

The frequency of COVID-19 among Mosul University students

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Background and objectives: Since December 2019, an outbreak of pneumonia associated with a new coronavirus (i.e., SARS-CoV-2; COVID-19) has been reported in several parts of the world, and its rapid and exponential diffusion forced The World Health Organization to declare it a pandemic. Objectives of this study to estimate the prevalence of COVID-19 among undergraduate student in university of Mosul. Identify some characteristics of the disease such as symptoms duration, signs and symptoms and complications of COVID-19.

Material and methods: Descriptive study, a retrospective study design was adopted from 2019 to 2021 to achieve the objectives of the current study. The sample of the study consists of (1554), (461) male and (1092) female from different colleges in university of Mosul. the data collected via the Internet, quarantine is a condition caused by a virus Corona pandemic, and the participation was voluntary after the participants were informed that all the data, they share will be confidential and for scientific research purposes only. A questionnaire was developed based on the previous study related to the research problem. The collected data was arranged analyzed and presented in tables by using frequency and percentage by using SPSS version 26.

Results: The results of the present study showed that More than half of the students were infected with COVID-19 (54.30%), and (9.28%) were infected again. The most of student were infected suffer from symptoms of COVID-19, fever (94.56%) and headache (91.27%). Most of the complications that students experienced after infection with COVID-19 are Fatigue and loss of energy (80.31%).

Conclusion and recommendations: the researchers concluded that the spread of Covid-19 disease among students of the University of Mosul is very high More than half of the students at the University of Mosul have contracted COVID-19, and more than 9.28% of them are infected again. The researchers recommended that the students with symptoms, even if they are mild, most be isolated at least 7 days and should be tested. Encouraging students to take COVID-19 vaccines to prevent its spread.

Key words: Frequency, COVID-19, University students.

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Introduction:

On 31 December 2019, the World Health Organization (WHO) was informed of a cluster of cases of pneumonia of unknown cause detected in Wuhan, Hubei Province, China. On 12 January 2020 it was announced that a novel coronavirus had been identified in samples obtained from cases and that initial analysis of virus genetic sequences suggested that this was the cause of the outbreak. This virus is referred to as SARS-CoV-2, and the associated disease as COVID-19. As of 24 June 2020 (10.00am CET), 9.2 million cases have been diagnosed globally⁽¹⁾. In the third millennium, three major threatening infectious diseases outbreaks happened. Following the

