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Assessing the Awareness Level of COVID-19 in western Libyan cities

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A B S T R A C T

Background: The global spread of the COVID -19 epidemic was reflected in the region of East and North Africa, with dynamic, changing ups and downs at the regional level and directly threatening patients with chronic diseases, and comorbidities such as cardiovascular diseases, diabetes, respiratory diseases, and cancer. Objective: The purpose of this study was to determine the level of knowledge of COVID -19 in western Libyan cities. Methods: The use of (questionnaire) forms, assessing the health situation, awareness, and adherence to public health measures to control the COVID -19 epidemic for patients in the treatment of COVID -19. The study was conducted on an appropriate sample of volunteers in some Libyan cities (Gheryan, Zintan, Tajoura, Tripoli, Al-Zawiya, Surman, Sabratha, Al-Ajeilat, Al-Zawara & Al-Jamil). Results: The study was conducted on 1460 volunteers from Libyan cities. 400 of them are college students and 1,060 are people from the community. More than two-thirds of the volunteers (65.69%) are Female. The majority of the volunteers (79%) live in the cities. Most of the people infected with the virus suffer from mild to moderate respiratory illnesses. Although the number of cases of COVID -19 is currently increasing significantly, (69%) of the respondents have no or mild symptoms. (Most of the patients (90.0%) had refused to take the vaccine, (27%) had respiratory symptoms, and (17.2%) many had elevated D-dimer levels and inflammatory markers. Overall, 116 of the patients died (11.12%), and 260 (6.9%) had impaired health. Conclusion: The infection is also transmitted by people who are otherwise healthy and who are unaware of their illness.COVID-19 affects all people in different ways. Symptoms range from mild to moderate to severe and can lead to death, depending on the person's immunity and lifestyle. we recommend that the necessary precautions be taken to educate Libyan citizens; On the importance of steps that can be taken to reduce the likelihood of contracting COVID-19, reducing the possibility of transmission to others, and vaccination for coronavirus disease.

تقييم مستوى الوعي بفيروس كوفيد -19 في مدن غرب ليبيا

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الملخص

انعكس الانتشار العالمي لوباء كوفيد-19 في منطقة شرق وشمال إفريقيا ، مع صعود وهبوط ديناميكي ومتغير على المستوى الإقليمي ومهدد بشكل مباشر في المرضى الذين يعانون من الأمراض المزمنة والأمراض المصاحبة مثل أمراض القلب والأوعية الدموية والسكري ، أمراض الجهاز التنفسي والسرطان. الهدف: الغرض من هذه الدراسة هو تحديد مستوى المعرفة بـ -19 COVID في مدن غرب ليبيا. نوع تصميم الدراسة: استخدام الاستبيانات وتقييم الحالة الصحية والوعي والالتزام بتدابير الصحة العامة للسيطرة على انتشار الفايروس وفي علاج. كوفيد-19عند المرضى . أجريت الدراسة على عينة مناسبة من المتطوعين في بعض المدن الليبية منها (غريان و الزنتان و تاجوراء و طرابلس و الزاوية و صرمان و صبراتة و العجيلات و زوارة و الجميل). النتائج: أجريت الدراسة على 1460 متطوعا من المدن الليبية. 400 منهم طلاب جامعيون و 1060 من أفراد المجتمع. أكثر من

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ثلثي المتطوعين (65.69٪) هم من الفتيات. غالبية المتطوعين (79٪) يعيشون في المدن. يعاني معظم المصابين بالفيروس من أمراض تنفسية خفيفة إلى متوسطة. على الرغم من أن عدد حالات كوفيد-19 يتزايد حاليًا بشكل ملحوظ ، إلا أن (69 ٪) من المستجيبين ليس لديهم أعراض أو يعانون من أعراض خفيفة. (معظم المرضى (90.0٪) رفضوا التطعيم ، (27٪) ظهرت عليهم أعراض تنفسية ، و (17.2٪) كان لدى الكثير منهم مستويات مرتفعة من بروتين ديمر-دي وعلامات الالتهاب. بشكل عام توفي 116 مريضاً (11.12٪) و 260 (6.9 ٪) لديهم مشاكل صحية. الخلاصة: لخلاصة: تنتقل العدوى أيضًا من قبل الأشخاص الأصحاء وغير المدركين لمرضهم. يؤثر OVID-19 على جميع الأشخاص بطرق مختلفة. وتتراوح الأعراض من خفيفة إلى معتدلة إلى شديد ويمكن أن يؤدي إلى الوفاة ، اعتمادًا على مناعة الشخص ونمط حياته. نوصي باتخاذ الاحتياطات اللازمة لتثقيف المواطنين الليبيين ؛ حول أهمية الخطوات التي يمكن اتخاذها لتقليل احتمالية الإصابة بـ COVID-19 ، مما يقلل من احتمالية الإصابة به. من انتقال المرض للآخرين ، والتطعيم ضد مرض فيروس كورونا .

