

Keeping your Cool: Teaching Emotion Regulation Skills to Children with Autism Spectrum Disorder

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Maria Turner Sample

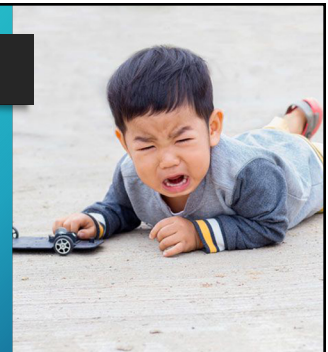
- Supporting children with Autism Spectrum Disorder over 10 years
- Early intervention and Elementary years in home, preschool, school and clinic environments with children ages 2-16
- Associate with ABLE Developmental Clinic and East Van Behaviour Analysis
- Co-Clinical Director of UP Early Intervention Clinic, Inc.

Overview

- Terminology and construct overview
 - Behavioural and non-behavioural perspectives
- Developmental Considerations
- Literature review
- Case presentations
- Discussion
- Questions

Why emotions?

- Emotional behaviours are often associated with problem behaviour
- Difficult for families and caregivers to be exposed to displays of emotion by their children
 - Treatment fidelity
 - Everyone suffers
- Difficult, but important, topic to tackle



Private Events



Behaviour analysis and emotions

- Problems with emotion as a scientific term should not discourage inquiry
- Recent calls for interdisciplinary research of broader relevance
- Limits the scope of the science of behaviour analysis unnecessarily

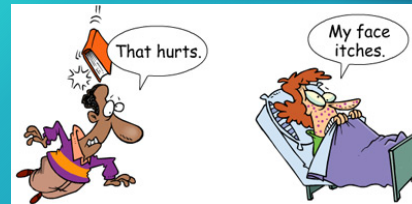
Irrelevant

Emotion Concepts (Gross, 2015)

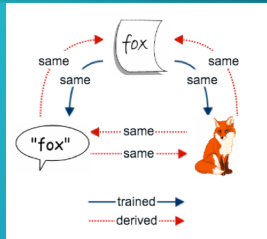
- Affect - psychological states that involve values-based discriminations
- Stress responses
- Emotions
- Moods



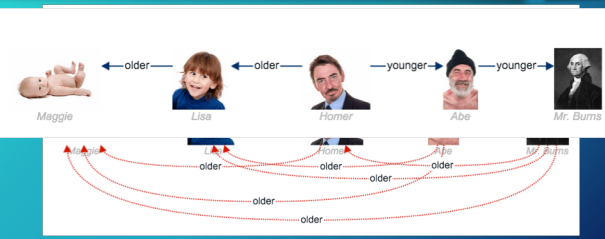
Emotion versus Emotional Behaviour



Derived Stimulus Relations



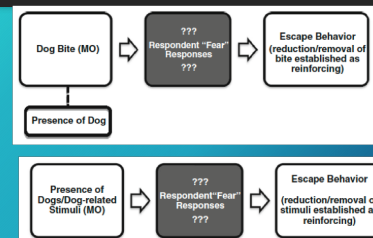
Network of Derived Stimulus Relations



Emotion and Motivation (Lewon & Hayes, 2014)

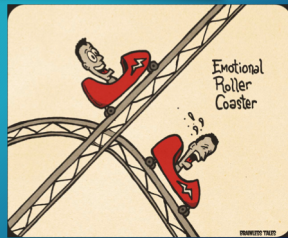
- Emotions as products of motivating operations
- Stimuli associated with subjective experience of emotions function to alter the value of certain stimuli as reinforcers, and evoke response classes that have produced those stimuli in the past
 - Emotions alter the probability of certain types of responses

Emotion and Motivation (Lewon & Hayes, 2014)



Emotions as contingency descriptors (Layng, 2017)

- "Contingency Factors": Emotions reflect the contingency requirements we face. As the requirements change, so do our emotions.

