

Study the Pregnant Women's Knowledge, Attitude and Compliance with Precautions Measures regarding Corona COVID-19 Infection

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Abstract

Aim of this study: Was to study the Pregnant women's knowledge, attitude And compliance with precautions Measures Regarding Corona COVID-19 Infection. **Design:** A descriptive study design was utilized to conduct the study. **Setting:** At obstetrics outpatient clinic at Benha University hospital. **Sampling:** A convenient sample included 366 pregnant women. **Tools of data collection:** Two tools were used. **(I)** A structured interviewing questionnaire to assess pregnant women's knowledge, self-reported questionnaire to assess pregnant women's compliance with precautions measures regarding corona covid-19 infection. **(II)** Modified likert scale to assess attitude. **Results:** (74.9%) of pregnant women had incorrect knowledge regarding corona virus, Additionally, (77.3%) of the studied sample have negative attitude . However (67.2%) of the studied sample are not compliance with precautions measures regarding corona COVID-19 infection regarding corona COVID-19 infection. Also, there was significant positive correlation between total knowledge, total compliance and total attitude regarding COVID19. **Conclusion:** Nearly three quarters of the studied sample had incorrect knowledge, more than three quarters had negative attitude, and more than half of the studied sample were not comply with precautions measures regarding corona virus infection COVID-19. **Recommendation:** Design and implement counseling session, booklet and brochures to enhance pregnant women's knowledge and compliance with preventive measures regarding corona COVID-19 infection.

Key words: Attitude, Compliance, Corona COVID-19 infection, Knowledge, Pregnant women.

Introduction

In December 2019, the World Health Organization revealed that a novel coronavirus (SARS-COV-2) caused an outbreak of the coronavirus COVID-19 infection in Wuhan, China. Infection with Coronavirus COVID-19 can cause a wide range of diseases in mammals and birds, including enteritis in dairy cows and pigs,

upper respiratory disorders in hens, and potentially fatal human respiratory infections (**World Health Organization, 2019**).

Also, from 2019 to 2021, COVID -19 will cause 1,719,508 million cases and 2,784.377 million fatalities worldwide. In addition, there were 421,975 cases in Africa from 2019 to 2021, with 112,169 deaths, including 3,111,562,904 cases in North America, including 184 deaths. There were

772,847 fatalities in Latin America, 17,698,461 deaths in Asia, 43,110,279 deaths in Europe, 946,283 deaths in the Middle East, 6,576,974 deaths in the Middle East, and 200,686 deaths in Egypt. From 2019 to 2020, there were 9,559 cases of COVID-19 in Kalyubia Province, with 687 deaths in the same year **(WHO, 2019)**.

In addition, significant problems such as hypoxemia, acute respiratory distress syndrome, arrhythmia, shock, acute cardiac injury, and acute kidney injury have been observed in COVID-19 patients. According to research including 99 patients, around 17% of patients developed ARDS, and approximately 11% died of multiple organ failure. The average time from the onset of symptoms to the onset of ARDS is 8 days **(Chen et al., 2019)**.

Initial COVID-19 management must be addressed to identify probable cases early, and isolation and supportive care, including oxygen therapy, fluid management, and antibiotic treatment of secondary bacterial infections, should be indicated. Some COVID-19 patients develop ARDS and septic shock quickly, resulting in multiple organ failures **(Wang, 2020)**.

The disease is mostly managed on a supportive basis, corresponding to the severity of the condition as defined by the WHO. If sepsis is discovered, empirical antibiotic therapy should be administered based on the clinical diagnosis, local epidemiology, and drug susceptibility data. Glucocorticoids should not be used routinely unless there are additional indications. Corticosteroid treatment is likewise not supported by clinical evidence **(Gidengil et al., 2020)**.

Nurses have a critical role in the care of COVID-19 patients since they are the ones who screen, classify, care for patients,

communicate with caregivers, and provide health education on coronavirus prevention. During the COVID-19 pandemic, nurses dealing with urgent situations should be able to identify pregnant women and play different roles as researchers, leaders, health educators, and healthcare providers to limit illness incidence and enhance maternal outcomes **(Huang et al., 2020)**.

Nurses should continue to execute their tasks, have a good attitude toward the current situation, and engage in all activities relevant to female care during the COVID-19 epidemic. It also needs to keep learning and implementing infection control, new policies and procedures, and managing supply and quarantine units **(Centers for Disease Control and Prevention, 2019)**.

Corona virus COVID-19 was the nursing concern because they play a multi definable role as a health educators, care givers, researchers and leaders .So the present study was conducted to enhance the pregnant women knowledge , attitude and compliance with precautions measures regarding corona COVID-19 infection .

