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Preview Notes

The development of critical thinking in nursing education: an experimental study

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ABSTRACT

Aim: To compare the critical thinking levels developed during clinical nursing education through an educational intervention with the help of concept maps. **Method**: an experimental, randomized, double-blind study with a "before-after" design, with regard to students of undergraduate courses in nursing from a public higher education institution. The project was submitted to the National Health Council for ethical consideration as Resolution no. 466/12 and was approved with opinion No. 752.501 01.08.2014. Data will be collected with the use of the *California Critical Thinking Skills Test* instrument and a socioeconomic questionnaire relating to a specific educational intervention. To verify the normality/symmetry of the figures, the *Shapiro-Wilk* test will be applied; for the data analysis, the *Student T* test will be used for a comparison of means, and Pearson's chi-square test will be used to verify the association between variables with a 95% reliability interval.

Descriptors: Nursing; Education, Higher; Thinking; Learning.

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THE SITUATION AND ITS SIGNIFICANCE

With regard to education in health, with an emphasis on the training of nurses, we have currently an environment characterized by rapid change and the increased production of scientific knowledge. This is because professionals currently need to develop increasing amounts of critical thinking (CT) skills to present good results in terms of their practical activities, in order to provide a versatile and individualized assistance, and to solve specific problems in different situations[2].

Thinking critically means to promote, during the initial training, conditions are such that the graduates know how to use all the knowledge produced so far, as well as checking for sources allowing them to access new knowledge, and knowing how to direct themselves in terms of its practical application, with the capability to undertake a unique analysis for each case.

In this context, the promotion of CT capability on the part of undergraduate students of nursing has become one of the most imperative tasks for teaching at this level, and should be a common goal for all courses aimed at the training of nurses.

Consequently, this research study aims to develop CT on the part of undergraduate nursing students. This is a proposal which is grounded in the cognitive approach to education, based on the Theory of Meaningful Learning (TML) proposed by David Paul Ausubel and applied as a teaching strategy through the use of Concept Maps (CM) by Joseph Donald Novak.

HYPOTHESIS

Teaching strategies mediated by clinical case studies associated with the preparation of concept maps promote CT development more effectively than other approaches.

AIM

To compare the critical thinking levels developed during the clinical training of nursing student through an educational intervention involving the use of concept maps.

METHOD

It is an evaluation experimental-type study with a quantitative approach, randomized, double-blind, with before-after design. The composition of the control and intervention groups will involve the random allocation of subjects, and a careful pairing between the two groups by ranking subjects' training level.

This study will address a proposal for training with a view to developing CT learning and development capability on the part of the students undertaking the nursing undergraduate course at the Federal University of Rio Grande do Norte (UFRN).

Only students enrolled in the third year of the undergraduate nursing course will be considered eligible for the study. This corresponds to approximately 260 subjects. Students who have received a nursing technician education or those who have already participated in training or specialized courses about basic or advanced life support will be excluded from the sample.

Data collection will take place in two stages, the pre-test and post-test, before and after the intervention, through the use of the *California Critical Thinking Skills Test* instrument and a socioeconomic questionnaire, as the result of an educational intervention.

The intervention will consist of a classroom course with a total workload of 64 hours. This will involve two weekly meetings lasting four hours each for a total of sixteen meetings about Advanced Life Support (ALS) in the period between January to May 2016, according to the schedule set out in the project submitted to the Ethics Committee regarding Resolution no. 466/12 of the National Health Council, approved with opinion No. 752.501 01.08.2014.

The only difference between the groups will be the teaching strategy used or, in other words, the treatment applied to the intervention group. The control group will use the traditional method of teaching associated with clinical case studies, while the intervention group will receive teaching based on the theoretical and methodological basis in TML, applied through CMs associated with the same clinical case studies applied to the control group.

The content selected for this study is a common subject in undergraduate courses in nursing, and must follow a strict scientific and methodological line suggested by the *American Heart Association (AHA)* as disclosed in its guidelines that are updated every five years, and which serve as a reference for all health professionals.

Knowledge about the ALS is a mandatory requirement for critical health care nurses. This educational topic was selected with the intention of promoting an enhancement of expertise in this area, and to improve the chances of survival on the part of cardiac arrest patients in a hospital environment[3]. Consequently, the training will be an important component of a transition to implement these changes.

Regarding the analysis of the data we will initially check the normality/symmetry of numerical data through the *Shapiro-Wilk* test. The *Student T* test will be used for a comparison of the means; and Pearson's chi-square test will be used to verify the association between variables, with a 95% confidence interval.

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Project Data

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