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# The live experience of coronavirus disease with emphasis on its psychological effects and consequences

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## Abstract:

**BACKGROUND:** The aim of this study was to investigate the living experience of coronary patients in Shiraz and the peak prevalence of the second stage in summer. This study could further examine these experiences in broader groups in subsequent studies. Identifying the psychological causes and effects of this disease with the help of patients involved in some countries has been considered.

**MATERIALS AND METHODS:** The method, which was used in this study, was a qualitative method and content analysis. Participants in this study were 13 patients with COVID-19, some of whom were members of the medical staff. The participants were selected purposefully. The semi-organized interview with the participants continued until the theoretical saturation was reached.

**RESULTS:** After extracting the codes, researchers classify them, and then the results were examined in more depth and categorized. About 120 extracted codes were classified into seven general categories; three of them were directly related to psychological issues. The other four of them were related to the subject of psychological effects and consequences.

**CONCLUSION:** In general, during the interview process, it was proved that the more severe the symptoms of the disease, the psychological experiences of confronting the disease because of its outbreak, and the processes of coping with it were deeper.

## Keywords:

COVID-19, living experiences, psychological effects and consequences, qualitative research

## Introduction

The first definitive outbreaks of the new coronavirus disease were reported on December 31, 2019, in Wuhan, Hubei province, China.<sup>[1-3]</sup> COVID-19 is a new type of Coronavirus that causes diseases from the common cold to SARS and Merse.<sup>[4]</sup> This disease has different symptoms such as fever, chills, cough, sore throat, nausea and vomiting, abdominal pain, and diarrhea.<sup>[5]</sup> In acute cases, it can lead to heart failure, respiratory failure, acute respiratory syndrome, and even death.<sup>[6,7]</sup>

This disease, because of its high incidence, quickly spread to other countries such as the United States, Italy, South Korea, and Iran. As it is now a global phenomenon,<sup>[3,8]</sup> in addition to the physical effects, COVID-19 can have serious effects on a person's health. It can have a wide range of psychological symptoms and experiences such as fear of death, feelings of helplessness, social stigma, anxiety stress, and depression.<sup>[8,9]</sup> These psychological symptoms affect everyone from citizens to front-line fighters with the disease such as physicians, nurses, medical staff, and, of course, patients.<sup>[10]</sup>

Previously done research on patients with infectious disorders such as MERS, SARS,

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and Ebola<sup>[11,12]</sup> as well as a few studies available on patients with COVID-19, show that these people due to facing with special conditions such as hospitalization, home quarantine, unwanted social isolation, difficult experiences, exposure to social stigma, interaction with under stressed treatment staff, and of course complex social and environmental factors cause to experience other special emotional and psychological conditions.<sup>[12]</sup> It seems that due to the widespread prevalence of this disease along with its severe complications, the name of this disease has become so stressful that this disease causes social isolation of the affected person. This issue cause to bring more isolation and loneliness in some isolated groups such as the elderly, marginalized, and racial minority groups. This is a special issue that greatly increases the psychological problems of these so-called groups.<sup>[13]</sup>

This feeling of loneliness can, in turn, lead to increase physical vulnerability, decreased body resistance, and then increased mortality rates in individuals.<sup>[14]</sup> Feeling lonely can lead to increase psychological problems such as depression, the more severe experience of stress, vulnerability to other illnesses, and affecting trust and subsequent relationships in individuals.<sup>[15]</sup> One study has shown that isolation and the feeling of isolation for 10 days can lead to psychological problems whose effects will appear later or even 3 years later.<sup>[16]</sup> However, issues such as feelings of insecurity because of the uncertain future situation, joblessness, reduced income, lack of social communities support or insufficient support, and reduced level of friendship and family relations due to the special quarantine conditions, are all factors that cause increased psychological problems such as sleep disorders, insomnia, and obsessive-compulsive disorder due to fear of illness, depression, and post-traumatic stress disorder in individuals.<sup>[17]</sup> For this reason, paying attention to emotional and psychological issues in patients and caring for those people who are at the risk of loneliness is one of the most important, medical, and psychiatric recommendations for this disease.<sup>[3]</sup>

However, a few studies have examined the psychological effects and consequences of developing COVID-19. Problems in controlling this disease and the treatment methods and saving the people's lives have caused this important issue to be neglected, although individuals and medical staff emphasize the importance of addressing this issue and maintaining patient morale during the treatment period.<sup>[18-20]</sup> In this regard, paying attention to the mental health of medical staff, those people who are at the risk such as old people, children, pregnant women, and those people who have a history of mental illness has been emphasized. However, a few studies have addressed the psychological problems of patients with COVID-19.

