

Early life trajectories for adolescents with Autism Spectrum Disorder, a Millennium Cohort Study



AFFILIATIONS

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This study investigated three hypotheses: at age 17, (1) adolescents with ASD are more likely to be neither in employment, education nor training, (2) for those with ASD, socioeconomic variables and the timing of their diagnosis rather than cognitive ability predicts NEET status, and (3) ASD diagnosis predicts aspirations for 30-years-old. All three hypotheses were corroborated using the Millennium Cohort Study. These results suggest a need for later and more widespread intervention and training.

AUTISM SPECTRUM DISORDER?

ASD is a complex developmental condition, that involves persistent challenges in social interaction, speech and nonverbal communication, and restricted / repetitive behaviours.¹

THE MILLENNIUM COHORT STUDY

The MCS a longitudinal survey of 19,243 families with children born in the United Kingdom between September 2000 and January 2002.² We studied 280 cohort members with ASD.

1 MOTIVATION

ASD's cost per annum in the UK is evaluated at £32 billion, yet only £4million is allocated to research, 10 x less than in the US or Australia. The MCS has been used to measure the prevalence, timing and depression of children with ASD in the UK.

This project sought out whether ASD had an influence on cohort members (CM) being in neither education, employment or training (NEET) independent of other predictors and to draw a profile of CM with ASD's aspirations for when 30 years old.

2 METHODOLOGY

Cohort members with parent-reported ASD were identified following previous studies.¹We took outcomes from MCS7 (age17), cognitive ability based on the British Ability Scales II from MCS3 (age3) and other predictors which explain any relationship from MCS6 (age 14). To establish the significance of predictors over outcomes (NEET status and aspirations), all predictors were:

1. dichotomised
2. applied Fisher's exact test
3. applied to a binary logistic regression model with ASD diagnosis

3 RESULTS

ASD individuals were found to be 3 times more likely to be in NEET. Further predictors of NEET for CMs with ASD:

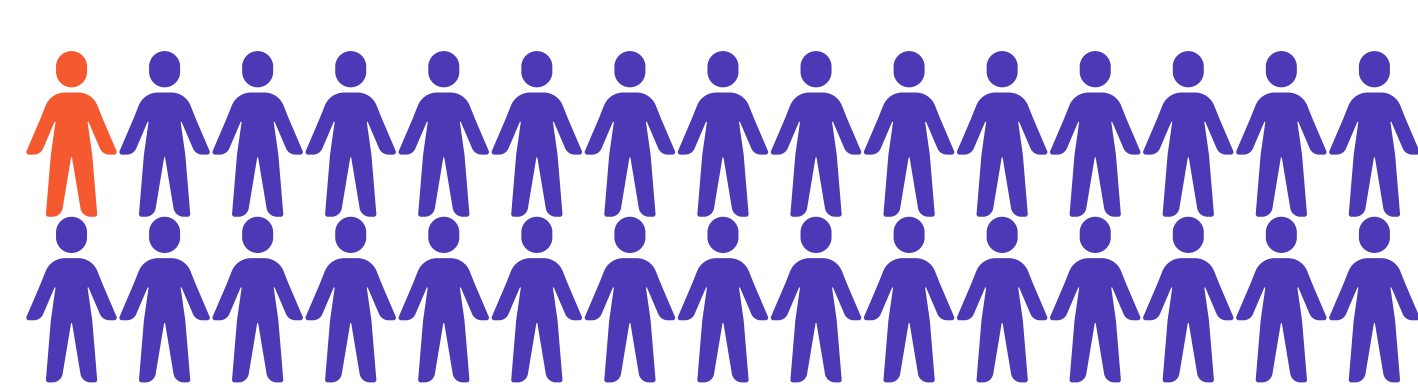
- Behavioural skills (as measured by the Strengths and Difficulty Questionnaire)
- Household income
- Carers' employment status
- Parental mental distress

Cognitive ability did not have an effect on the likelihood of NEET status for CMs with ASD.

