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Understanding others through the bottom of a glass: alcohol dependence factors affecting social and emotional processing

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Introduction

Alcohol use disorder (AUD) is described as a chronic relapsing condition with definitive behavioural markers (1). Recognised clinically as affecting decision making, relationships and neurological function, AUD is associated with poor treatment outcomes.

Social processing paradigms have been developed which show that AUD is associated with:

- the decoding of other's emotional expressions (2,3,4,5)
- differences in perspective taking (6)
- the detection of irony (7)
- social misdemeanours (faux-pas) (8)
- humour processing (9)

Yet in the UK there is no routine testing for problems with social cognition in patients with AUD.

Aim

The Mini Social Cognition and Emotional Assessment (mini-SEA:10) is now used widely in the UK for dementia patients. The author piloted its effectiveness in highlighting problems in social cognition in this population and also to see what AUD and cognitive factors may effect performance on this task.

Participants and Materials

44 participants with AUD were recruited from a set of outpatient service centres in the South East of the UK in 2015. All clinical participants met the DSM-5 (2013) criteria for AUD.

Assessment battery

Emotional understanding:

The mini-SEA comes in two parts

1. a faux-pas test (see image)
2. an emotional facial recognition test.

In the faux-pas test participants are presented with 10 stories involving 2 or more characters; 5 of these stories contain a faux-pas and 5 are control stories. The mini-SEA offers a finely grained insight into mental state reasoning through the division of 6 separate sub-scores: detection, identification, understanding, intention, belief and empathy.

Example answer

(Female, 52, abstinence 5 weeks, no poly-drug use, AD 22 years).

R: Why shouldn't Anne have said that? Why was it awkward?

P: She's not thinking before speaking but that's ok, we are all guilty of that.

R Why do you think Anne said it?

P: She probably never wanted to invite her friend around to begin with.

R: How do you think Jeanette felt?

P: I imagine she was fuming, she won't speak to her again. Who could blame her?

AUD related behaviours:

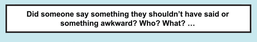
Drinking related behaviours: units consumed, age started drinking, age of alcoholism onset (years of drinking), alcohol craving, depression and anxiety.

Cognitive assessment:

Colour based Stroop and sub-tests from the Wechsler Intelligence Scale for Adults.

Results

Regression analysis showed years of drinking (YoD) was the highest predictor of faux-pas score variability β= -.746, p <001.



Secondly response inhibition, as measured by the colour naming Stroop task was the next predictor of low scores on the faux-pas test β =.325 , p =.044.

YoD also predicted poor performance all on the subcomponents of the faux-pas test: detection, identification, understanding, intention, belief and empathy.

Conclusion

AUD participants' performed poorly on the faux-pas task compared to controls. Most significantly, years of problematic alcohol drinking was the main predicative factor of total faux-pas score and the individual faux-pas sub-scores (with the exception of belief). Long-term AUD patients are those who are most likely to show evidence of general and social cognitive deficits.

The author noted some interesting patterns in responding that merit further exploration. Firstly, respondents commonly interrupted questions to give their responses and this was not the case with controls, and this possibility indicated a degree of impulsivity in line with the Stroop findings. Secondly, there was a clear negative bias in responses to the questions relating to intention and empathy, and this may be reflective of the context of the environments and relationships experienced by AUD participants. This second point is of particular importance, and calls for a need to 'unpick' those negative bias in environmental perception that are related to entrenched negative life-long experiences which shape thinking from that which is of true neurological consequence.

This is the first study with a UK based AUD cohort to test ToM and emotional recognition. AUD is not unique to the UK, but the UK does present with a distinct and problematic alcohol drinking culture. To date, there is no routine screening for deficits in social cognition in the UK (or general cognitive function), and treatment choices are minimising. Group based therapy is the most likely of all free NHS or charity based treatments to be available. This could be problematic, because group treatment in which understandings of and feelings of empathy towards fellow client's experiences is needed, may be not be achievable for some.

References

1American Psychiatric Association, 2013. DSM-5, Diagnostic and Statistical Manual of Mental Disorders 5th edition TR.

2Clark, U.S., Oscar-Berman, M., Shagrin, B., Pencina, M., 2007. Alcoholism and judgments of affective stimuli. Neuropsychology 21, 346–62.

3Kornreich, C., Brevers, D., Canivet, D., Ermer, E., Naranjo, C., Constant, E., Verbanck, P., Campanella, S., Noël, X., 2013. Impaired processing of emotion in music, faces and voices supports a generalized emotional decoding deficit in alcoholism. Addiction 108.

4 Maurage, P., Campanella, S., Philippot, P., Martin, S., De Timary, P., 2008. Face processing in chronic alcoholism: A specific deficit for emotional features. Alcohol. Clin. Exp. Res. 32, 600–606.

5Philippot, P., Kornreich, C., Blairy, S., Baert, I., Den Dulk, a, Le Bon, O., Streel, E., Hess, U., Pelc, I., Verbanck, P., 1999. Alcoholics' deficits in the decoding of emotional facial expression. Alcohol. Clin. Exp. Res. 23, 1031–1038.

6Cox, S., Chandler, C., Simpson, A., & Riggs, K. (2016). The effect of alcohol dependence on automatic visuo-spatial perspective taking. Drug and Alcohol Dependence, 166, 21-25.

7Amenta, S., Noël, X., Verbanck, P., Campanella, S., 2013. Decoding of Emotional Components in Complex Communicative Situations (Irony) and Its Relation to Empathic Abilities in Male Chronic Alcoholics: An Issue for Treatment. Alcohol. Clin. Exp. Res. 37, 339–347.

8Thoma, P., Friedmann, C., Suchan, B., 2013. Empathy and social problem solving in alcohol dependence, mood disorders and selected personality disorders. Neurosci. Biobehav. Rev.

9Uekermann, J., Channon, S., Winkel, K., Schlebusch, P., Daum, I., 2007. Theory of mind, humour processing and executive functioning in alcoholism. Addiction 102, 232–240.

10 Bertoux, M., Volle, E., De Souza, L. C., Funkiewiez, A., Dubois, B., & Habert, M. O. (2014). Neural correlates of the mini-SEA (Social cognition and Emotional Assessment) in behavioral variant frontotemporal dementia. Brain imaging and behavior, 8(1), 1-6.