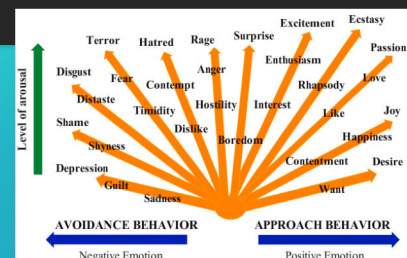


Contingency Analytic Approach (Layng, 2017)

- Reporting pain/discomfort → sympathy and support (potent reinforcer)
- Reporting pain/discomfort increases (operant behaviour)
 - May or may not occur with the experience of the private event of pain
 - One may "feel" or show physiological signs of pain
- Behaviour and emotion are a function of and part of the contingency

Evolutionary perspective

- Strong emotions allow for rapid appraisal, and prepare for subsequent actions to increase survival



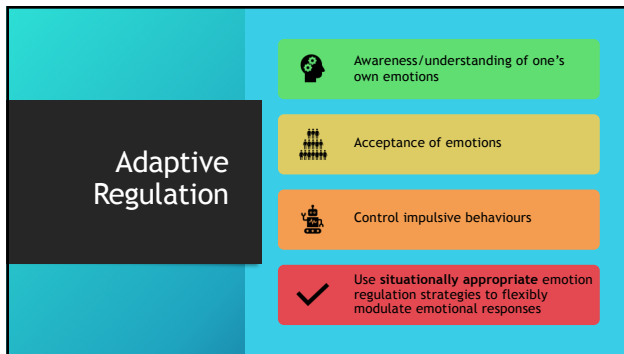
Emotion Regulation

- We can, and do, exert some measure of control over our emotional states
- Modify your emotions and reactions to fit the current context to move towards valued goals
 - Automatic or intentional

Adaptive Regulation

Modulating, not eliminating, emotional experience
 Inhibit inappropriate or impulsive behaviours
 Allows individuals to behave in accordance with desired goals, even when experiencing negative emotions






Development of emotion regulation


- Infants are only capable of simple forms of emotional regulation
 - Gaze-shifting
- Rely heavily on caregivers to meet their emotional needs
- The development of language skills allows:
 - more control over the environment
 - caregivers to explain and give instructions
 - Start to learn social rules, and how they can shape own and others' emotions

Visual Cliff




Building Blocks of Social Communication Skills

- Gaze/eye contact
- Intentional use of gesture, sounds, words
- Understanding of gesture and words
- Imitation
- Joint attention
- Play
- Observational learning
- Perspective Taking
- Follow social norms/expectations



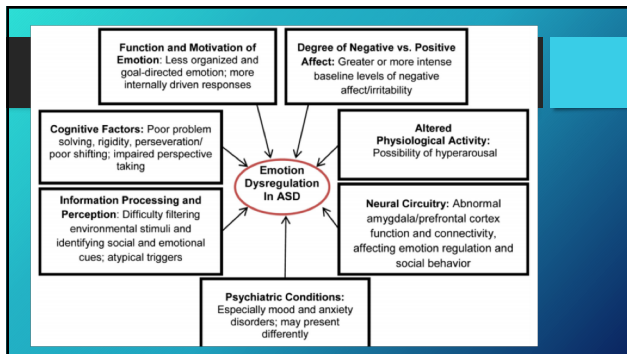
Coping at Hockey



I'm OK it's OK

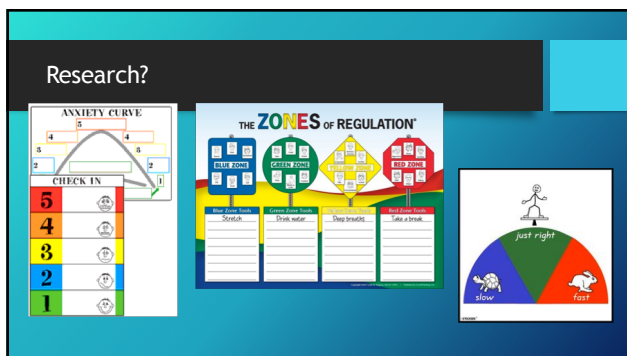
Emotion Regulation and ASD

- Children with ASD may fail to use adaptive ER strategies (Laurent & Gorman et al., 2018, Mazefsky et al., 2013)
 - React impulsively to emotional stimuli → "meltdowns"
 - Adults with ASD report higher use of ineffective strategies
- Lack insight required for effective ER
 - Difficulty describing emotional experiences
 - Experience physiological states without accompanying verbal behaviour
 - Rely on over cues
- Tacting, discriminating between and understanding the antecedents to their own emotions (Roberts-Collins et al., 2017)



