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# Survey COVID-19 among the homeless residents of Isin camp in Bandar Abbas in South of Iran

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## Abstract:

**BACKGROUND:** One way to reduce the burden of early detection of COVID-19 disease is in vulnerable and high-risk groups. The aim of this study was to diagnose and evaluate the disease in the homeless in Southern Iran Bandar Abbas.

**MATERIALS AND METHODS:** The target group of this study was 234 homeless people. Census sampling included all homeless residents of Isin camp Bandar Abbas. People were individually examined, and their information was recorded. COVID-19 sampling was done for all as outpatients this year.

**RESULTS:** Eight percent of people were able to answer the questions of awareness about symptoms, ways of transmission, and ways of prevention of COVID-19 disease. Nine percent of the homeless people in the target group stated that they used to wash their hands before settling in the camp. Six percent of homeless people stated that they used face masks before settling in the camp. Fifteen participants showed similar symptoms to COVID-19, yet their test result was negative. However, six people who were asymptomatic ended up afflicted. The mean duration of time (since the emergence of symptoms to the sampling date) was 3 days. The minimum duration of time from the emergence of symptoms to the sampling date was 3 h, and the maximum time was 7 days.

**CONCLUSION:** Considering the spread of the disease, certain social measures need to be taken in society to help take care of these people and transfer them from streets to safe places and provide for their essentials. Diagnostic tests should be done periodically among these people at regular intervals.

## Keywords:

COVID-19, homeless, screening

## Introduction

The end of 2019, coronavirus was recognized as a prevailing respiratory disease in Wuhan, China.<sup>[1]</sup> In February, 2020, COVID-19 was recognized as a key factor in the incidence of an acute respiratory disease with severe respiratory symptoms, infection in more than one organ together and even the cases of mortality.<sup>[2]</sup> In January 2020, the WHO introduced this disease as an emergent health threat and warned all countries to take national and

international measures to diagnose and prevent the disease.<sup>[3]</sup> As reported by the WHO, within 6 months of the pandemic, >5 million people were afflicted; 325 thousand died. Moreover, one million and seven hundred recovered.<sup>[4]</sup>

The main way the virus is transmitted among people is through inhaling the aerosols, coughs, and touch. However, the disease is not fully known.<sup>[2]</sup> Unfortunately, no definite treatment was suggested for the disease upon emergence, even by the Food and Drug Administration. Although there is no definite cure for the disease,

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the best and most effective measures that can be taken are social, political, and environmental to prevent the disease. The guideline provided by the WHO on March 7, 2020, includes preventive measures not only in the medical domain but also in other social domains such as transportation, trips, commercial units, and all the society.<sup>[3]</sup> A key factor in preventing the transmission of the disease is the early screening and diagnosis and appropriate quarantine. Moreover, isolating the afflicted from the healthy helps to control the ways of transmitting the disease.<sup>[3]</sup>

At the beginning of the pandemic, simple but effective strategies became popular and helped to slow down the transmission of the virus. These included washing and disinfecting hands recurrently, disinfecting the surrounding environment, preventing physical contact, social distancing, and personal hygiene. When the disease was further spread, wearing masks and attending more to personal hygiene were more effective and even in some countries such as China, Korea, and Japan, these were made mandatory. The WHO draws attention to the use of personal protectives. Although wearing masks is of an utmost importance, if used improperly, masks can raise the chances of affliction. Thus, it is recommended to use standard and hygienic masks.<sup>[4]</sup> CDC recommended to use a face mask to properly prevent COVID-19. Wearing masks indoors or in public crowded places is more recommended. Even in high-traffic areas, it is recommended to use a proper covering for the face.<sup>[5]</sup> People should avoid eye, nose, and mouth contact. Social distancing is a key strategy to prevent the transmission of the disease.<sup>[6]</sup> As the virus is transmitted in aerosols, keeping a social distance can help reduce the transmission of COVID-19. In social gatherings or at workplace, social distancing can be far from easy. The WHO recommends that distant working or working at home should replace the traditional ways of attending work in person. Online shopping is suggested to replace on-site shops.<sup>[7]</sup>

Quarantine is another key strategy to control the epidemic. It is in fact restrict people and their activities. It is usually done by checking for the symptoms of the disease in those at risk and preventing their contact with others. A review of the related literature showed that quarantine is an effective way to reduce the disease.<sup>[8,9]</sup> It was suggested to be effected in all countries upon the emergence of the disease. The results reported in 20 relevant works of research revealed that the number of afflicts was reduced from 81% to 41%, and the mortalities were also reduced from 61% to 31%.<sup>[10]</sup> An investigation of the epidemic of the disease in Italy showed that, without a quarantine, it would be hard to control the pandemic and the number of patients is ever rising from one household to another. Isolating people

during COVID-19 for 3–14 days can reduce this rate for 6–16 times.<sup>[11]</sup>

It is recommended by the WHO that for at least 14 days after a positive test result from a laboratory, the patients should be kept apart. To this aim, a number of measures can be effective: Avoiding face-to-face communication, using protectives in close contact with patients, keeping patients away from the public arena, keeping them away from the workplace and preventing their transportation.<sup>[12]</sup> The first cases of morbidity were reported in Iran in Qom on February 19, 2020. Soon, further cases of morbidity were found in 31 provinces.<sup>[13]</sup> One measure that the national Corona Operations Headquarters has taken is taking care of the homeless population in different cities as a multi-sector cooperative act. Other executive organizations are also cooperatively involved (e.g. the city hall, police, welfare organization, and health-care centers) in controlling the disease in the target population as initiated by the national operations headquarters.

