


Exploring the Barriers in Maintaining the Health Guidelines Amid the COVID-19 Pandemic: A Qualitative Study Approach

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Abstract

Due to the Irretrievable impacts of the COVID-19 pandemic on society, this study aimed to analyze the barriers and reasons for the Iranian people's implementation of public health measures during the COVID-19 pandemic in 2021. The study explores the barriers and reasons for non-compliance by Iranian people in following and maintaining the health guidelines to combat the spread of the coronavirus in 2021. This research is qualitative and recorded participants' feedback from the Ardabil province of Iran. The study used a purposeful sampling method and lasted from April to May 2021 to collect the data through semi-structured interviews with 45 participants based on their gender, education, employment status, and marital status. The researchers analyzed the qualitative content until the required data-target through interviews implementation. This study incorporated MAXQDA version 10 to analyze the data and followed Goba and Lincoln's criteria to ensure quality research results. After analyzing the data, two main categories (internal and external barriers) and seven subcategories were obtained. The internal barriers exhibited further classified subcategories, such as mental, belief, and awareness barriers. The results indicated that external barriers included social, political, managerial, and economic barriers. The study results designated that a set of internal and external factors might cause individuals' non-compliance with health guidelines and standard SOPs in the advent of the pandemic COVID-19. Recognition of such factors, identified following the social, cultural, and political context and individuals' characteristics during the COVID-19 outbreak, can be used effectively to plan educational and management programs. As a result, elimination and eradication of obstacles and the relevant dimensions may facilitate disease control. Moreover, the high prevalence and spread of the disease can be managed by reducing the influence of factors preventing proper health behaviors.

Keywords

COVID-19, prevention, qualitative study, Iran

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What do we already know about this topic?

Adherence to health protocols and guidelines to protect the community is essential and requires public participation.

How does the research contribute to the field?

By discovering the obstacles and reasons for non-compliance with health protocols, it is possible to help people in the health field create new guidelines. Health service management programs can also make practical changes to prevent Covid-19 disease.

What are the research's implications for theory, practice, or policy?

This study identified the barriers to social, cultural, political, and economic aspects and individual characteristics of individuals during the COVID-19 outbreak. So that by removing and correcting internal and external barriers, the control of the disease can be facilitated, and the high prevalence and spread of the disease can be controlled. These achievements can be used effectively in designing training and management programs.

Background

The outbreak of the novel coronavirus (Covid-19) in China started in late 2019 and its rapid spread in different parts of the world has highly concerned countries.^{1,2} At present, and with a 2% mortality rate, the disease has influenced all countries of the world.³ The rapid spread, extensive latency as the exposure and the onset of the symptoms lasts 2-14 days, and the potential to infect all groups, especially those with weak immune systems (e.g., elderly, pregnant women, patients with chronic diseases) are of the main features of the disease.⁴ In Iran, it was identified on February 20, 2017, in the city of Qom and then it spread and influenced the whole country.^{5,6} In April 2022, there were 500,186,525 confirmed cases of COVID-19 in the world, including 6,190,349 deaths, reported by WHO. In Iran, there have been 7,199,861 confirmed cases of COVID-19 with 140,711 deaths.^{7,8}

WHO has declared Coronavirus (Covid-19) an acute health problem and a severe concern.⁴ Pandemics, like Covid-19 disease, often cause an increased level of fear and anxiety, leading to widespread behavioral disorders and negative influences on physical and mental health.^{9,10}

Due to the lack of definitive treatment, the implementation of protocols presented by WHO is the best way to control the virus and cut the disease transmission chain.¹¹ Adherence to protocols requires public participation, and due to the nature of COVID-19 disease, public participation in self-care is more important than ever. This issue is also emphasized by the Ministry of Health of Iran.¹²⁻¹⁴

Numerous studies have reported the benefits of adherence to health protocols and people's participation in self-care, e.g., promoting the mental and social health of communities.¹⁵⁻¹⁸ Also, cross-sectional studies show that compliance with protocols is not as expected.¹⁹⁻²¹ The results of field visits showed that more than 50% of citizens do not follow health protocols, including observing social distance and wearing masks, etc.

