

Correspondence

Team-based learning in a medical centre in Malaysia: Perspectives of the faculty

Team-based learning (TBL) is a teaching–learning method which gives the benefit of small group learning within large classes.¹ TBL starts with the students' preparation, during which they study an advance assignment defined by the faculty and then participate in the readiness assurance process (RAP) to demonstrate knowledge. The RAP consists of a short individual test. This is followed by the same test taken in multiple teams with immediate feedback, the opportunity to appeal test questions, and then clarification of still difficult material. After the RAP, the remainder of the course is spent applying the content in the class to questions or problems via activities and case studies.² Studies show that students' performance improves and weaker students benefit more from TBL.^{3,4}

Universiti Kebangsaan Malaysia (UKM) is a leading national public university in Malaysia and its medical faculty has adopted many small group approaches including problem-based learning (PBL) along with lecture sessions for students. Currently, the conversion of lectures to innovative TBL is being planned. With this aim, a 2-day TBL faculty development workshop was organized by the Department of Medical Education in UKM in September 2014. This was attended by 39 members of the UKM medical faculty from various disciplines. At the end, the workshop was evaluated by administering a survey-questionnaire that contained items on general workshop contents, attitude of faculty towards applying TBL, workshop usefulness and open-ended questions. A 5-point Likert scale was used to rate the items. We describe the perspectives of the faculty on the TBL training workshop.

Of 39 participants, 28 responded (72%). The usefulness of the workshop was rated as good and very good by 60.7% and 17.9%, respectively and the majority had a positive attitude towards using TBL (Table I). The participants said that they got new insights on a more interactive way to teach, but they preferred more practical demonstration before its implementation.

The perceptions of the faculty members for introduction of TBL at UKM medical centre were positive and encouraging. The attitude

towards conversion of slides of a traditional lecture to innovative TBL in the near future was also positive. However, more workshops emphasizing more on practical demonstrations were the felt need for successful implementation of TBL.

Faculty members are the scholarly asset of medical schools, and faculty development activity is an integral part of an institution for its educational development. Among the difficulties facing educational institutions is how the curriculum should be customized.⁵ Medical schools should consider the needs of the faculty while organizing faculty developmental training workshops to forge links between education and practice to ensure sustainable development.

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TABLE I. Perspectives of faculty members who participated in a team-based learning (TBL) workshop (n=28)

Workshop contents	Poor n (%)	Satisfactory n (%)	Good n (%)	Very good n (%)	No response n (%)
<i>General aspects</i>					
Introductory session	–	3(10.7)	9 (32.2)	3 (10.7)	13 (46.4)
Individual readiness assurance test	3 (10.7)	5 (17.9)	15 (53.6)	1 (3.6)	4 (14.3)
Group readiness assurance test	–	6 (21.4)	16 (57.1)	4 (14.3)	2 (7.1)
Interactive lectures	–	3 (10.7)	11 (39.3)	12 (42.9)	2 (7.1)
Team activities	–	2 (7.1)	16 (57.2)	9 (32.1)	1 (3.6)
Video demonstration on TBL	–	7 (25.0)	12 (42.9)	7 (25.0)	2 (7.1)
Day 2, conversion of Powerpoint presentation of lecture to TBL	–	5 (17.9)	15 (53.6)	4 (14.3)	4 (14.3)
Duration of the workshop	1 (3.6)	18 (64.3)	9 (32.1)	–	–
<i>Attitudinal aspect</i>					
Desire to change lecture to TBL	1 (3.6)	7 (25.0)	14 (50.0)	5 (17.9)	1 (3.6)
<i>Usefulness aspect</i>					
Overall usefulness of the workshop	–	3 (10.7)	17 (60.7)	5 (17.9)	3 (10.7)

