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Explaining the psychological experiences of nurses during the first peak COVID-19 pandemic

Marjan Hosseinnia [1] , Seyed Mohamad Amin Mousavi Shalmaei [2] , Zohreh Salmalian [3], Naema Khodadadi-Hassankiadeh [4*]

[1] School of Pharmacy, Department of Clinical and Administrative Sciences, Notre Dame of Maryland University, Baltimore, Maryland, USA

[2] School of Dentistry, Guilan University of Medical Sciences, Rasht, Iran

[3] Department of Nursing, Langroud School of Nursing and Midwifery, Guilan University of Medical Sciences

[4] Guilan Road Trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran

Abstract

Introduction: The unexpected spread of COVID-19 with high risk of transmission, fear and anxiety, and a load of negative emotions followed for nurses. It is necessary to assess the psychological experiences of nurses during the first peak COVID-19 pandemic.

Materials and Methods: In this qualitative study, with the approach of conventional content analysis approach, the participants were selected through proposed-based sampling and snowball from the COVID-19 centers of Guilan province in March 2020. The number of 20 participants with various demographic characteristics (Gender, age ...) entered the study. The tools used were in-depth and semi-structured interviews.

Results: Most of the participants were women, married and nurses. Six categories were obtained: not perception, worries, and pretending, horrible observations, pre-psychological symptoms and psychological symptoms.

Conclusion: Psychological experiences of nurses in COVID-19 center in Guilan were expressed in a range of not perceptions and worry until the appearance of numerous pre and psychological symptoms. The psychological needs of this group must be considered at all stages of the crisis. Psychological support by mental health workers should be considered in line with the development of the crisis to reduce the stress on nurses.

Keywords: Psychological, Stress, Experiences, Nurse, COVID-19

***Corresponding Author:** Naema Khodadadi-Hassankiadeh

✉ Email: n_khodadady@yahoo.com

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Introduction

The COVID-19 is one of the types of the coronavirus family (1, 2). This disease spread rapidly throughout China and other countries of the world and became an emergency of the World Health Organization (W.H.O) (3, 4). China remains the highest-risk region (5, 6). The rapid increase in the number of COVID-19 cases in China in late 2019 reminds us how quickly health systems can be challenged to provide appropriate care (7, 8). COVID-19 is clearly a global health problem, especially for developing countries such as Iran (9, 10).

As COVID-19 is spreading rapidly around the world, it is clear that countries are not prepared to protect healthcare workers, patients, and the public, given the inevitability of a global COVID-19 pandemic. Despite the availability of guidance to prevent the H1N1 pandemic in 2009 and the Ebola outbreak in 2013-2016, it is shocking. A sign of the lack of preparedness is that nurses and other healthcare workers were forced to reuse damaged masks. It was estimated that 3,300 health workers were infected and 22 died in China due to "lack of adequate personal protective equipment (11).

Among all health workers, nurses are playing an extraordinary role in the fight against COVID-19, which quickly became a pandemic. During the pandemic, nurses demonstrated their commitment to their profession and patients by putting in intensive efforts by risking their lives in their respective departments (12). Nursing is the most common healthcare role in the United States (US) and the world (13). Approximately 3.8 million nurses in the US and more than 20 million nurses around the world are working with various occupational stressors (5) Most (68.3%) nurses had high levels of occupational stress(14). Moreover in another study, the results showed that the proportion of low occupational stress was 6.1 %, the proportion of medium occupational stress was 47.1 %, and the proportion of high occupational stress was 46.8 %, all of which were higher than the national standard (15). The unexpected outbreak of COVID-19 with high risk of transmission brought fear and anxiety to nurses (16). Some of the pressures that nurses in Wuhan had were: high risk of infection, insufficient protection against the virus, overwork, frustration, discrimination, isolation, caring for patients with COVID-19 with a burden of negative emotions, lack of contact with family and fatigue. Such dire situations cause mental health problems such as stress, anxiety, depressive symptoms, insomnia, denial, anger and fear. These mental health problems not only affect the attention, understanding, and decision-making ability of treatment workers and the fight against COVID-19, but can even have a lasting effect on their general well-being. Hence, health protection. Therefore, protecting the mental health of these nurses is important to control the epidemic and their long-term health (17, 18).

