



## A Questionnaire to Study the Extent of Worry and Fear of the Syrian Community About the Spread of Monkeypox Globally

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### Abstract

**Background:** The world witnessed an unprecedented spread of monkeypox in May 2022, which is a viral disease caused by Monkeypox virus, and rumors spread about it in the social media and news [1].

**Methods:** This study is conducted to show the attitude of the Syrian society against the monkeypox virus by spreading an online questionnaire to study the percentage of Syrians' concern and worries about this disease globally and locally. The online questionnaire questions were based on a similar article, which is for a study conducted in South Nigeria to study the extent to which people know about monkeypox [2].

Then we used Google Form to create and distribute the questionnaire to a range of the Syrian population, then the results were analyzed and a descriptive statistic was conducted for them, then the data charts were made by using Excel Microsoft Office 2013.

**Results:** The results of the questionnaire were discussed from the following points of view: Percentage of people afraid of monkeypox spreading, reasons why people are afraid of monkeypox, The percentage of people who expect monkeypox to become a pandemic, The percentage of people who think that the Syrian health system will be able to deal with this disease, and source of information about monkeypox.

**Discussion:** There is a good percentage of Syrians worried and afraid of the turning of the smallpox into a pandemic and its spread in Syria. Therefore, several steps should be taken in order to prevent the outbreak of monkeypox in Syria, and the role of the public health profession in Syria must be empowered in order to facing this disease.

**Keywords:** Monkeypox; Syria; Virus; Questionnaire

### Introduction

Monkeypox is a rare viral disease caused by Monkeypox virus of the Orthopox virus genus. Many viruses also belong to this genus as well, such as the common smallpox virus and cowpox virus. The first case of monkeypox infection in humans was discovered in the Democratic Republic of the Congo, from which the virus spread in

central and western African countries, and since then there were global efforts to limit the spread of this virus and deal With it [1].

In May 2022, a global outbreak of monkeypox was observed in several countries, which raised the concern of people and the World Health Organization.

The incubation period for monkeypox virus usually ranges between 7-14 days, but it may extend up to 21 days. Symptoms usually begin with fever accompanied by headache and fatigue, muscle and back pain and enlarged lymph nodes, then the rash usually appears after the second or third day from the Fever appearance, the symptoms usually last from 2 to 4 weeks [3,4].

The monkeypox virus can enter the human body through the skin, respiratory system, and mucous membranes, through contact with an infected animal or through eating its meat. The infection is transmitted between humans through large droplets secreted from the respiratory system of an infected person or by long-term contact with an infected person (such as having sex with him) [5-7].

Doctors have determined, by studying the disease in Africa, that the death rate does not exceed 10%, but there is currently no effective and safe qualitative treatment for monkeypox, and this is what worries people, but some research indicates that the smallpox vaccine may provide a good prevention rate [8,9].

Prevention ways from the virus include: Avoiding contact with animals that may be infected with the virus, such as rodents. Avoiding contact with any materials that have been in contact with an infected animal or person. Keeping hands hygiene after contact with infected animals or humans by washing hands with soap and water, or using an alcohol-based sanitizer [10,11].

**Objectives**

Knowing the extent of anxiety and worry in the Syrian society about the spread of monkeypox and explaining the reason for this fear, and highlighting the role of social media in influencing the people’s psychological health through the dissemination of medical rumors, in addition to proposing some measures to be taken in Syria to prevent the spread of the disease, as the Syrian health system will not be able to control the disease if it enters Syria.

**Methods**

An online questionnaire was designed and spread among 493 participants in the Syrian community through emails and different social media between 25<sup>th</sup> and 27<sup>th</sup> May 2022, to study the extent of anxiety among people in Syria that caused by monkeypox spreading lately. The questionnaire includes the following sections:

Participant’s age {participants were categorized in 6 groups as per their adopted age ranges (15-25, 25-35, 35-45, 45-55, 55-56 and <65 years>)} and provinces (Damascus, RifDimshq, Hama, Homs, Aleppo, Lattakia, Tartous, Idlib, As-Suwayda, Daraa, Al Hasakah, Deir Ez-zor, Al-Raqqa, and Quneitra Governorate). Then they were asked if they are worried about monkeypox spreading, and what they are worried about from its spreading (they were allowed to choose more than 1 answer), and if they think that monkeypox would be a new pandemic, and if they think that the Syrian health system will be able to deal with monkeypox if it spreads in Syria, then they were asked how did they hear about monkeypox.

