

ORIGINAL ARTICLE

Does PBL Make Medical Students Life long learners?

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ABSTRACT

Introduction: our medical school has switched from traditional to integrated modular spiral outcome based curriculum. Problem based learning has been introduced as one of the main teaching/learning strategies. One of the major benefits of PBL mentioned in the literature is to make student a lifelong learner. However it is not easy to assess that PBL imparts this basic feature of adult learning in students. PBL is used as learning strategy in the first 02 years of medical curriculum, so that the lifelong learning capability can be assessed in the last three years of medical school.

Objective: To determine the role of PBL in developing lifelong learning ability among medical students.

Study Design: A quantitative cross sectional co-relational study.

Place and Duration of Study: The study was conducted in Islamic International Medical College in April 2012.

Materials and Methods: Three hundred students from 3rd to final year MBBS were distributed Revised Jefferson scale of Physician Lifelong learning (JeffSPLL) at the start of the lecture. The questionnaire was collected at the end of the lecture.

Results: Data was collected from JeffSPLL inventory. This was entered into SPSS 18. Both non parametric and parametric analysis were done. Non parametric analysis included mean, median and mode of ages and gender of the participants.

Parametric analysis was based on Pearson Co relation analysis to find a relationship between the PBL and developing the capability of Lifelong learning.

Conclusion: Lifelong learning is multidimensional idea. Factors associated with lifelong learning include need recognition, undertaking research, self-motivation, practical abilities and personal motivations. The discussion will be based on the relationship between the development of lifelong learning skill and the process of Problem based learning. The process of PBL makes the students lifelong learners.

Keywords: *lifelong learners, Jefferson's scale, PBL.*

Introduction

The field of medical education has witnessed a galloping progress in last few decades.¹ Outcome based medical education and outcome based medical curricula evolved as a result of these progresses. One of the characteristics of these curricula is the explicitly stated outcomes of the education that they intend to achieve at the end of the instruction period. A commonly stated outcome is to make the learner an independent, self-directed and lifelong learner. It is quite pertinent that the learner becomes a lifelong learner as a result of instruction. This process makes him an independent problem solver, who is able to learn without instruction and improve his knowledge skills and attitudes that he has acquired through instruction. It appears that out of all the outcomes it is one of the most important ones to become a lifelong learner. The factual knowledge that he acquires during his stay in the medical school is very short lived as a

consequence of the ever expanding field of knowledge. Similarly by the advent of new technologies his skills and use of medical technology in practice are likely to require continuous improvement with the passage of time. It is here that lifelong and independent learner ship can spell the difference between one and the other doctor.

Whereas many medical curricula state lifelong and independent learning as one of the intended outcomes of their instruction, they do not appear to possess a tangible and deliberate attempt to assess it through valid and reliable assessment tools.² It is important to assess whether, as a result of a given course of study, the learner has become an independent learner or not.

The present study is aimed at finding out the proportion of students of final year MBBS in a Pakistani medical college who show evidence of being an independent learner as assessed by JFPLL.

Materials and Methods

Pertinent questions from the standard Jefferson's scale for physician's lifelong learning proforma were selected and distributed among the students of 3rd through final year MBBS, at Islamic International Medical College. The questions selected were the ones which were pertinent to medical students of

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undergraduate level. They were given time to respond and then the proformas were collected. A total of 300 respondents were selected to participate in the study. Three subscales for measurement of lifelong learning were selected namely motivation, scholarly activities, and attention to learning opportunities. Third, fourth and final year students were separately rated according to the subscales. The data was compiled and analyzed with SPSS.

Results

Revised Jefferson's scale for physicians' lifelong learning proforma was distributed among a total of 300 students of 3rd, 4th and final year MBBS students of Islamic International Medical College. A total of 218 students responded with a response rate of 72%. There were 62 male and 156 female students. The overall aptitude of medical students towards lifelong learning is shown in Table I.

Table I: Orientation towards lifelong learning in Medical Students

	High Aptitude	Average Aptitude	Low Aptitude
3 rd year MBBS	85/92 (92%)	7/92 (8%)	0/92
4 th year MBBS	54/59 (92%)	5/59 (8%)	0/59
Final year MBBS	62/67 (93%)	5/67 (7%)	0/67

Discussion

The learning process of a medical student does not end at the graduation from the medical school. Instead it continues throughout life as a lifelong process.³ this lifelong learning has been an important attribute of all health professionals for a long time and has been a part of physicians oath.⁴ It is important that teaching learning strategies incorporated in the medical curricula should ensure development of the self directed learning attitudes in the medical graduates.⁵ Several studies have been done on the development of self directed learning in undergraduate medical students using various instruments.^{6,7,8,9,10,11} Different instruments used for the purpose include the self-directed learning readiness scale (SLDRS)¹², the effective lifelong learning inventory (ELLI)¹³ and the Jefferson's scale for physicians lifelong learning.¹⁴ Our study utilizes the Jefferson's scale for physicians' lifelong learning as the instrument adapted for assessment of lifelong learning in medical students. The teaching learning strategy in our curriculum recognized to foster lifelong learning attitudes is the problem

based learning which is used up to second year in our curriculum.

Prior studies have substantiated Jefferson's scale for physicians lifelong learning as a reliable and valid instrument for measuring lifelong learning of academic and learning physicians.¹⁵ A three factor subscale was also used by Wetzel et.al. to establish the same attributes of JeffSPLL adapted for medical students.

REFERENCES

1. Norman G. Research in medical education: three decades of progress. *BMJ* 2002;324(7353):1560-2.
2. Hojat M, Veloski J, Nasca TJ, Erdmann JB, Gonnella JS. Assessing physicians' orientation toward lifelong learning. *J Gen Intern Med* 2006;21(9):931-6.
3. Gonnella JS, Callahan CA, Louis DZ, Hojat M, Erdmann JB. Medical education and health services research: the linkage. *Med Teach* 2004;26(1):7-11.
4. Wetzel AP, Mazmanian PE, Hojat M, Kreutzer KO, Carrico RJ, Carr C, et al. Measuring medical students' orientation toward lifelong learning: a psychometric evaluation. *Academic medicine* 2010;85(10):41-4.
5. Harvey BJ, Rothman AI, Frecker RC. Effect of an undergraduate medical curriculum on students' self-directed learning. *Academic medicine* 2003;78(12):1259-65.
6. Wilcox S. Fostering self-directed learning in the university setting. *Studies in Higher Education*. 1996;21(2):165-76.
7. Mifflin BM CC, Price DA. A conceptual framework to guide the development of self-directed, life-long learning in problem-based medical curricula. *Med Educ* 2000;34:299-306.
8. Ryan G. Student perceptions about self-directed learning in a professional course implementing problem-based learning. *Studies in Higher Education* 1993;18(1):53-63.
9. Candy PC. *Self-Direction for Lifelong Learning. A Comprehensive Guide to Theory and Practice*: ERIC; 1991.
10. Knowles MS. *Self-directed learning*. Chicago: Association Press New York; 1975.
11. Hammond M, Collins R. *Self-Directed Learning: Critical Practice*: ERIC; 1991.
12. Fisher M, King J, Tague G. Development of a self-directed learning readiness scale for nursing education. *Nurse education today* 2001;21(7):516-25.
13. Crick RD, Broadfoot P, Claxton G. Developing an effective lifelong learning inventory: The ELLI Project. *Assessment in Education: Principles, Policy & Practice* 2004;11(3):247-72.
14. Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. *Academic medicine*. 2009;84(8):1066-74.