Not maintaining corona-related health advice may cause detrimental consequences for the individual, family, and even society. Therefore, despite the preventive notifications about the virus, the general public does not follow the health and care guidelines sufficiently. Hence, there is an urgent need to investigate the reasons for the lack of adherence to the health tips to help policymakers, managers, and health professionals do planning in this regard. The recent studies on the coronavirus have often adopted quantitative and experimental approaches. However, the qualitative research which has been carried out has shown that the works on the reasons for non-compliance with health guidelines are not so much.

Given the situation, especially in Iran, which is still seriously influenced by the disease, coping with the crisis requires careful planning and identification of effective causes and factors through public expression. Therefore, using a qualitative approach, the researchers of the present study decided to explain the obstacles and reasons for the non-observance of health guidelines by the people of Ardabil, Iran in 2021.

Methods**Study Design and Recruitment**

This research was conducted with a conventional qualitative content analysis²² method from the end of February until May of 2021, in Ardabil province of Iran. The primary data was collected through semi-structured interviews. After the researcher announced the health centers of Ardabil province, those who could and willed to participate were selected via purposive sampling. Before the interview, research questions were compiled by reviewing the literature and using consultants, medical staff, and faculty members' opinions in face-to-face sessions and one online session (Questions list). The order of the interview questions was different for each participant, and other research questions were asked

according to the answer provided. Participants determined the time and place of the interviews. The average interview time was 13–41 minutes, mostly done in public places or at their workplaces. In all the interviews, the health principles related to COVID-19 were strictly maintained. The researcher provided the safety items to the participants and kept the appropriate distance before starting the interviews. The researcher introduced herself and briefly described her resume to the participants. After that participants gave their written consent and the central questions of the interviews were asked. Due to the limitations caused by Corona, 34 interviews were done on the phone, and 11 interviews were conducted face-to-face (13–41 minutes). For phone cases, the consent form was sent through the Internet. After reading and signing, they returned the form via WhatsApp and email.

According to the purpose of the study, the two general questions pre-designed were:

“Do people follow health guidelines properly?”

“Why do people not properly follow the preventive measures against Covid-19?”

Other questions were of an exploratory and individual nature;

1. What do they think about maintaining preventive measures against Corona?
2. Do people follow health guidelines properly?
3. What do they think is the problem with those who do not follow the preventive instructions?
4. Why do they travel despite being aware of the disease in the country?
5. What are the barriers to controlling and preventing Corona from their point of view?
6. What factors other than people’s behavior influence the occurrence of the disease?
7. What are the barriers to preventing and controlling the disease?
8. What problems do their families face to prevent maintaining health guidelines?
9. What is needed to deal with the problems mentioned?
10. What do they suggest to solve the problems mentioned (including social, financial, emotional, physical, and mental problems)?
11. What will help them to follow health guidelines as best as possible?

Participants’ Conversations Were Recorded and Transcribed on Paper

The data collection process continued until saturation was reached. Saturation in qualitative research is when data is repeated and no new concepts can be derived from it.²³ In this study, the researchers reached saturation after the 41st

interview, but several other interviews were done for accuracy, and finally, after 45 interviews, the collection of research data was completed. The data were analyzed using conventional qualitative content analysis. Data were categorized and analyzed via MAXQDA10 software based on Granheim and Landman’s five steps.²² Immediately after the interview ended, the recorded content was copied word by word from the voice recorder to Microsoft Word 2013. Preliminary analysis and coding of the data of each interview were done before the following interview. Then, the interview text was read line by line two or three times, and the part related to the research question was coded. Codes were categorized based on similarities and differences. The codes with similar meanings and concepts were placed in the same subcategory. The codes and subcategories were compared, and their relationships were examined. The codes with conceptually more comprehensive and abstract were placed in the main categories. Finally, in a joint session, the entire data analysis process was shared, and the opinions of all the article’s were used.

Rigor

Guba and Lincoln’s criteria were used to increase the research quality.²⁴ To increase the credibility, the researchers selected the participants with the highest diversity by demographic characteristics to observe the principle of diversity in sampling. Due to the quarantine, people were in their homes, and with the closure of their jobs, the researcher had enough time to be involved with both participants and data continuously, which might lead to more valid findings. Qualitative methodology experts analyzed the data and modified it if needed. To increase conformability, all the authors participated in group meetings, analyzed, coded, and performed all the processes, and expressed their opinions freely. Then, the findings were sent to 3 prominent researchers in qualitative research, and they confirmed the steps, analysis, and findings.

