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Internship Orientation Program of Dietary Students and PBL Effectiveness

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Abstract: The effectiveness of bachelor internship program of dietary students in equipping the students with necessary skill, attitude and knowledge has often been a controversial issue, at Tabriz Medical Science University. Variety of factors affects the program effectiveness, including the use of traditional educational strategy of lecturing at orientation session to internship. Thereby, this research was done to explore the effectiveness of problem Based Learning strategy, with the assumption that this strategy with its interactive nature in comparison to traditional one of teaching might improve the skills of the students. Thirty two bachelor students registered to internship program at Tabriz Medical Science University were divided into two groups of case and control according to their grade point average during the past seven terms of study and gender. The case and control group's orientation programs were conducted using P.B.L. and traditional strategies respectively. The effectiveness of these two strategies in improving the skill, attitude and knowledge were compared using data obtained through an observation checklist and using the t-test and paired t-test. According to the findings of this study, the P.B.L in comparison to traditional strategy was able to improve the students' skill, attitude and knowledge substantially and thereby to give the students the chance to practice their theoretical knowledge at real work environment. We recommend the use of this method in other fields of study to test its effectiveness.

Key words: Internship program, problem based teaches, dietary students, skill, attitude, knowledge, orientation, PBL

INTRODUCTION

Internship program of medical science students is aimed to give the chance to students to practice their theoretical findings in real work environment using lecturers and field tutor-mentors in Iran (Satarzadeh and Yavarikia, 2000). Due to the fact that dietitians play an important role in health teams in Iran and their weak performance in real situations, it is necessary to look for an appropriate teaching strategy to enable them to provide quality services for their clients (Torkington *et al*., 2000).

At the present their orientation to internship program is conducted by lecturing. A related study shows that the graduate who attend this kind of programs usually do not acquire the necessary capacity (Jeffries, 2001). Similar findings indicate that interactive strategies of teaching, in comparison to lecturing are more appropriate in improving the critical thinking and teaching skill, attitude and knowledge (Ahmadi, 2001). In this regard, Problem based learning strategy, as an active method of teaching plays an important role in improving students skill, attitude and knowledge and provides the learner with the opportunity to translate their theoretical learning into psychomotor responses suitable for their profession (Saberian, 2000). Thereby, the P.B.L. strategy due to its interactive nature, is able to deepen the learners understanding, critical thinking, decision making and judgment and therefore improve the sustainability of their knowledge, skill and attitude.

According to above discussion, in order to improve the dietary students skill, attitude and knowledge it was necessary, to revise the teaching strategy of Internship Orientation Session. Therefore, with this assumption in mind, that using P.B.L in orientation session might improve the internship program we conducted this research.

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MATERIALS AND METHODS

Thirty two dietary students, who registered for internship orientation program, were divided into case and control groups through pair matching based on their gender and grad point average during the previous seven terms.

Grade point average of case and control groups were 15.34±1.05 and 15.17±1.38 out 20 points, respectively. The case group was oriented through problem based learning strategy by lecturer and field tutor-mentors as his assistant. On the other hand the control group was oriented through traditional strategy by lecturer himself. The real work environments (hospitals) were chosen in such a way that intervening variables were controlled. Once the internship program was finished, the lecturer evaluated the level of skill, attitude and knowledge acquired in both groups, using a scoring checklist of 1-20 points. To test the meaningfulness of differences between the scores of 2 groups and one group in 2 times, the t-test and paired t-test were used.

RESULTS

The analysis of data indicates that 81.25 and 18.75% of the subjects were female and male respectively, the grade point average of case group was 15.17±1.38 and the control group was 15.34±1.05. The mean age of case and control group was almost similar: 23±66 years of age. Statistical findings of comparing the scores of post test in both control and case group indicates that P.B.L. in skill, attitude and knowledge was effective than current teaching strategy (Table 1). The difference in knowledge score among case and control group after intervention were 3.43±2.09 and 1.87±0.8 respectively ($p \leq 0.01$). The attitude score also shows that a meaningful difference in attitude score between case and control group after intervention were 4.06±2.20 and 8.06±4.23, respectively ($p \leq 0.01$). Finally, the difference in skill scores indicates that it was meaningful after intervention among case and control group 2.00±1.41 and 3.53±1.55, respectively ($p \leq 0.01$).

Table 1: Comparison of mean value of knowledge, attitude and skill among case and control group in before and after intervention

		Before intervention	After intervention	p-value
Knowledge	Case group	12.62±4.33	16.06±2.59	≤0.01
	Control group	12.62±3.84	14.50±3.18	<0.01
Attitude	Case group	75.18±4.62	83.25±1.39	<0.01
	Control group	76.25±4.62	80.31±3.07	<0.01
Skill	Case group	10.81±2.88	14.34±2.36	<0.01
	Control group	11.62±2.82	13.62±2.59	<0.01

DISCUSSION

The findings of this study are similar to those of other studies (Combs and Donal, 1959; Bilare, 1991; Walton and Matthews, 1989; Deldar, 1992; Menahem and Veil, 1990) in improving the students' job skills, motivation to self learning and acquiring the skills necessary to problem solving. The marginal increase in students skill grade point average after intervention whom attended the problem based learning classes might be due to the fact that in P.B.L. the students ability to remind their learning is improved through self learning and problem solving by team work which in itself helps the learners to bridge between their learning in basic sciences and skills to use in real work environment (Norman and Schmidt, 1992; Moore, 1991; Patel *et al*., 1991). The fact that in P.B.L the personal close relationship between teacher and students is encouraged and the improvement of logical thinking and active involvement of student in real problem solving are emphasized, similar to our findings the motivation to learn independently and as a result to have provide them the opportunity to use their theoretical findings in practice skillfully is enhanced (Greedy *et al*., 1992; Onill *et al*., 2000; Mithchell, 1988; Bickly *et al*., 1990; Robson, 1994; Veron, 1995).

CONCLUSION

Due to the fact that using P.B.L. in orientation session of internship program has indicated an improvement in student's skill, attitude and knowledge it brings about the hope that this even might be improved by improving the teachers' skill, attitude and knowledge in P.B.L. In other words if we use experienced teachers in P.B.L it further will improve the students skill, attitude and knowledge. Thereby, we recommend using P.B.L in other major fields of medical students' internship orientation program to explore its degree of effectiveness.

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