

Post-16 transitions and destinations

Initial findings from the Millennium Cohort Study at Age 23

According to recent reports from the Office for National Statistics (ONS), around 12% of 16–24-year-olds have consistently been NEET (Not in Employment, Education or Training) since 2023¹. In response to this ongoing concern, the government has launched an inquiry to investigate the reasons behind this crisis².

Previous research has suggested that young people with lower qualifications or chronic mental health problems are particularly at risk of becoming NEET^{3–5}. Effective interventions require policymakers to understand young people's pathways into employment and education beyond age 16, as well as inequalities in access to these opportunities by socioeconomic status. This is particularly relevant for the current generation of young people that entered the labour market during the pandemic and continue to face the cost-of-living crisis and a stagnant youth labour market.

This briefing examines patterns of economic activity and qualifications among young people in the UK reported by a sample of 9,675 Millennium Cohort Study respondents interviewed between 2023 and 2024 when they were age 23. It highlights differences by childhood socioeconomic status (SES), sex, ethnicity, and country. In addition, this report looks at the determinants of NEET status at age 23 with a special focus on early life and adolescence chronic behavioural and mental health problems, and special educational needs and disability status (SEND).

Beyond work and education, the analysis also explores how higher education qualifications relate to broader aspects of life, including political and economic attitudes, health, and family circumstances.

ABOUT THE DATA

Millennium Cohort Study Age 23 Sweep

The Millennium Cohort Study (MCS) is a UK longitudinal birth cohort study. It follows the lives of around 19,000 young people born across England, Scotland, Wales and Northern Ireland in 2000–02. At age 23, more than 9,675 study members took part in a 60–75-minute survey, either online or with an interviewer. Data from this and previous sweeps of MCS are available to download from the UK Data Service.

AUTHORS

Dr Habtamu Beshir
Dr Dominic Kelly
Professor Emla Fitzsimons
Professor Lindsey Macmillan

Key findings

- Around 71% of 23-year-olds were employed, with the majority in full-time employment (57%).
- Around one in seven (14%) were NEET — with 9% actively seeking work and 5% inactive or outside the labour market.
- Behavioural issues, SEND, and mental health conditions earlier in life significantly increase the likelihood of being NEET at age 23.
- Young adults from low-SES families with SEND or mental health conditions are more likely to be NEET at age 23 than higher-SES peers with similar characteristics.
- Individuals with degree-educated parents were half as likely to be NEET (9% vs 18%) and twice as likely to have higher education qualifications (65% vs 33%).
- Males were more likely to be unemployed than females (11% vs 7%).
- A higher proportion of females (52%) hold higher education qualifications compared to males (41%).

Results

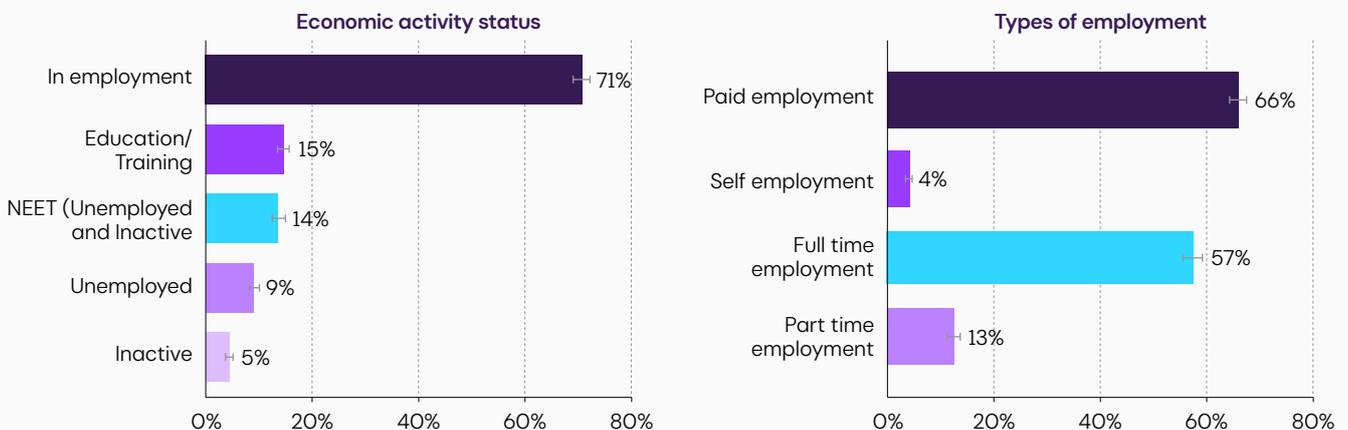
Economic activity and qualifications at age 23

Over 70% of MCS participants at age 23 were employed, with 66% of them in paid employment (Figure 1.1). The majority of these young people (57%) were in full-time employment, while one in eight were in part-time employment. A significant number (15%) of MCS participants were still in education and training by age 23. Importantly, about 14% of MCS participants were NEET, which comprised of 9% who were unemployed but actively seeking work and 5% who were inactive in the labour market. Young people are considered inactive when they are sick, disabled, or looking after family. Restricting the sample to England to enable better comparison with the Next Steps (NS) cohort, 71% were in employment, 14% were in education or training, and 14% were NEET (of which 10% were unemployed but actively seeking work).

