

Preventive Measures Pursued by College Students for The Prevention of Coronavirus in University of Kufa

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Abstract

Background: Coronavirus disease 2019 (COVID-19) is the latest pandemic with a high rate of morbidity and mortality worldwide. Crises like these can harm the academic functioning and psychophysical health of students. Students have an important role in controlling the spread of

الخلاصة:

خلفية البحث: يعد مرض فيروس كورونا أحدث جائحة عالمية حيث تتميز بارتفاع نسبة معدل الاعتلال والوفيات في جميع أنحاء العالم. حيث أن مثل هذه الأزمات يمكن أن تضر بالأداء الأكاديمي والصحة النفسية والسيولوجية للطلاب. يعد دور الطالب مهماً في السيطرة على انتشار الأمراض المعدية من خلال إتباع التدابير الوقائية ضد مرض فيروس كورونا و من خلال هذه الدراسة النوعية.

الاهداف: تهدف الدراسة إلى استكشاف كيفية نظر الطلاب إلى الأزمة وما هي تجاربهم الشخصية أثناء فترة دراستهم خلال فترة الوباء.

منهجية البحث: تم إجراء دراسة وصفية على الإجراءات التي اتبعتها طلاب الجامعات للوقاية من فيروس كورونا، حيث تم جمع العينة من خمسة وعشرون جامعة عراقية، تم جمع (427) طالب و طالبة ممن يدرسون في مجالات مختلفة، حيث تم جمع العينة بواسطة استمارة استبيان معدة ومصممة من جزأين الجزء الأول يتكون من المعلومات الديموغرافية (7 فقرات) والجزء الثاني الإجراءات الوقائية التي تتبناها طلاب الجامعات (18 فقرة).

النتائج: أظهرت الدراسة أن نسبة متوسط درجات الرضا عن القياس الوقائي مرتفعة، كما لا توجد علاقة بين المعلومات الديموغرافية والتدابير الوقائية كما أن التقييم الإجمالي الكلي للتدابير كان مرتفع أيضاً.

التوصيات: أوصت الدراسة بعمل دورات في التنمية البشرية حول أهمية الإجراءات الوقائية في الوقاية من فيروس كورونا ، وكذلك ورش عمل تطويرية تساعد في تحسين معرفة و مواقف وممارسات الطلاب خلال هذه الجائحة.

infectious diseases by pursuing prophylactic measures and this quantitative study.

Objectives: the study aims to explore how students perceive the COVID-19 crisis and what their personal experiences were while studying during the global pandemic.

Methodology: It is a descriptive study on Preventive measures pursued by college students for the

prevention of Coronavirus, where the sample was collected from twenty-five universities, were collected (427) among students who are studying in a different field, and the majority of them was studied at the University of Kufa (53%), the samples were collected by a questionnaire prepared and designed in two parts, the first part consists of demographic information (7 items) and the second part Preventive measurement pursued by college students (18th item).

Results: The study showed that the means of scores of satisfaction of the preventive measurement (high), and also there is a no relationship between the

demographic information and preventive measures, the overall total assessment is also high.

Recommendations: Overall, the researcher was able to prove that college students have sufficient knowledge and awareness of COVID-19, and the majority are willing to apply safety measures in the prevention of the coronavirus Continued access to online health information resources like free courses, clinical management guidelines, and webinars on COVID-19 offered internationally.

Keywords: Coronavirus, Preventive.

INTRODUCTION

Coronavirus Disease is a disease-causing by the beta coronavirus called severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) ⁽¹⁾. Corona Virus Disease-2019 ("COVID-19") was first identified in December 2019 in Wuhan, China ⁽²⁾. Since COVID-19 has been confirmed a global pandemic by the World Health Organization (WHO), it has made a fast spread across the world and it is causing high mortality and morbidity ⁽³⁾.

Worldwide, it causes an estimated number of 5.8 million cases and nearly half a million deaths at the end of May 2020 ⁽⁴⁾. In Iraq, according to the latest WHO report, there have been 2,183,402 confirmed cases of COVID-19 and 24,330 deaths by the end of January 2022 ⁽⁴⁾. Resulting of this pandemic, countries across the world have taken different preventive measures. These include confinement to home, movement restriction, and closure of schools and other social services ⁽⁵⁾. Therefore, appropriate knowledge

toward the preventive measures is required to halt the spread of the COVID-19 outbreak in countries ⁽⁶⁾. Most of the previous studies were predominately concentrated on the knowledge, attitude, and practices of health care workers toward the preventive measures of COVID-19 ⁽⁷⁾.

