

**Developing and Validating a Disaster
Plan for Nursing Department at
El-maadi Military Hospital**

Thesis

*Submitted for Partial Fulfillment of the Doctorate Degree in
Nursing Science
(Nursing Administration)*

By

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ABSTRACT

Disaster planning is essential for hospitals to provide policies, procedures, and guidelines necessary to protect lives and limit injury, and protect property immediately before, during, and after a disaster event. The aim of this study was to develop and validate a disaster plan for nursing department at Al- Maadi military hospital. The study subjects consisted of 110 nurses from different categories, and a jury group. The data collection tools included an interview questionnaire, checklists for assessment of nurses' practice in fire drill, an inventory checklist for resources, and an opinionnaire for experts' validation of the plan. The researcher developed the disaster preparedness plan and related training program, implemented it, and evaluated its validity and effectiveness. The validity of the plan was high with a majority agreeing upon all items. Nurses' awareness of disaster preparedness plan elements was generally low, but showed significant improvements at the posttest ($p < 0.001$). Nurses' performance in fire drill also significantly improved ($p < 0.001$). There were also significant improvements in most resources required. In conclusion, the implementation of a validated disaster preparedness plan led to significant improvements in nurses' awareness and performance in fire drill, as well as in the resources needed. The study recommends that the plan be implemented in similar settings, with inclusion of other activities such as evacuation, and transfer. Further research is proposed to develop plans that include all categories of health care workers.

Key words: Disaster Management, Emergency, Nursing, Plan, Preparedness

INTRODUCTION

Disasters being a global problem have an appreciable effect on the advances being achieved in health and socio-economic development (*Tabish, 2001*). Lately, the frequency of disasters has been increasing around the world (*Vogt and Kulbok, 2008*). Millions people are impacted by disaster, and thousands people died as a result of large-scale global disasters (*Sztajnkrzyer et al., 2006*). Disasters are unexpected, but they happen. With living come natural calamities, with industrial and technological advances come accidents, and with socio-economic and political stagnation or change come dissatisfaction, terrorism, and war (*Waeckerle, 1991*).

Disasters are known as the biggest catastrophes that threaten people's livelihoods, health, and even their lives, in general (*Yamamoto, 2006*). They are natural or man-made events that cause a level of destruction or emotional trauma exceeding the abilities of those affected to respond without community assistance (*Allender and Spradley, 2005*).

The *American Red Cross*[ARC], (1995) defined a disaster as an occurrence, either natural or man-made, that

causes human suffering and creates human needs that victims cannot alleviate without assistance. More recently, the World Health Organization defined a disaster as a sudden ecological phenomenon of sufficient magnitude to require external assistance (*World Health Organization [WHO], 2005*).

Natural disaster is possible through certain human activities that could aid in some of these events, whereas man-made disasters are mostly due to certain human activities. Both types vary in intensity, severity and impact (*Maurer and Smith, 2005*). In general, disasters happen suddenly or unexpectedly such as storms, floods, earthquakes, tsunamis, hurricanes, tornadoes, epidemics and eruptions (*Vogt and Kulbok, 2008*). Humans can also make disasters as a result of error, neglect, or intentional harm such as bioterrorism, bomb threats, epidemics, fires, radioactive-material leaks, and wars (*Rogers and Lawhorn, 2007*).

Disaster management is simply a set of strategies for managing disasters which help ensure that loss of life and property is at a minimum. It is particularly important in developing nations. The process of emergency management involves four phases: mitigation, preparedness, response, and

recovery (*Maurer and Smith, 2000; Allender and Spradley, 2005*).

Disaster management involves doing situation and risk analysis, planning, implementation of plans or programs, monitoring and evaluation. It should involve as many actors in the community as possible. It is the discipline of dealing with and avoiding risks (*Maurer and Smith, 2005*). Disaster management, in terms of facing disasters, is highly needed to be developed in order to face unpredicted situations effectively. To meet this aim, many professionals need to support this plan (*Savage and Kub, 2009*).

Disaster planning is essential for a community, business, or hospital. It involves thinking about details of preparation and management by all involved, including community leaders, health and safety professionals, and lay people (*Allender and Spradley, 2005*). The purpose of disaster planning is to provide the policies, procedures, and guidelines necessary to protect lives and limit injury, and protect property immediately before, during, and after a disaster event (*Maurer and Smith, 2005*).

Significance of the study

Nurses play a pivotal role in planning and implementing disaster relief efforts, preventing technological disaster, and addressing problems that occur. Hence, they are responsible for preparing themselves to acquire required knowledge and skills in caring for the disaster survivors as well as preparing to achieve the readiness for future disaster events. Therefore, they have to understand their roles in disaster management and preparedness.

AIM OF STUDY

The aim of this study was to develop and validate a disaster plan for the nursing department at Al-maadi military hospital. This was achieved through the following objectives:

1. Assessing nurses' awareness regarding disaster preparedness in Al-maadi military hospital before and after implementing a disaster program;
2. Assessing the internal disaster preparedness in Al- maadi military hospital;
3. Developing and validating a disaster management plan based on the internal disaster preparedness assessment;
4. Implementing (fire drill)as an example of the developed disaster management plan