance or another medical condition.

Anxiety Disorders

- Panic Disorder
  - panic attacks or sudden feelings of terror that come without warning
  - symptoms
    - chest pain
    - heart palpitations
    - short of breath
    - unrealistic worrying
    - self-consciousness

Anxiety Disorders

- Generalized anxiety disorder
  - Chronic, exaggerated worry about everyday events
  - present for at least 6 months
  - children/adolescents may complain of fatigue, tension headaches and nausea
  - restlessness, difficulty concentrating, irritability, sleep disturbance
  - causes interference in daily function

Anxiety Disorders

- Obsessive-compulsive disorder
  - repeated, intrusive and unwanted thoughts
  - rituals/actions done to diminish dysphoria of obsession
    - counting
    - arranging/rearranging objects
    - germ issues
    - clothing
  - Compulsions more easily identified in children

Questions to ask for Anxiety

- Can food touch/can others touch your food
- Things that prevent them from playing outside
- Order at a restaurant/talk in front of class
- Sleep hygiene
- Clothes wet/dirty or hand washing
- Cleaning issues: dishwasher, vacuum, rugs

Mood Disorders
Mania/Hypomania

- Up to 20% of those with ADHD develop bipolar disorders
- Symptoms
  - Distractibility
  - Increased goal directed activity
  - Psychomotor agitation
  - Excessive involvement in pleasurable activities
- Unequivocal change in functioning
- Not due to medical condition or pharmacologic effect

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Mood Disorders
Depression

- Depressed or irritable mood
- Loss of interest in activities (such as play)
- Concentration problems
- Change in sleep pattern
- Lack of energy or excessive agitation
- Change in appetite
- Feelings of hopelessness
- Suicidal ideation

Sleep Problems in ASD

- Individuals with ASD suffer from problems (insomnia) 40-80% more
- Those with hx of regression have more sleep problems
- Sleep problems can impact mood, attention, impulse control, daytime functioning in general & cause parental stress
- Daytime sleepiness may manifest as hyperactivity

(Cortesi, Giannotti, Ivanenko, & Johnson, 2010)

Sleep Problems (cont'd)

- Research shows effectiveness of behavioral interventions for sleep onset (sleep hygiene, visual supports, bedroom pass, routine, etc.)

- Several studies have shown abnormal melatonin levels in children with ASD (elevated daytime, sig lower nighttime)

- Genetic susceptibility region (chromosome 15q) may explain melatonin defect

(Cortesi, Giannotti, Ivanenko, & Johnson, 2010)

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Pediatric Neuropsychology

Professional specialty concerned with learning and behavior in relationship to a child's brain. A pediatric neuropsychologist is a licensed psychologist with expertise in how learning and behavior are associated with the development of brain structures and systems.

www.div40.org

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What is a Good Evaluation?

- Looks at "whole" child/adolescent
- Tests administered depend on your concerns – have specific questions in mind
- Clearly delineates strengths and weaknesses
- Interprets test data for you in terms that you understand
- Uses the objective data from research-based methods/standardized tests to make specific, relevant and practical recommendations

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What do we assess?

- General Intelligence
- Academic Achievement
- Language
- Phonological Processing
- Visual-Spatial Perception
- Memory
- Attention
- Executive Functions
- Processing Speed
- Fine Motor Skills
- Sensory Functioning
- Emotional/Behavioral/ Social Functioning
- Adaptive Functioning

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Intervention

- Education about ASD
- Individual/Family Therapy
- Behavior management techniques/Positive programming
- Primary focus is prevention of problems (be aware of sensory issues & coping skills)
- Social Skills Training (Social Stories/Scripts/Groups)
- Visual Supports
- Peer Mediated Intervention
- Medication

Self-Regulatory Strategies

- Identify signs of overload
- Identify potential problematic situations
- Strategies (effectiveness) child uses to manage stress
- Modify environment and adult response
- Try soothing music
- Exercise
- Technology

Calm Down Strategies

- Create cue cards or visual list of what to do when angry/stressed.
- When child shows card, direct to "quiet spot"
- Use social story to teach quiet spot
- When in quiet spot, direct to visual to show how to calm (take a deep breath, count to 100, recite Star Wars characters, listen to music on iPad)
- Use stress ball, notebook to write in/drawing, etc.
- When calm, return to activity

EF Interventions

- Use of everyday routine with (e.g., Goal-Plan-Do-Review)
- Support working memory with "visual copy" of routine
- Teach child how to formulate a plan, review their performance
- Teach to monitor their behavior
- Teach to become a self-advocate

