

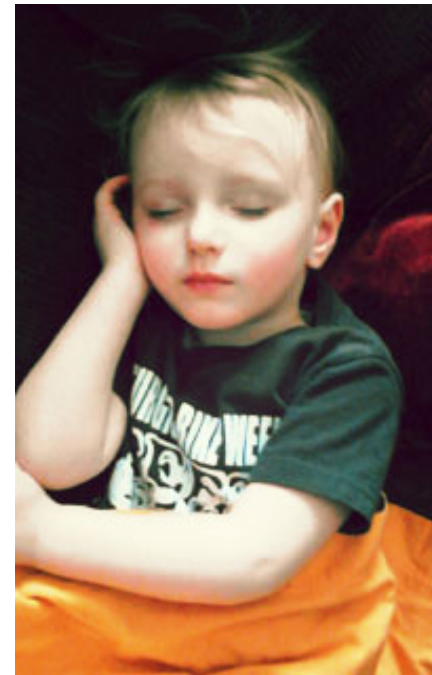
Difficult Temperament, Difficult Sleeper? Examination of Toddler Behavior & Sleep

Kathleen Moritz Rudasill, PhD
Department of Educational Psychology

Victoria J. Molfese, PhD
Department of Child, Youth and Family Studies

Amanda Prokasky
Department of Child, Youth and Family Studies

Elaina Montague
Department of Psychology



Olivia Prokasky, 3 yrs

Collaborators

Faculty & Staff

Dennis Molfese – Department of Psychology, CB3

Jack Bates – Department of Psychology, Indiana University

Students

Carly Champagne – Educational Psychology; Graduate Student

Scott Frohn – Educational Psychology; Graduate Student

Molly Holmes – Educational Psychology; Graduate Student

Mary Kralemann – Marriage and Family Therapy; Graduate Student

Kenji Madison – Educational Psychology; Graduate Student

Xiaoqing Tu – Child, Youth & Family Studies; Graduate Student

Jack Gallagher – Undergraduate Student

Hannah Malcolm – Undergraduate Student

Jayden Nord – UCARE Undergraduate Student

Rachel Schroeter – Undergraduate Student

What is temperament?

Temperament:

- is affect, behavior, and attention toward people, events, and objects

(Rothbart, 2011)

- emerges from complex interactions between genetics and environment

(Shiner et al., 2012)

- comprises *reactivity* and *regulation*

(Rothbart & Bates, 2006)



What is “difficult” temperament?

...temperament characteristics that are more **demanding** for caregivers (Thomas & Chess, 1977)

i.e., *high* in reactivity, *low* in regulation

→ Surgency – positive anticipation, impulsivity, activity; enjoys and seeks stimulating experiences

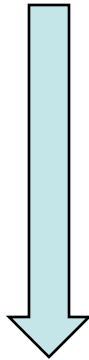
→ Negative Emotionality – fear, anger, sadness, discomfort, intensity; quickly/easily upset, not easily soothed



Julia and Anna
Rudasill, 5 & 13 yrs

In the absence of sufficient regulation...

High levels of **surgency** or **negative emotionality** can be INTENSE!



Difficult



Julia Rudasill,
2 yrs

Importance of Sleep

Daytime behaviors related to *poor sleep habits*:

- behavior problems;
- adjustment problems;
- hyperactivity;
- poor school performance;
- daytime sleepiness;
- inattentiveness.



