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Fear of the unknown, anxiety, and social isolation in Iranian patients with Covid-19, the grounded theory

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Abstract:

BACKGROUND: Coronavirus 2019 (COVID-19) pandemic has incurred a health challenge. Patients suffer from many physical and mental disorders. To accurately identify the experience of patients with Covid-19 in the Iranian society.

MATERIALS AND METHODS: This qualitative research was conducted using the grounded theory. The data of this grounded theory study were collected using 32 semi-structured interviews with participants and field notes including the patients with Covid-19, nurses, physicians, and the patients' families. Data analysis was performed using Corbin and Strauss (2008) approach for concepts, context, process, and categories' integration.

RESULTS: Qualitative analysis of data led to the extraction of 54 sub-categories and 7 final categories. "Isolation, fear of death, and fear of infection of relatives and family members" were identified as the main issue. The context to this concern was the "unfamiliarity with the virus due to its ambiguous nature that was obtained with a wide range of symptoms." Facing this issue, the patients used the strategy of "adherence to health protocol in the coronavirus infection process" that was recognized as the central variable.

CONCLUSION: The ambiguous and complex nature of the emerging virus, the appearance of different symptoms in different people, and the fear of infecting others, death and anxiety due to unknown complications of the disease make patients go through the most difficult experience of their lives. That requires ongoing training on up-to-date prevention and treatment protocols, along with the emergence of mutated viruses and new symptoms.

Keywords:

COVID 19, death, Islamic Republic of Iran, qualitative research, social anxiety

Introduction

Acute respiratory coronavirus syndrome, formerly known as SARS-CoV-(2), is a new positive single-strand RNA virus,^[1] causing coronavirus 2019 or COVID-19 disease.^[2] Along with the increase in the number of global incidence of the disease, the World Health Organization (WHO) issued a statement on January 11, 2019, declaring that the new coronavirus was the sixth in rank factor leading to public health emergency worldwide, threatening not only China but the world as a whole.^[3]

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Therefore, the prevention of the spread of the new coronavirus requires international cooperation, the efforts of health professionals, the public and governments together.^[1] According to the first study reports on patients with coronavirus, the incubation period of the virus was 5 days in average lasting on a 4- to 7-days range.^[4] However, with greater prevalence of the disease, different and sometimes longer incubation periods were reported.^[5] Coronavirus infection is nonspecific in the early stages and is generally associated with cold-like symptoms such as: tiredness, body aches, fever, and dry cough. Patients

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may initially have symptoms such as nausea, diarrhea, or headache before fever, and sometimes even asymptomatic. The so far unknown state of the disease and the emergence of a wide range of symptoms can complicate the process of prevention, diagnosis, and treatment.^[4]

The most updated results of the investigations confirm the airborne transmission of the infection.^[5] The highest rate of virus transmission is when a person has clinical symptoms. However, some patients are able to transmit the infection to others before the onset of clinical symptoms.^[6]

The main intervention is giving supportive care such as monitoring vital signs, improving ventilation and oxygenation, reducing complications such as secondary infections, and preventing organ failure. In the current situation, due to the lack of standard treatment and despite the fabrication of vaccine by some countries and partial vaccination of their population, the best way to avoid infection and prevent the spread of the virus is to continue using the mask in closed spaces, washing hands with soap and water, using handkerchiefs when sneezing and coughing, avoiding contact of contaminated hands with eyes, mouth and nose, avoiding public gatherings, and observing attentive to social distance.^[7]

There is a tough battle between genetic material and viral intelligence with human intellect and intelligence; to win this war, you must first have sufficient knowledge of this invasive and contagious virus, such as knowing the effective strategies to prevent or treat the symptoms of Covid-19 disease. In addition, implementing special protective and health policies as well as encouraging personal protective measures by the countries would be necessary for proper and timely control of the pandemic.^[5]

In the present study, the researcher tries to reach an exact recognition of the emerging Covid-19 phenomenon through qualitative method and adopt a grounded theory approach, featuring such characteristics as complete involvement of the researcher with the topic research, taking into account the possibility of using various methods of data collection and re-analysis techniques. Grounded theory is a method of gaining knowledge about the under-study subject, and on those subjects not comprehensively investigated, and there is little knowledge on them and the field they belong to.^[8] Assessment of the process of patients with Covid-19, the factors influencing the disease, possible challenges associated with it, strategies used to combat the disease and their consequences, all can provide useful information on the manner of vulnerability to disease. When the corona disease was introduced as a

pandemic disease on March 11, 2019, the world entered a new phase of dealing with this disease. The vague and unknown nature of the virus increased the fear of the disease and its transmission among people. This study presents pure and first-hand experiences related to the struggle of patients and medical staff with this virus in Iranian society.

It is believed that the corona virus will not be a challenge for the people of the next centuries because they will know the principles that maybe we hardly know about them today. The aim of this study was to accurately identify the experience of patients with Covid-19 in the Iranian society. Successful planning to control and inhibit the progression of the disease prevalence requires a deep understanding of the disease and sharing successful experiences in the disease control.

