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Original Article

Challenges and Strategies for Dealing with COVID-19 from the Perspective of Physicians and Nurses in Behbahan, Southern Khuzestan, Iran

Seyedeh Leila Dehghani[1], Fakhridokht Akbari[2*]

[1]Department of Publich Health, Behbahan Faculty of Medical Sciences, Behbahan, Iran
[2]Department of Nursing, Behbahan Faculty of Medical Sciences, Behbahan, Iran

***Corresponding Author:** Fakhridokht Akbari, Email: fdakbari@gmail.com

Abstract

Background: COVID-19 has widely spread around the world and has a high mortality rate. The aim of this study was to determine the challenges and strategies for dealing with SARS-CoV-2 from the perspective of physicians and nurses in Behbahan, southern Khuzestan, Iran.

Methods: In this descriptive-analytical study, 100 physicians and nurses working in COVID-19-related wards (respiratory isolation ward, intensive care unit, and emergency department) in Iran participated. They were included using available methods from March 21, 2020, to April 8, 2021.

Results: The mean age of the participants was 33 ± 3.4 years, and their mean work experience was 6 ± 1.6 years. Of the participants, 43.2% were female, 74.7% were married, and 51.6% were nurses. Regarding the main obstacles to controlling the coronavirus epidemic, the results showed that the highest percentage, 63.1%, was related to «the general public not taking the disease seriously.» In questions related to the main solutions to fight the coronavirus epidemic, the results indicated that the highest percentage, 72.6%, was related to «quarantining cities and self-quarantine.

Conclusion: To break the chain of COVID-19 transmission, it is necessary to implement measures such as quarantining, staying at home, restricting travel, practicing personal hygiene, identifying suspicious cases, providing livelihoods for people, ensuring adequate treatment staff, and raising public awareness and attitudes through training.

Keywords: COVID-19, SARS-CoV-2, Challenge, Physician, Nurse

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Introduction

At the end of December 2019, a number of unexplained cases of pneumonia were reported in Wuhan, China, and on January 21, 2020, the World Health Organization named this virus the novel coronavirus-2019. Coronavirus disease 2019, or COVID-19, is an infection caused by a specific virus called SARS-CoV-2. Breathing problems occur when the infection affects the lungs, causing pneumonia. Death due to these symptoms is possible in humans infected with the COVID-19 virus (1).

Usually, the symptoms start a few days after infection in humans, but in some people, the symptoms may appear later. Based on statistics and research, the symptoms can include fever, dry cough, respiratory disorder, fatigue, muscle pain, and diarrhea. On average, the incubation period for the symptoms is four days. Some people have no symptoms or only mild symptoms, but in others, this virus can lead to serious issues such as pneumonia, lack of oxygen, and death (2).

The fight against this virus is being carried out nationwide and comprehensively, although due to the novelty of the virus and the limited information available regarding its pathogenesis, control, and treatment, challenges remain (3). The occurrence of crises is one of the primary challenges for countries. What is crucial in this regard is how senior managers, experts, and people respond to these challenges, as this determines whether the future becomes a crisis (1).

To date, no vaccine or antiviral medicine for novel coronavirus-19 infections has been clinically approved. Therefore, the prevention and control of infection, along with public adherence to health guidelines, is a priority. However, these recommendations must be accurate and tailored to the needs of both experts and the general public (4). One of the primary needs of people during the coronavirus crisis is access to reliable information for accurate decision-making (5).

In their study, Ashrafi Rizi and Kazempour identified some challenges related to COVID-19, including the diversity of information, information audiences, and

media, information instability, people's varying levels of health literacy, lack of coordination in program strategies, and delays by officials in providing information (6). Medical and healthcare staff, including doctors and nurses, are on the front lines of fighting the coronavirus and are at a higher risk of exposure (7). Despite precautions taken while treating patients, healthcare workers are more likely to be infected due to the contaminated hospital environment, frequent exposure, and higher viral loads in these environments, making them more vulnerable than the general population (8-10).

According to research conducted by Koh and colleagues during the SARS epidemic in Singapore, 56% of healthcare workers reported increased work stress, and 53% reported increased work pressure (9). The exposure of medical staff to a wave of COVID-19 patients necessitates effective management and planning. Due to the increasing prevalence of this disease, the present study aimed to investigate the challenges and solutions for managing the coronavirus from the perspective of doctors and nurses in Behbahan city.

Methods

The current study was a cross-sectional study with a descriptive-analytical approach.