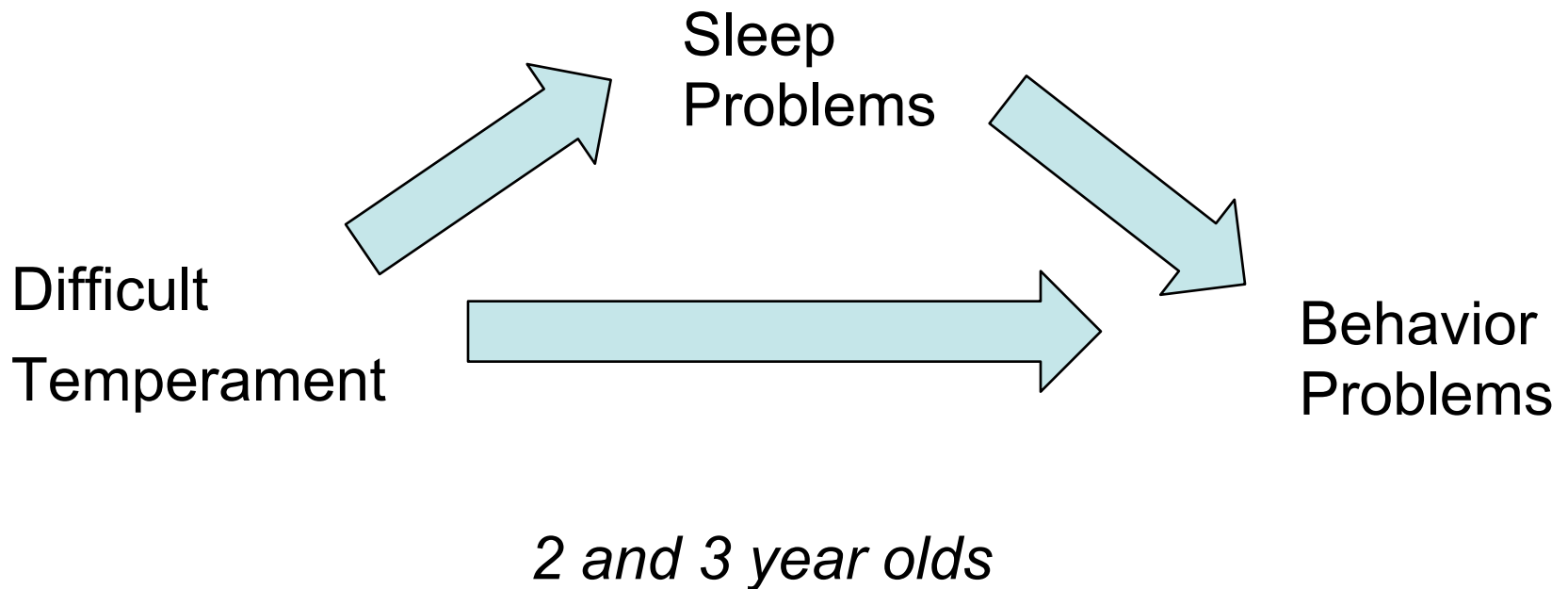
Carter Molfese, 2 months

(Bruni et al., 2008; Molfese, Rudasill, & Molfese, 2013)

Sleep and Temperament

- Sleep \leftrightarrow Temperament
 - More negative emotionality, less effortful control \rightarrow more sleep problems (e.g., Sadeh et al., 1994; Ward et al., 2008)
 - Poorer sleep \rightarrow poorer regulation later (e.g., Gregory & O'Connor, 2002)
 - Better regulation \rightarrow more efficient nighttime sleep (wake less often in the night; sleep longer)
 - more peaceful naps
 - fewer problems falling sleep and staying asleep
- (Molfese et al., 2013)
- *Temperament may be protective for children with sleep problems (Goodnight et al., 2007)

Difficult Temperament and Sleep: A Complex Relationship



Reid, Hong, & Wade (2009)

Purpose of Our Study

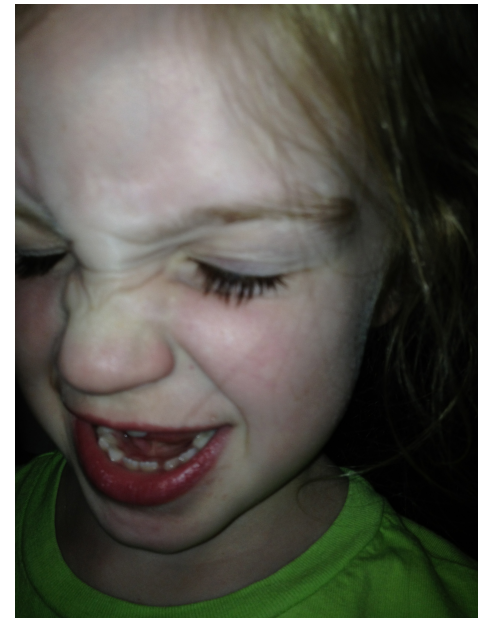
Development of SLEEP and REGULATION in
TODDLERHOOD

With attention to

Bedtime routines...



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Toddler Sleep Study

Longitudinal study of development of toddlers' sleep and regulation from 2 ½ to 3 ½ years

Data collection:

- Quantity and quality of child sleep
- Home environment and bedtime routines
- Child temperament
- Child behavioral and cognitive regulation

So far...

- 49 2 ½ year olds have participated

How do we study children's temperament?

- Parent and caregiver report of children's behavior
- Observations of behavior during lab tasks



How Do We Study Sleep in Children?

1. Parent reports in a “sleep diary”
 - Daily information across a period of time (1 – 3 weeks)
 - Information on bedtime and morning rise times
 - Reports on whether the child is “out of bed”, “in bed” and “asleep”
2. Parent reports of child’s sleep problems
 - Sleep hygiene
 - Sleep disordered breathing
 - Typical sleep patterns

How Do We Study Sleep?

3. Actigraphy – recordings of child activity using small, portable devices (actigraphs)

- Sleep onset and end time
- Sleep duration with night wakefulness subtracted
- Longest sleep interval
- Number of arousals during the night



How do we study bedtime routines?