Significance of the study

In December 2019, a new viral infection type appears in Wuhan, China. It has been called novel coronavirus disease by the World Health Organization. The unknown nature of the virus has caused an outburst of health systems generating alarming death rates in many countries worldwide. From reports of previous epidemics, studies reveal that the dispersal capacity of COVID-19 virus is much wider than SARS or MERS **(Petrosillo N, 2020)**.

Corona virus precautions measures was the nursing concern because nurse as a health care provider and health educator must enhance pregnant women knowledge ,attitude

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and compliance with precautions measures regarding corona virus precautions measures .

Aim of the study:

To study the pregnant women's knowledge, attitude and compliance with precautions measures regarding corona COVID-19 infection.

Research questions:

- 1-What is pregnant women's knowledge regarding corona COVID-19 infection?
- 2-what is pregnant women's attitude regarding corona COVID-19 infection?
- 3-Are pregnant women's correctly comply with personal preventive measures related to corona COVID-19 infection?
- 4- What is the relation between knowledge, attitude and compliance with personal preventive measures regarding corona COVID-19 infection?

Subjects and methods :

Study design: A descriptive design was used to conduct the study.

Study Setting

The study was conducted at an obstetrics outpatient clinic affiliated to Benha University Hospital.

Sampling

Sample type: A convenient sample.

Sample size: 366 pregnant women

Tools of data collection

Two tools were used

Tool (I): A Structured interviewing questionnaire included 3 parts:

Part (1): General characteristics of pregnant women and included 4 items.

Part (2): Pregnant women's knowledge related to corona virus infection and it was adapted from (Ferdous et al. , 2020) and included 20 questions .

Knowledge scoring system

Each correct answer was assigned score (2) and score (1) was given for incorrect answer.

The total knowledge score:-

Correct knowledge $\geq 70\%$

Incorrect knowledge $< 70\%$

Part (3): A self-reported questionnaire was to assess pregnant women's compliance with personal precautions measures regarding corona COVID-19 infection and included 10 statements.

Compliance scoring system: -

Each statement was assigned score (2) for comply and a score (1) for not comply

Total compliance scoring system: -

High compliance $\geq 60\%$

Low compliance $< 60\%$

Tool (II): Modified likert scale: Pregnant women's attitude concerning corona COVID-19 infection, adapted from (Ferdous et al., 2020) and included 10 statements.

Scoring system for attitude:

Each item was assigned based on three points of likert scale. a score (2) for agree, a score (1) for uncertain and a score (0) for disagree.

Total attitude score: -

Positive attitude $\geq 60\%$

Negative attitude $< 60\%$.

Tools validity and reliability:

All tools of data collection were sent to three specialized University Professors according to their comment's modifications were considered. expertise in Obstetrics and Gynecological Nursing tested content validity, clarity, relevance, comprehensiveness, and applicability of the studied tools. The reliability was done by cronbach`s alpha coefficient test, which revealed that the knowledge assessment questionnaire`s internal consistency was 0.81 and the internal consistency of the attitude assessment scale was 0.79.

Ethical consideration:

Approval was obtained from the scientific Research Ethical Committee at Faculty of Nurse Benha University. Approval to collect data from Benha University Hospital was

obtained from hospital manger. The aim of the study was explained to all participants to obtain their consent to participate in the study. Data included in the tools did not touch tradition, culture, religious and ethical issues. Pregnant women were interviewed individually to maintain confidentiality. Each pregnant women have freedom to withdraw at any phase of the study. All tools of data collection were burned after statistical analysis to maintain confidentiality of the participants.

Pilot study:

The pilot study was conducted on 10 % of the total sample (37 pregnant women). It was conducted to test the simplicity, feasibility, clarity and applicability of the developed tool, also to find out the possible obstacles and problem that face the researcher and interfere with data collection. According to the result of the pilot study, modification was considered. The sample included in the pilot study was excluded in the study.

Field work

At the beginning, the researcher started with reviewing the current, past, national and international relevant literature related to study topic by using local and international books, journals, periodicals in addition to computer search to develop the study tools and content. Data were collected from the beginning of February 2021 to the end of July 2021, lasting 6 months. The researcher visited the pre mentioned setting from 9am to 12pm, three days /week and average time taken to complete each interview ranged from 25minutes. The researcher interviewed 3 pregnant women each day and according to their sequence of attendance at clinic registration books.

First: The researcher greeted the pregnant women, introduced herself, explained the

purpose of the study and obtained an oral consent to participate in the study

Second: A Structured interviewing questionnaire (tool I) was used to assess pregnant women general characteristics, knowledge and compliance with precautions measures regarding corona COVID-19 infection .

