Life Satisfaction, Anxiety and Camouflage in Adults with and without a Diagnosis of ASD

ELIZABETH MILNE

University of Sheffield, UK

BACKGROUND

A growing number of people are diagnosed with ASD in adulthood. Autistic people face a number of challenges, which can be confounded by the expectation to 'fit-in' and adapt behaviour to social norms. This research investigates self-reported symptomatology / traits, anxiety levels and subjective life satisfaction amongst autistic adults – many of whom had been recently diagnosed - and in individuals who strongly identify with the autism phenotype but are not diagnosed. The aim of the study is to gain clearer understanding of the factors that affect life-satisfaction in autistic adults.

METHOD

Participants

We recruited participants who varied in the extent to which they identified with the autistic phenotype, including people who would be considered part of the broader autism phenotype. 98 people took part; 29 were diagnosed with ASD. Of these, 27 had received their diagnosis in adulthood. Mean age at diagnosis was 38.7 years (S.D. = 14.4).

Questionnaires

Participants completed the following questionnaires:

- Ritvo Autism Asperger Diagnostic Scales (RAADS-R)[1]
- Beck Anxiety Inventory – Trait Version (BAIT)[2]
- Satisfaction With Life Scale (SWLS)[3]

Four factors of the RAADS-R have been identified[1], reflecting Social Relatedness; Circumscribed Interests, Sensory Motor behaviour; and Social Anxiety. In addition, three questions probe trait-masking, e.g. "I like to copy the way certain people speak and act. It helps me to appear more 'normal'." A 'camouflage score' was created by summing the scores from these three items. All RAADS-R factor scores and the camouflage score are presented as a proportion (from 0 to 1).

RESULTS 1: RAADS-R SCORES

All diagnosed participants and 20 of the undiagnosed participants scored above the RAADS-R cut-off of 65. For some analyses the participants were split into three groups: those with a diagnosis (ASD); undiagnosed high-trait group (UdHT) and undiagnosed low-trait group (UdLT). Group characteristics are reported below.

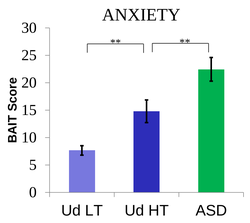
	UdLT (N = 49)	UdHT (N = 20)	ASD (N = 29)	
Female : Male	29 : 20	7 : 13	13 : 16	χ^2 = 3.7, p>.05
Age	36.4 (13.5)	34.3 (13.3)	43.9 (13.1)	F(2,97) = 3.9, p<.01

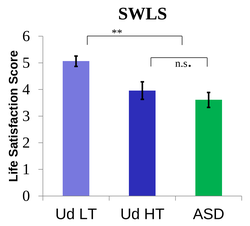
*Note that because of the recruitment method, these data do not provide reliable information about the prevalence of undiagnosed cases. Nevetrheless they do support previous work showing that there are many adults in the UK who meet diagnostic criteria for ASD but are not diagnosed.4

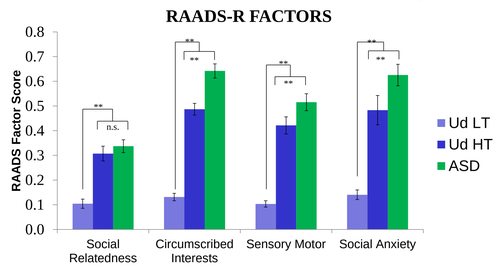
RESULTS 2: DIFFERENCES BETWEEN THE UNDIAGNOSED HIGH TRAITS GROUP AND THE DIAGNOSED GROUP

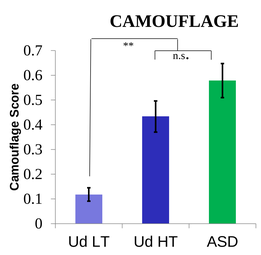
- Trait anxiety: ASD> Undiagnosed High-Trait > Undiagnosed Low-Trait (p<.01)
- **Subjective life-satisfaction**: ASD = Undiagnosed High-Trait < Undiagnosed Low-Trait (p<.01)
- RAADS-R factor scores:
  - **Social Relatedness**: ASD = Undiagnosed High-Trait < Undiagnosed Low-Trait
  - Circumscribed Interests = ASD> Undiagnosed High-Trait > Undiagnosed Low-Trait.
  - Sensory Motor: ASD> Undiagnosed High-Trait > Undiagnosed Low-Trait.
  - Social Anxiety: ASD> Undiagnosed High-Trait > Undiagnosed Low-Trait.
- **Camouflage**: ASD = Undiagnosed High-Trait > Undiagnosed Low-Trait.

