

* Nawal M. Soliman,
** Kamel A. Zyan,
***Howyida, S. Abd El-Hameed,
****Mahbouba S. Abd El Aziz. &
*****Amal A. Abd Allah

*Professor of Community Health Nursing, Faculty of Nursing, Ain Shams University
**Professor of Avian and Rabbit Diseases, Faculty of Veterinary Medicine Benha University
***Assistant Prof. of Community Health Nursing, Faculty of Nursing, Benha University
**** Lecturer of Community Health Nursing, Faculty of Nursing, Benha University,
***** (B.Sc Nursing)

Occupational Health: The Effect of Poultry Slaughter- House Environment on Workers' Health in Kalyobia Governorate

Slaughter -house, a building area with special design and construction which meets certain techniques and hygiene requirements. **Aim of the study:** To identify the effect of poultry slaughter-house environment on workers health in Kalyobia Governorate. **Study Design:** A descriptive research design was utilized to conduct the study. **Setting:** The study was conducted at 12 poultry slaughter-houses in Kalyobia Governorate, 3 mechanical and 9 manual. **Sample:** It included all workers working at 12 poultry slaughter-houses in Kalyobia Governorate, their number is 182. **Tool:** Two tools were used for collecting data; the **first tool** is a structured interviewing questionnaire to assess personal characteristics, knowledge about slaughter-houses diseases, and safety environment. **The second tool** is an observational checklist to assess workers' practices regarding safety measures. **Result:** The main findings revealed that most workers had poor knowledge about diseases. Their knowledge about practices was good. **Conclusion:** The study concluded that the workers had poor knowledge about diseases and approved lack of knowledge and concerns which reflect a need for education about measures for prevention the diseases, the importance of wearing protective measures and following healthy practices in work place. **This study recommended that,** the health educational message provided to workers in their work place about diseases transmitted from dealing with bird and using safety measure during work.

Key words: Poultry slaughter-houses, environment, health education, workers' health

INTRODUCTION

Occupational health is the specialty of practice that focuses on the promotion, prevention and restoration of health within the context of the safe and healthy environment (Radomiski&Catherine, 2008). Poultry slaughter-house is defined as a facility, where animals are killed for consumption as food products (United States Department of Agriculture, 2007).

Between the periods from 2003 to 2010 the cumulative number of confirmed human

cases of avian influenza were 507 cases and number of deaths among these cases were 302deaths, these cases were reported by 15 countries (WHO, 2009).

In Egypt, bird flu and other diseases infected poultry, and workers in birds' slaughter- houses, cause heavy losses directly estimated 6 billion pounds, and indirect losses considered the most important infection to workers through their dealing with birds and machines. The direct loss, resulting from the diseases on

the poultry wealth is estimated about 6 billion pounds for the manufacturers, one of the most chick successful and profitable industries in Egypt which represents investment of an estimated 18 billion pounds including; 6 billion fixed capital, 12 billion pounds; capital variable and works with the industry about 2 million workers and family, to produce 2.3 million chickens / day, 800 million chickens and 6 billion egg per year (Farm, 2006).

The importance of hygiene in reducing the mechanical spread of the disease on vehicles, equipment, footwear, and clothing should be re-emphasized (WHO, 2009).

In poultry slaughter-houses many of machines consist of two types, basic machines (killing cones stand, hot water scalding with dual heating, feather plucker), additional machines (screw chiller, drip roller, portion cutter machine), manual packing cones vacuum packing/scaling machine worker tables / trolley etc.). Main features for all machines, food grade stainless steel for best hygiene and very long life, can be assembled at customers and are of performance proven design (Dohopeshwars, 2010).

