Citizens' Opinion on Governmental Response to COVID-19 Outbreak: A Qualitative Study from Iran

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Abstract

Studying the people's expectations of government measures to control and manage the coronavirus disease 2019 (COVID-19) can help to prepare for future crises. This study aimed to investigate the opinion of the Iranian people on authorities' management during a crisis, such as the COVID-19 pandemic. This qualitative study was conducted on 70 Iranian citizens in Shiraz to explore their opinion about the government response to the COVID-19 outbreak in February and March 2020. Based on saturation criteria, the data was collected by I open-end question: "What is your attitude toward the readiness of the officials and government in this epidemic?" Thematic analysis was conducted to explore themes. At the first step of the outbreak, people had critical opinions on their authorities' management. Four themes were studied, including trust and responsiveness, policymaking during a health crisis, economic management, and epidemic management. Although the citizens' expectation is dynamic, our study showed that there are still high demands from citizens toward the authorities, even in a new crisis that was not perceived before. One of the best ways to respond to these demands is appropriate risk communication.

Keywords

preparedness, crisis management, trust, epidemics, COVID-19

Q1: What do we already know about this topic?

A: There are limited investigations on citizen's expectation form the governments during SARS-CoV-2 pandemic. It is vital to transfer the voice of people, their opinion, and expectations to adjust the policies and programs.

Q2: How does your research contribute to the field?

A: This is a qualitative study investigating various aspects of public opinion related to the Iranian government's response to the SARS-CoV-2 pandemic in its earliest phase.

Q3: What are your research implications for theory, practice, or policy?

A: Authors mainly investigate government policies related to crisis management in the COVID-19 epidemic and provide evidence-based recommendations for health policy-makers.

Introduction

In the 21st century, the world has faced several communicable diseases (CDs), including severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), influenza A (H1N1), Ebola, 1,2 and more recently since December 2019, SARS-CoV-2 outbreak that causes coronavirus disease 2019 (COVID-19). World Health Organization (WHO) announced COVID-19 as a pandemic on March 11, 2020. This coronavirus disease raises many debates on how pandemics should be managed in our globalized world. For

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instance, the UK's Scientific Advisory Group for Emergencies (SAGE), at the first days of the pandemic, believed that the lockdown policy could not be adopted by the government as many people might reject this policy. Likewise, England's Chief Medical Officer believed that it is not important to find every new case.4 Despite this, others believed that government early-stage interventions,5 including imposing a lockdown policy, and a higher testing rate were effective ways to control the pandemic.⁶ Urbanization and increased mobility within and between countries facilitate the rapid spread of CDs and may briskly change those diseases from an epidemic to a pandemic. In such situations, governments face many challenges, especially in urban areas, to implement lockdown, quarantine, or social distancing to manage the economy and education.8 In Iran, the government implemented various policies, such as restrictions on meetings and in crowded areas, disinfecting busy areas, kindergarten, school and university closure, office hour reduction, and imposing travel resections between cities.9 However, weakness of inter sectoral collaboration in the government as a whole to combat the pandemic, difficulties in importing some critical medicine and medical equipment due to sanctions, inadequate inpatient medical infrastructure in some cities, and lack of access to protective equipment, such as facial masks and sanitizers, 9,10 were among the challenges facing Iranian policy-makers at the beginning of the pandemic.

The emergency management cycle consists of 4 stages: preparedness, mitigation, response, and recovery. 11 Throughout the course of a crisis, mitigation and response are the main aspects to consider. Mitigation consists of measures, such as surveillance and control, system coordination among different sectors, and logistical support activities. The response should include operational plans with rapid implementation and communication.¹¹ Governance, risk reduction, knowledge management, education, reducing underlying risk factors, and preparedness for effective response and recovery are the main challenges that countries face in combating the crisis. 12-15 Improving public trust and increasing social capital are vital for resilience during a crisis, and to meet citizens' expectations. Balog-Way and McComas¹⁶ found 3 risk communication themes during the COVID-19 pandemic, including trust, tradeoffs, and preparedness. Trust is an important asset during emerging rapid health crises, especially in conditions of scientific uncertainty. Also, contextual factors, such as political orientation and religious commitment may affect trust during the crisis. A study in the US, between December 2019 and March 2020, showed that although scientific trust remained stable during the COVID-19 pandemic, there was an association between less trust in science and people's conservative political orientation and religious commitment.¹⁷

