PREDICTORS OF SUCCESS
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The veterinary literature relating to optimal approaches to student selection has often been limited by the small numbers of students studied, relevance to UK admissions and age of some studies (Hecker et al. 2009, Hudson et. al. 2009, Kunzel and Breit 2007, Rush et al. 2005). Though more work has been undertaken in the medical field, the results may not be wholly applicable to veterinary education (Hobfoll and Benor 1981, Groves et al. 2003, McManus and Richards 1986, Rubeck et al. 1998). The evaluation of pre-course factors most strongly associated with success and progression and the identification of within course assessments most likely to predict failure within the course, could allow improved selection and retention of students on the BVetMed course. As the largest veterinary school in the UK, the RVC benefits from extensive historical data on a large cohort of students over an extended period of time. These data could provide a powerful basis for the re-assessment of student selection and within course student surveillance and support. The aim of the project was to evaluate a number of pre-entry and within course parameters to identify major factors associated with success in the BVetMed course.

Data relating to the 6 most recent cohorts of the BVetMed course were evaluated (Cohorts entering 2003 to 2008). Pre-entrant data and within course assessments were collated from various spreadsheets held within Registry and uniquely identified via student identification number. Additionally, data entry of certain *a priori* factors the project was interested in analyzing was also undertaken. These additional data fields included results for specific GCSE subjects and other pre-entrant results. Once collated, the resultant database was manually cleaned and only one record per student identification number was permitted. For students with multiple attempts for a given course year, only the first results attempted per course year were considered. Data were exported to a standard statistical package for analysis (Stata version 10.0). Univariable screening of data was undertaken with chi squared and Fisher's exact tests for categorical data and the unpaired t test and Mann Whitney U tests for quantitative data. Variables significant at the 20% level ($P<0.20$) were considered in the multivariable analysis (Dohoo et al 2003). Assessment of collinearity of variables taken forward to the multivariable analysis was undertaken by standard methods (Dohoo et. al 2003). Mixed effects binary logistic regression models were constructed with a manual forward selection approach to evaluate factors associated with success at each course year examination (pass / fail and merit + distinction / pass). Model fit was assessed with the Hosmer Lemeshow test (Hosmer and Lemeshow 2000) and statistical significance was set at the 5% level.

During the study period 1347 students were taken forward for evaluation. 1226 standard entrant UK students, 68 gateway students, 88 North American entrants and 33 other students were followed from 1 to 5 years of their participation in the BVetMed course (Table 1). During the 6 cohorts, 203 failed the first year, 67 failed the second year, 65 failed the third year, 82 failed the fourth year and 32 failed the fifth year at the first sitting. The number of students passing their examinations were 1015, 902, 822, 575 and 421 for first to fifth years respectively. Across all years studied 1291 Merits were awarded and 307 Distinction (Table 2). Multivariable models were constructed for pass versus fail at the end of each BVetMed course year and additionally models for Distinction or Merit versus Pass were also constructed. A number of pre-entrant and within course variables were identified associated with success at year end examination.

Table 1. Country of origin of students (nationality not given for 4 students)

Country	Number of Students	Percent
UK	1,222	90.99
North American	88	6.55
European	21	1.56
Other	12	0.89
Total	1,343	100.00

Table 2. Merits and distinctions awarded per BVetMed course year

BVetMed Year	Merit	Distinction
1	257	57
2	274	59
3	308	112
4	160	29
5 Part I	32	8
5 Part II	57	2
5 Part III	203	40
Total	1291	307

The project identifies a number of pre-entrant and within course factors that should aid student selection and identify those students most likely to require greater monitoring and support during the course, as well as those most likely to excel. Pre-study and within course data entry recommendations will also be made to improve the efficiency of future data analyses. The results are currently being written up for publication.

References

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