

Professor Studies Poverty and its Impact on Childhood Emotional Development by Janette Ballard



Pilyoung Kim wants to know how childhood experiences drive changes in brain structure and function that influence an individual's emotional development. In particular, she is looking at the influence of poverty on the developing brain.

“Childhood poverty has been consistently linked to physiological and emotional health issues in children and parents,” said Kim, an assistant professor of psychology and director of the [Family & Child Neuroscience Lab](#) at the University of Denver. Her research examines the role of poverty in emotion recognition and regulation in children, and emotional bonding between parent and child.

Kim and her research team, consisting of grad and undergrad students as well as research coordinators, examine the socioeconomic and parenting factors that influence neural and emotional development in middle childhood through the HEART Project (Home Environment And Relationships: The study of emotional and cognitive development).

“We try to understand the links between environmental, biological and psychological mechanisms by which the social contexts influence children's ability to process others' emotional expressions and regulate their own emotions,” said Kim.

The researchers recruit families for the study by connecting and delivering flyers and brochures to Denver and Boulder public schools, as well as community centers, Emergency Family Assistance Association, and youth programs such as Big Brothers Big Sisters of America in metro Denver.

“My primary research method is pediatric neuroimaging using a magnetic resonance imaging scanner (MRI), which enables strong research investigation into environmental effects on human brain development,” said Kim.

“We tell our child participants that the scanner is essentially a big, fancy camera. What makes it special is that it can take pictures of the inside of the body. MRI uses magnetic fields and radio waves which is safe for most people,” she added.

A second area of focus is the Infant Development, Emotion, and Attachment (IDEA) Project, for which she received a grant from the National Institute of Health.

“We are recruiting low-income and middle-income mothers from Denver Health Medical Center, Catholic Charities, and WIC and Prenatal Plus programs. We examine the role of poverty-related chronic stress in the specific neural processes of emotion regulation and parental motivation,” said Kim. “There are increased vulnerabilities for postpartum depression and harsh parenting among low-income mothers, and I hypothesize such increased vulnerabilities may be related to potential changes in the neurobiological processes of parenting due to the exposure to severe stress and poverty during the early postpartum period.”

Kim was born and raised in South Korea and Canada. She completed her masters at Harvard University, PhD in Developmental Psychology at Cornell University and postdoctoral training at National Institute of Mental Health. In 2012, she joined the University of Denver and started the [Family & Child Neuroscience Lab](#). Her courses include Child and Lifespan Development, which explores the physical, cognitive, social and emotional development across the lifespan, from the prenatal period to death; and the Science of Love, which examines the theory, research and issues relevant to love in parent-child and romantic relationships.

Kim will be giving a talk on April 9 entitled, [“How Poverty Gets in the Brain for Both Children and Parents.”](#) for the AHSS Faculty Lecture Series.