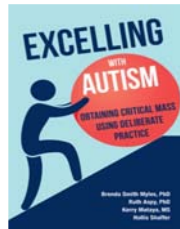
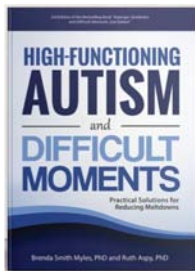


SELF-REGULATION, MELTDOWNS AND SENSORY ISSUES

Brenda Smith Myles, Ph.D.
brenda_myles@mac.com

NOT ALL SLIDES ARE IN YOUR HANDOUTS

Disclosure



Full-time Employment



<https://www.forbes.com/sites/karenhigginbottom/2018/05/31/the-benefits-of-employing-people-with-autism/#2736ecc07>



INDEPENDENT LIVING:

20%

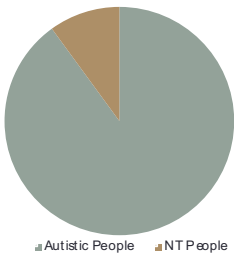
Newman et al. (NLTS2), 2011

SOCIAL INCLUSION



- 54% not invited to activities with friends
- 69% never saw friends
- 65% never talked with friends on the

Longevity



Suicide Ratio

■ Autistic People ■ NT People

Life Expectancy

- NT = 72
- Autistic with ID = 39.5
- Autistic without ID = 58

Leading causes of death

- Heart disease
- Suicide
- Epilepsy

Guan & Guohua, 2017; Hirvikoski et al., 2018

THE BRAIN

Self-Regulation Challenges

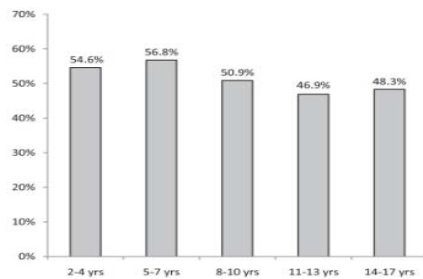
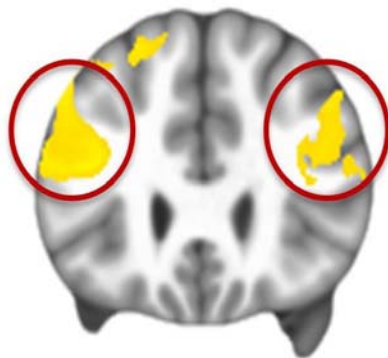


Fig. 1. Percentage demonstrating aggression across age groups.

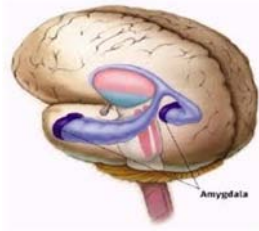
Mazurek, M. O., Kanne, S. M., & Wodka, E. L. (2013). Physical aggression in children and adolescents with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 7(3), 455-465.

Self-Regulation - Underactivity



Richey et al., 2015

Regulation: Amygdala



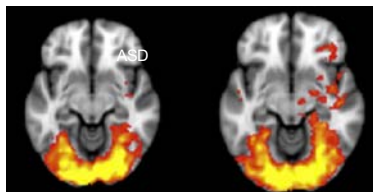
- Detects danger
- Produces stress, fear, anxiety
- Related to eye contact and emotion recognition
- Key in behaviors, such as anxiety, meltdowns and aggression

Regulation/Change

Individuals with ASD process small changes – such as a change in the schedule -- similar to the way another person would process a major change – such as being fired from a job
(Gornot & Wicker, 2012).

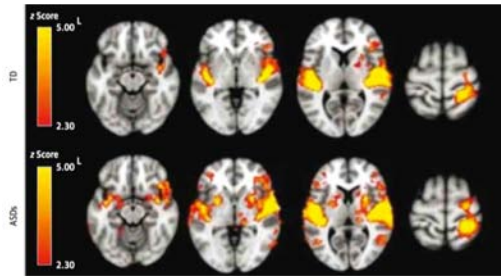


Self-Regulation: Sensory - Auditory



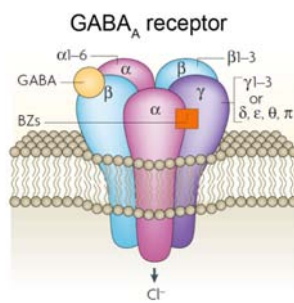
Green et al., 2013

Self-Regulation: Sensory - Auditory and Tactile



Green et al., 2015

GABA



Jacob et al., Nature Reviews Neuroscience, 2008

Robertson et al., 2015

PEOPLE WITH AUTISM ARE
INUNDATED WITH A DELUGE OF
SENSORY INFORMATION THAT CAN
TURN EVERYDAY ENVIRONMENTS
INTO DISTRESSING EXPERIENCES

Lurie, 2015

"If my child graduates from high school and he cannot read, it would be against the law to discriminate against him.

However, if he graduates and is not able to live or work next to other people without hurting or scaring them, society will not tolerate him.