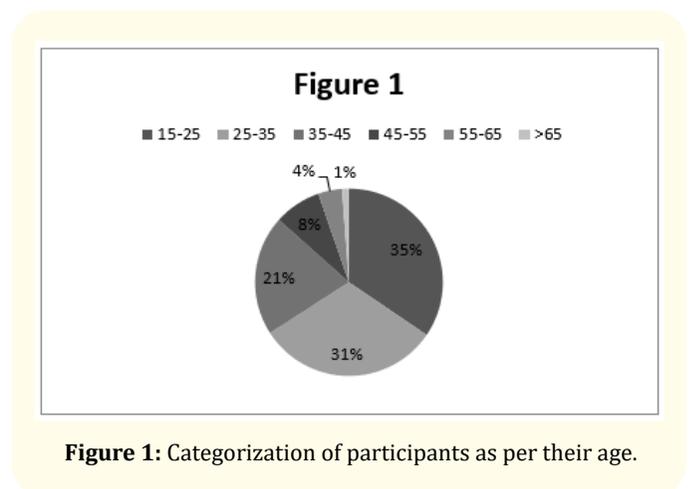
**Study design**

We conducted a cross-sectional study so we took a sample of the Syrian population (different ages and from all the Syrian governorates), and we gave them a questionnaire to study the extent of anxiety and fear in the Syrian society about the spread of monkeypox.

**Results**

**Categorization of participants as per their age**

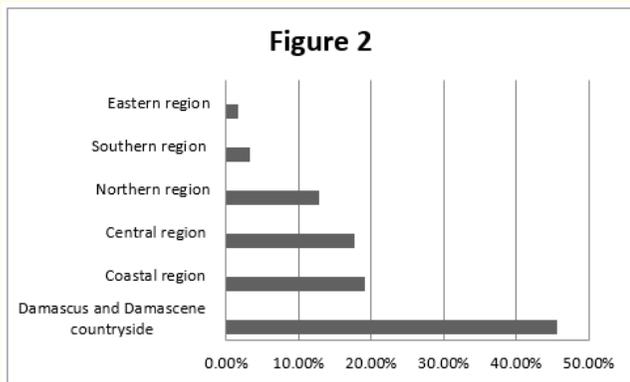
The participants were in the age group of 15-25 years (170: 34.5%) while the <65 years (6: 1.2%) witnessed to be the minimal. The rest of participants were between 25-35, 35-45, 45-55 and 55-65 years with their numbers recognized as 155 (31.4%), 102 (20.7%), 40 (8.1%), 20 (4.1%) respectively (Figure 1).



**Figure 1:** Categorization of participants as per their age.

**Distribution of participants according to the provinces:**

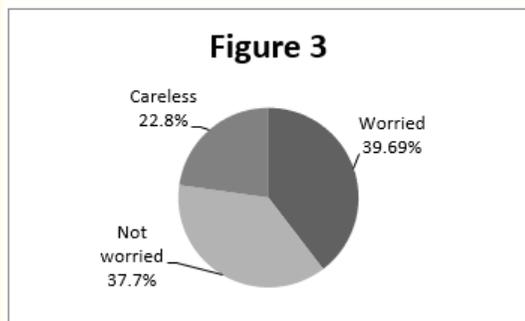
The participants of the two provinces Damascus and Damascene countryside were observed maximally of 45.6% (225), while the Eastern region’s participants (Al-Raqqa, Dier ez-zour, Al-Hasakah) were minimal of 1.6% (8) of the total participants, the coastal region provinces of Lattakia and Tartous, were observed with 19.1% (95) participants followed by central region (Homs and Hama) 17.6% (87), the northern region (Aleppo and Idlib) 12.8% (63) and the southern region (Daraa, Suwayda, Quneitra) 3.2% (16) (Figure 2).



