

known for engaging in risky behaviors such as those with mTBI.

**Categories:** Emotional and Social Processes

**Keyword 1:** intelligence

**Keyword 2:** emotional processes

**Keyword 3:** decision-making

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#### 41 Aesthetic Perception in Agenesis of the Corpus Callosum

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**Objective:** Agenesis of the Corpus Callosum (AgCC) is the congenital absence of all or part of the corpus callosum. Previous research has demonstrated that isolated AgCC results in a pattern of cognitive and psychosocial deficiencies, even when FSIQ is in the normal range (FSIQ > 80; Brown & Paul, 2019). Importantly, individuals with AgCC have been shown to provide narratives containing fewer emotional words, social interactions, and mental inferences on the Thematic Apperception Test (TAT; Turk et al., 2009). Similarly, research has suggested deficits in the elaborative imagination of persons with AgCC when they are providing narrative descriptions of simple animations (Renteria-Vasquez et al., 2021). Such findings raise questions about aesthetic perception in AgCC. While previous research has demonstrated differences in aesthetic perception among other neuropsychological populations (e.g. Parkinson's Disease; Luring et al., 2019), there is no research reported regarding aesthetic appreciations in AgCC. The present study employed the Assessment of Art Attributes (AAA; Chatterjee et al., 2010) to compare the conceptual and perceptual aspects of aesthetic perception of persons with AgCC to neurotypical control participants. Prior investigation by Bromberger and colleagues (2011) utilized the AAA to examine the aesthetic perception of persons with right hemisphere lesions, finding

deviations in judgements of abstractness, symbolism, realism, and animacy— all classified as “conceptual attributes.” Based on these findings, it was predicted that individuals with AgCC would rate paintings differently than neurotypical controls on conceptual attributes, but not on perceptual attributes.

**Participants and Methods:** Thirteen persons with AgCC and 49 neurotypical individuals completed the AAA. After completing measures of artistic experience and colorblindness, participants rated 24 paintings on 14 attributes. Balance, color saturation, color temperature, depth, simplicity, and stroke made up the “perceptual scales,” while abstractness, animacy, emotion, objective accuracy, realism, interest, and preference made up the “conceptual scales.”

**Results:** Following Bromberger and colleagues (2011), average ratings from all control participants were used to rank the 24 paintings for each scale. Spearman's rank-order correlations were then conducted between the rankings of each participant and the average of the controls for each scale. Spearman's rho coefficients were then compared between AgCC and control groups using t-tests, controlling for multiple comparisons. As hypothesized, the AgCC group had significant deviations from the average of the controls (lower rho values) on several conceptual attributes: Abstractness ( $p = .004$ ,  $d = .11$ ), emotion ( $p < .001$ ,  $d = .12$ ), and interest ( $p < .001$ ,  $d = .18$ ), whereas individuals with AgCC deviated on only one perceptual attribute: Simplicity ( $p = .003$ ,  $d = .12$ ).

**Conclusions:** While generally unremarkable in the sensory aspects, persons with AgCC demonstrated greatest differences in three important conceptual aspects of aesthetic perception. This outcome suggests that such higher-order aesthetic appreciations require interhemispheric interactivity. These results further support the hypothesis that decreased elaborative imagination is a fundamental component of AgCC.

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**Keyword 1:** corpus callosum

**Keyword 2:** visual imagery

**Keyword 3:** emotional processes

#### 42 Does dorsolateral prefrontal cortical functioning moderate the relation between conduct problems and