

Knowledge , Attitude and Practice Toward COVID – 19 in Mosul City

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ABSTRACT

Background: COVID-19 or the disease caused by the SARS – Cov2 – (sever acute respiratory syndrome caused by coronavirus 2). Coronavirus has caused a pandemic that has affected patients in more than 188 countries and territories around the world.

Prodigious restrictions and safety measures have been adopted by the governments to control the spread of wildfire coronavirus disease 2019 (COVID-19) pandemic. However, the effective implementation of these measures depends upon the knowledge, attitudes, and practices (KAP) of the people.

Materials and Methods: A cross-sectional survey was designed for the present study. The study was conducted from May 2020 to Septembet 2020 in Mosul city and include adults who are not working in the medical field and visit family medicine centers or hospitals for any reasons except having a disease

Results: this study revealed that about (190) 95% of the participant knows that the disease can be spread by droplet of patient and (136) 68 % of them believe that surfaces touched by patient could be one of the measures to transmit the disease and (156) 78% of them said that the disease may transmitted from asymptomatic patient.

Regarding the knowledge of the participant about measures used to prevent spread of Covid 19 this research demonstrates that (198) 99% and (190) 95% of them convinced that proper hand wash and maintain appropriate distance between himself and other person specially with symptoms is an effective measure to prevent transmission of the disease . On the other hand , this study check the attitude of the participants toward Covid 19 which found that 76% and 72% of them have a good attitude toward covid 19 which was washing hands regularly and put facemask while only 59% believe that curfew during pandemic state are useful and 58% found that the preventive measures advised by health personnel were useful and 63% still considered that this disease designed as a biological weapon.

Conclusions: According to this study about 65% of the participant have good knowledge , 63.4 % of them have good attitude a toward Covid 19 which is very important to limit it's transmission through the population .

Keywords: Knowledge , Attitude, Practice , COVID 19 .

المعرفة ، السلوك والممارسة تجاه كوفيد ١٩ في مدينة الموصل

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الخلاصة

خلفية الدراسة: كوفيد ١٩ او المرض الناتج عن فايروس سارس النوع الثاني (متلازمة الجهاز التنفسي الحادة الوخيمة الناجمة عن فيروس كورونا ٢). تسبب فايروس كورونا في حدوث جائحة أصاب المرضى في أكثر من ١٨٨ دولة ومنطقة حول العالم. اعتمدت الحكومات قيودًا وتدابير أمان هائلة للسيطرة على انتشار جائحة فيروس كورونا (كوفيد ١٩) . ومع ذلك ، فإن التنفيذ الفعال لهذه التدابير يعتمد على المعرفة والمواقف والممارسات للناس.

المواد والطرق المستخدمة في البحث: تم تصميم مسح مقطعي للدراسة الحالية. أجريت الدراسة من شهر أيار ٢٠٢٠ لغاية شهر ايلول ٢٠٢٠ في مدينة الموصل وتشمل البالغين الذين لا يعملون في المجال الطبي ويزورون مراكز طب الأسرة أو المستشفيات لأي سبب عدا إصابتهم بمرض.

النتائج: كشفت هذه الدراسة أن حوالي (١٩٠) ٩٥٪ من المشاركين يعرفون أن المرض يمكن أن ينتشر عن طريق قطرات المريض و (١٣٦) ٦٨٪ منهم يعتقدون أن الأسطح التي يلمسها المريض يمكن أن تكون أحد الإجراءات لنقل المرض. و (١٥٦) ٧٨٪ منهم قالوا أن المرض قد ينتقل من مريض بدون أعراض. فيما يتعلق بمعرفة المشارك بالإجراءات المستخدمة لمنع انتشار كوفيد ١٩ ، يوضح هذا البحث أن (١٩٨) ٩٩٪ و (١٩٠) ٩٥٪ منهم مقتنعاً بضرورة غسل اليدين بشكل صحيح ، والحفاظ على مسافة مناسبة بينه وبين الشخص الآخر خاصةً مع الأشخاص الذين لديهم أعراض إجراء فعال لمنع انتقال المرض. من ناحية أخرى ، تتحقق هذه الدراسة من موقف المشاركين تجاه كوفيد ١٩ والتي وجدت أن ٧٦٪ و ٧٢٪ منهم يتمتعون بسلوك تجاه كوفيد ١٩ جيد حيث كانوا يغسلون أيديهم بانتظام ويضعون قناع الوجه بينما يعتقد ٥٩٪ فقط أن حظر التجول أثناء حالة الجائحة مفيد و ٥٨٪ وجدوا أن الإجراءات الوقائية التي نصح بها العاملون الصحيون كانت مفيدة و ٦٣٪ ما زالوا يعتبرون أن هذا المرض مصمم كسلاح بيولوجي.

