

Intervention Case Study 10

This case study looks at using sleep restriction as an intervention to help deal with sleep problems.

Introduction

Sara is a 4 year old girl diagnosed with autism who lives with her parents. She began having sleep problems at 15 months old. Sara often awakes during the night on average of once a night. Typically, she will stay up for an hour after waking up during the night. After these awakenings, she will refuse to return to her bed around half of the time and so sleep in her parent's bed. Sara will also sometimes throw tantrums involving crying and screaming that can last 2-4 hours after waking up in the middle of the night. In the past, Sara has been prescribed clonidine, klonopin, tofranil, mellaril, and melatonin to try to help her sleep.

Measurement

Researchers had Sara's parents fill out the *Albany Sleep Problems Scale* (Durand, 1998), which measures what sleep problems the child has and how serious they are, and the *Parental Sleep Satisfaction Questionnaire* (Christodulu, 2000). Researchers also interviewed the parents about Sara's sleep problems and her sleep schedule. Everyday, the parents wrote down when Sara went to sleep and woke up, if and when she woke up in the middle of the night, her behavior at waking up in the middle of the night, if and when she took a nap, and any unusual sleep behavior such as sleepwalking.

Sara takes melatonin every night and occasionally Benadryl. She has an inconsistent sleep schedule, going to bed somewhere between 8 pm and 12 am and waking up between 3 am and 9 am. When she wakes up in the middle of the night, it is between 2:30 am and 3:45 am. She will typically go to her parent's bed to fall asleep again and sometimes she will not be able to fall asleep. She sometimes naps in the car for 10 to 60 minutes and in the school bus for 20 minutes.

Intervention

The goal of the intervention was to decrease the amount of time Sara woke up in the middle of the night and also to help her fall asleep more easily to begin with. A sleep restriction intervention involves reducing the amount of time the child is in bed to 90% of the child's sleep time. If the child lies awake in bed, the parent takes the child out of bed and has them do a relaxing activity. The child is not allowed to sleep in the parent's bed. If the child shows progress, sleep time is increased by 15 minutes after the first week. Sara sleeps an average of 8.75 hours so her sleep during the intervention was reduced to 7 hours. Sara's bedtime became 12 am and she was wakened each morning at 7 am. Sara did not receive melatonin or Benadryl during the intervention.

Results

After the intervention, the average times Sara woke up in the middle of the night fell from 7.2 times a week to 1.4 times a week. The average amount of time Sara remained awake during these episodes fell from 1.3 hours a week to .18 hours a week. It also became easier to put Sara to bed. Before the intervention, she often threw tantrums at bedtime, but after the intervention she stopped. She also stopped having tantrums if she woke up in the middle of the night. Sara's

mother showed an increase in satisfaction with Sara's sleep as well. At the end of 30 weeks of intervention, Sara slept an average of 8.5 hours a night.

Durand, M.V. (2004). Description of a sleep-restriction program to reduce bedtime disturbances and night waking. *Journal of Positive Behavior Interventions*, 6, 83-91.