Bandar Abbas County in Hormozgan province has a population of 642 thousand people. Within 8 months of the pandemic in this area, the number of patients reached 11,186 and the number of mortalities, as reported by Hormozgan University of medical sciences, was 852. Due to certain features such as being a destination for immigrants and seasonal admission, this County is more prone to a growing homeless population and a faster spread of the disease. Thus, the present research investigated the state of COVID-19 and screening for the disease in this population.

The purpose of this study was to investigate the situation of homeless people in Bandar Abbas in the conditions of COVID-19. Diagnosis and early detection of the disease led to quarantine and restriction of these people. The state of knowledge and preventive behavior of these individuals were assessed.

## Materials and Methods

### Study design and setting

First, in the provincial and city control headquarters of Bandar Abbas in the field of Corona COVID-19, the participation of the municipal organization and the police in attracting the health status of the homeless were attracted. With the participation of these organizations, homeless and street people were accommodated in the camp. Corona care team consisting of a doctor, expert and sampler arrived at the Isin camp in Bandar Abbas. The symptoms of COVID-19 disease including fever, cough, shortness of breath, headache, and dizziness were assessed.

### Study participants and sampling

The target group of this study was 234 homeless people. Census sampling included all homeless residents of Isin camp Bandar Abbas.

### Data collection tool and technique

An individual form was completed for each person, and a throat and nose sample was received and sent to the laboratory for the diagnosis.

Face-to-face training was conducted to improve their awareness of coronary prevention behaviors. Improving awareness and improving coronary prevention behaviors will reduce the transmission of the disease from them to the community.

Those with a positive test result were isolated from others. They also received personal instructions on COVID-19 by well-trained staff in COVID-19. The homeless were also provided with personal hygienic stuff such as masks. They were reminded of the significance of wearing masks, regular washing of hands, and social distancing.

### Ethical considerations

This research was illuminated by the experience and measures of the medical team in controlling COVID-19 epidemic in Bandar Abbas County and more specifically among the homeless population in the South of Iran. The present research was approved by the ethics committee of Hormozgan University of Medical Sciences, Bandar Abbas, Iran (IR.HUMS.REC.1399.546). The written form of informed consent was obtained from each participant. They were all allowed to leave the study voluntarily whenever they wanted. They were ensured of the confidentiality of the information they provided.

## Results

All the residents of the camp were male, and their average age was 39 years ( $R = 19-60$  years). Only 3% of this population worked on commission or as fishermen. 97% were unemployed and wandered in streets during the day or begged and slept in streets at nights. They all shared the Iranian nationality. 8% of people were able to answer the questions of awareness about symptoms, ways of transmission, and ways of prevention of COVID-19 disease. Nine percent of the homeless people in the target group stated that they used to wash their hands before settling in the camp. Six percent of homeless people stated that they used face masks before settling in the camp.

Fifteen people had the symptoms similar to COVID-19, but their sampling result was negative. Six others were asymptomatic, but their test result was found positive. The mean duration of the symptoms of disease since

the emergence of the symptom until the sampling day was 3 days. The minimum duration of time was 3 h, and the maximum time was 7 days. There was a statistically significant correlation between people's age and morbidity with COVID-19 ( $P < 0.05$ ). The majority of the patients were below 35 years of age.

## Discussion

The morbidity rate of COVID-19 in the homeless population of Isin camp was found to be 2.6%, which exceeded that of the total population of Bandar Abbas County (1.8%). This morbidity rate can be a warning about the spread of the disease in the target population. It is noteworthy that the asymptomatic were found with a positive test result. Thus, asymptomatic carrying of the disease can be a serious threat in this population. These people were deprived of minimal hygienic facilities such as masks or regular washing of hands, before entering the camp. It is also noteworthy that as the homeless have no stable accommodation and are all the time wandering in city and crowded places such as plaza, coastal recreation areas, and crowded streets and linger in them for sleeping and begging, their presence within the city can accelerate the spread of the disease. Another point to consider is the minimum age of this population. Those below 20, as required by their age, appear more within the city and create more chances of transmitting the disease. Besides, the maximum age of this population was 60 years, and this elderly age group was more at risk of the disease. Prior experience of pandemic in average-income countries including Iran has shown that these countries and their different states or provinces get into financial and operational problems in meeting the basic needs of these populations at risk. Thus, a gap is created between the co-operative acts of public and private sectors.<sup>[14]</sup> One way to take care of this population is to transfer them as fast as possible to camps.<sup>[15]</sup>

## Conclusion

In COVID-19 pandemic, the homeless population in Bandar Abbas is not an exception. Considering the significance of the spread of the disease in this population, and consequently, all other populations in society, it is incumbent on NGOs, private sector, welfare organization, and city hall to cooperate attentively in solving the issues related to these people. They should be immediately gathered from all around the city and be transferred to safe camps where they can receive basic daily stuff and hygienic facilities. Moreover, after leaving the camp, these people are again faced with pathetic conditions. Thus, the welfare organization, city hall, private sectors and so on can be expected to help them with proper employment. Otherwise, after leaving

the camp, they might get back to idleness, begging, and homelessness and pave the way for a faster spread of the disease in Bandar Abbas County.

### Limitation and suggestion

One of the limitations of this study was the lack of access to all homeless people in the city outside the camp. It is recommended that a similar project be carried out on all homeless people in the different parts of the country during the corona pandemic.

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### Conflicts of interest

There are no conflicts of interest.

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