1.Introduction

The World Health Organization (WHO) declared COVID-19 a Public Health Emergency of International Concern on January 30, 2020. [1]. The COVID-19 pandemic has led to an unprecedented and globally shared experience of confinement, confinement, fear, loss, and radically transformative uncertainty [2,3]. COVID -19, has infected 213 countries and regions around the world, which has greatly changed the lives of many countries and spread terror among the world's population. Some become poor, moreover, many daily and educational activities are postponed and disorientated [2-4]. The healthcare system, many products, and flights are affected, and it continues, more than two years later, to cost lives and limit many of our daily activities. The main problem in covid-19 disease is comorbidities. it is the simultaneous presence of two or more diseases or medical conditions in a patient. [5]. Comorbidities increase the likelihood that you will have difficulty recovering from coronavirus. Comorbidities are the most common cause of death associated with the COVID -19 virus [6]. The most common comorbidities we hear about are autoimmune diseases such as diabetes and asthma. These injuries are not limited to infected cases, but we have also lost some individuals who provide health care in hospitals and isolation centers. Data indicate a steady increase in cases. The measures taken to contain the pandemic have left many people insecure in their jobs and education, as well as mentally unwell [7]. Daily routines have been disrupted as families have had to stay home for some time and spending priorities have shifted from activities to necessities. At the same time, however, a high level of thinking ability, resourcefulness, and sustained optimism can be observed in many people, an awareness of greater solidarity and new forms of civic engagement valued by society, and an increased awareness of health issues [8]. Estimates are conflicting about the number of asymptomatic patients who play a large role in the spread of the epidemic. The main motivation of the study was to document the respondents' experiences on how the infection was, duration of infection, methods of diagnosis, symptoms of infection, and the extent of awareness and commitment to public health interventions to combat the COVID-19 epidemic among respondents in western Libyan cities.

1. Methods:

1.1. Type of study design

This was a descriptive cross-sectional study conducted on an appropriate sample of volunteers promise(Gheryan, Zintan, Tajoura, Tripoli, Al-Zawiya, Surman, Sabratha, Al-Ajailat, Al-Zawara, Al-Jamil) of the Libyan society to assess the level of awareness of COVID -19. The questionnaire consists of two parts: The first part contains questions about the demographic data of the respondents such as age, sex, city, etc. The second part contained. questions about the infection with the coronavirus Covid-19, the medical analyzes that were performed to detect the infection, also included questions about the duration of infection with the virus and accompanying symptoms, as well as the type of medication used in the treatment and chronic diseases of the volunteers, the questionnaire consisting of closed questions.

1.2. Study period:

During the period of data collection by questionnaire, which lasted six months from November 2020 to April 2021, 1,500 volunteers participated in the study. The questionnaire included demographic information, testing practices, diagnostic methods, duration of infection, places for treatment, and vaccination.

2.3. Ethical considerations:

Ethical approval to conduct this study was obtained from Medical Technology - Surman, Sabratha University. Consent was obtained from the volunteers after explaining the purpose of the study and indicating that participation was voluntary. Volunteers were also informed that their responses would be kept anonymous and confidential.

2.4. Diagnosis of COVID-19:

A. PCR (polymerase chain of reaction) test

There are two types of tests used to diagnose COVID -19 infection: PCR (polymerase chain reaction) and antigen tests, which have the highest sensitivity and specificity, meaning they are more accurate and therefore the preferred entry test for COVID -19. PCR tests can be performed on upper and lower respiratory tract secretions (specimens from nasal or oral swabs or saliva) to identify the virus.

B. Antigen tests:

Antigen tests can be done at home or at a health center but are generally less accurate than NAAT when people have been exposed to the COVID -19 virus. A home test can detect a new coronavirus antigen in saliva in less than 20 minutes.

2.5. The validity of the questionnaire:

The validity and reliability of the questionnaire were determined using the computer program IBM SPSS version 20. In addition, the quality of the questionnaire was reviewed by two experts in the field of survey design. After an initial review, wording adjustments were made.