Compared to the NS cohort interviewed in 2015 at age 25, the MCS cohort had lower employment rate (71% vs 78%), mainly because a significant proportion of them were in education or training (14% vs 5%) and yet to join the labour market. NEET rates were similar across the MCS cohort at the age of 23 and NS at age of 25 (14% vs 15%). A closer look on the components of NEET rates indicates that the MCS cohort had a slightly higher unemployment rate than the NS cohort, albeit at an earlier age (10% vs 7%).



FIGURE 1.1: ECONOMIC ACTIVITY AT AGE 23

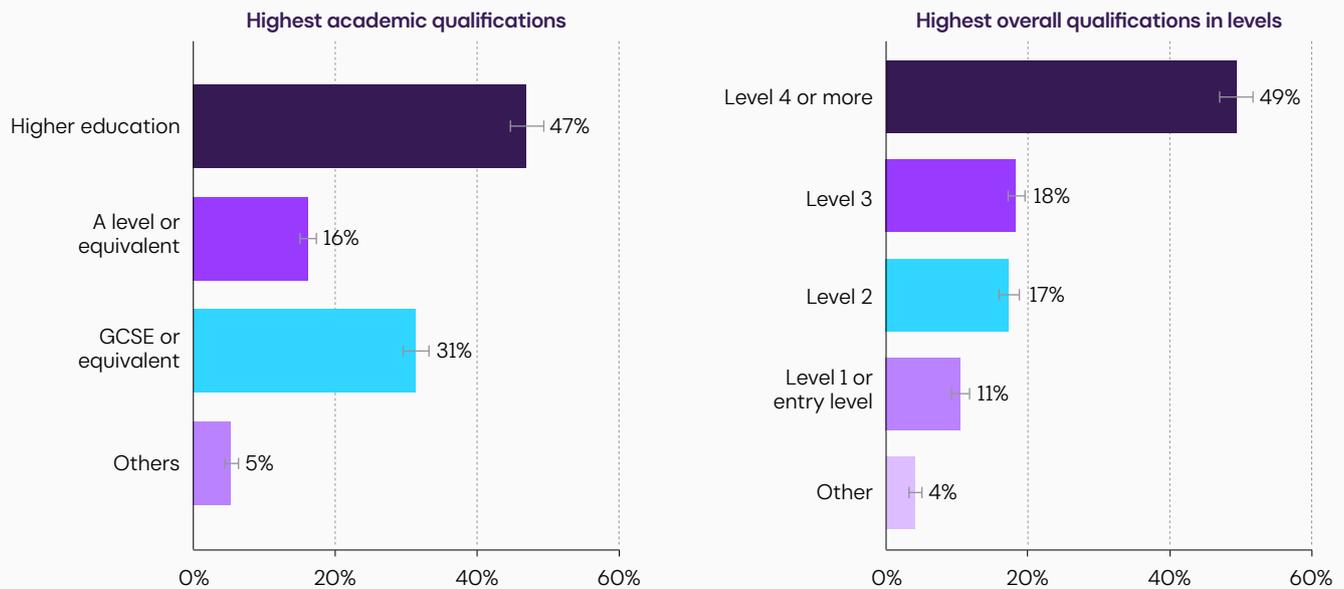


Note: The figure shows weighted proportions based on information from 9,622 MCS cohort members who provided information about their economic activity status at the age of 23.

Figure 1.2 depicts two classifications of qualifications: highest academic qualifications and highest overall qualifications combining both academic and vocational qualifications. Focusing on academic qualifications exclusively, about one-third of MCS members hold only GCSEs or equivalent level of qualifications (31%), while a significantly larger proportion (47%) of the 23-year-old cohort members hold higher education qualifications (at least diploma in higher education or other higher education qualification).

By comparison, 34% of the Next Steps cohort members attained higher education qualifications by age 25. Looking at participants' highest overall qualifications, about half of young people hold a Level 4 or above qualification (equivalent to Higher National certificate (HNC) or above). Comparable proportions achieved Level 2 (equivalent to 5+ GCSE grades A*–C) or Level 3 (equivalent to 2+ A levels) qualifications, at 17% and 18% respectively.

