The Edinburgh Social Cognition Test (ESCoT): A novel test of social cognition

The Edinburgh Social Cognition Test (ESCoT): A novel measure of social cognition in healthy younger and older adults

Centre for Cognitive Ageing and Cognitive Epidemiology

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Background

Social cognition refers to the higher cognitive abilities that are relevant to the perception and understanding of social behaviours and which process this information to respond appropriately in everyday interactions [1, 2].

Social cognitive abilities encompass processes such as Theory of Mind (ToM), empathy, emotional recognition, moral judgements and the understanding of social norms.

Current neuropsychological tools used to assess social cognition either have limited use in clinical settings or do not measure the intended abilities in sufficient detail, decreasing the ecological validity of the findings.

Furthermore, they have yielded mixed results in their attempts to measure performance across an adult's lifespan [3, 4].

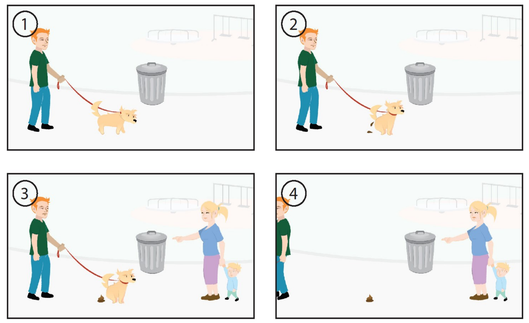
Current Project

We present a novel social cognitive task called The Edinburgh Social Cognition Test (ESCoT) to address these limitations.

The ESCoT consists of ten dynamic, animated scenarios that are all self-contained narratives that depict an array of interactions.

It incorporates the findings of a dichotomised ToM network, explicitly assessing Cognitive ToM and Affective ToM [5].

To investigate an individual's comprehension of the social rules that govern behaviour, the ESCoT examines the interpersonal and intrapersonal Understanding of Social Norms.



ESCoT example scenario: norm violation

Methods

Participants

A total of 60 older adults (24 males, 36 females) aged between 65 – 85 (M = 72.32, SD = 6.07) and 62 younger adults (30 males, 32 females) aged between 18 – 35 (M = 23.68, SD = 4.51) were recruited.

Study 1 participants

	Older Adults	Younger Adults
Mean age	72.22 (6.10)	26.00 (5.30)
Males:Females	15:17	15:17
Total	32	32

Study 2 participants

	Older Adults	Younger Adults
Mean age	72.43 (6.15)	21.20 (.61)
Males:Females	9:19	15:15
Total	28	30

Measures

To validate the ESCoT, performance on the task was compared to established measures of social cognition.

Study 1

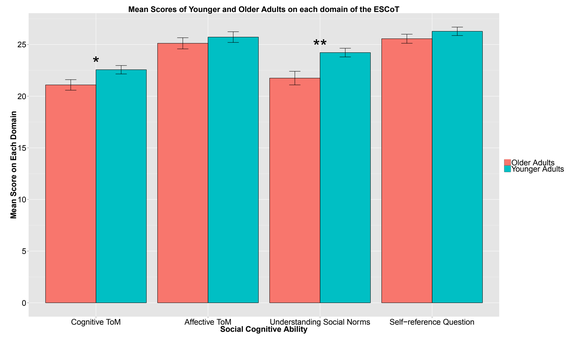
Triangles Task [6], Reading the Mind in the Eyes [7], Reading the Mind in Films [8], Judgement of Preference [9], Social Norms Questionnaire [10].

Study 2

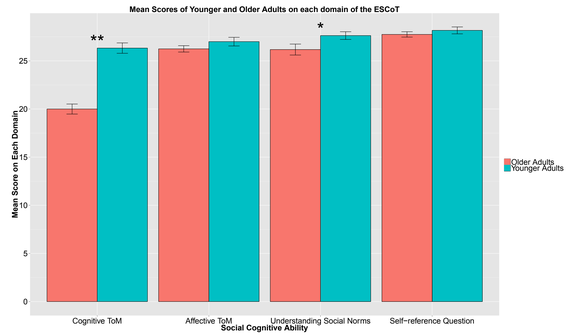
Reading the Mind in the Eyes [7].

ESCoT Results

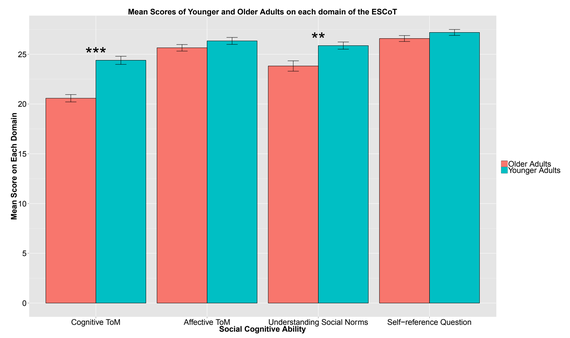
Study 1



Study 2



Combined data from Study 1 & 2



'***' 0.001 '**' 0.01 '*' 0.05

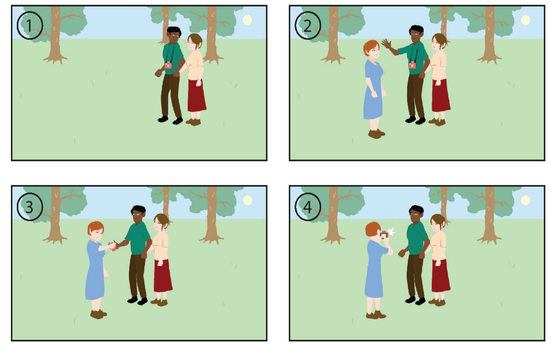
Discussion

Both Study 1 and Study 2 revealed that while the cognitive aspect of ToM and interpersonal understanding of social norms show age differences, the affective component and intrapersonal understanding of social norms do not.

The results suggest there is a fractionation in the effects of age on social cognitive abilities.

Data collection is underway for validation studies with adults with Autism Spectrum Disorder and in an early on-set mixed dementia population

It is hoped that this task will be developed into an appropriate clinical tool for the assessment of social cognitive abilities in healthy and clinical populations.



ESCoT example scenario: non-norm violation

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