

**BETTER SLEEP. SAFER BEHAVIOR:
USING SKILL-BASED TREATMENT
TO TACKLE SLEEP CHALLENGES**

LEARNING OBJECTIVES

01.

Describe the bidirectional relationship between behavioral challenges and sleep difficulties in children.

02.

Identify common sleep challenges and define the role of BCBAs within their scope of practice.

03.

Develop interventions to promote better sleep within the skill-based treatment (SBT) framework.

ABOUT ME

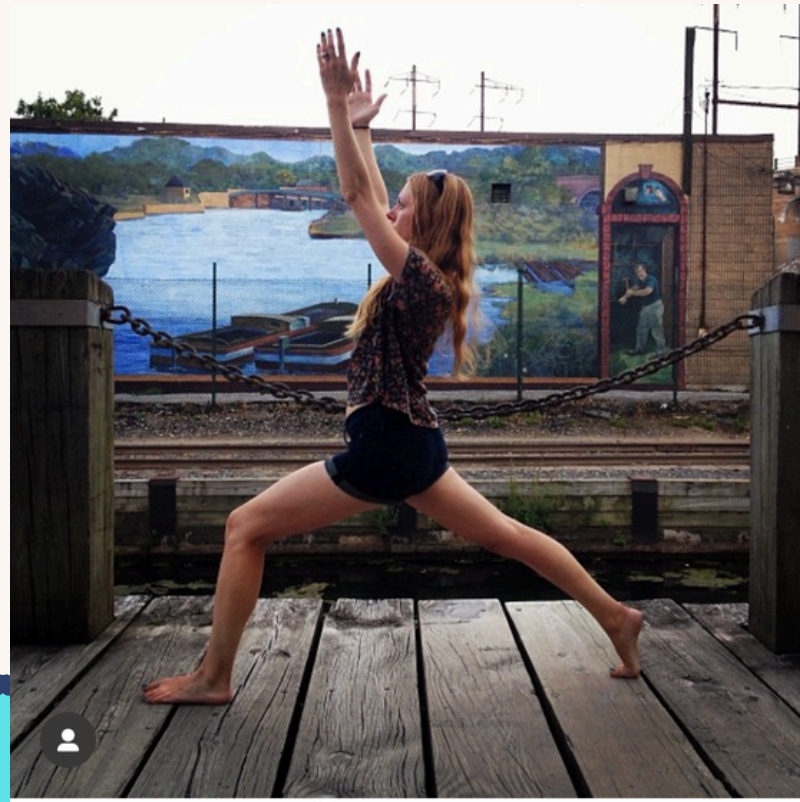
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RESTFUL KIDS



FTF Behavioral
CONSULTING

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AGENDA

01

Medical considerations;
Importance of sleep; Prevalence of sleep issues

02

Correlation between sleep issues and behavior challenges

03

Overview of skill-based treatment

04

Incorporating sleep-supporting skills into programming

MEDICAL DISCLAIMER

The information provided by Lindsay Anderson or Restful Kids LLC, is intended for educational and informational purposes only. Any recommendations offered are based on behavioral principles and should not be considered a substitute for medical advice, diagnosis, or treatment.

Any sleep-related concerns or conditions that require medical attention, including but not limited to sleep disorders, physical health issues, or psychological conditions, should be addressed with a physician or qualified healthcare provider.



WHY IS SLEEP SO IMPORTANT?



PHYSICAL HEALTH

- Fatigue
- Injuries
- Obesity
- Immune System

EMOTIONAL HEALTH

- Irritability
- Emotional Regulation

BEHAVIOR

- Cooperation
- Behavioral Challenges
- School Performance

(Liu et al.,2024)



WHY IS SLEEP SO IMPORTANT?– ABA SPECIFIC



**Missed
treatment time-
sleep related
cancellations,
tired/falling
asleep during
session**

**Child is irritable
and less likely to
follow
instructions
when tired**

**Without
sufficient REM
sleep, children
are less able to
retain what they
have learned**

= Slower Progress

ETHICS—RESPONSIBILITY IN PRACTICE

2.19 Addressing Conditions Interfering with Service Delivery: Behavior analysts actively identify and address environmental conditions (e.g., the behavior of others, hazards to the client or staff, disruptions) that may interfere with or prevent service delivery. In such situations, behavior analysts remove or minimize the conditions, identify effective modifications to the intervention, and/or consider obtaining or recommending assistance from other professionals. Behavior analysts document the conditions, all actions taken, and the eventual outcomes.

SLEEP AND AUTISM



Estes et al (2024)
Kanney (2020)

01

25-50% of children without autism; up to 80% of children with autism experience sleep problems