For the transferability of the findings, the entire process of the research was described, and various methods (phone, face-to-face, and video interviews) were used to collect data. In addition, participants’ quotations were given directly and in large numbers. The findings were also shared with five individuals whose conditions were relatively similar to the participants’, though they did not participate. They confirmed having experiences like the participants.

Ethical Considerations

He ethics committee approved the study of Ardabil University of Medical Sciences (IR. AUMS.REC. 1400.067). To address ethical considerations, the interviewer introduced himself/herself at the beginning, and after explaining the purpose of the study, she gave the consent form to the participants. Data confidentiality was assured. Their names were asked neither in interviews nor in the final description and

through the data analysis. Each subject was given a code to be identified in the following steps. The consent form was also delivered to all participants, and they read and signed the form. In the case of remote interviews, the consent form was sent through the Internet. The interviewees returned it via WhatsApp and email after reading and signing. Then, the interview was transcribed and returned to the interviewee to confirm the accuracy of the information and express his/her satisfaction.

Results

Sociodemographic Characteristics of the Participants

The participants were 29-64 years old, with an average age of 46.5. The gender diversity was almost equal. In terms of marital status, 29 of the participants (65%) were married. By education level, 60% of the subjects had a diploma to bachelor's degrees. In terms of work status, 60% were self-employed or had non-governmental positions, 22% were government-employed, and 18% were unemployed (Table 1).

Two main categories of internal and external barriers were detected. The internal factors include issues such as mental, belief, and awareness barriers, while the external factors consist of social, political, managerial, and economic barriers. In addition, seven subcategories were identified, including mental barriers, belief barriers, awareness barriers, social barriers, political barriers, organizational barriers, and economic barriers. To ensure the reliability of the subcategories, they were reviewed and approved by the participants (Table 2).

Internal Barriers

Mental barriers: Some individuals worry about their mindset their own and that of others. Many think they are responsible for the situation. Low perception, depression, non-acceptance of the possibility of becoming ill, and the

Table 1. Demographics of the Participants.

Variable	Aspect	N (%)
Gender	Female	22(48%)
	Male	23(52%)
Age	35-18	17(38%)
	36-55	19(42%)
	More than 55	9(20%)
Marital status	Married	29(65%)
	Single	16(35%)
Work status	Governmental position	10(22%)
	Non-Governmental position	27(60%)
	Unemployed	8(18%)
Education level	Less than diploma	9(20%)
	Diploma to BA	27(60%)
	Higher than BA	9(20%)

need for communication are among the items defined for this subcategory.

Depression-need for communication: *"It is not possible to cancel all the rituals and not go to other people's houses. Depression is worse than corona"* (Participant 36)

Low perception: *"When people are asked about their learning about the coronavirus, they do not know. Some may lack intelligence or perception"* (Participant8)

"Some do not have a mentality. No matter how much you explained, they do not learn. Their brain is not capable" (Participant1)

Belief barriers: Some participants' reasons are related to their behavioral beliefs and confidence. Most people do not believe in the existence or severity of the disease. However, those who believe in the existence of the disease recognize that compliance with the protocols alone is not enough, and the government must take measures, first to attract peoples' trust in the media and daily statistics and, secondly, gain the public's trust in the government and the decisions and recommendations made.

Not taking the disease seriously, negligence, a history of being infected, distrust in the government, stubbornness, distrust in the news, lack of motivation, distrust in the media, and monotony of life are among the items set for this subcategory.

