ASSESSMENT OF PREGNANT WOMEN KNOWLEDGE REGARDING NOVEL (H١N١) SWINE INFLUENZA

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Abstract

BACKGROUND: Swine influenza is a highly contagious acute respiratory disease of pigs, caused by one of several swine influenza A viruses . Influenza A *(* H١N١) shown to be major global health problem with world health organization . In Egypt ,there many cases infected with H١N١. To prevent further spread of infection Proper knowledge regarding the swine flu disease are crucial protection'against the disease. One group at higher risk of infection are pregnant women some of them may incorrect knowledge regarding swine flu disease.

PURPOSE: To assess pregnant women knowledge regarding A (H١N١) swine influenza.**DESIGN:** Adescriptive study design was used. **SETTING:** The study conducted at Benha University Hospital in antenatal clinic .This setting was choosen as considered educational place.**SUBJECTS** : A convenient sample was used ,٢٠٠ pregnant women were recruited in the study ,this size represent one third of the last year of pregnant women attending ante natal clinic ,free from obstetrical and medical problems in second tri-miester of pregnancy.**RESULTS:** The main findings of the present study , ٤١.٠٪ of them were multi gravidae , ٧٨.٠٪ of them in second trimister of pregnancy-Regarding knowledge ,٥٤٪ of them had satisfactory knowledge , while ٤٦٪ had unsatisfactory knowledge .Regarding Practices ,٦٨.٥٪ of them had poor practies, while ٣١.٥ % had good practies about swine flu disease.

CONCLUSIONAND RECOMMENDATIONS: The present study concluded that pregnant women(٥٤٪) had satisfactory knowledge and poor practices regarding swine flu disease . Based on the findings , it is recommended to provide health education for pregnant women about swine flu disease and its preventive measures at the antenatal clinic through media.acupressure sp٨ for reducing pain on large scale sample size for generalization.

Keywords:Sp٨ acupressure, Dysmenorrhea

Introduction:

Pregnancy in the women's life is aperiod that posses many new challenges and many problem .These changes that occur in the pregnant women body are caused by several factors .Many of these changes are the result of hormonal influence, some

caused by the growth of the fetus inside the uterus, and are the result of the pregnant physical adaptation to these changes .These changes in the cardiovascular system and respiratory system, including increased herart rate, decreased lung cabacity ,renal disorders may also increase the women's risk factor to infection ***(WHO, ٢٠١٠)***. Pregnant women's who infect with swine flu disease more likely to develop severe illness that requires hospitalization .Take antiviral drugs to protect themselves and their fetuses. The Center for Disease Control and Prevention Committee on Immunization Practices recommended that H١N١ vaccination efforts focus on five groups. One of those groups is pregnant women ***(CDC, ٢٠٠٩).***

The nurse play an important role for pregnant women in early detection and prevention of influenza A(H١N١). Educate the pregnant women about the protective measures that protect the mothers and her fetuses from infection during pregnancy as: frequent hand-washing, a balanced diet with fresh fruits and vegetables, whole grains, and lean protein, sufficient sleep, regular exercise, and avoiding crowds, frequent follow up

for pregnancy progress ***(WHO, ٢٠١١).***

Significance of the study:

The pregnant women have an increased risk of sever disease and hospitalized with swine flu. That susceptible pregnant women increased morbidity and mortality. The general incidence of swine flu in Egypt According the Egyptian Ministry of Health report until January ٢٠١٠ the total estimated cases infected with A(H١N١) reached to (٢٠٤.٢٦) cases per million and (٣.٤٧) deaths per million ***(www.Flucount,org).*** (٥٧) cases of them was pregnant women

(WHO, ٢٠١٠). World wide the ٢٠٠٩ A(H١N١) hospitalization rate was significantly higher among pregnant than non pregnant women (٥٥.٣ compared with ٧.٧ per ١٠٠.٠٠٠ population) this still holding up as the epidemic grow ***(WHO, ٢٠١١).*** So this study was conducted To assess pregnant women knowledge regarding A(H١N١) swine influenza.

