# ABCS: Associations between characteristics of students

## National Student Survey measures

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## Introduction to ABCS

1. Associations between characteristics of students (ABCS) are a set of measures which aim to improve our understanding of the outcomes different groups of people are likely to experience across the student lifecycle. We define groups of people by looking at a set of characteristics so that we can determine the effect of not just one characteristic on an outcome, but the effect of multiple characteristics.

2. Each measure takes the form of a set of quintiles, where quintile 1 indicates groups of individuals who are least likely to experience or report a positive outcomes and quintile 5 indicates group that are most likely to experience or report a positive outcome.

3. These quintiles are defined using the outcomes from statistical modelling. Details of the modelling methodology and creation of quintiles can be found in the associated methodology document.[1]

## What do ABCS FT and PT NSS measure?

4. ABCS full-time (FT) and part-time (PT) NSS measure the proportion of students responding positively to the National Student Survey (NSS). This is based on their response to the question “How well have teaching staff support your learning?”. This question has been chosen as levels of positivity for this question have been shown to be highly correlated with other questions across the survey. Students responding “Very well” or “Well” are considered to have a positive response.

5. The FT measure covers students who study full-time and the PT measure covers those who study part-time. These measures are split because the demographics of full-time and part-time students are quite different and so the relationship between various characteristics and the chances of giving positive responses differs between the modes of study.

## Population

6. Updates were made to the NSS for students taking the survey in 2023. This means we only have three years of data available following this update, these have all been included in the construction of these measures.

7. Therefore, the model used to create the ABCS FT and PT NSS included those taking the survey in 2023, 2024 and 2025.

8. The measure is further restricted to UK-domiciled students studying at English providers who responded to question 16 of the NSS.

[1] See Associations between characteristics of students - Office for Students.

## Selection of characteristics

9. In selecting the factors for use in ABCS FT and PT NSS measures, we were looking for characteristics that we would not expect to be related to the way a student would respond to the NSS, but where the evidence showed that they did.

10. The characteristics used for ABCS FT NSS are age group, disability type, eligibility for free school meals, estrangement, ethnicity, sex, sexual orientation and religious belief.

11. The characteristics used for ABCS PT NSS are age group, disability type, ethnicity, local or distance learner, parental education, income deprivation affecting children index (IDACI) and sex.

12. The full-time model includes data on 670,832 respondents, 572,885 of which gave a positive response. Table 1 shows the attribute groups within each of the eight characteristics used for the model and the number and proportion of the graduates who are in each of these groups.

**Table 1: Characteristics in the ABCS FT NSS model**

| Characteristic | Category | Total number of individuals in the three cohorts | Per cent |
|---|---|---|---|
| Age group | 18 and under* | 359,824 | 53.6% |
| | 19 | 122,481 | 18.3% |
| | 20 | 36,134 | 5.4% |
| | 21-25 | 56,034 | 8.4% |
| | 26-30 | 27,348 | 4.1% |
| | 31-40 | 40,580 | 6.0% |
| | 41-50 | 21,493 | 3.2% |
| | 51+ | 6,938 | 1.0% |
| Disability type | Cognitive or learning difficulties | 48,775 | 7.3% |
| | Mental health condition | 40,505 | 6.0% |
| | Multiple or other impairments | 31,877 | 4.8% |
| | Sensory, medical or physical impairments | 17,531 | 2.6% |
| | Social or communication impairment | 7,513 | 1.1% |
| | No disability reported* | 524,631 | 78.2% |
| Estrangement | Estranged | 5,301 | 0.8% |
| | Not estranged* | 523,010 | 78.0% |
| | Unknown or N/A | 142,521 | 21.2% |