It is necessary to assess the problems and demands of healthcare providers to create a safer healthcare system for an effective response when natural disasters occur. In addition, it is necessary to develop strategies to protect healthcare providers from severe emotional and psychological stress (19). In a study of the experiences of nurses caring for patients with MERS coronavirus syndrome, several themes emerged: "Going into a dangerous field," "Extreme pressure because of MERS," "The strength that makes me bear it," "Growing as a nurse, "and remaining duties (20). Perception of the mental health response after a public health crisis is important in that it can help medical and nursing staff prepare to respond to a disaster. Perception of the mental health response after a public health emergency may help medical workers and communities manage the public's response to a disaster (17). As the review of the literature shows, there has been no published study in Iran and Guilan that describes the experiences of nurses regarding their psychological symptoms during the COVID-19 pandemic. The need to study in this topic is necessary considering the significant statistics of deaths and infections in Guilan province in the first peak compared to other provinces of the country and the death of a significant number of nursing staff in this province.

Materials and Methods

Study design

A conventional content analysis was conducted .The primary participants of this research were nurses with the ability to understand and speak Persian who were willing to participate in the study and express their experiences. The first participant was selected through

purposed-based sampling from the hospitals of the COVID-19 treatment center, and the next participants were selected by snowball. An effort was made to include people with diverse characteristics in terms of gender, age, etc. in the study so that the presence of nurses who have various experiences of nursing care in this crisis will help to maximize diversity and achieve theoretical information richness. According to the need and according to the results of data analysis, the researcher conducted interviews with nurses, head nurses (infectious, emergency and ICU wards...) and supervisors and nursing coaches. The information related to the demographic characteristics of the participants includes age, gender, education level, marriage, and the number of children in table 1 (Table 1).

Data gathering

In-depth and semi-structured individual interviews were the main tools of data collection, which started with several general and open-ended questions related to the research topic; what were your psychological experiences while caring for COVID-19patients?" (2) What feelings and concerns did you experience during this crisis (3) what psychological symptoms did you experience? The interviews were conducted with WhatsApp according to the nurses' desire and the risk of infection. The duration of the interviews was between 30 and 60 minutes.

Analysis Plan

Immediately after the first interview, the content of the interview was written down in the participant’s own words. The interview was then read several times to gain a general perception. The analysis was performed word by word, line by line, and paragraph by paragraph, and the initial codes were assigned. The codes were categorized according to similarities and differences and placed in initial categories. Code and category naming was revised several times. The ambiguities were clarified by checking the issues with the participants.

Trustworthiness

The issue of ensuring the trustworthiness of the data is essential for conducting qualitative research. Lincoln and Guba proposed four criteria: credibility, dependability, confirmability, and transferability (21). Participant review was used to ensure the credibility of the data. The participants had the opportunity to correct any misunderstanding in the interviewer's perceptions. In order to gain dependability, experts in qualitative research reviewed the codes and categories. Furthermore, we tried to achieve confirmability. All stages of the research were written in detail so that other researchers could follow the data and possible biases were eliminated.

Results

Most of the participants were women, married and nurses. The demographic characteristics of the participants in the study are shown in table 1.

Table 1. Demographic characters study population.

No	Gender	Age	Responsibility	Marital	Number of children
1	Male	54	Nursing coach	Married	3
2	Male	53	Supervisor	Married	2
3	Female	50	Head nurse	Married	2
4	Female	54	Supervisor	Married	2
5	Female	52	Nurse	Married	2
6	Female	53	Nurse	Widove	2
7	Female	54	Nurse	Married	2
8	Female	53	Supervisor	Married	2
9	Female	52	Nurse	Married	2
10	Female	53	Metron	Married	1
11	Female	35	Nurse	Single	0
12	Female	30	Nurse	Married	1
13	Female	32	Nurse	Single	0
14	Female	36	Nurse	Single	0
15	Female	26	Nurse	Single	0
16	Female	29	Nurse	Single	0
17	Female	45	Nurse	Married	2
18	Female	42	Nurse	Divorce	3
19	Male	33	Nurse	Single	0
20	Female	54	Associate Degree	Married	3

There were 6 categories of not perception, worries, and pretending, horrible observations, pre-psychological symptoms and psychological symptoms (Table2).

Table 2. Psychological symptoms of nurses during the first peak COVID-19 pandemic.