As a result, he will most likely lose his freedom to move about his community independently, impacting his long-term quality of life."

- Quote from "a very wise parent" in Using the S-Paint Scale and Anxiety Curve Poster by K. Dunn-Buron and M. Curtis (2008) AAPC

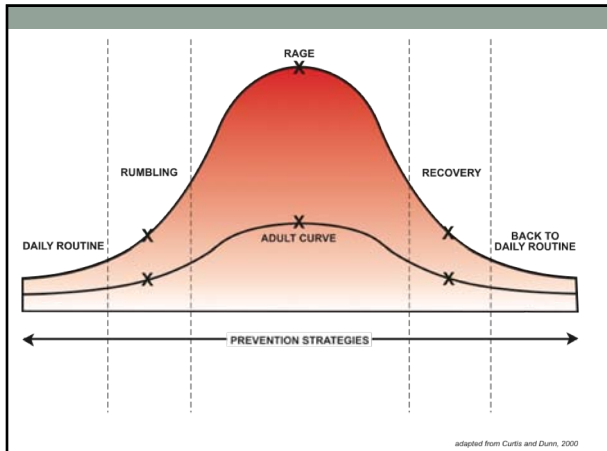
TRADITIONAL TEMPER TANTRUMS" vs "MELTDOWNS

Temper Tantrums

- The child will look to see if behavior is getting a reaction
- The child can alter behavior to ensure that she does not get hurt
- The "temper tantrummer" will use a situation to his benefit
- The child has a goal and when the goal is met, the behavior returns to typical
- The child is in control

The Meltdown

- The child has no involvement in the social situation
- The child is not concerned for his own safety
- The child does not look to or care if others react to his behavior **during** the meltdown
- Meltdowns appear to be under their own power and have a cycle
- Are **not** manipulation – they are the only behavior the child has to react to the situation




Reactive Regulation Challenges

- Not planned in advance
- Occurs because the individual does not have the skills to problem solve, recognize feelings in self, match feelings, to event, and calm self



Farmer et al., 2014





This is important!

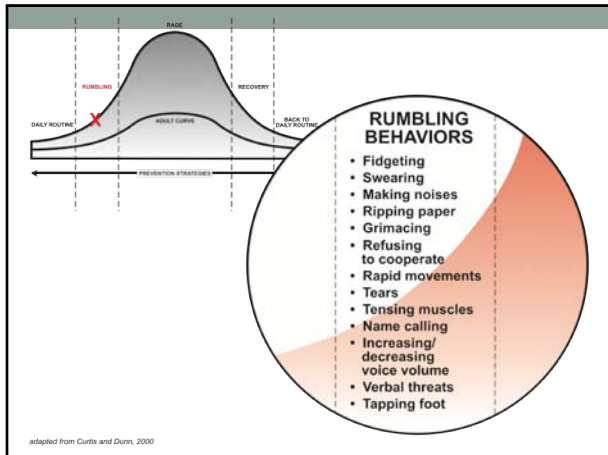
The minute the rage cycle hits, all opportunities for learning are gone (perhaps for the rest of the day)!

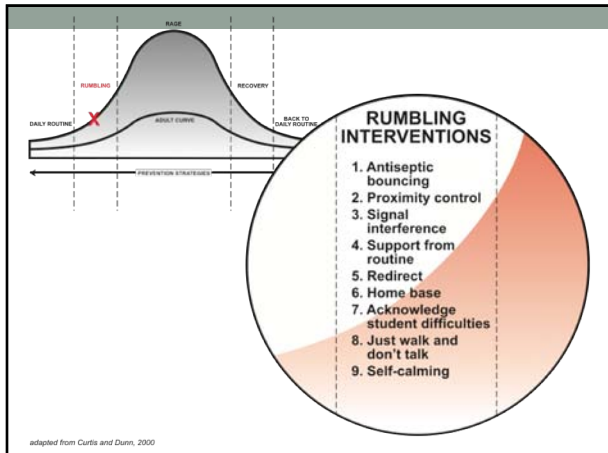


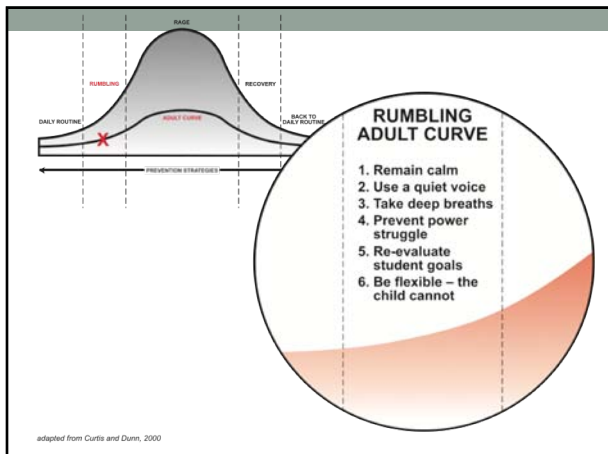
Rumbling Stage

- Most important stage
- Building up to rage
- Some thinking ability still intact
- Individual children have their own patterns of “rage behavior”

Note: The role of verbalizations in escalation.