Materials and Methods

Study design and setting

This qualitative research was conducted using the grounded theory described by Corbin and Strauss (2008) approach.^[8] Targeted data collection began in April 2020 (the first months of official announcement of Covid-19 epidemic in Iran) and gradually was continued until data saturation.

Study participants and sampling

Sampling using 29 semi-structured interviews included participants who were the patients definitely diagnosed with Covid-19, the families of patients who died of the disease, nurses, physicians, and the other stakeholders involved. The research was finally completed with three additional interviews until the theoretical saturation stage in January 2021. Sampling was continued until reaching the data saturation level.

Data collection tool and technique

The questions asked from the participants included: "What were the first symptoms you suspected of developing Covid-19?," "How did you find out that such symptoms could be related to Covid-19 disease?," "What intervention did you use at that time?," "How did you feel at that time?," "What challenges did you encountered with?," and "How did you cope with and overcome them?" Moreover, to guide the interview, the participant's experience was used at every specific circumstance, to further evaluate the process-focused exploratory questions (why? where? when? how? what or who?).

The duration of each interview (in absentia and by phone call) varied between 50 and 90 minutes for the main interviews and between 30 and 45 minutes for the supplementary interviews. The researcher would

record the interviews on a recorder device afterwards the coordination with the participant and obtaining his/her consent, and took notes during the interview if it was necessary. All the interviews were made on phone calls out of observing the pandemic protocols. The interviews were time scheduled based on the participants' agreement. Immediately after each interview, and in the shortest possible time, the text of the interview was transcribed verbatim on paper after several times of listening and reviewed and reread several times. Data analysis began immediately after the first interview.

Data analysis was performed using Corbin and Strauss (2008) method in four stages: data analysis for concepts, data analysis for context, bringing process into the analysis, and integrating categories; finally, the study theory was emerged.^[8] The researcher's main guide throughout the data collection process was to achieve theoretical saturation, write memo, and try to fill in the gaps along with data, categories, and the emerging theory.

The first step was to analyze the data for the concepts (open coding), design and then draw the concepts in terms of their characteristics and dimensions. For this purpose, all the first level codes were compared with each other, similar codes were placed in same category, and they were given an abstract name. Continuing the data analysis, the categories and sub-categories took form and were given a designated name. The researcher still sought discovering the participants' main issue. Discovering the Main Issue makes the researcher focus on the way out of it by the study participants.^[9] What did the patients with Covid-19 experience that was specific to this disease? The researcher focused on the individual, environmental, organizational, family, social, political, economic, and cultural influencing factors that directly and indirectly contributed to the development of Covid-19 disease. To this end, the researcher by raising questions such as "why," "where," "when," "how," "what," or "who"? succeeded in discovering the factors constituting the background or context of the prevalence of Covid-19 disease. Afterward data analysis for the context with simultaneous data analysis for concepts and developing assumptive and abstract categories, previously obtained from the data depth, was also performed.

The second stage included analyzing the data for the context to identify the context-related concepts and examining the patients' vulnerability and infection by the coronavirus.

The third stage in data analysis based on the research question was to identify the strategies/processes (action/interaction) that participants used in response to the context.

Following the data analysis and development of categories, the next step was the incorporation of process into analysis in order to write down the strategies and consequences of the main issue.^[10] In this study, the researchers developed the infection process of patients getting Covid-19 based on the consequence, which was either the improvement or death of the patient. The final stage of the analysis was combining or integrating the categories to build a theory [Figure 1].

In the present study, a theoretical storyline was written based on the memos and deep immersion into the data and reflection on the categories emerged from the data analysis stages for the context and process. After identifying the disease process of the patients with Covid-19, the researcher identified the central variable by reflecting on the main categories, properties, diagrams, and classification of memos. The central category was the main theme of the research, which in the opinion of the majority participants played a special axis role for the emergence of the phenomenon.^[11]

Researchers of this study, in accordance with the qualitative approaches guidelines, and to ensure the accuracy, credibility, dependability and transferability, helped data validation by continuous engagement with the accumulated data, verification of the data by the participants, allocating sufficient amount of time to the study, and maintaining open and empathetic communication with the participants as well as benefiting from the supervision of three qualitative research experts during all the study stages.^[8]

Ethical consideration

This research was approved by the Medical Ethics Committee of Sabzevar University of Medical Sciences under the code IR.MEDSAB.REC.1399.056. Written informed consent was obtained from the participants and they were assured that their statements would be kept confidential and the obtained data would be used only for scientific analytical purposes. They were all assured

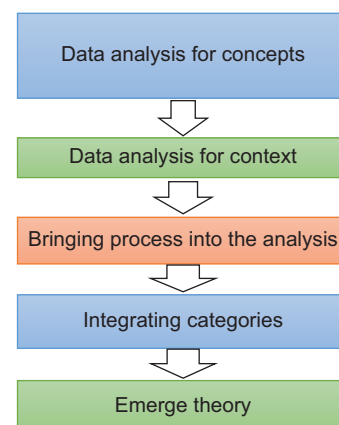


Figure 1: Diagram methodology

of data confidentiality, their voluntary participation, and the right to withdraw from the study at any point they wished.