2.6. Data Analysis:

Descriptive statistics such as frequency (%), mean and SD were used to represent the participants and their characteristics. Study questions and their characteristics were compared among volunteers by region. SPSS software (version 23) (IBM Corporation, Armonk, NY, USA) was used to analyze data with a significance level of $P < 0.05$.

3. Results and Discussion:

3.1. Sociodemographic characteristics of survey participants

Sociodemographic characteristics of survey participants

The demographic characteristics of survey participants are shown in Figures (1,2). Factors related to age and

gender: this study was conducted on 1460 volunteers from Libyan cities (Gheryan, Zintan, Tajoura, Tripoli, Al-Zawiya, Surman, Sabratha, Al-Ajailat, Al-Jamil). 400 of them are college students and 1,060 are nice people from the community. A little more than two-thirds of the respondents (65.69%) are girls. The majority of volunteers (79%) live in the city (69%). Sociodemographic and clinical characteristics varied among volunteers: gender, age, area of residence medical history, function, and education.

We note that the factors of age, gender, and other health problems suffered by the patient increase the risk of covid-19 infection. There is a significant difference in the extent of covid-19 infection compared to age groups It is becoming increasingly clear that infection with COVID -19 occurs through exposure to the virus, and both the immunocompromised and normal populations appear to be susceptible. Most of the adult patients are between 30 and 59 years old. Some other studies reported age distribution of adult patients between 25 and 89 years old. Most of the adult patients were between 35 and 55 years old [14]. A study on the dynamics of early transmission of the virus reported that the average age of patients was 59 years, ranging from 15 to 89 years, and the majority (59%) were male [2].
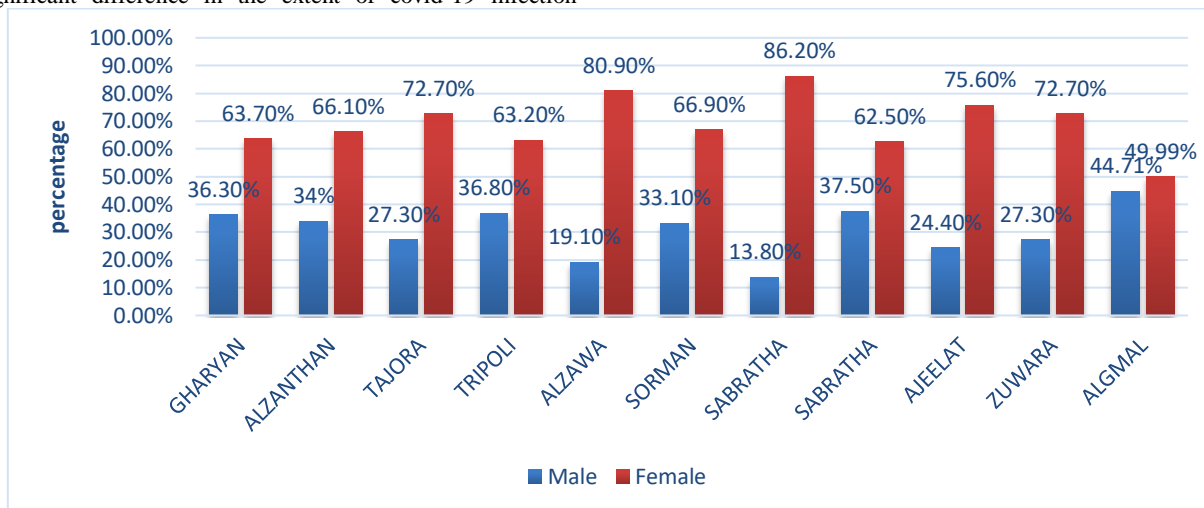

Figure 1: The Percentage of male to female study volunteers.

Most adult patients were between 30 and 59 years old.