| Characteristic | Category | Total number of individuals in the three cohorts | Per cent |
|---|---|---|---|
| Ethnicity | Asian or Asian British - Bangladeshi | 16,568 | 2.5% |
| | Asian or Asian British - Chinese | 5,363 | 0.8% |
| | Asian or Asian British - Indian | 27,600 | 4.1% |
| | Asian or Asian British - Pakistani | 31,305 | 4.7% |
| | Asian or Asian British - other | 18,573 | 2.8% |
| | Black or black British - African | 48,978 | 7.3% |
| | Black or black British - Caribbean | 9,548 | 1.4% |
| | Black or black British - other | 3,220 | 0.5% |
| | Mixed - other | 10,463 | 1.6% |
| | Mixed - white and Asian | 12,054 | 1.8% |
| | Mixed - white and black African | 4,660 | 0.7% |
| | Mixed - white and black Caribbean | 7,454 | 1.1% |
| | Other ethnic group | 16,389 | 2.4% |
| | White* | 447,201 | 66.7% |
| | Refused or unknown | 11,456 | 1.7% |
| Free school meal (FSM) eligibility | Eligible for FSM | 65,834 | 9.8% |
| | Not eligible for FSM* | 356,945 | 53.2% |
| | Unknown or N/A | 248,053 | 37.0% |
| Religious belief | Any other religion or belief | 17,577 | 2.6% |
| | Buddhist | 2,732 | 0.4% |
| | Christian | 189,916 | 28.3% |
| | Hindu | 14,135 | 2.1% |
| | Jewish | 3,207 | 0.5% |
| | Muslim | 77,409 | 11.5% |
| | No religion* | 297,603 | 44.4% |
| | Sikh | 7,590 | 1.1% |
| | Unknown | 60,663 | 9.0% |
| Sex | Female | 412,149 | 61.4% |
| | Male* | 256,671 | 38.3% |
| | Unknown | 2,012 | 0.3% |

| Characteristic | Category | Total number of individuals in the three cohorts | Per cent |
|---|---|---|---|
| Sexual orientation | Heterosexual* | 515,109 | 76.8% |
| | Lesbian, gay or bisexual | 64,325 | 9.6% |
| | Other sexual orientation | 13,469 | 2.0% |
| | Unknown or N/A | 77,929 | 11.6% |
| Total number of individuals | | 670,832 | 100% |

* Indicates a reference category in the statistical model

13. The part-time model includes data on 52,207 respondents, 44,555 of which gave a positive response. Table 2 shows the attribute groups within each of the seven characteristics used for the model and the number and proportion of the graduates who are in each of these groups.

**Table 2: Characteristics in the ABCS PT NSS model**

| Characteristic | Category | Total number of individuals in the three cohorts | Per cent |
|---|---|---|---|
| Age group | 18 and under | 1,796 | 3.4% |
| | 19 | 1,987 | 3.8% |
| | 20 | 2,234 | 4.3% |
| | 21-25 | 11,008 | 21.1% |
| | 26-30 | 9,412 | 18.0% |
| | 31-40* | 13,701 | 26.2% |
| | 41-50 | 7,370 | 14.1% |
| | 51+ | 4,699 | 9.0% |
| Disability type | Cognitive or learning difficulties | 2,239 | 4.3% |
| | Mental health condition | 3,690 | 7.1% |
| | Multiple or other impairments | 5,483 | 10.5% |
| | Sensory, medical or physical impairments | 1,801 | 3.4% |
| | Social or communication impairment | 434 | 0.8% |
| | No disability reported* | 38,560 | 73.9% |
| Broad ethnicity | Asian | 2,176 | 4.2% |
| | Black | 2,417 | 4.6% |
| | Mixed | 1,412 | 2.7% |
| | Other | 536 | 1.0% |
| | White* | 44,336 | 84.9% |

| Characteristic | Category | Total number of individuals in the three cohorts | Per cent |
|---|---|---|---|
| | Unknown | 1,330 | 2.5% |
| IDACI quintile | Quintiles 1, 2 and 3* | 24,925 | 47.7% |
| | Quintiles 4 and 5 | 16,018 | 30.7% |
| | Unknown or N/A | 11,264 | 21.6% |
| Local or distance learner | Distance learning* | 44,910 | 86.0% |
| | Local to address prior to entry | 3,431 | 6.6% |
| | Not local to address prior to entry | 3,796 | 7.3% |
| | Unknown or N/A | 70 | 0.1% |
| Parental education | Higher education qualification not held by parent(s)* | 19,749 | 37.8% |
| | Higher education qualification held by parent(s) | 11,417 | 21.9% |
| | Unknown or N/A | 21,041 | 40.3% |
| Sex | Female | 34,224 | 65.6% |
| | Male* | 17,983 | 34.4% |
| Total number of individuals | | 52,207 | 100% |