Results

The participants of this study included 29 people from the below factions: patients with Covid-19, nurses providing care for Covid-19 patients, emergency physicians, and family members of patients who died of Covid-19 disease [Table 1].

Qualitative analysis of interview data led to the extraction of 500 open codes, 54 subcategories, and 7 final categories. In the data analysis stage for the concepts, the text relating to 22 interviews were analyzed and a number of 400 open codes were extracted without taking into account the overlapping which with the continued simultaneous data analysis and categorization-integration of codes, they were finally organized in 85 initial categories.

Continuous theoretical sampling and comparative analysis to complete each category properties eventually led to the emergence of 54 subcategories, which with further merging and reduction of categories, it was limited to 7 main categories. [Supplementary Table]

The researchers during the initial interviews sought the discovery of the participants' Main Issue and identified relevant contexts.

Extraction of main issue

The categories obtained from stage of the data analysis for the concepts, review of the memos and field observations, revealed the different conditions of vulnerability to Covid-19 infection compared with other diseases. The data of these categories were repeated in most of the situations and the participants emphasized it. "Anxiety about getting infected owing to it being unknown," "fear of death," "family members keeping away from the patient," and "fear of the close family members getting infected" added to the disease anxiety

simultaneously with the changing health conditions. The concepts of these four categories were relevant and seemed belonging to each other and expressed the properties of a phenomenon extracted as the conceptual framework of "isolation, fear of death and fear of infection of family members," revealing the main issue of the participants. This issue and concern existed from the first day of coronavirus infection in the infected people and took on different dimensions. Part of the participants' experiences are listed below [Table 2].

Participant No. 10: "I was all stressed in the coronavirus ward. There were a lot of patients. When a patient died, I was afraid I would die too."

Participant No. 9: "The stress and anxiety of having a corona transfer to my family was my first and foremost concern. Transferring the disease to my elderly father, who has asthma and is high-risk, and my wife. I was much stressed."

Participant No. 8: "This is a new and unknown disease; I heard different news of remaining pulmonary complications and involvement of other organs such as the kidney, liver; especially mutation of the virus, re-infection of some patients. I was very scared."

Participant No. 3: "All my family avoided me. I was afraid that my children and others would get the disease. It was a very difficult time."

Data analysis for the context

Coincidence with data analysis for the concepts, the researchers sought identifying concepts relevant to the context that influenced the patients with Covid-19. Accordingly, the problems, needs, and concerns (Issues) of the participants in relation to coronavirus infection were identified.

After identifying the main concern (Issue) that was revealed as the "phenomenon" fear of death and worry about family members, the context of this main concern was explained as follows.

Table 1: Demographic characteristics of participants

Number of interview	Underlying disease	Home remedies		Duration of home quarantine		Period of hospitalization		Family history of disease		Job
		Medicinal Plants	Medical drugs	0-90	0-26 days	13				
30	Joint problems	Medicinal Plants		0-90	0-26 days	13		Housewife		
	Coagulation disorder	Medical drugs						Manual worker		
	Diabetes	Lifestyle (rest, fruit, nutrition)						Free		
	blood pressure	Other (oxygen capsules, bathing, drinking lcohol)						Employee		
	Bronchitis							Retired		
	Pregnancy kidney disease									
Number of interview	Position				Marital status		Age (years)	Gender		
	Family of the deceased	Physician	Staff	Patient	Single	Married		Male	Female	
30	6	1	2	21	6	24	18-79	12	18	

Table 2: The main concern of the participants

Subcategories	Categories	Main Issue (Concern)
Feeling of the fear and stress before confirming the diagnosis	Anxiety about getting infected owing to it being unknown	Isolation, fear of death and fear of infection of family members
Feeling of the fear and stress after confirming the diagnosis		
Different symptoms and complications in affected people	Fear of death	
Feeling sick and dying following corona virus disease		
Intensification of fear and anxiety due to hospitalization		
Fear of death at the time of hospitalization		
Fear of death due to lung involvement		
Fear of transmitting the disease to others		
Concern about transmitting the disease to the family before confirming the diagnosis	Family members keeping away from the patient	
Fear of transmitting the disease to family members		
Family concern about coronavirus disease		
Fear of transmitting the disease to the family after coronavirus disease		
Feeling of isolation and loneliness in the patient		
Concerns about endangering family health		
Fear and anxiety of infecting relatives	Fear of the close family members getting infected	
Stay away from relatives due to the high infectivity of the virus		

The resulting categories represent the context and situations that exhibit the isolation, fear of death, and transmission of Covid-19 disease to others.