Susceptibility appears to be related to age, biological sex, and other health conditions [12]
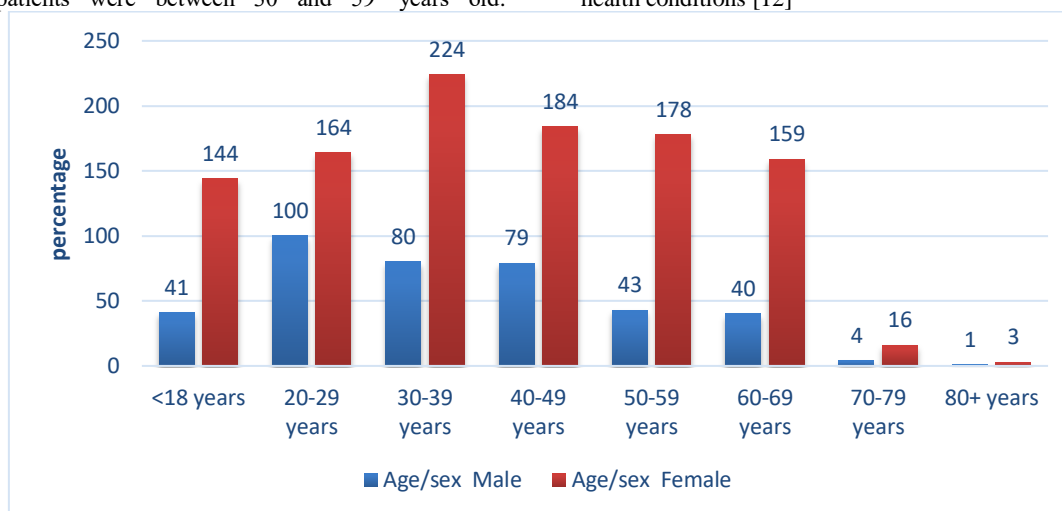

Figure 2: Pyramids of age/gender for labolaboratory-confirmedID-19 (n=1460)

3.2. Test results of COVID-19:
A. PCR (polymerase chain of reaction) test :
Persons who had been in close contact with a person infected with the COVID -19 virus were tested about 5 days after the last contact, and persons who had asked to be tested because of school, workplace, health care, and government requirements. The study shows that most cases of COVID-19 virus infection were recorded in Gheryan and Zawara towns (80.6%), (see Figure (3), while the lowest cases of infection detection by PCR technique were recorded in Gemayel town (38%). This study demonstrates the need to determine the extent of infection with the virus using the polymerase chain reaction technique. Studies in patients with suspected infection confirm that a test (RT-PCR) to detect positive DNA is performed by swabbing secretions from the throat and lower respiratory tract [13, 14, 15].
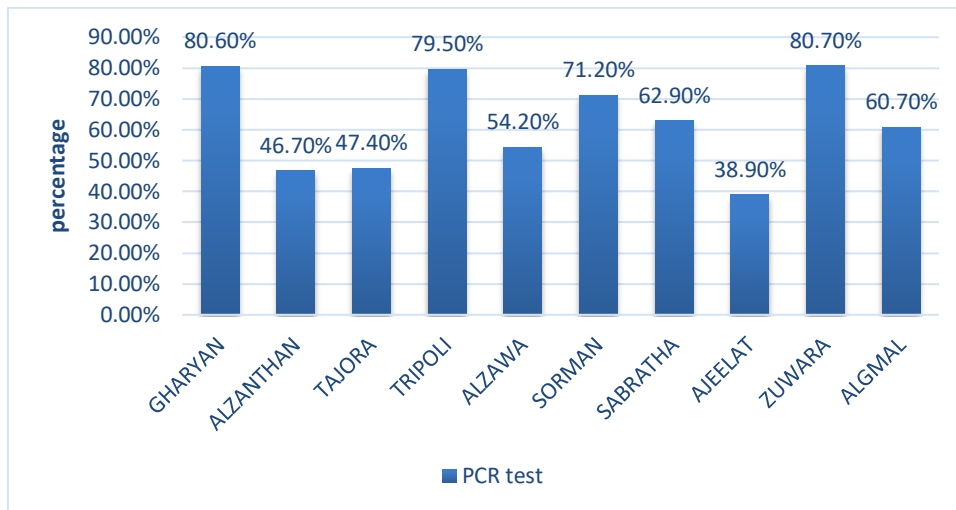
Figure 3: COVID-19 PCR Confirmation Rate in Patients