02

Co-occurring anxiety and ADHD

03

Higher risk of sleep apnea and restless legs syndrome

04

Differences in melatonin

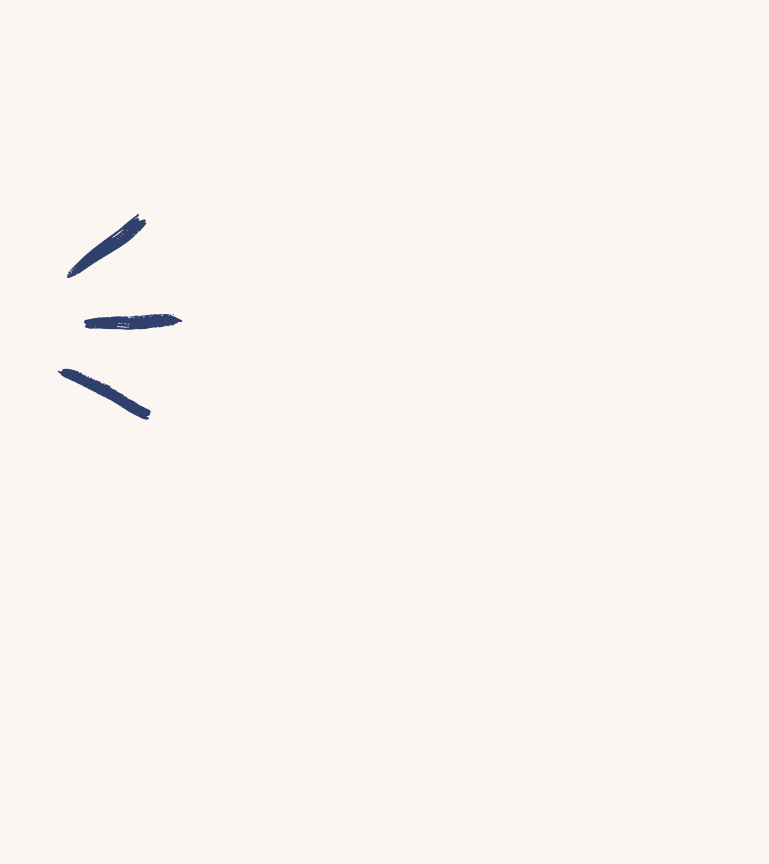
COMMON SLEEP ISSUES IN CHILDREN

01. Taking too long to fall asleep

02. Not sleeping enough for age

03. Waking up in the middle of the night/Too early

04. Challenging behaviors/ Anxiety surrounding sleep

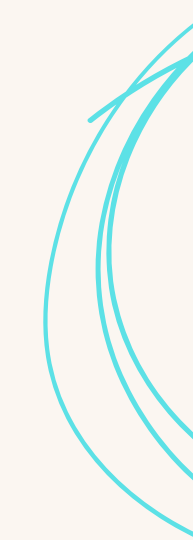


IDENTIFYING SLEEP ISSUES

YOU MIGHT HEAR:

- Child was “up all night again”
- Took child “forever to fall asleep”
- Child is “cranky this morning”
- Child slept “a full 8 hours”
- Child “woke up really early again”

YOU MIGHT SEE:

- Tired/Falling asleep during session
Arrives to session asleep
 - Large emotional reactions
 - More injury prone than others
 - Difficulty concentrating on tasks
 - Sick more than others
 - Engaging in challenging behaviors
 - Lack of progress with no obvious cause
- 

MEDICAL CONSIDERATIONS



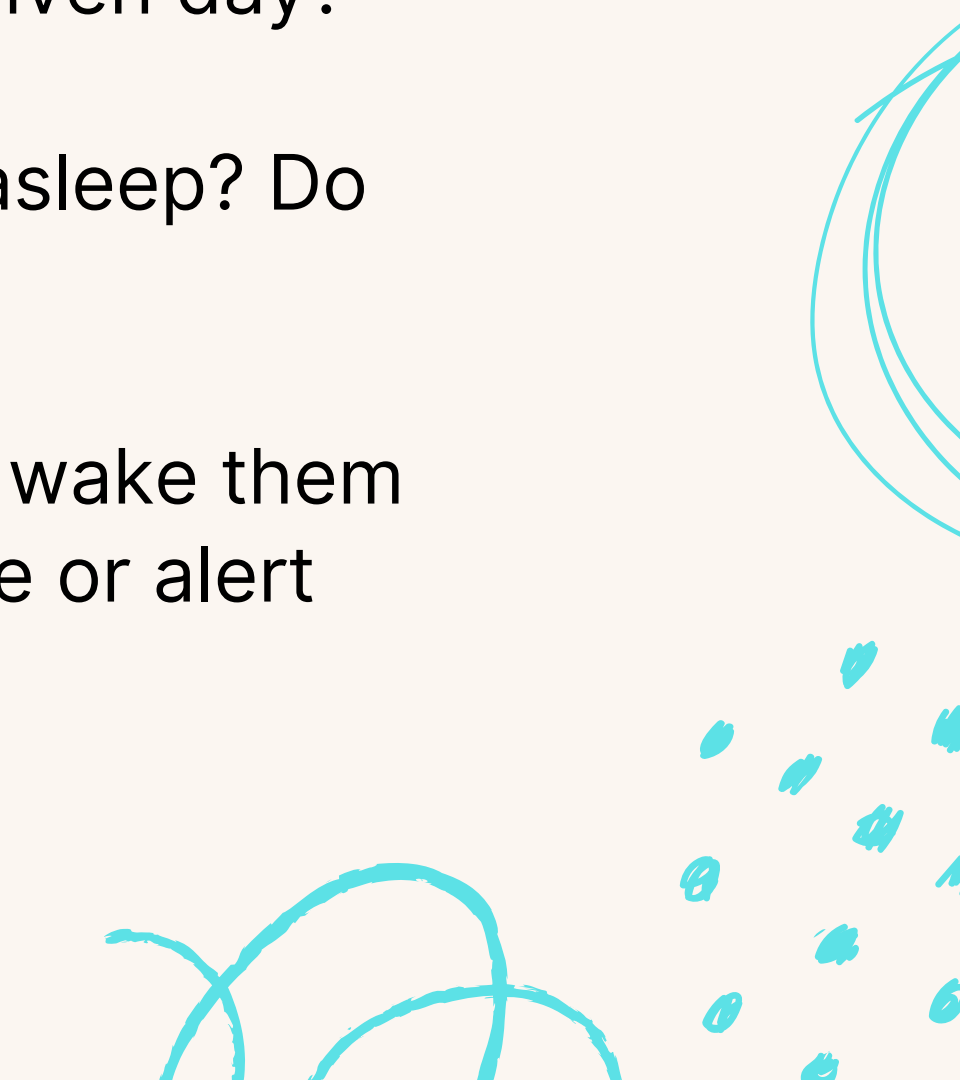
MEDICAL CHECKLIST

- ☐ LOUD SNORING
- ☐ GASPING/ UNUSUAL BREATHING
- ☐ REFLUX
- ☐ CONSTIPATION
- ☐ SEIZURES
- ☐ ASTHMA
- ☐ ALLERGIES/NASAL CONGESTION
- ☐ TOOTH PAIN
- ☐ ECZEMA
- ☐ FEEDING ISSUES/VITAMIN DEFICIENCY
- ☐ RESTLESS LEGS
- ☐ MEDICATIONS THAT MAY IMPACT SLEEP

THIS IS NOT AN EXHAUSTIVE LIST. REFER TO A PHYSICIAN FOR ANY SUSPECTED MEDICAL CAUSES OF SLEEP ISSUES.