***Aim of The Study*:**

The aim of this study: To assess pregnant women knowledge egarding A(H١N١) swine influenza this aim achieved through:-

١. Evaluate the pregnant women knowledge regarding A(H١N١)
swine influenza.
٢. Identify the protective measures that pregnant women fulfill
regarding A(H١N١) swine influenza .

Research design:

١. Do pregnant women have knowledge about swine influenza?
٢. Do pregnant women fulfill protective measures regarding A(H١N١) swine influenza ?

The subjects and methods of this study were portrayed under four main design as following :

١- Technical design
٢- Operational design
٣- Administrative design
٤- Statisticaldesign

I-Technical Design:

Research design:

Descriptive study

Setting:

The study conducted at Benha University Hospital for pregnant women attending ante-natal clinic .This setting was choosen as considered educational place and flow rate high.

Subjects (Sample):

- **Sample type:-** A convenient sample.
- **Sample size**:-Two hundred

pregnant women attending ante natal clinic
the Sample size represent one third of the last year of pregnant women attending ante natal clinic they were choosen Untill the sample size completed.

Sample criteria: pregnant women free from obstetrical and medical problems , in second tri-miester of pregnancy.

Sample technique: the researcher introduced her self and explained the purpose of the study to pregnant women who met the critrria for inclusin
in the sample repeated three days weekly from ١٠AM to ١٢PM untill the sample completed.

Ethical considerations :-

Each woman was informed about the purpose and benefits of the study at the beginning of interview and time through out the study .

- An oral consent was obtained from each woman before starting the data collection.
- Confidentiality was ensured through out the study process , where personal data were not disclosed , and the women were assured that all data are used only for research purpose .
- Each woman was informed that participation is voluntary and her with drawal will not affect her care .

Tool of data collection:

It was designed by the researcher after reviewing related literature . It was written in an Arabic language in the form of multiple choice questions (MCQ).Close and open ended questions. To evaluate the pregnant women knowledge about swine flu disease and follow up protective measures .**Astructured Interview questionnaire sheet:- Appendix (١)**

It is composed of three parts:-

l.First part: demographic characteristics of the study sample:- as age, level of education ,occupation and residence .

٢.Second part : Obstetric history:-as number of pregnancies, gestational age ,number of abortions, complications of current pregnancy ,....etc

٣.Third part : Knowledge questionnaire: It evaluates the pregnant women knowledge regarding swine influenza, which included ١٢ questiones about: heard any thing about the disease, sources of knowledge, modes of transmission, at risk groups, spread to humans , signs and symptoms , incubation period ,knowledge about swine flu virus , presence of treatment and vaccine.

Scoring of knowledge:

A score for each answer on questions of knowledge given as follows :

١ = Correct answer

٠ = Incorrect answer

Total score of knowledge =١٢

The knowledge was considered satisfactory if percentage of the total knowledge score equals or more than ٧٠ % , and considered unsatisfactory if the percentage of total knowledge score is less than ٧٠٪ . It means if total knowledge score > ٦, it is considered satisfactory knowledge, while < ٦ it is considered unsatisfactory.

Practices throuhg asking questions : (protective measures) which included (٢) questions about: If develop symptoms of swine flu or exposed through one of the family members and protective measures during pregnancy.

Scoring of practices:

A score for each answer on questions of practice given as follows :

٢ = good practice

٠ = poor practice

Total score of practices = ٤

The practices was considered good if total Practices throuhg asking questions equals or more than (٢), and considered poor if the total scores is less than (٢).

٢- An educational health promotion guidelines (Appendix ٢)

The educational health promotion guidelines was designed to increase awareness of pregnant women about swine influenza.

It consisted of the following items:

- Definition of swine influenza .
- Causative organism.
- Incubation period .
- Signs and symptoms.
- Mode of transmissions .
- Vaccination and treatment.
- Vulnerable groups.
- Foods that increase immunity system.
- Healthy practices toward swine influenza.
- Protective measures during pregnancy.

II-Operational Design*:*

This included : A-Preparatory phase, B- Pilot study, C-Field work

A- Preparatory phase :- Areview of the current and past relevant literature related to using the available local and international books, magazines , periodical and computre search was done to Assess pregnant women knowledge regarding A(H١N١) swine flu. To assess the tool of the study.

