# AUTISTIC TRAITS ACROSS CLINICAL AND NON-CLINICAL GROUPS: A COMPARISON OF AQ SUBSCALE PROFILES

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## Introduction

Autism spectrum disorder (ASD) is a complex neurodevelopmental condition characterized by persistent difficulties in social communication and restricted and repetitive behaviors (American Psychiatric Association, 2013).

Autistic traits are continuously distributed across the general population and may be elevated in several psychiatric conditions (Ruzich et al., 2015).

The Autism Spectrum Quotient (AQ) is a widely used self-report measure assessing autistic traits across five domains: Social Skill, Attention Switching, Attention to Detail, Communication, and Imagination (Baron-Cohen et al., 2001).

## Objective

This study aimed to compare AQ subscale profiles across ASD (Autism Spectrum Disorder), MDD (Major Depressive Disorder), AD (Anxiety Disorders), ADHD (Attention Deficit Hyperactivity Disorder), and healthy control (HC) groups recruited from three child and adolescent psychiatry clinics, and to assess the discriminative value of AQ total and subscale scores.

## Methodology

A total of 233 participants (117 males, 116 females) were included:

- MDD (n=29),
- AD (n=33),
- ADHD (n=30),
- ASD (n=13), and
- HC (n=128)

Measure: AQ (total and 5 subscale scores)
Analysis: ANOVA + Bonferroni

## Results

The largest group differences emerged in **social skills, attention switching,** and **communication** domains.

Significant group differences were found for **social skills** ($F(4,228)=6.34$, $p<.001$, $\eta^2=.10$), **attention switching** ($F(4,228)=4.97$, $p<.001$, $\eta^2=.08$), **communication** ($F(4,228)=8.89$, $p<.001$, $\eta^2=.14$), and **AQ total** ($F(4,228)=8.82$, $p<.001$, $\eta^2=.13$).

No significant differences were observed for **attention to detail** ($p=0.33$, $\eta^2=0.02$) or **imagination** ($p=0.17$, $\eta^2=0.03$).

Bonferroni-adjusted post-hoc tests showed that the ASD group scored significantly higher than all others on **social skills, attention switching, communication,** and **AQ total.**

The AD group scored higher than HCs on **communication** domain ($p=0.012$).

*Table 1: AQ Subscale and Total Scores by Group, Mean (SD)*

| | Social skills | Attention switching | Attention to detail | Communication | Imagination | AQ total |
|---|---|---|---|---|---|---|
| **MDD** | 3.93 (1.91) | 5.21 (1.68) | 5.52 (2.26) | 3.59 (2.04) | 3.00 (1.83) | 21.24 (5.17) |
| **AD** | 3.67 (2.20) | 5.30 (1.74) | 5.79 (2.07) | 4.48 (2.37) | 3.15 (1.42) | 22.39 (6.05) |
| **ADHD** | 2.80 (1.99) | 4.40 (1.63) | 4.90 (1.81) | 4.33 (2.09) | 3.27 (2.10) | 19.70 (6.07) |
| **ASD** | 5.62 (2.29) | 6.38 (1.45) | 5.31 (2.53) | 6.15 (1.72) | 4.54 (2.37) | 28.00 (5.66) |
| **HC** | 2.90 (2.15) | 4.70 (1.51) | 5.09 (1.89) | 3.21 (1.87) | 3.17 (1.99) | 19.07 (5.63) |

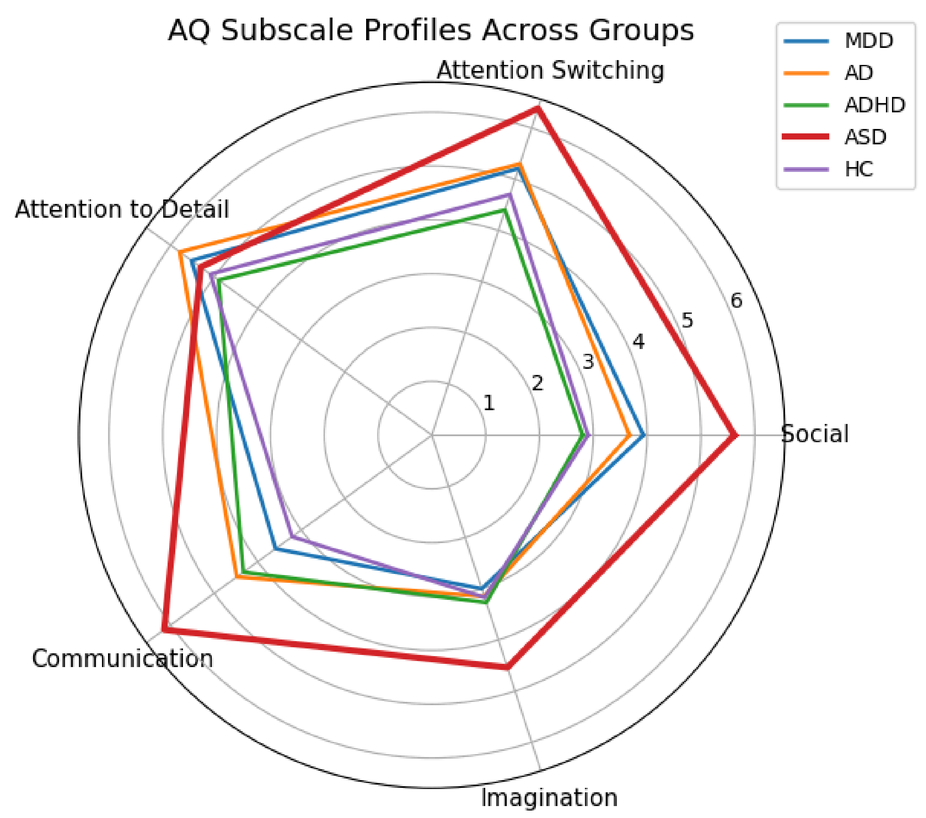



*Figure 1.* AQ subscale profiles across diagnostic groups. The ASD group shows consistently elevated scores in social skills, communication, and attention-switching domains. In contrast, attention to detail demonstrates minimal separation across groups, indicating limited discriminative value, while imagination shows modest variation without clear group differentiation.

## Conclusion

These findings indicate that **social and communication difficulties** and **attention-switching problems** are especially prominent in the ASD group, consistent with the core features of autism.

**Communication-related difficulties** in the AD group further suggest that some social-communicative traits may cut across diagnostic categories.

In contrast, **attention to detail** appears to reflect a relatively stable and non-specific cognitive characteristic.

**Imagination** showed modest, non-significant variation, indicating limited diagnostic relevance.

The lack of ADHD-related differences in AQ attention subscales suggests distinct attentional mechanisms, with AQ capturing cognitive flexibility rather than sustained attention deficits.

Overall, findings support a dimensional, transdiagnostic framework, where:

- **Social-communicative** traits are diagnostically informative
- **Attention to detail** is non-discriminative

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**The authors have no conflicts of interest to declare**
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