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# ASSESSMENT OF STUDENT'S AWARENESS ABOUT INFLUENZA A / H1N1 IN THE SECONDARY SCHOOLS OF GIRLS AT BENHA CITY

This study was conducted to assess students' awareness about influenza A /H1N1 of secondary schools students of girls at Benha city, through assessing their knowledge, practices through asking questions and attitudes regarding to the disease. This study was descriptive design. **Sample:** The systematic random sample was consisted of 230 students who had studied in Benha Secondary School, El-Shimaa Secondary School and Om El-Moamneen Secondary School. **Tools:** Two tools were used for collecting data, the **first tool** is a structured interviewing questionnaire to assess socio-demographic characteristics, students' knowledge related to influenza A/ H1N1, students' practices through asking questions related influenza A/H1N1, and students' attitudes related to influenza A/H1N1, and the **second tool** is observational checklist to assess environmental schools condition. **Results:** The main findings were: 85.7% of the studied sample had a satisfactory knowledge about the disease and the main source of their knowledge was TV, their practices through asking questions was good for 60.4%, and attitudes was positive for 52.2%. There was also highly statistically significant correlation between their total knowledge, practices through asking questions and attitudes toward the disease. **Conclusion:** This study concluded that the studied sample had high awareness about influenza A/H1N1 influenza. **This study recommended that:** Increasing the health educational message provided through mass media because they are very effective health educational methods, and reinforcing health educational programs for school children in different forms as in subjects, school activities to enhance their abilities to react and respond influenza A/H1N1 situation

**Key words:** influenza A/H1N1, health education, and the school health nurse

## INTRODUCTION

Influenza A/H1N1 virus is an acute respiratory disease of humans, that caused by one or more of the influenza viruses of type «A». This disease has caused substantial morbidity and mortality in humans. The severity of the disease ranges from very mild symptoms to severe illnesses that can result in death (WHO, 2009).

Influenza A/H1N1 virus is contagious and binds through hemagglutinin onto sialic acid on the surface of epithelial cells, typically in the nose, throat and lungs and can spread from

person to other through coughing, sneezing or talking by people with influenza. Sometimes people may become infected by touching something – such as a surface or object – with flu viruses on it and then touching their mouth or nose. The symptoms of this disease are similar to the symptoms of regular human flu and include fever, cough, sore throat, body aches, headache, chills and fatigue, (Dumar, 2009 & CDC, 2010).

According to the Center for Disease Control and Prevention, (2009) the students can get sick with flu and schools may act as a point of spread, where students can easily spread the

disease to other students and their families. So the largest number of cases has been in people between age of 5 and 24 years old. The students, school staff, and their families must take personal responsibility for helping to slow the spread of the virus by practicing infection control steps to keep from getting sick with flu and protecting others from getting the flu.

The school nurse promotes health by providing health information directly to individual and groups of students, by providing guidance about the health education, encouraging comprehensive, sequential, and age appropriate information. The school nurse is a member of the coordinated school health team that promotes the health and well-being of school members through collaborative efforts, (American Academy of pediatrics, 2008).

The school health nurse should consult with the teacher's health concerns and health education activities. The classrooms teachers should make every effort to work with school nurse in matters related to students health, but for this to be achieved certain responsibilities should be provided by the school nurse as the following, the nurse can help the teachers by letting them know the signs and symptoms on various health problems, establishing referral mechanisms, working with the teacher in terms of health guidance, providing frequent teacher-nurse conferences to discuss teacher observation, to help teacher know what action to take in emergencies to help pupils with known health problems. The teacher can help the nurse by observing the children daily, assisting in screening, and referring suspected health problems, (Ivanov et al., 2008).

#### **Significant of the study:**

The great concern of Egyptian population towards influenza A/H1N1 and continuously highest rate of illness occurred in school- aged children. Also Influenza A/H1N1 outbreak has led to numerous precautionary school closures in several countries. This study was conducted to assess the students' knowledge, practices and attitudes toward influenza A/H1N1 in secondary schools for girls to increase awareness among the students. According to the Ministry of Health and Population (2009) announcement

until December 2010: cumulative number of humans infected with H1N1 virus worldwide were 1549364 cases and 25174 deaths, in Egypt total number of H1N1 virus cases were 15739 cases and the number of deaths were 267 cases.

