Development and Evaluation of Electronic-learning Media on Drug Information Resources Commonly Used in Clinical Pharmacy in Pharmacy Students

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Introduction: Electronic-learning (E-learning) media is an approach which can be adjusted in accordance with the speed in recognition of students to enhance individual learning. E-learning is also useful for a style of emphasizing and repetitive learning to meet the needs of students. In addition, E-learning can be used in situations with a limited number of instructors and/or a large number of students. In learning process, pharmacy students need to know drug information resources. Because of a variety of the resources, a limited time and large amount of pharmacy students in classes, it is unfeasible for the students to learn these resources effectively and completely. Therefore, the researchers were interested in development of electronic-learning media on drug information resources commonly used in clinical pharmacy and aimed to evaluate the efficiency of the media when used in pharmacy students. **Materials and Method:** This is a research and development study which was carried out during June 3rd – September 30th, 2013 at Faculty of Pharmaceutical Sciences, Khon Kaen University. The E-learning media was developed by using the Adobe Captivate Program. The media consisted of the details, prominent points, and methods to use of 12 books and 1 database that are frequently used in clinical pharmacy. The trial use of the media was conducted in 8 of the fifth-year pharmacy students. The media was then adjusted for appropriateness. Next, the E-learning media was tested in the fourth –year pharmacy students (N= 43). Efficiency of the media was evaluated by comparing students' scores before and after learning via the E-learning media. The data were analyzed using Paired t-test in the IBM SPSS Version 19. **Results:** By comparing the average of students' score before and after learning via the E-learning media, we found that 1) the media was found to be efficient in improvement of students' overall knowledge on drug information resources ($p < 0.001$), 2) student knowledge on selection of appropriate resources based on the need of information was improved ($p < 0.05$), 3) student knowledge on the prominent point of resources was improved ($p < 0.001$), and 4) time that the students spent in learning via the media was 66.91 minutes in average. **Conclusion:** we found that the students' test scores significantly improved after learning through the E-learning media, indicating that the media is efficient to allow students to recognize the characteristics and the prominent points of the drug information resources, and to select the appropriate resources in regard to information they need. In addition, the students can spend different time in learning based on their capability.

Keywords: E-learning, Drug Information, Resources, Pharmacy, Student

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Smoking Cessation of Parent with Pediatric Asthma Patient, KhonKaen Hospital.

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Introduction: Asthma is a chronic lung disease which affects on health and quality of life. Some patients had to admit into hospital and some are death. Most of them had uncontrolled symptom because they always exposed to trigger factors such as cigarette smoke from their relatives or parents which are the major risk of this disease. Thus, this study aimed to determine smoking cessation of parents with asthma children who had the desire to quit smoking. **Materials and Method:** Parents of asthma children were asked to quit smoking and firstly be screened baseline with the Fagerstrom test, amount of carbon monoxide in the lung, percentage of peak expiratory flow rate and determine their nicotine dependence. Then, all of them were followed up by telephone and made a evaluator visit at drug store or hospital and recorded the data in week 1, 2, 4, 8, 16, 24, respectively. **Results:** All of 20 parents of pediatric asthma patient were male and aged 25-71 years old. Most of them decided to quit smoking due to their family, health and social need of 6 (30%), 10 (50%) and 1 (5%), respectively. An average cigarette number was 16 rolls per day. For nicotine dependence, we found 8 (40%) persons, 3 (15%) persons in mind addiction and 9 (45%) persons addicted from social environment. Fagerstrom scores have shown that most of parents or 11 (55%) persons had low score, 8 (40%) persons had average score and found only one person with high score. Amount of carbon monoxide in the lung had score during 1-31 ppm and percentage of peak expiratory flow rate less than 80% found in 5 (25%) persons. After follow up at week 24, 14 (70%) parents can quit smoking, 3 (15%) parents can reduce the number of cigarette per day from their baseline and 3 (15%) parents were unable to follow up their smoking since they have changed telephone number or loss from the follow up visit. For amount of carbon monoxide in the lung and percentage of peak expiratory flow rate, they showed the better value in all patients who can reduce the number of cigarette smoking. **Conclusion:** Parents of asthma children, who had the compliance to pediatric asthma clinic and follow up visit, mostly have an experience to succeed in smoking cessation. Special counseling such as nicotine replacement therapy and initiation of inspiration to quit smoking in parents of pediatric asthma clinic were needed.

Keywords: Smoking cessation, Asthma, Pediatric, Parents, Fagerstorm

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