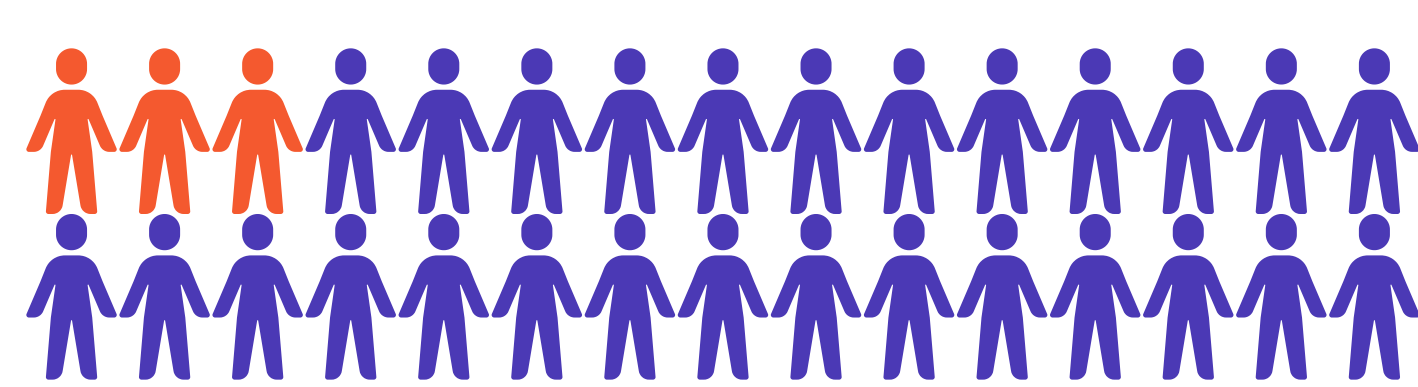
Early timing of diagnosis predicted higher professional aspirations, despite lower social confidence.

4 IN BRIEF - OUTCOMES FOR ADOLESCENTS WITH ASD AT 17 YEARS

(1) RATES OF NEET STATUS



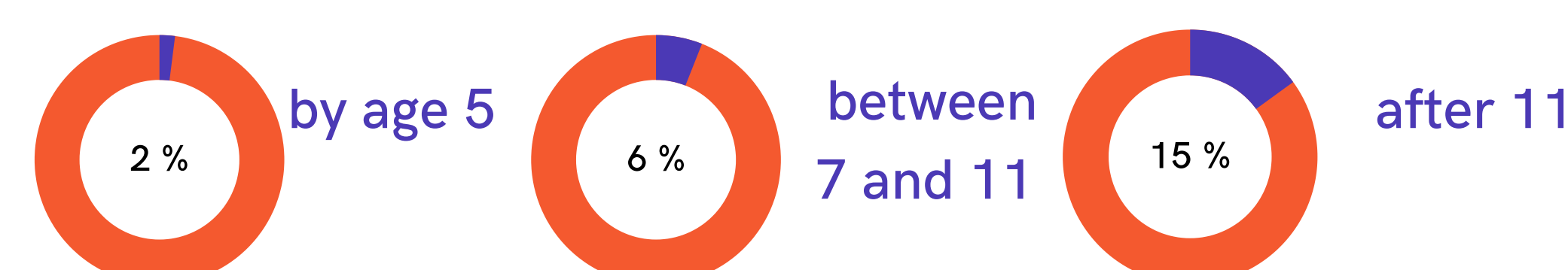
without an ASD diagnosis: 3%



with ASD: 9%

(2) PREDICTORS OF NEET FOR THOSE WITH ASD

BY TIMING OF DIAGNOSIS



NEET likelihood has **no significant link** with cognitive ability for those with ASD

SOCIOECONOMIC PREDICTORS FOR COHORT MEMBERS WITH ASD:

in the 2 lowest UK income quintiles **x7.5**
with high scores on all SDQ domains **x3.0**
with carers not in work **x3.1**
with carer with poor mental health **x2.8** } times higher odds of being in NEET

(3) ASPIRATIONS

early diagnosis **➤** higher professional aspirations

late diagnosis **➤** higher social aspirations

Compared with neurotypical cohort members when asked to picture themselves at 30 years old, cohort members with ASD were:

40% less likely to see themselves with a partner

50% less likely to see themselves having children

52% less likely to see themselves in a worthwhile job

57% less likely to see themselves having gone to university

5 CONCLUSION

This report has corroborated its three hypotheses: CMs with ASD seem more likely to be in NEET, this likelihood is partially predicted by socioeconomic variables and ASD diagnosis predicts answers to projected achievements for age 30. Further research should be conducted into other education and healthcare systems to measure the specificity of these conclusions to the UK. Equally, this study should be complemented by an investigation into later life as the MCS cohort grow older.

This is fuel for optimism, as it gives substantial potential for expanding early intervention, investment in diagnosis and in the effectiveness of schemes later in life.

Our work has found that a great deal more could and should be done to generate evidence to shape policy and improve practice in autism. ...

This is an unsustainable state of affairs and must be addressed.

- Autism Dividend, 2017

REFERENCES

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- ² Fitzsimons, E., Haselden, L., Smith, K., Gilbert, E., Calderwood, L., AgaliotiSgompou, V., Veeravalli, S., Silverwood, R., Ploubidis, G. (2020) *Millennium Cohort Study Age 17 Sweep (MCS7): User Guide*. London: UCL Centre for Longitudinal Studies.
- ³ Ilemmi, V., Knapp, M., & Ragan, I. (2017) *Autism Dividend*, Michael Smith Foundation for Health Research (MSFHR).
- ⁴ Hosozawa, M., Sacker, A., & Cable, N. (2021). Timing of diagnosis, depression and self-harm in adolescents with autism spectrum disorder. *Autism*, 25(1), 70-78.