

Research and Application of Multi-Dimensional and Three-Dimensional Teaching in Geriatric Nursing Teaching in the Context of Mass Entrepreneurship and Innovation

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Abstract: Purpose: Study the specific application effect of multi-dimensional and three-dimensional teaching in Geriatric Nursing teaching in the context of mass entrepreneurship and innovation. Methods: Respectively select 80 nursing undergraduates of 2015 and 80 nursing undergraduates of 2014 in our school as the research object of the experimental group and the control group. In terms of Geriatric Nursing teaching, nursing students in the control group adopt traditional classroom teaching methods to carry out, while students in the experimental group adopt multi-dimensional and three-dimensional teaching in the context of mass entrepreneurship and innovation. Then observe and compare the geriatric nursing knowledge scoring as well as theory and practice assessment results in the two groups taught with different methods. Results: It's obvious that the scoring of nursing students in the experimental group is higher than those in the control group in respect of geriatric nursing knowledge, and statistical significance exists in the between-group differences ($P < 0.05$). The nursing students in the experimental group perform obviously better than those in the control group in terms of the results of theory, practice and comprehensive assessment as well as total score, and statistical significance exists in the between-group differences ($P < 0.05$). Conclusion: Implementing Geriatric Nursing teaching for higher education nursing undergraduates with multi-dimensional and three-dimensional teaching in the context of mass entrepreneurship and innovation can remarkably improve nursing students' cognitive level in geriatric nursing as well as their mastery degree of theoretical, practical and comprehensive knowledge. Thus, the multi-dimensional and three-dimensional teaching mode in the context of mass entrepreneurship and innovation makes 80 nursing undergraduates of 2015 in our school direct beneficiaries, which could be popularized and applied in medical colleges.

Keywords: Mass entrepreneurship and innovation; Multi-Dimensional and three-dimensional teaching; Geriatric Nursing

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1. Introduction

At the present stage, Chinese population has entered the aging stage. With the increase of the elderly population, higher requirements are put forward against nursing institutions for the aged as well as geriatric nursing talents. Besides, the context of "mass entrepreneurship and innovation" completely coincides with the concept of deepening innovation and entrepreneurship education reform in colleges and universities put

forward by Premier Li Keqiang in 2014, which causes the graduates of various colleges and universities face serve employment situation as well as market competition pressure. However, graduates from colleges and universities can also achieve self-worth through entrepreneurship and innovation as well as better adapt to market demands. In this context, scientific and effective education mode^[1] should be taken under the general background of population aging as well as mass entrepreneurship and innovation to enhance higher education nursing students'

ability and level in Geriatric Nursing and prompt them to be excellent nursing talents in the context of mass entrepreneurship and innovation. To a certain extent, multi-dimensional and three-dimensional teaching mode can cultivate good theoretical and practical knowledge and ability for higher education nursing talents, enhance nursing students' overall quality and prompt them to be a member in the group of entrepreneurship and innovation in the context of mass entrepreneurship and innovation^[2]. To this end, this research is carried out to explore the specific application effect of multi-dimensional and three-dimensional teaching in Geriatric Nursing teaching in the context of mass entrepreneurship and innovation. Eighty nursing undergraduates of 2014 and Eighty nursing undergraduates of 2015 are respectively selected as the research objects in the control group and the experimental group. The specific research report is as follows.

2. Data and Methods

2.1 General Data

This research respectively selects 80 nursing undergraduates of 2015 and 80 nursing undergraduates of 2014 in our school as the research object of the experimental group and the control group. The research objects of the experimental group include 18 boy students and 62 girl students, whose age is from 17-21 and average age is (18.33 ± 1.85) . The research objects of the control group include 14 boy students and 66 girl students, whose age is between 17-20 and average age is (18.03 ± 1.24) . All the research objects are admitted in a unified way after participating in the college entrance examination, and all of them are the nursing undergraduates of 4-year higher education. The research objects of both groups have no significant difference in the general data such as gender and age, with no statistical significance ($P > 0.05$) but with comparability.

2.2 Method

For the nursing students in the control group, Geriatric Nursing teaching is carried out by adopting the traditional classroom teaching method, including the contents of nursing fundamentals, clinic nursing, humanistic ethics, health education and nursing practice.