Non-aqueous, non-vitreous humour in medical journals

We thank Drs Golden and Mohan^{1,2} for their interest in our paper.³ Dr Golden rightly points out that Sir William, a 'saint of humanity' had a fescennine sense of humour. Indeed, I (SAP) first happened to read Dr Mohan's letter in the *Journal* and the immediate reaction was to think of Osler's wicked paper on penis captivis—which Dr Golden has referred to in his letter!¹ Both, Dr Golden, a past president of the American Osler society as well as I, believe that Sir William was as near complete a humane and intellectual physician as can be, and have undoubtedly been influenced by his teachings. We do wish to point out, however, to Dr Golden, that, while the paper was most definitely written tongue-in-cheek, we truly did believe in the hypothesis before performing the research. Our logic was based on the observation that surgeons take quicker, bolder decisions by the very nature of their work and the concurrent knowledge that testosterone levels have been known to be higher in those who take risks. As far as the gender issue is concerned, our limiting step was the fact that there are only a few women surgeons in our hospital; the numbers would not then yield any statistically significant data.

Dr Mohan raises a number of points. We thank him for praising our English and our talent, but cannot reconcile with some of his views. He suggests that humour has no place in a medical journal. As is well known, the *BMJ* and the *CMAJ* devote a considerable part of their Christmas issues to humour—risqué or otherwise. We have alluded to some of these papers in our article, but the interested reader could certainly discover much more such literature. Even the most respected of medical journals—the *New England Journal of Medicine*—occasionally carries articles in the same vein. One recent example is the paper which links Nobel prizes with chocolate-eating!⁴

Because humour often cuts across sciences, even basic science journals publish, from time to time, articles dealing with wit and humour. Read, for instance, Jan Witkowski's paper on 'How I learned to stop worrying and love Cell'.⁵ Witkowski, incidentally, is Executive Director at Cold Spring Harbor, USA. *Nature*, too, has carried funny poems and articles over the years. One such example is the poem 'To Sir Charles Vernon Boys on his eightieth birthday'.⁶ Molecular biology also makes its presence in the field of humour; the term 'Western blot' is simply a take-off on an earlier technique, the Southern blot—named after Sir Edwin Southern. The Western blot is not named after a Dr Western!

We believe that there is a place for non-aqueous, non-vitreous humour in a medical journal. We wonder what the opinions of other readers of this journal are, on the topic of humour in medical journals—and look forward to hearing more on this.

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Effect of music on stress and academic performance of undergraduate medical students

Stress during medical education affects the academic performance of undergraduate students.^{1–3} Some studies show the effect of music as a coping strategy for reduction of stress among medical and non-medical students.^{4,5} Music is presumed to activate general attention and memory areas of the brain.⁶ We report the effect of music on stress and the academic performance of MBBS students at a private medical college in Puducherry.

Sixty students of second year MBBS were divided into two equal groups: music (intervention) and non-music (control) group. Their stressors and anxiety level (as a marker of stress) were assessed with a modified version of Presumptive Stressful Life Events Scale⁷ and Westside Test Anxiety Scale.^{4,8} The music group listened to *Raag Bilahari*,⁹ a Carnatic classical music piece, daily for 30 minutes using a headphone for a month, before the study hour, in the evening. The non-music group was not exposed to any kind of music before the study hour. The music group continued to listen to the music till 1 week before the internal theory examination. The subject most frequently studied by the students was noted. Anxiety scores and examination marks of both groups were analysed before and after the intervention. Paired *t* test, independent *t* test and chi-square test were used to assess the statistical significance of the data.

The major stressors reported by the students were high workload (53%), failure in internal examinations (49%), financial constraints (55%), home sickness (64%) and presence of major illness (20%). These findings were at par with previous studies.^{1,3} While 44% of students in the music group had examination anxiety score ≥ 3 before the intervention, only 20% reported it after the intervention ($p < 0.05$; Table I).