Political conflicts-distrust in the government-passivity to the news: *"Contradictions and conflicts in policies make people frustrated and suspicious of the government's actions in the fight against the corona, which leads to disregard for the news then with the demands of the authorities. In such a situation, each person disobeys any orders and recommendations in any way they can, even knowing that disobeying the orders will harm themselves and their families"* (Participant 13)

Not accepting the possibility of getting sick: *"If I were to get infected, it would have already happened, so there is no Corona. I do not know what the protocol is, but I have not used a mask from the beginning and I never put it on. It seems more like a joke"* (Participant 2)

"What happens if I get sick? Our neighbor's wife was diagnosed with Corona. She visited the doctor. She was asked to be hospitalized, but she was scared of the hospital. She bought medicine from an herbal store and took it. Now, she is fine." (Participant 3)

Public mistrust of the news: *"The lack of honesty in the words and messages presented by the government and the media makes people pessimistic, unable to make good decisions"* (Participant 14)

People do not take the disease seriously: *"I do not feel like washing my hands regularly. The mask makes breathing difficult. I do not believe these words and Corona. One reason for not following the guidelines is the lack of implementation"*

Table 2. Categories, Subcategories, and Codes.

Categories	Subcategories	Codes
Internal barriers	Mental barriers	Low perception-depression-the need for communication- not accepting the possibility of getting infected
	Belief barriers	Not taking the disease seriously-negligence-a history of infection-distrust in the government-stubbornness-distrust in the news-lack of motivation-distrust in the media-the monotony of the life-not accepting the possibility of getting infected
	Awareness barriers	Low health knowledge-not speaking in the language of ordinary people-the lack of knowledge about sampling sites- the lack of knowledge about the rules and civic duties-the lack of a coherent media-passivity of people to the news-the need for new interventional methods
External barriers	Social barriers	Corona social stigma-quarantine social stigma-holding religious and traditional ceremonies-family gatherings-collective passivity-pushing people away
	Political barriers	The need to impose fines-the need to impose social sanctions-the government's incompetence-the government's failure to control the pandemic-political conflicts-the need to enforce the law
	Management barriers	Inadequacy of hospitals in treating patients-an oversimplification of the disease by the authorities-the need to involve people in solving the problem-lack of coordination in closing centers-lack of complete quarantine of cities-the need to provide services to suspects and patients-lack of access to the identical and free treatment-lack of lay off infrastructure-lack of personal protection facilities for government employees
	Economic barriers	Concerns about the high cost of diagnosis and treatment-financial problems-fear of losing a job-dependence of the family economy on self-employment-lack of a fixed income-the need to leave home for work-renting

of quarantine by the government and under all conditions. However, individuals do not observe it at all" (Participant 34)

People's Negligence: "In my opinion, those who do not follow the protocols are weak and self-destructive people who cannot do anything; doing some tips is not that difficult! (wear a mask, to wash your hands, avoid agglomerations, keep distances, and stay at home)" (Participant 29)

Stubbornness and lack of motivation: "I think many people are stubborn with the government. No money, no job, so why do they survive?" (Participant 32)

History of infection: "I am afraid of Corona. My cousin died of Corona. He was buried without his family. I do not want to die like this, but many do not mind. They say because they were infected once, they will not get it again" (Participant 5).

Not developing an appropriate culture-lack of trust in officials-lack of collective decision-making: "The difference between us and China is that they have developed the culture and people trust in the officials, but in our country, people do not trust. Everyone thinks s/he is so wise that can find a solution to cope with the problem" (Participant 30)

The monotony of the life: "I'd say how long we should continue adherence to the protocols. It's been a long time. A way should be offered to get rid of the mask. The people do not have much fun, and because of Corona, it is not even possible to go out and do shopping safely" (Participant 35).

Awareness barriers: Some codes were detected due to people's lack of knowledge and ignorance about Covid-19 and the current circumstances, the lack of knowledge about civil rights and duties, unfamiliarity with terms, protocols,

and instructions, and lack of knowledge about where and how the sampling is performed.

Codes related to this subcategory include low health literacy of individuals, not speaking in a common language, lack of information about sampling sites, lack of knowledge about rules and civil duties, lack of a coherent media for awareness, passivity to the news, and the need for new educational intervention methods.

Not speaking in the ordinary language: "I do not understand most of what I hear on the radio and television. I would like people who speak to speak simply. They expect us to learn but some doctors use words that need to be explained" (Participant 24).

Lack of information about sampling sites: "I think people do not want specialist discussions, but they need simple tips, they want to know what to do." (Participant 25).

