



What to Follow; Problem-Based Learning or Traditional Teaching?

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

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- Complete Peer review History: <http://www.sdiarticle4.com/review-history/62001>

Review Article

Received 10 November 2020
Accepted 17 January 2021
Published 15 March 2021

ABSTRACT

Many pedagogies in nursing education are developed to boost students' critical thinking skills. Problem – based learning (PBL) is the widely used methodology to enhance nursing students' critical thinking skills and to solve the practical problems in the clinical and academic areas independently. Globally many studies have examined the effects of PBL on nursing students' learning outcomes and others have studied the association among the outcomes. In this review paper the author used non-equivalent, quasi-experimental, pre and posttest design was used. ANCOVA (statistical test) was used to compare the outcomes of variables. The interventional group (PBL) gained a higher score in terms of critical thinking compared to control group (traditional lectures). In addition to self-directed learning students problem solving ability scores were also high. However, the statistical difference in scores between these two groups were not significant. In this review paper the author has reflected on the importance of PBL and the associated hindering factors for the nursing students.

Keywords: Problem-based learning; critical thinking; self-directed learning; problem-solving.

1. INTRODUCTION

An important concept that helps students of all disciplines for better and in-depth understanding

of core concepts is critical thinking [1]. It is a cognitive process that students use for better judgment, rational analysis in clinical reasoning and finally for reaching a sound decision [2].

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Brookfield [3] has summarized critical thinking into three phases in the milieu of teaching: (i) To understand assumptions because our choices, actions and decisions are based on these assumptions; (ii) asking and exploring a different view point and others' perspective to check for validity and accuracy of these assumptions; (iii) and reaching a sound decision founded on multi-perspective assumptions. Today our health care system is patient centered and the healthcare industry is facing many challenges of advancement so in order to compete with these complexities we need to accept the importance and need of critical thinking both in education and practice [4,5].

The importance of higher order skills for nursing students needs to be understood in order to achieve academic and practical competencies because nurses are considered responsible and accountable due to their reasoning abilities and for the actions they take in clinical area that requires skills [5]. Knowles [6] states that "facts learned in youth have become insufficient and in many instances actually untrue; skills learned in youth have become outmoded by new technologies". Therefore, to make nursing professionals competent and skilled in this growing multidimensional environment we need to incorporate different skills of critical thinking [1,7]. Although various strategies are used for enhancing critical thinking but problem based learning methodology (PBL) is best strategy for development of critical thinks [8]. It helps nursing students in analyzing and reaching to a best solution to problems they encounter during their clinical rotations and help in bridging theory-practice gap [9,10].

PBL is an educational strategy that is student centered so in this methodology students are conscientious for their teaching and learning, however, the teacher plays the role of a moderator [11,12,13]. Explicitly in this pedagogy an open ended problem is given to a group of few students with the expectation to solve it under the best theoretical and practical approach [9]. The students comment and counter-comment and are allowed to ask, what, why, how while all members of the group play an active role and argue with the best research evidences in a holistic way [5]. The overall goal of PBL is to enhance students' critical thinking skills to make them a critical being. The paper under discussion will enlighten the effects of PBL and its relationship in developing critical thinking among students in nursing profession.

2. Summary

The title of under discussion paper is "Effects of problem-based learning vs. traditional lecture on Korean nursing students' critical thinking, problem-solving, and self-directed learning" [14].

3. STUDY PURPOSE

This research paper is intended to measure the impact of PBL versus traditional lecturing method on critical thinking development among Korean nursing students.

4. Study Questions

This respective study aimed at answering the following questions:

1. To measure the effectively of instructions given via problem based learning versus traditional teaching on critical thinking.
2. To appraise the correlation between the outcomes of PBL "problem solving, critical thinking and self directed learning".

5. Study Methodology

The methodology (design, participants & settings) used is as follow:

6. DESIGN

In this study the author used, Non-equivalent, quasi-experimental, pre and posttest design.

6.1 Participants and Settings

A total of 90 (N=90) 1st year nursing student studying in two different settings (colleges) in South Korea participated in this study.