These situations affect their performance, interactions, and emotions.

The “obscure and unknown nature of the corona virus” was considered as the context of developing “isolation, fear of death and fear of family members” in Covid-19 infection disease process. This context was the result of identifying eight categories as follows: “Lack of early diagnosis due to similarity of symptoms of coronavirus to cold and flu,” “Dissimilarity of symptoms in different age groups,” “Infected work environment,” “Uncertainty about the source of infection,” “Unknown source of infection,” “Physical and mental fatigue of medical staff due to work stress,” “Difference of the course of disease and improvement of symptoms among patients,” and “Uncertainty of patient immunity following recovery” [Figure 2].

Participant No. 18: *“I had symptoms of common cold in the form of fever and chills and severe sweating. I went to the doctor, he said: it is the flu, he started medicine for me, but my symptoms got worse, I lost my sense of smell, I became suspicious of the coronavirus and had it tested.”*

Participant No. 10: *“My colleague had corona symptoms; we worked in the same room; but he would come to work. When his symptoms worsened, he went on sick leave; then I had bone pain, headaches, fever, and chills; I went to the hospital, I had a test. I got corona from work environment.”*

Participant No. 4: *“I was happy to get released and go home, but on the other hand, I was worried that my husband and son would get infected.”*

Participant No. 24: *“In the corona ward, the work pressure is high, the long shifts are very tiring especially in these clothes. On the other hand, the young patients who die would affect us extremely mentally”.*

Participant No. 6: *“I read an article about a patient having corona disease who died of brain stroke. Such news and the unidentified nature of the disease have made me worried, often I think that I might have a stroke in my sleep.”*

Participant No. 5: *“All I worry about is whether the antibodies are made enough in my body or not? How safe am I? I want to have test once again, I’m all worried about not taking it again.”*

Bringing process into the analysis

After discovering the main concern and identifying the context, the categories that indicated patients’ challenges following Covid-19 infection were identified. At this stage, the researchers explored the strategies and solutions that the patients used to cope with the “fear of death and concern about the potential infection of family members” and considered the relevant strategic, practical/interactive/and emotional patterns. The patients exposed to the disease, employed strategies such as “performing corona tests,” “frequent refer to the doctor and use of drugs (antibiotics, analgesics, and antipyretics),” “home quarantine (oxygen machine, proper ventilation, serum therapy),” “Traditional medicine to relieve symptoms,” “Hospitalization,” etc., were used to address the main concerns of “isolation, fear of death and fear of potential exposure of family members to disease.” The consequence of patients’ use of their own strategies to address their main concerns is “relief following recovery from the illness as a result of treatment” and “family support despite the persistence of some symptoms,” which can be represented by two