Iran is facing the COVID-19 pandemic while it is under the highest pressure of international sanctions. In addition to the international sanctions affecting Iran's economy over the last 4 decades, US unilateral sanctions have imposed more pressure on Iran's fragile economy since May 2018. This issue directly and indirectly affects Iran's health sector response to the pandemic. ¹⁸ This situation has made Iran a special case during the COVID-19 pandemic. Such economic situations result in imposing fewer restricting policies to dealing with the pandemic. However, a study in Italy showed that the lockdown policy, among different policies, has more positive impacts on controlling the virus. ¹⁹ This study focused on the Iranians opinion about the government response to the COVID-19 outbreak to investigate their judgments about the state's capability to manage this crisis.

Materials and Methods

Iran officially announced its first cases of COVID-19 disease on 19th February 2020 in 2 patients from Qom, a city in central Iran. Shortly after, the confirmed cases were reported from other parts of Iran. It was just 2 days before the national parliamentary election, which is held every 4 years in all the 31 provinces of Iran. Iran's parliamentary election is of utmost importance because the parliament has a central role in Iran's power structure. It can depose the ministers and even the president, while it is responsible for the enactment of budgets and all the legislation.

Retrospective studies suggested that COVID-19 might have been present (but misdiagnosed as flu) in Iran as early as December 2019.²⁰ The official announcement of the first positive cases of COVID-19 2 days before the election, the paucity of knowledge about this infection, and the global fear of the disease had created an ambiguous atmosphere in Iran at that time. There was a growing demand from the community toward the executive power to act quickly and properly in confronting this epidemic. This qualitative study was conducted in February and March 2020 in the first weeks of the COVID-19 epidemic in Iran to investigate these demands.

One open-end question was designed to investigate the common perspectives and perceptions among the Iranian people during the current COVID-19 epidemic. The interviews were conducted purposefully among the citizens of Shiraz. The question was finalized by the research team before the interview and sought to cover the research objectives. The participants' informed consent was obtained to answer this question: "What is your attitude toward the readiness of the officials and government in this epidemic?" Also, phrases, such as "Explain further," "Can you explain more," and "What does it mean?" were used to complete the participants' answers during the interview. On average, the interviews took about 10 min. The responses were recorded on paper by the interviewer. The basis for completing the data was saturation, which was obtained with 70 people. The age median of interviewees was 33, about 60% were female, and 40% were men. Moreover, about 55% of participants had university education. The collected data were analyzed and described using thematic content analysis approach. Based on Braun and Clarke's^{21,22} method, 6 stages were considered to explore the main themes: (1) reading and re-reading the

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transcripts (familiarization), (2) developing the primary codes, (3) determining the themes and sub-themes, (4) evaluating the detected themes, (5) labeling the themes, and (6) reporting the findings. Three authors of the study contributed to the analysis process and read and coded the transcribed interviews independently to extract the meaning units. Then, the specified codes were assessed to detect the sub-themes. Finally, the possible connections among the sub-themes were examined, and the main themes were obtained.

Three researchers performed coding to achieve homogeneity and reliability of the encoded codes. According to

Lincoln and Guba's approach, we used 5 criteria, including confirmability, dependability, credibility, transferability, and authenticity to promote rigor and trustworthiness in this qualitative study.²³ Therefore, a series of methods were used to reach the mentioned criteria as follow: member-checking by the multidisciplinary research team (confirmability), using several authors during the analysis steps (dependability), regular meetings, and peer debriefing (credibility), recruiting a large sample size with maximum variation (transferability), and considering the citations from almost all the participants (authenticity).

Table 1. Iran Citizens' Opinion on the COVID-19 Preparedness and Management by the Government.