7. METHODS

In the interventional group (PBL) 16 sessions of scenario based intervention were given while in the control group (traditional lecture method) the same content (asepsis, safety and hygiene etc.) was delivered by didactic lectures. The sessions were intervened for 2 hours/week for both groups. Therefore, one full semester was utilized before measuring the results as part of post test. However, at the end of 16th week tools of CT, problem solving, and self directed learning abilities were administered to measure the impact of interventions.

7.1 Analysis of the Results and Findings

ANCOVA (statistical test) was used to compare the outcomes of variables. The interventional group (PBL) gained a higher score in terms of critical thinking compared to control group (Traditional lectures). Moreover, in addition to self directed learning their problem solving ability scores were also high. However, the statistical difference in scores between these two groups were not significant.

8. DISCUSSION AND CONCLUSION

In this study two groups of students from different institutions were exposed to traditional lecture method and problem based learning and assessed by "critical-thinking ability scale for students" in college (CTASCS), problem solving and self directed learning scale developed in Korean context [15,16]. In the PBL group they administered questions reflecting CT, self-driven learning and problems solving. However, the statistical results did not showed any significant difference between the experimental and control group. The findings show a positive correlation between critical thinking, self-driven learning and problem solving and vice versa in the PBL group. The study did not produced expected results may be due to limited time (2 hours/week for 16 weeks) and due to inadequacy in delivering instructions compared to same studies done in the past. Time period should be increased in order to get productive results as the duration was one whole year indicated by literature [17,18]. The population also consisted of first year nursing students and may be this is one of the reasons because as a freshman students are under other stressors which suppress the learning. These findings are not consistent with studies conducted outside Korea but literature supports this association of critical thinking and PBL within Korea.

The literature supports the positive effects of PBL so problem based learning should be incorporated in the nursing curriculum because it enhances the quality of care provided by the nursing students.

9. REFLECTION

This was a productive activity which made me think critically about problem based learning and its impacts on student learning. As part of few PBL sessions with Post RN students I can relate this experience that PBL is not an

easy thing for novice students in our context. Various problems are associated to this such as; the nature of our schooling is passive/ lecture based so freshman in nursing find it difficult but this strategy (PBL) works well with senior students. The findings from different studies have also mentioned at PBL methodology works better with experience.

In the conclusion and discussion part of the study it was mentioned that the results were not statistically significant may be because of insufficient time and inadequacy in delivering instructions but being a faculty in the past I can say that we should understand the past learning and teaching experiences as well. Learning about the educational background of the students in order to understand their needs is very important.

As a freshman it takes time to understand the medical jargon. Moreover, the education system has many domains in the context of curriculum where the teachers play an active role in the delivery of content. In addition, shifting to student centered learning can lessen the teachers' burden as well. Therefore, the teachers should understand the importance of critical thinking pedagogies and especially problem based learning because of its long lasting effects on professional practice. In my view point there is a need to initiate PBL strategy from schooling in order to develop our students as critical being. However, using it from the start of nursing career would result in developing intellectually sound nurses. Therefore, there is an essential role of teachers to help students in participation and achievement of such innovative strategies which results in in-depth understanding and analysis of issues pertaining to nursing practice.

The institutions can play an important role by training nursing faculty because only a trained and qualified teacher can generate the interest of students using these innovative learning methods. Therefore, teachers have a great responsibility to maintain psychological and intellectual environment in the class which could lead to effective learning while maintaining a physical environment is the responsibility of institution. We use to teach big classes and are pre-occupied to give a passing result of 100% but I think it is more important to illuminate the criticality of a nursing student and develop them competent instead of make them grades oriented. Further research with different population and large sample size is suggested in

order to understand applicability and generalizability of PBL. The author also suggests increasing the intervention time to minimum of 40 sessions per year as evident by literature. In this way nursing students at all levels can benefit from PBL, the strategies used to enhance CT.

In extension to all above discussion and experience that I have gained as a teacher and from my TCT teacher I conclude that it is vitally important to craft nurses think critically in this modern era. The implications are long lasting and it helps students to learn the core concepts instead of rote learning. Therefore, it is challenging for the faculty to think, develop and use this strategy in limited resources in respect to our need and requirement to produce competent nursing professionals.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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