For the nursing students in the experimental group, the multidimensional teaching method in the context of mass entrepreneurship and innovation is carried out to receive Geriatric Nursing teaching, and the specific teaching method is as follows.

First, make multi-dimensional and three-dimensional teaching target clear^[3]. Fully comprehend the heuristic teaching idea and mix the teaching methods such as situational teaching, empathy cultivation, case teaching and clinic internship together, and take students as the teaching objects to strive to cultivate a batch of professional nursing talents having the innovation ability and entrepreneurship ability in the context of mass entrepreneurship and innovation.

Second, build the multi-dimensional and three-dimensional teaching system. Develop the teaching mode^[4] of Geriatric Nursing suitable for the nursing students of our school by exploring the science, and the main multi-dimensional and three-dimensional teaching methods mainly include:

1) Micro-course teaching. Micro-course teaching mainly takes video as the teaching carrier to record the teachers' teaching process inside and outside class and especially the key points, difficulties or doubtful points in teaching, and then the students can autonomously play and study the wonderful teaching activity process. Generally, the videos are suitable to be 5-15 min.

2) Multimedia courseware. When the multimedia courseware is adopted for Geriatric Nursing teaching, the specific requirements for the teaching outline as well as demands on the actual teaching content shall be analyzed and mastered and then the stricter teaching design shall be conducted to form the teaching courseware in the way of multimedia expression on this basis. The multimedia courseware teaching is featured by certain verisimilitude, intuition and colorful nature, and it can make the traditional, relatively complex and boring teaching process simple and charming and can further improve students' learning interest and achievements.

3) WeChat teaching. WeChat is a free application program for instant communication services produced by Tencent Company, which is able to support the transmission and exchange of information in multiple forms such as picture, word, video as well as audio and belongs to the shared streaming media. Applying WeChat teaching method in Geriatric Nursing can make teachers become friends of students and develop the interactive relation by adding friends or following the public platform in the functions such as message push, friend circle and public platform provided by WeChat so as to share the teaching contents

in WeChat. The students can autonomously download and read the learning resources inside or outside class, and they can discuss and exchange at any time. WeChat teaching is a breakthrough against the traditional classroom teaching mode.

4) University town space teaching. University town belongs to an online virtual town; it takes the online distance education as the core and has many functions such as comprehensive media, instant communication, online office, personalized digital library and comprehensive distance teaching; it can be deemed as the real and virtual university community platform^[5]. Applying the university town space in Geriatric Nursing teaching can release various teaching resources in university town space, and students can complete their homework, begin, answer questions or conduct discussions online, which is in favor of consolidating and exploring the learned knowledge.

2.3 Observation Index

Observe the scoring situations in geriatric nursing knowledge of the nursing students of both groups after adopting different teaching methods, and the geriatric nursing knowledge mainly includes geriatric nursing basic principles, daily life care for the elderly, medication safety care for the elderly, clinic features of common problems of the elderly, nursing of the common problems of the elderly as well as hospice care^[6]. All the scores are obtained from survey of Geriatric Nursing Knowledge Questionnaire prepared by our school; wherein, 0 point is for not knowing the answer or incorrect answer, and 1 point is for correct answer.

Observe the theory and practice assessment achievement situations of the nursing students of both groups after adopting different teaching methods, including theory assessment achievement, practice assessment achievement and comprehensive assessment achievement. All the scores are got by the closed-book exam assessment after the courses for both groups are finished; the total score is 100 including 35 points of theory assessment, 35 points of practice assessment and 30 points of comprehensive assessment.

2.4 Statistical Processing

All the data in this research are processed by adopting SPSS19.0 statistical software; the measurement date is expressed in mean (\pm) and standard deviation ($\bar{x} \pm s$), and

comparison between groups is tested by adopting (t). If $P < 0.05$, it means the difference is of statistical significance.

