

# Presence of “autistic traits” affects executive function and mood in a sample of older adults.

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## Background

- The Broad Autism Phenotype (BAP) describes sub-clinical autistic spectrum disorder traits.
- BAP traits are observed in the typical population.
- As autistic spectrum disorders were identified in the 1940s, only now can we examine ageing in this population.
- Diagnosis on autistic spectrum disorder in adulthood is becoming more common.
- With the increasing ageing population, there are growing numbers of older adults with autistic spectrum disorder.
- Examining the BAP in older adults can provide information about ageing with autism spectrum disorders traits and diagnosis.

## Hypotheses

- Elevated BAP traits will be associated with:
  - Greater executive function problems,
  - Lower levels of social support,
  - Increased depression and anxiety symptoms.

## Methods

- **Participants:** 66 community dwelling adults aged  $\geq 60$  years
- 20 above cut-off (3.15) on BAPQ (BAP group); 46 below cut-off, control older adults (COA)
- No group differences in education, health or marital status (not shown).

Table 1: Group demographics, mean (standard deviation)

	BAP (n=20)	COA (n=46)	Group differences
Age	73.65 (6.92)	69.57 (6.42)	F=5.17, p=.03
Sex (m,f)	11,9	22,24	$\chi^2=.29$ , p=.59
Relative with ASD (y,n)	7,13	4,42	$\chi^2=5.86$ , p=.12

## Self-report Measures:

**BAP Traits:** Broad Autism Phenotype Questionnaire (BAPQ)

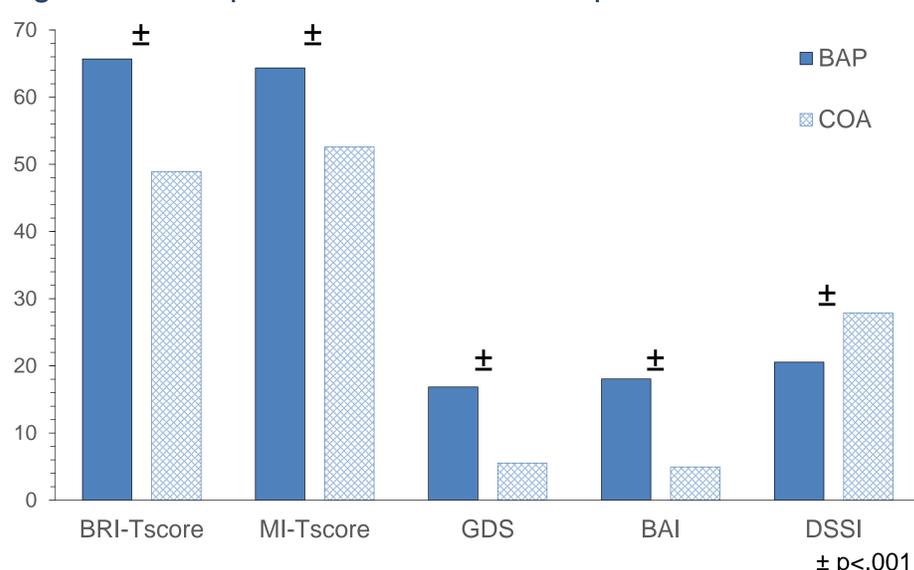
**Executive Function:** Behavior Rating Inventory of Executive Function – Adult version; Sub-scales - Behavioral Regulation Index (BRI) and Metacognition Index (MI).

**Mood:** Geriatric Depression Scale (GDS); Beck Anxiety Inventory.

**Social Support:** Duke Social Support Index (DSSI)

## Results, Group differences

Figure 1: Group differences on Self-report Measures



## Results, Correlation Analyses

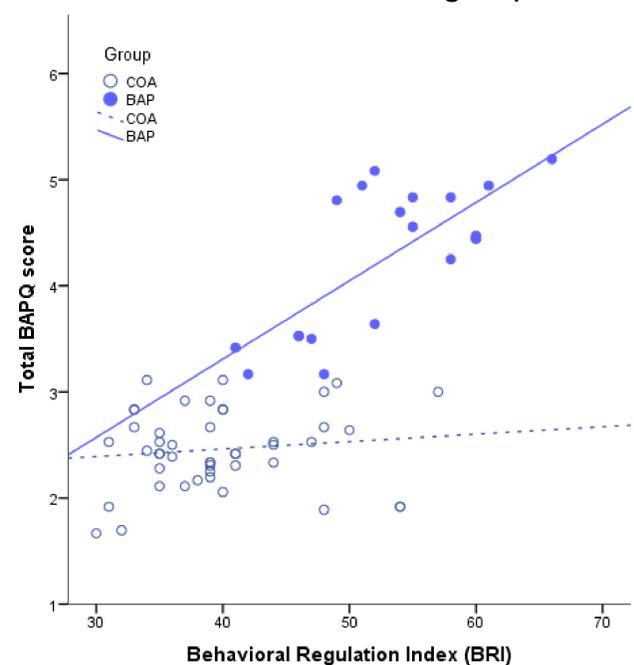
Table 2: Correlations with BAPQ by Group

		BAP	COA
Executive function	BRI	r=.73, p<.001 <sup>±,a</sup>	r=.12, p=.42 <sup>a</sup>
	MCI	r=.32, p=.17	r=.22, p=.15
Mood	GDS	r=.55, p=.01*	r=.39, p=.008**
	BAI	r=.04, p=.85	r=.07, p=.67
Social support	DSSI	r=-.65, p=.002**	r=-.35, p=.02*

\*p<.05; \*\*p<.01; ±p<.001

<sup>a</sup> Significant difference in correlations between BAP and COA group for BAPQ Total and BRI scores (Fisher's r to z transformation = z=2.82, p=.005)

- A different pattern of correlations is observed between BAPQ and BRI for BAP versus COA groups.



- **Correlations with Age:**
- In the whole sample, age correlated significantly with MCI (r=.26, p=.03) and GDS (r=.27, p=.03)
- Correlations did not reach significance for either group alone
- Age did not correlate with any other variables.

## Results, Regression Analyses

- To examine variables that predicted BAPQ scores
  - 78.7% of variance explained (F(4,54)=49.75, p<.001)
  - By DSSI (63.5%), BRI (10.3%) and MI (2.1%)
- To examine variables that predicted GDS scores
  - 68.5% of variance explained (F(2,58)=63.11, p<.001)
  - By BAPQ (59%) and MI (9.5%)
- To examine variables that predicted BAI scores
  - 52.8% of variance explained (F(2,58)=32.47, p<.001)
  - By BAPQ (47.4%) and GDS (5.5%)

## Conclusion

- BAP traits exist across a continuum in later-life but do not increase with age.
- BAP traits were associated with greater executive difficulties, less social support, and lower mood.
- Older adults with BAP traits may be at greater risk for age-related decline
- Results suggest that ageing with autism spectrum disorders may represent additional risk