الاستنتاجات: وفقاً لهذه الدراسة ، فإن حوالي ٦٥٪ من المشاركين لديهم معرفة جيدة ، و ٦٣.٤٪ منهم يتمتعون بسلوك جيد تجاه كوفيد ١٩ وهو أمر مهم جداً للحد من انتقاله بين السكان.

الكلمات المفتاحية: المعرفة ، الموقف ، الممارسات ، كوفيد ١٩ .

INTRODUCTION

Coronavirus disease 19 or the illness caused by the SARS – Cov2 –virus which mean (sever acute respiratory syndrome caused by coronavirus 2). Coronavirus has make a pandemic that has impress patients in many countries and regions around the sphere. The number of infected people diagnosed to have coronavirus disease has more than 27 million on september 2020, and to 11 January 2021 exceed 890000 deaths from the disease.¹

Sever Acute Respiratory Syndrome –Corona Virus type2, as a beta corona virus, constitute about 88% of 2 batderived Sever Acute Respiratory Syndrome -like coronaviruses and distances from Sever Acute Respiratory Syndrome –Corona Virus (about79%) and MERS coronavirus (about 50%).² Their epidemics have hazards to world health due to increased rates of death of 9.6% for Sever Acute Respiratory Syndrome –Corona Virus and 34.4% for MERS coronavirus universally² . Coronavirus illness occur in 2019 is a highly communicable illness attributable to a coronavirus with a mean incubation period of 5.1 days . Corona virus has infect more than 200 countries and areas with more than 23 millions established cases as of August 27, 2020.³

Spread of Sever Acute Respiratory Syndrome – Corona Virus type2 can happen through direct, indirect, or close contact with diseased people through infected discharges such as saliva and respiratory secretions and droplets , which are released when a diseased people sneezes,coughs and talks. .Less than 10 respiratory droplets are 5-10 µm in diameter while droplets <5µm in diameter are stated to as aerosols. Respiratory droplet transmission can occur when a person is in close contact (within 1 metre) with a diseased people who has respiratory symptoms (e.g. coughing or sneezing) in these

situations , respiratory droplets that contain virus can arrive the mouth, nose or eyes of a contacted people and can develop infection, while indirect contact considering contact of a host with a contaminated things or surfaces may also be occur.^{4,5}

Remarkable constraint and safety manouvers have been achieved by the governments to control the transmission of wildfire coronavirus disease 2019 pandemic. Nevertheless, the effective accomplishment of these manouvers depends upon the knowledge, attitudes, and practice s (KAP) of the community.⁶

AIM OF THE STUDY

To determine the knowledge of people that visit family medicine center and hospitals about Covid 19 and what is there attitude and practice toward such a patient. .

SUBJECTS AND METHODS

A cross-sectional study design has been adopted for this study. The study was conducted from May 2020 to September 2020 in Mosul city and include adults whose job was far from the medical field and visit family medicine centers or hospitals for any reason except having the disease a special questionnaire form filled in by the individual himself directly after securing the protective measures to prevent the transmission of disease . Those who have the following criteria will be included in this study :

1. Adult person (≥18 years old.)
2. Able to apprehend and fill the content of the questionnaire.
- 3.Presumably to be healthy and not have any symptom at time of filling questionnaire

The following criteria were excluded :

- 1.Those who have any illness or other reasons make them unable to fill the questionnaire
- 2.Those who refused to contribute in research .