WHAT IS HEALTHY SLEEP?

- **Subjective satisfaction** - On a scale of 1-10, how would you rate your child's sleep currently?
 - **Appropriate timing**- When does your child typically sleep?
 - **Adequate duration**- How much do they usually sleep in a given day?
 - **High efficiency**- How long does it usually take them to fall asleep? Do they wake up during the night? How much?
 - **Sustained alertness during waking hours**- How hard is it to wake them up in the morning? Do they have a hard time staying awake or alert throughout the day?
- 

(Buysse, 2014)

BUT IS SLEEP IN OUR SCOPE?

01

No! But...

02

Sleep= Primary Reinforcer

03

The skill to teach = Behavioral Quietude (a calm, regulated body that can independently lay in the sleep space)

Bootzin (1977), Blampied (1993)



BEHAVIORAL REFRAME



**ENVIRONMENTAL
VARIABLES HAVE
A LARGE IMPACT
ON SLEEP.**

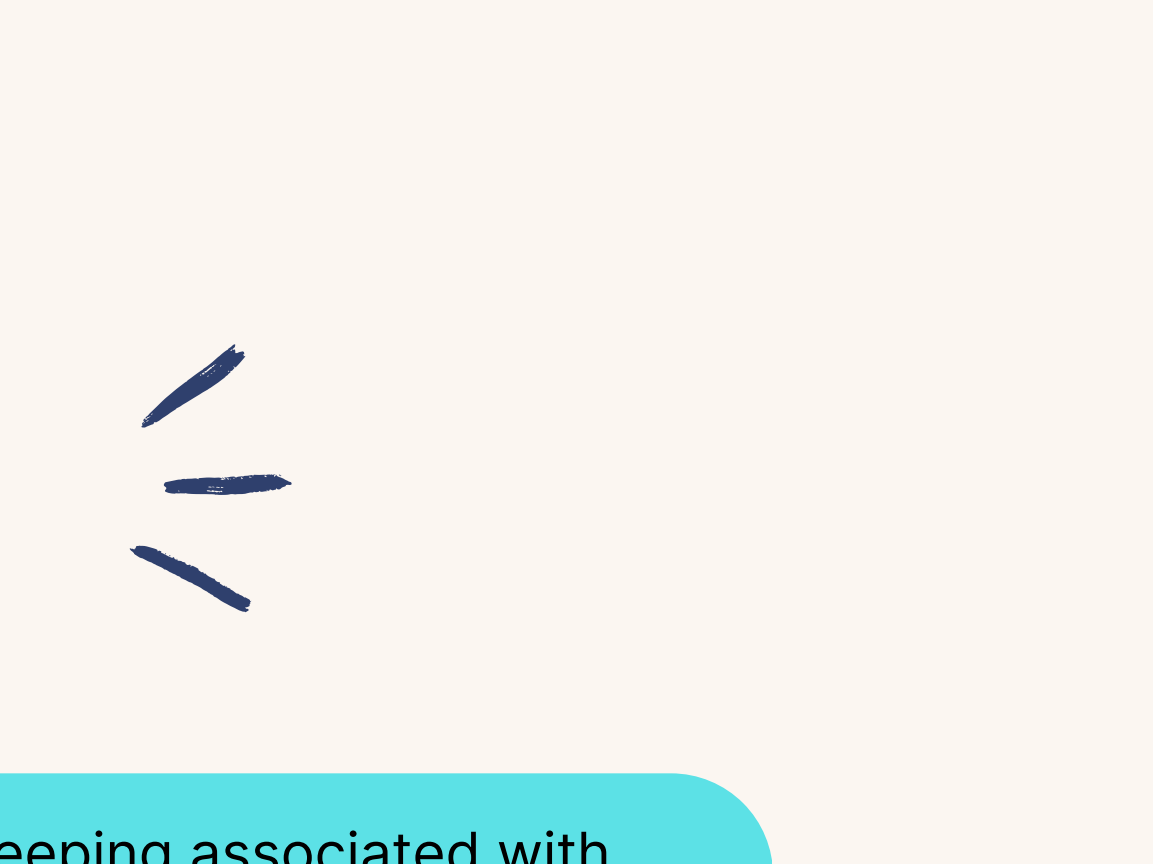
**SLEEP
PROBLEMS=SKILL
DEFICIT.**

**SKILLS TAUGHT
DURING THE
DAY.**

Bootzin (1977), Blampied (1993)
Ready, Set, Sleep LLC



SLEEP CHALLENGES= BEHAVIOR CHALLENGES



01.

Persistent sleep problems= 16x risk of psychosocial difficulties including aggression, social/attention problems, anxious/depressed mood (Simola et al. 2014)

03.

Trouble sleeping associated with attention problems, anxiety/depression, and withdrawal; tiredness was associated with aggression (Coulombe et al. 2011)

02.

History of sleep disturbances associated with emotional and behavioral difficulties in preschool children (Deng et al. 2023)

04.

Sleep problems at age 6 predicted behavior problems at age 11, behavior problems at age 6 also predicted sleep problems at age 11 (Liu et al. 2021)



RESEARCH SUMMARY



Sleep disturbances and emotional/behavioral difficulties are highly associated in children and adolescents.



While a lack of sleep may be triggering challenging behaviors, it also may be that challenging behaviors are making it more difficult for the child to transition to bedtime and fall asleep.