FIGURE 1.2: HIGHEST QUALIFICATIONS AT AGE 23



Note: Figure 1.2 depicts weighted proportions based on information from 9,645 MCS cohort members who provided information about their qualifications at age 23. Highest academic qualifications include both completed qualifications and the qualifications the participant were studying for at the time of the survey. Highest overall qualification was derived by closely following the UK National Qualifications Framework. A similar approach was used by the ONS to classify highest levels of qualification in the 2021 Census dataset.

A spotlight on NEET and chronic mental health

The longitudinal data collected by the MCS over two decades provides an ideal opportunity to identify the childhood factors that shape the likelihood of young adults being NEET at age 23. Three commonly discussed factors, all of which are repeatedly measured in the MCS, are: (1) behavioural problems during childhood, (2) mental health problems during adolescence, and (3) Special Educational Needs and Disability (SEND) status⁵⁻⁸.

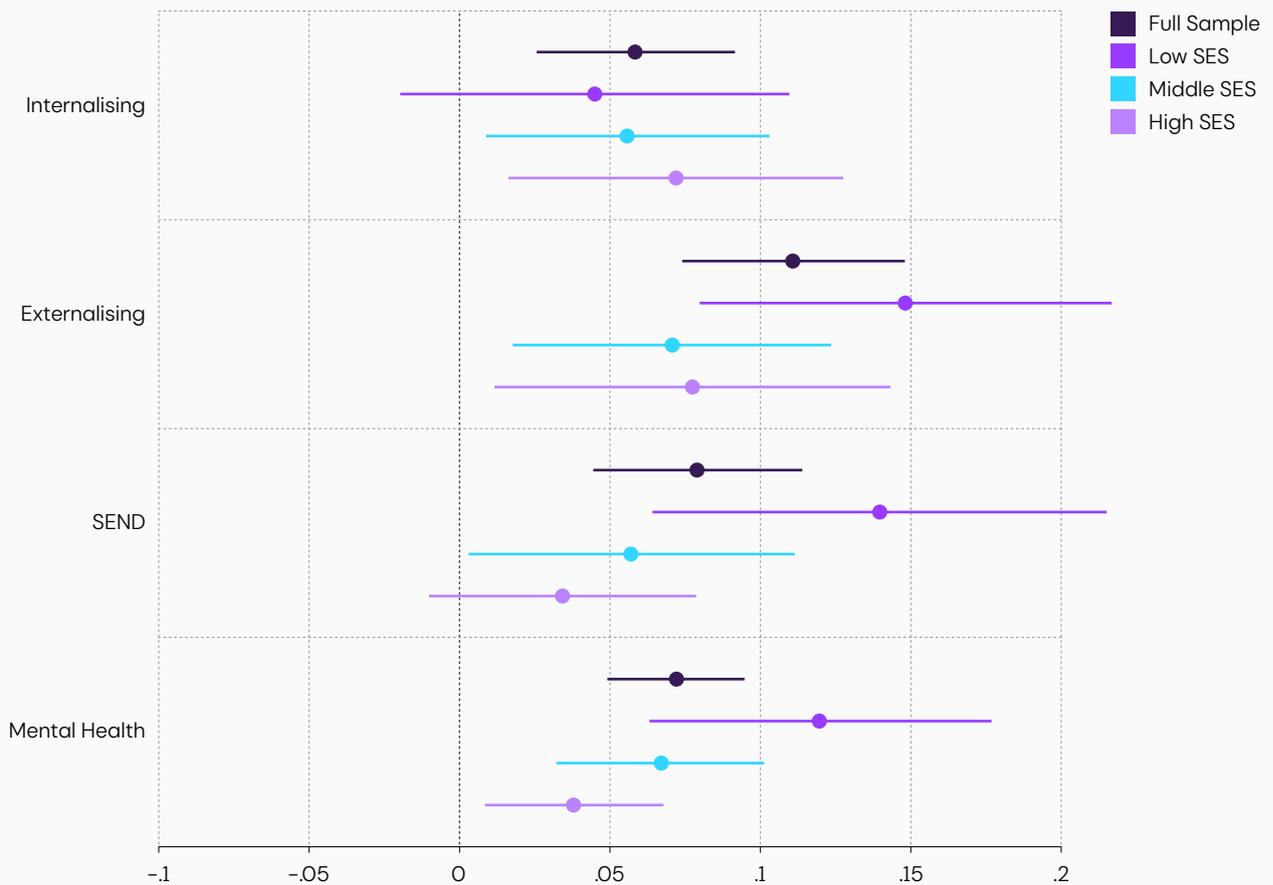
This report investigates whether these factors explain the prevalence of NEET status in the latest wave of MCS data, and whether they are equally predictive for cohort members from different socioeconomic status (SES) backgrounds (measured by childhood family income terciles). In MCS at age 23, 25% of the low-SES young people were NEET, compared to 10% and 7% from middle and high-SES families, respectively. These are similar to the rates reported in the Next Steps cohort study at age 25: 22% for low-SES (defined by self-reported family income) cohort members and 9% and 6% from the middle and high-SES families, respectively.