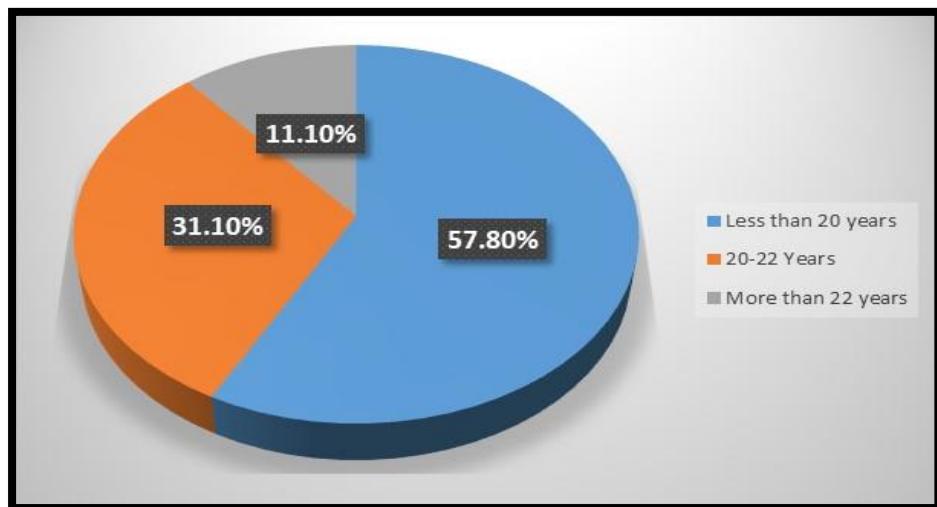
outbreak of SARS-CoV in 2002, and the MERS-CoV-19 in 2012⁽²⁾. The novel Coronavirus “COVID-19” has emerged globally and has threatened the entire world. The coronaviruses are zoonotic infections, can be transmitted from animal to animal, animal to human, and human to human⁽³⁾. Since December 2019, an outbreak of pneumonia associated with a new coronavirus (i.e., SARS-CoV-2; COVID-19) has been reported in several parts of the world, and its rapid and exponential diffusion forced The World Health Organization (WHO) to declare it a pandemic⁽⁴⁾. Social distancing, confinement and quarantine were adopted by many countries to contain the diffusion of the infection. As reported by some studies, these extreme measures, along with the fear and uncertainty of an unknown infection, have impacted on people’s lifestyles, generating high levels of psychological distress, anxiety and mood alterations. Both the fear of contracting the virus and the measures adopted to counteract the spread of infection may have been perceived as traumatic events. Consequently, they can represent risk factors for many mental diseases⁽⁵⁾. The pandemic outbreak of an unrecognized infection, with no vaccines or effective medical treatments, such as COVID-19, could be defined as a traumatic experience for its acute and chronic implications at individual and community levels. The COVID-19 outbreak has had a direct effect on the population. On the one hand, the fear of contagion and the risk of death, for oneself and loved ones, represents a direct threat⁽⁶⁾. The first patient with COVID-19 was reported in Iraq on 24 February 2020 for the Iranian student came from Iran. As of 24 May 2020, the confirmed cases of COVID-19 infections reached 4469, with 160 deaths and 2738 patients were recovered from the infection. Significant public health strategies have been implemented by the authorities to contain the outbreak nationwide. Nevertheless however, the number of cases is still rising dramatically⁽⁷⁾. Most of the cases were recorded in Baghdad followed by Basra and Najaf. About 45% of the patients were female (with 31% deaths of the total cases) and 55% were male (with 68% deaths of the total cases)⁽⁸⁾. Most cases are between the ages of (20-59) years old, and (30-39) years are the most affected range (19%). Approximately (8%) of cases are children under 10 years old. Iraq has shown a cure rate lower than those reported by Iran, Turkey and Jordan; and higher than Saudi Arabia and Kuwait. Healthcare workers represented about (5%) of the total confirmed cases. These findings enable us to understand COVID-19 epidemiology and prevalence in Iraq that can alert our community to the risk of this novel coronavirus and serve as a baseline for future studies⁽⁷⁾. The aim of the study to Prevalence of COVID-19 among students in Mosul university

Methods and Materials:

Prior to the actual collection of the data, formal administration approval was obtained from department of the clinical science/ college of nursing/ university of Mosul to conduct the study. Descriptive study, a retrospective study design was adopted from 2019 to 2021 to achieve the objectives of the current study. The study extended from (1-12-2020) to (25-6-2021). The sample of the study consists of (1554), (461) male and (1092) female from different colleges in university of Mosul. The study was conducted at the College of Nursing, University of Mosul, where the data collected via the Internet, quarantine is a condition caused by a virus Corona pandemic, and the participation was voluntary after the participants were informed that all the data, they share will be confidential and for scientific research purposes only. A questionnaire was developed based on the previous study related to the research problem, and validity tested by presenting it to a group of experts in the several fields includes nursing, medicine and medical statistics. The reliability was checked through pilot study was conducted in one 20 participants and analyzed by person correlation in the data by SPSS program at value (0.73). The collected data was arranged analyzed and presented in tables by using frequency and percentage by using SPSS version 26⁽⁹⁻⁷⁵⁾.

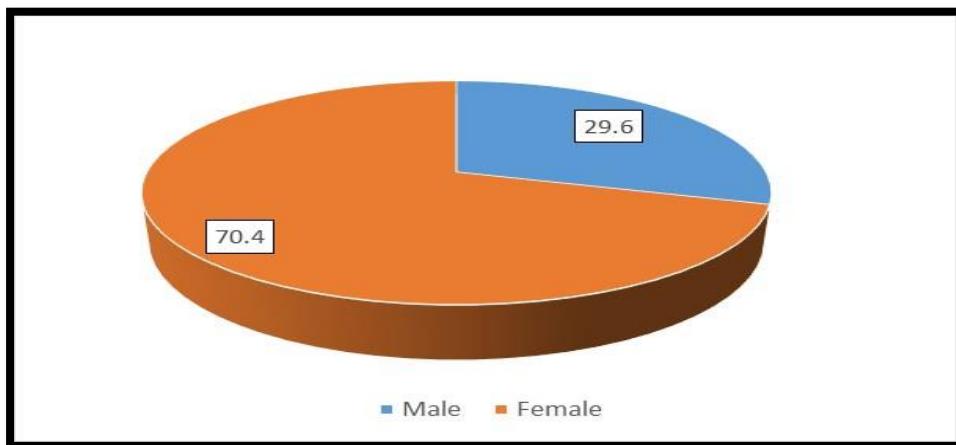
Results:

Figure (1): Distribution of the study sample according to their age group.