Iraq has taken various prevention and control measures to stop the spread of COVID-19. These include staying at home, school closure, keeping social and physical distances, and increasing hand washing basins in places where people use commonly such as markets, and banks. Moreover, the best way to prevent and slow down transmission is to be well informed about the disease and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol-based rub frequently and not touching your face.

Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and

recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses (8). The COVID-19 virus spreads primarily through droplets of saliva or from the discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).

The risks of getting COVID-19 are higher in crowded and inadequately ventilated spaces where infected people spend long periods together in close proximity. These environments are where the virus appears to spread by respiratory droplets or aerosols more efficiently, so taking precautions is even more important (9).

WHO has recommended personal hygiene (respiratory hygiene, using face masks, washing hands with warm water and soap, use of alcohol-based hand sanitizers, avoiding touching mouth, eyes & nose, cleanliness), social distancing, and careful handling of purchased products as an effective preventive measure for COVID-19 disease, The growing pandemic of COVID-19 disease requires social distancing and personal hygiene measures to protect students' health (4). But this message is not clear and well understood among college students so this study aims to determine the awareness, knowledge, and attitude of college students about COVID-19 and relate their behavior to the response of

rigorous precautionary measures. Health awareness is important due to educating students and improving their health level, reducing the incidence of diseases, and helping students deal with healthy measures using the available capabilities.

Therefore, the main objectives of this study were intended to assess the preventive measurement pursued by colleges students and to find out the relationship between preventive measurement pursued and demographic data.

Aims of the Study

aims to explore how students perceive the COVID-19 crisis and what their personal experiences were while studying during the global pandemic.

METHODOLOGY

Design of the study: A descriptive study of Preventive measures pursued by college students for the prevention of coronavirus at the University of Kufa, the study was conducted from (February to April 2021).

The setting of the study: The settings of the study include (472) college students and the study was carried out in 25 universities in Iraq.

Sample of the study: The non-probability technique (accidentally sampling) was to select the students in different universities.

The study instrument: A questionnaire was designed from the relevant literature for the Preventive measures pursued by college students for the

prevention of The questionnaire was distributed to nurses to fill it.

Methods of data collection: The study sample was collected by preparing a form designed electronically in a Google Form, and the link was

published to various students in all universities and colleges in Iraq.

Data analysis: Descriptive statistical measures (frequency and percentage). Inferential the statistical approach of chi-square used data analysis.

RESULTS

This chapter presents the findings of the data analysis systematically in tables as they correspond with the objectives of the study as follows:

Table 1: Statistical distribution of students by their Socio-Demographic Data

Items	Sub-groups	Study group (Total = 427)	
		Frequency	Percentage
Age / Years	18-23	379	80.3
	24-29	85	18.0
	30-35	8	1.7
Gender	Male	162	34.3
	Female	310	65.7
Residence	Urban	372	78.8
	Rural	100	21.2
Specialty	Medical	268	56.8
	Humanitarian	204	43.2
Stage	First	95	20.1
	Second	92	19.5
	Third	92	19.5
	fourth	181	38.3
	Fifth	6	1.3
	Sixth	6	1.3
Have you been infected with coronavirus?	Yes	151	32.0
	No	321	68.0
College	Nursing	182	38.6
	Medicine	16	3.4
	Science	34	7.2
	Pharmacy	9	1.9
	Education	93	19.7
	Engineering	42	8.9
	Administration and Economic	33	7.0
	Law	16	3.4
	Technical	32	6.8

The table shows the statistical distribution of students groups by their socio-demographic data, it explains that the majority of the students are: students with ages between (18-23) years old (80.3%), female students (65.7%),

those who study in medical specialties (50.8%), those who live in urban residents (78.8%), those who are in the fourth stage (38.3%), those who are not infected with coronavirus (8%), and finally those who study in nursing colleges (38.6%).

