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Objective: Multiple sclerosis (MS) is a persistent neuroinflammatory disease of the central nervous system that affects young adults, and is pathologically characterized by multiple and distributed focal white matter lesions, although they are characteristically located in periventricular regions. Cognitive impairment occurs in all clinical forms of the disease, with great variability and great impact on the quality of life of patients. Recent research indicates that in addition to cognitive and physical deficits, they also have deficits in social cognition, such as Theory of Mind. Although social cognition in patients with multiple sclerosis has begun to be studied in recent years, there is still little knowledge about its impact in the early stages of the disease, when the load of injuries is low and physical disability is not yet present. A series of 7 cases of patients diagnosed with MS in follow-up by the Multiple Sclerosis polyclinic of the Institute of Neurology of the Hospital de Clínicas is presented.
Participants and Methods: Clinically stable patients with no recent urges and no cognitive complaint were included. They were evaluated with the ACE-R screening test and Theory of Mind tests: Reading the mind in the eyes and Faux Pas tests.
Results: All patients presented normal ACE results, without indicators of cognitive impairment and poor performance in the emotion reading test. In two cases, poor yields in Faux Pas were also found.
Conclusions: social cognition has a great impact on quality of life, and there are indicators of involvement in early stages of the disease in which other typical cognitive deficits are not yet evident, and may constitute the first indicator of deterioration. The evaluation and early detection of deficits in social cognition could contribute to the treatment and quality of life of patients.

Categories: Emotional and Social Processes
Keyword 1: cognitive functioning
Keyword 2: theory of mind
Keyword 3: multiple sclerosis
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38 Assessing Memory for Emotions Separately from Emotion Recognition

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Objective: Accurate processing of facial displays of emotion is critical for effective communication. A robust literature has documented impairment in the ability to recognize facial affect in people with traumatic brain injury (TBI), but research is scarce about memory for facial affect. Disruptions in recognizing and remembering the emotions of others can undermine relationship quality and may result in psychosocial dysfunction. Importantly, the extant literature indicates that facial affect recognition dissociates from other cognitive abilities such that it is likely a distinct neuronal process. Thus, explicit measurement of affect recognition and memory for emotions may be critical for implementing and refining rehabilitation interventions. The present study examined the relationship between recognition and memory for emotions using a novel computerized task and explored its associations with other cognitive abilities.
Participants and Methods: Participants were adults who were neurologically healthy (n = 31) or had a history of moderate to severe TBI (n = 26). The battery included the novel Assessment of Facial Affect Recognition and Memory (AFARM), Cambridge Face Memory Test (face memory without emotion), Wechsler Test of Adult Reading, Rey Auditory Verbal Learning Test, Judgment of Line Orientation, Oral Symbol Digit Modalities, Digit Span, FAS, Animal Fluency, and the Affect Intensity Measure (experienced emotion). Spearman correlations examined the relationship of AFARM performance with the test battery. Logistic regression models examined whether immediate-delay (ID-EM) and long-delay face emotion-memory (LD-EM) accounted for unique variance in group membership beyond recognition accuracy of facial affect and memory for faces.
Results: AFARM demonstrated relationships with neuropsychological and mood variables in

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the expected directions across and within groups, with the strongest associations observed for memory for verbal information (rs = .51 to .58) and processing speed (rs = .48 to .57). Consistent with traditional list-learning tests, ID- and LD-EM were highly correlated (r = .85). Experienced affect intensity was inversely associated with ID-EM (r = -.29) and LD-EM (r = -.38) but not with recognition accuracy (r = -.10). Logistic regression examining ID-EM was significant, $\chi2(3) = 26.05$, $p < .001$, Nagelkerke R2 = .49. ID-EM accounted for unique variance in group status (p = .006; OR = 0.65) after accounting for recognition accuracy and face memory. Similarly, the model examining LD-EM was significant $\chi2(3) = 27.70$, $p < .001$, Nagelkerke R2 = .43; LD-EM was significant after accounting for other variables (p = .017; OR = 0.69).
Conclusions: The findings are consistent with the hypothesis that memory for emotions represents a unique component of social cognition that is separate from recognition. Accuracy in identifying emotions, face recognition memory, and memory for emotions are strongly related but not wholly redundant processes. Consistent with prior literature, subjective experience of emotion had substantial effects on objective performance tasks, indicating that an individual's intense experience of their own emotions can disrupt sensitivity to the emotions of others. Future research should assess the extent to which memory for emotions relates to psychosocial outcomes such as the quality and quantity of interpersonal relationships.

Categories: Emotional and Social Processes
Keyword 1: traumatic brain injury
Keyword 2: assessment
Keyword 3: social cognition
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39 Empathic Abilities of Individuals with Agenesis of the Corpus Callosum

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Objective: Previous research suggests that individuals with isolated Agenesis of the Corpus Callosum (AgCC) have cognitive and psychosocial deficits including that of complex processing of emotions (Anderson et al., 2017) and their ability to verbally express emotional experiences (Paul et al., 2021). Additionally, research suggests individuals with AgCC show impaired recognition of the emotions of others (Symington et al., 2010), as well as diminished ability to infer and describe the emotions of others (Renteria-Vazquez et al., 2022; Turk et al., 2010). However, the nature of the empathic abilities of individuals with AgCC remains unclear in empirical research. Capacity for empathetic feelings and situational recognition in persons with AgCC were tested using the Multifaceted Empathy Test [MET] (Foell et al., 2018). We hypothesized that individuals with AgCC would have lower abilities for both cognitive and affective empathy than neurotypical controls.
Participants and Methods: Results from 50 neurotypical control participants recruited from MTurk Cloud were compared to responses from 19 AgCC participants with normal-range FSIQ (>80) drawn from the individuals with AgCC involved with the Human Brain and Cognition Lab at the Travis Research Institute. The research was completed through an online version of the MET. The MET uses a series of photographs of individuals displaying an emotion. To measure cognitive empathy, the participants are asked to pick the correct emotion being displayed with three distractors for each item. To measure affective empathy, they are then asked on a sliding scale, "how much do you empathize with the person shown" (1 = Not at all, 7 = Very much).
Results: Results of a MANOVA showed a trend for a significant overall difference between individuals with AgCC and controls for empathic abilities $F(1, 67) = 2.59$, p-value = .082, with persons with AgCC showing less empathy overall. Follow-up one-way ANOVAs showed that individuals with AgCC scored significantly lower in cognitive empathy $F(1, 67) = 4.63$, p-value = .035, $\eta p2 = .065$; however, affective empathy was not significantly different between groups $F(1, 67) = .537$, p-value = .466, $\eta p2 = .008$.
Conclusions: Results suggest that adults with AgCC have a diminished ability to give cognitive labels to the emotional states of others compared to neurotypical controls. However, contrary to our hypothesis, participants with

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