WHY TRADITIONAL EXTINCTION OFTEN FAILS

01

Aggression and self-injurious behaviors- not safe to just “walk them back to bed”

02

Not teaching skills- may end coming out of room but doesn’t increase sleeping

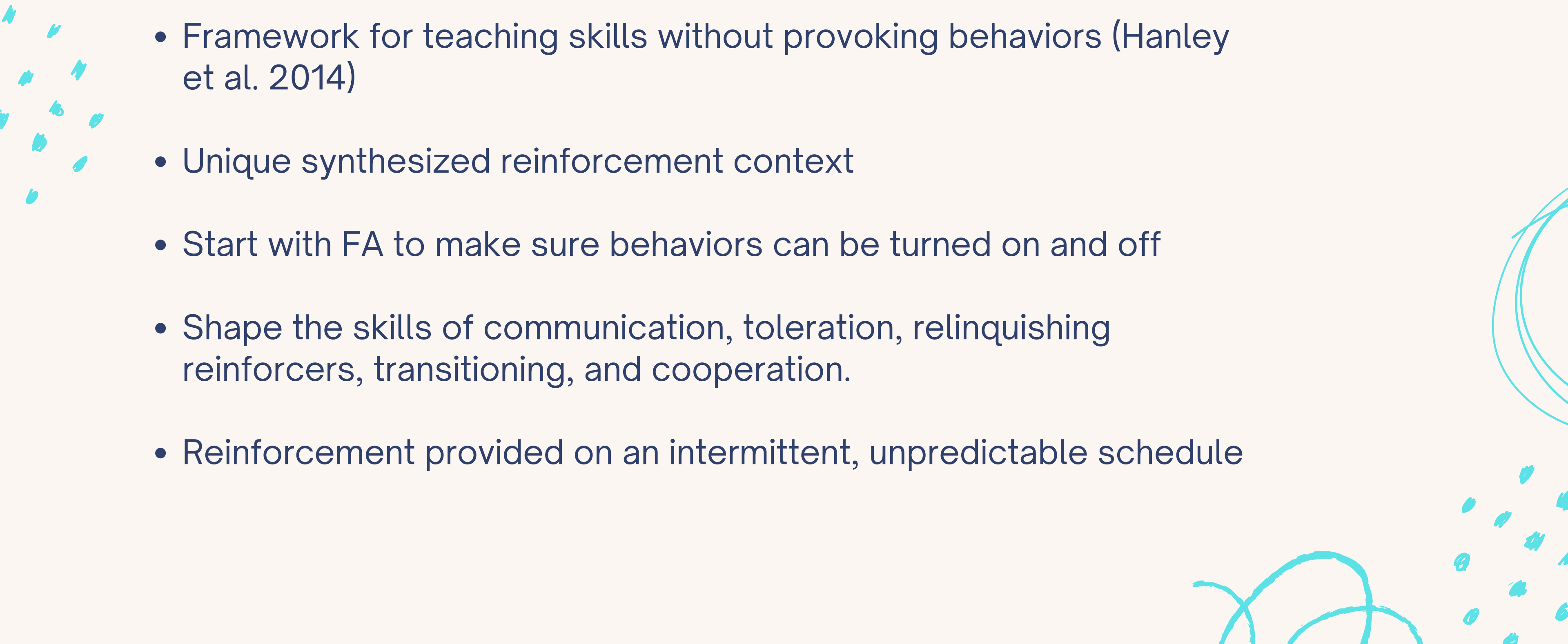
03

Too difficult for caregivers to implement-often leads to intermittent reinforcement





SKILL-BASED TREATMENT

- Framework for teaching skills without provoking behaviors (Hanley et al. 2014)
 - Unique synthesized reinforcement context
 - Start with FA to make sure behaviors can be turned on and off
 - Shape the skills of communication, toleration, relinquishing reinforcers, transitioning, and cooperation.
 - Reinforcement provided on an intermittent, unpredictable schedule
- 

HAPPY, RELAXED, AND ENGAGED

- Interview parents as part of Practical Functional Assessment
- Synthesized reinforcement context contains all of child's favorite things and the specific attention they like, as well as the absence of things they don't like
- Need to achieve HRE before taking any further steps



FUNCTIONAL ANALYSIS

01

Happy, relaxed, and engaged for at least 5 minutes

02

Present EO that triggers behavior and immediately reinforce at first precursor. Wait for return to HRE at least 30 seconds.

03

Repeat 2 more times and begin teaching.

KEY SKILLS

FCR

Functional Communication Response: Teaching the learner a simple, effective way to appropriately request what they want (e.g., “My way,” “Can I have more time?”)

TR

Tolerance Response: Teaching the learner to calmly accept a “no” or delay, while waiting for access to reinforcement (e.g., giving a high five or fistbump).

CAB1

Relinquishing Reinforcers: Teaching the learner to calmly place preferred items down or hand over to a trusted adult when asked.

CAB2

Transitioning: Teaching the learner to calmly move to another area when asked to do so by a trusted adult.

CAB3-6

Cooperation: Teaching the learner to cooperate with an adult-led activity for progressively longer durations of time or responses, and with specific challenges.



