

Assessing Social Cognition in Clinical Practice

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The 'social brain'



Is a set of brain regions dedicated to social abilities and situations, including empathy, mentalisation, simulation, and emotional regulation

Traumatic Brain Injury

Traumatic Brain Injury occurs when there is trauma to the head, such as a severe fall or car accident, which results in damage to the brain. Depending on the location there is a likelihood that the injury will disturb processing in the social brain networks.

Social Cognition



Is a range of cognitive processes that are involved in our social interactions and how we are able to perceive and attend to information regarding others.

What is the relationship between TBI and social cognition?

TBI can lead to a variety of deficits in social cognition including the ability to communicate, interpret emotional states understand the intentions and points of views of others, as well as understand the meaning behind pragmatic actions.

Current assessments of social cognition

Author	Year	Participants	Assessment Tools	Findings
McDonald + Flanagan	2004	24 adults (TBI) 24 Matched controls	Judge speakers emotions (Pond or task) What speakers intended communication partners to believe (Baron-Cohen tasks) What they actually meant (Stone/Baron-Cohen)	Could only recognise when explicit information was provided
Kidders, Poole + Crawford	2003	17 Mild to severe TBI 17 Healthy controls	Neurocognitive Test Expressions (Baron-Cohen, 1988) Eye test (Baron-Cohen, 1997) EG (McIntosh & Goodrich, 1972) Face-Pos Test (Baron-Cohen, 1998) Cartoon tasks (Haxby, 1998)	Patients with TBI had more problems in emotional and social behaviour than controls
Kidders, Listerwell, Crawford, Currie	2006	23 mild to severe TBI 24 Dextrous controls	Same as above	Patients with TBI were impaired in emotion recognition, TBI a negative flexibility impairment in controls
Nijmiera, Humphreys & Park	2014	40 Neurologically damaged patients (DSM) 50 Neurologically intact controls	Reading known/healthy unknown tests Famous GO photos	Patients as a whole did worse than controls Performance worse on social cognition
Allen, Kullback, Pathway & Moore	2001	12 Mild to severe TBI 12 Controls	12 different tests constructed 25 first order, 8 second order	Both patient groups showed impairments in TBI
Sherry, Yancy, Van, Ellensby & Alvarado	2006	22 ABI 22 HC	Revised color Tapes Test (Baron-Cohen, 1997), a Revised TBI compared to executive TBI	Patients with damage exhibit specific impairments in affective TBI compared to executive TBI

From the 21 studies collected so far, we noted at least 10 different assessment tools used. It was apparent that modifications were made to the tools, tailoring them to the needs of the researchers. This limits the reliability and validity of the original tests.

Although not being an issue in itself, it does pose a problem to clinicians struggling to understand which tool is better suited for their patients.

The need for a standardised and reliable method of measurement is clear.

Social Behaviour



If there are deficits present, a range of social problems will be visible such as; 'social impulsivity', problematic social conduct, inappropriate language and low emotional understanding.

What problems are we investigating?

- Clinicians are unaware of what social cognition is and the battery tests available for them to use.
- The tools available are more prevalent in research rather than the clinical setting.
- There is a gap in the implementation of these tools and recommendations.

Further details

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How could it be resolved?

- Our project entails collating mass amounts of previous data to analyse the more well-used battery tests and process their reliability and validity over a variety of factors, such as; the cost of performing them, timings and cross cultural factors as a few examples.
- We will attempt to incorporate the tools into clinical settings by developing a model and/or flow chart which will help clinicians decide which battery test is better suited for their patients.