

## **Semantic Analysis of Awareness of Consequences in Agenesis of the Corpus Callosum**

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**Objective:** Previous studies have indicated that persons with agenesis of the corpus callosum (ACC) have deficits in social cognition that make it difficult for them to navigate the complex world of social relationships, including deficits in inferring the mental states of others and imagining realistic social scenarios. This study examined the semantic content of responses to the Awareness of Consequences Scale (AOCS) which demands finding solutions to social or moral dilemmas. Responses were analyzed using the Linguistic Inquiry and Word Count (LIWC). It was predicted that individuals with ACC would show diminished emotional, social, and cognitive content and a different distribution of words belonging to grammatical categories compared to controls.

**Participants and Methods:** Twenty-nine adults with ACC (ages 16–55; FSIQs 78–129) were compared to 22 normal controls (ages 18–51; FSIQs 88–116), covarying FSIQ. LIWC was applied to a composite of responses to the six vignettes of the AOCS.

**Results:** Individuals with ACC used significantly fewer words denoting emotionality ( $p < .01$ ) and cognitive processes ( $p < .05$ ), but no differences were found in social content or grammatical usage. Unexpectedly, individuals with ACC were found to use more words than controls pertaining to physical states and bodily functions ( $p < .05$ ).

**Conclusion:** These results suggest that absence of the corpus callosum may result in under-utilization of solutions to dilemmas that involve the emotional and cognitive processes of others. These findings are consistent with our previous findings of reduced capacity for problem solving, deficient social inference, and alexithymia in ACC.

Words = 250