Table 2: Statistical distribution of students by their universities

Items	Sub-groups	Study group (Total = 427)	
		Frequency	Percentage
University	Baghdad	12	2.6
	Kufa	249	53.0
	Babylon	2	0.4
	DhiQar	48	10.2
	Basrah	23	4.9
	Islamic Univerity	3	0.6
	Kafeel	3	0.6
	Sumar	13	2.8
	Al-ain	3	0.6
	Al-Qadisiya	4	0.9
	Wasit	51	10.9
	Middle Technical	1	0.2
	Bayan	1	0.2
	Jabir bin Hayan	8	1.7
	Mosul	3	0.6
	Imam Al-Sadigh	3	0.6
	Middle Euphrates	8	1.7
	Maysan	4	0.9
	Southern technical	8	1.7
	Israa	1	0.2
	Mustaqbal	1	0.2
	Al-Zahrah	14	3.0
	Karbala	1	0.2
Mustansiriya	4	0.9	
Imam Al-Kadhum	2	0.4	

Table 2 shows the statistical distribution of student sub-groups by their university, it explains that the majority of the students study at the University of Kufa (53%).

Table 3: Descriptive Statistics of preventive measurement pursued by college students

items	Resp .	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Tobacco use may increase the risk of severe symptoms of COVID-19 infection	Freq.	14	29	80	189	160
	%	2.97	6.14	16.95	40.04	33.90
2. I keep a safe distance from anyone who is coughing or sneezing	Freq.	5	4	40	181	242
	%	1.06	0.85	8.47	38.35	51.27
3. I avoid close (close) contact with infected patients	Freq.	6	11	26	113	316
	%	1.27	2.33	5.51	23.94	66.95
4. I clean and disinfect things and touch surfaces regularly	Freq.	10	27	58	201	176
	%	2.12	5.72	12.29	42.58	37.29
5. I wash my hands often with soap and water for at least 20 seconds	Freq.	6	36	63	192	175
	%	1.27	7.63	13.35	40.68	37.08
6. I cover my cough or sneeze with a tissue and then throw it in the trash	Freq.	5	16	31	163	257
	%	1.06	3.39	6.57	34.53	54.45
7. Raw and cooked food and water must have a known and trusted source	Freq.	1	7	76	225	163
	%	0.21	1.48	16.10	47.67	34.53
8. Good ventilation is important in crowded places	Freq.	2	5	76	162	227
	%	0.42	1.06	16.10	34.32	48.09
9. Eating foods and drinks such as citrus fruits and vegetables that contain vitamins C, D and A are important in boosting immunity	Freq.	0	3	15	109	345
	%	0.00	0.64	3.18	23.09	73.09
10. Cleaning hands with soap and water and using a face mask can prevent or reduce the spread of infection	Freq.	3	10	25	174	260
	%	0.64	2.12	5.30	36.86	55.08

11. Antibiotics are not the first line of defense for COVID-19 infection	Freq.	16	44	106	199	107
	%	3.39	9.32	22.46	42.16	22.67
12. Being infected with the virus is not a defect and you should not hide your infection	Freq.	8	8	18	84	354
	%	1.69	1.69	3.81	17.80	75.00
13. If you feel unwell, even if it is a slight fever or a slight cough, the right place is to stay at home	Freq.	9	24	32	180	227
	%	1.91	5.08	6.78	38.14	48.09
14. I avoid touching my eyes, nose, and mouth as much as possible	Freq.	6	19	63	212	172
	%	1.27	4.03	13.35	44.92	36.44
15. Shortness of breath is one of the symptoms of the COVID-19 virus	Freq.	3	24	59	156	230
	%	0.64	5.08	12.50	33.05	48.73
16. What is your source of information for news and developments of COVID-19 infection	Freq.	4	5	46	200	217
	%	0.85	1.06	9.75	42.37	45.97
17. The COVID-19 virus is spread by droplets from an infected person	Freq.	4	11	47	215	195
	%	0.85	2.33	9.96	45.55	41.31
18. Symptoms of the Covid-19 virus appear within 2-14 days of infection	Freq.	3	7	21	187	254
	%	0.64	1.48	4.45	39.62	53.81

Table 4: Assessment and means of scores of preventive measurements pursued by college students

items	MS	SD	Assessment
1. Tobacco use may increase the risk of severe symptoms of COVID-19 infection	3.96	1.01	High
2. I keep a safe distance from anyone who is coughing or sneezing	4.38	0.76	High
3. I avoid close (close) contact with infected patients	4.53	0.81	High
4. I clean and disinfect things and touch surfaces regularly	4.07	0.95	High