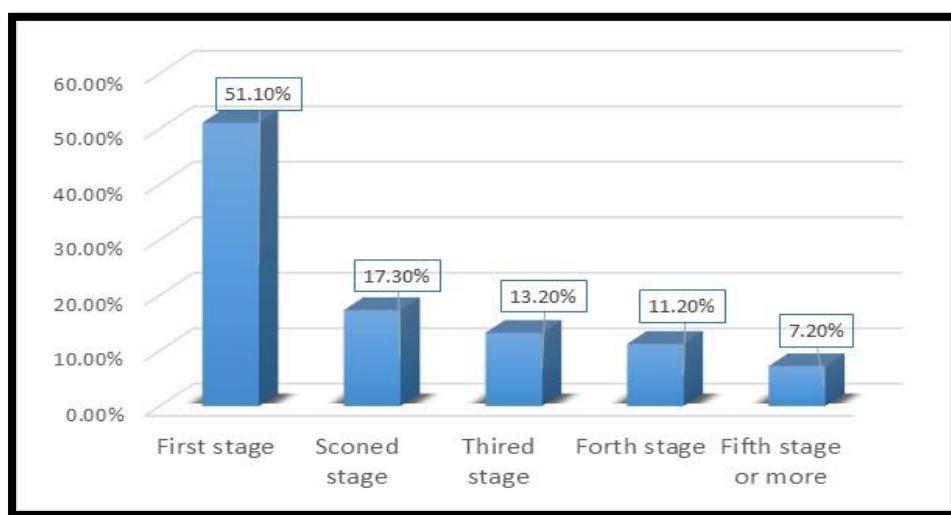
This figure indicated that the majority of the study sample was less than 20 years.

Figure (2): Distribution of the study sample according to their gender.



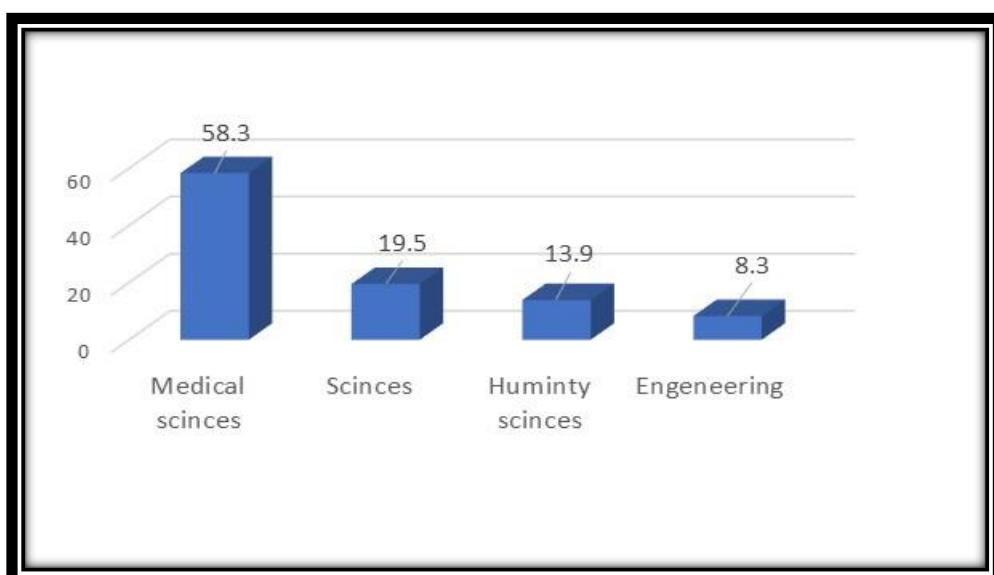
This figure indicated that the majority of the study sample were female (70.4%).

Figure (3): Distribution of the study sample according to their educational stage.



