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THE PERCEPTION OF UNDERGRADUATE MEDICAL STUDENTS ABOUT IMPACT OF LBL CURRICULUM ON KNOWLEDGE TOWARDS HEALTH RESEARCH

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Abstract,

Medical students from many countries seldom careers as researchers. It has been identified in studies that involvement in health research as a medical students has been found to be strongly linked with research efforts after graduation. Aim of this study is to examine the perception of medical students about curricula toward health research in medical faculty of Nahdlatul Ulama Surabaya. This is a descriptive study based on a self-administered questionnaire. From 9th, 2th and 4th years of medical students, with 75 total participants. Responses obtained for knowledge were recorded on a scale and graduated in percentages to be compared statistically. Most of responding students prefer LBL toward health research. The results is the 44.19% students know scientific hypothesis is a proposed idea or thought, 53.49% the students agree that the truth will be reached through scientific research and 32.56% they know about essential characteristic of science is the some natural phenomena need not be measured but it suffices that a researcher notices them on time. The LBL significantly showed the positive influence of medical students in Nahdlatul Ulama University with better knowledge towards health science research.

Keywords: PBL, Health Research, medical students.

Introduction

Medical health research an important part of medical education¹. It is essential critical thinking to develop a positive attitude amongst students²⁰ towards scientific research from the beginning of their medical career². Previous study was examined that involvement in research as a medical students was associated with postgraduates research initiatives, significantly^{3,1}.

The development of the world of science in the field of medicine is growing rapidly for now. The number of health researchers leading to a growing need for physician scientists who can conduct basic health science research projects which itself underlines the importance of undergraduate medical students as research assistants⁴. However, the number of scientists from among doctors is very small, especially in Indonesia.

Observing² student research activities can aid in identifying capable researchers for the future; as a good research record during medical school is a predictor of long term academic success in medicine³. Therefore, medical education programs is important to development health research in medical school. In medical education only focus on acquisition of skills, knowledge and attitudes rather than factual learning⁵. Where the problem analysis and decision making on the solution is the key skill in the practice of medicine and research⁶.

In the current medical curriculum model is PBL-based approach is an educational strategy founded in the West, but has been increasingly popular in medical schools all over Asia⁷. The aims of PBL system is to inculcate the above mentioned abilities in medical students and to promote selfdirected lifelong learning. However, In the

conventional lecture based curriculum (LBL), relatively little emphasis was placed on critical analysis, self-directed learning or problem-solving⁷. Instead, teaching was a teacher-directed process and the emphasis was on examination oriented learning of details. Therefore, in conventional curriculum students passively absorb information rather than actively acquire knowledge. Various studies were¹⁹ formed in other countries to determine the effectiveness of each on basic and clinical science⁶. With this background, the aim of this study were to assess the impact of PBLs, we investigate perception of undergraduate medical students about impact of PBL curriculum on knowledge towards health research.

Research Methods

Study Design and Sample

This study uses a non-experimental research method that is descriptive method with survey technique (descriptive survey). The data used in this study is primary data. To obtain the data, researchers deployed online questionnaires that have been provided by researchers. This questionnaire is a closed questionnaire containing 4 questions. Questionnaires were handed over to subjects after obtaining their verbal informed consent. Participants were asked to return the completed questionnaire within two days. Those who failed to do so were not followed up and were taken as non-respondents. curriculum in enhancing medical students' knowledge towards health research including command acquired.

Statistical

The 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. The results were recorded as frequencies.

Research Results and Discussion

From 43 students was observed. Among medical education system in unusa with PBL, the frequencies and percentages of knowledge questions in medical faculty of University of Nahdlatul Ulama Surabaya in table 1.

In table 1 shows that 44.19% of medical students define the hypothesis as a proposed idea or thought and 32.56% students know the essential characteristic of science is scientific theory cannot merely explain natural phenomena, but must somehow also exert influence upon. However, 44.19% students define the scientific truth that will be reached through scientific research.

Table 1. Depicts frequencies and percentages of knowledge questions for both the groups.