B-Pilot study:- The pilot study was carried out during (november - ٢٠٠٩) it involved ١٠٪ of total sample (٢٠ pregnant women). To test tool validity and reliability the tool was reviewed by three medical and nursing expertise in the field of obstetrics and gynecology and modification were carried out according to the judgment on

clarity of sentences and the appropriateness of content. Required modifications were done in the form of omission of some questions such as (effect of A (H١N١) on the humans ,where the human cases occurred , and foods that increase immune system) .women involved in the pilot were excluded from the study.

C- Field work conducted during period from the beginning of (febrauary -٢٠١٠) to end of (August -٢٠١٠) .The researcher attended the ane-natal clinic at benha universiy hospital three days weekly from ١٠AM to ١٢PM untill the sample completed.

The sheet is filled by the researcher through an interview with pregnant woman in about(٢٠) minutes for each woman ,The average number interviewed were three pregnant women per day. Until the predetermined numbers were fulfilled .Utilizing proper channel of communication and explaining the purpose of the study before beginning the questions

III-Administrative Design

Necessary official approval to conduct the study obtained from the Dean of Faculty of Nursing to the Director of (Benha University Hospital). The title and the objectives of the study had been explained to them to obtain their permission and help in the conduction of the study and to facilitate data collection

IV- Statistical Design

Data entry using the stastical package for social science (spss) version ١١

Quantative data were expressed as means and standard deviations (x+SD) Qualitative data were expressed as number and percentage (No&%) and analysed by applying Chi-square test(x^2).

Significant levels were considered as follows :

P<٠.٠٥ Significant

p>٠.٠٥ Not significant

p<٠.٠٠١ Highly significant

Results: The Results of this study were presented in the following sequences.

Characteristic of study group:-

Part (I): Represent the following:

- Distribution of studied sample regarding socio-demographic data
  Table (١) ,Figure (١)

Part (II); Represent the following:

- Distribution of studied sample regarding obstetric history Table (٢)

Part (III): Sample dist
relation to
knowledge T
,Figure(٢-٣)

Part (IV): Distribution of sample regarding Practices of swine flu contact and prophylactic measures Table (٧) ,Figure (٤)

Part (VI): Relation between total knowledge & socio - demographic data Table (٨)

Part (VII): Relation between swine flu contact practices and socio-demographic data Table (٩)

Part (VIII): Total knowledge and total practices of study sample Table (١٠)

Table (١): Socio-demographic data of study sample

SpcicHdemographic data	N=٢٠٠	
	No	%
١-Age in years		
<٢٠	١٥	٧.٥

٢٠-	١١٠	٥٥.٠
٣٠-	٦٢	٣١.٠
٤٠-٤٤	١٣	٦.٥
X ± S D	٢٣.٦ ±.٧١٧	
٢-Residence		
rural	١٣٦	
urban	٦٤	
٣-Level of Eduction		
Illetrate	٣٦	
Education less than ١٢ years	٧٥	
Education more thn ١٢ years	٨٩	
٤- Occupation		
Working	٥٠	
House wife	١٥٠	
٥- Marital status		
Married	١٩٥	٩٧.٥
Divorced	٥	٢.٥