Codes	Category	Theme
Gap between authority's slogan and practice	Dishonesty	Trust and responsiveness
Being honest		
Dishonesty		
Delay in announcing the emerging pandemic		
Ambiguity about coronavirus starting point in Iran	Lack of transparency	
Lack of transparency		
Arrival flights from China		
Quarantine of infected cities		
Authorities do not think about people	Distrust	
People are unimportant for them		
Incompetency of some officials		
International coordination	Using all capacities	Policymaking during
Using Iranian health experts outside the country		pandemic
Using experts in their appropriate position		
Stress management	Public's mental health support by	
Rumors management	government	
People need positive energy		
Managing media's news		
Quarantine planning	Physical distancing policy	
Quarantine of infected cities		
Coming and going restrictions		
Prohibition of gatherings		
Closing offices and shut down the city's transport system		
Helping low-income groups	Prioritize population	Economic
Paying more attention to the deprived households		management
Economy crisis	Economic susceptibility	
Supporting all people in an economic manner		
Inflation		
Coping with extortion	Monitoring	
Coping with hoarding		
Peoples' lack of awareness about pandemic	Enhancing public knowledge	Epidemic
Enhance people's knowledge about coronavirus		management
Sanitizing crowded places	Public health needs	
Health monitoring		
Providing masks and other protective facilities for people		
Enhancing COVID-19 test capacity		
Enhancing hospital beds	Treatment needs	
Separating confirmed and suspected cases of COVID-19		
Free treatment facilities (related to COVID-19) for all people		

This research was approved by the Research Ethics Committee of Shiraz University of Medical Sciences (code: IR.SUMS.REC.1398.1384). As a mandate, all data were untitled, coded and analyzed anonymously.

Results

Our findings indicated that people criticized different aspects of the government's public health emergency (PHE) management, including trust and responsiveness, policymaking during a health crisis, economic management, and epidemic management (Table 1).

Trust and Responsiveness

Trust and responsiveness are one of our main themes relating to the government's PHE management. This subtheme consists of authorities' dishonesty, lack of transparency, and distrust.

Dishonesty

The feeling gap between people and authorities was mentioned in some of the interviews. One of the interviewees stated that:

"They always talk and talk, but they never do."

Another one said that:

"Authorities say that we do this or that, but in practice, we see that they do another thing."

Being honest was another people's expectation from authorities. In this regard, the participants criticized policymakers about their risk communication strategies in the course of the crisis.

"They (authorities) should tell the truth . . . they have to be frank with us (about the disease)."

"The information should be transparent, and they have to be honest with us."

Lack of Transparency

Ambiguity about the source or index case of coronavirus in Iran is another subcategory relating to responsiveness. After confirmation of the first cases of coronavirus in one of the main Iranian religious cities, many uncertainties or controversial reports appeared about the source of coming coronavirus into the city.

"The government should have banned arrival flights from . . . from the first days of the pandemic. I think . . . is the source of coronavirus, but the government does not prefer to tell the truth."

"Outbreak started from . . ., but they did not quarantine this city. This issue led to the spread of the disease all over the country."

Distrust

Another subtheme related to trust and responsiveness is mistrust between politicians and people. The high inflation and strict economic sanctions imposed high pressures on Iranian people, especially those with lower socioeconomic status in the past year. In this context, debates on proper outbreak management intensified mistrust in the early days of the epidemic in Iran. Some people believe that politicians do not pay enough attention to the people's problems.

"No one thinks about us. We are under overwhelming pressure. No one helps us. In this pandemic, we are alone."

"They are incompetent and cannot manage this problem. People should protect themselves."

Policymaking during Pandemic

This theme mainly refers to strategies that people expect policymakers to adopt in the course of the outbreak. This theme consists of 3 categories as follows: using all capacities, mental health management, and social distancing policy.

Using All Capacities

Mobilizing all capacities in their proper position was one public's concerns.

"The government should ask other governments [around the world] to help us to control the disease. Many countries have valuable experiences. We can use them; why not?"

"We should ask all Iranian scientists around the world to help us . . . they have many capabilities, and we should not ignore them."

Public's Mental Health Support by Government

Mental health was another major concern. At the time of the crisis, people usually seek more information, especially if they feel that the available official information may not be accurate. In this setting, rumors could emerge. Some participants indicated that certain sources of information, such as satellite channels and social media, often contained content that was critical, sometimes extremely so, of the current ruling regime in Iran. Those same channels of information were said to be the source of rumors about the COVID-19 pandemic. This made it difficult for participants to determine what information was accurate. One possible cause of their difficulty was the ongoing global conflict involving Iran. Since the Islamic revolution in 1979, Iran was the target for many attempts to exterminate through imposed war, coups,

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and sanctions. These attempts have been supported by intense psychological warfare.