The questionnaire was prepared in Arabic, which is the main language in Iraq, and it covered the socio-demographic informations, knowledge about corona virus disease 19, practices about the illness, and attitude against preventive measures toward coronavirus disease 19⁷ . The sample size was 200 participants and randomly selected and agreement has been taken from each participant and official permission from health care institutions has been obtained .

RESULTS

This study shows that (84) 42% of participant their ages between 18 to < 30 years while those who are more than or equal to 40 years was (46) 23 % from the participant as shown in table 1.

Regarding gender (108) 54% of the participant were male and (96) 48% of those included in this study finished their university or high education and only (16) 8% of them finish primary school as seen in table 1.

On the other hand (130) 65% of participant was single and (132) 62% of them was employed as it evident in table 1 .

Table 2 and table 3 revealed that (190) 95% of the participant knows that the disease can be spread by droplet of patient and (136) 68 % of them believe that surfaces touched by patient could be one of the measures to transmit the disease and (156) 78% of them said that the disease may transmitted from asymptomatic patient , while (30) 15 % of the sample think that dealing with pets may transmit the disease and (86) 43% of them still consider that the goods imported from China are infectious.

Concerning common symptoms of COVID 19 , table 2 reveals that 89%, 88%, 91%, 84%, 90% and 91% of the participants know that cough , body aches, loss of taste and smell , COVID 19 more serious for the old age people and more dangerous for those with chronic illness respectively.

Table 1 Socio-demographic characteristics of the participants N=200

Age	No.	%
17– < 30 year	84	42%
30 – <40 year	70	35%
≥ 40 year	46	23%
Gender	No .	%
Male	108	54%
Female	92	46%
Level of education	No .	%
Primary school	16	8 %
Secondary school	88	44%
University and high education	96	48%
Marital status	No .	%
Married	70	35%
Single	130	65%
Employment state	No .	%
Employed	132	62%
Unemployed	6	3 %
Private job	70	35%

Table 2 Knowledge about mode of transmission and common symptoms of Coronavirus disease among the participant

Knowledge items COVID-19 spreads by :	Agree		Disagree		Not sure	
	No .	%	No.	%	No.	%
Droplets of diseased person (with cough ,sneezing and expiration)	190*	95%	2	1 %	8	4 %
.Surfaces touched by affected person	136*	68%	4	2 %	60	30%
Touching coins and banknotes	180	90%	8*	4 %	12	6 %
Dealing with pets	30	15%	84*	42%	86	43%
Feces (e.g. in public water cycles)	174	87%	14%	7 %	12	6 %
Goods imported from China	86	43%	48 *	24%	66	33%
Coronavirus disease could be spread from asymptomatic people	156*	78%	8	4 %	36	18%
Common symptoms include						
Fever	178*	89%	10	5 %	12	6 %
Dry cough	176*	88%	10	5 %	14	7 %
Body aches	182*	91%	14	7 %	4	2 %
Difficulty in breathing	118*	59%	72	36%	10	5 %
Loss of taste and smell	168*	84%	20	10%	12	6 %
Vomiting	98	49%	72*	36%	30	15%
Corona virus disease may be more serious among old age people	180*	90%	8	4 %	12	6 %
Coronavirus disease may be more serious in those who have chronic illnesses	182*	91%	8	4 %	10	5 %

* Correct answer

Regarding the knowledge of the participant about measures used to prevent spread of COVID 19 table 3 demonstrates that (198) 99% , (190) 95% , (190) 95%, (192) 96% and (196) 98% of them convinced that proper hand wash, maintain appropriate distance between themselves and others specially those with symptoms , avoid rubbing eyes, touching nose and mouth , cover the mouth and nose while coughing or sneezing by bending elbow and stay home without going out unless there is necessary things specially at pandemic state respectively an effective measure to prevent transmission of the disease . So according to this study about 65% of the participant have good knowledge toward COVID 19 .