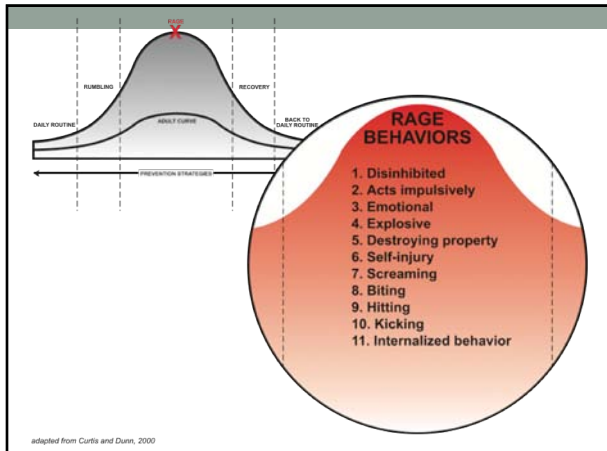


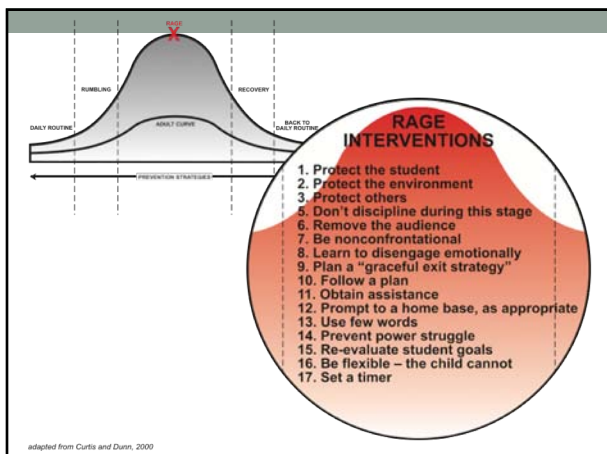


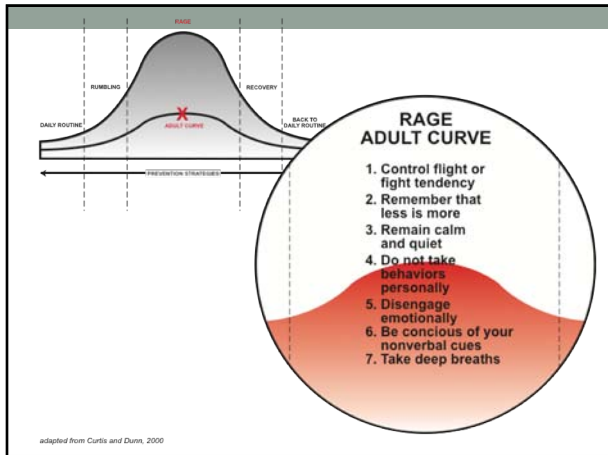


Rage Stage

- This is the lightening stage when the neurotransmitters are not working correctly.
- The child or youth may shout, swear, kick, or hit.
- He or she is clearly out of control.

