

Effects of Presentation- Assimilation- Discussion (PAD) Class Teaching Model on Learning Attitudes of Nursing Students —Taking the "Nursing Psychology" Course as an Example

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Abstract: Purpose: to explore and discuss the effects of PAD Class Teaching Model on nursing students who are expected to enter undergraduate schools from junior colleges. Method: Randomly select 112 students from two classes (2016) who are expected to enter undergraduate schools from junior colleges in a medical school in Pingdingshan, and divide them into a control group and an experimental group using a method of cluster randomization. In the teaching process of "Nursing Psychology", the control group and the experimental group respectively adopted the traditional teaching mode and the PAD class teaching mode. After the implementation of one semester, compare the nursing students' learning attitudes change before and after the implementation. Results: The scores of the nursing students in the experimental group at the three latitudes of learning interests, learning habits, and professional cognition were significantly higher than those of the control group, and the differences have statistical significance ($P < 0.05$). Conclusions: PAD class teaching mode helps improve nursing students' learning attitudes.

Keywords: PAD class; Learning attitude; Nursing Psychology

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1. Introduction

Presentation- Assimilation- Discussion (PAD) Class Teaching Model is an innovative classroom teaching model proposed by Prof. Xuexin Zhang from Department of Psychology of Fudan University in 2014 based on the Peer Teaching Method^[1] created by Professor Eric Mazur of the Physics Department of Harvard University in 1991. It encourages students to study independently after class, co-learning in class, interaction between students and students, and interaction between teachers and students. It changed the traditional single teacher's lecture to bisection of class time by teacher and students. The teaching process is divided into three processes: presentation, assimilation and discussion. It can also be referred to

simply as PAD class.^[2] The main form of the implementation is bisection of class time, which separates teachers' teaching and student learning from each other in time, so that the students will have sufficient time between those two processes to individualize internal absorption at their own paces.

"Nursing Psychology" course is a cross-discipline. It is closely related to and intersects with many disciplines such as nursing, anthropology, sociology, etc. At present, medical colleges and universities in China are established in the form of basic courses. This study attempts to apply the halving classroom teaching model in the teaching of "Nursing Psychology" for undergraduate nursing students, and achieved certain results. The report is as follows.

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2. Objects and Methods

2.1 Research Objects

Randomly select 112 students from two classes (2016) who are expected to enter undergraduate schools from junior colleges in a medical school in Pingdingshan, and divide them into a control group (55 students) and an experimental group (57 students) using a method of cluster randomization. Inclusion criteria: (1) nursing students (Grade 1) who are expected to enter undergraduate schools from junior colleges; (2) agreed and voluntarily participated in the research. There were no statistical differences between the control group and the experimental group in terms of gender, whether only child, household type, and Per capita admission score.

2.2 Research Methods

2.2.1 Teaching Method

The control group used the traditional teaching mode, while the experimental group used PAD class mode. Both groups are arranged according to the school syllabus of "Nursing Psychology" once a week (2 hours), a total of 18 weeks, by the same teacher to teach in the same semester, using the same assessment methods in the end of semester. During the first class hour of the first week in the school year, the experimental group first introduced the operation procedures and assessment methods of the classroom. The second class hour the teacher entered the teaching session, taught the students new knowledge to be learned, and arranged the homework for students to digest and absorb in a week. In the first class hour of the second week, at the beginning, a study group composed of students (about 4 people in each group) conducts sharing and discussion among the groups, sharing their own knowledge and not having good points of confusion. They can communicate within the group and between groups for about 10 to 20 minutes, then the group representative spoke about the content of this knowledge unit to learn to share and exchange among the classmates, and finally summarized by

the teacher; the second class hour the teacher entered the teaching of new courses. That cycle lasted until the end of the 18-week course.

2.2.2 Effect Evaluation

Adopt the "the Learning Attitude Scale for Nursing Students" revised by Shaopeng Liu,^[3] etc. in 2015. The scale was revised on the basis of "the Learning Attitude Questionnaire for nursing students in higher Schools" compiled by Yunhan Zhang,^[4] etc. There were four latitudes including learning interests, learning experiences, learning habits, and professional cognition. Each latitude included 4 items which adopted Likert 5 points score level evaluation: 1 to 5 points represent very non-conformist, more inconsistent, consistent, more consistent, and very consistent, out of 80 points. The total scale of Cronbach's α coefficient is 0.860, which has good reliability and validity and can be used to determine the learning attitude of nursing students at all levels.

2.2.3 Statistical Method

SPSS18.0 statistical software was used for analysis. Measured data such as learning interest scores were expressed as Mean \pm Standard deviation. The two groups were compared using "t" value.

