
UNDERGRADUATE MEDICAL STUDENT'S PERSPECTIVES OF KNOWLEDGE HEALTH RESEARCH IN PROBLEM-BASED LEARNING CURRICULUM OR LECTURE-BASED LEARNING CURRICULUM

Hotimah Masdan Salim¹, Mohammad Qoimam Bilqisthi Zulfikar², Bagas
Setiawan Ihsan Zaini³

¹Faculty of Medicine, Nahdlatul Ulama University of Surabaya
Surabaya, Indonesia
dr.hotimah@unusa.ac.id

²Faculty of Medicine, Nahdlatul Ulama University of Surabaya
Surabaya, Indonesia

³Faculty of Medicine, Nahdlatul Ulama University of Surabaya
Surabaya, Indonesia

Abstract

Medical sciences is currently growing rapidly. However, health research training is an important part of medical education especially for undergraduate student. This study was conducted to assess the level of knowledge regarding health research. This is descriptive study conducted among a group of Nahdlatul Ulama University medical students. Through stratified random sampling, validated questionnaire was administered to 3rd and 4th grade of medical students. Knowledge were recorded on a scale (graduated in percentages). The results of this study it was found that 33% of students chose the PBL to find out to define scientific hypothesis. However, as much as 70% for knowing the theory, 70% for knowing the truth from science and 69% for to know the characteristic in science with LBL system. The students of medical faculty of Nahdlatul Ulama Surabaya chose the LBL curriculum toward health research.

Keywords: *PBL, LBL, Health Research, undergraduate*

Introduction

Understanding the curriculum is considered a narrow or simple understanding. If you study books or other literature about curriculums that are currently developing, especially those that develop in developed countries, you will find many broader and more diverse understandings. The curriculum is not limited to a number of subjects, but includes all the learning experiences experienced by students and affects their personal development.

Medical education has two kind of curriculum, that is conventional that called LBL (lecturer base learning and Problem Based Learning (PBL) is one of the many applied curriculum. PBL is based on the results and was first implemented in medical schools at McMaster University Canada in the 60s¹. PBL as a learning approach is applied on the grounds that PBL is very effective for medical schools where students are faced with problems then are required to solve it. PBL is more appropriate than traditional learning approaches. It is understandable that the doctors who are on duty in fact are always faced with the patient's problems so they must be able to solve them. Although it was first developed in learning in medical school, the next development was applied in general learning.

Medical education is closely related to health research, and as we know health research training an important part of medical education, and the essential to inculcate critical thinking and reasoning skills to develop a positive attitude and knowledge towards scientific research from the beginning of learn in medical faculty². Furthermore, to encouraging and motivating medical student's research activity can increase the physician scientists and help developing countries in to increased health care and research³. PBL has the idea that learning

can be achieved if educational activities are centered on tasks, problems that are authentic, relevant, and presented in a context¹. The method is intended for students to have experience as they later face in their professional lives. This experience is very important because effective learning starts from concrete experience. Questions, experiences, formulations, and drafting concepts about the problems they create themselves are the basis for learning. In this context, PBL provides benefits in exploring several things, namely scientific theory, scientific hypothesis, scientific truth and essential character of science. Scientific theory is a set of interrelated constructs (concepts), boundaries, and propositions that present a systematic view of symptoms by establishing relationships that exist between variables, and with the aim of explaining and predicting these symptoms⁴. With this background, this study was examined the undergraduate students perspception about knowledge toward health research, better in PBL or LBL systems.

Research Methods

This study uses descriptive survey research methods. The data used in this study is primary data. To obtain these data, researchers distributed online questionnaires that had been provided by researchers. This questionnaire is a closed questionnaire containing four questions. This online questionnaire was distributed to undergraduate medical students in 2nd and 4st grade. The sample was taken using total sampling technique.

Data was entered and analyzed in Statistical Package for Social Sciences 16.0 (SPSS, Inc., Chicago, IL, USA). Descriptive statistics were performed for mean scores and proportions. Results were recorded as frequencies, means \pm standard deviations (SD), p-values, standarized and unstandardized regression coefficients. For all purposes, a p-value of was considered as the criteria of signficance.

Research Result and Discussion

The students overall response showed that the PBL sessions were beneficial to their learning scientific hypothesis in 27.50% and 22.50% there choosed LBL system. Regarding educational experience about health research, 76.67% there agree to definite scientific theory better using LBL system, and 60% to definite the scientific truth better with LBL system. Furthermore, to explaining the essensial characteristic of science 68.33% there agree with LBL system, respectively.

The mean knowledge score in undergraduate medical students in UNUSA about knowledge of health research was significant in LBL compared with PBL system (P-value 0,03). However, there is no significant different to defining scientific hypothesis in PBL and LBL system.

Table 1. Comparison of responses to questions assessing knowledge toward health research

No	STATEMENTS	PBL	LBL	P-Value
1	What curriculum mode is better at defining scientific hypothesis	33 (27,50%)	27 (22,50%)	NS
2	What curriculum mode is better at defining scientific theory?	14 (11,67%)	46 (76,67%)	0,039
3	What curriculum mode is better at defining scientific truth?	24 (20%)	36 (60%)	0,05
4	What curriculum mode is better at explaining the essential characteristics of science?	19 (15,83%)	41 (68,33%)	0,001

The present study shows that undergraduate medical students agree with LBL education system to increase the knowledge toward health research significantly compared withPBL systems. The findings suggest, the favourable and encouraging influence of LBL curriculum, in ameliorating the knowledge of medical students of unusa regarding health research activities, still effective in medical education system. This finding was similar with previous studies that the knowledge and attitudes of the medical students towards health research were significantly better in the LBL group as compared to the PBL group⁵.

In medical education systems, the medical students with PBL and LBL systems are taught the theoretical essentials of research methodology, statistics and epidemiology. However, the way in which these topics are taught differs among the two curricula. The students from both curricula gain a substantial portion of their knowledge through lecturer. However, the different is the students in the PBL systems have small group interactive discussions. Studies have shown that the students was agree with LBL system to explained the scientific theory, scientific truth, and to explained the essential characteristics of science toward knowledge of health research in medical faculty on UNUSA, even the curricula system in PBL. Previous study have shown that

the ability of PBL and LBL educational curricula to foster desirable qualities in medical students have been explained, especially the understanding and skill of basic and clinical ⁶. Some studies found that there is no significant difference between the knowledge and competency of PBL and conventionally trained students ⁶. However, various studies were examined the effectiveness of LBL and PBL systems in other countries. Implementation of PBL curricula has proven to be a pattern in medical education, which helps young doctors to establish lifelong-learning skills and clinical ⁷. Also PBL curricula is based upon group learning and discussion which leads tutors to connect theory and medical practice during the lecture effectively. In other countries revealed that instructors found PBL curricula better than LBL curricula⁷.

Limitation

The study was conducted at one institution to serve as a pilot for a large scale research. So the findings cannot be generalized for the whole population of Indonesian medical students. In spite of these limitations, the use of a validated questionnaire allows us to compare our findings to other studies done under similar settings and using the same evaluative tool. We recommend further detailed studies to be carried out across health institutes all over the country to address this critical issue of research.

Conclusion and Recommendation

The undergraduate medical student in University of Nahdlatul Ulama Surabaya agree with LBL curriculum to improve their knowledge toward health research.

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