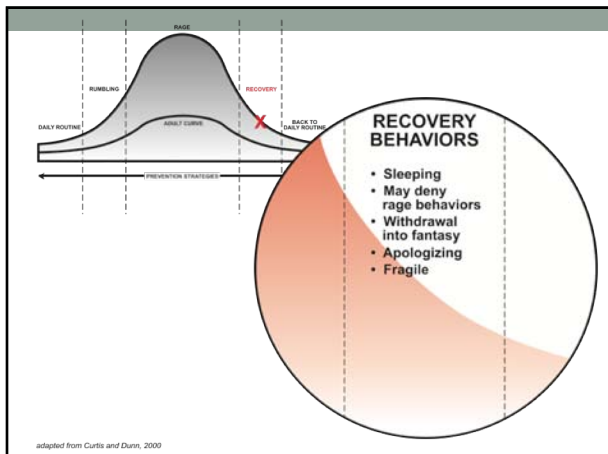


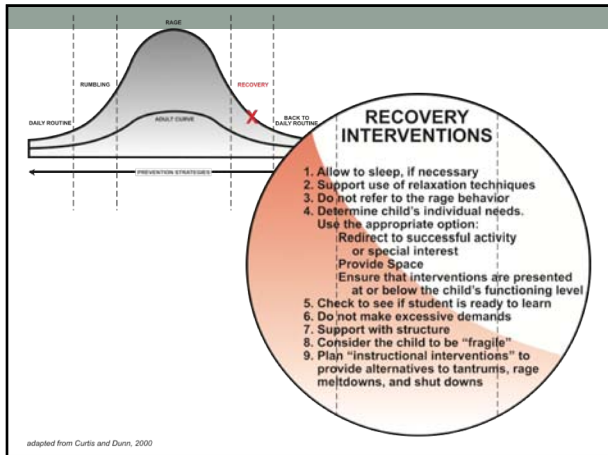


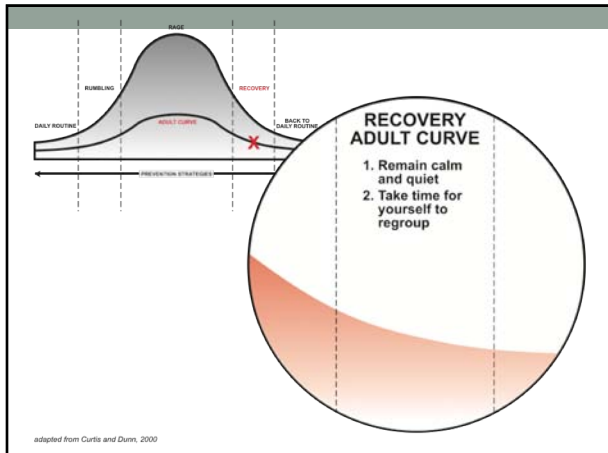


Recovery Stage

- The child or youth may sleep for awhile.
- He/she may apologize or be contrite.
- Withdrawal may occur; a fantasy world may be the target.
- The student may deny meltdown.
- Some do not remember what happened during the Rage Stage.







Student Crisis Plan Sheet

Page 1

Rumbling Stage

Student Crisis Plan Sheet	
Student Name _____	Student Age/Grade _____
Teacher Name _____	Date of Plan _____
ENVIRONMENTAL/PERSONNEL CONSIDERATIONS	
1. Describe how you can obtain assistance when it is needed: _____	
2. At which stage should outside assistance be sought? _____ rumbling _____ rage _____ recovery	
3. Which school personnel are available to provide assistance? _____ principal _____ school psychologist _____ paraprofessional _____ social worker _____ counselor _____ other (please specify) _____ _____ other (please specify) _____	
4. Where should child(ren) exit to? (specify room or school) _____	
5. At what stage should the plan be used by others in the classroom? _____ rumbling _____ rage _____ recovery	
6. Are there any extenuating circumstances that others should know about this student (i.e., medications, related medical conditions, home situation)? _____	
7. Who should be notified of the incident? _____	
8. How should the incident be documented? _____	

Figure 3-4. Student crisis plan sheet.

HELP AUTISTIC INDIVIDUALS TWO UNDERSTAND THEIR REGULATION NEEDS

*EVERYONE HAS REGULATION
PROBLEMS TO SOME DEGREE!*

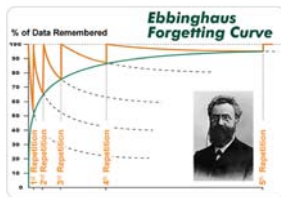
Self-Regulation Has **MANY** Sides

- Staying calm
- Controlling one's impulses and to stop doing something, if needed
- Doing something because it is needed – even if you don't want to
- **Recognizing how your are feeling**
- **Matching emotions to events**



TEACH, TEACH, PRACTICE,
PRACTICE, PRACTICE,
RETEACH ...

The Forgetting Curve



- People tend to forget one-half of what they learned over days or weeks if it is not actively rehearsed.

Sensory Demands

- Some experiences are experienced too intensely and others are not intense enough



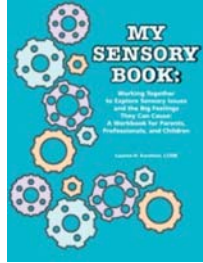
Coulter Video

Sensory

Interoception



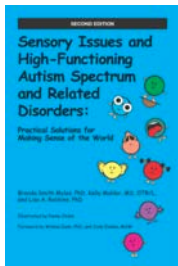
My Sensory Book



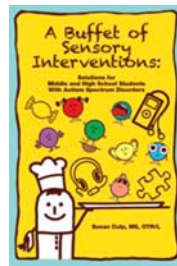
Regulation

Sensory Issues High Functioning
ASD: Practical Solutions ...

Sensory Buffet



Myles, Mahler, & Robbins



Culp

Sensory Issues

- Smell
- Taste
- Touch
- Visual Input
- Auditory
- Vestibular (balance)
- Proprioception (body awareness)
- Interoception



Myles et al., 2014

Interoception and Self-Regulation: A Connection

- Itch
- Temperature
- Sexual arousal
- Emotional awareness
- Empathy
- Theory of mind
- Intuition
- Pain
- Decision making
- Sensing risk
- Understanding norm violations
- Maternal and romantic love
- Control of urges (i.e., smoking)
- Reading social gestures
- Hunger
- Motivation
- Response to fight or flight

From the work of Kelly Mahler



Preschool Child

- Reacts to minor and major events in a similar manner
- Does not report injuries or act hurt
- Has difficulty with potty training
- Recognizes hunger only as feeling sick to stomach
- Startles easily
- Limited repertoire of interests

School Age

- May be under- or over-weight
- May not match clothes to weather
- Easily coerced into risky behavior
- Does not react when others are hurt
- Experiences meltdowns
- Difficulty understanding the thoughts of others
- Has few friends