Lack of awareness of the rules and civic duties-distrust in the media-lack of a single trusted media-the need to involve people in problem-solving: The government criticizes the people, and the people criticize the government. There is a mutual distrust that grows more profound. This is because we have not learned the rules of social life and are not familiar with our and the government's duties. The government accuses the people and vice versa and most importantly, there are no media that everyone trusts. In my opinion, there will be no effect until the people are involved. It has always been like that; there will be no result. Otherwise, the people will work honestly" (Participant 31).

Low health literacy, stubbornness, low understanding: "The main problem is that the people do not have basic literacy; so, no matter how much they are explained about the

transmission routes, virus mutation or ways to prevent. It does not work” (Participant 9)

“There are three reasons for not following the recommendations: illiteracy, stubbornness, and lack of learning. People do not understand some things” (Participant 10).

The need for new educational intervention methods: “It continues in a way that no one is motivated to observe hygiene unless people are attracted with creative methods, because now everyone knows how dangerous the disease is, but no one cares. How long are they going to give people a flyer? How long will they put a banner on the street? They have to ask people what they like to know” (Participant 33).

External Barriers

Sociocultural barriers: Participants repeatedly spoke of the social stigma of Corona and quarantine; that is, they are preoccupied with the negative mindset of others and themselves. So, they did not advertise the infection and continued to appear in public. They also hold religious ceremonies and celebrations according to the routine of previous years. Some of the codes detected address issues people encounter in the community and in dealing with others. Among the codes related to the mentioned subcategory, we can mention: the social stigma of Corona, the social stigma of quarantine, carrying out religious and traditional ceremonies, holding family gatherings, collective passivity, and distancing people.

Quarantine social stigma: “My family and I got infected but we did not tell anyone. Hearing the word quarantine makes me feel like I want to be arrested and I get upset.” (Participant 23)

Holding a family meeting: “I live in an apartment, and I see that, especially on Thursdays, my neighbor’s children get together at their parents’ house. It happens in most homes. They don’t care about warnings about avoiding crowds” (Participant 37)

Participation in traditional-religious ceremonies: “Although the authorities have banned funeral ceremonies, some still go to funerals (Participant 40)

Corona social stigma - pushing people away: “I’m ashamed to tell anyone that one of my family members is infected with the virus. I told a friend about my mom’s infection, and she pushed away. I did not get sick but my friend made me upset. Sometimes we need sympathy. Corona has made people push away ”(Participant 45).

Political barriers: Some participants blame the implementation of incomplete rules, the lack of preventive character of the rules, and negligence of government agencies for the current situation. They also recognize the need to review policies as a priority on the agenda of officials and authorities. Among the codes related to this subcategory, the following can be mentioned: the need to impose fines, the need to impose social sanctions, government incompetence,

the government’s failure to control the pandemic, political conflicts, and the need to comply with the rules.

Government’s negligence in controlling the pandemic: “The government can easily eliminate Corona if it wants to. As in China, the government can close places for a month and gives everyone money and food” (Participant 4)

Lack of coordination in closing centers: “There are contradictions in the speeches and actions of the government, radio, and television. For example, mosques are closed, but meetings are being held, people are traveling, having fun and shopping” (Participant 11).

Government incompetence: “It is not all the people’s fault; we are not from South Korea or Italy! Offices should have been closed! The government says one thing, the media says another. The government itself lacks cohesion” (Participant 12)

Oversimplification on the part of the authorities: “Unfortunately, they did not show the true face of the disease and patients with serious illness. Only a few employees said with a smile, “I got infected and, thank God, I am fine! This affects people’s understanding.” (Participant 16)

Weak preventive policies: “I enjoy traveling. I used to travel frequently before Corona. What should I do now? ” (Participant 38)

The need to impose collective rules, passivity, and indifference: “Many people are indifferent to Corona because there is no penalty. Most of them have returned to normal life. They believe in the existence of the coronavirus only when the government close places” (Participant 41).

The need to apply fines - the imposition of social sanctions: “Fines and the deprivation of social services for people and associations that do not comply with health protocols could prevent this catastrophe. If all the offices were closed and cities were quarantined, people would realize the depth of the tragedy” (Participant 42)

Not developing the culture - lack of public trust in employees - lack of collective decision-making: “Our difference to China is that they have developed the culture and people trust in their employees, but in our country, people do not trust in the employees, think they are wise and try to find solutions and deal with the problems by their own.” (Participant 30).

