

## INTRODUCTION

Technical education represents an integral and important part of Egypt's educational system. Technical education is provided in a three-year and five-year programs and includes schools in three different fields: industrial, commercial and agricultural (*Abrahart, 2003*).

Students in technical school may face hazards such as physical, chemical and mechanical hazards. Physical hazards are those that produce adverse health effects through transfer of physical energy, including temperature, noise, vibration, radiation, and electricity, while mechanical hazards, are those that can potentially cause injury or illness in the workplace. They are resulted from protruding or moving part of machines, (*Stanhope & Lancaster, 2008*). Chemical hazards are those that can be inhaled, absorbed, or ingested. They can harm respiratory organs, eye and skin (*Hilgenkamp, 2006*).

A healthy school environment is a dynamic concept. It involves all the internal and external factors that affect individuals during course of the school day. So, a safe and healthy school environment is critical to education (*El-Demerdash, 2007*).

**McKenzie et al. (2005)**, stated that the responsibility for maintaining safe school environment should rest with all who use it. Every one, including those administrators, teachers, staff and students. So, many safety measures should be adopted to control school hazards. These can be presented as a hierarchy approach to control injury including eliminating hazards through design, using safeguards that minimize exposure to hazards, providing warning signs or devices to identify hazards, training

students in safe work practice and using personal protective devices (*Levy et al., 2006*).

The school nurse is the cornerstone of the school health service program. The school nurse has a multi-faceted role within the school setting. She provides care to students and staff who have been injured or who present with acute illnesses. She has to be aware of specific and general hazards associated with working and training process and ensure the existence of the necessary measures to protect students. She provides health education by providing health information directly to individual students, groups of students, or classes about the importance of using safety measures. She promotes a healthy school environment (*El-Demerdash, 2007;and NASN, 2009*).

### **Significance of the Study**

In Egypt, it has been found that more students had to be directed to the technical and vocational stream. By the late 1990s technical and vocational schools had about 2 million students, almost twice as many as in general education (*Abrahart, 2003*). In 1992, approximately 67 % of all secondary students were enrolled in a technical program. The Ministry of Education administers about 1,600 technical and vocational schools. The technical education sector (about 1,800,000 students) is comprised of technical and commercial secondary schools that offer a technical diploma for 3-year courses (*State University.com, 2011*).

Many activities are done in technical school workshops. So, a range of hazards such as mechanical, electrical, physical, and chemical are present. These hazards must be managed to ensure the safety of staff, students and others (*The State of Queensland, 2007*).

Accordingly, it is important to identify hazards and safety measures among students in technical schools in order to acquaint school team with the main areas of unmet knowledge and practice among students.