B. Antibodies test results:

Antibodies tests To detect the infection, some infected patients have used the detection of SARS-CoV-2 IgM and IgG M antibodies, an immunoglobulin produced by the immune system. (53.1%) recorded the highest category from the city of Sorman, which the percentage of people who depended on detection of infection with the virus was for each of the cities of Sabratha and Al-Ajeilat (34.9%). On the other hand, the city of Zintan recorded the lowest percentage (12.9%) in using the detection Immune system to the antigen, as a result of interest in isolating infected cases.
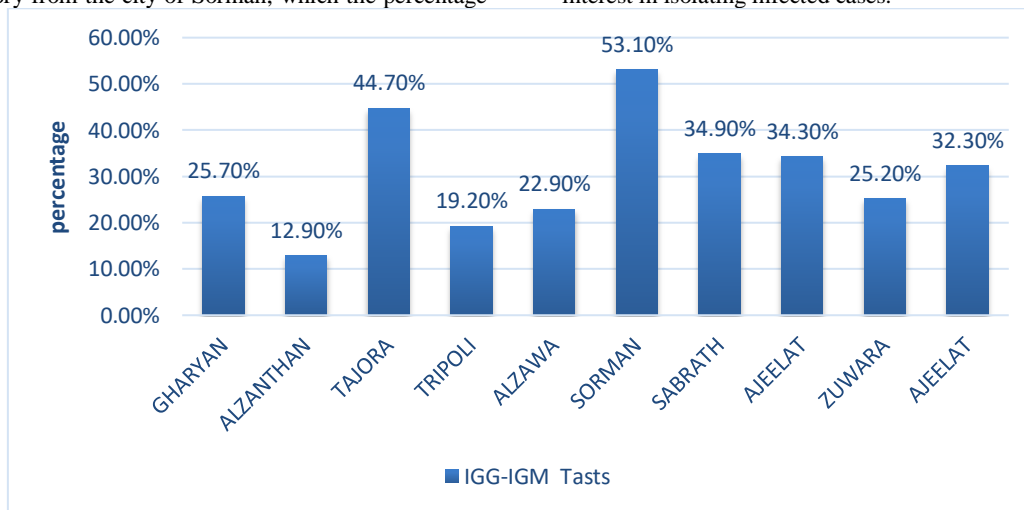
Figure 4: The Percentage of patients for confirmed COVID-19 by IgM and IgG tests

C. D-dimer test results:

D-dimer levels are used as a predictive biomarker for the blood disorder disseminated intravascular coagulation and for coagulation disorders associated with COVID -19 infections (7). The results of the study show that protein analysis is above normal in chronic respiratory and cardiac diseases, which may lead to poor outcomes in COVID -19 patients. The results in Figure (5) show that the number of cases of COVID -19 infected patients and an increase in the overall rate of D-dimer is lower than average compared with previous studies.
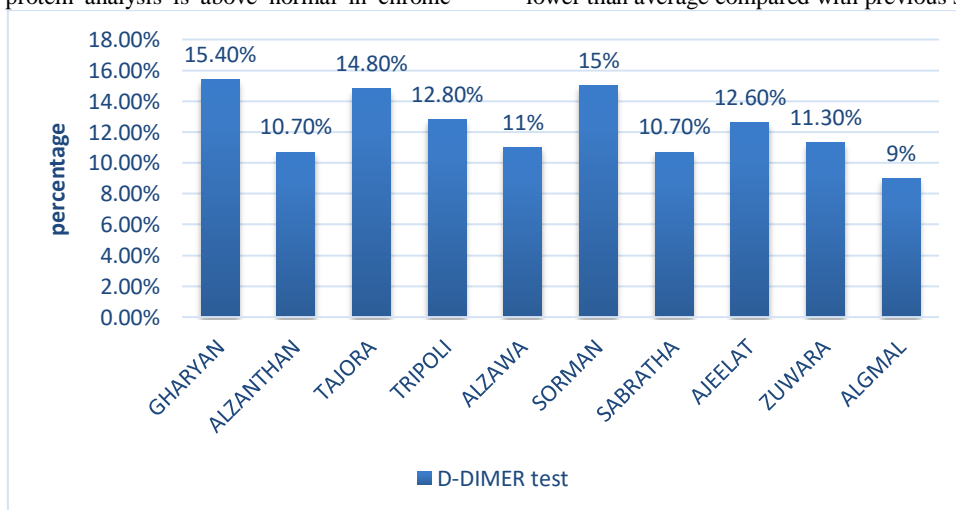