No	Questions	Description of the Questions	Percentages
1.	How would you define scientific hypothesis	1. A proposed idea or thought	19 (44,19%)
		2. An answer or solution to a question	2 (4,65%)
		3. An answer or solution to a question which has a capacity of verification or empirical demonstration	15 (34,88%)
		4. Logical deduction of the premises that may or may not be verified empirically	7(16,28%)
2.	How would you define scientific theory	1. Speculation or assumption with no or insufficient evidence	0 (0,00%)
		2. Scientific hypothesis that may be proven, but lacking evidence for verification	6 (13,69%)
		3. Set of scientific knowledge on a given topic or area	19 (44,19%)
		4. System of hypotheses logically connected to one another, with common background, some of which have been verified	18 (41,86%)
3.	How would you define scientific truth	1. The truth that will be reached through scientific research	23 (53,49%)
		2. Absolute truth	3 (6,98%)
		3. Consensus of competent experts	14 (32,56%)
		Fact that can found in the textbooks	3 (6,98%)
4.	Essential characteristic of science is	1. All scientific conclusions are temporary	10 (23,26%)
		2. Scientific theory cannot merely explain natural phenomena, but must somehow also exert influence upon them	14 (32,56%)
		3. Rather obvious scientific conclusion does not have to be testable	4 (9,30%)
		4. An experiment is not an objective model of the nature but serves as an introduction into real research of natural phenom	14 (32,56%)

In medical education, the role of students is important to involvement in research is a longstanding tradition and has been an integral component of medical education for years. Research experience has been recognised to help foster scientific thought and nurture evidence-based practice in clinical settings⁸. This study

shows that knowledge of health research in medical students using the PBL system are significantly. These results has positive impact of the curriculum in medical education in improving the knowledge of medical students toward health research. Previous study had showed that the knowledge of the medical students toward health research is significantly in LBL system compared to PBL system⁵. Several studies have shown that students who become involved with research while still in medical school have superior postgraduate research productivity and are more likely to be interested in pursuing an academic career^{9,8}.

As such, more should be done to help foster research methodology skills and research experience among all medical students, especially in Indonesia. Our study revealed that in PBL was very interesting for majority of students 70% who participated in the PBL. Students' perception about health research has become the bottom line for its success in gaining popularity among the medical universities. There is a national program in Indonesia for undergraduate students called the "Pekan Kreatifitas Mahasiswa (PKM)". Therefore, the medical students should learn about research theory since the first year. Medical students at UNUSA are taught theoretical essentials of methodology, statistics and epidemiology during the first two years of their medical curriculum. This study demonstrates medical students' appreciation of the usefulness of research experience from their knowledge about scientific research with over 50%. This deterioration in percentages shows a mismatch between medical students' ideals, initiative and the research opportunities available to them.

Several of these studies get published in indexed journals. Mandatory participation in research activity has been shown to improve students' knowledge and attitudes towards research⁹. However, the curriculum systems is important to know they are knowledge about sciences. Many studies which compare the ability of the PBL and LBL curricula to foster desirable qualities in medical students have been examined. The measured qualities of students include competence and understanding of basic and clinical sciences in medical education systems⁷.

The present study has shown that the PBL curriculum, maintains a high level of knowledge towards health research but does not improve it further. These findings are encouraging because it means that the PBL curriculum can be used as a means to improve the current situation of health research in medical faculty of unusa. To improving attitudes of undergraduate medical students towards health research will nurture greater participation, development of a more robust research infrastructure and promotion of evidence-based medicine. Evidence-based medicine is crucial to improving health care in Indonesia.

This study was conducted at one private institution, which may be different other medical schools in Indonesia and elsewhere. This restricts the generalizability of the results. In light of these limitations, the findings of the study must be interpreted in a prudent manner. Also need to conduct further research about knowledge of medical students toward health research.

Author contributions Conceived and designed the experiments: HMS. Performed the experiments: HMS, MQBZ, and BSIZ. Analyzed the data HMS and MQBZ. Wrote the paper HMS, SS.

Conclusion

In conclusion, we report moderate knowledge medical students showed the positive influence in Medical faculty of University of Nahdlatul Ulama Surabaya with better knowledge towards health science research.

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