In addition, quarantine may cause some mental disorders, such as depression, delirium, anxiety, acute stress disorder, and posttraumatic stress disorder.²⁴ Spreading misinformation by unauthentic broadcasts and social media may intensify this negative atmosphere. As a result, people expect that policy-makers control these negative side effects. Official information and expert opinions in this situation need to be professionally announced while emphasizing the truths, clarifying uncertainties, and responding to people's concerns. The risk communication by officials during the first month of the COVID-19 pandemic did not fulfill these mandates as judged by respondents (Additional content related to misinformation is located in the "Epidemic Management" section.).

"Many people, like me, are under overwhelming pressure. I do not know which news is right or wrong. I feel anxiety and stress all day at the workplace and even at home. I know lots of people suffer from this problem these days and the government should think about this issue. We need positive news . . ."

"Icannot trust newspapers, news agencies, or even broadcasting. Lots of experts talk about different aspects of the pandemic. In some cases, you can see some contradictories."

"The state should confront the rumors which are spread by social media and satellite channels..."

Physical Distancing Policy

Respondents believed that the government should have implemented the physical distancing policy much sooner. In their view, the government hesitated to apply quarantine policy due to its negative effect on the economy. In addition, interviewees indicated that the government did not have a well-planned roadmap to combat the pandemic. Interviewees proposed that the government should have restricted both national and international travels in the early days of the epidemic. In their view, quarantine restrictions, including lockdown, the prohibition of gatherings, closing offices, and restricting domestic transportation were not done promptly.

"We should learn from China, South Korea, and European countries. Using an effective quarantine policy, they controlled the disease. But our government hesitates to implement the quarantine, and many people will die."

"People who come from other infected cities might put us at risk. We shut down our business to protect our family, but it seems that ineffectual."

Economic Management

Economic instability and international sanctions have raised people's susceptibility to economic shocks in Iran. This subtheme consists of 3 subcategories named prioritizing low-income groups, economic vulnerability, and efficient support system.

Economic Vulnerability

Lockdown policies, including shutting down businesses during the pandemic, can lead to a higher rate of economic vulnerability for vulnerable people who have limited livelihood assets. In addition, this outbreak was recognized 1 month before Iranian New Year, which is a flourishing time for most micro-businesses. Thus, shutting down businesses at this time caused many problems for the vulnerable households.

"They should think about vulnerable people how to live in marginalized areas."

"Many people sold their assets to buy food or pay their taxes and debts. Like other countries, the government should provide some facilities for people and pay money to protect them in this critical situation. Many people will become homeless as they cannot pay their rent."

"I cannot sell anything these days. Because of the pandemic, no one prefers to go shopping. I had several plans for these days, and I borrow money to sell goods in this month like in previous years. I do not know how I can pay my debts and rent."

Low-income Groups and an Efficient Support System

Recognizing the most vulnerable groups and targeting them for the government subsidies and economic support was another issue.

"In our region, most people don't have permanent jobs. Now with coronavirus, most of us lost our job, and we don't know how to pay our loans."

"I know lots of families suffer from this condition. Most of them lost their source of income. Some of them use their children as the labor forces, and now they can't handle their financial needs. Governments should help them and subsidized them in this regard."

Epidemic Management

Finally, epidemic management was the last theme resulting from our interviews. In this theme, enhancing public knowledge about coronavirus, providing public health needs, and providing treatment needs were categorized.

Public Knowledge about Coronavirus

Interviewees mentioned that

"Every day a lot of information is spread over the social media about how we can protect ourselves from COVID-19; however, we do not know which information is correct and actually what we should do?"

Moreover, some people underestimated the risk of COVID-19, which would ultimately lead to rapid spread of the disease. In this regard, policymakers should provide authentic and practical information to guide the people to protect themselves.

"Everyone proposes some strategies to prevent being infected. Moreover, a lot of misinformation is spreading these days. Some people say it is not an important issue and people should resume their normal life; others say it is a very dangerous disease, and no one should come out."

"Many of my colleagues neither washing their hands nor using a mask . . . It is not limited to my colleagues; many people do not know how should prevent the disease."

"Many people in marginalized areas don't know even this disease exists or not?! They resume their routine life."

"I don't know if the mask can protect me from being infected or not? Are masks reusable?"

Public Health Needs

Participants also argued that health authorities should sanitize crowded places, inspect the shopping centers, provide adequate masks and hand sanitizers, and enhance testing capacity.

"If the government insists not to implement quarantine, they should sanitize crowded places such as bazaars, malls, and . . ."