The mean (SD) theory examination marks (total marks 40) of students in the music group improved after the intervention (24.3 [5.8] and 25.9 [5.9] but were not statistically significant ($p = 0.09$). The non-music group showed a decrease in marks (26.9 [5.9] and 24.4 [5.6]; $p = 0.116$). However, there was no significant difference in pre-intervention ($p = 0.10$) as well as post-intervention ($p = 0.32$) marks between the two groups.

Varying results have been reported on cognitive performance of students after listening to music. While Kesan *et al.*^{9,10} had reported an enhancing effect of music on examination performance of students of mathematics, Goldenberg *et al.*⁵ in their study on the effect of Mozart music among 359 psychology students, did not establish a significant favourable outcome.

In our study, even though we observed a reduction in the anxiety score, we could not establish a significant improvement in performance in the examination after the music intervention. The reasons could be the small sample size, our choice of music selection rather than student's choice or the method of intervention adopted. Further, the high level of stressors identified in the study could have hindered the overall effect of music. Larger studies are needed to establish its

TABLE I. Westside test anxiety score of students in the music group ($n = 30$)

Anxiety score	Before intervention		After intervention	
	Students	<i>n</i> (%)	Students	<i>n</i> (%)
Comfortable low anxiety (1.0–1.9)	1	(3.3)	8	(26.7)
Normal test anxiety (2.0–2.4)	7	(23.3)	11	(36.7)
High normal test anxiety (2.5–2.9)	9	(30.0)	5	(16.7)
Moderately high anxiety (3.0–3.4)	6	(20.0)	4	(13.3)
High anxiety (3.5–3.9)	7	(23.3)	2	(6.7)
Extremely high anxiety (4.0–5.0)	–	–	–	–

$p = 0.05$

scientific evidence on academic achievement. The findings of the study emphasize the need for identification of students with stressors and to plan suitable interventions to aid in better learning.

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Does the present undergraduate curriculum emphasize the principles of enhanced recovery after surgery (ERAS)?

There are little data regarding the practice of enhanced recovery after surgery (ERAS) in India, but it is suspected to be low. I was a coauthor of a recent report in this *Journal* that highlighted the lack of awareness and barriers to the effective implementation of ERAS programmes in India.¹ After a recently concluded trial,² we have started implementing the principles of ERAS in our daily practice. It was surprising to discover that undergraduates who attended clinics in our unit knew little about ERAS. We, therefore, conducted an online survey among final year undergraduate students to assess the level of awareness regarding ERAS. The survey consisted of eight single best response-type questions. Students at the selected level had General Surgery as part of their curriculum and were at the end of the final year. They were therefore expected to have completed the curriculum for the concerned year. Students of seven medical colleges from Mumbai and Navi Mumbai regions were invited to answer the survey. Of over 150 invited students, only 96 replied and only 33 (34.4%) had heard about ERAS. Of these, only 15 (45.5%) remembered reading about it in standard textbooks covering the prescribed curriculum. The rest knew about it from other sources such as the internet or from seniors in teaching sessions. While all the respondents thought that perioperative care was relevant to the curriculum included under surgery, they also felt the need for more emphasis in textbooks and classroom/clinical teaching. A review of textbooks prescribed at the undergraduate level revealed that the popular book *Bailey and Love's Short practice of surgery* in its twenty-sixth edition has only one paragraph about ERAS in a chapter on surgical pathophysiology. I did not come across any other prescribed textbook with an emphasis on ERAS.

The methodology of ERAS mandates a comprehensive perioperative care programme. Introducing medical students to the principles of ERAS serves as an opportunity to teach them all aspects of the care of a surgical patient. At the end of the final undergraduate year, a medical student has sufficient knowledge of basic and clinical specialties in medicine to be able to understand these principles. ERAS is a constantly evolving programme that requires implementation of the latest evidence-based practices as they become available. Learning from this model may benefit medical students to do the same in their practice. Introducing concepts of ERAS, or evidence-based medicine in general, in standard medical school curriculum may reduce the 'loss in transmission'.

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