5. I wash my hands often with soap and water for at least 20 seconds	4.05	0.96	High
6. I cover my cough or sneeze with a tissue and then throw it in the trash	4.38	0.84	High
7. Raw and cooked food and water must have a known and trusted source	4.15	0.75	High
8. Good ventilation is important in crowded places	4.29	0.80	High
9. Eating foods and drinks such as citrus fruits and vegetables that contain vitamins C, D and A are important in boosting immunity	4.69	0.56	High
10. Cleaning hands with soap and water and using a face mask can prevent or reduce the spread of infection	4.44	0.75	High
11. Antibiotics are not the first line of defense for COVID-19 infection	3.71	1.02	High
12. Being infected with the virus is not a defect and you should not hide your infection	4.63	0.77	High
13. If you feel unwell, even if it is a slight fever or a slight cough, the right place is to stay at home	4.25	0.93	High
14. I avoid touching my eyes, nose, and mouth as much as possible	4.11	0.87	High
15. Shortness of breath is one of the symptoms of the COVID-19 virus	4.24	0.90	High
16. What is your source of information for news and developments on COVID-19 infection	4.32	0.76	High
17. The COVID-19 virus is spread by droplets from an infected person	4.24	0.79	High
18. Symptoms of the Covid-19 virus appear within 2-14 days of infection	4.44	0.71	High
Total Assessment	4.27	0.83	High

MS : Mean of Scores SD : Standard Deviation; ; low : MS = 1-2.33; Moderate : MS = 2.34-3.66 ; High : MS \geq 3.67

Table 4: reveals descriptive statistics of preventive measurement and mean scores of satisfaction pursued by college. It explains that the assessment of all the items scored high; so that the overall assessment is also high. This assessment is based on the statistical scoring system that indicated a total mean of scores between (1-2.33) as (poor), while those with scores between (2.34-3.66) as (moderate) and those with mean of scores equal or more than (3.67) as (high).

Table 5: Association between Preventive measurement pursued by college students and their demographic data

Demographic Data	Chi-Square	Correlation Coefficient	Significance P-value
Age	1.62	0.35	0.34
Gender	1.33	0.25	0.22
Specialty	0.42	0.26	0.32
Stage	0.71	0.32	0.21
Residence	0.17	0.39	0.72
Have you been infected with coronavirus?	0.33	0.24	0.21
College	0.78	0.12	0.24
University	0.95	0.25	0.11

Table 5 explains the association between preventive measurement pursued by college students and their demographic data, it explains that there is no significant relationship ($p > 0.05$) between the satisfaction of the students' relatives and their ages; while it is non-significant ($p > 0.05$) for the other demographic data.

DISCUSSION

This study sought to determine the perspective of college students in Iraq toward the COVID-19 pandemic. In the study, a survey program known as a " statistical scoring system " was used to collect data for the purpose of the research. The data were analyzed through the application of descriptive and inferential statistics to meet the study objectives, 427 first- to fifth-year students, (332) of them are from an urban area, while (100) of them are from a rural area. Of the students that participated in the study 50.8% of the study in medical specialties, 38.6% who study in nursing colleges, consisting of 162(34.3%) males and 310(65.7%) females. The majority of the students belong to the age group of 18 to 23-years-old (80.3%).

Moreover, the majority of the college students are in the field of nursing (182 or 38.6%) and the majority of them are studying at the University of Kufa (53%).

The findings from this study confirmed that the awareness, knowledge, and attitude of college students about COVID-19 and their behavior to the response of rigorous precautionary measures are very well irrespective of their age, sex, and university of study, students understood how the virus is spread, its symptoms, and the precautionary measures needed to be done by both individuals. In view of students' knowledge about COVID-19, a full 41.31% (195) of the students knew that the COVID-19 could spread through droplets from an infected person. Previous

studies provided evidence that COVID-19 is mainly transmitted through social contact with symptomatic persons with mild to severe symptoms and through asymptomatic transmission ⁽¹⁰⁾.

Students were aware that shortness of breath is one of the symptoms of the COVID-19 infection (230 or 48.73%). Also, (227 or 48.09%) of the students understood the importance of staying at home as a precautionary measure to stop the spread of the virus in the community. The assessment of all the items is (high), so the overall total assessment is also high.

In our study, 68% of all participants had positive attitudes. The level of knowledge is higher than Bangladesh students (10.5%) in a similar study (11).

