**Comparison of student outcomes in laboratory, data or clinically based BSc research projects**

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**Background and Aims**

Within the Clinical Pharmacology BSc programme at St George’s University of London, second year students undertake an eight-week, full time, research project. Projects are offered by supervisors in the following three categories: Laboratory, Clinical and Data. Laboratory projects are wet lab based, whilst Clinical projects involved patient-centred data. Data projects involve the secondary analysis of pre-extracted datasets that could be either from laboratory or clinical research. Students are assessed by both oral presentation and a written research report. We considered that different project types might result in different student outcomes. Therefore, this study investigated potential differences in student outcomes in the different categories of research projects.

**Summary of Work and Outcomes**

The student outcomes in overall project mark, presentation mark and report mark were analysed by one-way ANOVA with multiple comparisons for the three categories of project. In the 2020/21 cohort of students, 14 undertook laboratory projects, 15 undertook clinical projects and 24 undertook data projects. Students undertaking clinical projects had an overall project mark of 73.5% compared to students undertaking laboratory projects who had an average mark of 66.7% (p=0.08). Analysis of the assessment components showed that clinical projects had an average written report mark of 69.3% compared to laboratory projects which had an average mark of 65.1% (p=0.6). Comparison of average oral presentation scores for the different categories were: Clinical (76.1%) vs Laboratory (66.8%) (p<0.05). Data project marks were consistently in between those of clinical and laboratory projects (mean overall mark 72.6% (p=0.1 vs lab, p=0.9 vs clinical), mean oral presentation mark 74% (p=0.09 vs lab, p=0.8 vs clinical), mean written report mark 70.8% (p=0.4 vs lab, p=0.9 vs clinical)

**Discussion**

In our 2020/21 cohort, we identified a disparity in student outcomes in different project categories which was disadvantageous to laboratory based projects, particularly in oral presentation assessment. There are potential confounding factors that we are not able to account for, such as self-selection for projects, as well as supervision provided. However, clinical projects may be more accessible to a more general audience than lab projects. This discrepancy should be better characterised to consider the most appropriate method of standard setting across varied projects.

**Conclusion**

Whether student research projects have a clinical, data or laboratory basis can impact student outcomes in assessment, in particular in oral presentations.