Lastly: Modified Likert scale (tool II) was used to assess pregnant women's attitude regarding corona COVID-19 infection.

- The previous steps were repeated until the total sample were done.

Statistical analysis:

- Computerized data entry and statistical analysis were done using Statistical Package for Social Science (SPSS) Version 22.

Results:

Table (1): Showed that 48.6% of the studied sample were in the age group 22<26 years old, with mean age of 28.2±8.4 years old. In terms of educational level, 35.5% of the studied sample had received secondary education. In addition, 66.9% of them were from rural areas. In addition, 67.5% among them were working.

Figure (1): Showed 74,9 % of the studied sample had in correct knowledge while 25,1 had correct knowledge (n=366).

Table (2): Showed that 77.3% of the studied sample had negative attitude and 22.7% had positive attitude regarding corona virus COVID-19 infection.

Figure (2): Showed that 77.3% of the studied sample had negative attitude and 22.7% had positive attitude regarding corona virus COVID-19 infection (n=366).

Figure (3): Showed that 67.2% of the studied sample not comply, while 22.7% comply with precautions measures regarding corona virus COVID-19 infection (n=366).

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Table (3): Indicates that there was a highly significant positive correlation between total correct knowledge, total compliance and their total positive attitude regarding COVID19 among the studied sample at ($P = < 0.01$).

Table (1): Frequency distribution according to the studied sample general characteristics (n = 366)

Items	N	%
Age		
18-<22 yrs.	62	16.9
22-<26 yrs.	178	48.6
26-<30yrs.	90	24.6
≥30 yrs.	36	9.8
Mean SD	28.2±8.4	
Educational level		
Illiterate	7	1.9
Read and write	38	10.4
Primary	82	22.4
Secondary	130	35.5
High level	109	29.8
Residence		
Rural	245	66.9
Urban	121	33.1
Occupation		
Working	247	67.5
Housewife	119	32.5

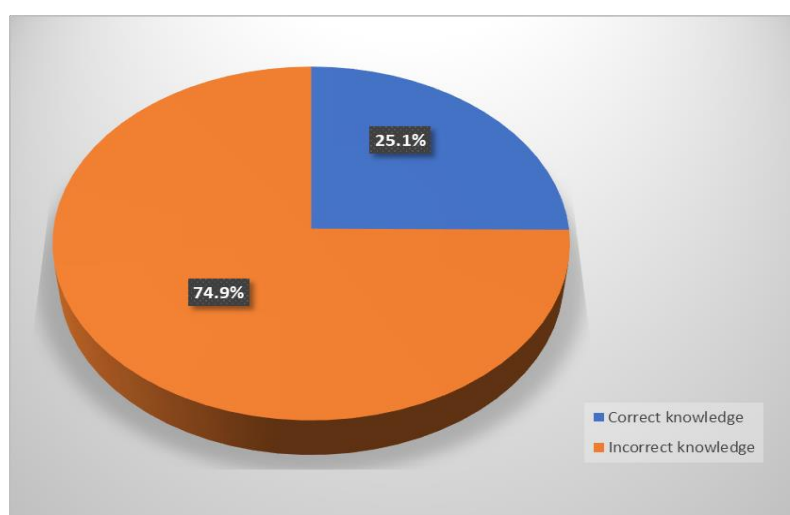


Figure (1): Percentage distribution of the studied sample according to their total knowledge about coronavirus infection COVID19 (n=366).

Table (2): Frequency distribution of the studied sample attitude regarding corona COVID-19 infection (n=366).

Items	Positive		Negative			
	Agree		Uncertain		Disagree	
	N	%	N	%	N	%
Pregnant women at higher risk for coronavirus COVID-19	304	83.1	22	6	40	10.9
Coronavirus COVID-19 passed from a woman to her unborn or newborn baby	39	10.7	75	20.5	252	68.9
Coronavirus COVID-19 can pass from woman to her fetus and from woman's milk to her newborn	14	3.8	60	16.4	292	79.8
A pregnant woman can protect herself from coronavirus COVID-19 through the utilization of preventive measures	124	33.9	105	28.7	137	37.4
Coronavirus COVID-19 can lead to abortion at the first trimester of pregnancy	176	48.1	142	38.8	48	13.1
Corona virus COVID-19 can cause premature labor at third trimester	92	25.1	146	39.9	128	35
A pregnant woman with confirmed or suspected coronavirus COVID-19 must undergo a cesarean delivery	131	35.8	160	43.7	75	20.5
Pregnant women should undergo a test to detect corona virus COVID-19	195	53.3	123	33.6	48	31.1
Corona virus COVID-19 transmitted through sexual intercourse to pregnant woman	25	6.8	62	16.9	279	76.2
Pregnant women take antibiotics and tranquilizers during coronavirus COVID-19 infection	80	21.9	138	37.7	148	40.4