- Arrive at the house 1 ½ hours prior to bedtime
 - Low-profile observation of bedtime routine
 - Parent(s) wear microphones
 - Observation ends when the lights are out

Observers note:

- interactions between study child and parent(s)
- features of the home environment
- unusual or atypical events or situations

Bedtime Routines: What We're Seeing so Far

Average bedtime routine: 48 minutes (range: 19 min-3 hours)

Despite wide variations in length and activities, there are some universals:

- bath time / personal hygiene
- reading / story time
- snack / drink

Bath Time

- Parent-child play, conversations
- Mutually enjoyable experience

Bedtime Routines: What We're Seeing so Far

Father Involvement

- wide variation in fathers' involvement
- moms typically do routine care (bath, brush teeth, pj's, etc.); dads are more likely to play and interact with child

Sibling Influences

- only child: one parent seems to dominate routine
- more than one child: both parents more likely to interact with test child
- siblings play a role in routine

Future Areas of Exploration in Relation to Bedtime Routines

Consistency across ages

- To what extent are the routines at 2 ½ the same at 3 and 3 ½?

Use of technology at bedtime

- Use of ipad, iphone, video games, etc.
- Who uses these, what are the motivations, and how does it impact sleep?

Temperament and Sleep in Toddlers: Preliminary Findings

Parent-reported sleep problems:

- Surgency ($r = .34, p = .01$)
- Negative emotionality ($r = .42, p = .002$)
- But NOT Effortful control (regulation)

Julia Rudasill, 5 yrs



Temperament and Sleep in Toddlers: Preliminary Findings

Length of nighttime sleep:

- No associations between actigraph and temperament
- Parent report and surgency ($r = -.24, p = .09$)

Length of napttime sleep:

- No associations between actigraph and temperament
- Parent report and negative emotionality ($r = -.27, p = .06$)

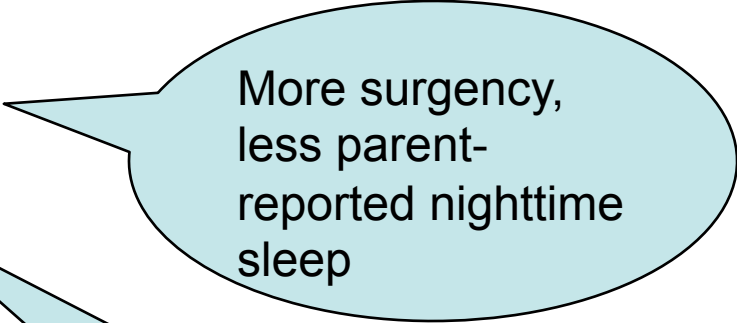
Observed length of bedtime routine:

- Effortful control ($r = .26, p = .06$)

What do our findings suggest thus far?

- Children with more difficult temperament had more parent-rated sleep problems

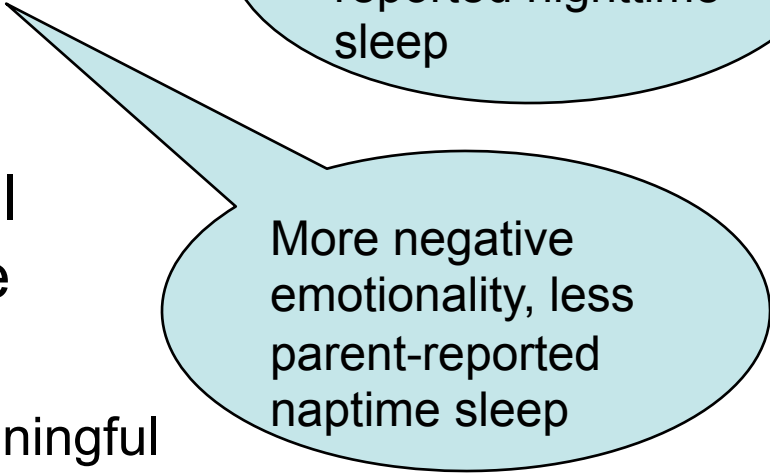
- More parental awareness?
- More sensitive to environment?
- Don't want to "miss out"?



More surgency,
less parent-
reported nighttime
sleep

- Children with more effortful control had longer bedtime routines

- More able to engage in meaningful interactions?
- More pleasant for parents?



More negative
emotionality, less
parent-reported
naptime sleep

Take-Away Points

- 1) Sufficient sleep is essential for optimal developmental outcomes in children.
- 2) Children's sleep is related to characteristics of the home environment (such as bedtime routines) and characteristics of the child (such as temperament).
- 3) What works with one child may not be as successful with another child.

QUESTIONS ???

krudasill2@unl.edu

vmolfese2@unl.edu

aprokasky@unl.edu