Figure 5: The Percentage of patients for confirmed COVID-19 by D-dimer test

D. X. Chest radiograph results:
COVID On chest radiography, chest radiograph results were contrasting in patients with COVID -19. The diagnostic rate in patients with suspected infection with COVID -19 was relatively low compared with other diagnostic methods, as shown in Figure (6).
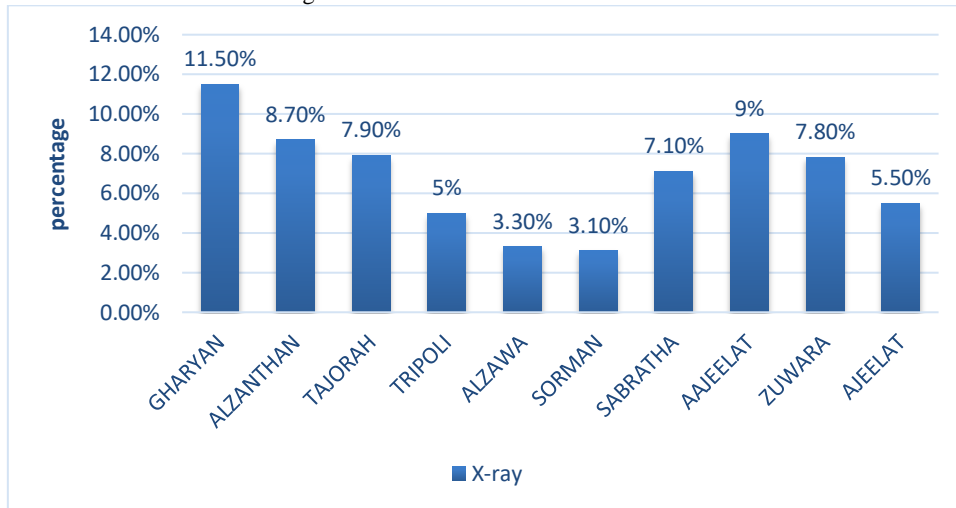

Figure 6: The Percentage of patients for confirmed COVID-19 by X-ray test

3.2. Different symptoms in people with COVID -19 .
Signs and symptoms of coronavirus disease 2019 (COVID -19) appear 2 to 14 days after exposure. Most people infected with COVID -19 have mild or no symptoms but can still pass the virus (asymptomatic transmission), but some become very sick and die. Studies show that COVID -19 is an indicator of person-to-person transmission through close contact with infected persons via respiratory droplets when coughing or sneezing. This is consistent with studies [16, 17, 19]. This is consistent with this study. Symptoms include the following: Early symptoms of COVID -19 include loss of sense of taste and smell. Common signs and symptoms Fever and cough, with fever being one of the most common symptoms in infected individuals, followed by cough symptoms. Signs in individuals infected with Corvid-19 The graphs show the percentage distribution of the most common signs and symptoms among study participants in Figure (7).
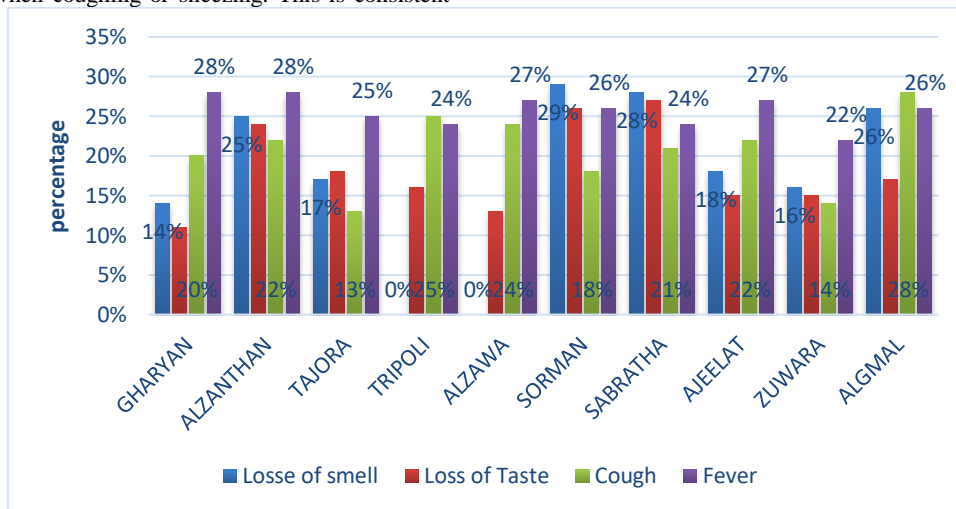

Figure 7: Percentage distribution of symptoms among study subjects.