Management barriers: According to several participants, there were mistakes in managing the crisis. Hospitals have not provided adequate and effective services, and the person who sought them will likely lose their lives to hospital negligence. For effective management, it is necessary to resolve the problem or improve the situation. Participants also think that authorities are not concerned about the problem because they say that control of Covid-19 depends on government support for the jobs that incur loss and incredibly close self-employed jobs, centers, and stores. However, they claim that such an important measure has not been fully implemented. Furthermore, equal and free medical services are needed for all people in the country, not just people in large cities and non-governmental hospitals.

Among the codes related to the mentioned subcategory the followings can be mentioned: Inadequacy of hospitals in treating patients—excessive simplification by the authorities—need to involve people in the solution of the problem—lack of coordination in closing centers—lack of complete quarantine of cities—lack of face-to-face care for t suspects and patients—lack of access to free and equal treatment—lack of lay off infrastructures—lack of personal protective equipment for public employees—lack of attention to aspects of quarantine.

Hospitals' Inadequacy in patient care: "I have heard they do not care who comes to hospitals and patients die. If they go to the hospital, I think they will keep the protocols. I saw many cases. I took care of my aunt because she had no children. She was sick. I did not keep guidelines until then. However, then, I got scared" (Participant 6).

Lack of access to equal and free treatment: "Having access to treatment and medical care at a reasonable cost is the first public health condition, especially during an epidemic. However, the high cost of the tests,, lung CT scan, and medication has led some people to tell it was just a cold! The lack of financial resources for treatment should not deprive the person of treatment "(Participant 21)

Lack of lay-off infrastructure - lack of personal protective equipment for government employees: "A friend says we want to take it seriously, but it does not work. He works at the electricity company. He is responsible for maintaining, repairing and operating the high voltage power grid. He must go to work and works longer hours than usual. In one task, four technicians, a specialist, a worker, and a driver sit together in a car " (Participant 27).

Do not provide supplies to infected and confirmed cases: "People with suspected Coronavirus infection who do not follow health instructions should not be attended when visiting clinics. In addition, patients who come out quarantine should be deprived of access to social services" (Participant 43).

Lack of attention to the supportive economics of quarantine: "Suppose people take this seriously. Does anyone provide them with food and supplies? In our city, they say with a loudspeaker do not leave the house. The governor has turned it into a ghost town! However, nobody says how people are going to eat! What happens to the expenses of the poor ?" (Participant 19)

Lack of attention to the supportive economic dimensions of quarantine: "The government should pay each family's salary for a few months. Then ask them to stay at home. The government say stay at home. They give a small subsidy. What do they expect from the people? It's Iran. " (Participant 20).

Economic barriers: Many participants cited financial problems as one of the most important factors influencing their behavior and others concerning the prevention of Coronavirus. Examples include people who have not reported their infection for fear of losing their jobs. Some self-employed with financial problems during the closing of the business have refused to comply with the quarantine.

Codes related to the mentioned subcategory include: Concern about the cost of Corona diagnosis and treatment—financial problems—fear of losing one's job—dependence of the family economy on self-employment—lack of a fixed income—need to leave home for work and rent.

Financial problems (renting): "If citizens do not enjoy good well-being and socioeconomic status, they cannot be expected to comply with the law" (Participant 18).

"If it were not for the economic problem, I think many people would follow the protocols, but what they should do when the stores close and the goods spoil in the stores and the checks do not arrive? Many are tenants and do not have a fixed income. So, they cannot stay in the home (Participant 44)

Fear of losing their job: "There are cases where, given the symptoms of the disease, people know that they have been infected and they should be quarantined, but they do not isolate themselves for fear of losing their job and continued working. "(Participant 22).

Lack of fixed income-dependency of the family economy on self-employment—the need to leave home to work "If I do not work one day I have to beg. How can I follow the protocols? Also, quarantine order and not leaving the house does not make sense for those who do not have a fixed salary and receive a daily rate, nor for salespeople or for those who earn living selling fruits and vegetables in a van" (Participant 28)

Worries about diagnosis and treatment costs: "Many people find difficult to pay the costs of exams and treatment. For example, my whole family has been infected. If we were all tested, we would have to pay 1 million, but we did not go for the test, then we got better in two or three days and started walking around the city"(Participant 7).

