

Occupational Health and Safety Programs for Health Care Workers: An application of an Occupational Health Nursing Model

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The Faculty of Nursing, Chiang Mai University, Thailand firstly established a master's program in occupational health nursing (OHN) in 2002. The program is to prepare nurses for acquiring expertise in the delivery of health services to working populations. One of the major requirements of the program is the completion of OHN practices. This practicum required students to develop an occupational health and safety (OHS) program that can be used in a specific workplace. Students have to adopt an OHN model into the OHS program. The model applied includes four stages: assessment, planning, implementation and evaluation. We have learned that the model is applicable for OHN practice in real work settings. It could serve as a guideline for master students to complete the full process of the practice. This paper describes the process of applying the OHN model in an OHS program for health care workers. Students were provided with a tool model to establish an OHS program in order to solve occupational health related-problems and to meet their needs. The effectiveness of using the tool and the model was discussed.

キーワード：産業保健プログラム；安全管理計画；医療従事者；産業看護モデル

Key words: Occupational health program; Safety program; Health care workers; Occupational health nursing model

I. Introduction

The Faculty of Nursing, Chiang Mai University, is the first institute in Thailand that established a master's program in occupational health nursing (OHN). The program started in 2002. The objective of this program is to prepare nurses for acquiring expertise in the delivery of health services to working populations. During the course of the program, students have to gain complete practical experiences in occupational health nursing. These experiences are aimed

at providing the student with an opportunity to synthesize theories and concepts that they have learned through the program, and to develop an understanding of how they can be applied in the workplace. One of the requirements of the master's program is to develop an occupational health and safety (OHS) program for a target population. Hospital is one of the settings for students in running the program. To develop the OHS program, Master students have to adopt an OHN model as a critical foundation of the systematic approach to enhance the well-

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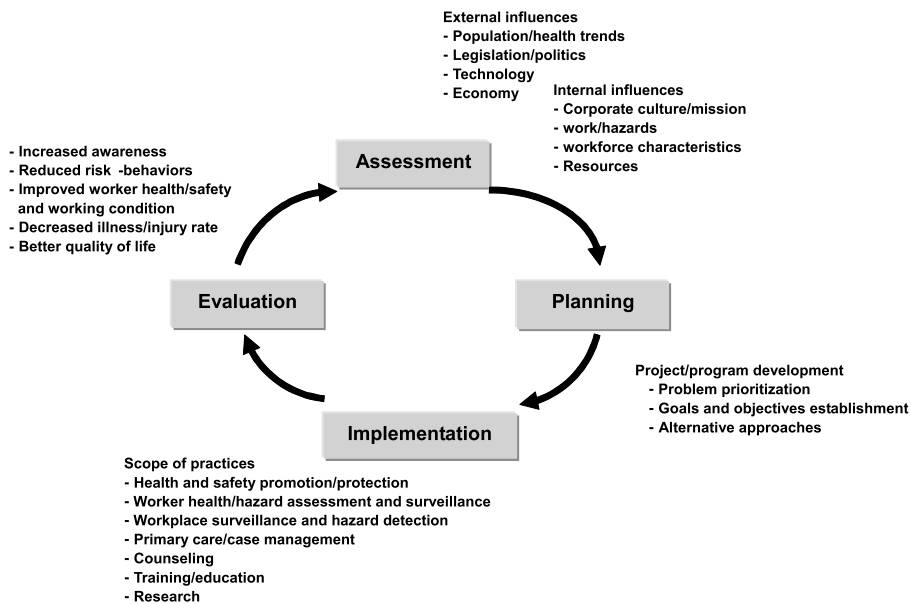


Fig. 1 Occupational health nursing model

being of health care workers or in other words to reduce health risk among those workers.

It is useful to know the applicability of the model in real work situations. The purpose of the paper is to examine the process of applying the model and discuss how we can promote adequate OHS programs in local conditions.

II. Occupational Health Nursing Model

In accordance with the literature review and practice experiences in the field of occupational health nursing, we have adopted the conceptual framework for occupational health programs and services suggested by Rogers (2003) into OHN model^{1, 2)}. The Nursing Process by the American Nurses' Association: (ANA, 1980) is also utilized as a tool for OHS program development³⁾. The outline of this OHN model is illustrated in Fig. 1. As a result of applying the OHN model, four stages have been implemented. These stages include assessment, planning, implementation and evaluation. The description of each stage is presented as the following.