Research

- Recognition of basic emotions (Lee et al., 2018)
- Match emotion to situation sample (Conallen & Reed, 2016)
- Tacting private events of others (emotion to situation), Tacting own private events (Conallen & Reed, 2016; Lee et al., 2018)
- Emotion regulation curriculum 8-12 years (Jr. Detective program/Secret Agent Society) (Thompson, Riosa & Weiss, 2015)
- CBT program for Adults with ASD (Kuroda et al., 2013)



Case Presentation 1

Leon Choo

Case Presentation 2

Mariah Bashir

Discussion

- Procedure to teach coping/calm down sequence to children with ASD
- Consistent, quality teaching was required to demonstrate the skill
- Maintained over time
- Generalization across environments
- Response generalization

What type of learner may benefit

- If emotional behaviours are often paired with expressions of problem behaviour, or if the student demonstrates emotional reactivity
- If major problem behaviour is not your primary concern
- Resources to support intensive teaching of the routine will likely speed up acquisition
- No particular prerequisite skills other than listener-responding discrimination training

Coping Skills Basics



High probability target behaviours

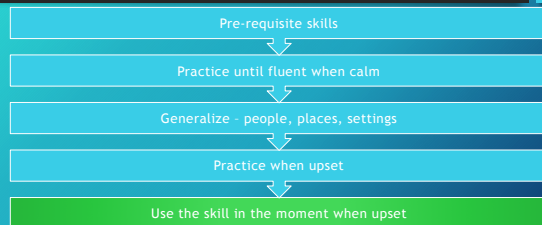


Target behaviours that are conducive to the end goal for the particular student



Context should be considered - what will be deemed as appropriate in the environment where the skill is to be used

Teaching coping skills



Coping Routine Basics

- Individualized calming behaviour sequence
 - Easy and/or well practiced/fluent
 - Incompatible with problem behaviour
 - Calming/soothing

1. Teach each skill individually until fluent
2. Combine into a routine when calm
3. Generalize to mild agitation
4. Prompt in the moment

Less advanced:
Visual supports
Adult-directed

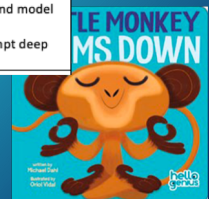
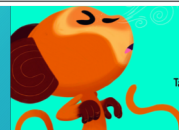
More advanced:
Independence

Individualization

- Individual skills taught
- Level of independence
- Teaching strategies
- Materials and supports
- Increased complexity
 - Provide choices for strategies for the learner to build their own routine
 - Incorporating self-management to self-initiating coping routine
 - Teach learner to pick an appropriate skill for particular situation

Adaptation for a 3-year old

- Model varied types of affect
- Make frequent reference to emotions (yours, CHILD's, and from characters in books, etc.) throughout session
- Suggest a break if CHILD is getting upset
- Use words, "calm down" and model slower behaviour.
- Use monkey visual to prompt deep breathing



Adult-led coping routine

Tantrum – early stages

Say, "Let's calm down", and put on music. Go-to songs are party rock, sound of silence by disturbed, badger badger, YouTube duck song, Dwayne Johnson you're welcome. Minimize the amount of changes in the environment (i.e., stay in the room, don't change activities, don't give access to parents, etc.). If Child is seeking physical comfort, you can provide that. Once Child has been calm for 1-2 minutes, redirect back to what you were doing in sessions.

The goal for this is to intervene and help Child calm down without providing access to items that Child was looking for (i.e., the trigger for problem behavior) or additional items that may reinforce problem behavior (i.e., ending session, getting access to parents), so that we can continue on with sessions.

Practical Strategies to Support Emotion Regulation Skills



Questions?

Unless you analyze the learner, it doesn't matter what intervention you use

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Thank you!!