"If I have to go to my office, my workplace should be disinfected every day, and my manager and the government are responsible for it."

"I think the government should provide some facilities for the general population who should go to work to sanitize their cloth and cars on the streets."

Providing Treatment Needs

Finally, enhancing treatment facilities and hospital infrastructure was one of the major concerns. More strict distancing and isolation strategies in the emergency rooms and clinics were one of the demands. In addition, free health facilities related to the coronavirus pandemic was another expectation. These demands were concerned very urgent.

"Many people infected because they go to hospitals . . . If I have some symptoms, I never go to the hospital."

"I have many concerns about the peak of the disease in my city. I do not think we have enough hospital beds."

Discussion

The COVID-19 pandemic is a major challenge for policy-makers and authorities. ^{25,26} This study investigated the opinion of Iranian citizens about the management of the early phase of the COVID-19 epidemic by the authorities. The results showed that 4 issues, including trust and responsiveness, policymaking during health a crisis, economic management, and epidemic management were the main concerns of the citizens.

Trust is a determinant of long-run economic development in natural disasters, such as CDs epidemics.²⁷ World Health Organization²⁸ in the current pandemic suggested that countries should balance the possible benefits and negative consequences of each intervention and deploy strategies to encourage community engagement, gain trust and limit social or economic harms.

This study indicated that trust in the authorities in the early phase of the COVID-19 epidemic was a major concern. It was the first pandemic in the 21st century and reached Iran much earlier than many other countries. At that time, there was scant information about the virus; even its name had not yet been confirmed. The people's demands from the authorities were to provide correct information about the virus, its routes of dissemination, and the sources and preventive measures, whereas most of them were not known at the beginning of the epidemics. In risk communication strategy, accurate information should be provided in a timely manner; however, uncertainties and unknowns should also be declared frankly. This item was also addressed by the Director-General of WHO, Dr. Tedros Adhanom. He announced at the Munich Security Conference on February 15, 2020, that "We are not just fighting the COVID-19 epidemic concurrently; we are also struggling with an 'infodemic' which can be a serious problem in public health."²⁹ Iran, like many other countries, faced infodemics about the COVID-19 epidemics as it was reported by Kouzy et al,30 Ahmed et al,31 and Tasnim et al.32 The extent of these infodemics reduced due to increasing trust and reliance of people on the official news which were provided by the Ministry of Health of Iran through the national Television and/ or radio and social network channels.

Community engagement was not prominent in the first stage of the COVID-19 pandemic. There were demands toward the government without active participation. Even those sections of the community who wanted to help did not know how they can help. It took some time that the dialog between the government and the community and non-governmental organizations were established and the mitigation program by lockdown and physical distancing got support from the community.

As a newly emerging disease, it caused uncertainties to adopt appropriate mitigation measures. There were proponents of herd immunity worldwide at the beginning of this outbreak;³³ however, the passing of time revealed that this strategy could be disastrous.³⁴ On the other side, lockdown

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and strict quarantines were demanded by some of citizens at the same time, while it was criticized by others because of its negative impact on the economy and mental health. These counterbalancing demands, along with the uncertainties on whether active lockdown or herd immunity should be the basis of the crisis management ended with tardive decisions at the first weeks of the COVID-19 outbreak. These tardive reactions were criticized by the people, as seen in this report.

Having a multidimensional approach, attention to the mental health of people, and emphasizing the observance of physical distancing were among the demands of citizens from the authorities. Good communication and providing people with on-time information, along with proper management of misinformation were also requested by people. Participants indicated that they encountered rumors about COVID-19 on the same information channels where they typically would see information intended to affect government-community interactions. This made it difficult for participants to know what to believe. Communicating the accurate news of the prevalence of the disease and mortality may also produce anxiety and fears with high psychological pressure in the short term while providing people with accurate and on-time information from the authorities would build up the trust constructing a framework for community engagement, participation, and support. Lockdown and quarantine have been part of a mitigation strategy in this outbreak.³⁵ As it was mentioned before, the decision for lockdown is always challenging not only because of its effects on the economy and mental health, but also from the point of its interference with the freedom and privacy of individuals. Regional lockdowns may be more challenging when some cities or regions have their normal works and others are restricted. It is a hard decision for authorities to decide which cities should be on the list of guarantines due to some unpredictable social, psychological, and financial effects.³⁶ Our study showed that citizens demanded the implementation of strict lockdown from the beginning of the COVID-19 epidemic in this country. It was an advantage to the country if the decisions were made for lockdown in Iran in early March 2020 and resulted in general support by the people and their observance of the preventive measures.