Table (٢) : Sample distribution in relation to swine flu knowledge

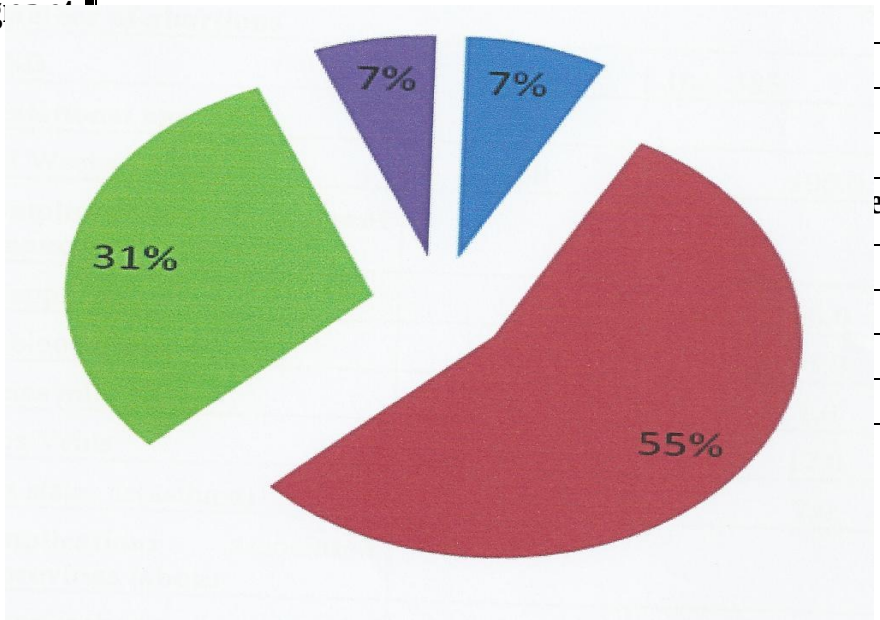
Knowledge questions	N=٢٠٠ No	%
Heard about swine flu		
Yes	٢٠٠	١٠٠.
No	-	-
Sources of information about the disease		
The media	١٠٨	٥٤.
New spapers and magazines	٣٧	١٨.
Health units	٣٧	١٨.
Afriend or family member	١٧	٨.٥
Othre states as (street)	١	.٥
spread of virus		
Yes	٢٠٠	١٠٠.
No	-	-

Table (٣): Distribution of sample knowledge about swine flu virus

Knowledge questions	N=٢٠ No	%
Swin flu virus is …		
	٩٢	٤
	٣١	١
	٤٠	٢
	٣٧	١
e		
	١٦٢	٨
	٧	٣
	٣١	١

Figure (١): A

preg



	Total Practices	Good		Poor	
		No	%	No	%
,t know **vaccine affect the fetus**		٦٣	٣١.٥٪	١٣٧	٦٨.٥٪
t know		١٢٠	٦٠.٠		

Table (٤: Distribution of sample regarding Practices of swine flu contact and protective measures

Practices questions	N = ٢٠٠	
	No	%
hen develop symptoms of swine flu or exposed to ily member		
swer	١٠	٥.٠
mplete answer	١٠٥	٥٢.٥
plete answer	٨٥	٤٢.٥
ective measures during pregnancy		
swer	٩	٤.٥
mplete answer	١١٣	٥٦.٥
plete answer	٧٨	٣٩.٠

Table (٥): Total knowledge and total practices of study sample

No =٢٠٠

Total Knowledge	Satisfactory		Unsatisfactory	
	No	%	No	%
	١٠٨	٥٤٪	٩٢	٤٦٪

Disscussion: Swine influenza is a highly contagious acute respiratory disease of pigs, caused by one of several swine influenza A viruses. Swine influenza viruses are most commonly of the H١N١ subtype, but other subtypes are also circulating in pigs (e.g., H١N٢, H٣N١, H٣N٢). Sometimes pigs can be infected with more than one virus type at a time ***(Admin , ٢٠٠٩)***.During pregnancy the immune system is very low that expose the pregnant women to swine flu disease.

The present study was conducted to assess pregnant women's knowledge regarding swine flu disease .The sociodemographic data of the studied sample revealed that majority of them ranged between ٢٠ -< ٣٠ years old, more than two thirds living in rural areas, less than half received high education , three quarters were not working and the majority of them were married **Table(l).**

Concerning obstetric history of the studied sample .The present study showed that, the majority of them were multi gravidae, had normal labour, no previous abortion.About two thirds had no complications during pregnancy , more than three quarters had no complications associated with previous labour, all the studied sample in the second tri-meister of pregnancy.

