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Are traits of ADHD associated with self-reported social cognition in an adult community sample?

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Objective and methods

Adults with ADHD are often impaired in their social relationships, but studies on social cognition are lacking.

This study explores whether traits of ADHD in a community sample of adults are associated with self-reported social cognition.

Community sample (n = 685, 270 males, 415 females)

Mean age: 33 years (range 16-84 years)

Online survey: self-report questionnaires on traits of empathy (Empathy Quotient¹), systemizing (Systemizing Quotient²) and ADHD (ADHD Rating Scale (ARS)³; adulthood and retrospective childhood version)

EQ: Cognitive empathy (CE)



EQ: Emotional empathy (EE)



EQ: Social skills (SS)



SQ: Systemizing



SQ - EQ: Brain type (D)



ARS: ADHD symptoms



Categorical approach

Selected participants with DSM-5 screening diagnosis of ADHD on ARS (adulthood: ≥ 5 clinical symptoms & childhood: ≥ 6 clinical symptoms) = "ADHD".

ANOVA ("ADHD"*sex) group comparison with matched controls from the community sample.

	"ADHD" (n=56) M(SD)	Controls (n=56) M(SD)	Main effect "ADHD"	Cohen's d
total EQ	26.7 (9.6)	30.9 (10.5)	p=.013*	-0.42
CE	11.0 (5.6)	12.3 (5.0)	p=.128	-0.26
EE	11.1 (4.7)	13.2 (5.2)	p=.006**	-0.42
SS	5.9 (2.8)	6.9 (2.5)	p=.073	-0.38
SQ	59.5 (20.0)	53.7 (17.4)	p=.066	0.31
D	0.074 (0.121)	0.017 (0.121)	p=.004**	0.47

No significant interactions of "ADHD"*sex were found.

Dimensional approach

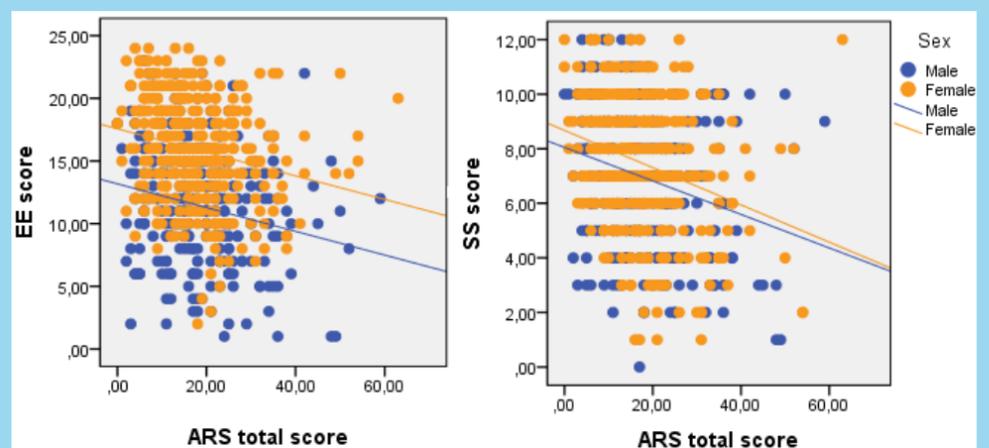
Whole-sample (n = 685) multiple linear regression analysis:
CE + EE + SS + SQ + D -> ARS (adulthood total score)?

Significant models:

Across sexes: SS + EE -> ARS ($R^2 = 0.085$; $p < .001$)

Males: SS -> ARS ($R^2 = 0.06$; $p < .001$)

Females: SS + EE -> ARS ($R^2 = 0.091$; $p < .001$)



Conclusions

Both approaches point to reduced emotional empathy in relation to traits of ADHD. Participants with a screening diagnosis of ADHD are characterized by a "male pattern" of self-reported social cognition.

In the community sample ADHD traits link to capability in social skills.

Future clinical ADHD studies should focus on possible impairments in empathy; sex differences should be taken into account.

References

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- ³Kooij, J. J. S., et al. (2005). Psychological Medicine, 35(6), 817-827.