Statistical population and inclusion and exclusion criteria

The statistical population of the study included all physicians and nurses working in corona disease hospitals (Shahidzadeh hospital and Valiasr hospital) affiliated with Behbahan Faculty of Medical Sciences. According to the number of physicians and nurses working in departments related to coronavirus disease (respiratory isolation, emergency section, and intensive care unit), the study included 100 participants, consisting of 50 for physicians and 50 for nurses. The studied samples were selected based on the inclusion criteria and the available method. The inclusion criteria included voluntary participation in the study and having at least 1 year of work experience. Incomplete questionnaires (five questionnaires) were excluded from the study.

Method of conducting the study

The method involved the researcher obtaining permission from the assistant after receiving approval for the research at Behbahan School of Medical Sciences. After coordinating with the University's Deputy Director of Treatment, sampling began. Data collection was carried out by the researcher at Shahidzadeh and Valiasr hospitals, where the relevant questionnaires were distributed to all nurses and physicians working morning, evening, and night shifts. The research goals and voluntary participation were explained to the participants, and oral consent was obtained.

The required data was obtained by filling out the questionnaire, which took 20 minutes. The tool used in this study is a researcher-made questionnaire that includes three parts. The first part relates to demographic information, and the second part consists of 30 items addressing the challenges of dealing with the coronavirus in five areas: planning, facilities, financial issues, education, and social issues. The questions were scored using a Likert scale with the following options: strongly agree, agree, no opinion, disagree, and strongly disagree (scored 0-4, respectively).

The third part contains two open-ended questions to identify obstacles and propose solutions for managing the coronavirus epidemic. These responses were analyzed using the content analysis method. The questionnaire's validity was confirmed by 10 professors from the University of Medical Sciences (from the fields of medicine, health education, and nursing), and its reliability, assessed using Cronbach's alpha, was 0.85, which is higher than 0.7, indicating excellent reliability.

Statistical analysis of data

Considering that the study was descriptive-analytical, descriptive statistics (frequency, percentage, mean, standard deviation) were used.

Results

The mean age of the participants was 33 ± 3.4 years, and their mean work experience was 6 ± 1.6 years. Of the participants, 43.2% were female, 74.7% were married, and 51.6% were nurses (Table 1).

In response to the areas related to the challenges of dealing with the coronavirus, the highest percentage was related to "manpower supply," at 84.2%, while the lowest percentage was related to "education and social issues," at 57.8% (Table 2).

In the questions related to the main obstacles to controlling the coronavirus epidemic, the results showed that the highest percentage, 63.1%, was related to "the general public not taking the disease seriously", while the lowest percentage, 11.5%, was related to "failure to deal with offenders" (Table 3).

In the questions related to the main solutions for fighting the coronavirus epidemic, the results showed that the highest percentage, 72.6%, was related to «quarantining cities and self- quarantine,» while the lowest percentage, 7.3%, was related to «Solving the problem of insufficient treatment staff» (Table 4).

Discussion

The findings of the study indicate that the biggest challenge in dealing with the coronavirus is the general public not taking the disease seriously, and the lack of quarantine in infected cities is the main obstacle to controlling the epidemic. The proposed solutions for

Table 1. The demographic characteristics of the studied samples

Variable		Frequency	Percent
Gender	Male	41	43.2
	Female	54	56.8
Marital status	Married	71	74.7
	Single	24	25.3
Job	General practitioner	36	37.8
	Specialist	9	9.5
	Super specialist	1	1.1
	Nurse	49	51.6
Total		95	100

Table 2. Frequency of areas related to the challenges of dealing with the coronavirus from the perspective of doctors and nurses

Variable	Frequency	Percent
Comprehensive planning	60	63.1
Facilities	69	72.6
Financial matters	63	66.3
Education and social issues	55	57.8
Manpower supply	80	84.2

Table 3. The main obstacles to the control of the coronavirus epidemic

Obstacles	Frequency	Percent
Failure to quarantine infected cities	55	57.8
Lack of equipment	33	34.7
The general public not taking the disease seriously	60	63.1
Lack of information and transparency in statistics	35	36.8
Failure to deal with offenders	11	11.5
Lack of crisis management	24	25.2

Table 4. The main solutions to fight the coronavirus epidemic

Solutions	Frequency	Percent
Quarantining cities and self-quarantine	69	72.6
Restricting travels and controlling City entry/exit	63	66.3
Practicing personal hygiene	47	49.4
Providing health and safety equipment	46	48.4
Providing livelihoods for people	29	30.5
Identifying people suspicious cases	22	23.1
Solving the problem of insufficient treatment staff	7	7.3

addressing the coronavirus, in order of importance, include quarantining cities and self-quarantine, restricting travels and controlling city entry/exit, practicing personal hygiene, providing health and protective equipment, providing livelihoods for people, identifying suspicious cases, and ensuring adequate treatment staff.

The nature of crises is to create rapid tension in society. It seems, however, that the officials responsible for managing the crisis did not initially have a proper policy or plan for crisis communication, and as a result, a coherent strategy for managing crisis communication was not in place. In addition, delays in promptly presenting statistics and figures to the general public sometimes contributed to heightened concerns and the spread of pseudo-information and counter-information within society (5,11,12).