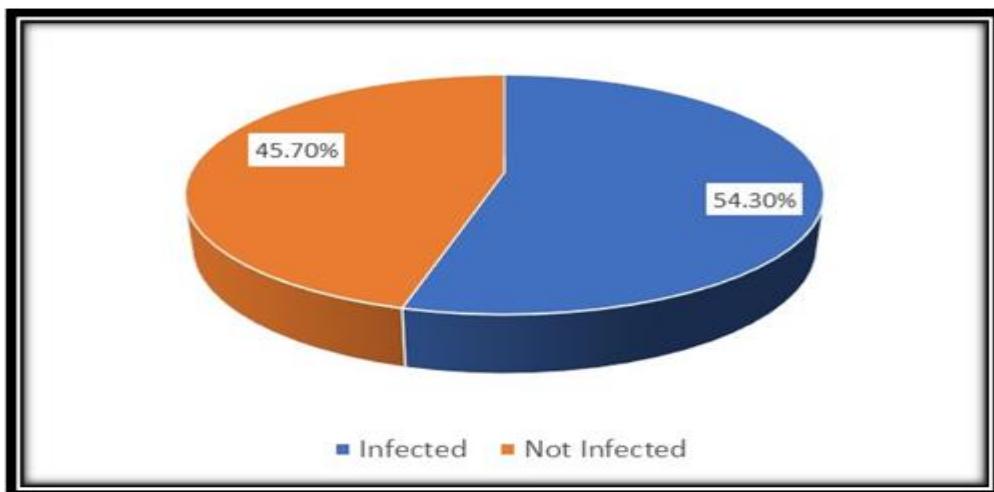
This figure indicated that the majority of the study sample were more than half in first stage (50.10%).

Figure (4): Distribution of the study sample according to their specialty.



This figure indicated that the most of the study sample were medical filed (58.3%)

Figure (5): Distribution the prevalence of COVID-19 among students in university of Mosul.



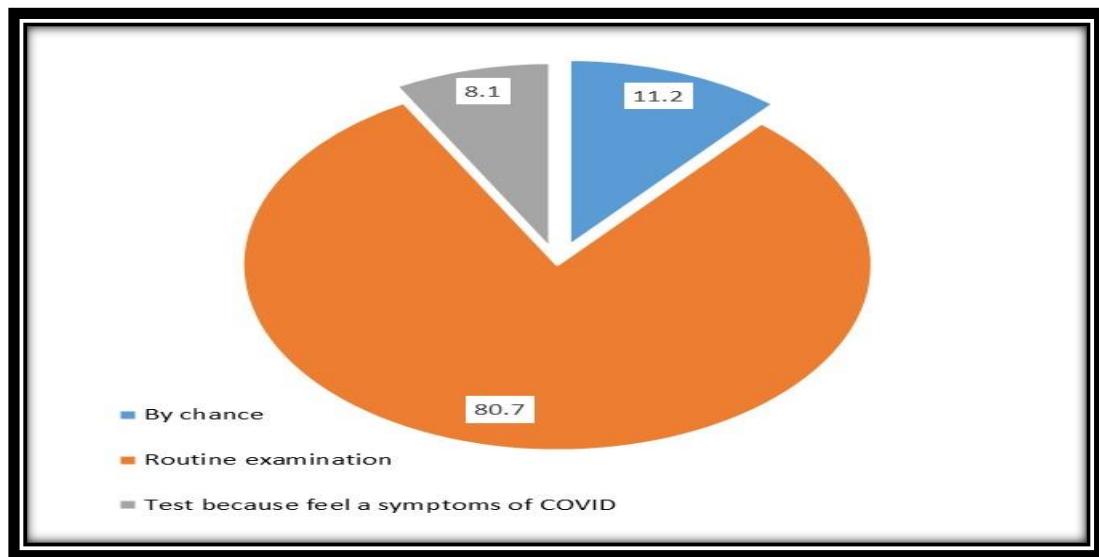
This study indicated that the more than half of the study sample were infected with COVID-19.

Table (1): Distribution of the students according to their infected by COVID-19.

	Infected		Recurrent infected	
	No.	%	No.	%
Infected	883	54.32	82	9.28
Non-Infected	742	45.78	801	90.72

This table indicated that more than half of the student was infected by COVID-19 (54.32%), and (9.28%) was infected again.

Figure (6): Distribution of the study participant according to their diagnostic tests.



This figure indicated that the most of them felt symptoms of COVID-19 and did the examination.

Table (2): Distribution of the study sample according to their duration of signs and symptoms of COVID-19.