Table 3. Knowledge about preventive measures toward Corona virus disease 19 among participant

Knowledge items Measures to avoid transmission of the infection include	Agree		Disagree		Not sure	
	No .	%	No.	%	No.	%
Adequate hand sterilization and washing	198*	99%	0	0 %	2	1 %
Keep an adequate distance between yourself and anyone suspected to have COVID 19	190*	95%	2	1 %	8	4 %
Avoid put your hand on nose , mouth and eyes	190*	95%	4	2 %	6	3 %
Wearing a facemasks in open places not over crowded	186	93%	6*	3 %	8	4 %
Taking antibiotics	52	26%	108*	54%	40	20%
Eating garlic	146	73%	26*	13%	28	14%
Bending the elbow or use tissue paper to cover the mouth or nose during coughing or sneezing	192*	96%	2	1 %	6	3 %
Stay at home and go out for necessary thing specially at pandemic state	196*	98%	0	0 %	4	2 %

* Correct answer of table 2 and 3 = 65%

On the other hand , this study check the attitude of the participants toward COVID 19 which found that the attitude of those who wash their hands regularly was 76%, those who put facemask was 72% , those who have any symptoms similar to COVID 19 will inform health authorities was 70% and those will take a vaccine once it be available was 75%, while only 59% believe that curfew during pandemic state are useful and 58% found that the preventive measures advised by health personnel useful as shown in table 4 .

Table 4 Attitude of the participants toward the preventive measures of COVID 19

Attitude items	Agree		Disagree		Not sure	
	No .	%	No.	%	No.	%
I will always greet my friends with a handshake	66	33%	132	*66%	2	1 %
I will always greet my family with a hug even in pandemic	72	36%	124	*62%	4	2 %
I wash my hands frequently and for adequate duration	152	*76%	4	2 %	44	22%
I frequently wear a facemask to prevent spread of infection to me	144	*72%	10	5 %	46	23%
If I contacted a diseased person with corona virus disease, I will notify the health authorities	108	*54%	28	14%	64	32%
If I have the symptoms similar to those of Covid 19, I will tell the health authorities	140	*70%	16	8 %	44	22%
If I find that I contacted a patient had Covid 19, I accept to be quarantined at home for a period of time until it is confirmed that I am free from the disease	126	*63%	16	8 %	58	29%
If I contacted a patient had Covid 19, I agree to be quarantined at a hospital for a period of time until it is confirmed that I am free from the illness	110	*55%	24	12%	66	33%
I am willing to do any lab test for detection of the virus if available	116	*58%	34	17%	50	25%
I am willing to take any Covid 19 vaccine once it become available	150	*75%	8	4 %	42	21%
I frequently adhere to the updates about transmission of the virus in my country	132	*66%	26	13%	42	21%
I will attend any lectures or seminar about the virus and disease if organized near me	102	*51%	26	13%	72	36%
I will buy any equipment or protective measures if available and affordable	132	*66%	14	7 %	54	27%
Is curfew useful in eliminating Covid 19?	118	*59%	18	9 %	64	32%
Are the preventive measures advised by health personnel useful?	116	*58%	58	29%	26	13%

*correct answer = 63.4 %

In addition to that table 5 revealed that 94% of the participant think that COVID19 is a dangerous disease 89% have an idea that he /she or any member of his /her family can infected with this disease while 46.5% consider infection with this disease will left a stigma on patient and 63% still considered that this disease designed as a biological weapon .

Table 5 Practice of the participants toward COVID-19

Practice items	Agree		Disagree		Not sure	
	No .	%	No.	%	No.	%
Corona virus disease is serious	188	*94%	8	4 %	4	2 %
the probability that I or another family member can be infected with corona virus	178	*89%	16	8 %	6	3 %
Do you think that infection with corona virus is linked with stigma	93	46.5%	86	43%*	21	10.5%
I afraid that the media coverage about corona virus disease is fabricated	122	61%	42	21%*	36	18%
virus used as a biological weapon	126	63%	44	22%*	30	15%

*correct answer = 53.8%

DISCUSSION

To apprehend societies' knowledge, attitudes and practices (KAP), ahead with their insights needs on Corona virus disease 19, here about 23 questions regarding knowledge and 15 questions about attitude and 5 questions about practice all used to check KAP of the participants ⁷ .