COMMON BEHAVIORS INTERFERING WITH SLEEP



**Child is unable
to give up
electronics at
bedtime**

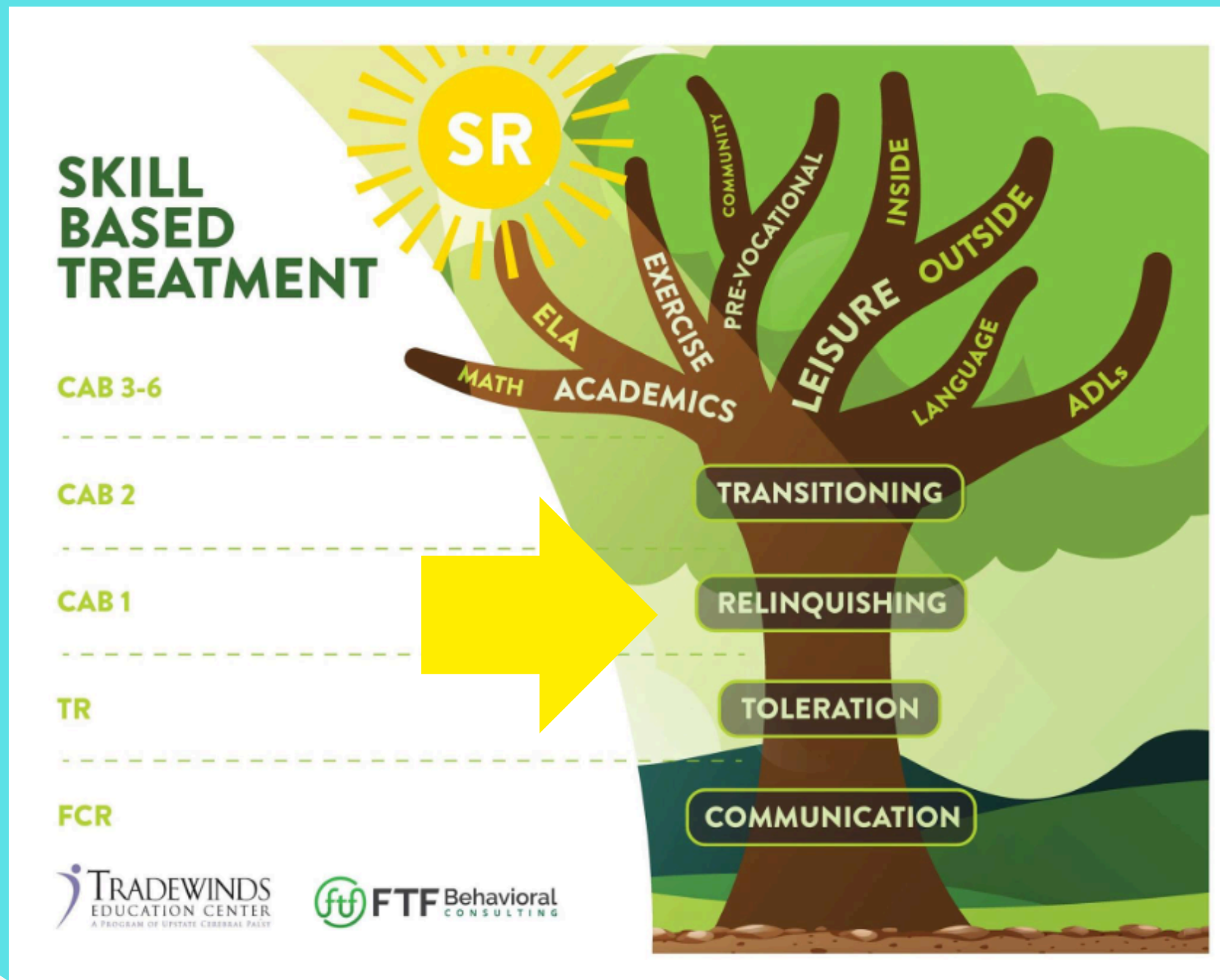
**Child has
difficulty
transitioning
through the
bedtime
routine**

