

A Longitudinal Examination of Change in Vocational Activities for Adults with ASD



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Background

- The years after high school exit are a time of increased risk for youth with ASD, with estimates that over 50% of youth have no vocational or educational activities during this time.
- It remains to be seen whether poor vocational outcomes in the years after high school exit represent a momentary perturbation in development with gradual improvement, or if poor outcomes persist throughout adulthood.
- The present study addressed this question by examining change in vocational activities for adults with ASD over 10 years, as well as predictors of change.

Study Aims

- To examine change in Vocational Index (VI) scores for adults with ASD over a 10-year period.
- To determine the personal and environmental characteristics related to:
 - VI scores at the start of the study (Time 1).
 - VI scores at the end of the study (Time 6).
 - Change in VI scores over time (Slope).

Methods

- Participants included 161 parents of adults with ASD who had exited high school prior to the first time point of the study (in 1998).
- Data were collected from parents via interviews and questionnaires at 6 time points spanning 10 years (as part of a larger longitudinal study).

Dependent Variable: VI (measured at all 6 time points)

- 9 = Community employment w/out supports, >10 hrs/wk
9 = Post-secondary degree-seeking education, > 10 hrs/wk
8 = Employment w/out supports or education, ≤ 10 hrs/wk
7 = Community employment with supports, >10 hrs/wk
6 = Community employment with supports, ≤ 10 hrs/wk
5 = Sheltered setting and community employment, >10 hrs/wk
4 = Sheltered setting, no community employment, >10 hrs/wk
3 = Sheltered setting, ≤ 10 hrs/wk
2 = Volunteering with no other activities
1 = No vocational/educational activities
(Taylor & Seltzer, 2012, JADD)

Independent Variables (measured at Time 1)

- | | |
|-------------------------------------|--------------------------------------|
| Personal characteristics | Environmental characteristics |
| • Intellectual Disability (1 = yes) | • Family Income |
| • Maladaptive Behaviors | • Number of Services |
| • Autism Symptoms | • Number of Unmet Service Needs |
| • Activities of Daily Living | • Number in Parental Support Network |
| • Gender (1 = women) | |

Analysis

- Multi-level models with 6 time points were used to estimate intercepts and change in VI scores.
- Models were run with Time 1 (initial status) as intercept and Time 6 (final status) as intercept. Slope estimates were identical between models.
- Age and placement at Time 1, and change in maladaptive behaviors, autism symptoms, and placement over the 6 time points were controlled in all models.

Results

Time 1 Characteristics of Adults with ASD (n= 161)

	M (SD) or %
Men	72.0%
Age (years)	30.9 (8.3)
Age (range in years)	18 – 52
Has an Intellectual Disability	80.7%
Level of Language (From ADI-R)	
Daily functional use	69.6%
No 3-word phrases	12.4%
Fewer than 5 words	18.0%
Living arrangements	
With parents	39.8%
Community residence	42.2%
Independent living	3.1%
Public or private institution	3.1%
Other	11.8%
Median Family Income	\$40,000 - \$45,000

Unconditional Multi-level Models Estimating Average Intercepts and Change in VI Scores

	Coefficient
Intercept	
Time 1 Score	4.62**
Time 6 Score	4.24**
Slope	
Time	-.04*
Time-Varying Predictors	
Maladaptive Behaviors	-.02
Autism Symptoms	-.01
Lives Outside of Home	-.10

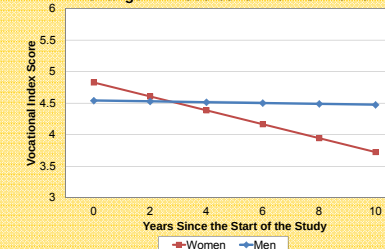
* p < .05 ** p < .01

Multi-level Models that Include Personal and Environmental Characteristics as Predictors of Intercepts and Slope of VI Scores

Time 1 Variables	Coefficient : Time 1 Intercept	Coefficient: Time 6 Intercept	Coefficient: Slope
Intellectual Disability	-1.51**	-1.14*	.04
Maladaptive Behaviors	-.02	-.04*	-.00
Autism Symptoms	-.04	-.09†	-.01
Activities of Daily Living	.06*	.07**	.00
Sex (1 = women)	.29	-.78*	-.10**
Family Income	.03	.03	-.00
Number of Services	-.04	.08	.01†
Number of Unmet Needs	.02	.09	.01
Number in Support Network	-.04	-.06	-.00

† p < .10 * p < .05 ** p < .01

Change in VI Scores for Men vs. Women



Conclusions

- On average, vocational activities were declining over the study period, although a great deal of stability was also observed.
- This suggests that difficulties finding and maintaining vocational activities in the years after high school exit persist throughout adulthood.
- Declines in vocational activities were more pronounced for women (vs. men). This might be because of gender stereotypes or increased risk for comorbid disorders in women with ASD.
- Personal characteristics predicted stability in vocational activities. Adults who did not have an intellectual disability, who had fewer behavior problems, and who had greater independence in activities of daily living had higher VI scores.
- Interventions aimed at increasing independence in activities of daily living or reducing behavior problems might improve vocational prospects for adults with ASD.

Limitations

- Not a nationally representative sample
- Many in the sample were diagnosed before DSM-IV widened the diagnostic criteria, and before the explosion in early intervention services. Thus, it is unclear to what extent these findings apply to subsequent cohorts of adults with ASD.

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