- All statistical tests controlling for age
- **Bold** font indicates comparisons where those with and without a diagnosis **do not differ**.









RESULTS 3: RELATIONSHIP BETWEEN SUBJECTIVE LIFE SATISFACTION, ASD AND ANXIETY

Across the whole sample, RAADS-R scores and BAIT scores were negatively correlated with life satisfaction. A regression model with life satisfaction as the DV and RAADS-R score and anxiety as the IVs was tested.

N = 98	Life Satisfaction	Anxiety	RAADS-R Score
Life Satisfaction		-.482**	-.480**
Anxiety	-.482**		.716**
RAADS-R Score	-.480**	.716**	

The overall regression model was significant, F(2,95) = 16.54, p<.001; RAADS-R and BAIT scores accounted for 25.8% of the variance in subjective life satisfaction in this sample (adjusted R^2 = 24.3%).

However squared semi-partial correlations (sr_i^2) showed that RAADS-R score accounted for a significant part of the variance over and above BAIT score, t = 2.44, p<.05, sr_i^2 = .046, whereas BAIT score did not predict additional variance over and above RAADS-R score, t = .1.89, p >.05, sr_i^2 = .028.

RESULTS 4: ARE SPECIFIC FACTORS ASSOCIATED WITH LIFE SATISFACTION IN ASD?

The table below shows significance levels for correlations between life satisfaction and ASD traits / symptoms.

	ANXIETY	SOCIAL RELATEDNESS	CIRCUMSCRIBED INTERESTS	SENSORY MOTOR	SOCIAL ANXIETY	CAMOUFLAGE
DIAGNOSED	**-.368***	**-.490****	-.327	-.190	-.323	-.157
UNDIAGNOSED	**-.379****	-.087	**-.379****	**-.359****	**-.359****	**-.329****

Note that Fisher's r to z transform indicated that the only difference between the diagnosed and undiagnosed participants was the relationship between social relatedness and life satisfaction.

FINDINGS / CONCLUSIONS

1. A large minority of the 'neurotypical' sample scored above cut-off on the RAADS-R.
2. The undiagnosed high-trait group had lower trait anxiety than those with a diagnosis. This may suggest that presence of comorbidities increases the likelihood of ASD diagnosis in adulthood.
3. Satisfaction with life was associated with level of self-reported traits / symptoms, not with diagnostic status. Autism traits predict satisfaction with life, even after controlling for anxiety.
4. The strongest predictor of life-satisfaction in ASD was social relatedness. This matches anecdotal information obtained during the study which suggested that life satisfaction is improved by increasing access to social networks.
5. In undiagnosed participants, social relatedness was not correlated with life-satisfaction, however other aspects of the autism phenotype, including level of camouflage, were. This suggests that trait-masking is associated with lower life satisfaction, and this is especially true of those with high-traits but are undiagnosed.

LIMITATIONS

1. Findings are limited by the relatively small sample size of diagnosed participants.
2. The factor scores from the RAADS-R have not been validated.
3. Camouflage score was based on three items of the RAADS-R and has not been validated.

REFERENCES

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4. Brugha, T. S. et al. (2011). *Archives of general psychiatry*, *68*(5), 459-465.

CONTACT

If you would like further information, or to discuss this work, please contact Elizabeth Milne: E.Milne@sheffield.ac.uk. I would like to sincerely thank all of the participants who took part in this research. These data were collected alongside neuroimaging (EEG) data. Please keep in touch if you would like to hear more about these results as they become available.