

Learning hindrances and strategies reported by undergraduate physiology students: What makes a student resilient?

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The transition from secondary to tertiary education is fraught with challenges for students (Kantanis, 2000, van der Meer *et al.*, 2010). University students need to cope with changing academic expectations surrounding independent learning, time management and levels of academic challenge. For each student, the decision to remain at university or to attrite will depend on how well students adjust to university life and the learning hindrances they face while at university (Krause, 2005). These hindrances may negatively impact on learning by distracting from study, or may enhance learning by encouraging students to address challenges as they arise.

In the current study, second year pharmacy students (n = 210) studying physiology were asked to describe their learning hindrances at a single point early in semester, and to outline the strategies for overcoming these hindrances in future. Hierarchical cluster analysis was used to separate the learning hindrances into groups based on the strategies that students reported for each type of hindrance. Learning hindrances and strategies were then compared between high achieving (distinctions or high distinctions in years 1 and 2; n = 50), low achieving (failed at least one course in years 1 and 2; n = 15) and resilient students (failed at least one course in year 1 and passed in year 2; n = 21).

The most frequently reported learning hindrances related to other commitments, including academic, work, social and unspecified commitments, which were reported by 51% of students. The most frequently reported strategies for overcoming future learning hindrances included planning and time management, reported by 42% and 29% of students respectively. Five learning hindrance clusters were identified, including non-academic commitments, motivational factors, academic commitments, difficulties concentrating and difficulties understanding. Hindrances associated with difficulties understanding were reported most frequently by resilient students and least frequently by low achieving students. Resilient students were most likely to report learning strategies that promote understanding. These results suggest that early interventions to encourage students to critically evaluate their understanding may benefit struggling students.

Kantanis T. (2000) The role of social transition in students' adjustment to the first-year of university. *J Institut Res* **9**, 100-110.

Krause K-LD. (2005) Serious thoughts about dropping out in first year: Trends, patterns and implications for higher education. *Stud Learn Eval Innovat Dev* **2**, 55-68.

van der Meer J, Jansen E, Torenbeek M. (2010) It's almost a mindset that teachers need to change: first-year students' need to be inducted into time management. *Stud High Educ* **35**, 777-791.