

# Aspergers – Different, not less: Occupational strengths and job interests of individuals with Asperger's Syndrome

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## Theoretical Background

The purpose of this study is to provide a primary overview of the strengths and job interest profiles of individuals with Asperger's. Our approach is based on the theory of neurodiversity and therefore considers autism a regular variant of the human brain [1]. The neuronal variance causes difficulties for individuals with Asperger's in areas such as empathy and social skills. Regarding individuals with Asperger's as solely impaired or deficient would discount their strengths and capabilities [2, 3]. Their skills of concentration during long-lasting routine work, identification of logical rules and patterns, processing visual information, and the ability to remember facts, surpass neurotypical individuals [e.g. 4-5].

According to the strength philosophy [6], these strengths can be an advantage in certain professions and thereby offer good prospects to integrate individuals with Asperger's into the professional world according to their abilities, creating a better person-job-fit.

This in turn will help lay the foundation for the development of approaches towards improving the occupational situation of individuals with Asperger's.

## Method

### Sample

In total 291 persons were included in the analysis:

- 136 individuals with Asperger's (86 women, 46 men, 4 other), aged 18-65 years ( $M_{age} = 35.54$  years,  $SD = 10.59$ )
- 155 neurotypical individuals (91 women, 62 men, 2 other), aged 18-60 years ( $M_{age} = 33.5$  years,  $SD = 9.05$ ).

Participants were recruited online.

### Materials

- *Strengths*. Participants were asked to pick one to five outstanding strengths from a list of 26 strengths
- *Job interest type*. Participants completed the AIST-R [7]
- *Self-efficacies*. Participants completed the General self-efficacy scale [8] & Occupational self-efficacy scale [9]

### Data Analysis

The data was checked for the appropriate prerequisites to conduct our data analysis doing t-tests and  $X^2$ -tests.

## Results I: Results t-tests job interest type scores – individuals with Asperger's vs. neurotypical individuals

Interest type	$M(SD)$ Aspergers	$M(SD)$ NT	$M$ difference	df	t	p
Realistic	100.69 (9.16)	97.23 (8.66)	3.46	289	3.23	.001*
Investigative	110.83 (8.76)	102.66 (8.19)	8.17	289	8.21	.000*
Artistic	102.12 (9.51)	105.00 (10.35)	-2.88	289	-2.46	.014
Social	90.56 (12.94)	102.11 (12.83)	-12.29	289	-8.12	.000*
Enterprising	87.76 (10.22)	102.86 (11.45)	-13.45	289	-10.51	.000*
Conventional	110.32 (10.32)	102.88 (9.80)	7.44	289	6.30	.000*

\* = statistically significant after Bonferroni correction

Note: Aspergers = individuals with Asperger's, NT = neurotypical individuals, RIASEC refers to Holland's job interest types measured with the AIST-R

An explorative data analysis was conducted to determine the results of reducing the job interest code job interest types Investigative and Conventional. A cross-table was generated and the percent distribution within the groups is 76,5% (Aspergers) vs. 27,1% (NTs) having a job interest code of I and C; the effect size in this analysis is a relatively strong association,  $\Phi_{Cramer} = .49$ ,  $X^2(1, N=291) = 70.64$ ,  $p < .001$ .

## Results II: Frequency of indicated strengths of individuals with Asperger's vs. neurotypical individuals

Strength	% Aspergers	% NT	$X^2$	p	$\Phi_{Cramer}$
Attention to detail	73	34	43.26	.000*	.39
Logical reasoning	60	35	18.86	.000*	.26
Reliability	49	44	0.63	.426	.05
Focus	48	17	30.91	.000*	.33
Systemizing	47	29	10.05	.002*	.19
Consistency	40	19	14.61	.000*	.22
Visual skills	36	18	12.02	.001*	.20
Creative solutions	35	26	2.65	.104	.10
Retentiveness	35	14	16.61	.000*	.24
Repetitive tasks	32	10	23.04	.000*	.28
Numbers	29	08	20.32	.000*	.26
Organizing ability	24	29	1.13	.288	.06
Apprehension	24	21	0.35	.553	.04
Verbal skills	24	41	9.45	.002*	.18
Auditory skills	23	05	21.32	.000*	.27
Stamina	22	20	0.19	.667	.03
Proactiveness	17	19	0.16	.690	.02
Fine motor skills	11	06	1.93	.164	.08
Concentrativeness	10	05	2.10	.148	.09
Emotional control	09	15	2.96	.085	.10
Physical work	09	08	0.02	.895	.00
Flexibility	04	26	24.91	.000*	.29
Social skills	04	35	43.52	.000*	.39
Multitasking	01	17	22.14	.000*	.28
Empathy	01	41	65.50	.000*	.47
Team work	00	25	39.52	.000*	.37

\* = statistically significant after Bonferroni-Holm correction

Note: Aspergers = individuals with Asperger's, NT = neurotypical individuals

## Results III: Self-efficacy scores of individuals with Asperger's vs. neurotypical individuals

Individuals with Asperger's reported a lower general self-efficacy ( $M = 21.44$ ,  $SD = 5.32$ ) than neurotypical individuals ( $M = 28.39$ ,  $SD = 5.59$ ),  $t(289) = -10.81$ ,  $p < .001$ ,  $r = .54$ , as well as a lower occupational self-efficacy ( $M = 16.91$ ,  $SD = 5.75$ ) than neurotypical individuals ( $M = 22.72$ ,  $SD = 5.20$ ),  $t(289) = -9.05$ ,  $p < .001$ ,  $r = .47$ .

For individuals with Asperger's, the statement of being currently employed was statistically significantly correlated with occupational self-efficacy ( $r = .26$ ,  $p < .001$ ) but not with general self-efficacy ( $r = .03$ ,  $p = .70$ ). This is different to neurotypical individuals where both forms of self-efficacies ( $r = .20$ ,  $p = .011$ ;  $r = .25$ ,  $p = .002$ ) showed statistically significant relations with employment status.

## Discussion

Individual, tailored coaching could help to further a goal-oriented integration of individuals with Asperger's into the working world, drawing on available strengths while acknowledging problematic areas such as team work or social skills in face-to-face communication. Areas that require their exact strength profiles can be pinpointed within most occupational fields. Here, individuals with Asperger's could not just be integrated but might also be able to specifically show achievements superior to other candidates. Individual results on job-interests can further be used to determine corresponding occupational areas. Our results are in accordance with Müller et al. [10] who have shown that a high person-job-fit positively influences how individuals with Asperger's experience occupational life and further studies should investigate how this could positively influence the self-efficacies of these individuals.

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