Adult

- Delays going to the doctor
- Has difficulty empathizing with partner
- Makes hidden curriculum errors at work
- Has difficulty making decisions regarding finances
- Smokes and drinks
- Has a "short fuse"
- Makes some bad decisions

Strategies: Visual Supports



Go to the bathroom at:
9:00
11:00
1:00
3:00

Strategies: Social Narratives

Memo:

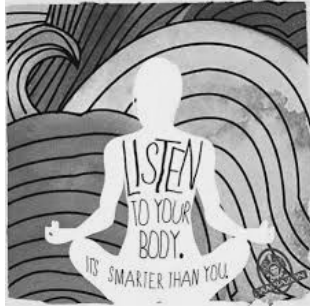
Some people can tell when they are hurt by the feelings in their body. For others, this can be a challenging thing to do. While you are learning the feelings in your body, it is important to make sure that your body is okay. Everyday before you shower, you need to do a mirror check.

Look at your body to see if there are any

- Cuts
- Red spots
- Bruises
- Swollen or raised areas
- Anything with pus

If you see any of these, you need to immediately tell your mom or dad. This will help to keep you healthy.

Strategies: Body Scan



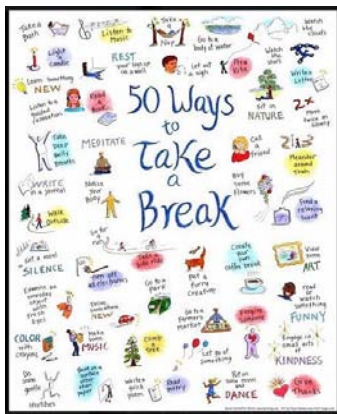
Teaching Interoception Awareness

- Supports emotional understanding in self
- Promotes emotional regulation skills
- Promotes physical health
- Helps determine if problem solving skills are needed
- Supports empathy and perspective taking
- Provides a firm foundation for learning new skills

PROACTIVE BREAKS TO SUPPORT REMAINING CALM

Remaining Calm

- Know when breaks are needed
 - To remain calm
 - To regain composure
- Ensure that they are
 - Matched to the handbook
 - Cleared with the supervisor



Coping Cards

**Take 2 deep breaths
with your eyes closed**

**Press hands together
and count to 10 slowly**

Coffin, 2006

Incorporate Priming

- Preparing for daily activities accomplishes two very important things.
- It helps to reduce anxiety by making the environment predictable.
- It can reduce processing time, thereby allowing you to respond in a more timely manner.

REGULATION PLAN: LILIA

Stress Level	Regulation Plan	Personal Reminder
High: Clenching teeth, eyes watering, cannot understand meaning of written words	Take formal break time: <ul style="list-style-type: none"> Close and lock office door Turn off ringer and lights Lie on yoga mat with iPod Listen to 13-minute nature music selections 	The unexpected will hit me like a big lightning bolt. Do: Pause, take a deep breath, inhibit blurting, "No!" Say: "Let me think about this and get back with you."
Medium: Excessive yawning, rubbing eyes, rubbing nose, time between meeting and understanding	Increase regulation awareness: <ul style="list-style-type: none"> Turn on white noise Turn on lamp lighting Take a short walk (e.g., use restroom, deposit bagging tags, refill car) 	The unexpected will annoy me. Internationally arrive, adjust quickly, identify daily language. Say: "Okay," "Yes," "I'll add that to my list." To get back with you in just a moment. Or you might not see my response - I may have been...
Low: Notice signs of coming between fingers, tears off glasses, understanding written words	Effects a regulation and: <ul style="list-style-type: none"> Close office door Drink gum Drink coffee or other beverage 	I am able to handle the unexpected. Say: "The usual went on my iPhone to 30 min to do stress level check and engage in normal conversation style." Say: "What is stress management is consent to show that you are thinking in terms of 'Thanks, interesting, sorry, I have, had, or some other generic comment'."
None	Stop my stress free email	Continue to follow my CAPS (see p. 55)

Managing Stress to Maintain Engagement

Stress Level	Regulation Plan	Personal Reminder
High: Clenching teeth, eyes watering, cannot understand the meaning or written words	Take formal break time: <ul style="list-style-type: none"> Close and lock the door Turn off ringer and lights Lie on yoga mat with iPod Listen to 13-min nature music selections 	The unexpected will hit me like a big lightning bolt. Do: Pause, take a deep breath. Inhibit blurting, "No!" Say: "Let me think about this and get back with you."

Managing Stress to Maintain Engagement

Stress Level	Regulation Plan	Personal Reminder
Medium: Extraneous drumming on computer keyboard, rubbing eyes, lag time between reading and understanding	Increase regulation assistance: <ul style="list-style-type: none"> • Turn on white noise maker • Switch to lamp lighting as opposed to overhead as opposed to overhead florescent light • Take a short walk (i.e., use restroom, deposit outgoing mail, refresh drink) 	The unexpected will annoy me. Do: Intentionally smile; exhibit positive, friendly body language Say: "Okay," "Yes," "I'll add that to my list," or "I'll get back with you in just a moment. Do you mind if I ask any questions that I might have?"

