

Development of Nursing Informatics Competencies Evaluation Index System of Clinical Nurses

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Abstract. For lack of effective and reliable assessment tools of nursing informatics competencies (NIC), we used literature research method, nominal group technology (NGT) and delphi technique to construct an evaluation index system of NIC for clinical nurses, which can provide reference for establishing a training system of talents of nursing informatics.

Keywords. Nursing informatics competency, evaluation indicator system, delphi technique

1. Introduction

Development plan of national nursing career (2016-2020)^[1] clearly points out that it is necessary to vigorously promote the construction of nursing information, so as to improve efficiency and quality of nursing services and reduce the workload of clinical nurses. NIC is a comprehensive ability of knowledge, skills and attitudes expressed through various activities of nursing informatics^[2]. NIC can not only enhance the accuracy and completeness of nursing documentation, but also facilitate the promotion of quality of nursing services and reduce work errors^[3]. However, most of the clinical nurses' are weak in NIC due to have not been received training courses of nursing informatics^[4]. The construction of nursing informatization in China started late, and there are few related theoretical studies. In addition, there is no report on effective and reliable assessment tools of NIC^[5]. Therefore, it is urgent for us to establish an evaluation index system of NIC of clinical nurses.

2. Objective

To develop an evaluation index system of NIC for clinical nurses.

3. Methods

We selected the item pool through literature research method and Nominal Group Technique. Then, 12 experts involving nursing management, nursing education, clinical nursing and medical informatics were invited in two rounds of delphi to establish the evaluation indicators. Yaahp (a software) was used to determine the weight of each index through the analytic hierarchy process.

4. Results

Experts familiar coefficient, judgment coefficient and authority coefficient was 0.86, 0.82 and 0.84, respectively; In the second round, the index system included 3 first level indexes and 45 second level indexes; The variation coefficients of each item was 0.00~0.24, and Kendall's W was 0.54. As we can see in the Table 1 below, "Computer comprehensive ability" ranked first in the first-level index, which indicated that "computer comprehensive ability" is the most basic and core ability that clinical nurses should be possessed.

Table 1. The score of indexes of NIC for clinical nurses.

Evaluation indexes	Score ($\bar{x}\pm s$)	CV	Weight value
Computer comprehensive ability	4.92±0.29	0.06	0.5470
Comprehensive application ability	4.17±0.39	0.09	0.1085
Information ability	4.83±0.39	0.08	0.3442

5. Conclusion

The entrenched assessment indicator system was scientific and reliable. We plan to build a training framework of NIC, which are applicable to three levels (general nurse, information nurse, information expert) of clinical nurses in China, so as to provide reference for the training and evaluation of talent of nursing informatics.

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