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)
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:
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.

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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
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!

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 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 (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

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!