3. Results

3.1 Comparison on Learning Attitudes of Students from Two Groups before Implementation (see Table 1)

3.2 Comparison on Learning Attitudes of Students from Two Groups after Implementation (see Table 2)

4. Discussions

4.1 PAD Class Mode Helps Improve Nursing Students' Learning Attitudes

Table 2 shows that after the implementation of the research, both the learning attitude score and the total average score of the two groups were higher than before the implementation. The experimental group had significantly higher scores in learning interests, learning habits, and

Table 1. Scores of Learning Attitudes of Nursing Students from Two Groups before Implementation ($\bar{x}\pm s$, point)

Group	Cases	Learning Interests	Learning Experiences	Learning Habits	Professional Cognition	Total Average score
Control group	55	2.89 \pm 0.06	2.59 \pm 0.69	2.74 \pm 0.38	3.02 \pm 0.18	2.81 \pm 0.15
experimental group	57	2.81 \pm 0.39	2.63 \pm 0.27	2.69 \pm 0.13	3.01 \pm 0.37	2.79 \pm 0.64
t value		1.383	0.602	0.925	0.183	0.230
P		0.167	0.547	0.355	0.855	0.819

Table 2. Scores of Learning Attitudes of Nursing Students from Two Groups after Implementation ($\bar{x}\pm s$, point)

Group	Cases	Learning Interests	Learning Experiences	Learning Habits	Professional Cognition	Total Average score
Control group	55	3.18 \pm 0.01	2.89 \pm 0.19	3.78 \pm 0.54	3.57 \pm 0.48	3.36 \pm 0.11
experimental group	57	4.01 \pm 0.25	2.97 \pm 0.37	4.29 \pm 0.42	4.05 \pm 0.57	3.83 \pm 0.12
t value		-25.045	-1.447	5.590	4.812	21.585
P		0.000	0.148	0.000	0.000	0.000

professional cognition than the control group. The differences have statistical significance ($P = 0.000$) which shows that PAD class teaching model is more conducive to improving nursing students' learning attitude than the traditional teaching model. This is consistent with the research results of Fengxia Wang,^[5] etc. Learning attitude refers to a stable and lasting psychological tendency held by the subject of learning to the object being studied.^[6] This tendency may be affirmative or negative. The former eminent education scholar Skatkin from Soviet Union pointed out that "learning attitudes determine learning effects." Factors affecting learning attitudes include objective family education, school education, and social education, as well as personal subjective learning interests, learning experiences, learning habits and the cognition of professional knowledge, etc.

4.2 Affecting Factors of PAD Class on Nursing Students' Learning Attitudes

4.2.1 Effects of PAD Class on Learning Interests of Nursing Students

Table 2 shows that the average scores of learning interest in the experimental group and the control group after the implementation were 4.01 ± 0.25 and 3.18 ± 0.01 , respectively, and the difference was statistically significant ($P = 0.000$). This indicates that the class of the class significantly improved students' interest in learning. Interest is the best teacher, and it is also the internal motivation of people's behavior. Learning interest is the direct driving force that motivates students to actively study. Under the traditional teaching model, students always cannot escape the word "being", and they only passively accept knowledge as one-way. Due to the lack of communication and participation, only the "input" of knowledge is not "output" to students, resulting in students' learning. There is a serious lack of interests. While in PAD class teaching mode, the "Presentation- Assimilation- Discussion" teaching process provides students with a platform for students to complete the "knowledge input" in the "teachers lecture" and "internal absorption" links. The "discussion" link completes the "knowledge output" and thus builds the "input-output" dynamic circulation process.^[7] It changes students' passive learning into active learning, and enables students to become active participants in learning and gain enthusiasm and interests in learning.

4.2.2 Effects of PAD Class on Learning Experiences of Nursing Students

Table 2 shows that the average scores of learning interest in the experimental group and the control group after the implementation were 2.97 ± 0.37 and 2.89 ± 0.19 , respectively. There was no significant statistical difference ($P = 0.148$), indicating that the impact of the classroom

on nursing students' learning experience was not significant. This may be related to the fact that the subject of this study is for new students entering the school. Due to the relatively small number of nursing skills in the new curriculum, there is no chance of clinical internships and internships so that nursing students cannot take care of the patient and lack of achievement.

4.2.3 Effects of PAD Class on Learning Habits of Nursing Students

Table 2 shows that the average scores of learning habits of the experimental group and the control group after the implementation were 4.29 ± 0.42 and 3.78 ± 0.54 , respectively, and the difference was statistically significant ($P = 0.000$), indicating that the classroom learning was more conducive to the development of student learning habits. "Present Test Help" (present harvesting, test others using the acquired knowledge, help from others) is a form that is widely used in homework assignments. It emphasizes the use of knowledge and allows students to learn independently. The results are divided into three pieces, the greatest gains, knowledge, and understanding, encourage students to express in the form of problems, cut the "learn and ask" of the word "ask". The "Present Test Help" makes the homework a tool for students' self-learning, thereby prompting students to develop good learning habits.

4.2.4 Effects of PAD Class on Professional Cognition of Nursing Students

Table 2 shows that the average cognition scores of the experimental and control groups after the implementation were 4.05 ± 0.57 and 3.57 ± 0.48 , respectively, and the difference was statistically significant ($P = 0.000$), indicating that class sharing was more conducive to improving students' professional cognition. The emphasis on the "internalization and absorption" process of students in class points, so that the teaching methods and discussion methods are organically integrated, avoid weaknesses, and achieve an effective transfer of student knowledge, thereby stimulating students to develop creative and critical thinking^[8] and no longer simply believe that "the nursing knowledge is relatively simple and the challenge is low; there is no technical contents in the nursing practice operation and it is not necessary to study hard; it is only necessary to conduct a focused surprise review before the exam", thereby improving nursing students' sense of identity to nursing professional knowledge.

5. Conclusion

Compared with the traditional teaching model, Presentation- Assimilation- Discussion (PAD) Class Teaching Model has improved nursing students' learning interests so that nursing students can develop more reasonable

learning habits, improving nursing students' cognition of nursing profession, which leads to more positive Learning attitudes of nursing students.

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