The severity of COVID -19 symptoms can range from very mild to severe. Some subjects may experience worsening symptoms, such as increased shortness of breath and pneumonia, approximately one week after symptom onset. Accordingly, symptom rates for cases infected with the virus in figures (8) were as follows: Fever and chills (16%), (15%) shortness of breath and muscle pain, (14%) joint pain and headache, and (13%) chest pain. The most commonly reported symptoms were fever, cough, muscle pain or fatigue, pneumonia, and complicated shortness of breath, while headache, diarrhea, hemoptysis, runny nose, and mucus-producing cough were reported less frequently [3, 16].
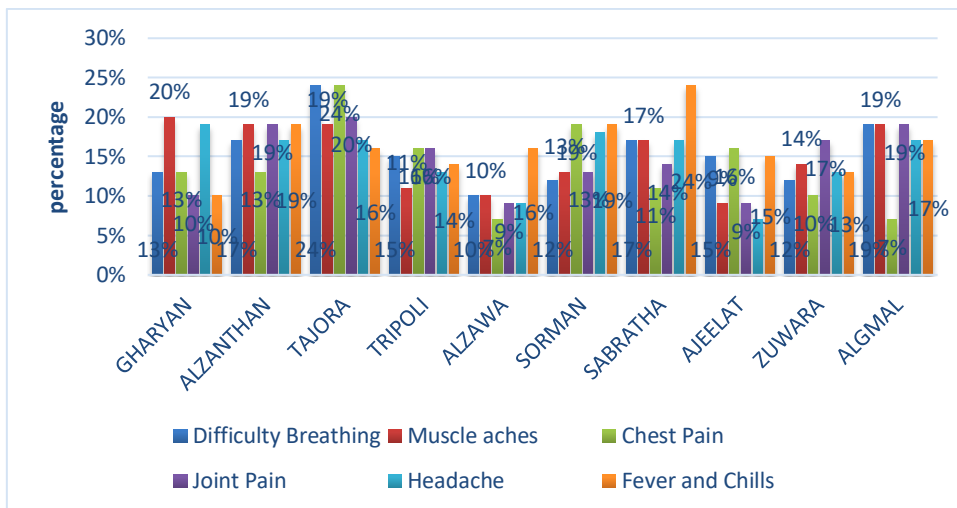
Figure 8: Study participants' symptoms.

Infection, the time required for recovery depends initially on the extent of the injury, as shown by the results of the study in the figures (9) of patients recovering rapidly after two weeks, but the disease may leave permanent problems in some. These are indications that full recovery may take a long time in some patients and may take more than one month. The more intensive and the longer the patient is treated, the longer the recovery takes more than two months. Some studies report that patients with mild symptoms have been reported to recover after one week, whereas in severe cases, progressive respiratory failure due to alveolar damage caused by the virus has been observed, which can lead to death [13].
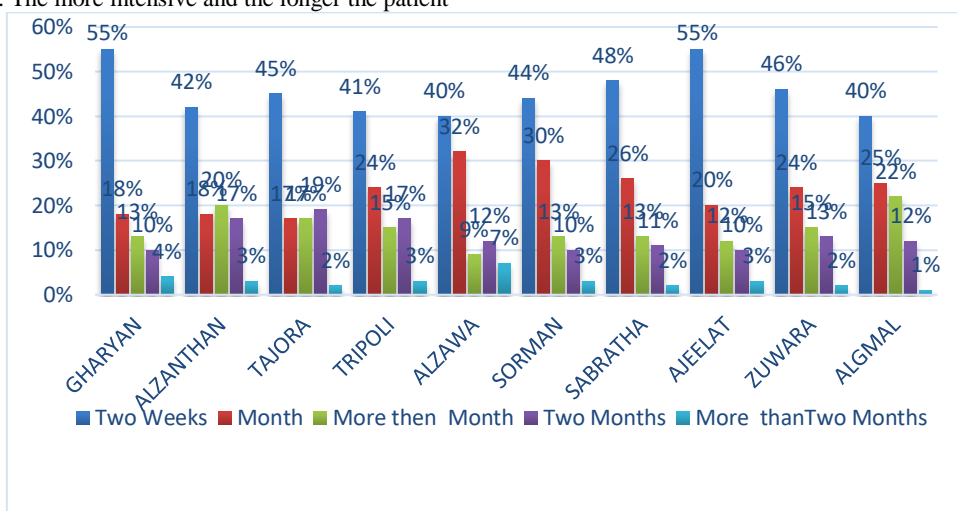