Managing Stress to Maintain Engagement

Stress Level	Regulation Plan	Personal Reminder
Low: Rubs fabric of clothing between fingers, takes off glasses, momentary lag time between understanding spoken words	Employ a regulation aid <ul style="list-style-type: none"> • Close office door • Chew gum • Drink coffee or other beverage 	I am able to handle the unexpected Do: Set the visual timer on my iPhone to 30 min to do stress-level check and engage in normal conversation style. Say: When in doubt, remember to comment to show that you are listening by saying, "Thanks," "I see," or some other generic comment

Managing Stress to Maintain Engagement

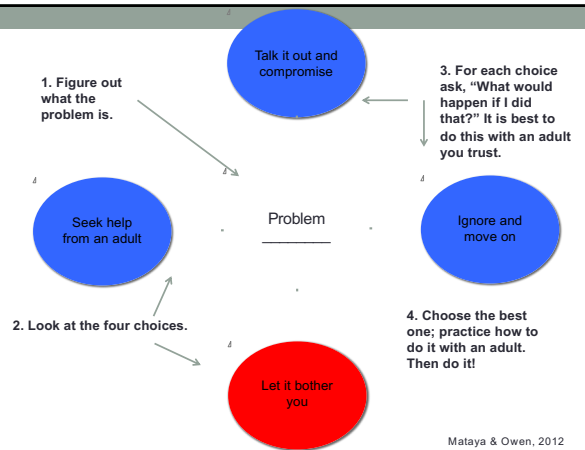
Stress Level	Regulation Plan	Personal Reminder
None	Enjoy my stress-free status!	Continue to follow my CAPS

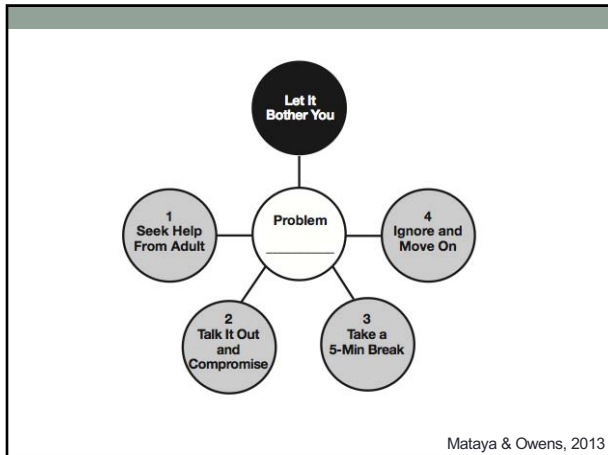
LEARN TO SOLVE PROBLEMS

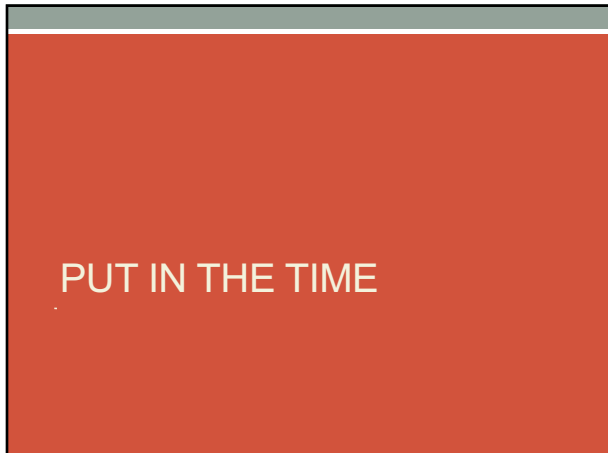
Efficiently and Calmly

ALL PROBLEMS HAVE A SOLUTION --

But you might not always get the solution you want.
This is called life!







