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Enriching traditional didactic teaching in undergraduate ophthalmology with lateral thinking method: a prospective study

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Abstract

Purpose: To evaluate undergraduate medical students' perspective on lateral thinking pedagogy in teaching clinical ocular anatomy in correlation to developing differential diagnoses and recognising red flags in managing common eye conditions.

Methods: The prospective study compared the lateral thinking method (LTM) versus the traditional didactic method in teaching clinical ocular anatomy. Two hundred seventy-two medical students who underwent ophthalmology clerkships were recruited over 3 years. They were randomised into two groups, the LTM and regular didactic groups. Students participated in pre and post-tests to assess their theoretical clinical ophthalmic knowledge, and their responses to respective teaching methods were measured via the self-assessment questionnaire (SAQ), which incorporated a five-point Likert-type scale.

Results: Overall, the LTM group scored significantly higher than the control group, and they found the innovative teaching method improved their confidence and awareness in theoretical knowledge in generating differential diagnoses, managing common eye conditions and recognising potential signs that could be sight and/or life-threatening compared to the regular teaching group ($P < 0.05$). However, all students were neutral towards both lectures regarding changing their negative perception of the current ophthalmic curriculum.

Conclusion: From the student's perspective, LTM is an effective tool in enriching regular teaching. The method encouraged versatile thinking patterns while enhancing the effectiveness of learning experience in time and resource-limited undergraduate ophthalmic teaching.

Keywords: Medical education, Lateral thinking pedagogy, Ophthalmology, Undergraduate teaching

Introduction

The ophthalmic undergraduate curriculum has been criticised for its marginalisation and absence, as limitations in time and resources are rising to accommodate other non-ophthalmic curricula [1–3]. Studies among the primary care and junior doctors have shown their

undergraduate ophthalmic teaching was inadequate while they were expected to deliver first-line eye care as ophthalmic presentations could make up to 19% of the primary care visits [4–6]. Moreover, the lower confidence and poorer understanding of ophthalmic knowledge had led to over-referral of benign eye cases, failure to screen and mismanage potentially sight-threatening eye conditions [7, 8]. The rapidly growing prevalence and financial burden of visual impairment will require all physicians to be better equipped with ophthalmic skills [9].

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