3. Results

3.1 Comparison of Scoring in the Geriatric Nursing Knowledge of Nursing Students in the Control Group and the Experimental Group

Table 1. Scoring in the Geriatric Nursing Knowledge of Nursing Students in the Control Group and the Experimental Group (Score, n = 80, $\bar{x} \pm s$)

Geriatric nursing knowledge	Control group	Experimental group	t	P
Geriatric nursing basic principles	2.63 \pm 0.72	3.94 \pm 0.74	8.1102	< 0.05
Daily life care for the elderly	2.61 \pm 0.83	4.64 \pm 1.06	8.0352	< 0.05
Medication safety care for the elderly	2.55 \pm 0.75	3.98 \pm 1.01	8.0461	< 0.05
Clinic features of the common problems of the elderly	2.52 \pm 0.76	3.97 \pm 1.05	8.0064	< 0.05
Nursing of common problems for the elderly	2.56 \pm 0.70	3.78 \pm 0.96	8.0611	< 0.05
Hospice care	2.44 \pm 0.68	3.69 \pm 0.95	8.1540	< 0.05

It can be found from the relevant data in Table 1 that in this research, the nursing students in experimental group get higher scores than the nursing students in control group in the geriatric knowledge, and statistical significance exists in the between-group differences ($P < 0.05$).

3.2 Comparison of Theory Assessment and Practice Assessment Results of Nursing Students in the Control Group and in the Experimental Group

Table 2. Theory Assessment and Practice Assessment Results of Nursing Students in the Control Group and in the Experimental Group ($\bar{x} \pm s$)

Group	n	Theory assessment result	Practice assessment result	Comprehensive assessment result	Total score
Control group	80	26.33 \pm 2.47	24.13 \pm 2.26	22.81 \pm 2.42	73.18 \pm 5.22
Experimental group	80	31.21 \pm 2.36	25.84 \pm 2.93	26.08 \pm 1.57	84.65 \pm 3.95
t		8.263	9.145	8.454	11.249
P		< 0.05	< 0.05	< 0.05	< 0.05

It can be found from the relevant data in Table 2 that in this research, nursing students in the experimental group are obviously superior to nursing students in the control group in theory assessment, practice assessment and comprehensive assessment results as well as total score, and statistical significance exists in the between-group differences ($P < 0.05$).

4. Discussion

Currently, geriatric nursing has become key teaching contents for higher education nursing major in the medical colleges mainly because population aging has become an outstanding phenomenon in China's social development^[7]. In terms of professional education of geriatric nursing, China's research started relatively late, so further exploration in terms of Geriatric Nursing teaching methods still needs to be carried out. As the background "mass entrepreneurship and innovation" forms, multi-dimensional and three-dimensional teaching has gradually been approved by Geriatric Nursing teaching^[8]. The main reasons lie in that multi-dimensional and three-dimensional teaching mode can closely link the contents in multiple aspects such as the theory system, practice teaching, comprehensive quality and teaching team construction in terms of geriatric nursing together, and that it can make students generate the higher enthusiasm to consolidate and explore the nursing knowledge by themselves and can excite the students' innovation thinking and practical operation ability; therefore, it is in favor of urging nursing students to become the talents having the innovation and entrepreneurship ability in the context of mass entrepreneurship and innovation and also in favor of promoting the professional level and quality of geriatric nursing.

In this research, multi-dimensional and three-dimensional teaching mode in the context of mass entrepreneurship and innovation is mainly adopted for nursing students in the experimental group, while only the traditional classroom teaching mode is adopted for nursing students in the control group. The results show that the scoring of nursing students in the experimental group is obviously higher than those in the control group in respect of geriatric nursing knowledge, and statistical significance exists in the between-group differences ($P < 0.05$). The nursing students in the experimental group perform obviously better than those in the

control group in terms of the results of theory, practice and comprehensive assessment as well as total score, and statistical significance exists in the between-group differences ($P < 0.05$).

To sum up, implementing Geriatric Nursing teaching for higher education nursing undergraduates with multi-dimensional and three-dimensional teaching in the context of mass entrepreneurship and innovation can remarkably improve nursing students' cognitive level in geriatric nursing as well as their mastery degree of theoretical, practical and comprehensive knowledge. Thus, the multi-dimensional and three-dimensional teaching mode in the context of mass entrepreneurship and innovation makes 80 nursing undergraduates of 2015 in our school direct beneficiaries, which could be popularized and applied in medical colleges.

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