Between ages 5 and 17 parents reported their children's levels of behavioural problems on five occasions using the Strengths and Difficulties Questionnaire⁹, focusing on two subscales: externalising problems (hyperactivity, aggression) and internalising problems (emotion and peer problems). If parents reported high levels for a subscale on more than one occasion, the cohort member was considered to have 'chronic' problems. 14% of the MCS cohort at age 23 had chronic externalising problems and 14% had chronic

internalising problems. In addition, 27% of the age 23 cohort had adolescent mental health problems – measured by high scores on the Short Mood and Feelings Questionnaire at age 14¹⁰ or the Kessler-6 measure of psychological distress at age 17¹¹ – and 15% had SEND status.



FIGURE 2: BEHAVIOURAL AND MENTAL HEALTH CONDITIONS AS PREDICTORS OF NEET AT AGE 23



Note: First, the relationship was estimated on the full sample of 8,797 cohort members that have complete information. Then, heterogeneous effects were assessed by dividing the cohort into low-income, middle-income, and high-income socioeconomic groups. The vertical axis shows the mental health and SEND factors included in the analysis, while the horizontal axis displays the coefficient estimates for the association between NEET status and each factor. Each dot represents a coefficient estimate, and the whiskers indicate the corresponding confidence intervals. The association between chronic behavioural, and mental health problems and NEET were estimated controlling for key variables (e.g. ethnicity, sex, parental SES (childhood permanent family income), family structure, school absences, and vocabulary scores, as well as region fixed effects).

As shown in Figure 2, behavioural and mental health conditions significantly increase the probability of being NEET at age 23 (see the Full Sample coefficients). Chronic externalising problems are associated with the largest increase in NEET probability (11 percentage points, against a baseline NEET rate of 14%), followed by SEND status (8pp), adolescent mental health problems (7pp), and chronic internalising problems (6pp).

Young adults from low-SES families with externalising behavioural difficulties, mental health conditions and SEND status were more likely to be NEET at age 23 than their peers from higher SES families with similar characteristics. For the low-SES group, SEND status and adolescent mental health problems increase the probability of being NEET by 14pp and 12pp (from a baseline NEET rate of 25% among the low-SES group), respectively. Among the low-SES group, these associations are both substantial in magnitude and statistically distinct from the corresponding effects for the middle-SES and high-SES groups.

Chronic externalising problems also increase the probability of being NEET by 15pp among young people from low-SES families, although this effect is not significantly different from the effects observed for the middle- and high-SES groups. The results highlight the importance of early identification of, and support for, behavioural problems, mental health challenges and SEND status, especially for the most socioeconomically disadvantaged.

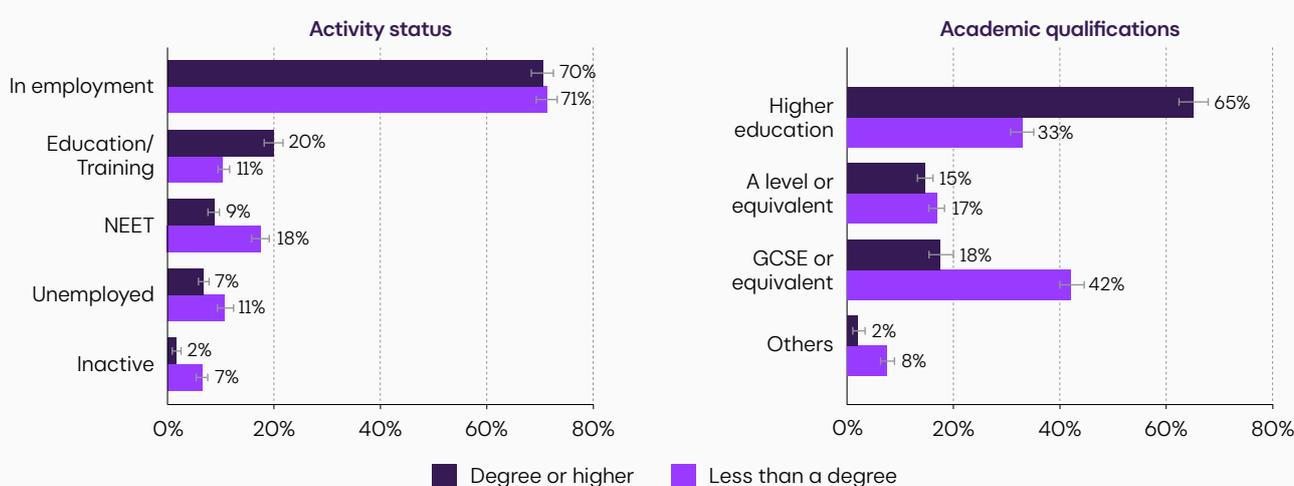
Behavioural and mental health conditions significantly increase the probability of not being in employment, education or training at age 23.