This findings is in the same line with ***(Balkhy et al., ٢٠١٠)*** those carried out a study among the Saudi population to assess Awareness, attitudes, and practices related to the swine influenza pandemic and reported that Most of the participants were in the age groups of ١٨-٢٤ years (٥٣.٢٪) and ٢٥-٣٩, years (٣٢.٨٪). About one-half of the participants were married (٥٢.٥٪), and the majority had completed their high education (٨٩.٦٪). Nearly two-thirds (٦٢٪) of the subjects were employed ,

less educated , and more likely to be married and unemployed .

In this study ,the whole studied sample heard about swine flu disease, for most of them the main source of their knowledge was through radio and TV, while the minority least source of knowledge was from friends, Table (٣),whole studird sample said that virus spread to humans.These findings are in agreement with ***(Balkhy et al., ٢٠١٠)***.those concluded that majority (٨٤.٢٪) of the participants received their information about swine flu from the television; ٥١.١٪ received information from written media such as newspapers and magazines, while ٤٨.٢٪ received information from the internet. Only ١٦.١٪ received their information from a physician or a health educator.

The present study results demonstrated that about one third of pregnant women's know all methods of transmission.The most important method of transmission are reported by one third of pregnant women's are Sneezing or coughing from infected person , while minority of them mentioned touch contaminated things. Table (٤) These findings are in agreement with those ***(Balkhy etal., ٢٠١٠)***. The majority of the participants (٩٥.٤٪) were aware that the disease was a viral illness; however, a large number also believed that the disease was an immunodeficiency disease (٢٧.٦٪). Most reported accurate information about the mode of transmission, although ٤٣٪ stated that direct contact was main mode of transmission .

In the current study ,about half of the studied group answered incomplete answer on the symptoms of swine flu disease ,while less than one third of pregnant women's answered I don't know. **Table** (٥) Regarding the incubation period of the swine flu disease in this study ,the most of the

studied sample saied Idon't know , while ٥.٥٪ of them saied correct answer(l-٤)days **.Table** (٥) These findings are similar to those reported by those ***(Balkhyetal., ٢٠١٠)*** That studied knowledge, attitude and behavioral changes in an Indian population during influenza A(H١N١) reported that Most participants agreed that the symptoms were the same as those of seasonal flu, although ١١٪ of participants assumed that this illness could cause immediate death. The majority of participants were not knowledgeable about the incubation period or the period of communicability (٦٣.٥٪ and ٨٠٪, respectively).about the incubation period of the swine flu disease .Also ***(Kamate et al; ٢٠١٠)***. Reported that ٥٩.٦٪ had no idea about the duration of the pandemic , ١٠.١٪ though that it would last less than month , ٢٠.٢٪ belived that it would last three to six months , ٨.١٪ though that it would last six months to one year , and only ٢٪ believed that it would last one to two years**.**

In the present study, regarding practies most of the studied sample had poor knowledge on the question of prophylactic measures during pregnancy. **Table** (٧). These findings are similar to those reported by those ***(Barr et al, ٢٠١١)*** who assesd Awareness, attitudes, and practices related to the swine influenza pandemic among the Saudi public found that only ٤٨.٣٪ of those interviewed were willing to comply with precautionary measures In their study, about two-thirds of all participants (٦٠.٨٪) reported either not taking any precaution, or taking minimal or mild precautions to prevent infection, with only ١٧٪ who reported high level of precautions. Those with a higher level of education, and those with a higher level of knowledge about H١N١.

This study showed no statistically significant relations

between Practices through asking questiones & socio-demographic characterstics of pregnant women **Table (٩).** This finding was on the contrary with ***(WHO and MOB, ٢٠١٠)*** that emphasis on increase knowledge of pregnant women's regarding preventive measures against swine flu infection.Regarding total knowledge, ٥٤٪ of them had satisfactory total knowledge , while ٤٦٪ had unsatisfactory knowledge .Regarding Practices ,٦٨.٥٪ of them had poor practices , while ٣١.٥ % had good practies about swine flu disease.

Conclusion

The present study showed that media ,radio and TV are the most effective methods of health education about different health topics. Due to the wide range of the TV among all population, regardless of age ,education ,occupation due to its continous teaching program about swine flu disease .