Although free testing and care both for in and out patients were implemented from the beginning in the state's health care facilities in Iran, people did not know about this at the time of study and the cost of care was one their main concerns.

The availability of medicines, personal protective equipment, diagnostic kits, and medical equipment were also pf concern by them because of sanctions and unpreparedness before the pandemic. Their availability was a major concern in the early phase of pandemic in Iran and this was a major driver for rapid scale up of the domestic production of many of these items with governmental support.

Conclusions

This study was conducted in the first phase of the COVID-19 epidemics in February and March 2020 in Iran when there were many uncertainties, entanglement, and discomfitures worldwide, as well as in Iran. The citizens' demands were much higher than the capacities of the governments in confronting this outbreak. After the first few months of the epidemic, a more balanced interaction was established. These expectations have changed over time and need to be monitored regularly. However, our study showed that, even in a new crisis that was not perceived before, there are still high demands from citizens toward the authorities. One of the best ways to respond to these demands is to adopt an appropriate risk communication strategy.

Limitation

This study was conducted in the first wave of COVID-19 in Iran when there were many uncertainties regarding the government policies. In addition, it should be mentioned that reaching rigor is more difficult to maintain, assess, and demonstrate in qualitative studies. In addition, as we are not allowed to record audio files, transcript errors could be mentioned as another limitation of this study. It seems that this study was limited by these conditions.

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References

- Lee H-Y, Oh M-N, Park Y-S, Chu C, Son TJ. Public health crisis preparedness and response in Korea. *Osong Public Health Res Perspect*. 2013;4(5):278-284.
- Ryan MJ, Giles-Vernick T, Graham JE. Technologies of trust in epidemic response: openness, reflexivity and accountability during the 2014–2016 Ebola outbreak in West Africa. *BMJ Glob Health*. 2019;4:e001272.
- World Health Organization. WHO Director-General's Opening Remarks at the Media Briefing on COVID-19-11 March 2020. WHO: 2020.
- 4. Scally G, Jacobson B, Abbasi K. The UK's public health response to covid-19. *BMJ*. 2020;369:m1932.
- Dergiades T, Milas C, Mossialos E, Panagiotidis T. Effectiveness of Government Policies in Response to the COVID-19 Outbreak. University of Macedonia, Departmentof Economics, Discussion Paper Series, 5; 2021.

 Imtyaz A, Haleem A, Javaid M. Analysing governmental response to the COVID-19 pandemic. *J Oral Biol Craniofac Res*. 2020;10(4):504-513.

- World Health Organization. Cities and Public Health Crises: Report of the International Consultation, 29-30 October 2008, Lyon, France. World Health Organization; 2009.
- Bell DM, Weisfuse IB, Hernandez-Avila M, Del Rio C, Bustamante X, Rodier G. Pandemic influenza as 21st century urban public health crisis. *Emerg Infect Dis*. 2009;15(12):1963.
- Abdi M. Coronavirus disease 2019 (COVID-19) outbreak in Iran: actions and problems. *Infect Control Hosp Epidemiol*. 2020;41(6):754-755.
- Raoofi A, Takian A, Sari AA, Olyaeemanesh A, Haghighi H, Aarabi M. COVID-19 pandemic and comparative health policy learning in Iran. Arch Iran Med. 2020;23(4):220-234.
- 11. Rose DA, Murthy S, Brooks J, Bryant J. The evolution of public health emergency management as a field of practice. *Am J Public Health*. 2017;107(S2):S126-S133.
- UNISDR U. Hyogo framework for action 2005–2015: building the resilience of nations and communities to disasters.
 Paper presented at: Extract from the final report of the World Conference on Disaster Reduction; January 18–22, 2005; Kobe, Hyogo, Japan. (A/CONF. 206/6); 2005.
- Craig A, Kasai T, Li A, Otsu S, Khut Q. Getting back to basics during a public health emergency: a framework to prepare and respond to infectious disease public health emergencies. *Public Health*. 2010;124(1):10-13.
- 14. Reilly MJ, Markenson DS. *Health Care Emergency Management: Principles and Practice*. Jones & Bartlett Publishers; 2010.
- 15. Bayntun C, Rockenschaub G, Murray V. Developing a health system approach to disaster management: a qualitative analysis of the core literature to complement the WHO Toolkit for assessing health-system capacity for crisis management. *PLoS Curr.* 2012;4:e5028b6037259a.
- Balog-Way DH, McComas KA. COVID-19: reflections on trust, tradeoffs, and preparedness. J Risk Res. 2020;23(7-8):838-848.
- Agley J. Assessing changes in US public trust in science amid the COVID-19 pandemic. *Public Health*. 2020;183:122-125.
- 18. Takian A, Raoofi A, Kazempour-Ardebili S. COVID-19 battle during the toughest sanctions against Iran. *Lancet*. 2020;395(10229):1035.
- Signorelli C, Scognamiglio T, Odone A. COVID-19 in Italy: impact of containment measures and prevalence estimates of infection in the general population. *Acta Biomed*. 2020;25:01.
- Malekzadeh, R, (Deputy Minister of Research and Technology of the Ministry of Health), We diagnosed Coronavirus late; We got it wrong with the flu; 2020; hamshahrionline.ir/x6c5f. Accessed March 28 2021, 2021 (in persian).