Academic Interventions

- Highlight texts, study guides, notes
- Completed model of what is expected
- List of criteria for grading
- Decrease writing-verbal responses, computer, multiple-choice tests

Academic Interventions

- Priming
- Teaching outlining skills, how to pick out important details
- Graphic Organizers (*Framing Your Thoughts, Inspirations, etc.*)
- Provide enrichment activities in areas of strength (i.e., advanced classes in science, drama, art, etc.)
- Homework support – fax or email to parent or eliminate

Travel Card

Lists 4-5 target behaviors student is working on with a listing of the classes the student attends. Teacher marks travel card at the end of each class period. Designed to increase productive behaviors, facilitate collaboration, increase awareness of IEP goals, and improve home-school communication.

Smith Myles, B. & Adreon, D (2001)

"Learning the R.O.P.E.S for Improved Executive Function"

(Schetter, 2004)

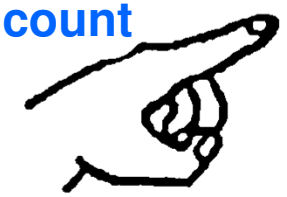
- Capitalize on visual strengths, practice and feedback in real-life situations, relies heavily on graphic organizers

wait =

hands and feet still

be quiet

1,2,3,4,5,6,7
count



Social Skills

- Cue cards and scripts for interacting with friends
- List of reminders/rules for behavior (Cue cards to show how to deal with stressful situations (cue cards for stressful situations – too loud – get headphones or exit room)
- Never assume, always teach skill
- Use Social Stories
- Try Comic Strip Conversations
- List of activities, list of free-time options
- Dry erase board, white board, etc.

Social Checklist

1. Say “hi” to a friend._____
2. Ask a friend what his favorite video/movie is._____
3. Show a friend one of your favorite books._____
4. Say something nice to your friend._____

Sample Hidden Curriculum

- Know which kids to avoid.
- Do not pass gas or pick your nose in any class.
- Use a nice tone of voice when talking to teachers – they like it. Also, try to smile sometimes.
- Rules change from teacher to teacher. Do not focus on the fact that it might not be fair.
- If you do something funny, it is usually funny once. If you do it repeatedly, it makes you look goofy and people might make fun of you.

(Myles & Simpson, 1998, 2001)

Rules To Live By

Do not:

- Laugh when someone else is crying/angry
- Correct someone else's grammar when he/she is angry
- Ask to be invited to someone else's birthday party
- Tell a friend he/she has bad breath
- Do what actors do on television, actors are not the same as real life

(Myles & Simpson, 1998, 2001)