Socioeconomic inequalities in economic activity and qualifications

As shown in Figure 3, there is clear evidence of socioeconomic gaps in economic activity and qualifications. At age 23, 20% of young people who grew up with at least one parent educated to degree level were still in education or training, compared with just 11% of those from non-degree households. Similarly, 23-year-olds from non-graduate families were twice as likely to be NEET compared to their peers who grew up with at least one parent educated to degree level (18% vs 9%).

The contrast is even more striking in terms of qualifications. Only 33% of young people whose parents do not hold a degree have higher education qualifications, compared with 65% of those whose parents hold a degree or above qualifications. Young people with non-graduate parents were twice as likely to hold only GCSE or equivalent qualification compared to their peers with parents who hold a degree or higher qualifications (42% vs 18%).

FIGURE 3: ECONOMIC ACTIVITY AND QUALIFICATION AT AGE 23 BY SES (PARENTAL EDUCATION)



Note: Figure 3 depicts weighted proportions based on 4,307 members who have at least one parent with degree or higher qualifications, and 5,288 of less advantaged ones (for activity status outcomes). Similarly, for academic qualification outcomes, weighted proportions were computed using 4,314 MCS members who have at least one parent with degree or higher qualifications, and 5,305 of less socioeconomically less advantaged participants. Socioeconomic status, in this case, is defined by parental education – at least one parent holds a degree (high-SES), whereas both parents have less than a degree (low-SES).

Sex, ethnic and geographic gaps in economic activity and qualifications

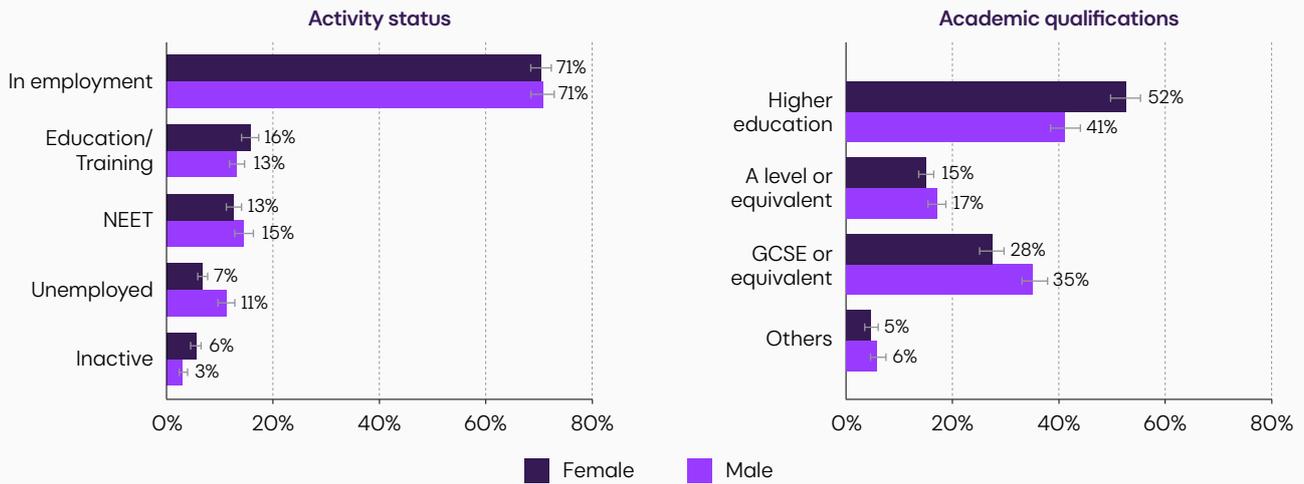
Figure 4.1 shows differences in economic activity and qualifications by sex. Although overall employment rates were similar between males and females, females were more likely to be in part-time employment (16% vs 9%), while males were more likely to be in full-time employment (61% vs 54%). Additionally, males experienced higher unemployment rates compared to females (11% vs 7%). Consistent with previous evidence, a significantly larger proportion of females (52%) attained higher education qualifications compared to males (41%).

