

Evaluation of a Problem-based Learning Package on Pregnancy-induced Hypertension for B.Sc. Nursing Students

*Mrs. Jutiana Linnethe D'Sa

Introduction

Education is as old as the mankind. It brings a relatively permanent change in behaviour. Mahatma Gandhi states, 'By education I mean an all round drawing of the best in child and man – body, mind and spirit' (Bhatia Bhatia, 1994, P 1). There are various methods of teaching-learning which range from complete teacher centred to student centred.

Many schools use the conventional method of teaching, which are ineffective in comparison with newer technologies in terms of motivations. Individualized instructions are student centred. Programmed instruction is effective in terms of gain of knowledge, than the standard. Self – instructional modules have effected primarily on improving the cognitive ability of individuals. Alternative approaches to teaching learning to be used in order to motivate students to explore and understand issues in depth. In the problem-based learning (PBL), students work through problem situations, generate hypotheses and test these against the relevant literature and personal experience. Enhancement of clinical reasoning and critical thinking is paramount in nursing education. To generate critical thinking and bring about motivation, the main challenge is to provide teachers with alternative approaches to teaching and learning.

Objectives of the Study

- To develop and validate a Problem – Based Learning Package

Author :

Associate Professor, College of Nursing, MAHE, Manipal, Karnataka.

lem – Based Learning Package (PBLP) on situations related to pregnancy induced hypertension on the basis of selected criteria,

- To determine the effectiveness of the Problem – Based Learning Package as evident from gain in clinical reasoning ability, and
- To determine the opinion on acceptability of the PBLP from students and teachers in terms of acceptability score.

Research Methodology

An evaluative approach was used for the study. A non equivalent pre-test and post – test control group was designed i.e. a quasi experimental design was used for the study. For selecting the sample from the population of B.Sc. Nursing students of two colleges of Nursing, non – probability convenience sampling technique was used.

The experimental group was undergoing the course in Obstetrical Nursing; the subject in the control group were those who had already undergone the course in Obstetrical Nursing, a year earlier.

A Clinical Reasoning Ability Questionnaire (CRAQ) was developed to assess the dependent variable, i.e. clinical.

A semi structured opinionnaire was also developed to determine the acceptability of the problem – based learning package. The steps in developing the independent variable, i.e. the problem based learning package (PBLP) were:

- Development of criteria checklist,
- Preparation of first draft of the

PBLP,

- Contact validation, and
- Preparation of final draft of the PBLP.

The pilot study was conducted on a group of 20 students on the basis of an orientation. The students were oriented to the PBL approach. Practical experience was provided in the process of PBL by using different problems i.e. from medical surgical condition and one from an obstetrical. A researcher and a teacher with twenty students who were in College of Nursing M and 23 students of College of Nursing N constituted the experimental group and control group respectively. Majority of students in the control group (69.57%) had attended lecture/lecture-cum-discussion and 63.16% had attended case presentation on PIH. In the experimental group, 47.37 percent of students had presented cases on PIH, while in the control group 26.09 percent of students did case presentation. In order to determine the effect of the PBLP, in terms of the clinical reasoning ability (CRA), the pre – test and post – test CRA scores were obtained from the experimental group and the control group. The pre-test CRA mean scores (80.37) of the experimental group was higher than that of the control group (64.91). In the experimental group, the mean CRA scores were apparently higher in the post-test (95.10) in comparison to the pre-test (80.37). The dispersion of pre-test scores (SD 48.43) of the experimental group is more than that of their post-test scores (SD +4.82). In the control group, the dispersion of pre-test →

scores (SD 18.98) seem to be more than the test-scores (SD 16.54). The post-test mean score (84.91) in control group is apparently higher than of their pre-test mean score (64.91).

The total mean CRA score on PIH was higher (95.10) in comparison with that of the experimental group. The mean post-test scores in the area of definition of PIH (3.16), risk factors, aetiology and patho-physiology (11.74), manifestation, assessment and diagnosis (28.16) and ante-natal management of PIH and its complications (49.45) seem to be higher than their pre-test means that is 2.42, 9.16, 23.00 and 42.89 respectively).

In order to determine the effectiveness of PBLP in terms of significance of difference between the means of the pre-test and post test clinical reasoning ability scores, values were computed and the difference in the pre-test mean scores of the experimental group and of the control showed a true difference ($40 = 3.23$ $P < 0.005$) and control group. It was found that both the traditional method and the PBL approach was found to increase the clinical reasoning ability.

Implications

Although problem solving is utilized in the nursing education of the baccalaureate nursing curricula in some courses e.g. use of nursing process, research project, etc. there is a need to utilize various strategies that can enhance clinical reasoning ability, critical thinking and problem – solving ability of students. For effective practice, there is a need for nurses. The nurses' exposure to practice – based learning, integrating theory and practice meaningfully. The PBL strategy can facilitate clinical reasoning process and clinical skills.

Conclusion

The students in the experimental group gained significantly higher CRA scores in the post-test when compared to their pre-test scores. They also scored significantly higher in post-test when compared to the control group. However, the students who had undergone the traditional method of teaching also gained significantly in post-test CRA scores. The difference in the mean gain scores of both groups were not significant. Thus, it is concluded that both strategies of teaching were effective in increasing the CRA scores of the students of PIH, although the students of the experimental group demonstrated higher level of CRA by scoring higher in the post-test than that of the control group. Studies may be conducted to compare the strategy with other instructional strategies.

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