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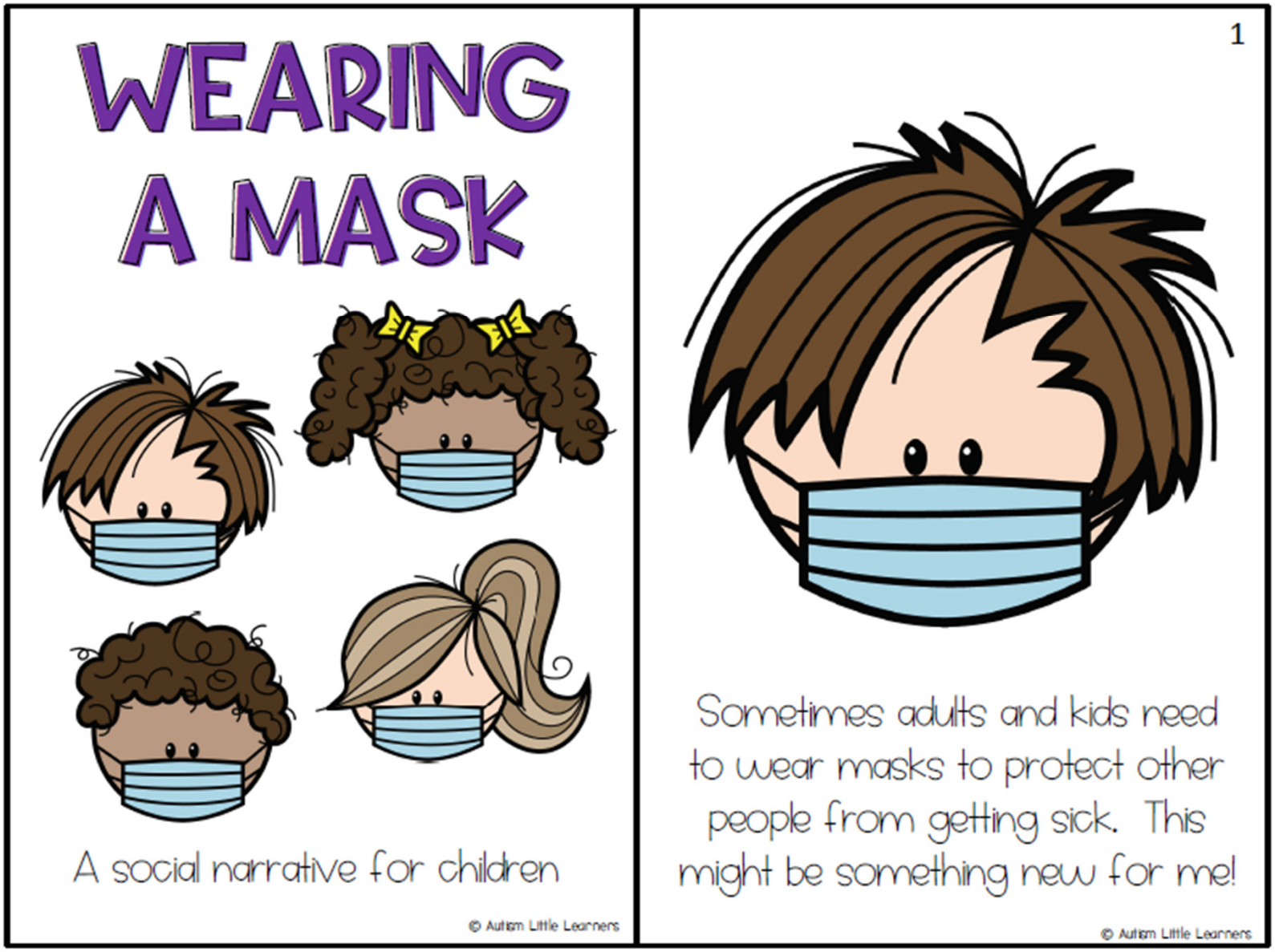
Social Story



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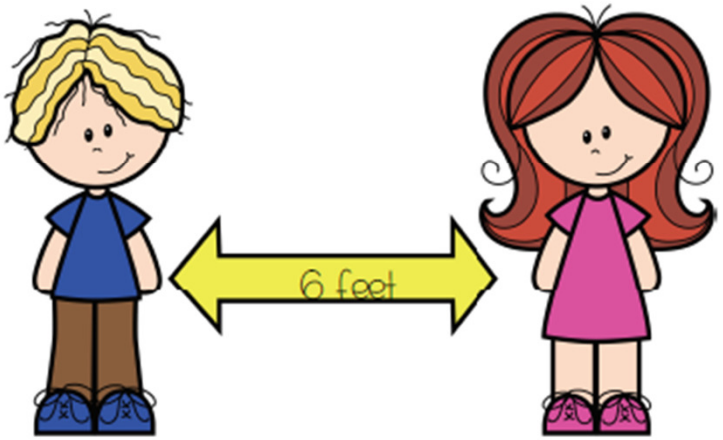
Social Story

2

Masks might feel kind of uncomfortable at first, but I will get used to it!

3



Even when I wear a mask, it is still important to stay 6 feet away from other people.

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Social Story

4

It is still OKAY to touch and hug my family.

5

I usually don't need to wear a mask in my home or my yard.