There is also evidence of ethnic inequalities in economic activity and qualifications (see Figure 4.2). 72% of White young people were in employment, compared to 60% of those from Mixed or other

backgrounds. By contrast, only 45% of White 23-year-olds have higher education qualifications, compared with 64% of those from Asian backgrounds.

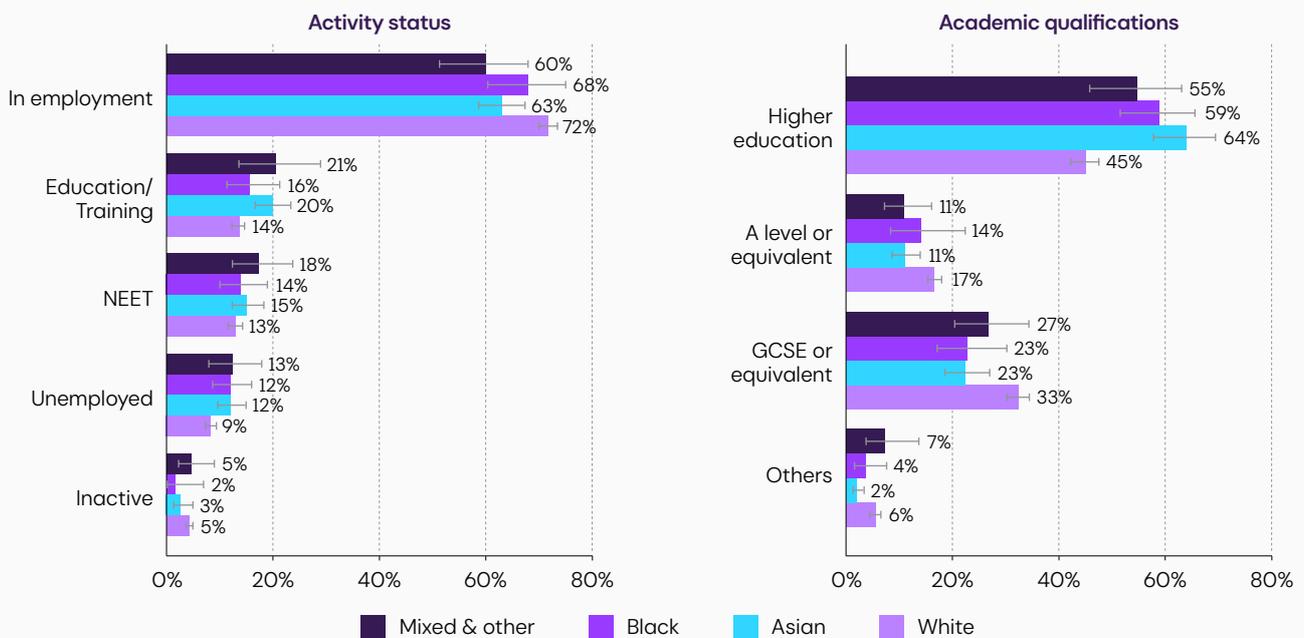
Figure 4.3 shows notable differences in employment rates among young people across the UK nations. Employment rates among young people were the lowest in Scotland (66%) and the highest in Wales (73%). A higher proportion of young people in Northern Ireland and Scotland were still in education or training by the age of 23 compared with the other UK nations. The lowest NEET rate is observed in Northern Ireland (9%), while England recorded the highest (14%). In Northern Ireland, 54% of young people have higher education qualifications, compared with just 44% in Wales, which is the lowest among the nations.

FIGURE 4.1: ECONOMIC ACTIVITY AND QUALIFICATION AT AGE 23 BY SEX



Note: Figure 4.1 depicts weighted proportions based on 4,411 male and 5,210 female participants (for activity status outcomes); 4,419 male and 5,225 female participants (for academic qualification outcomes).

FIGURE 4.2: ECONOMIC ACTIVITY AND QUALIFICATION AT AGE 23 BY ETHNICITY



Note: Figure 4.2 depicts weighted proportions based on 7,831 White, 1,097 Asian, 323 Black, and 370 Mixed and other ethnic group participants (for activity status outcomes); and 7,846 white, 1,102 Asian, 326 Black, and 370 Mixed and other ethnic group participants (for qualification outcomes).