**Child is unable
to calm their
body at
bedtime/
overstimulated**

**Child is unable
to separate
from caregivers
at bedtime**

**Child displays
anxious
behavior around
bedroom or
sleep**

RELINQUISHING ELECTRONICS

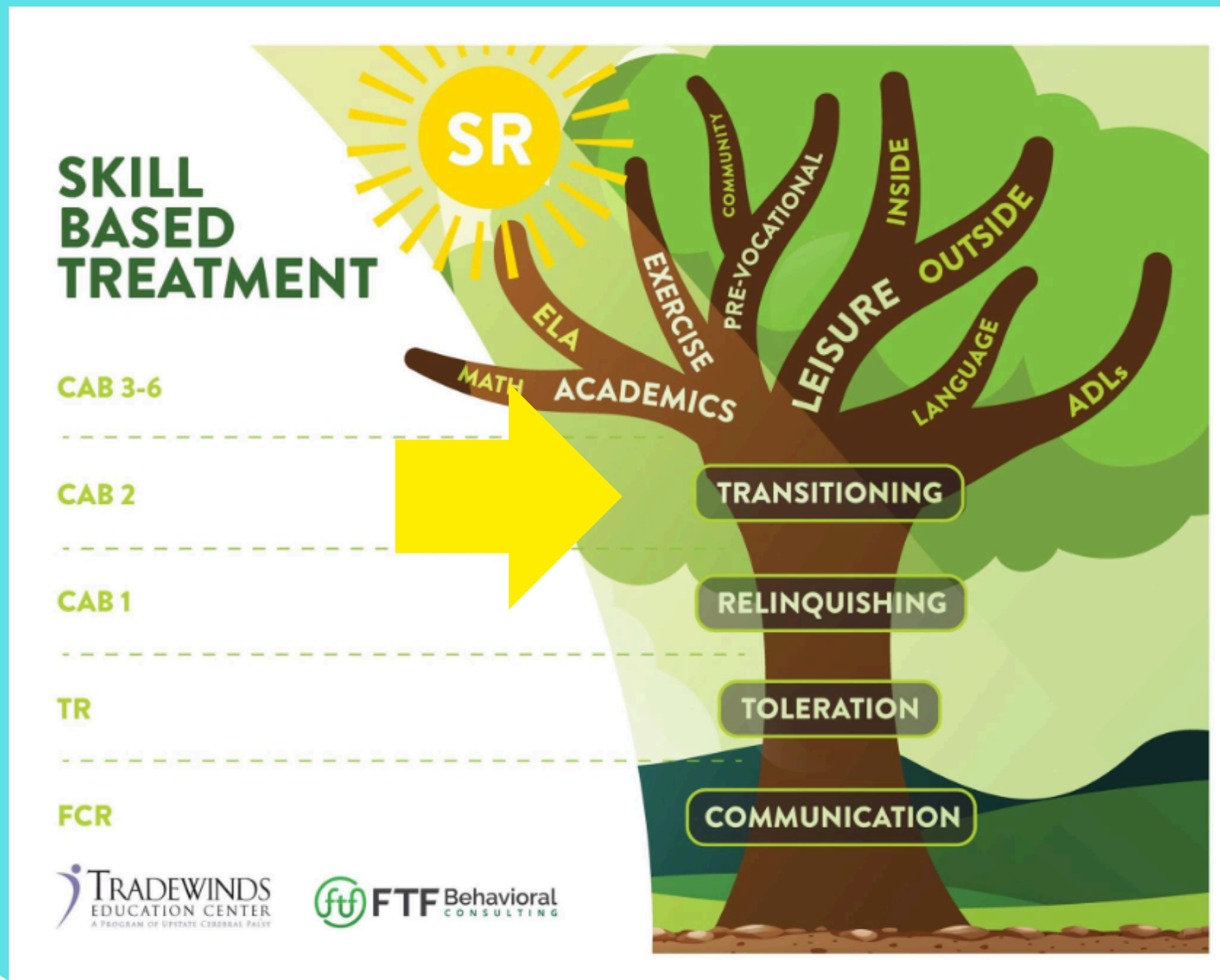


Technology before bed, especially active screen time (e.g. scrolling, video games) leads to later bedtimes and disrupted nighttime sleep(Bauducco et al. 2024).

Even though they might be able to be HRE in session without it, if it is causing big behaviors at bedtime consider bringing it in to the reinforcement context.

We don't want bedtime to be the only time all day they are asked to relinquish electronics. After they are able to consistently do it with staff bring parents in to run trials.

TRANSITIONING THROUGH BEDTIME ROUTINE



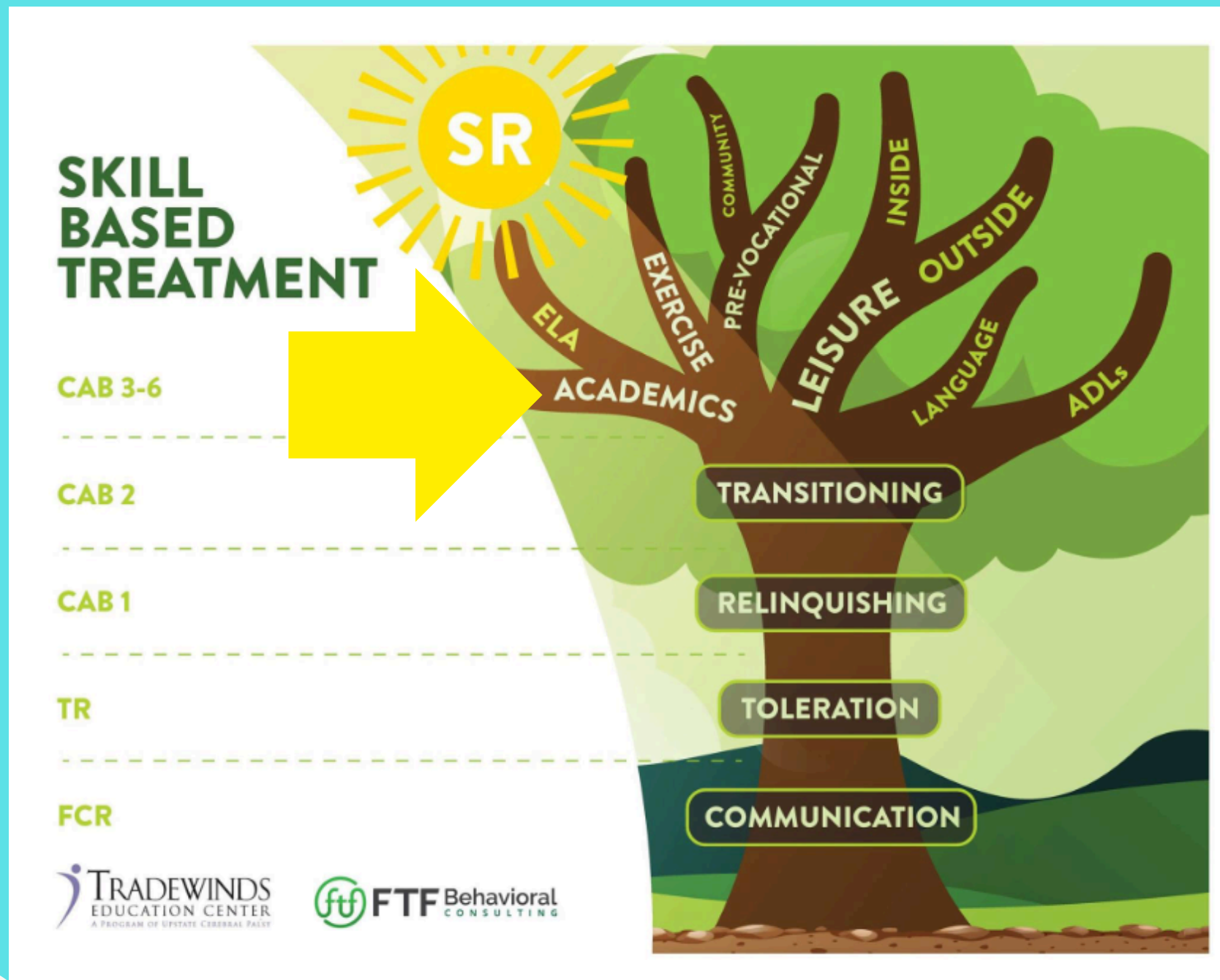
Incorporate transitions to places they might need to go to complete hygiene tasks, such as to the bathroom to brush teeth.

Create a branch for cooperating with various hygiene tasks or activities of daily living.

Teach following a schedule either independently or with help.

Transfer visual schedule to parents in the home environment.

