

▶ Current Studies ◀

Multi-Language Infant-Directed Speech Study 5.5—6.5-month-olds

- ◆ 1 visit to the lab
- ◆ Infants will listen to samples of women speaking to babies in two non-native languages to examine whether they are able to recognize approving and comforting speech intent when presented in an unfamiliar language.
- ◆ Requirements: Infants who hear English most of the time and are exposed to other languages less than 50% of their waking time.
- ◆ Interested in participating? Please contact us via phone or email! (info on page 2)



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Did you recently participate in research at the Infant Learning



Project with your 10-month-old? This study measured infants’ eye-tracking patterns for infant-directed speech and facial expressions. We have completed data collection and will soon begin analyses. Stay tuned to the next issue of our newsletter for a review of these findings.

Thank you again for your participation!

“Like” the Infant Learning Project on Facebook to receive weekly information about infant research, child development and parenting!



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infantlearningproject](https://facebook.com/infantlearningproject)
OR
bbs.utdallas.edu/ilp



Children's Sleep and Eating Habits Kimberly Truong

Obesity rates of children in America have steadily risen over the past several years. Approximately 17% of children in the United States from ages 2-19 were obese in 2011-2012, according to The Center for Disease Control and Prevention (CDC, 2014). Researchers have seen a correlation between sleep deprivation and overeating. Burt, Dube,



Thibault and Gruber (2014) conducted a study to further examine the relationship between sleep activity and eating habits in children.

The eating measures were calculated using the Child Dutch Eating Behavior Questionnaire (DEBQ-M), a parent-report measure that focuses on 3 types of eating behaviors: emotional - eating in response to emotional distress, external - eating in response to the sight or smell of food, and restrained eating - food intake is initially reduced to lose or maintain body weight but followed by increased consumption and binge eating. Sleep activity was measured using an actigraph, a computerized wristwatch-like device that collects data from motor movement. Participants wore these devices for seven consecutive nights and shortly after waking. Sleep logs were completed by the parent when the child went to bed and when he or she woke up.

Results indicated that children with less sleep and later bedtimes were more likely to have the urge to binge eat rather than restrain themselves. It was also found that a lower average sleep time was associated with a higher emotional eating score and a higher average number of wakes throughout the night. Shorter average sleep duration was associated with external eating, which meant that participants were likely to eat more if the food appealed to them by sight or smell. These combined findings were consistent with a separate study

finding that poor sleep quality in adults was associated with higher levels of hunger, cognitive restraint, emotional eating and a higher likelihood of consuming food due to external sensory influences. There are four neural circuits that are thought to be involved in overeating including

reward-saliency, motivation-drive, learning-conditioning and a three-part circuit that is involved in inhibitory control, emotional regulation, and executive function. Researchers in the present study hypothesized that poor sleep impairs children's executive function and reduces the activity of the circuits related to control and inhibition; in turn, this may lead to a poor ability to exert self-control in the presence of food. Poor sleep is also associated with behaviors that could increase overeating, therefore, increasing the risk for obesity in children. Although there are many other factors that could contribute to overeating, these findings demonstrate a close relationship between sleeping behaviors and eating habits.

References:

- Burt, J., Dube, L., Thibault, & Gruber, R. (2014). "Sleep and eating in childhood: A potential behavioral mechanism underlying the relationship between poor sleep and obesity." *Sleep Medicine*, 15(1), 71-75.
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Retrieved from <http://www.cdc.gov/obesity/data/childhood.html>



Infant Learning



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Bilingualism in Children

Kirsten Anderson

Priscilla Jacob & Mariah Fowler, Eds.



The possible advantages and disadvantages of childhood bilingualism have long been debated in the field of language development. In the early 1970's, it was believed that bilingualism was a disadvantage. Studies at the time provided some evidence that bilingual children had smaller vocabularies in each language when compared to same-aged monolingual peers. In recent years, researchers have discovered a common methodological flaw in previous studies: children were being tested in *one* language. Recent tests of bilingual children in *both* languages have revealed no statistically significant vocabulary deficits in comparison to their monolingual peers. In fact, it has been suggested by some researchers that the vocabulary skills of bilingual children exceed those of monolingual children later on in language development.