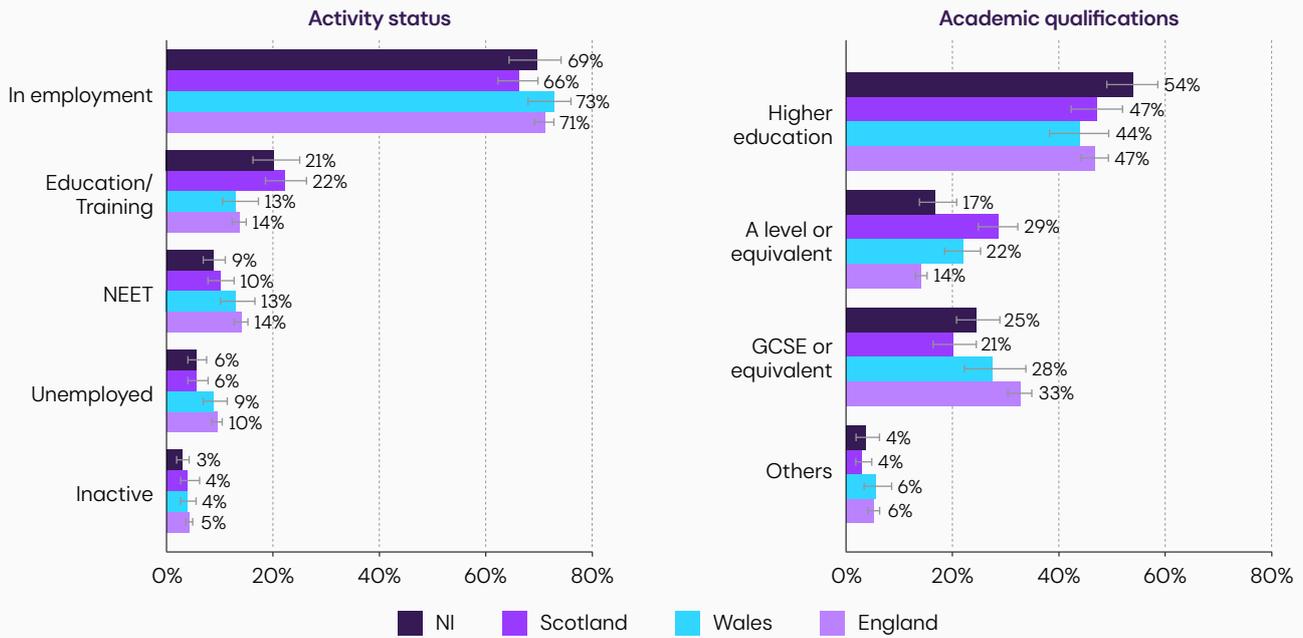
Females were more likely to be in part-time employment:

♀ 16% ♂ 9%

Males were more likely to be in full-time employment:

♂ 61% ♀ 54%

FIGURE 4.3: ECONOMIC ACTIVITY AND QUALIFICATION AT AGE 23 BY COUNTRY



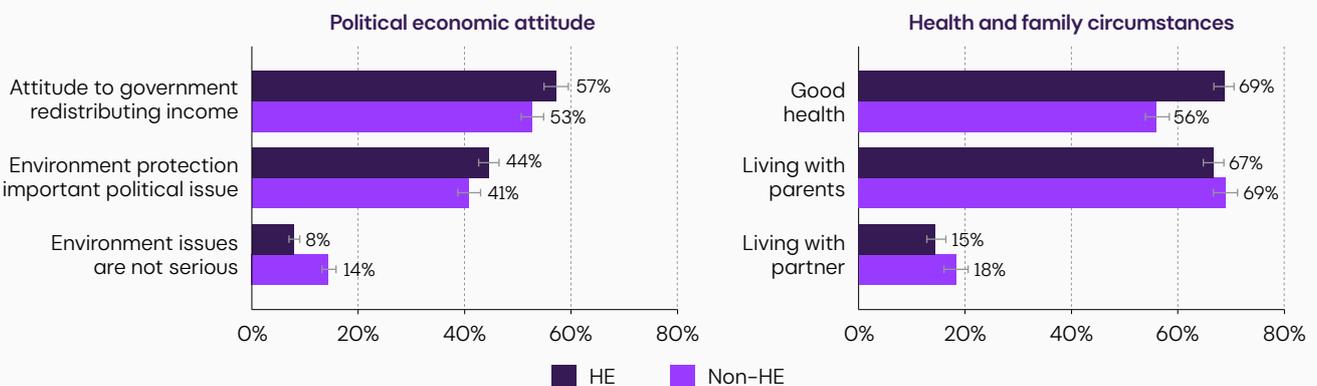
Note: Figure 4.3 depicts weighted proportions based on 6,542 participants from England, 1,203 from Wales, 992 from Scotland, and 843 from Northern Ireland (for activity status outcomes). For academic qualification outcomes: 6,559 from England, 1,207 from Wales, 992 from Scotland, and 845 from Northern Ireland.