**Figure 2:** Participants percentage according to the provinces.

**Percentage of people that are afraid of monkeypox spreading**

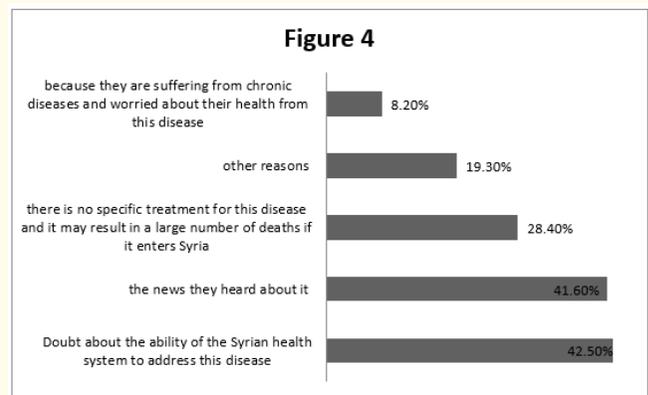
The participants were asked whether they are afraid of monkeypox spreading or not. Most participants (39.69%. N: 197) were worried and afraid from this disease. While (37.69%. N:187) of them were not worried or afraid from the disease, and (22.8%. N:113) of them were never concerned about diseases and pandemics (Figure 3).



**Figure 3:** Percentage of people that are afraid of monkeypox spreading.

**Reasons why people are afraid of monkeypox**

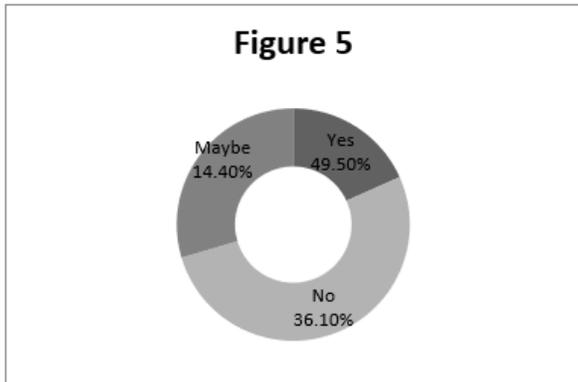
The participants were asked what are the reasons of their worries and fear from monkeypox spreading and they were allowed here to choose more than one answer. The data indicate that the main reason is people’s Doubt about the ability of the Syrian health system to address this disease (42.5%. N: 99), and the second common reason was that people don’t know much about this disease, but it worries them anyway because of the news they heard about it (41.6%. N: 97), then the data showed that the reason which comes in third place was that there is no specific treatment for this disease and it may result in a large number of deaths if it enters Syria (28.4%. N: 66), and some people said that they have other reasons for their worries (19.3%. N: 45), Finally few people said that they are suffering from chronic diseases and worried about their health from this disease (8.2%. N: 19) (Figure 4).



**Figure 4:** Percentage of reasons that made Syrian people afraid of monkeypox.

**The percentage of people who expect monkeypox to become a pandemic**

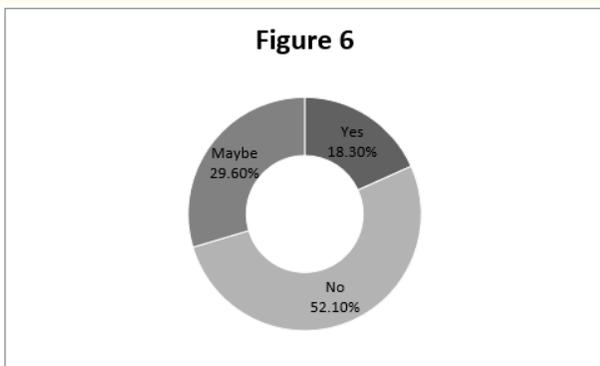
The participants were questioned if they expect that monkeypox will become a new pandemic soon, about half of participants 49.5% (244) were not sure if it will be a pandemic or not so they answered that maybe it will, while 36.1% (178) said yes, they think it will be a new pandemic soon, and some of them 14.4% (71) were optimistic and answered no it will not (Figure 5).



