

Do learning styles and approaches to learning differ among medical undergraduates and post graduates?

L Samarakoon¹, T Fernando², C Rodrigo², S Rajapakse²

¹National Hospital of Sri Lanka, Colombo

²Department of Clinical Medicine, Faculty of Medicine, University of Colombo.

Objectives

To assess the differences in approaches to learning (deep, strategic and superficial) and learning styles (visual, auditory, read/write and kinesthetic) between first and final year medical students and postgraduate students using standard validated assessment tools.

Methods

We used self administered VARK and ASSIST questionnaires to assess the differences in learning styles and approaches to learning amongst medical undergraduates of the University of Colombo and postgraduates of PGIM. Comparisons were made using students t test. SPSS v15 was used for analysis.

Results

A total of 147 participated: 73 (49.7%) first year students, 40(27.2%) final year students and 34(23.1%) postgraduate students. Response rates were 98.6%, 88% and 94.1% respectively.

The majority of first year students had bimodal (30.1%) and unimodal (30.1%) learning styles. Among unimodal learners, the majority were auditory learners (50%). Among bimodal learners, auditory-reading (50%) and auditory-kinesthetic (31.8%) types predominated. Among final year students, the majority (32.5%) were unimodal learners with kinaesthetic approach (38.5%) predominating. Among postgraduates also the majority were unimodal (52.9%) learners with kinaesthetic approach (33.4%) predominating. Among all three groups, the predominant approach to learning was strategic. When comparing between groups, postgraduates had significant higher mean scores for deep approach and strategic approach than first years or final years ($p < 0.05$ for both). Mean scores for the superficial approach did not differ significantly between groups. Mean scores for all three approaches did not differ significantly between first and final years. Regarding gender differences, majority of males were unimodal (37.7%) learners with kinesthetic style predominating (31%). Among females, the majority (34.3%) were unimodal learners, but dominant learning style was auditory (41.7%). The predominant learning approach in both genders was strategic, and no significant differences were observed between the two groups (P value < 0.05)

Conclusions

The learning approach showed a positive shift towards deep and strategic learning in postgraduate students. However a similar shift was not observed in undergraduate students during their transition from first year to final year. Thus the undergraduate curriculum does not seem to influence learning methodology over its five year period. Understanding the differences in the learning styles and learning approaches may have important implications in development of effective medical curricula for both undergraduates and post graduates.