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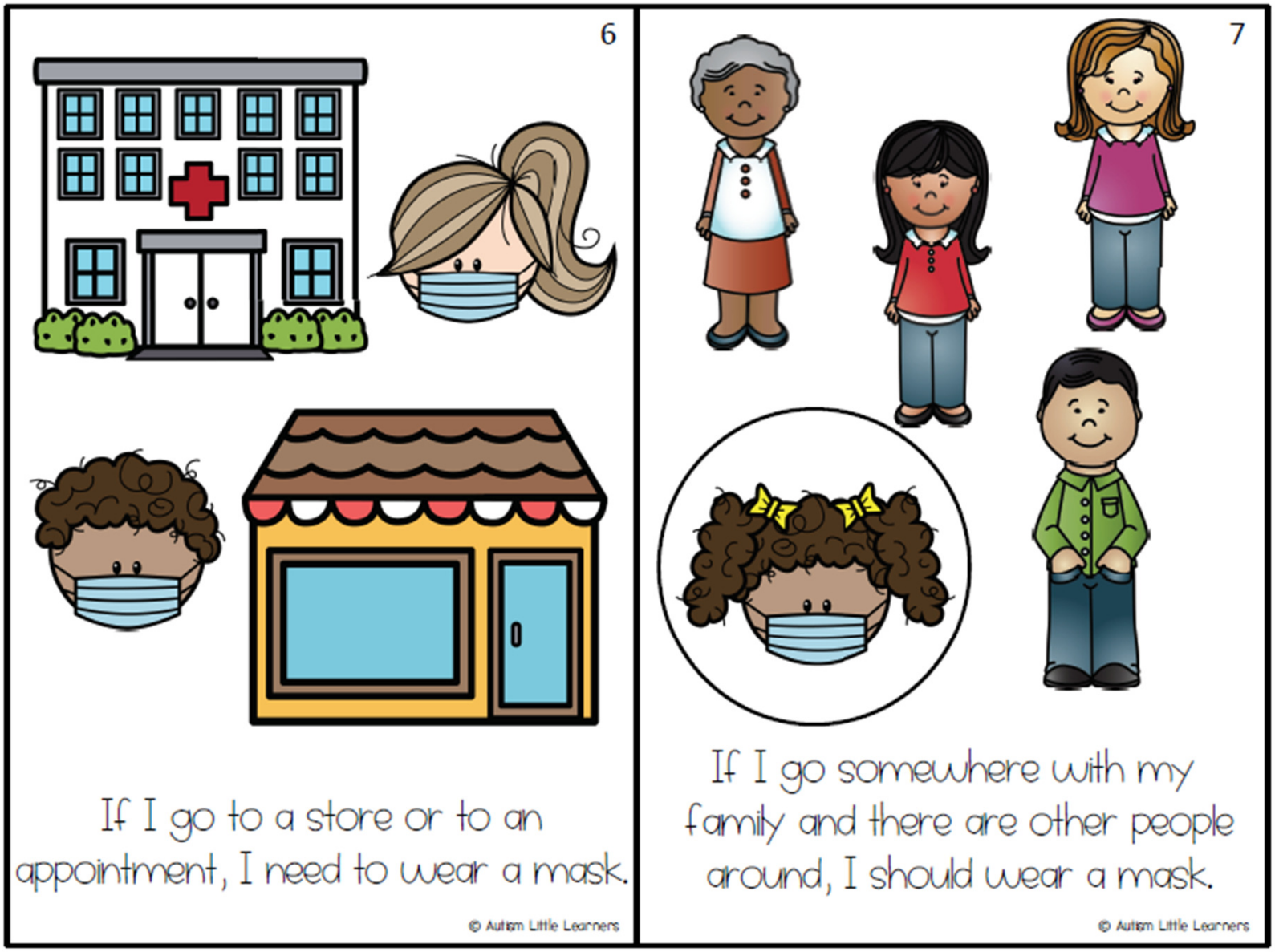
Social Story



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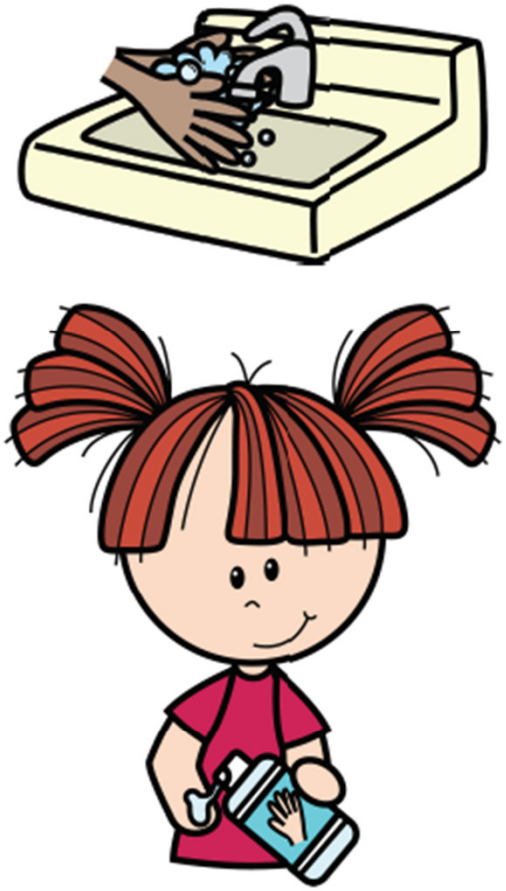
Social Story

8

A mask can protect other people if I cough or sneeze. It will also protect me from others!