Discussion

This study aimed to investigate the barriers to non-compliance with health protocols during the Covid-19 pandemic. The results revealed that compliance with health protocols is a complex issue involving numerous factors. Until now, Covid-19 disease does not have a standardized treatment, adhering to the protocols is the most efficient approach that together with vaccination can control the disease burden in communities. The data analysis identified two main categories: 1) Internal barriers with mental, belief, and, awareness barriers and, 2) External barriers with social, political, managerial, and economic barriers.

The first category includes the internal barriers of individuals. A person's behavior refers to her/his values. Positive and negative values have remarkable impacts on a person's behavior, especially in the case of new behaviors that emerged for the first time in society. An individual's motivation to perform a healthy behavior is affected by three categories: 1-Perception of the problem 2-Modulating factors 3-Probability of results implementation.²⁴ The present study

showed that mental barriers (individuals' insufficient knowledge and understanding-depression - the need for communication, and non-acceptance of the possibility of getting sick) were the main reasons for citizens' non-compliance with protocols. If participants have insufficient knowledge and understanding of the severe threat to life, in other words, if they do not consider themselves exposed to the disease and its consequences, they will not behave properly.²⁵ These results align with the study of Darvishpour,²⁵ Champion,²⁶ and Becker.²⁷ They reported poor and insufficient knowledge about a disease and health issues as the significant reasons for non-observance of health behavior and screening. Knowledge is a prerequisite for changing attitudes, behaviors, and decision-making on coping with behavior.^{28,29} Purposeful and needs-based training might encourage people to follow health protocols.³⁰ In addition, a significant relationship between individuals' knowledge and perception degree with being at the risk of a severe problem has been realized by other studies.³¹ In other words, if people do not accept being at the risk of a severe health problem, they will not require themselves to maintain the protocols. Health behaviors are more likely to be adopted if people stay healthy and believe that healthy behaviors will improve their health.³²

Depression and the need for communication were among the items detected in the category of mental barriers. Depression is a disorder that causes a lack of motivation.³³ Psychological injuries during the pandemic and decreased social relationships, and disruption of everyday life threaten those with a history of mental illness and others to the same extent.³⁴ On the other hand, depression is a dangerous outcome of quarantine and a severe decline in social relations caused by increasing the time spent at home and results in emotional challenges.³⁵ Studies show that familial and telephone communication is a prominent factor in improving the mental and psychological health of individuals.³⁶⁻³⁹ Research results suggested that talking to others and traveling with family and friends reduce the burden of daily stress.⁴⁰ Participants said they attend family meetings to avoid depression. According to them, Corona and extend stays at home are the leading causes of depression, which they thought was worse than the infection with Covid-19.

Barriers to awareness were another category detected in the present study. The analysis of participants' experiences and views showed that low health literacy of individuals, not speaking in the language of ordinary people, lack of knowledge of sampling sites, lack of knowledge of the rules and civilian duties, lack of a coherent awareness of media, the passivity of people towards the news, and the need for new interventional methods were the obstacles to maintain health protocols. Due to the persistence of Covid-19 disease and the need to educate different age groups, the use of new technologies appropriate for age and gender is an essential point that should be considered because the selection and application of training techniques and methods (based on age groups and audience needs) motivate individuals'

behaviors.⁴¹ Studies show that education, mainly teaching in simple language and according to the needs of the people, is very effective, especially in critical circumstances and in situations where there is no definite solution to solve the problem.^{42,43} People wait for messages with training content to deal with the trouble in critical and epidemic situations. If the education and messages are not following the citizens' needs, they will be confused.⁴²

Social barriers were identified. Some subjects considered the Covid-19 disease as a social stigma because it causes isolation. To avoid isolation and social stigma, they hide their disease and this causes them not to follow quarantine, which is a requirement for controlling the pandemics.^{44,45} Social barriers might be overcome through purposeful education, which requires the review of educational terms.⁴⁶ For example, the virus and disease were not limited to a specific area. Instead of calling the patients people with Corona, they should be called infected cases. Instead of using terms such as spreading the virus and infecting others (in active voice) which is highly stigmatizing, it is better to say spreading and transmitting the virus (in the passive voice). According to the studies, the social stigma and induction of being a problematic case causes emotional distress and exposes people to compensation or denial of their illness.³² This is seriously important, especially in the case of contagious diseases, since it paves the way for an outbreak.⁴⁷