Due to the controversies surrounding bilingualism, there has been a rise in studies working to prove a "bilingual advantage." One such study investigated the correlation



between creativity and bilingualism. It was found that bilingual students were able to come up with more uses for everyday objects than their monolingual peers. These results suggest that bilingual children may possess an advantage in creative thinking.

A study conducted by Krizman et al., (2012) found that children who learn more than one language may have better listening skills than monolingual children. Krizman and colleagues hypothesized that because bilingual children must discriminate between two sets of sounds across the languages they are exposed to, they must encode the sounds they hear at a higher rate and with more accuracy than monolingual children.

Singh and Fu (2015) tested whether bilingual infants would show an advantage in distinguishing visual information. First, the infant was shown a colored image of a bear which served as the habituation stimulus, meaning it was shown to the infant several times until he or she was no longer interested in looking at it. Second, the infant was shown an image of a wolf as a novel stimulus. The researchers measured the amount of time the infant looked at the novel wolf image; longer looking implies that infants detect the new information.

(Continued on pg. 4)



We would like to express our sincere gratitude to the parents of the infant participants in our studies. Without you, our research would not be possible!

SHARED

BOOK READING



Current study examines 3 and 5 year old children's looking patterns while reading a book.

- The study includes both typically developing children and children with hearing loss.
- Children will share 3 short books with a reader and complete a picture vocabulary test. Clinicians will provide feedback regarding language development based on their performance on the vocabulary assessment.
- We will be running the study at both Callier Richardson and Callier Dallas.

If interested please contact Dr. Emily Touchstone:
ETouchstone@utdallas.edu



Dr. Kate Shepard earned her masters and doctoral degrees at the University of Texas at Dallas and conducted research at the Infant Learning Project. She is a speech-language pathologist and developmental psychologist who now owns a private practice in which she provides speech-language services to children in the North Dallas Area.

For more information, visit:

shadowmespeechtherapy.com

Are you interested in further research participation?



The Think Lab at UTD, headed by Dr. Candice Mills, studies how children and adults think about and learn from the world around them.

Recruiting families with children between the ages of 4-10-years-old!

- Current projects examine how preschool- and elementary school-aged children think about what others are likely to know, and how this influences their learning.
- Parents will receive gift cards as thanks for their participation, and children receive a prize.

For more information, please visit:
www.utdallas.edu/research/thinklab

Questions?
utdthinklab@yahoo.com or
(972) 883-6075



Dr. Jackie Nelson and the Family Research Lab students at UTD study emotional aspects of family relationships and children's development.

- **Currently inviting two-parent families with a 3- to 5-year-old child to participate** in projects on emotional responses and mealtime interactions.
- Parents will receive gift cards as thanks for their participation, and children receive a prize.

For more information, please contact: familyresearchlab@gmail.com
or (972) 883-4122

(*"Bilingualism in Children"*, continued from pg. 3)

Bilingual infants fixated on the novel stimulus longer than the monolingual infants. Results suggest bilingual infants were better able to detect the differences between the control stimulus and the novel stimulus. Singh and Fu (2015) interpreted these results to mean that bilingual infants may have more developed cognitive skills needed to differentiate between two sets of stimuli. Because bilingual children must encode sounds in two different languages, they need to pay greater attention to detail when they hear speech sounds. This increased attention may translate to other parts of cognition as well.

References

- Krizman, J., Marian, V., Shook, A., Skoe, E., & Kraus, N. (2012). Subcortical encoding of sound is enhanced in bilinguals and relates to executive function advantages. *Proceedings of the National Academy of Sciences of the United States of America*, 109(20), 7877-81.
- Singh, Leher, Fu, Charlene S. L., Rahman, Aishah A., Hameed, Waseem B., Sanmugam, Shamini, Agarwal, Pratibha, & Rifkin-Graboi, Anne. (2015). Back to basics: A bilingual advantage in infant visual habituation. *Child Development*, 86(1), 294-302.
- Turk-Browne, N., Scholl, B., & Chun, M. (2008). Babies and brains: Habituation in infant cognition and functional neuroimaging. *Frontiers in Human Neuroscience*, 2, 16.

