

## Sigma's 29th International Nursing Research Congress

### Effects of Interactive E-Books on the Anxiety Level and Satisfaction of ICU Patients' Family

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#### **【Background】**

Medical care in the 21st century tends to be family-centered. Family-centered caring can improve the communication of patients, family, and medical staff and hence improve the patients' recovery. They are not familiar with the ICU environment, staff, or treatment procedures, which might cause additional anxiety and agitation. These emotions affect not only the patients but also the family members' behaviors, and even the functioning of the whole family. Therefore, providing relevant information, explanations, and instruction is important for promoting the satisfaction and lowering the anxiety of ICU patients' families.

#### **【Purpose】**

This study aimed to use an interactive e-book to present the health education of the ICU and apply it in an ICU nursing instruction activity to let information technology be truly implemented in nursing instruction and simulated contextual education

#### **【Methods】**

This study attempted to combine mobile devices with e-book teaching software and to use the interactive practice functions to develop a multimedia interactive e-book learning system. A clinical experiment was used to conduct the experiment activity to explore the effects of the interactive e-book health education learning system on the nursing instruction learning results, and the effects of ward instruction acceptance on perceived usefulness and perceived ease of understanding, learning satisfaction, and anxiety. Therefore, a multimedia interactive e-book mobile learning system was developed.

A sample of 80 ICU family members was recruited. Participants were randomly assigned into

either the experimental group (n = 34) or the control group (n = 46). The two groups of patients' families had different learning activities. The experimental group used a multimedia interactive e-book mobile learning system to learn while the control group used oral one-to-one health education instruction. A certain medical health education pamphlet was chosen as the learning content. After the learning activity, the two groups completed a post learning questionnaire

#### **【Results】**

The research results showed that through the use of multimedia, the nursing e-book cannot reduce patients' families' anxiety immediately, but in terms of the acceptance of ward instruction, the result is significantly better than the conventional teaching mode. At the same time, it can help promote the knowledge level of families caring for patients.

**Health care knowledge learning performance** the means and standard deviations of the health care knowledge test were 90.88 and 6.68 for the experimental group and 68.48 and 9.65 for the control group. After analyzing the scores by independent sample t test, a statistical significance was reached ( $t = 12.26$ ,  $p < 0.001$ ). **Perceived usefulness** no significance was found with  $t = 1.491$  ( $p > 0.05$ ), **Perceived ease of understanding** is a significance in the two groups ( $t = 1.3$ ,  $p < 0.001$ ). **Anxiety level** the result of the analysis of covariance. After excluding the effects of the covariant variable (pre-questionnaire of anxiety for the family of patients) on the dependent variable (post-questionnaire of anxiety for the family of patients), no significance was found for the result of the questionnaire of anxiety for the two groups ( $F(1,77) = 3.151$ ,  $p = 0.08 > 0.05$ ). **Learning satisfaction** with the interactive e-book It is found that the means of most of the items are above 4.0, except for that of the item "using the e-book learning system helps me discover new problems."

## **【Conclusions】**

To sum up, the interactive e-book not only eased the load of the first-line nursing staff, but also has the potential to promote the family members' competence of taking good care of the patient. For future research, it is suggested that more applications and conditions can be considered by taking the features and needs of different medical departments into account. In addition, integrating effective learning tools or strategies, such as knowledge construction tools, into the implementation of the e-books could be a good direction for providing better instructional facilities to the families of patients. .

**Keywords: Interactive e-book, State-Trait Anxiety, Health education acceptance**

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### **Abstract Summary:**

The use of multimedia, the nursing e-book cannot reduce patients's families' anxiety immediately, but in terms of the acceptance of ward instruction, the result is significantly better than the conventional teaching mode. At the same time, it can help promote the knowledge level of families caring for patient

### **Content Outline:**

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