Stage I: Assessment

The objective of this stage is to collect primary and secondary data concerning internal and external influences in the workplace, which is a hospital. The internal influences include corporate culture/mission, work/hazards, workforce characteristics and resources. The external influences comprise population/health trends, legislation/politics, technology, and economy. Data collection is completed by means of quantitative and qualitative approaches. A walk-through survey is a physical inspection tool in collecting quantitative data regarding work hazards. In this stage, occupational health nurses have to communicate with health care workers and their supervisors to assure the validity of obtained data. Moreover, focus group discussions and in-depth interviews with health care workers and their supervisors are also carried out to obtain the qualitative data.

Stage II: Planning

In this stage, involvement of all stakeholders such as hospital leaders, health care workers and health care professions is established. In particular, this is done by the steps of problem

prioritization, goals/objectives establishment and alternative approaches selection. These are done to ensure the sense of 'belonging' or 'ownership' among stakeholders which is the key factor of program success.

Stage III: Implementation

The main purpose of this stage is to conduct the program as planned in the previous stage. The program implementation based on the scope of OHN practices is shown in Figure 1. These practices are health and safety promotion/protection, worker health/hazard assessment and surveillance, workplace surveillance and hazard detection, primary care/case management, and counseling.

The provision of OHS training and education is also carried out during program implementation. Finally, the occupational health nurse can be part of a research team in order to figure out the effectiveness of the OHS program in promoting health and minimizing risks. There are three examples of OHS programs for health care workers conducted by students.

Health surveillance program: This program has been developed for operating-room staff who are at risk of reproductive hazardous substances such as ethylene oxide and nitrous oxide. This program includes seven steps: identifying employees, establishing the schedule, gathering and providing information, ensuring proper medical surveillance, providing examination results, medical removal protection and record keeping.

Hearing conservation program: The program is specific to maintenance workers who are exposed to noise while working with grinders and boilers. These workers are at risk of hearing loss. The purpose of this program is to prevent occupational hearing loss among those workers. This program consists of four main steps: noise monitoring, audiometric testing, employee educational training and record keeping.

Infectious control and health promotion pro-

gram: This program is developed focusing on laundry workers who are at risk of skin rashes and irritation from exposure to detergents and disinfectants. Moreover, they are at risk of exposure to hepatitis and other diseases as a result of needlestick injuries from the improperly disposed sharp hospital wastes and contaminated linen. In addition, they also have muscle sprains and strains from over loading of heavy clothes into washing and drying machines. The program comprises two main activities: information dissemination by posters, brochures and training and work improvement by using 5S principles.

Stage IV: Evaluation

The objective of this final stage is to measure anticipated outcomes resulting from program implementation. These outcomes include increased awareness, reduced risk behaviors, improved worker health/safety and working conditions, and decreased illness/injury rates. The ultimate outcome of the program is to enhance a better quality of life among health care workers.

The OHN model was used by the master's program students to establish an OHS programs. Each program was to assess existing safety and health risks and solve occupational and health-related programs. In order to gain a more effective OHS program in hospitals, all stakeholders (e.g., health care employers and employees, occupational health nurses, occupational physicians and safety officers) were stimulated to be involved in all stages as much as possible. As a result of applying the OHN model the students could effectively assess the existing risks and establish OHS program adjusted to the hospital. The students appreciate the model as a useful guideline for framing the program.

III. Lesson Learned From ~~Ohn~~ Model Application

Through this study, we could confirm that the OHN model used was applicable for OHN practice in the real work settings. It could serve as a guide for master students to complete the full process of the practicum. Students were provided a tool model to establish a program in order to solve the occupational health related-problems for health care workers, and also to meet their needs. Furthermore, health care workers are beneficial from the students' practice in terms of knowledge gain and being supported to recognize the significance of occupational hazards. However, this application was only the teaching and learning process in the academic area. For long-term OHS outcomes that should include improved worker health/safety and working conditions, decreased illness/injury rates, and better quality of life, the

occupational health nurses and other occupational professionals have to work together. The model should thus be used to help them act as facilitators for expanding awareness about OHS to other health care workers and developing strategies to convince health care workers to be an active recipient rather than a passive recipient. Therefore, it is important to use the model as that the health care workers could establish a self-initiative for dealing with their OHS problems. This should be taken into account in promoting the use of the OHN model in different work settings of health care workers.

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