Regarding knowledge,about half of Pregnant women(٤٦٪) had unsatisfactory knowledge ,more than half (٥٤٪) had satisfactory knowledge .Regarding Practices ,٦٨.٥٪ had poor practices, while ٣١.٥ % had good practies regarding swine flu disease.There are no statistically significant relations between knowledge and age and occupation . and ahighly statistical significant relation between knowledge and education and residence .There are no statistically significant relations between Practices throuhg asking questions & socio-demographic characterstics of pregnant women.

Recommendations

- Increasing health educational message provided through TV as it is

avery effective method of health education .The message should include detailed information about the disease symptoms in humans and practical methods of protection .

- Further research: Increasing awareness among pregnant women by the ante natal care neurses to improve their knowledge regarding swine flu disease.

References

AdelPillitter, (٢٠١٠): Maternal and child health nursing: care of the child bearing and child bearing family /٦th ed Lippincott Williams & Wilkins.pp ٢١٨-٢٤٢.

Admin,(٢٠٠٩): what about swine flu: availabe at (weki pedia.org) :time of researching this paper in ٤/٢٠١١ at ١ la.m.

Balkhy etal,(٢٠١٠): Hanan H Balkhy ,Mostafa A Abolfotouh, Rawabi H Al-Hathlool* andMohammad A Al-Jumah: King Abdullah International Medical Research Center (KAIMRC), King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), Riyadh, Kingdom of Saudi Arabia.

Barr M, Raphael B, Taylor M, Stevens G, Jorm L, Giffln M, et al (٢٠١١): Pandemic influenza in Australia: using telephone surveys to measure perceptions of threat and willingness to comply. Infect Disease.

Btyth, CC, Iredell, JR, Dwyer, DE.(٢٠٠٩): Rapid-test sensitivity for novel swine-origin influenza A (H١N١) virus in humans.

Brankston G, Gitterman L, Hirji Z, et al,(٢٠٠٧): Transmission of influenza A in human beings. Lancet Infect Diseases Apr;٧(٤):٢٥٧-٦٥.

Centers for Disease Control and Prevention, (٢٠٠٩) : Interim CDC Guidance for Public Gatherings in Response to Human Infections with Novel Influenza A (H١N١) .

Centers for Disease Control and Prvention,(٢٠٠٩): Novel influenza A (H١N١) Virus Infections Worldwide, ٦ May٢٠٠٩. Morbidity and Mortality Weekly Report.

Hlnl prevention Available at: http://www.cidrap.umn.edu/cidrap/ content/influenza/swineflu/news /accessed may,٢٠٠٩)pregnancy-br.html (accessed Aug (٢٠٠٩).

Hlnl treatmentAvailable at: http://www.fda.gOV/MedicalDevices/ Safety/ EmergencySituations/ucml٦١٤٩٦.htm accessed Aug (٢٠٠٩).

Swine flu during pregnancy Available at: http://www.who.int/csr/ disease/swineflu/assess/disease_swineflu_a ssess_٢٠٠٩/en/index.html (٢٠٠٩) Retrieved Decembe ,٢٠٠٩.

Hlnl measures Available at: http://www.who.int/csr/ don/٢٠٠٩_ll_٢٧a/en/index.html (Accessed November ٢٧, ٢٠٠٩).

Kamate et al,(٢٠١٠): Shivilingesh Krishnappa Kamate, Anilgrawal,Harsh Vardahan. Chaudhary, Karanaprash Singh, Prashant Mishra, Kalilash Asawa: Department of public health dentistry, pracific dental college and hospital, debari, udaipar Rajathan, India

influenza pandemicavailable at: http://www.who.int/mediacentre/Pandemic_h ١ n ١ _presstranscrip٢٠ ٠٩.pdf. Retrieved November ٣٠, ٢٠٠٩).

Hlnl tratment Available at: www.cdc.gov/flu,٢٠٠٩.

Hlnl precaution Available at: www.cdc.gov/hlnlflu/guidance/ public_gatherings.htm. Accessed November ٣٠, ٢٠٠٩).

Infection measures as isolation Available at: www.cdc.gov/ ncidod/dhqp/ gMsolation.html accessed Aug ,٢٠٠٩).