9



It is still important to wash my hands or use hand sanitizer.

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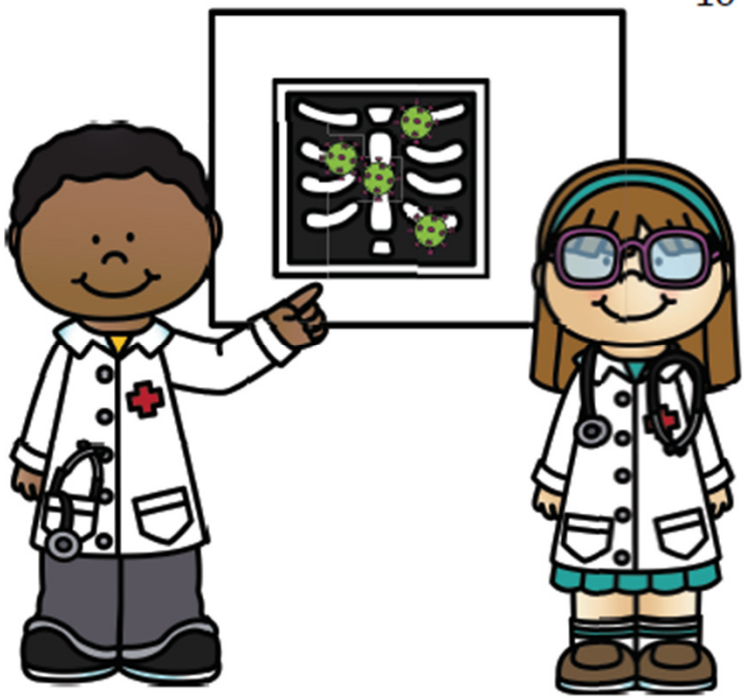
Social Story

10



Doctors are working hard to find ways to make COVID-19 go away. Once it is gone, I won't need to wear a mask anymore.

11

Wearing a mask is different, but it will be okay!

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Social Story

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WHIMSY CLIPS

Thank you for purchasing this activity from my store! I hope you find these materials as useful as I have in my classroom. Be sure to come back for newly added products!

♥taraTUCHEL

Summary

- Prepare for transitions
- Provide structure and visual supports
- Establish routines and be consistent
- Limit verbalizations and avoid arguments
- Teach expectations for all new routines (lists, social stories)
- Never assume, first teach
- Focus on generalization

Summary (cont'd)

- Be aware of your own language, body posture, and stress level
- Provide choices (clearly label child versus adult choice time)
- Avoid (or explain) idioms, words that have double meanings, sarcasm, or nicknames
- Communicate clearly/avoid verbal overload

Resources

- Parent support groups/information (www.autism-society.org)
- Sibling support groups (www.thearc.org/siblingsupport)
- Respite services (CBDD)
- Other family members (www.asgc.org)
- Create informal network of other parents/families/professionals in community (www.milestones.org)
- Books/training modules (www.ocali.org; www.autisminternetmodules.org; www.autismspeaks.org)

- AIMS – Autism Internet Modules: Linking Research to Real Life (from Autism Interactive Collaborative Network group) www.autisminternetmodules.org
  - Organization for Autism Research (OAR)
  - Autism Speaks (www.autismspeaks.org)
    - ❑ 100 Day Kit
    - ❑ online screening tool--Modified Checklist for Autism in Toddlers (M-CHAT)
    - ❑ Video clips/glossary

    Excellent resources for coping with COVID-19

"Learn the Signs. Act Early"

- Free resource kits
- Downloadable materials: printable milestones checklists, interactive milestones table, parenting tips, etc.
- Great website with resources
  - www.cdc.gov/actearly

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Websites

- www.amazon.com
- www.autismconsortium.org
- www.autism.com
- www.autismlittlelearners.com
- www.autism-resources.com
- www.autismsciencefoundation.org
- www.autism-society.org
- www.autismspeaks.org
- www.carolgraysocialstories.com
- www.fhautism.com

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Websites (cont'd)

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- www.globalautismcollaboration.com
- www.littlepuddings.ie
- www.milestones.org
- www.MonarchTT.com
- www.oasis.com
- www.semel.ucla.edu/autism
- www.SpecialNeeds.com
- www.usdoj.gov/disabilities/htm
- www.usevisualstrategies.com
- www.wrightslaw.com

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