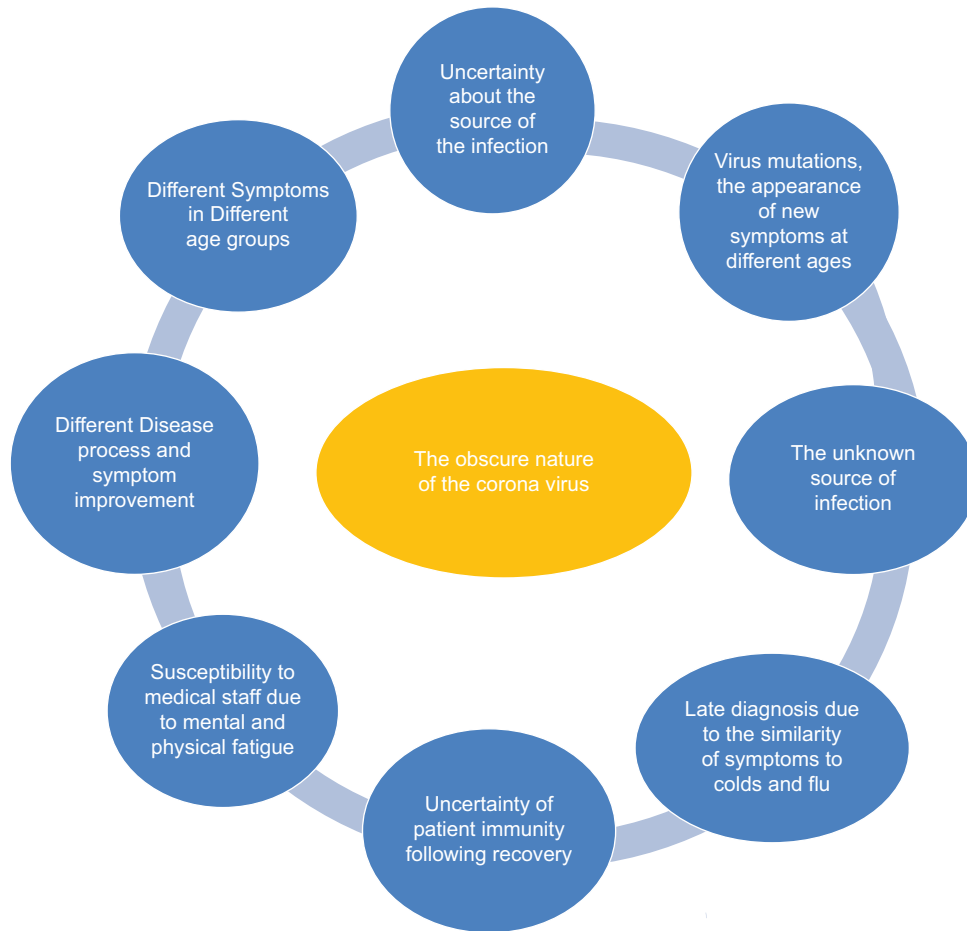


Figure 2: Underlying factors in the face of the main concerns of the participants

spectrum: one including “The importance of family psychological support during illness,” “Feeling of relief following the recovery and discharge from the hospital,” and “hope of facilitation of recovery” on the one hand and on the other, “persistence of some symptoms for a long time” [Figure 3].

Combination or integrating categories

The final stage of analysis was combining or integrating categories to build a theory. Data analysis showed that the main concern of patients, which was repeatedly mentioned in their experiences and all their reactions were focused on solving it, was “isolation, fear of death and fear of family members getting infected.” Adherence to health protocol in the coronavirus infection process that was recognized as the basic psychosocial process (central category) would act as a concept connecting other research concepts together, something that was revealed with the utmost clarity.

The use of a general strategy of adhering to health protocols, which included a variety of strategies used by participants, had consequences for patients that was placed in the category of “Comfort, following relief from

disease as a result of treatment” and “family support, despite persisting some symptoms or death.”

Among these, there were some mediating factors that increased the chances of developing Covid-19 disease, while some others prevented them from the infectious disease (facilitator), so that such factors enhanced the participants’ ability to use corona combat strategies [Figure 4].

After finding the process existing in the study by reflecting on the main categories and considering the properties of each of them individually and writing down of the theoretical story that was taking place, finally the basic theory was obtained.

Discussion

Today the emerging Covid-19 disease is a major health challenge worldwide, and the efforts of all health policymakers and managers are to reduce the disease mortality rate and its consequences.

This qualitative study was conducted relying on the grounded theory as described by Corbin and