Current Events



This past May, graduate student, Mariah Fowler and faculty lab director, Dr. Melanie Spence, presented research findings at the annual meeting of the **Association for Psychological Sciences in New York City!**



- 6-month-olds' eye-tracking of speaking infant-directed faces showed no significant differences in looking at eyes vs. mouths during typical speech in which the facial movements and audio matched, supporting previous findings. However, facial scanning patterns were disrupted when infants viewed misaligned videos in which the face and voice were mismatched. Results suggest facial-vocal desynchrony may have influenced infants' failure to categorize the communicative intent of desynchronized speech in previous studies.

This October, graduate students Priscilla Jacob and Mariah Fowler presented research findings at the biennial meeting of the **Society for the Study of Human Development in Austin, TX!** Both Students received travel funding from the Psychological Sciences MS Program and would like to thank Dr. Candice Mills!



- Priscilla's study, titled *"Infants' Eye-Tracking of Static and Dynamic Facial Expressions"* examined the effect of motion and emotion on 6-month-olds' scanning of facial expressions. Eye-tracking data revealed that infants were looking more at the eyes than mouth when viewing silent moving clips and non-moving images of happy and disgust expressions. The findings are consistent with previous studies that have used silent stimuli; infants may have scanned the mouth and realized that the available speech information was limited. The attention to the eyes suggest that 6-month-olds readily search for social information when viewing emotional expressions.
- Mariah's study, titled *"Infants' Eye-Tracking of Audiovisual Faces: Communicative Intent & Facial-Vocal Desynchrony"* assessed effects of presenting 6-month-old infants with approving and comforting infant-directed speech that was either audiovisually matched or mismatched while accounting for the effect of order of presentation. Results suggest infants were better able to perceive and recognize the presence of facial-vocal desynchrony when they had viewed a normal (synchronous) video first.



The Infant Learning Project has had close to 150 wonderful families participate over the past year! Our contributions to research would not be possible without your help.

THANK YOU!

Infant Development Program

The Infant Development Program (IDP) of the Center for Children and Families at the University of Texas at Dallas serves as a resource for the identification and prevention of developmental disorders for children ages 0-5. IDP offers comprehensive developmental screenings in both English and Spanish at various sites in greater Dallas.

For more info, contact:
Cecilia Lazcano at 972-883-4503 or
cecilia.lazcano@utdallas.edu



Juega Conmigo

Juega Conmigo (Play with Me), is a program of weekly, free, drop-in, parent-child playtimes for children ages 0-3. *Juega Conmigo* is designed to foster strong parent-child relationships and children's growth through semi-structured play sessions. In this informal environment, bilingual developmental specialists facilitate play and learning activities using toys, music, and movement to promote sensitive, stimulating parent-child interactions and provide important supports for school readiness.

For more information, contact: 972-400-0286

Resource & Referral Program

Designed to help connect parents and professionals with a variety of local and national resources. Referrals for services include: Developmental Assessment Professionals, Family Therapists, Mental Health Professionals, Educational Testing and Evaluation for Learning Differences, Social Skills Programs for Children, Speech/Language Therapy, Occupational Therapy, Physical Therapy, and Home Health Services.

For more info, contact:
Adriana Villa Baird @ 972-883-4827



*The Infant Learning Project
says a special goodbye to
~ Sarah Rouhani ~*



Sarah entered the lab two years ago as a undergraduate majoring in Speech Language Pathology and Audiology. She graduated with honors this past Spring and will have completed her first year in the Communication Disorders MS program by the end of this academic year. Sarah is beginning a new position in her field and is on track to become a successful speech-language pathologist. Sarah was a vital part of our team and we thank her for her immense contributions to the lab over the past two years. We wish her the very best in her future endeavors!

Fall 2015 Infant Learning Project Team

Faculty Lab Director:

Melanie J. Spence, Ph.D.



Graduate Research Assistants:

Mariah Fowler, B.S.

Priscilla Jacob, B.S.

Sarah Rouhani, B.S.

Undergraduate Research Assistants:

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