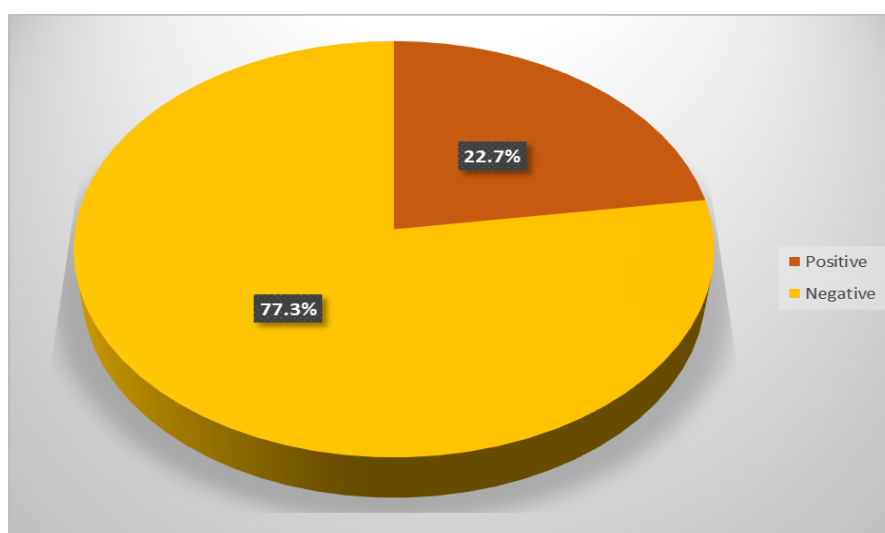


Figure (2): Percentage distribution of the studied sample according to their total attitude regarding corona COVID-19 infection (n=366).

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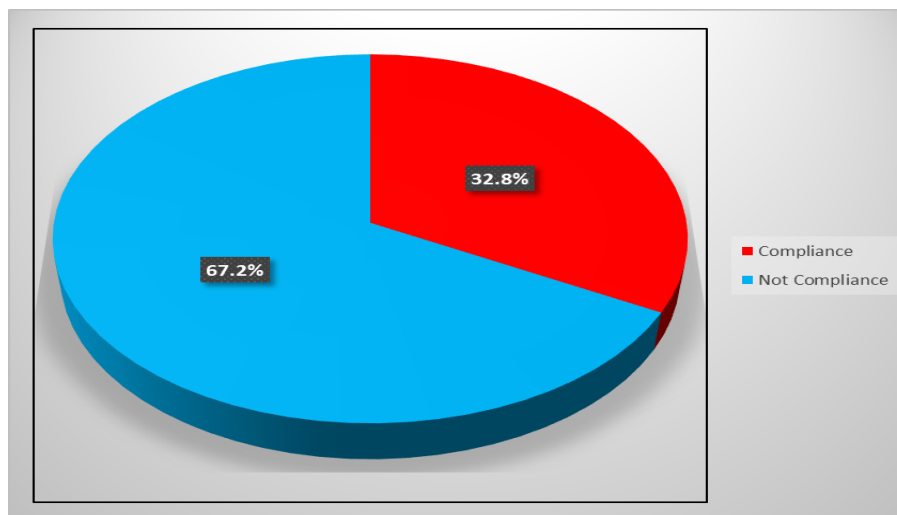


Figure (3): Percentage distribution of the studied sample according to their total compliance with personal preventive measures regarding corona COVID-19 infection (n=366).

Table (3): Correlation between total knowledge, total compliance, and total attitude regarding COVID19 among studied sample (n=366).

Items	Total knowledge	Total compliance
Total compliance	r = .424 P = .000**	
Total attitude	r = .294 P = .000**	r = .296 P = .000**

**highly significant at $p < 0.0001$.

Discussion:

The present study aimed to investigate pregnant women's knowledge, attitude, and compliance with precautions measures regarding corona COVID-19 infection. This aim was significantly achieved within the framework of the present study research question

The present study had reported that, nearly three quarters of the studied sample had incorrect total knowledge regarding corona virus infection COVID-19. This was agreed with **Fikadu et al., (2021)**. The similarity between both studies was attributed to be followed the same aim and methodology.