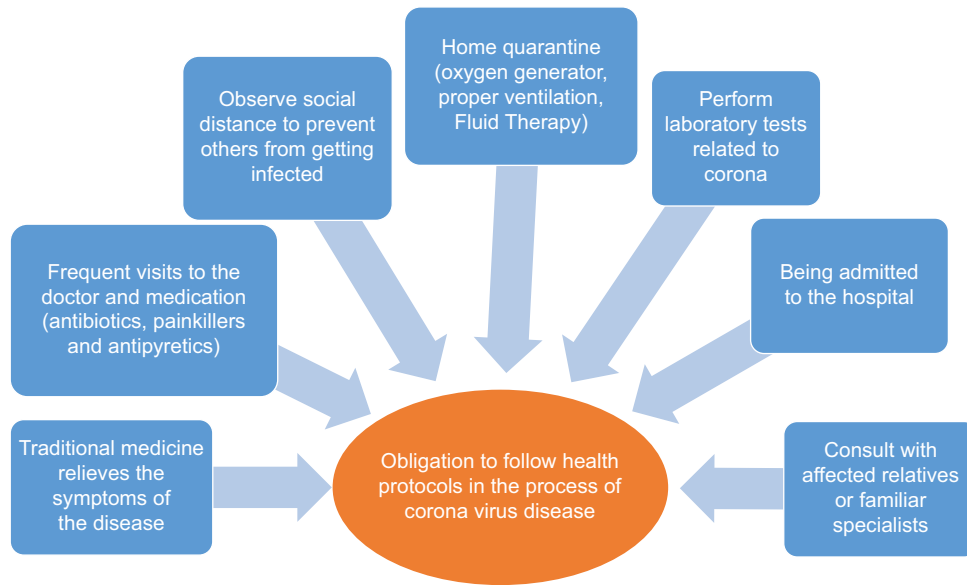


Figure 3: Strategies and methods of patients with the main concern

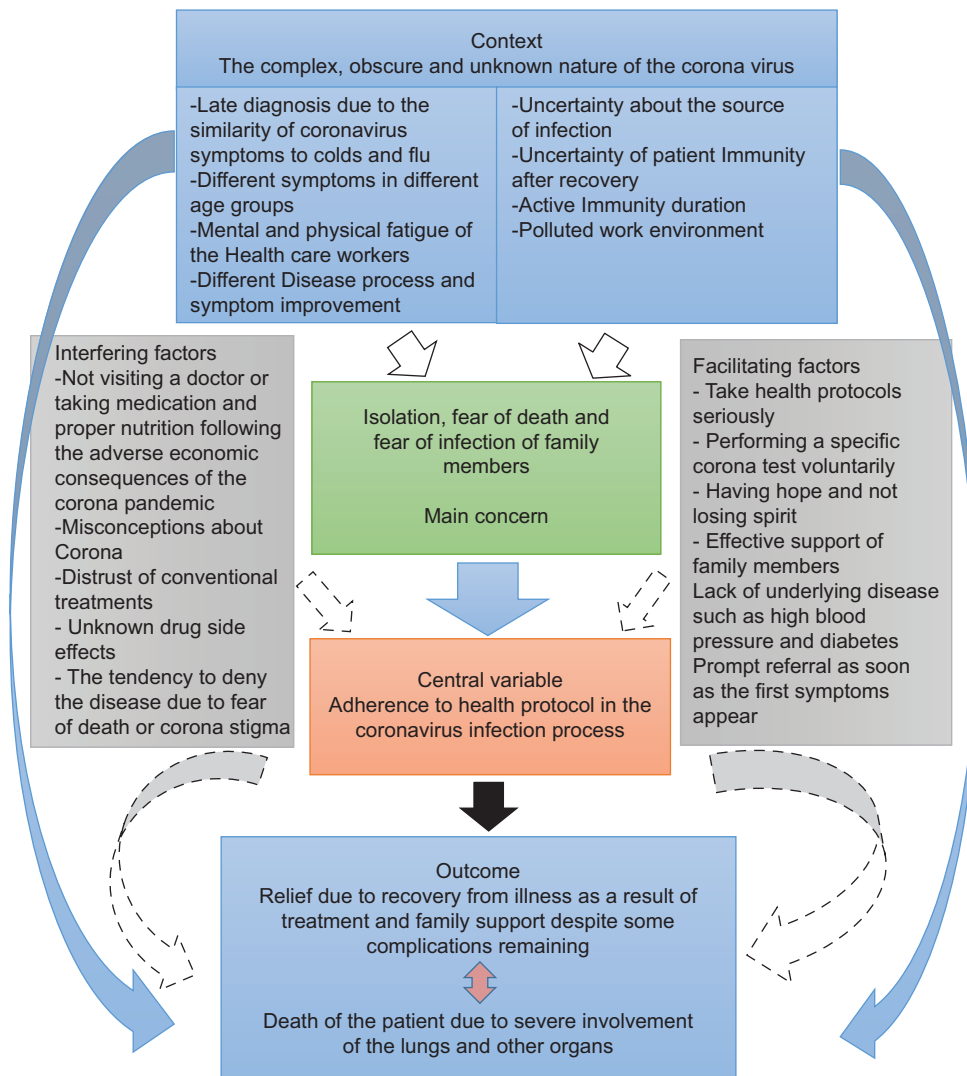


Figure 4: Paradigm model of the theory of adherence to health protocol in the coronavirus infection process

Strauss (2008) approach with the aim of explaining the experiences of patients with Covid-19 and the ways they used to deal with the disease, so that the outcome of research could be applicable for better and more efficient disease management and control.

In the initial stage of data analysis for the concepts, "Isolation, fear of death and fear of infection of relatives and family members" were identified as the main concern of participants.

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In a phenomenological study, following the lived experience of corona patients, "the fear or anxiety about death" has been extracted as one of the main concerns.^[12] Other studies have identified "fear of death" as a serious psychological consequence in patients with Covid-19 and their caregivers.^[13,14] "Fear of death" refers to the emotional response to the perception of real or imagined signs of danger and threat to one's life. The psychological factor is the most dangerous factor when dealing with crises and disasters^[15] and can weaken the immune system.^[16]

Although there is sample evidence of anxiety and fear of death in patients with acute life-threatening diseases such as cancer or AIDS, in patients with Covid-19, however,^[17,18] to the following reasons namely ambiguity of the nature of the illness, death in isolation without seeing the loved ones, and strange burials make all age groups anxious and worried.

Patients are hospitalized without a companion or visitation permit, and they witness unfortunate incidents every day, such as worsening symptoms or the death of other patients in the ward, or watch and hear the news and videos of those unfortunate incidents in social groups.

On the other hand, nurses do not have the necessary experience and skills to deal with death anxiety in such patients^[19] and are not familiar with the term "corona phobia." These cases would increase patients' anxiety; accordingly, training healthcare workers with strategies to deal with these psychological disorders in caregiver personnel is necessary.^[20]

In the second stage of data analysis for the context, the complicated, ambiguous, and unknown nature of the coronavirus was identified as the underlying context of this main concern.