**Figure 5:** The percentage of people who expect monkeypox to become a pandemic.

**The percentage of people who think that the Syrian health system will be able to deal with this disease**

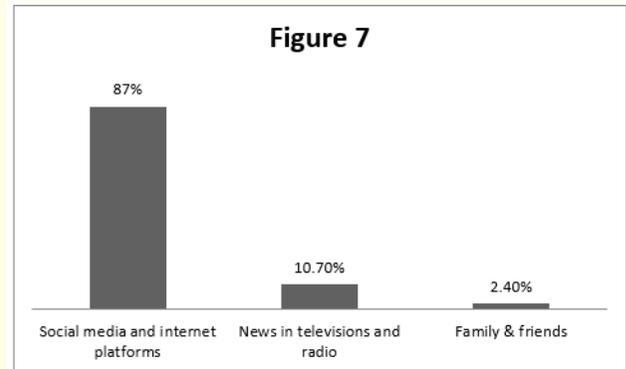
Participants’ opinions were taken about if they think that the Syrian health system will be able to deal with this disease when it enters Syria. Unfortunately, more than half of the participants 52.1% (257) did not believe in the ability of the Syrian health system to deal with the disease correctly if it entered Syria and answered no, while 29.6% (146) were not sure if Syrian health system can deal with this disease and answered maybe, and few people 18.3% (90), believe in the ability of the Syrian health system and said yes (Figure 6).



**Figure 6:** The percentage of people who think that the Syrian health system will be able to deal with monkeypox.

**Source of information about monkeypox**

Majorly, 87% (428) of the participants were informed about monkeypox from social media and internet platforms, and some of them 10.7% (53) heard of it from the news in televisions and radio. Finally, only 2.4% (11) mentioned that they heard about this disease from their families and friends (Figure 7).



**Figure 7:** Ways how people know about monkeypox.

**Discussion**

We note from the results of the questionnaire that there is a good percentage of Syrians worried and afraid of the turning of the monkeypox into a pandemic and its spread in Syria, as the Syrians have suffered a lot in the COVID-19 pandemic and have lost many victims and no one wants to repeat this scenario. The Syrian health system, no matter how strong it is, will not be able to prevent the disease if it spreads in the country.

And by comparing our results with the results of a previous study conducted in southern Nigeria in 2020 to study the extent of people’s knowledge of monkeypox and the effect of medical rumors that spread about this disease in social media and among people, it was found that most people in Nigeria had little or no knowledge of the disease, while in Syria there was a greater percentage of people who knew basic information about this disease, and in the two studies it was found that most people’s information about monkeypox came from social media and the media, which makes the spread of medical rumors and misinformation easy and widespread in both Syrian and Nigerian societies which is an obstacle to medical awareness campaigns to achieve its intended purpose [2].

There are several steps that should be taken in order to prevent the outbreak of monkeypox in Syria, the most important step is to secure the smallpox vaccine for citizens and to start national vaccination campaigns and give the vaccine to the largest possible number of people, as the vaccine provides a very good rate of prevention from monkeypox, and then issuing laws that commit people to physical distancing from each other in crowded places such as public transport and places of worship in order to reduce the chances of physical contact between people as much as possible. Organizing awareness campaigns in schools about the importance of washing hands with soap and water especially after touching animals or using alcohol disinfectant, launching awareness campaigns in the Syrian countryside, in order not to contact with animals that can transmit the virus, such as rodents as the Syrian countryside is constantly dealing with these animals. Finally, the role of the public health profession in Syria must be empowered for its large and important role in dealing with any health disaster or new pandemic, as Syria suffers from severe shortage in this specialization due to the war.

The questionnaire also showed us the importance of controlling fake news in social media, so people must be aware and teach them how to take correct and reliable information from social media platforms away from rumors and fake news illusion.

## Conclusion

This study with the previous questionnaire showed us that the monkeypox is a disease that we should be aware of and take it seriously, and it showed the impact of social media on people in different ages and how they deal with news related to diseases and pandemics.

## Limitations and Challenges

The difficulties that we faced during our study were limited to our inability to analyze the results in a quick time due to the lack of statistics about monkeypox disease during the past ten years.

We also encountered some difficulties in convincing a large segment of people to express their opinion about the disease because they do not know much about it.

We were able to face these obstacles by using statistics from the World Health Organization and articles by some researchers to

get the information we need about monkeypox, we also provided relevant information to some participants who did not know much about the disease.

## Authors Statement

This research is a purely individual activity by the authors and is not funded by any organization (governmental or non-governmental), and it does not need ethical approval, since all the participants of the questionnaire have been informed previously that the questionnaire is intended for research purposes and that their answers will be shared as results in this research and they agreed on that.

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