Most studies, which are in the field of psychological work on COVID-19, have been based on text reviews or text-based predictions. It is important to pay more attention to the psychological dimensions during or after the onset of this disease. In this recent article, to investigate this issue, while conducting a semi-structured interview with several people with COVID-19 in the Fars province, we have tried to study this issue deeply and extract important elements, which are resulting from the experience of the disease using a qualitative method. Given all the above-mentioned issues, the results of this study can, in practice and deeply, enhance our experience of the psychological effects and consequences of COVID-19 and they can provide a basis for more experimental research in this area and they provide the best method (s) for coping with inevitable epidemic the future.

## Materials and Method

### Study design and setting

*The method* used in this study was a qualitative method and content analysis. In this method, while doing in-depth interviews with participants, the basic elements of an individual's psychological experiences were extracted. In the present study, the purpose of using this method was to investigate the psychological experience of corona exposure. For this purpose, while asking in-depth questions in the first interview, free coding was done for the content of the interviewer. These codes were classified into more general categories. In the next interview, according to the results of the first interview, deep questions were asked about the experience of the participants regarding the extracted categories, and new codes and categories were mentioned. This process continued until the tenth interview, after that no new cod or category was obtained. At this stage, due to theoretical saturation, after doing three final interviews and a total of 13 interviews, the data collection stage was completed.

*The Participants* were the people with corona disease at the time of the interview, whose COVID-19 diagnosis was confirmed by the medical staff. Targeted sampling included people who had been diagnosed for two weeks. In addition, they were physically and mentally fit for the interview. Those who were not physically able to be interviewed due to the severity of their symptoms or underlying illness were excluded from the study.

*The data collection tool* was a semi-instruction interview and the interviews were conducted with consultation and cooperation of the medical staff. Each interview lasted 20 to 30 min. Because of getting the contact number and addresses of the people, it was possible to do further studies to validate the extracted codes. *For ethical considerations*, participants were included in the study

knowing the purpose of the study and had the option to leave the interview whenever they did not want to, and their details were kept confidential.

Participants were 13 people with COVID-19 who were interviewed by the medical staff during their hospitalization and the interviews were done with their cooperation. The details of the characteristics of the interviewed people are given in Table 1.

To validate the obtained codes, the information was first collected by two colleagues and sent to the first author to extract the code. After coding each interview, the results were sent to the interviewers and they were asked to share the results with the interviewees. In this way, a three-way process was used between the interviewees, interviewers, and the qualitative method expert to validate the results. The codes entered the final stage in cases where the interview was approved by the interviewer. Finally, a conceptual framework of the interview results was presented.

### Results

After extracting the codes, we classified them, and then the results were examined in more depth and categorized. About 120 extracted codes were classified into seven general categories; three of them were directly related to psychological issues. The other four were related to the subject of psychological effects and consequences. The extracted codes from the interviews are given in Table 2.

As can be seen from Table 2, the direct psychological effects and consequences of developing COVID-19 included psychological factors at the onset of the disease that often showed negative emotions such as anxiety, sadness, and anger. Emotions that lead to higher mortality and vulnerability.<sup>[14]</sup> However, it leads to severe psychological symptoms.<sup>[15]</sup>

Regarding how people get infected, the participants often emphasized not observing the hygiene standards during a family gathering or during their presence in the workplace in their offices, Especially the habit of eating breakfast at work without using a mask; however, most of the participants' emphasized on family gatherings. This case indirectly showed the subject of people's behavior in relation to encounters with the disease and its dangers, therefore the experience of this disease led them to be more observant. In general, while conducting the interview, it was proved that the more severe the symptoms of the disease, the deeper the psychological experiences of confronting the disease because of its outbreak and the processes of coping with it (1, 5, 7 categories in Table 2).

### Discussion

With the spread of the disease, negative mental states of the people intensify so that some obsessive behaviors and feelings of guilt, and the fear of being labeled with the disease increased these symptoms,<sup>[1,18]</sup> which is consistent with the research of Roger *et al.*<sup>[17]</sup> Also, people who have good resources in social support, such as the positive attitude of medical staff and family, were better off at this stage, and if they have problems in terms of economic and social support [3 and 6 categories in Table 2], the severity of psychological symptoms and the increased symptoms in them were seen that these results are similar to Hwang, T. J. et However, people who.<sup>[13]</sup> However, people naturally resorted to coping with strategies based on their previous experiences to deal with these negative feelings and emotions. In the list of seven, several coping strategies that have helped to improve their negative psychological state are mentioned. Some of these strategies included health behaviors to reduce the sense of guilt due to the family, such as family quarantine and living in a separate room. Others were faced with worry during the quarantine

**Table 1: Demographic characteristics of participants**

How patients got infected	Number of children	Marital status	Educational level	Income level	Occupation	Age
Family gathering	6	Single (death of a spouse)	Above the diploma	Average	Cultural retiree	60
Probably in a family gathering	-	Single	Diploma	Average	High school students	18
Not known	1	Married	Master degree	Average	Employee	32
Family gatherings or when buying	2	Married	Bachelor	Average	Military	49
Probably in a family gathering	-	Married	Bachelor	Average	University student	24
Family gathering	2	Married	Diploma	Average	Housekeeper	28
Medical staff colleagues	1	Married	PhD	High	Specialist	55
Probably commuting on the street	2	Married	PhD	High	An employee of the drug company	42
Through the spouse	2	Single (death of a spouse)	Diploma	low	Housekeeper	30
Through the spouse	2	Married	Bachelor	High	Housekeeper	48
Internship place	-	Single	Bachelor	Average	University student	23
Medical staff (colleagues)	-	Single	Bachelor	Average	Nurse	26
Not known	1	Married	Bachelor	Average	Military	32