Political barriers were another subcategory detected in this study. At present, using comprehensive and accurate planning and the establishment of coordination between the nation and the government, countries are dealing with the spread of coronavirus and treatment of the cases. Authorities' confusion in decision-making and their contradictory statements, lack of people's attention to specific regulations, and distrust in official statistics were mentioned as the reasons for not following the protocols. Due to the nature of Coronavirus disease, coordination of the organizations with the Ministry of Health is required to control the disease. The lack of such coordination might lead to infection disease and non-compliance with protocols. In addition, the participants expected full quarantine for all jobs; though, not implementing a complete quarantine has caused the spread of the disease and a kind of passivity among the citizens. Ineffective policies in monitoring quarantine and non-quarantine of infected cities, and late notification of the first cases provoked citizens to underestimate the disease. Studies show that a single policy is needed to coordinate organizations in times of crisis and epidemic; otherwise, operations will take an island and scattered shape. The result achieved through a cohesive whole in the face of a crisis is different from the result from separate islands, which may lead to failure.^{48,49}

Management barriers were identified with concepts such as inadequacy of hospitals in caring for patients, oversimplification of the disease by the authorities, need to involve people in solving the problem, lack of coordination in closing centers, not complete quarantine of cities, the need to provide

services to suspects and patients, lack of access to equal and accessible treatment, lack of lay off infrastructure, and lack of personal protection facilities for government employees. In Iran, the high trend of morbidity and mortality, the limitations caused by sanctions, and the lack of a cross-sectoral and participatory view on the issue of health and disease control has caused a kind of passivity among the people that prevents implementing protocols.⁵⁰ People need to be interested in improving the status and effectiveness of policies. More importantly, the policies should align with the prevailing conditions; otherwise, people may suppose the end of the disease and return to normal life.

Economic barriers were identified, too. Economic problems were a severe reason for non-compliance with protocols and quarantine. Considering the associations between livelihood and economic issues, participants said they had to violate the rules and go to work even if they were patient.

Limitations and Strengths

This study is one of the few qualitative studies that explored the reasons for non-compliance with health guidelines, particularly in Iran, which is still struggling with such a problem. The results can be a beacon for policymakers to recognize problems and obstacles people face in taking steps to prevent and control the pandemic. Also, based on the information coming from the heart of the society, there should be proper planning for political, social, and managerial interventions to increase compliance with health tips and a complete preparation to control emerging and re-emerging diseases in the future. Diverse samples and selection of people with different occupations were another strength of the study.

Though, there are limitations, too. Some people were worried about the record of their names somewhere as people who do not follow the laws and issues related to Corona and that it would be a nuisance for them. This was eliminated when the researcher guaranteed that their name would not be asked in any way; thus, they were encouraged to participate in interviews. Moreover, some people were reluctant to do face-to-face interviews. This was eliminated by phone interviews, social distancing, disinfectant to sterilize the interview site, and giving two masks to more sensitive subjects. As another limitation, in the case of telephone interviews, it was not possible to realize interviewees' moods and responses to the questions and to record their body language behavior.

Conclusion

According to the results, a combination of internal and external factors leads to individuals' non-compliance with health guidelines in the face of COVID-19. Recognition of these factors, which are in accordance with social, cultural, and political context and individual characteristics, can be

effectively used to plan educational and management programs for confronting the pandemic so that by removing and modifying the barriers and noticing different dimensions of them, control of the disease will be facilitated. It is also possible to manage the high prevalence and spread of such future infectious diseases by reducing the impact of factors preventing proper health behaviors.

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Authors' contributions

All authors participated and approved the study design. RT and AZ contributed to design the study, JYL and NN collected the data, and analyzed by AZ and JYL. The final report and article were written by RT, IAM and AZ and All authors read and approved the final manuscript.

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Ethical approval

The study was approved by the Research Ethics Committee of Ardabil University of Medical Sciences (IR. ARUMS. REC.1400.067). Written informed consent was obtained from all group members.

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