

**Application of the Health Belief Model In Studying Non-Compliance With
Universal Precautions Among Nurses and Laboratory Technicians In Alexandria,
Egypt.**

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ABSTRACT

Background: Nurses and lab technicians are at high risk of occupational exposure to blood-borne pathogens. Universal precautions are an effective means of controlling the spread of infection, and providing protection to healthcare staff and patients. However, widespread non-compliance of nurses with universal precautions is well established. In order to promote nurses' compliance studying factors associated with non-compliance is a must. One of the models that can be used to study factors associated with non compliance the health belief model.

Aim: Assessing non-compliance of nurses and laboratory technicians with universal precautions and studying factors associated with non compliance.

Methods: This cross sectional study was carried out on a total of 305 nurses and lab technicians. The sample was randomly selected from 5 general hospitals affiliated to 5 different health sectors in Alexandria, Egypt. The multistage random sample was the method of sample selection. Two tools were used to collect data; a self administered anonymous questionnaire based on the Health Belief Model as the theoretical framework and an observational checklist to observe nurses and lab technicians' compliance with different guidelines of universal precautions.

Results: The age of the studied sample ranged between 25 – 40 years with a mean of 27.5 ± 6.7 years, 88.5% were females and only 12.8% of the sample attended training programs concerning blood borne diseases and universal precautions. The study revealed that non-compliance varied among the different guidelines of universal precautions. The percentage of non-compliant nurses and lab technicians was extremely high for certain guidelines, for example: wearing goggles 100%, wearing masks 83.6%, changing gloves between patients 77% and wearing gowns 72.5%. Non compliance was high for washing hands before dealing with patients (63.6%), disposal of needles and sharps in special containers (60.3%) and wearing gloves 45.2%. Non compliance was lowest for washing hands after gloves removal (21.3%) and disinfecting the work area (11.8%). Non compliance was significantly associated with nurses' and lab technicians' perceived barriers to compliance with universal

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precautions, perceived benefit of compliance, perceived severity of blood borne diseases, and perceived self efficacy. No association was found between non compliance and knowledge about blood borne diseases and universal precautions, perceived susceptibility to blood borne diseases, years of experience and educational level. A regression analysis model revealed that perception of barriers, and perception of benefits were the main predictors of compliance.

Conclusion: The study concluded that non-compliance of nurses and laboratory technicians with universal precautions guidelines is generally high. The results have implications for the development of infection control programs that enhance compliance with universal precautions.