The emergence manner of the disease, and the lack of stable behaviors of the virus in different people, as well

as variety of symptoms and course of the disease, all cause fear and anxiety in patients and confusion of the medical staff. There is ample evidence that Covid-19 disease causes more severe symptoms and mortality in men than in women, or that it has different consequences at different ages and ethnicities.^[7,21,22] What is certain is that the obscure nature of the corona virus and the unknown nature of the disease in individuals have led to psychological disorders in different population groups.^[23-27] The obscurity and unknown nature of the virus, especially at the beginning of the pandemic sometimes caused the nurses, as the front line of treatment in hospitals, to develop dual emotional conflicts of giving assistance or not to the Corona patients owing to the possibility of getting infected or due to the fear of transmitting the disease to their own family members. As the pandemic continued, nurses were able to overcome their fear of infecting others and adapt too many new situations, and despite their fatigue, they continued efforts to devote care for Covid-19 patients by wearing breathtaking covers during shifts. Results of a qualitative study using grounded theory approach also showed the nurses' fear and their anxiety of working in the unknown conditions in the wards of Covid-19 patients. Nurses are empowered by the support of the government and society and the acceptance of professionalism in nursing, and they felt that their profession was sacred and valued by the society, and this comprehensive support facilitated the work process for them.^[28]

In the third stage of bringing process into the analysis, i.e. patients' strategies in the face of this concern, the patients' use of the designing strategy. Adherence to health protocol in the coronavirus infection process was identified as the central variable of this study. The hard experience of patients during this period showed that there is no definitive solution and if they followed the health protocols, they would definitely not get the disease. But the important thing is that the whole society should be obliged to follow the protocols in order to achieve better results. Adherence to protocols not only reduces the risk of infection in an individual, but also limits the spread of the disease to others. Successful management of health crises requires the participation of three groups: the government, the health system, and the people.^[29]

In addition to trust in the government, poverty and economic pressures are the most important reasons for noncompliance with health protocols by people in different countries.^[30,31]

In Iran, due to severe economic sanctions, most people faced with financial difficulties and the provision of disinfectants and masks was financially burdensome for them, so health protocols were less adhered to. In order

to increase the voluntary adherence to COVID-19 health protocols, strategies that strengthen moral commitment and trust in government officials should be implemented. For example, trusted people in the community should be invited to disseminate information^[32] and in order to reduce the financial burden on low-income people, the government should provide them with sanitary facilities free of charge. In this study, the outcome of participants' use of this strategy ultimately led to a spectrum of consequences including "feeling relief following getting rid of the disease after treatment" and "family support despite remaining some complications" on the one hand and "death of the patient because of severe involvement of his/her lungs and critical organs" on the other hand.

Social support, especially family support in crises reduces stress and anxiety as well as the complications of the disease.^[33,34]

Limitation and recommendation

One limitation of the present study was that the participants were volunteer nurses from hospitals affiliated with Sabzevar University of Medical Sciences in Iran, as mentioned earlier. Replication of the same study either in other hospitals or in other regions might provide further insight in exploring a bigger picture of the phenomenon under study perspective.

Conclusion

The theory of this study explains that patients encounter increasing tensions and conflicts in the process of exposure to Covid-19, so that the main concern of the participants in the study is "isolation, fear of death, and fear of infecting family members." This concern develops as a "complex, ambiguous, and unknown nature of the coronavirus," so that Covid-19 affected patients on the one hand by the exacerbation of their symptoms, would experience emotional conflicts such as fear and anxiety which would lead to their social isolation and on the other hand, they face macro-level contexts such as adverse economic consequences following getting infected by the disease. As a result, most patients -- despite believing in adherence to health protocols -- refrain from abiding, either at the family or at the community level. It seems that ignorance of symptoms, simplification and delayed referral, resistance to hospitalization, and preference of home quarantine despite the aggravation of symptoms and consequently delayed treatment and loss of mood were among the main causes of death in Iranian patients, which need due investigation and communicating proper information to the public in the context of this pandemic. Despite all these issues, patients make every effort to overcome the disease and survive through adherence to health protocol in the coronavirus infection process. The consequence of

this commitment is the relief obtained from getting rid of the disease as a result of treatment and family support despite remaining of some complications that give them hope to recover, strengthen their morale, and continue treatment and care, especially through implementing preventive measures.

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Conflicts of interest

There are no conflicts of interest.

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Supplementary Table: Categories extracted from data analysis