Key targets are to apprehend communities:

- A. Awareness about Corona virus disease.
- B. Cheerfulness towards Corona virus disease, as well as their beliefs, or any preconceived thinking.
- C. Habit and practice of people to prevent the transmission of illness to them or their families.

This study found that the age , education and marital status of participant similar to other research accomplished in India which revealed that the average age was 28 years , 50.9% were female, 78.9% have a bachelor's degree or above, and 51.1% were employed ⁸ and nearly mimic other one done in South Korea which revealed that the mean age of participants was 47.44 years . Nearly half of them were females (51.4%), and 59.2% had a diploma, followed by a bachelor's degree (31.9%) and graduate or professional degree (9%) ⁹ .

In this study there was 95% of the participant knows that the disease can be spread by droplet of patient and 68 % of them believe that surfaces touched by patient could be one of the measures to transmit the disease and 78% of them said that the disease may transmitted from asymptomatic patient , while 15 % of the sample think that dealing with pets may transmit the disease and 43% of them still consider that the goods imported from China are infectious . Concerning common symptoms of COVID 19 , this research showed that 89%, 88%, 91%, 84%, 90% and 91% of the participants know that cough , body aches, loss of taste and smell , COVID 19 more serious for old age and more dangerous for those which have chronic disease respectively . So according to this study about 65% of the participant have good knowledge toward COVID 19 which is very important to limit it's transmission through the population . This knowledge may be gained from their physicians, TV or Radio channels, social media, health messages distributed by health institutions, from friends or family members, this result was mimic one implemented in Bangladesh which clarified that 61.2% had adequate knowledge ¹⁰ and similar to other study done in Ethiopia which found that the rate of correct answers of knowledge questions was 67.2% ¹¹ but lower than other study achieved in Saudi

Arabia which demonstrated that most of those share in study had a good knowledge level (89.77%) to the Corona virus disease 19 pandemic. Again they reach a good level of knowledge with a score of 89.6% among contributors , specially from the Western area of Saudi Arabia ¹² this could be due difference between sample size and level of education and quality of both samples and may be due to difference in resources between KSA and Iraq .

Regarding attitude of the participants this study showed that about 63.4 % of them answer correctly on 15 questions prepared to check their attitude toward Covid 19 and revealed that the attitude of the participants toward COVID 19 which found that 76%, 72% , 70% , 75%, of them have a good attitude toward the followings : wash their hands regularly , put facemask , if they have any symptoms similar to COVID 19 will inform health authorities and they will take vaccine once it be available respectively which is nearly mimic to other study done in Egypt ⁷ and similar to other study achieved in Bangladesh which clarified that 62.3% of participants had more good attitudes towards Corona virus disease 19 ¹³ and mimic other study also done in Bangladesh which found that The mean of good attitudes rates for all participants was between 55.28 and 68.50% ¹⁴ and nearly resemble other study done in Hong Kong which revealed that Most of contributor accept that COVID-19 is a dangerous disease (83.0%) and were anxious that they would diseased with it (61.9%) or be isolated (69.0%). However, fewer than 40% of the contributors thought that they or their families were at risk of SARS-CoV-2 infection ¹⁵ and there is other study done in India which clarified that the most of those share in study (>90%) had right knowledge about preventive procedures to prevent the transmission of Covid-19 which is higher than that in this research ⁸ .

Regarding to practice or practice of the participants , this study showed that that 94% of the participant think that COVID19 is a dangerous disease 89% have an idea that he /she or any member of his /her family can infected with this disease while 46.5% consider infection with this disease will left a stigma on patient and 63% still considered that this disease designed as a biological weapon. This study showed that satisfactory knowledge, positive attitude and poor practice were found among the participants which is similar to other study done in Egypt ¹⁶, so that this study revealed that the Iraqi population in Mosul city needs more health educational program about Covid 19 to increase their KAP .

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