The present study had concluded that, more than three quarters of the studied sample had negative attitude regarding corona

COVID-19 infection. This was agreed with **Alsaleh et al., (2021)** this finding because the knowledge consequently had reflected upon the studied sample attitude.

The present study had illustrated that, more than half among the studied sample were not complied with personal precautions measures regarding corona COVID-19 infection. This was agreed with **Besho et al., (2021)**. the reason for not compliance among the studied sample the incorrect knowledge and negative attitude which consequently had reflected upon their noncompliance.

As previous mentioned the present study had revealed that, there were significant positive correlation between total knowledge, total compliance, and their total attitude regarding COVID19. This was agreed with **Anikwe et al., (2020)**. This was attributed

due to correct knowledge among the studied sample which consequently had reflected upon their attitude and compliance with precautions measures regarding corona COVID-19 infection.

It was evidence from the present study finds that the majority among the studied sample had incorrect knowledge which consequently had reflect upon their negative attitude, also their noncompliance with precautions measures regarding corona COVID-19 infection because knowledge was the base of attitude and compliance of precautions measures.

Furthermore, the present study finding had reported that the majority of studied sample were from rural area, where incorrect knowledge and negative attitude lead to health illiteracy and lead to unhealthy behaviors about precautions measures regarding corona virus COVID-19 infection. This directing our attention toward the importance of counseling session among pregnant women at antenatal clinic to enhance their knowledge, attitude and compliance with precautions measures regarding corona COVID-19 infection.

Conclusion:

Nearly three quarters of the studied sample had total incorrect knowledge about corona virus infection COVID-19. Similarly, more than three quarters of the studied sample had negative attitude regarding corona COVID-19 infection. While more than half of the studied sample did not comply with personal precautions measures regarding corona COVID-19 infection. Moreover, there was statistically significant positive correlation between total correct knowledge, total compliance and their total attitude regarding COVID19 among studied sample, so the present study aim was achieved through the research questions.

Recommendations:

- Design booklet, brochures and guidelines to be distributed among pregnant women at antenatal clinic to enhance their knowledge and compliance with preventive measures regarding corona COVID-19 infection.
- Design and implement counseling session among pregnant women at antenatal clinic to enhance their knowledge and compliance with preventive measures regarding corona COVID-19 infection.
- Design and implement awareness raising program conducted by Faculty Benha University to enhance pregnant women knowledge at rural area.

Further research:

- Replication of the present study on large sample size in different setting.

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دراسة معلومات وإتجاهات وإلتزام السيدات الحوامل بالإجراءات الإحترازية تجاه عدوى كورونا كوفيد-19

جهاد محمد عبد الرحمن عبيد - كاميليا رجب أبو شبانه - سماح عبدالحليم سعيد - زينب ربيع عبدالمرضى

يعد فيروس كورونا كوفيد-19 من الأمراض المعدية التي ظهرت التي ظهرت مؤخرا ثم تحول عالميا إلى جائحه كما أنه لم يتم إكتشاف علاج لفيروس كورونا إلى الآن فكانت بدايه ظهور فيروس كورونا في منتصف عام 1960 يصنف فيروس كورونا المستجد بأنه عباره عن إلتهاب رؤي حاد حيث كانت بدايه ظهور فيروس كورونا في سبتمبر 2019 في مدينه وهان الصينيه. لذلك هدفت هذه الدراسة الي معرفة معلومات وإتجاهات وإلتزام السيدات الحوامل بإجراءات الإحترازية تجاه عدوى كورونا الفيروسيه. وقد أجريت الدراسة في العيادات الخارجية بمستشفى بنها الجامعي. تم تطبيق الدراسة علي 366 سيده حامل . وكشفت النتائج في ضوء الدراسه الحاليه أن أغلب السيدات الحوامل ليس لديهم معلومات كافيه عن عدوي فيروس كورونا كوفيد-19 وبالتالي وجد أن معظمهن لم يلتزممن بإجراءات الوقائيه لمنع إنتشار العدوى وقد تبين أيضا أن أغلبهن ليس لديهم الإدراك والوعي لخطر إنتشار عدوي فيروس كورونا وأكدت النتائج انه يوجد علاقه قويه بين معرفه السيدات الحوامل بعدوى فيروس كورونا وإلتزامهم بالإجراءات الوقائيه وإدراكهم لخطر إنتشار فيروس كورونا كوفيد-19. ومن خلال النتائج تم التوصية إستخدام كتيبات وملصقات لزياده معرفه وإدراك وإلتزام السيدات الحوامل بإجراءات الإحترازية تجاه عدوي فيروس كورونا كوفيد-19 .