Staff Nurses' Knowledge and Commitment toward Hospital Waste Management

Thesis

Submitted for Partial Fulfillment of Master Degree in Nursing Sciences
(Nursing Administration)

By

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Ahlam Abdallah Abou El-Ella

Dedications

✍ *I would like to dedicate this thesis to*

My husband

My family

For Their Love, care, support and encouragement that allowed me to accomplish this work

✍. *Ahlam Abdallah Abou El-Ella*

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List of Abbreviations

MW	Medical Waste
MWM	Medical Waste Management
HCWs	Healthcare Workers
HCV	Hepatitis C virus
HBV	Hepatitis B virus
HIV	Humane Immunodeficieny virus
BMW	Biomedical Waste
HWs	Hospital Workes
HCW	Healthcare waste
PPE	Personal Protective Equipment
OSHA	Occupational Safety and Health Administration

ABSTRACT

- **Background**: Healthcare waste management should be strictly followed by all health team members, and nurses should have required knowledge and skills to deal properly with waste. **Aim of the study**: To assess staff nurses' knowledge and commitment toward hospital waste management. **Design:** A descriptive study design was utilized to meet the aim of this study **Setting**: This study was conducted at Sirs Elian hospital, El-Monoufyia governorate, the study sample consisted of 184 staff nurses in all units. **Tools of data collection**: two self-administered questionnaire sheets was used to collect data: I) Hospital waste management knowledge questionnaire sheet. II) Commitment toward hospital waste management questionnaire sheet. **Results**: A great majority of the nurses (90.2%) had high total knowledge of workplace preventive measures. The majority (90.2%) had high knowledge and 95.7% had adequate commitment, while 70.7% had satisfactory knowledge of hospital waste management. The scores of knowledge and commitment are correlated. The knowledge score is positively influenced by the attendance of training in management, whereas the commitment score is positively influenced by nurse's age and by scores of knowledge. **Conclusion**: staff nurses in the study setting have high knowledge and commitment to waste management, while their related knowledge is variable. Their commitment is positively related to their age and their scores of knowledge **recommendations**: The study recommends more training courses in waste management. Further research is proposed to investigate the effect of training interventions and leadership on nurses' commitment towards hospital waste management.

Keywords: Commitment, Hospital waste management, Knowledge, Staff nurse

Introduction

Effective medical waste management becomes more important than before. In developing countries, medical waste have not received sufficient attention ***(Patwary et al., 2011).*** Healthcare waste management is a process that help ensures proper hygiene in the health institution and safety of healthcare workers ***(Abor, 2007)***. The process of waste management comprises key stages which are all very important and interrelated. These include segregation, collection, storage, handling, transportation, treatment and disposal ***(Ramokate, 2008)***. Hospital waste management means the management of waste produced by hospitals using techniques that will check the spread of diseases ***(World Health Organization [WHO], 2015)***.

A proper waste management of hospital biomedical waste has become a worldwide humanitarian topic. Although risks of poor management of hospital waste have aroused the concern all over the world, particularly in the light of its far-reaching effects on human, health and the environment ***(Yadavannavar et al., 2010)***.

Waste materials are generated in the healthcare setting. They require special procedures for collection,

storage, transport, and disposal in efforts to prevent complications related to direct exposure of these waste products. The key step in waste management is to distinguish between infectious and noninfectious waste. Infectious waste has the potential to transmit disease and should be collected, transferred, and disposed of in a manner that decreases the risk of injury to healthcare workers, waste management workers, patients, and the community ***(World Health Organization [WHO], 2015)***.

Waste management continues to be a major challenge, particularly, in most healthcare facilities of the developing countries where it is hampered by technological, economic and social difficulties and inadequate training of staff responsible for handling of the waste ***(Alagoz and Kocasoy, 2008)***.

Poor conduct and inappropriate management and disposal methods exercised during handling and disposal of medical waste (MW) is an increasing significant health hazards and environmental pollution/hazards due to the infectious nature and unpleasant smell of the waste ***(Patwary et al., 2009; Hossain et al., 2011)***. Despite the fact that current medical waste management (MWM) practices vary from hospital to hospital, the problematic

areas are similar for all healthcare units and at all stages of management ***(Tsakona et al., 2007)***.

If the overall goal of waste management is to prevent disease transmission from waste products, then the emphasis should be placed on the "management" aspect of the process and not on the "technological fix" which time and again has proven to be an expensive diversion rather than an effective solution. Technology should fit the situation and work in the management system to achieve the final goal as part of the overall system, not as a replacement for the system. Technology choices will be made to meet local needs and conditions and cannot be uniformly applied throughout a state or country and there is no reason for any country to have standards any less stringent than those being modelled in the U.S. or Europe ***(World Health Organization [WHO], 2015)***.

In waste management, healthcare wastes hold higher priority due to their hazardous nature. Some parts of healthcare wastes are considered most hazardous that can affect human health and pollute the environment badly. Although the infectious and hazardous waste have a small portion in Medical Waste (MW), improper medical waste management, and mixing infectious waste with the general