* Indicates a reference category in the statistical model

## The statistical model

14. We have used a binary logistic regression model to predict the probability of responding positively to the NSS for both full-time and part-time students. We have included all characteristics as main effects and used a statistical approach to determine which of the two-way interactions should be included. See the ABCS methodology document for details.[2] Table 3 shows the interactions included in the full-time model and Table 4 shows the interactions included in the part-time model.

**Table 3: Interactions in the ABCS FT NSS model**

| Interactions |
|---|
| Age group*religious belief |
| Age group*ethnicity |
| Estrangement*religious belief |
| Age group*disability type |
| FSM eligibility*ethnicity |

[2] See Associations between characteristics of students - Office for Students.

| Interactions |
|---|
| Sexual orientation*religious belief |
| Ethnicity*sex |
| FSM eligibility*sexual orientation |

**Table 4: Interactions in the ABCS PT NSS model**

| Interactions |
|---|
| Sex*study location type |
| Parental education*study location type |
| Ethnicity*sex |
| Ethnicity*parental education |
| IDACI*local or distance learner |

15. The coefficient estimates for each of the factors and for all the two-way interactions included in the final model can be found in the Excel/CSV files.[3]

## Derivation of ABCS quintiles

16. Using the model's predicted positive response rates for each of the groups, we then used these predicted rates to split the individuals included in the modelling into five quintiles. Those groups with the lowest modelled rates are in the lowest quintiles and those with the highest are in the highest quintile. Table 5 shows the number and proportion of graduates in each quintile for the full-time measure, as well as the mean, minimum and maximum predicted rate. Table 6 does the equivalent for the part-time model. The minimum predicted rates are also the breakpoints, which determine the quintile boundaries.

**Table 5: Description of ABCS FT NSS quintiles**

| FT NSS quintile | Number of students | Proportion of students (%) | Mean modelled FT positivity rate (%) | Minimum modelled FT positivity rate (%) | Maximum modelled FT positivity rate (%) |
|---|---|---|---|---|---|
| **Quintile 1** | 134,082 | 19.99 | 81.3344 | 53.3420 | 83.1386 |
| **Quintile 2** | 134,227 | 20.01 | 84.0369 | 83.1392 | 84.9905 |
| **Quintile 3** | 134,187 | 20.00 | 85.4294 | 84.9925 | 85.9462 |
| **Quintile 4** | 134,108 | 19.99 | 86.6020 | 85.9465 | 87.1677 |
| **Quintile 5** | 134,228 | 20.01 | 89.5898 | 87.1679 | 98.2904 |

[3] See Associations between characteristics of students - Office for Students.

**Table 6: Description of ABCS PT NSS quintiles**

| PT NSS quintile | Number of students | Proportion of students (%) | Mean modelled PT positivity rate (%) | Minimum modelled PT positivity rate (%) | Maximum modelled PT positivity rate (%) |
|---|---|---|---|---|---|
| **Quintile 1** | 10,202 | 19.54 | 80.3870 | 55.6198 | 82.7773 |
| **Quintile 2** | 10,678 | 20.45 | 83.8455 | 82.806 | 84.6918 |
| **Quintile 3** | 10,414 | 19.95 | 85.5493 | 84.6958 | 86.3994 |
| **Quintile 4** | 10,458 | 20.03 | 87.2111 | 86.4007 | 88.0294 |
| **Quintile 5** | 10,455 | 20.03 | 89.6343 | 88.0357 | 99.1663 |

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