Duration	No.	%
Less one week	362	40.99
1-2 Weeks	353	39.97
1 Month or less	96	10.87
More than months	72	8.15

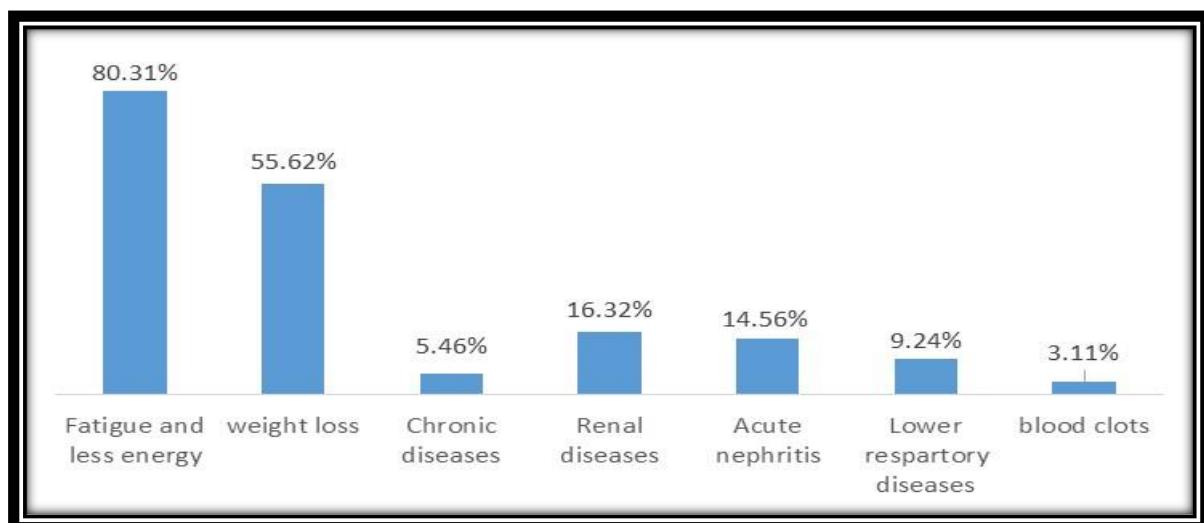
This table indicated that slightly less than half of the sample

Table (3): Distribution the study sample according to signs and symptoms related to COVID-19.

Signs &symptoms	Yes		No	
	No.	%	No.	%
Fever	835	94.56	48	5.43
cough	365	41.33	518	58.66
Sore throat	657	64.21	226	25.59
Runny nose	524	59.34	359	40.56
nausea and vomiting	347	39.29	536	60.7
Diarrhea	610	69.08	273	30.91
Joint and bone pain	782	88.56	101	11.43
Headache	806	91.27	77	8.72
Loss sense of smell or taste	614	69.53	269	30.46
Difficulty or shortness of breath	572	64.77	311	35.22
chest pain	231	26.16	652	73.83
loss of mobility	67	7.58	816	92.41

This table indicated that the majority of the study sample were suffer from headache and fever, (91.27%), (94.65%).

Figure (7) Distribution of the study sample according to complication with COVID-19.



This figure indicated that the most complication of COVID- 19 was fatigue and less energy (80.31%), weight loss (55.62%).

Discussion:

The biological and epidemiological trends in the prevalence and mortality rate are changing daily. Initially, China bore the large burden of the diseases, but the incidence is gradually increasing in other countries mainly the Europe and United States of America. Despite recent efforts to understand the novel coronavirus COVID-19, the science community, researchers, and general population would like more information about the current biological and epidemiological situation ⁽⁷³⁻¹⁴³⁾. University students are among the age groups most vulnerable to infection, especially as they meet at the university from different races and sects and from several provinces in Iraq, so they are more likely to be infected with Corona virus. Table (1) indicated that more than half of the student was infected by COVID-19 (54.32%), and (9.28%) was infected again. Table (2) indicated that slightly less than half of the sample Table(3) indicated that the majority of the study sample were suffer from headache and fever, (91.27%), (94.65%).

Conclusion:

This study concluded that the majority of the study sample were females whose age was less than 20 years in the first stage. The spread of Covid-19 disease among students of the University of Mosul is very high More than half of the students at the University of Mosul have contracted COVID-19, and more than 9.28% of them are infected again. Most students who were infected with COVID-19 experienced symptoms for a period ranging from one to two weeks and most of the complications resulting from Covid-19 disease are fatigue, lack of energy and weight loss.

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