- 21. Braun V, Clarke V. Thematic analysis. In: Cooper H, Camic PM, Long DL, Panter AT, Rindskopf D, Sher KJ, eds, APA Handbooks in Psychology[®]. APA Handbook of Research Methods in Psychology, Vol. 2. Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological. American Psychological Association; 2012:57-71.
- Clarke V, Braun V. Teaching thematic analysis: overcoming challenges and developing strategies for effective learning. *Psychol.* 2013;26(2):120-123.
- 23. Kyngäs H, Kääriäinen M, Elo S. The trustworthiness of content analysis. In: Kyngäs H, Mikkonen K, Kääriäinen M, eds. *The Application of Content Analysis in Nursing Science Research*. Springer; 2020:41-48.
- Huremović D. Mental health of quarantine and isolation. In: Huremović D, ed. *Psychiatry of Pandemics*. Springer; 2019:95-118.
- 25. Peeri NC, Shrestha N, Rahman MS, et al. The SARS, MERS and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: what lessons have we learned? *Int J Epidemiol*. 2020;49(3):717-726.
- 26. Spinelli A, Pellino GJ. COVID-19 pandemic: perspectives on an unfolding crisis. *J Br Surg*. 2020;107(7):785-787.
- Aassve, A., Alfani, G., Gandolfi, F., & Le Moglie M. Epidemics and trust: The case of the Spanish Flu. *DONDENA* Working Paper, 2020.
- 28. World Health Organization. Coronavirus Disease 2019 (COVID-19): Situation Report, 72. WHO; 2020.
- Zarocostas J. How to fight an infodemic. *Lancet*. 2020;395 (10225):676.
- Kouzy R, Abi Jaoude J, Kraitem A, et al. Coronavirus goes viral: quantifying the COVID-19 misinformation epidemic on Twitter. *Cureus*. 2020;12(3):e7255.
- 31. Ahmed W, Bath PA, Sbaffi L, Demartini G. *Moral panic through the lens of Twitter: an analysis of infectious disease outbreaks.* Paper presented at: Proceedings of the 9th International Conference on Social Media and Society; Copenhagen, Denmark, 18-20 July 2018. New York, NY.
- Tasnim S, Hossain MM, Mazumder H. Impact of rumors and misinformation on COVID-19 in social media. *J Prev Med Public Health*. 2020;53(3):171-174.
- 33. Jones D, Helmreich S. A history of herd immunity. *Lancet*. 2020;396(10254):810-811.
- 34. Mortazavi SAR, Ghadimi-Moghadam A, Haghani M, Kaveh-Ahangar A, Mortazavi SMJ, Jafarzadeh A. Health care policy makers' response to COVID-19 pandemic; Pros and cons of "flattening the curve" from the "selective pressure" point of view: a review. *Iran J Public Health*. 2020;49(6):1053-1059.
- 35. Parmet WE, Sinha MS. Covid-19—the law and limits of quarantine. *N Engl J Med*. 2020;382(15):e28.
- Sorooshian S. Quarantine decision due to Coronavirus pandemic. *Electron J Gen Med*. 2020;17(4). doi: 10.29333/ejgm/7862