**Table 2: Extracted codes from the interviews**

Codes	Interviews
Psychological factors at the beginning of the outbreak of this disease (anxiety, anger, and being worry caused by ambiguity and labeling)	The fear of transmission, the fear of exacerbation of symptoms, anxiety, the risk of relatives' infection, and exacerbation of their symptoms, being unpredictable of this disease, being unknown and dangerous, if you neglect, you will lose your life, being ambiguity in how to transmit, being a silent and dangerous disease, lack of full awareness of the process and the anxieties caused by ambiguity, feeling loneliness and being alone.
Type and severity of physical symptoms (severe, moderate, mild, and varied over a wide range)	Interesting the body pain, severe nausea, the type of I had no severe symptoms and have severe symptoms and having been hospitalization for 14 days. Being hospitalization after 5 days of quarantine, mild cold-like, dry throat, body aches, nausea, fever and chills, shortness of breath, severe headache, lethargy, body and headache, thirst, suffocation, eye pain, headache, loss of smell and taste in the first 3 days, gait disturbance, single cough, and recurrent cough, inability to speak.
Social and supportive elements	Neighbor magnification, fear of the label, supporting the children, video call, mother crying. Father cooperation, dual consolation and inducing neighbor's concerns, the need for empathy during critical situations, psychological relaxation by the treating physician, supportive family situation, spouse support, positive interaction of medical staff, accessing to medical staff.
How individuals got infected (work, party, and social interactions)	Distribution of medicine from colleagues, on the street, colleagues of my wife's company, attending a party, birthday party, I don't know, being vague the place of work or party, the place of internship
Psychological factors during the continuation of the disease (anger, depression, feeling guilty, and obsession)	Exacerbating the symptoms after hearing the test result, being impatience and confused during headaches, coughs, and shortness of breath, being discomfort because of the separation from spouse and children, recalling bitter experiences, the role of stress in the exacerbation of symptoms, being angry with those who have infected me, feeling guilty during illness because of hurting others, getting bore and becoming aggressive with the family, it is a bad disease and destroyed me. This is a strange disease, the symptoms were mild for us, but the previous fears are more, I am worried about family members who have to communicate with people, and due to lack of knowledge about the future disease, I have an obsession with eating freezer and meat.
Economic effects	Having good economic situation because of having fixed salaries, being high cost of medicine and father's unemployment, having no cost, being covered and supported by Emam Khomeini relief committee, lack of income during the illness and its problems, reducing overtime and income deduction
Positive psychological coping strategies	Entertain yourself, praying, do not be afraid, watch movies, play computer games, keep your spirits up, accepting then intense fear, feeling intense stress after being tested positive, accept illness because of its epidemic situation, listening to your favorite music to be comforted, observing collective family quarantine, observing hygiene, maintaining morale, living in a separate environment and on leave, practicing medical staff training, prescribing medication and the type of nutrition, individual quarantine in the room, not following news about COVID-19 mortality, by getting infected my previous fear and panic left me, we should not limit ourselves too much, this disease is with us, we should live.

days, which is in the line with the research of Shahyad and Mohammadi.<sup>[18]</sup>

## Conclusion

We extracted details of some of the psychological issues related to COVID-19 at different stages of the disease through interviews with patients, which can be a cornerstone for further research. Therefore, it is recommended that conducting further studies and using the findings of this research in large-scale studies can help generalize the findings. Factors such as anxiety and lack of support at the individual and social levels had an effect on participants' severity and the onset of symptoms, and in addition to having effective coping styles, they were effective in reducing and improving the disease. While conducting It was concluded that the more severe the symptoms of Covid 19 disease, the more severe the psychological symptoms, and the more difficult the adaptation stages and the treatment process were seen. Which represents the interrelationships of body and mind.

The behavior of some family members to take health issues seriously and their positive adaptive style with

this disease and the effects of their positive behavior on other family members can be considered as another research topic.

## Limitations and Recommendations

This research is also confronted with limitation, like any qualitative research, its purpose is not to generalize the results, but to have a more complete understanding of the processes and factors associated with a new phenomenon. In addition, it is recommended to study and examine the effects of the psychological processes on the severity of the disease symptoms.

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## Authors' contributions

The first author designed, coordinated, translated, and analyzed the study; the second author conducted



the interview and extracted the code; and the third author conducted the interviews. There is no conflict of interest.

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### Conflicts of interest

There are no conflicts of interest.

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