Figure 9: Show percentages according to the time required for recovery of the study volunteers.
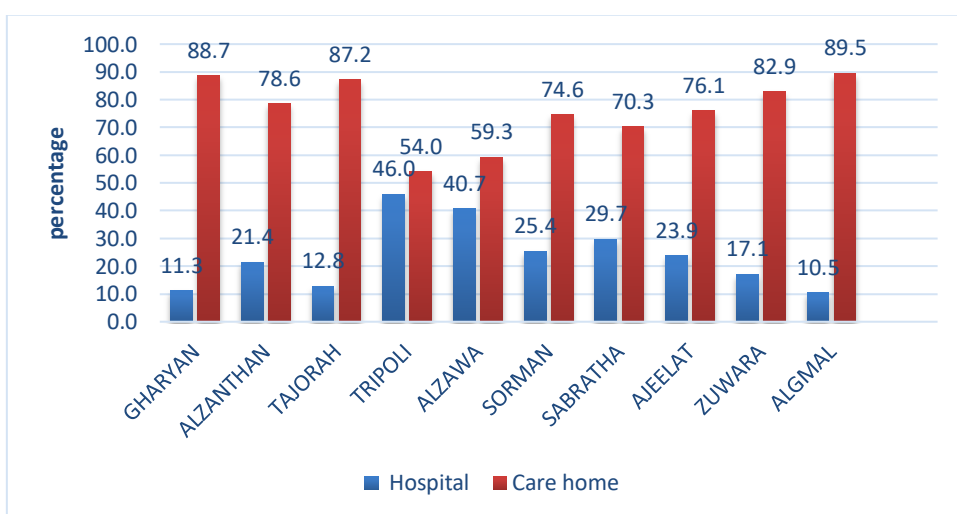

Figure 10: Show percentages according to the symptoms of the study volunteers.

The results of this study are presented in the form (11) that novel coronavirus (COVID -19) caused death in 11% of the family members of the cases included in the study who were infected with COVID -19. The infection rate among family members also exceeded 80%.

The case definition guidelines mention the following symptoms: fever, lymphopenia and leukopenia, new pulmonary infiltrates, on chest radiograph and no improvement in symptoms after three days of antibiotic treatment [2]. The fatal cases were mainly middle-aged and elderly patients with pre-existing conditions (oncological surgery, cirrhosis, hypertension, coronary artery disease, diabetes) [13].
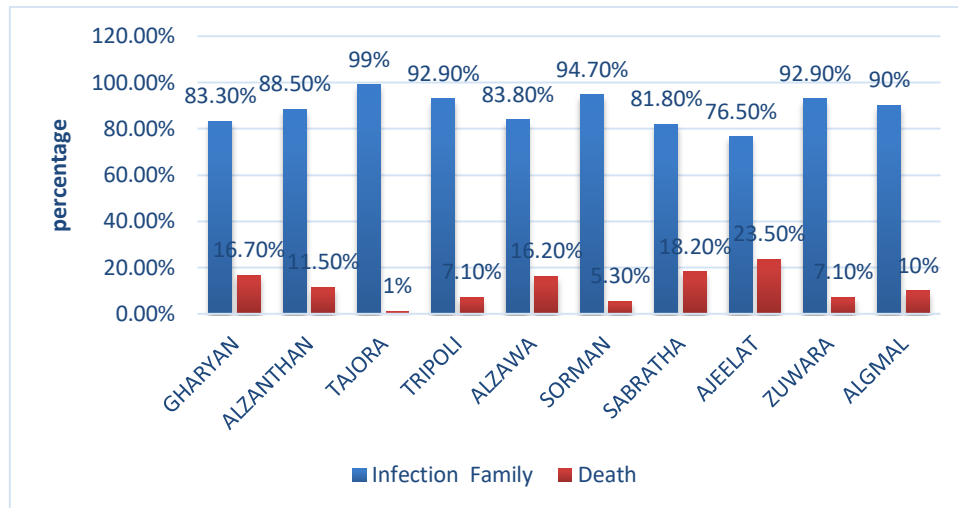
Figure 11: Show proportions by symptoms of the study volunteers.

4. Conclusions:

The infection is also transmitted by people who are otherwise healthy and who are unaware of their illness. COVID-19 affects all people in different ways. Symptoms range from mild to moderate to severe and can lead to death, depending on the person's immunity and lifestyle, medical preparations are necessary to protect people with chronic diseases such as cardiovascular disease, asthma, diabetes, cancer, obesity, weak nerves, and muscles, age group and commitment. The phase of the response to the Covid-19 virus is considered the phase of preparations, according to the response plans prepared by officials at the National Center for Disease Control and the protection authorities in Libyan cities, and it had a significant impact on limiting and reducing the number of infections.

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