CALMING BODY DOWN

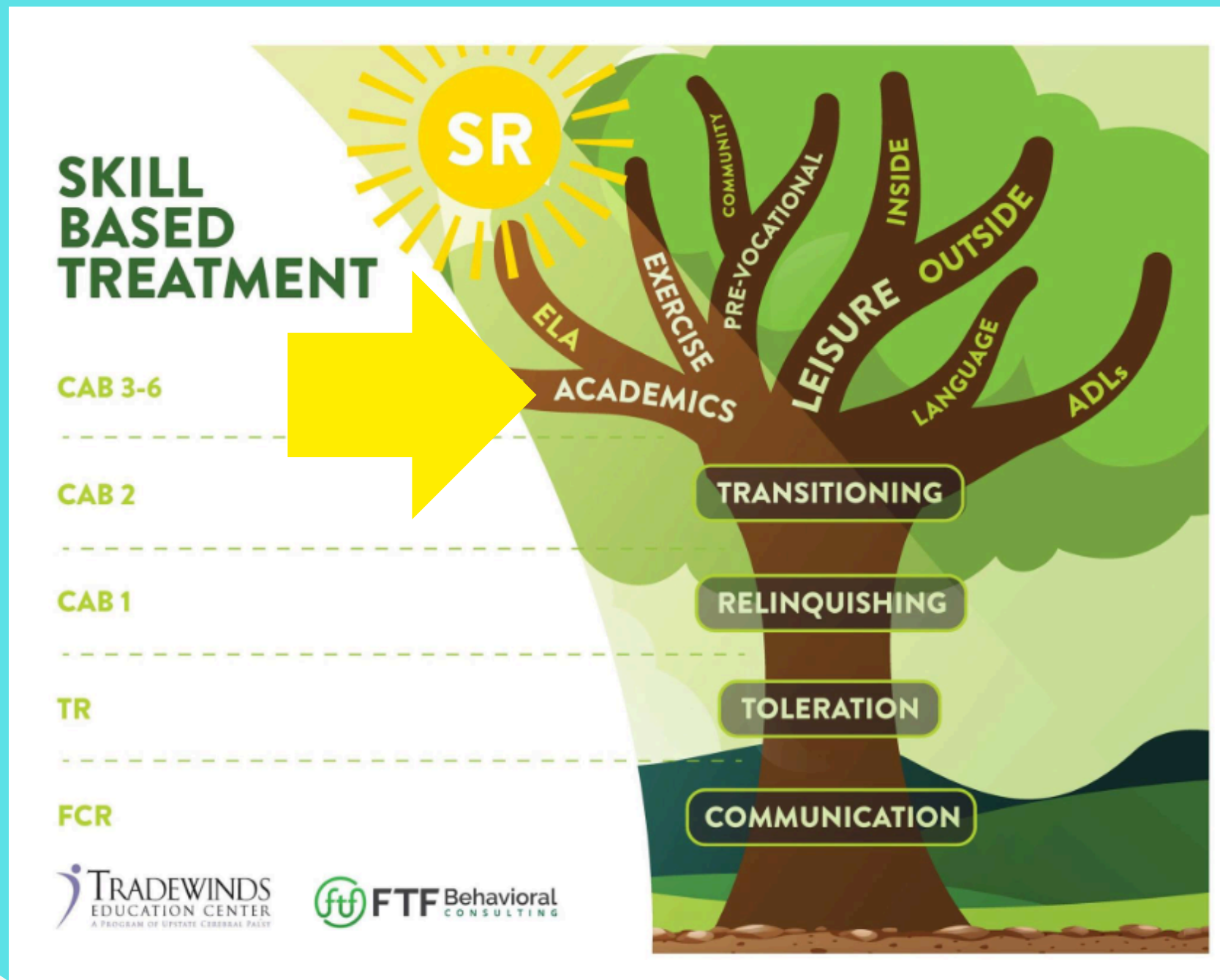


If child is moving all day long, they won't suddenly be able to turn it off at bedtime. Need offsets throughout the day.

Calming activities branch where they transition to leisure skills that can be completed sitting down (e.g. puzzles, blocks, Velcro file folders, etc.) Watch their reaction what's calming for one child is overstimulating for another.

Communicate to parents activities child likes/tolerates to put into bedtime routine.