Community health nursing could play an important role to increase the awareness of poultry slaughter-houses workers about the health protection methods during their work. Health education is to be used for protection clothing, hand washing, hair covering, gloves , protective footwear , mask to reduce exposures that occur infection by inhalation (Agriculture & Consumer Protection Departement,2009)

Magnitude of the study

In Kalyobia Governorate, 24 poultry slaughter – houses, which consist of many workers, must keep their health, and teach them about the diseases, which may infect them through their dealing with

birds and machines. They need to control highly pathogenic avian influenza and other diseases to reduce the possibility of potential global human pandemic and the soci-economic damage and effect on the poultry wealth (Ministry of Health, 2009)

The role of the occupational and environmental health nurse has evolved and expanded in the past decade; principal functions continue to be promotion, protection, and maintenance of the health and safety of workers. The practice of the specialty involves primary, secondary, and tertiary prevention. Special skills include; training on safety hazards, disaster planning, familiarity with safety equipment, and the ability to plan and implement health education (Mckenzie et al., 2008).

Aim of the study

The study aimed to identify the effect of poultry slaughter – houses' - environment on workers health through:1) Assessing poultry slaughter –houses environment related to safety measures for prevention of health hazards,2)Assessing workers knowledge needs regarding their work in poultry slaughter- houses, 3) Assessing workers practice toward healthy prevention method during their work, and4) Assessing workers health problems regarding the poultry slaughter – houses environment.

Research Questions

1. Does poultry slaughter houses' environment affect the workers health status?
2. Is there a relationship between workers socio-demographic characteristics and their practices?

Subjects and Methods

Research design

A descriptive research design was utilized to conduct the study.

Setting:

The study was conducted at the poultry slaughter-houses in Kalyobia Governorate. Half of the poultry slaughter-houses were randomly selected from 24; three of them worked mechanically (Middle East Company, Alabed & Felegy Mammon), and 9 worked manually (Khatab, Ahmad Kamel, Alkawsar, Almarow, Alfaoneya, Magued Fawzy, Shahewan Moheb, Abohashem & Mohammed Hamedy).

Sample:

All workers present and working in the above previously mentioned settings were included accounting for 182 workers, mechanical houses 86 workers and manual houses 96 workers.

Tools for data collection:

Two tools were used in this study, 1) An interview questionnaire, and 2) An observational checklist.

1) An interview questionnaire was developed to assess workers' characteristics, their knowledge and safety environment. It consisted of four parts: **Part I:** Was intended for collection of data pertaining to personal characteristics of the workers. This included age, sex, educational level, occupation, years of experience, and income. **Part II:** It was designed by the researcher based on review of pertinent literature, and reviewed by experts. It covered assessment worker knowledge about diseases transmitted from birds, causes of diseases, mode of transmission, symptoms of diseases, method of spread, and precautions. **Part III:** It was designed to assess worker's knowledge about machines used in birds' slaughter-houses such as; cleaning and packing of final product. **Part IV:** It include questions about safety environment of the slaughter-houses such as; source of water,

waste disposal system, ventilation, electric power, site of slaughter house, site of room dressing, veterinary supervision, and refrigerator of final product (Ministry of Agriculture and Reclaiming, 2006).

Scoring System: The knowledge scores of workers about avian influenza and other diseases transmitted from birds were scored as followings: A correct answer was given one score while a wrong or don't know answer was given zero. The total knowledge scores were summed up, and the worker was considered having good knowledge if the total score equals 70% or more; average when total score equals 50 - 70 % and poor if the total score of knowledge was 50%.

2- Observation checklist:

It was developed by the researcher to assess worker practices related to personal protective equipment used during their work, hygienic measures and good body mechanics.

Scoring system:-

For the practice items, the worker is given one score for step done, and zero for not done or inapplicable. The scores of the items were summed up and the total divided by the number of items (16), giving a mean scores. These score were converted into a percentage score. The practice was considered satisfactory if the percent score was 75% or more and unsatisfactory 75 %.

Content validity

A panel of three experts from the Faculty of Nursing in Community Health Nursing Department reviewed the tools and gave their opinions.

Ethical considerations:

During the interview, each subject was informed about the purpose and benefits