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A little about me

- Leon, MS
- Junior consultant
- Profiles

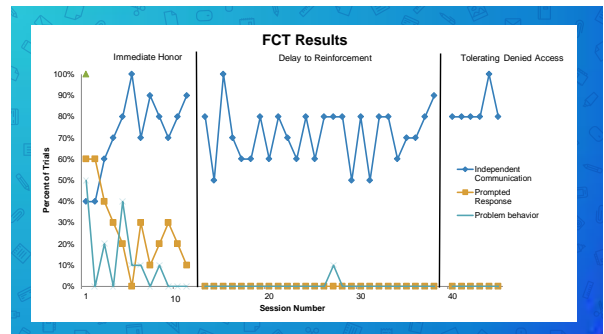


History of Case/Behaviors

- 12 year old male
- Referred for home ABA program (specifically SIB)
- Verbal abilities
- Problem behaviors

FBA and FCT

- FBA completed
 - attention, and escape/avoid a task
- FCT for Requests
 - 3 phases



Rigidities

- Reduction in SIB and whining
- Denied access to rigidity
 - What is it?
 - Tolerance for denied access to rigidities

Tolerance Training and Resulting Issues

- Decrease problematic bx with one rigidity, increase in another
- Escalations can't
- Emotional regulation
 - Minimal coping strategies
 - Low tolerance for frustration

Skill Deficit

- 3 programs introduced
 - Tolerance for error correction
 - Coping skills
 - Coping routine

Coping Skills

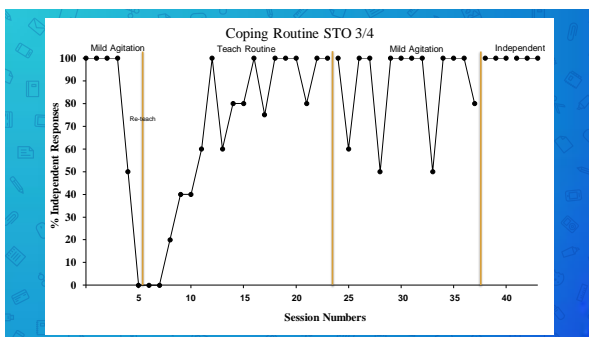
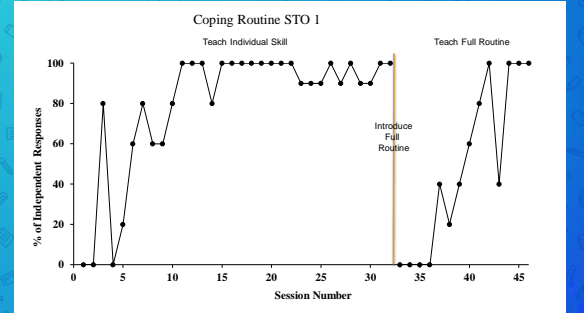
- Goal
- 4 short term objectives
 - ST01 – Teach 5pt scale ID
 - ST02 – 478 breathing
 - ST03 – Glitter jar
 - ST04 – Generalization to mild agitation



Coping Routine

- Goal
- ST01 – Teach routine
- ST01 – Power card story
- ST03 – Generalization to mild agitation
- ST04 – Independent use

1.	<p>Say how I feel!</p>
2.	<p>Take an A-Z-B breath (breathe for 4 counts, hold for 7 counts, exhale for 8 counts)</p>
3.	<p>Take another A-Z-B breath (breathe for 4 counts, hold for 7 counts, exhale for 8 counts)</p>
4.	<p>Let me say thoughts out</p>



Modifications

- Emotional recognition in mild agitation
- Emotional recognition program

Video

- Ran at ST01, in maintenance
- Why?

Generalization

- London Travel Story
- Gym
- Parents use of coping routine at home

Case Study 2

By Mariah Bashir, BA, BCaBA

About Me

BCaBA

Masters Degree: Special Education (Aug 2019)

- ◆ - BA Applied Behaviour Analysis, 2017
- ◆ - BA Psychology, 2014
- ◆ Behaviour Interventionist:
 - ◆ Young children with ASD: Private Setting
 - ◆ Adolescents and Adults with ASD: Arcus Community Resources

Jake

- ◆ 6-8 years old at time of intervention
- ◆ Discrete trials on the floor and at the table
- ◆ Preferences for rewards involve sensory stimulation
- ◆ Significant areas of his life affected by Autism

