An Interprofessional, Tailored Behavioral Intervention for Sleep Problems in Autism: Use of Sensory Data to Inform Intervention

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Background

Prevalence of ASD has increased to 1 in 68 children (CDC, 2014). Chronic severe insomnia (sleep disturbance) is one of the most common co-occurring conditions in children with ASD (60-80%) (Liu et al., 2006; Souders et al., 2009; Wiggs & Store, 2004).

Causes are multi-factorial including behavioral, biological and cultural mechanisms (Kotagal & Broomall, 2012; Malow & McGrew, 2008). Parents report that both sensory sensitivities (to the environment) and anxiety may be contributing factors (Souders et al., 2009).

Occupational therapists can address these factors and help improve sleep quality by implementing sensory and environmental strategies.

Purpose

The purpose of this poster is to demonstrate how Sensory Profile data informed occupational therapists can address these factors and help improve sleep quality by implementing sensory and environmental strategies.

Methods

Comparative Effectiveness Design

Eligibility Criteria:

- Autism Dx (ADOS)
- Insomnia (CSHQ, Artigrapy)
- Ages: 6-10

Consent & Administer Measures:

Assessed for Eligibility

ATN Sleep Tool Kit Education (Mallow, 2008)

Medical Assessment & Sleep History

Randomized n=40

ATN Sleep Tool Kit (4 Home Visits)

Tailored Behavioral Intervention (TAB) + ATN Sleep Tool Kit (8 Home Visits + Follow up)

Baseline

1. Behavioral Strategies
2. Calming Module Activities Selected
3. Additional Environmental Adaptations & Calming Strategies

Case 1: Male, 9 years-old

Sensory Profile Subscales Type Prog. Diff.
Auditory Processing

Visual Processing

Vestibular Processing

Touch Processing

Multisensory Processing

Visual Sensory Processing

Sensory processing related to endurance/one

Modulation related to body position and movement

Modulation of movement affecting activity level

Modulation of visual input affecting emotional responses

Modulation of visual input affecting emotional responses and activity level

Emotional/social response

Behavioral outcome of sensory processing

Items indicating thresholds for response

Specific behaviors noted from parent report on Sensory Profile

Strategies used to improve sleep

Case 2: Male, 8 years-old

Sensory Profile Subscales Type Prog. Diff.
Auditory Processing

Visual Processing

Vestibular Processing

Touch Processing

Multisensory Processing

Oral Sensory Processing

Sensory processing related to endurance/one

Modulation related to body position and movement

Modulation of movement affecting activity level

Modulation of visual input affecting emotional responses

Modulation of visual input affecting emotional responses and activity level

Emotional/social response

Behavioral outcome of sensory processing

Items indicating thresholds for response

Specific behaviors noted from parent report on Sensory Profile

Strategies used to improve sleep

Case 1 Outcomes

Pre Intervention Sleep Behavior

- Sleeps with parents
- Increased sleep latency (28 minutes to fall asleep)
- Wakes during night/restless (247 sleep minutes; 117 wake minutes)
- Wakes at 5am

Post Intervention Sleep Behavior

- Sleeps in own room
- Decreased sleep latency (21 minutes)
- Decreased waking during night (685 sleep minutes; 65 wake minutes)
- Wakes at 5-6am with dad

Case 2 Outcomes

Pre Intervention Sleep Behavior

- Sleeps in own room
- Increased sleep latency (47 minutes to fall asleep)
- Wakes during night/restless (209 sleep minutes)
- Early bedtime/early wake time

Post Intervention Sleep Behavior

- Sleeps in own room
- Decreased sleep latency (12 minutes)
- Decreased waking during night (51 sleep minutes)
- Later bedtime/later wake time
References