#### **Aim of the Study**

The aim of the study is to assess students' awareness about influenza A/H1N1 disease of secondary schools of girls. It will be done through:

- Assessing students' knowledge about influenza A/H1N1 virus to detect the students needs.

- Assessing students' practices through asking questions to avoid infection by H1N1 virus to detect the students needs.

- Assessing students' attitude toward influenza A/H1N1 virus to detect students needs.

- Developing educational health promotion guidelines for them to increase awareness about influenza A/H1N1 virus according to their needs.

#### **Research questions:-**

- Is there a relation between socio-demographic characteristics of the students and their knowledge, practices, and attitudes regarding influenza A/H1N1 disease?

- Is there a relation between environmental home condition of the students and their knowledge, practices and attitudes regarding influenza A/H1N1?

#### **Subjects & Methods**

**Research design:** A descriptive research design was utilized to conduct the study.

#### **Setting:**

The study was conducted in all secondary schools for girls at Benha city, they named; Benha Secondary School, El Shimaa Secondary School, and Om Elmoamneen Secondary School.

#### **Sampling:**

The studied sample included 230 secondary female students they were selected as systematic random sample from the previous



mentioned settings as (every ten's student). The study sample was selected as follow: Om Elmoamneen Secondary School 100 students (from total 1000), El Shimaa Secondary School 80 students (from total 800), and Benha Secondary School 50 students (from total 500).

#### **Tools of data collection**

Two tools were used for collecting data:

##### ***1- A structured interviewing questionnaire sheet:***

The researcher designed questionnaire based on literature review, approved by supervisors and it was written in simple clear Arabic language. It consisted of the following four parts:

##### ***Part I: To assess socio-demographic characteristics:***

It consists of nine questions related to school name, age, student's order, family size, mother's education & occupation, father's education and occupation, and family income.

##### ***Part II: To assess the student's knowledge regarding to influenza A/H1N1:***

This part included nine questions about meaning of the disease, clinical manifestation, mode of transmission, high risk group, method of diagnosis, preventive method, presence of vaccine against the disease, preventive role of the school health nurse, and sources of information.

##### **Scoring system:**

Each student's answer was given two points for complete correct answers and one point for an incomplete correct answer and zero for a wrong or don't know answer. Total score of knowledge was 18. The total knowledge score was divided on the knowledge items and converted into percent. The students had satisfactory level of knowledge if the score was  $\geq 75\%$  ( $\geq 13$ ) and had unsatisfactory level of knowledge if they had less than  $75\%$  ( $< 13$ ).

##### ***Part III: It was designed to assess the student's practices through asking questions***

##### ***regarding to influenza A/H1N1:***

Which included sixteen questions as continuous hand washing with soap and water, using antiseptic solution during hand washing, covering nose and mouth when coughing or sneezing, using the sleeve not hands in case of unavailability of tissue, going to the doctor in case of symptoms appearance, avoiding hanging and kissing, avoiding touching eyes, nose and mouth, Avoiding infected cases, taken the vaccine, taking a lot of fluids, vegetables and fruits, staying at home and don't go to the school, avoiding overcrowded areas and tell my family if any symptoms appears, ...etc.

##### **Scoring system:**

Each student's answer was given two points for always practice, and one point for sometimes practice, and zero for a rarely practice. Total score of practices was 24. The practice was considered good if the score of the total practices equals  $> 75\%$  ( $> 24$ ), considered average if the percentage of total practices is  $50-75\%$  ( $16-24$ ) and considered poor if it is less than  $50\%$  ( $< 16$ ).

**Part IV:** It was designed to assess the students' attitudes toward influenza A/H1N1, "Likert scale" adapted from (Ahmed, 2009), modified by the researcher and revised by the supervisor. Included nine questions about the danger of disease, fearing from eating meat, necessary of pigs eradication, follow up the news of the disease, taken precaution by authorities, taken the vaccine if it present, notification of a suspected case if present, following the preventive measure, ...etc.

##### **Scoring system:**

A score for each answer was given two points for always attitude, and one point for indifferent attitude, and zero for rarely attitude. Total score of attitude was 18. The attitude was considered positive if the score of total attitudes  $> 75\%$  ( $> 14$ ), considered indifferent if it equals  $50-75\%$  ( $9-14$ ) and negative if it is  $< 50\%$  ( $< 9$ ).

**2-Observational checklist to assess environmental school's conditions:** It consists of eleven questions used to assess the school