Home Session

- ◆ Home session included goals in the following areas:
 - ◆ Increase focused learning at the table
 - ◆ Play and leisure
 - ◆ Communication skills
 - ◆ Academic skills
 - ◆ Independence skills
 - ◆ Fine and gross motor

Problem Behavior

Escape Maintained

- ◆ Refusal
- ◆ Screaming
- ◆ Self-Injury: Mild to moderate head hitting
- ◆ Aggression
- ◆ Tantrum
- ◆ Non-responding
- ◆ Motor Stereotypy

Other

- ◆ Rigidity: insisting that something happen in a particular way. Engages in problem behavior if not honored.
- ◆ Motor stereotypy: interruption could result in escalation
- ◆ History of hair pulling (eye-lashes)

Previous & Current Interventions

- ◆ Zones:
 - ◆ Green Zone- Access to choice, preferred activities and tokens
 - ◆ Yellow Zone (refusal and non-responding)- Given a warning
 - ◆ Red Zone (aggression, head hitting, tantrums)- Lost access to reinforcing activities, and must complete the demand
- ◆ Token Economy:
 - ◆ Receiving a token for 1 minute of green zone behaviour.
 - ◆ Correct and effortful responding, manding, and on-task behaviour
- ◆ FCT

However

- ◆ Skill deficits are associated with higher task difficulty
- ◆ Significant areas/ routines affected that require intervention
- ◆ Impossible requests
- ◆ Unable to regulate emotions











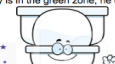
Coping Routine

- ◆ LTO: Jake will complete the steps of a coping routine when upset or agitated in the absence of major problem behaviour with 80% accuracy and independence across 3 consecutive sessions and two BIs.
- ◆ **Coping Routine:**
 - ◆ Take 3 belly breaths
 - ◆ Choose something to look at for 30 sec.
 - ◆ Choose something to listen to for 30 sec.

Coping Routine

- ◆ STO 1: Teach individual target behaviours
 - ◆ Belly Breathing
 - ◆ A- "Take a deep breath"
 - ◆ B- Student takes slow, deep breath for 5 sec.
 - ◆ "Look at" activities
 - ◆ A- "Look at (toy)"
 - ◆ B- Student will engage with toy for 30sec-1 min
 - ◆ "Listen to" activities
 - ◆ A- "Listen to (toy)"
 - ◆ B- Student will engage with toy for 30sec-1 min

STO 2: Expose student to Power Card story

Mr. Potty Stays Calm!  Mr. Potty likes to play with his FAVOURITE things all day long. He likes to play with stars, fans, and to go and play outside.  Sometimes, Mr. Potty can't play the way he wants to.  Sometimes, Mr. Potty needs to listen to what his mommy, daddy, and teachers ask him to do.  Sometimes, This makes Mr. Potty MAD!!!		When Mr. Potty is Mad, He Follows These Steps to Calm Down:	
1.	Take 3 deep breaths	Take deep breath	
2.	Look at a toy		
3.	Listen to a toy		
Then, Mr. Potty feels better, and he can go back to the Green zone. When Mr. Potty is in the green zone, he can HAVE FUN! 		 When YOU are mad, you can follow Mr. Potty's Calm Down Plan to stay in the green zone and have FUN!	

Coping Routine

- ◆ STO 3: Teach routine
 - ◆ A- "Use your calm down plan" and present visual.
 - ◆ B- Student will engage in coping routine

You can follow these steps to calm down, like Mr. Potty:

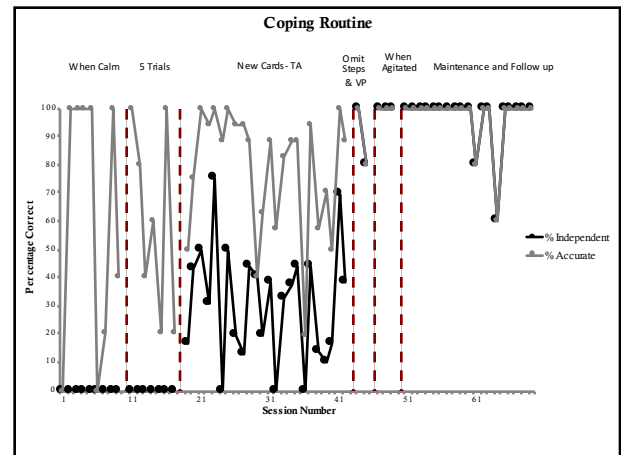
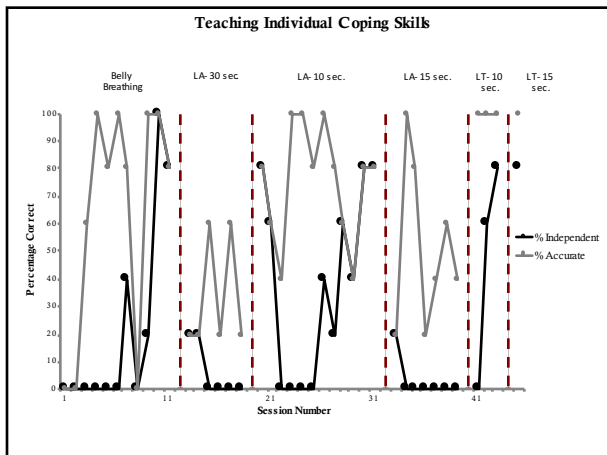
1. Take 3 deep breaths

2. Look at a toy

3. Listen to a toy

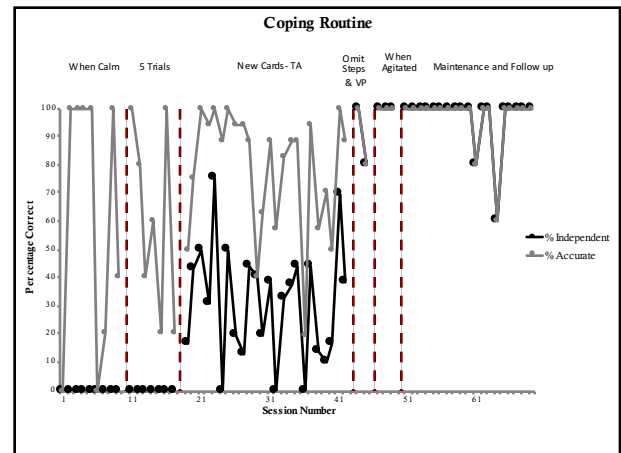

Coping Routine

- ◆ STO 4:
 - ◆ A- When students begins showing signs of mild agitation, say, "use your calm down plan", and provide visual.
 - ◆ B- Student will engage in coping routine
 - ◆ C- Deliver token with praise



Omission of Steps

1. Get book	4. Get book
2. Open book	2. Open book
3. Take deep breath	3. Take deep breath
4. Turn page	4. Turn page
5. Take deep breath	5. Take deep breath. Take a breath
6. Turn page	6. Turn page
7. Take deep breath	7. Take deep breath
8. Turn page	8. Turn page
9. Pick look at item	9. Pick look at item
10. Engage with look at item	10. Engage with look at item
11. Put away	11. Put away
12. Turn page	12. Turn page
13. Pick listen to item	13. Pick listen to item
14. Engage with listen to item	14. Engage with listen to item
15. Put away	15. Put away
16. Turn page/clean up	16. Turn page/clean up



Maintenance and Generalization

- ◆ Decrease problem behaviour data for in session, at home, and in the community
- ◆ Was able to generalize to school with ABA-SW support
- ◆ Using in SLP sessions
- ◆ When prompted, he is able to calm down and continue on
 - ◆ Grocery store- music
 - ◆ Neighborhood walk- math and shapes
 - ◆ Pharmasave line-up- counting

Barriers

- ◆ Poor Treatment Integrity
 - ◆ Staff changes
 - ◆ Limited clinical oversight
 - ◆ Incorrect data collection and implementation
- ◆ Low frequency of implementation
 - ◆ Only 2-3 trials per session during STO 2 (CR)
- ◆ Teaching a new skill

Solutions

- ◆ Catch these mistakes early
 - ◆ Frequent data analysis
 - ◆ Frequent observation of implementation
- ◆ Re-evaluate training to match the budget