**Do You Feel What I Feel?:**

**Developmental Differences in Emotion Representation**

1500 Character Abstract:

Most parents would agree that they think about and express their feelings differently than their children do. The intensity with which children express the joy of eating birthday cake or the fear of skulking monsters has few parallels in the adult world, and this may be attributable to developmental differences in how emotions are represented within affect-related neural circuitry. Our project used Representational Similarity Analysis (RSA) on functional magnetic resonance imaging (fMRI) data to examine fine-grained pattern level responses from children (n = 25, aged 4 - 10, mean = 7.4) and adults (n = 20, aged 20 - 44, mean = 26.7) during passive viewing of positive and negative clips from popular children’s films. Compared to adults, children generated greater pattern similarity in neural activation within the ventromedial prefrontal cortex (vmPFC), regardless of the emotional valence of the stimuli. No differences in pattern similarity were measured between adults and children within the amygdala or nucleus accumbens (NAcc). This may suggest a maturation from visceral emotional responses which merely assess how significant an affective experience is to more evaluative analyses which modulate emotional responses. This project represents the first examination of pattern similarity analyses differences between a developmental and adult population for affective responses in the vmPFC, amygdala, and NAcc circuitry.