Put in the Time

SUCCESS IS THE SUM OF SMALL EFFORTS, REPEATED DAY IN & DAY OUT. 👍

EXCELLING WITH AUTISM

OBTAINING CRITICAL MASSES USING DELIBERATE PRACTICE

Brenda Myles, PhD
Ruth Myles, PhD
Kerry Johnston, MSW

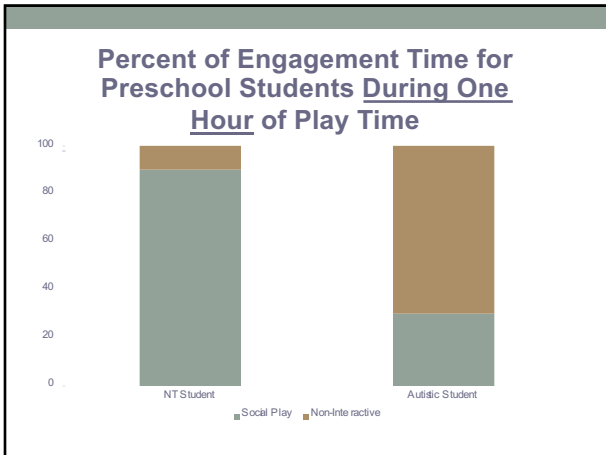
Put in the Time

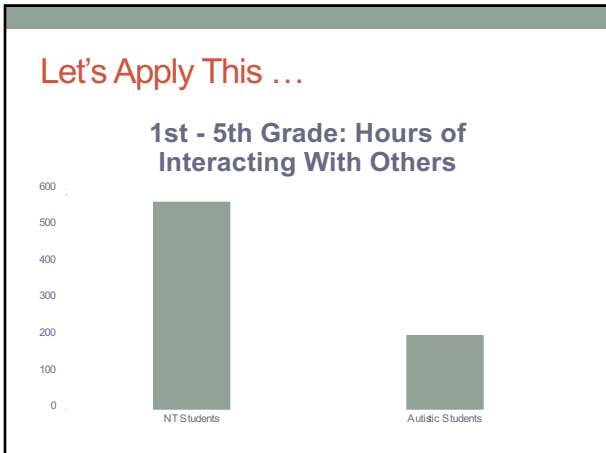
- Regularly scheduled instruction and practice
- Intense, but not always rote (use levels of learning)
 - Sessions may be short
 - Increase time, as needed

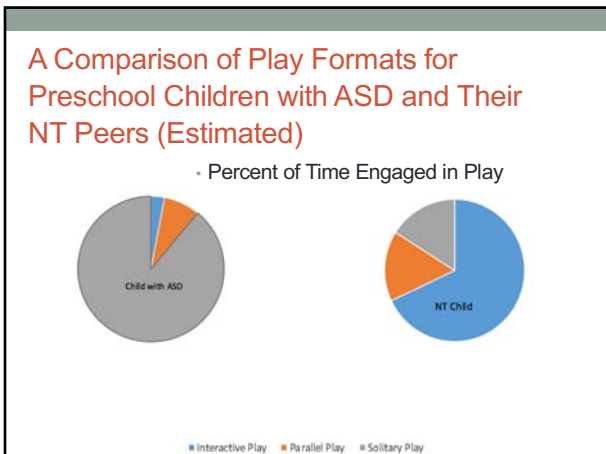


HAVE CHILDREN AND ADOLESCENTS WITH ASD HAD THE OPPORTUNITY TO PUT IN THE TIME?

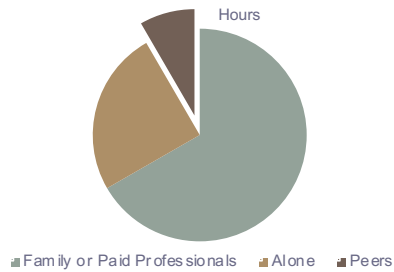
SOCIAL OUTCOMES







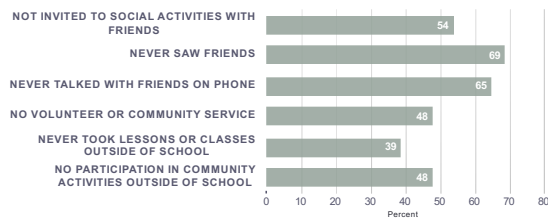
Companionship During Free-Time Activities for Adolescents with ASD



Percent of Adolescents with ASD Who Engage in Free-Time Activities

• Watching television	86%	• Visiting with friends/relatives	20%
• Using computer	53%	• Napping	15%
• Physical activity	47%	• Having a conversation	15%
• Listen to music	45%		
• Shopping	44%		
• Relaxing (unoccupied)	36%		
• Reading	36%		

Social Participation of Young Adults with ASD

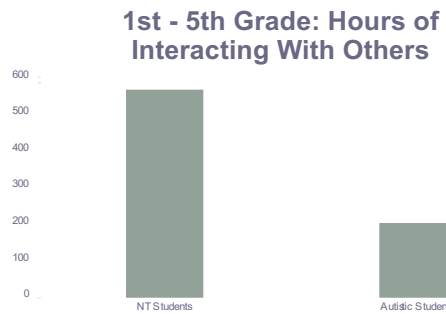


Roux et al., 2015

Put in the Time

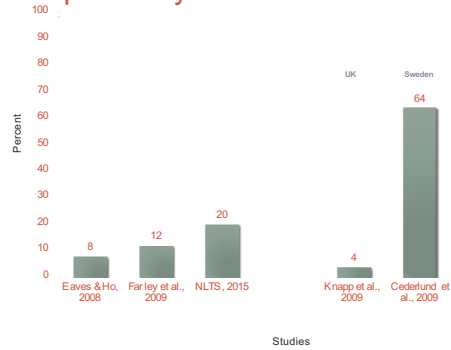


Let's Apply This ...

