

Conscientious behaviour is a predictor of academic outcome in Foundation Programme students

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Background

Recently the U.K. Government has recognised the importance of Foundation Programmes as a mechanism for improving access to Higher Education (HE) for low participation groups and as a means to engage with the National Scholarship Programme (Willets 2009; Great Britain. BIS 2011).

Students enrolled on Foundation Programmes are frequently those from disadvantaged backgrounds; the majority of home students in this study are mature, local to the North East of England with no A level qualifications and likely to have a household income below 25K. “The educational needs of these disadvantaged students are qualitatively different and quantitatively greater than those of traditional university students” (Ainley et al, 2002, p89). The issues are not just academic; there is recognition that widening participation (WP) groups and adult learners are most likely to face barriers such as finance, and family responsibilities causing time and geographical constraints (NIACE 2011; Harris 2012; Pollard et al, 2008; Fuller and Patton 2007). These issues make it less likely that disadvantaged students apply to HE and it means that they are more difficult to retain (Great Britain. House of Commons Public Accounts Committee, 2009). Given the increased risks to both the institution and the individual when WP students are recruited, there is interest in identifying the factors which may indicate academic success in Higher Education

At Durham University we have developed an objective, scalar measure of the trait of conscientiousness, which is valid and reliable, (McLachlan, Finn et al. 2009). This ‘Conscientiousness Index’ (CI) was initially developed with respect to undergraduate medical students, and the results have since been independently replicated at University College, Cork (M. Kelly, S. O’Flynn et al. 2012). The CI consists of points

accumulated over the academic year for each student that reflects the occurrence of conscientious behaviours such as attending compulsory sessions or timely submission of written work.

Preliminary data in medical students shows that the CI corresponds with performance in exams (unpublished data). We have recently shown that the measure is reliable (i.e. consistent across time) which suggests that it is measuring a stable trait, and that measures of conscientiousness as predicted by written Personal Qualities Assessments (Revised NEO Personality Inventory, NEO-PI-R) administered before entering a study programme correlate strongly with actual conscientiousness once the programme is under way (unpublished data).

Methods

Sample

This study was set in Durham University with Foundation Programme students (n=703) during the years 2004-2010. The Foundation Programme is run by the Foundation Centre at Durham University, located at both the Durham City site and the Queen's Campus site in Stockton-on-Tees. The Centre has a diverse population of students including mature students, home and international students, and students who have not done any formal study for many years.

Ethics

The data analysed in this study is routinely collected administrative data related to the Foundation Programme and thus no specific student consent is required (McLachlan and McHarg 2005).

Components of the Conscientiousness Index

Attendance

Attendance at all teaching sessions within the Foundation Programme at Durham University is compulsory and this is emphasised to students during their first week at induction, in the student handbook and throughout the course. Students have 18 hours of formal teaching time per week, made up of 6 compulsory sessions of lectures, workshops, or practical sessions, over 21 weeks. The data was calculated as a percentage of total possible attendance at these compulsory sessions.

Assignment submission

The students are given a deadline for submission of summative assignments at the time they are set. A record was kept of whether students' assignment submission was before or after this deadline. The data was calculated as a percentage of the total assignments that were submitted on time.

Calculation of the Final CI score

The final CI score was calculated as the mean of the percentages derived for attendance and assignment submission.

Assessment within the Foundation Programme

Methods of assessment in the Foundation Centre vary between modules, with some modules assessed entirely by coursework; others with a combination of coursework and a test or exam. All modules have a pass mark of 50%. Modules are worth either 10 or 20 credits and all students take 120 credits worth of modules. The marks for these modules are then averaged to give the final Foundation Average mark. To pass the Foundation Programme, students must pass all modules.

Results

Distribution of Foundation Average mark and CI

Simple visual comparison of the Foundation percentage marks showed a slight negatively skewed leptokurtic distribution with a peak at 66-68% and 68-70% (Figure 1A). There was a more negatively skewed leptokurtic distribution for CI percentage with a peak at 88-90% (Figure 1B)

Correlation between Foundation Average mark and CI

Figure 2 is a scatter plot of the final percentage marks achieved by Foundation students and the CI percentage for each student. Calculating a Pearson's correlation coefficient showed a high degree of correlation ($p = 0.001$, with $r = 0.53$; Figure 2).

We are currently also investigating whether students' sex, age and previous qualifications or experience can influence both Foundation marks and level of conscientious behaviour.

Points to Consider

This study shows that there is a strong correlation between the Conscientiousness Index and academic performance on the Foundation Programme. Given the strong relationship, the next step will be to determine whether it is possible to remediate a low CI score during the year in order to improve academic achievement. However, as previous studies have suggested that conscientiousness is a stable trait, it could be argued that selection of the right people may be a better way to ensure successful performance. Adopting a more appropriate selection criteria is also markedly less expensive for both the individual and the institution. Employers are also likely to strongly desire to select those applicants who are going to be conscientious in the work place.

Word count 963

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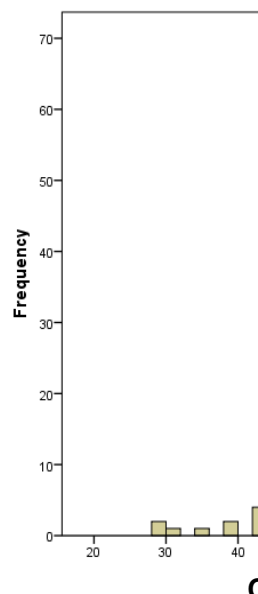
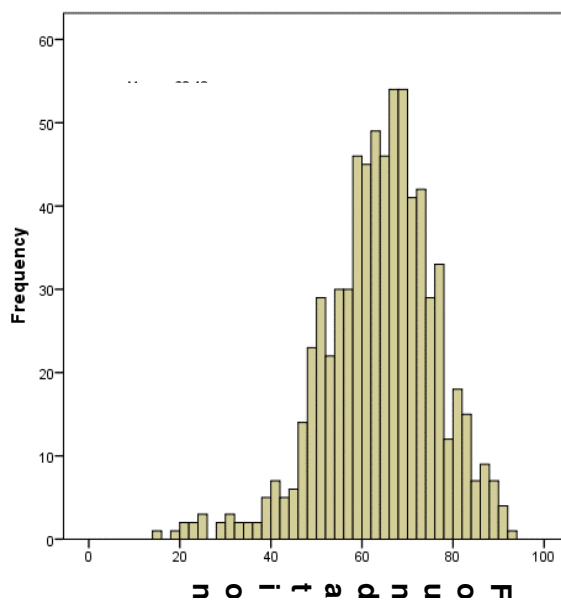
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