Attitudes, health and family structure by education qualification

Previous research¹² documents the non-monetary returns to education. Adults with higher levels of education tend to experience more favourable marriage market outcomes, better health, greater success among their children, and higher levels of civic participation. Figure 5 illustrates differences between young adults with and without higher-education qualifications in their attitudes toward selected political and economic issues, as well as in their health and family circumstances. Those without higher education qualifications were twice as likely

to believe that environmental problems are not as serious as they are made out to be. A larger share of higher educated young people enjoyed good health (69%) even at age 23, compared with those without higher education qualifications (56%). Although there is no significant difference between the two groups in terms of independence from parents, a slightly higher proportion of young people without higher education qualifications reported living with a partner at the age of 23 (18% vs 15%).

FIGURE 5: DIFFERENCE IN ATTITUDE, HEALTH AND FAMILY LIFE BETWEEN HE VS NON-HE



Note: HE and Non-HE denote individuals with and without higher education qualifications. Attitudes toward each issue are coded as positive when participants agree or strongly agree with the following statements: the government should redistribute income; preserving the environment is more important than any other political issue; and environmental problems are not as serious as people claim. Individuals are classified as being in good health if they report their general health as very good or excellent. Respondents are considered independent if they report no longer living with their parents.

This is an **observational study**. This means that researchers did not control what the participants were exposed to, instead they observed what happened to the different groups of people without intervening. The authors were able to use very detailed data to account for a wide range of factors that may have influenced the links between [childhood behavioural (mental health) problems and adulthood NEET status]. However, it would be impossible to rule out every influence with absolute certainty.

Considerations for policymaking

The report highlights several key issues that need attention from policymakers. The findings show significant differences in economic activity and educational qualifications across socioeconomic status, sex, and ethnicity, suggesting that targeted interventions could improve education and employment outcomes for disadvantaged groups, for instance, young people from lower socioeconomic status. The results also indicate that childhood behavioural, SEND and mental health conditions are strongly associated with the likelihood of being NEET at age 23, suggesting that interventions targeting early behavioural problems and adolescent mental health, as well as support for those with SEND in accessing work or education, may improve young adults' labour market outcomes.

Specifically, policymakers should consider strategies that focus on:

- intervening early in the education system to identify and support those most at risk of becoming NEET, including those with behavioural problems, mental health issues, and SEND status;
- expanding and strengthening policies that build skills and improve work readiness among young adults, and particularly those with SEND status at school, including the Adult Skills Fund, Free Courses for Jobs, the Youth Guarantee, apprenticeships, and Skills Bootcamps;
- tackling mental health challenges in childhood by improving financial support and access to Child and Adolescent Mental Health Services (CAMHS) and developing a work readiness focus for these services;
- advancing policies that narrow existing socioeconomic disparities in opportunity to strengthen intergenerational mobility;
- addressing barriers that prevent women in part-time roles from transitioning into full-time employment

Opportunities for future research

Future research should use the data from the age 23 sweep to investigate the factors underlying socioeconomic and gender gaps in labour market outcomes by linking this wave of the data with earlier waves. Moreover, researchers should exploit the data to document sex, ethnicity, SES gaps in higher education participation and the mechanisms that explain such inequalities. The data can also be used to examine socioeconomic differences between STEM (Science Technology Engineering and Mathematics) versus non-STEM graduates, as well as non-graduates.

The preliminary analysis of determinants of NEET emphasises the importance of childhood factors in predicting later engagement with the labour market. Future research should further distinguish differences based on reasons for NEET status (actively vs not actively seeking work).

About the Millennium Cohort Study

The Millennium Cohort Study (MCS) is a UK longitudinal birth study. It is following the lives of around 19,000 young people born across England, Scotland, Wales and Northern Ireland in 2000–02. There have been seven main sweeps of MCS to date, at ages 9 months, 3, 5, 7, 11, 14, 17 and 23 years. It has tracked measures such as physical, socio-emotional, cognitive and behavioural development, economic circumstances, parenting, relationships and family life across the life course. MCS is core funded by the Economic and Social Research Council and a consortium of government departments.

How to cite this briefing paper

Beshir, H, Kelly, D, Fitzsimons, E and Macmillan, L. (2026) Post-16 transitions and destinations: Initial findings from the Millennium Cohort Study at Age 23. London: UCL Centre for Longitudinal Studies.

Acknowledgements

The Millennium Cohort Study is supported by the Economic and Social Research Council and a consortium of government departments. These initial findings, and the future research these data will

enable, would not be possible without the invaluable contributions of the Millennium Cohort Study members over many years. We are very grateful for their ongoing commitment to the study.

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Contact

✉ clsdata@ucl.ac.uk

🌐 www.cls.ucl.ac.uk

🐦 [@clscohorts.bsky.social](https://twitter.com/clscohorts.bsky.social)

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Published in March 2026