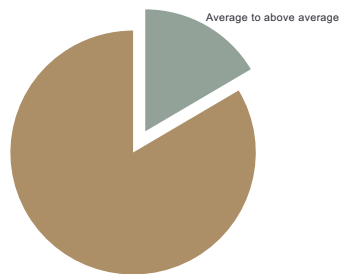


INDEPENDENT LIVING OUTCOMES

Percent of Adults with ASD Who Live Independently

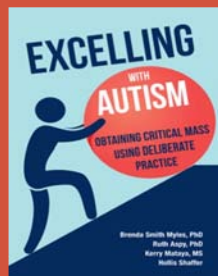


Scores on the Waisman Activities of Daily Living (W-ADL) Scale



-ADL; Maenner, Smith, Hong, Makuch, Greenberg, & Seltzer, unpublished data (2011)

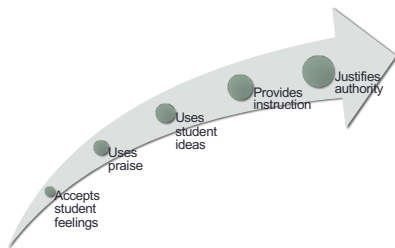
RELATIONSHIPS WITH TEACHERS



POSITIVE TEACHER-STUDENT RELATIONSHIPS

Have a long-term impact on learners' academic, behavior, mental health and social skills

Teachers Behaviors Related to Student Academic and Social Gains



Aspy & Roebuck, 1977

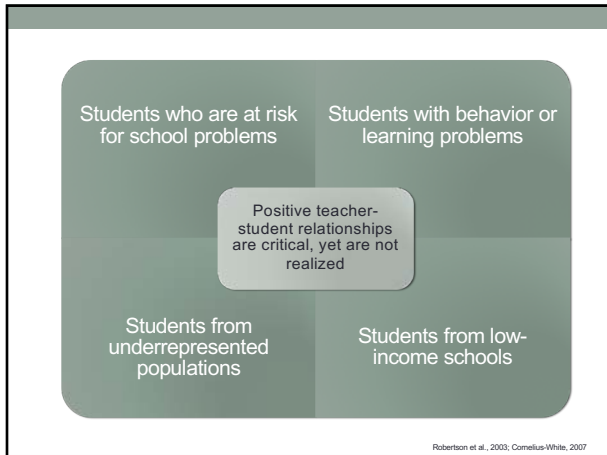
Teachers Tend to Have ...

Positive Relationships With

- Students from high income families
- Students receiving no special services

Conflictual Relationships With

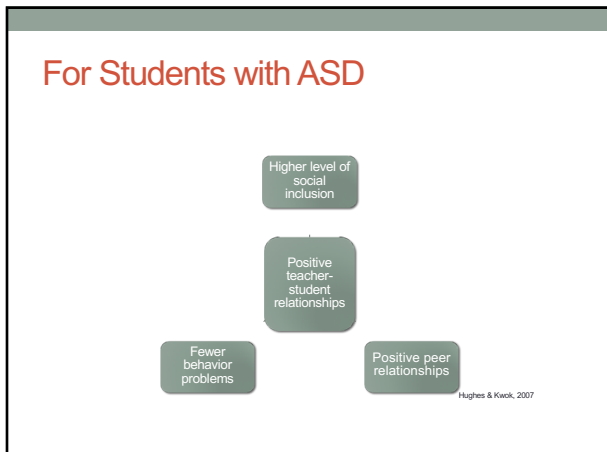
- Students who have special services
- Student with difficult temperaments



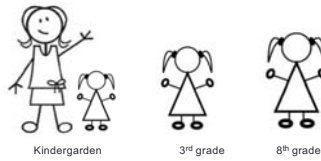
Who Benefits More?

- Students from low income schools benefit **more** from positive teacher-student relationships more than their counterparts in average-to-high income students

Cornelius-White, 2007



Impact: Achievement, Behavior, Social Skills



Cornellup-White, 2007

MINDFULNESS

Mindfulness

- Mindfulness derives from Buddhist practice and is described in the psychological literature as an intentional and non-judgmental awareness of the present moment

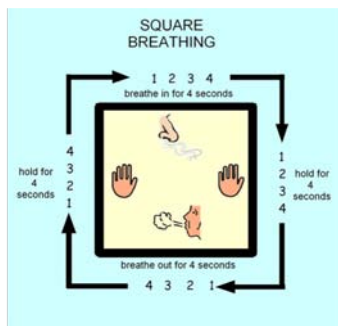
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3629307>

Photo Album

- Identify calming photos
- Place in album
- Review throughout the day with coaching about the calming effects of the photo album
- Prompt to use when upset
- Available to learner on an as-needed basis



Mindfulness of Breathing



www.autismlearning.net

Walking Mindfulness



PHOTO: DIANE BIGDA

Meditation on the Soles of the Feet for Anger Management

- Stand up and feel your feet, especially how they feel pressing against the floor
- Now walk slowly.
 - As you walk simply notice how your feet feel.
 - When your mind wanders, just feel your feet again.
 - Notice the changes in sensation as you lift your foot, step forward, and place your foot back down on the floor.
- Practice until you feel more relaxed

<http://centerformsc.org/sites/default/files/Soles%20of%20the%20Feet.pdf>, Singh, Singh, Singh & Winton (2011) by Fernleaf Publications

THE POTENTIAL OF
INDIVIDUALS WITH AUTISM IS
LIMITLESS!