Sub categories	Categories	Final Categories
Feeling uncomfortable because coworkers keeping away themselves	Feelings of fear and sadness from the stigma of coronavirus	The patient's social isolation
Fear of being a vector for family members after discharge	Rejection of the infected patient by the community	
Concern about being a vector, despite the end of the illness		
Concern about transmitting the disease to others in the workplace		
Infection with coronavirus despite following all health protocols	Uncertainty about the source of the infection	The obscure nature of the corona virus
Uncertainty of the patient from the primary source of infection		
The possibility of getting on the train or walking with friends		
Possibility of getting infected from smoking a hookah	Uncertainty of patient Immunity after recovery	
Fear of re-infection with the corona		
Concerns about recurrence of coronavirus		
Patients' intense fear of re-infection with the coronavirus		
Contaminated work environment causing coronavirus disease	Polluted work environment	
Continuing to work despite the possibility of contracting the coronavirus		
Possibility of catching a cold at the beginning of the illness	Late diagnosis due to the similarity of Corona virus symptoms to influenza	
Symptoms begin with runny nose, sneezing and coughing		
Illness begins with nausea and cold symptoms		
Differences in symptoms in children	Different symptoms in different age groups	
Late diagnosis due to different symptoms of the disease		
Different early symptoms in patients		
Increased mortality due to the new emergence of coronavirus disease	Different Disease process and symptom improvement	
Increased mortality due to unclear treatment protocol for coronavirus		
Rest is the most important factor in relieving the symptoms of the disease		
Relieving symptoms with palliative medication		
Death of patients with coronavirus due to various causes		
Traditional medicine relieves the symptoms of the disease		
Loss of sense of smell two weeks after the onset of symptoms		
The difference in the disease course from a week to a month		
The difficulty of experiencing the challenge of dealing with coronavirus disease	Mental and physical fatigue of the Health care workers	
Fatigue of medical staff due to the need to use personal protective equipment		
Hard work of nurses		
Nurse stress following fear of being a vector		
Infection of medical system members due to lack of complete protection		
Physical weakness of the nurse following malnutrition due to fear of infection		
A feeling of dual conflict of helping or not helping the corona patient	Nurse duality and emotional conflict	
The nurse's torment of conscience and emotional conflict		
Feeling sick and dying after getting the coronavirus	Fear of death	Fear of death and concern for family members
Intensification of fear and anxiety due to hospitalization		
Fear of death at the time of hospitalization		
Feeling of fear and stress before a definitive diagnosis	Fear of contracting the disease due to being unknown	
Feeling of fear and stress after a definitive diagnosis		
Fear of transmitting the disease to others	Keeping the family members away from the patient	
Fear of transmitting the disease to the family before definitive diagnosis		
The important role of mass media education in home quarantine		
Family concern about coronavirus infection		
Concerns about family transmission after coronavirus infection		
Transmission of the disease to family members	Fear of infecting close family members	
Observing physical distance to prevent family infection		
Concerns about endangering family health		

Contd...

Supplementary Table: Contd...

Sub categories	Categories	Final Categories
Family happiness from recovery and discharge from hospital	The importance of family psychological support during illness	Relief due to recovery from illness as a result of treatment and family support despite some complications remaining
Feeling satisfied with the full support of the spouse during coronavirus disease		
Being supported by family members after confirmation of diagnosis		
Satisfaction with the support of other family members during illness		
Feeling happy to accelerate the symptoms of recovery	Feeling happiness after recovery and discharge from the hospital	
Feeling happy following a healthy discharge from the hospital		
Lack of anxiety due to hope of recovery from coronary heart disease	Hope is a factor in improving recovery	
Accelerating the recovery of symptoms due to hope for treatment		
Hope is the reason for overcoming the fear of coronavirus		
Respiratory symptoms persist even after the end of the illness	Persistence of some symptoms for a long time	
Persistence of chills, weakness and fatigue long after partial recovery		
Durability of complications after the end of the disease period		
Patient death following loss of life expectancy and worsening of symptoms	Exacerbation of symptoms by despair	Feelings of fear and anxiety aggravate the symptoms of the disease
Loss of hope following hospitalization in the coronavirus ward		
Feeling anxious about the underlying disease following coronavirus infection	Concerns about the aggravation of the underlying disease	
Possibility of recurrence of cancer from the patient's point of view, chest burning and bone pain		
Feeling short of breath and fear of death	Feeling of death when the symptoms of the disease worsen	
fear of death following exacerbation of symptoms		
Relieving symptoms with palliative medication	taking medication to reduce symptoms according to the treatment protocol	Obligation to follow health protocols in the process of coronavirus infection
Reducing the symptoms by taking prescribed medications and fluids		
Applying home quarantine after a corona test	The importance of mass media education in home quarantine	
Applying home quarantine until the results of diagnostic tests are announced		
Performing home quarantine and physical distance from the time of diagnostic testing	Following the advice of medical staff based on home quarantine	
Taking health protocols seriously (wearing a mask, observing social distance, washing hands)		
Post-discharge quarantine to prevent coronavirus infection in the family		
The high number of late referrals of critically ill patients with low socio-economic status	Increased mortality due to late referral of low-income people	Adverse economic consequences of coronavirus disease
Increased mortality due to untimely referral at the onset of symptoms of coronavirus		
Financial problems due to non-receipt of wages at the time of public quarantine	Quarantine causes economic problems for people with coronavirus	
Unemployment is a consequence of global quarantine		
Faster referral of people with sufficient income and trying to provide expensive drugs based on the nurse's perception	Wealthy people care about their health	
Seeing providing expensive medicines by high-income groups by a nurse		
Feeling financially anxious about the high cost of treatment during the illness	Financial problems following the cost of treatment	
Lack of proper nutrition during the illness due to financial problems		