The very rapid spread of COVID-19, one of the most significant features of this virus, along with the percentage of deaths caused by the disease, has presented many countries worldwide, especially developed nations, with a major health challenge. How long this crisis will persist remains an unanswered question, requiring patience (13,14).

The primary strategy in combating COVID-19 is prevention and hygiene, which takes precedence over treatment. A review of the experiences of successful countries shows that regarding prevention and health, controlling the chain of disease transmission has been considered a key strategy and the main factor in their success.

From December 31, 2019, when China first encountered the coronavirus in Wuhan, until January 7, 2020, when Chinese authorities informed the World Health Organization of the new coronavirus, only 7 days had passed. China immediately implemented quarantines in cities, homes, and infected areas, along with isolation measures, public health policies in public places, travel restrictions, and the formation of a central committee to deal with the epidemic headed by the prime minister and provincial committees led by the governor. Central surveillance teams were dispatched to affected areas by the central government, mobilizing all government resources and hospitals. Other key strategies included extending the New Year holiday period, controlling traffic, and strengthening health education, all of which contributed to reducing the disease outbreak in China, eventually bringing it to zero (11).

In South Korea, as the situation worsened in February, the government imposed quarantines and curfews in North Gyeongsang province and some cities. Closing schools and universities, using electronic maps to track infected individuals and monitor their movements, allocating additional funds, and raising the level of warnings were among the country's effective measures to control the outbreak (12).

Japan also managed to keep the death rate from COVID-19 at a low level, despite having a vulnerable elderly population. Measures such as promoting teleworking for both large and small companies and offices, delegating authority to local governments based on Ministry of Health guidelines, closing schools and universities, providing subsidies, encouraging employees to stay home to care for their children, closing public gatherings and places, and increasing COVID-19 diagnostic tests to more than 4000 cases per day helped the country reduce the spread of the disease (13).

In the study by Meskarpour-Amiri et al, the results

showed that Iran's health system responded to the coronavirus epidemic in seven main areas: health and treatment, preparedness and support, crisis management, education, research management, and communication and information management, with healthcare and education being the most prominent areas (14). In their study, Ashrafi Rizi and Kazempour identified the challenges related to COVID-19, including the diversity of information, information audiences, and media, information instability, people's varying levels of health literacy, lack of coordination in program strategies, and delays by officials in providing information (6).

In their review study, Amiri identified the most important challenge in facing COVID-19 as issues related to the acquisition of knowledge. They also considered the geographical distribution of epidemic diseases to be a significant factor in the spread of the virus (15).

The policies of successful countries in managing the COVID-19 epidemic focus on seriously preventing the chain of disease transmission, reducing the spread of the virus by minimizing contact, and increasing physical distance between suspected individuals. In Iran, although self-reported screening of patients is conducted through the network system infrastructure, contact tracing and controlling the chain of disease transmission remain neglected in crisis management. After identifying patients, their interactions with others are not monitored to enforce quarantine. Furthermore, there is no comprehensive and integrated strategy to reduce or stop social contacts and limit the movement of the population within the city.

Conclusion

The most important finding of the present study is that the biggest challenge in dealing with the coronavirus is the general public's failure to take the disease seriously, and this can be addressed by observing personal hygiene. Measures such as quarantining cities and self-quarantine, restricting travels, practicing personal hygiene, identifying suspicious cases, providing livelihoods for people, ensuring adequate treatment staff, and raising public awareness and attitudes through training are crucial. A comprehensive guideline should be developed for monitoring and managing the COVID-19 crisis in the country. Based on the findings of this research, identifying challenges and seeking effective and efficient solutions can serve as a guide and source of information for policymakers and officials. This approach can help improve the quality of information, reduce stress and worry, and enhance overall performance.

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Authors' Contribution

Conceptualization: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Data curation: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Formal analysis: Seyedeh Leila Dehghani.
Funding acquisition: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Investigation: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Methodology: Seyedeh Leila Dehghani.
Project administration: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Resources: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Software: Seyedeh Leila Dehghani.
Supervision: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Validation: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Visualization: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Writing–original draft: Seyedeh Leila Dehghani, Fakhridokht Akbari.
Writing–review & editing: Seyedeh Leila Dehghani, Fakhridokht Akbari.

Conflicts of Interest

The authors declare that there is no conflict of interest in this study.

Competing Interests

None declared.

Ethical Approval

In this study, to comply with ethical considerations, consent and approval were obtained from the participants before asking them to complete the questionnaire. The study was approved by the Behbahan School of Medical Sciences with the ethics code IR.BHN.REC.1400.012.

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