Perhaps this could be due to the fact that students had sufficient knowledge. Fourth-year students are more likely to have good knowledge compared to their counterparts. This finding could be biased by the disproportionate representation among respondents. However, this cannot explain why they had better knowledge compared to their colleagues. Perhaps this could be due to the fact that fourth years constituted up to nearly one-third of the study population. Furthermore, social media although convenient and widely preferred, especially by youth may have a lot of other false content and is not the best portal to relay medical knowledge to students. However, its widespread use could be leveraged to convey messages, especially on preventive health measures to the public. Although the majority of the students used mass media, journals or articles, and

websites to obtain their information and to have sufficient knowledge than others. It has been shown among students that having and enhancing knowledge about a new infectious disease will help improve the students' perceptions of the disease and preventive behaviors. The risk of students acquiring coronavirus infection due to a lack of enough knowledge about COVID-19 is increased by the fact that there is asymptomatic carrier transmission of the coronavirus, which has been reported ⁽¹²⁾.

Despite the rapid progress of the last few months, the widespread availability of an effective vaccine or antiviral treatments is still a few months away. Meanwhile, countries are still struggling to find the right mix of preventive measures (and the right balance between health and socio-economic priorities) to build an effective response to the COVID-19 pandemic.

Finding the right prevention mix means identifying what are the most cost-effective measures that can be widely implemented to reduce or halt the transmission of the virus. For this, we need a better understanding of how this virus spreads and how effective the different preventive measures are. Only more research and better science will provide this information.

However, finding the right balance also means recognizing that some measures can be effective, but carry very high social, economic, political, educational, and even health costs. These are political decisions. For example, many European countries have tried very

hard to avoid imposing again strict generalized lockdowns, border closures, or travel bans. These measures are simply too costly for society to be acceptable.

The best scenario is to be able to respond to a new cluster of cases or the acceleration of the spread of the virus, due to “super spreader” events or a relaxation of individual preventive measures, through localized time-limited public health measures, their effectiveness being judged by better and timely monitoring of the spread of the virus. Even in the absence of COVID-19 vaccines or treatments and comprehensive knowledge of the immune response to SARS-CoV-2, countries can navigate pathways to reduced transmission, decreased severe illness and mortality, and less economic disruption in the short and longer term. It is not ideal, it is not being “back to normal”, but while we wait for the widespread availability of the new “silver bullets” it is probably the best option we have right now to contain this pandemic.

CONCLUSION

In conclusion, the world has a long history of successful efforts to prevent or cure widespread infections. The world has the opportunity to reverse disease predictions with strict preventive measures. These preventive interventions will be effective in reducing peak incidence and its impact on public services. Smart working and recommended shifts may have to be adopted to mitigate COVID-19 transmission in the future. Online learning and digital didactic can be

protracted for months. Telemedicine, both in veterinary and medical sciences, needs to be implemented. In addition, efficient diagnosis, rapid isolation, and clinical management should remain of utmost importance. If we don't go through the protocol of pandemic experts would mean, we are giving full permission to the Coronavirus to destroy furthermore lives. Believe us it's not too late. This is a time being a thing. After this night a bright day will come. Although there is mathematical rationality behind the implementation of social distancing measures including lockdown, this study also emphasized the importance of other associated measures like increasing tests and increasing the number of hospital and ICU beds. The later components are particularly important during the social mixing period to be observed after the lifting of lockdown. Therefore, it is recommended that preventative measures are most effective when they are used in conjunction with one another. Moreover, using a face mask does not mean you do not have to social distance, and regularly washing your hands does not mean that you should not clean and disinfect regularly touched surfaces daily. While a person may not be showing symptoms, it is still possible for them to spread the virus, and this is why these preventative measures are so necessary to limit the spread of COVID-19.

RECOMMENDATIONS

1. Preventative measures are most effective when they are used in conjunction with one another.

2. Using a face mask does not mean you do not have to social distance, and regularly washing your hands does not mean that you should not clean and disinfect regularly touched surfaces daily. While a person may not be showing symptoms, it is still possible for them to spread the virus, and this is why these preventative measures are so necessary to limit the spread of COVID-19.
3. In order to avoid the contagion of the infectious disease, good hand hygiene, coughing and sneezing

etiquette, and distance to people (about 1 to 2 meters) should be observed, especially in regions where the new coronavirus is present. However, in view of the corona wave, these measures are advisable everywhere and at all times.

4. Disinfect hands regularly but at the very least after each physical contact (e.g. shaking hands or “danger contact”, like touching public door handles).
5. After blowing your nose, sneezing, or coughing, wash or disinfect your hands thoroughly.

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