SEPARATING FROM CAREGIVERS



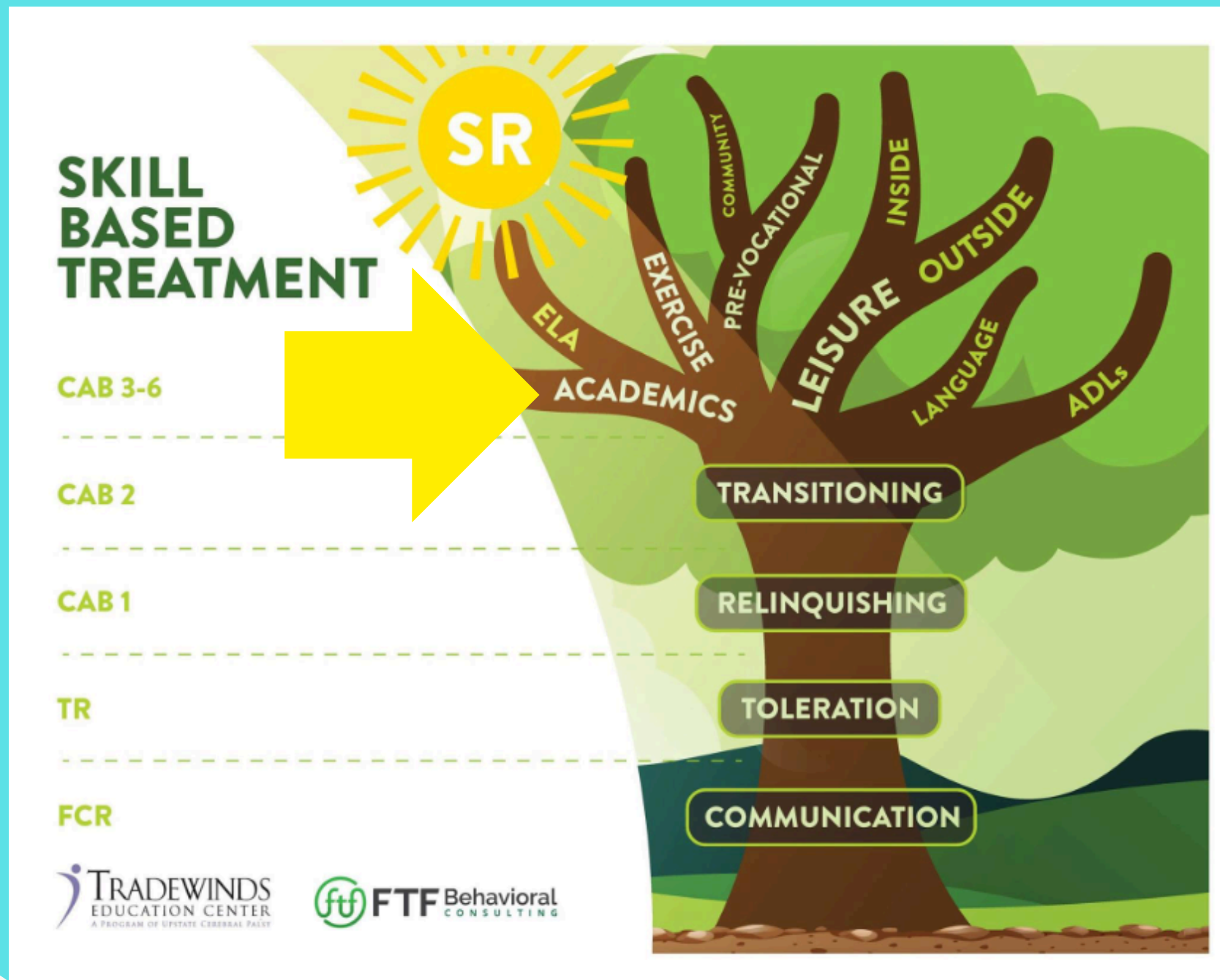
Branch for teaching independent play while child is playing with a preferred activity. Adult says “I’ll be right back” and initially leaves for a very short amount of time (3-5 seconds). Emily Varon (2023)

Work up to about 2 minutes of independent play and then try while they are just relaxing (e.g. lounging on a bean bag chair) to mimic being alone at bedtime.

Could be done as CAB6 challenge in other branches.

Parents then run during the day and repeat at bedtime based on success.

ANXIOUS BEHAVIOR AROUND SLEEP



Branch for pretend play that incorporates sleep related play

Examples- Putting dolls or dinosaurs to sleep- reading a story to them, tucking them in, singing a song; Child and therapist take turns pretending to sleep and waking up

Involve parents in play and have them repeat in the child's bedroom during the day.

EXAMPLE GOALS

01

When asked to transition from preferred activities to seated leisure activities, Learner will participate in puzzles, blocks, and stringing beads for up to 10 minutes, with divided caregiver attention, in the absence of problem behavior.

BCBA: "All done tablet."

FCR: "my way"

BCBA: "Let's sit at the table."

CAB2: Walks to table.

BCBA: "No, not right now"

TR: gives high-5

BCBA: "Put this puzzle together please"

CAB3: 30 seconds of puzzles

CAB4: 30 seconds of puzzles, blocks, or beads

BCBA: "Put tablet in bin"

CAB1: puts tablet in bin

CAB5 short: 1-3 min; medium: 3-5 mins; long: 5-10 mins

CAB6: Works on activity while adult steps out of the room

EXAMPLE GOALS

02

When asked to transition from preferred activities to activities of daily living, Learner will participate in toothbrushing, handwashing, and hairbrushing for the duration of the task, with divided caregiver attention, in the absence of problem behavior.

BCBA: "All done tablet."

FCR: "my way"

BCBA: "Let's walk to the bathroom."

CAB2: Walks to bathroom.

BCBA: "No, not right now"

TR: gives high-5

BCBA: "Brush your teeth please."

CAB3: Brushes teeth for 10 seconds

CAB4: Brushes teeth, washes hands, or brushes hair for 10 sec

BCBA: "Put tablet in bin".

CAB1: puts tablet in bin

CAB5 short: 10-30sec; medium: 30s-1min; long: 1-2 mins

CAB6: Continues ADLs while adult steps out of the room

EXAMPLE GOALS

03

When asked to transition from preferred activities to adult-directed play activities, Learner will participate in pretend play involving tucking dinosaurs in, singing to dinosaurs, and reading dinosaurs a story for up to 5 minutes, in the absence of problem behavior.

BCBA: "All done tablet."

FCR: "my way"

BCBA: "Let's sit on the rug."

CAB2: Walks to the rug.

BCBA: "No, not right now"

TR: gives high-5

BCBA: "Let's tuck our dinosaurs in for bedtime"

CAB3: Tucks dinosaurs in for 30 seconds.

CAB4: Tucks dinosaurs in, sings, or reads for 30 sec

CAB5 short: 1-2 mins; medium: 2-3 mins; long: 3-5 mins

BCBA: "Put tablet in bin"

CAB1: puts tablet in bin

CAB6: A peer or sibling joins

KEY INGREDIENT= TRANSFER TO CAREGIVERS

- Most important step, need to be able to do it in their natural environment
- Give caregivers confidence that they can set boundaries at bedtime without dangerous behaviors
- Provide caregivers options of calming leisure skills their child will tolerate so they can string together a calm bedtime routine
- Talk them through principles of pairing and reinforcement so child can start to enjoy and not fear their bedroom
- Work with parents to get child tolerating separating from them for a few minutes at a time for independence

IMPACT OF BETTER SLEEP

- Improved attention
- Improved reaction times/responding
- Improved mood and toleration for frustration, reduced irritability
- Improved retention of learned skills
- Improved social skills
- Improved weight maintenance
- Better ability to fight illness
- Better judgement and decision making

=More Progress in ABA

(Liu et al.,2024)

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THANK YOU VERY MUCH!

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