

How Much Basic Science Knowledge Do Our Students Remember?

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Introduction:

The importance of horizontal and vertical knowledge integration in health professions education cannot be overemphasised. Health professionals need to develop critical analytic and diagnostic thinking skills and not just a mere accumulation of large volume of facts.

However, an integration of multidisciplinary basic sciences with clinical experiences is an important challenge facing the health professions education sector.

Objectives:

This study aimed to measure medical and pharmacy students' level of retention of basic science knowledge and perception of its relevance to clinical practice.

Method:

All medical and pharmacy students at the James Cook University were invited to participate in a basic science exam with sixty multiple choice questions. In addition, participants were asked to rate each assessment question in terms of its perceived relevance to clinical practice. Covariates pertaining to demographics were also collated. Differences in retention of knowledge in individual disciplines as well as perceived relevance of the assessment items as determined by all participant groups were investigated.

Results:

Data analysis revealed a progressive increase in performance scores in relation to year of study in both medicine and pharmacy, with the more senior students obtaining higher overall scores in the exam. Comparative analysis of performance in the different discipline areas revealed that with the medical cohort, the highest scores were obtained in pathology and physiology; while with the pharmacy students, it was chemistry and physiology. While performance improved from foundation years to senior years across all disciplines, the smallest improvements were observed in domains/disciplines which were rated as least relevant by the students.

Conclusion:

Perceived clinical relevance demonstrated through applicability to clinical situations may assist in the retention of basic science knowledge.