Categories	Subcategories
A.Not perception	1. From the authorities
	2. From the wife
	3. From the patient
	4. From uninformed clients
	5. From the people
B. Worries	1. For patients
	2. For being a carrier
	3. For families
	4. For the suffered loved ones
	5. For the people
	6. For yourself
	7. For colleagues
	8. Regarding withdrawal of families
	9. About the officials
C. Pretending	1. Obligation to good appear
	2. Requirement to have a smile
	3. The need to look funny
D.Unfortunate observations	1. Occurrence of human massacre
	2. Death of patients
	3. Occurrence of abnormal behaviors
	4. Occurrence of of anxiety in society
	5. Unpleasant changes
E.Pre-psychological symptoms.	1. Feeling of homesickness
	2. Feeling of fear
	3. Lack of attention to appearance
	4. Feeling of mental fatigue
	5. Ignoring wishes
	6. Worrie about the future
	7. Feeling of not trusting
	8. The feeling of losing peace
	9. Feeling of insecurity
F- Psychological symptoms	1. Feeling of panic
	2. Feeling stressed
	3. Feeling anxiety
	4. Feelings of despair and hopelessness
	5. Crying and moan
	6. Feeling guilty
	7. Praying as the only solution
	8. Feeling depressed

A. Not perception

1. From the authorities. Participant 1: I am a prolific person, if my husband doesn't come to pick me up in the evening, believe me, I will stay in the hospital for 24 hours... But I feel that no one on the treatment staff understands the amount of work and the strain of working with these patients and the fear of patients takes a lot of energy.

2. From the wife. Participant 14: My husband's sister posted the steps of baking bread at home on WhatsApp, my husband expects me to bake bread for our family. They don't understand me at all.

3. From the patient.

Participant 15: We wear so much, sometimes we don't hear. The patient was calling us and we did not hear and did not go to him. We saw him shouting, are you a deaf nurse?

4. From uninformed clients.

Participant 6: Some people don't really understand, last night a patient came without an ultrasound with a ruptured amniotic sac. I tell you, what does your ultrasound report say, I came from a party. I wanted to hit him. We haven't seen our siblings for a few months, they are having a party. In the end, nothing happens to them, then they say that we all threw a party, but nothing happened.

5. From the people. Participant 10: Nurses work in such conditions, but people easily travel selfishly as much as possible, while they are informed but impatientto stay at home.

B. Worries.

1. For patients. Participant 9: I had seven discharges today, they thanked us so much, and I pray that there will be no problems for them at home. They don't last

as long, meaning it's not as long from the time they're admitted to the time they die, which is a worry.

2. For being a carrier. Participant 12. The situation is really dangerous and everyone is aware of this danger, but my colleagues and I are more concerned about our families than about ourselves. Because we have always been exposed to diseases.

3. For families. Participant 2: My wife's family was very worried and kept asking me on the phone not to go to work at all. Also, my eldest son was very afraid that I would get COVID-19 or maybe bring COVID-19 home.

4. For the suffered loved ones. Participant 2: One of my sisters and also a close friend got COVID-19and I had to take care of COVID-19 patients in the hospital. Outside of working hours, I will also give them advice and injections. Of course, now I have a clear conscience that I was able to manage these situations to some extent.

5. For the people. Participant 20: The situation is very bad, many people are dying, and nothing can be done, nothing.

6. For yourself. Participant 3: One of my employees was very young, her husband had died. At the beginning of the COVID-19 pandemic, her daughter, who was in the fourth grade of school, called me, if my mother gets infected COVID-19, who will take care of me? Finally, her mother got COVID-19. Unfortunately, he has no one, her husband's family are not good people.

7. For colleagues. Participant 16: I did not go to work because of my child. But all my colleagues were going to work during the crisis. After ten days, I called my head nurse and said that I can't stay at home when you are struggling so much, I will come to work... Now, I have a fever and my CRP test is positive.

8. Regarding withdrawal of families. Participant 2: My family distanced themselves from me as if I had leprosy. My sisters, who always trip in my car, now that they know the possibility of being a carrier of the medical staff, are not even willing to ride in my car. So what about my wife and children? Should they leave me too?

9. About the officials.

Participant 7: Our hands are wound, One's heart cries when he sees it, no one cares at all, and our officials are so relaxed. They forget everything quickly. Heart-wrenching.

C. Pretending

1. Obligation to good appear .Participant 17: Whenever my shift was over, I would go to the dressing room to cry alone so that I could calm down a bit and look refreshed when I got home.

2. Requirement to have a smile. Participant 13: Our boss loves taking pictures frequently. He says to smile in the photo to make people happy. How can you smile with ith this mask and glasses,?

3. The need to look funny. Participant 3: I joked with the patients in the ward today. They were sprinkling their coughs everywhere, I told one of them that I will not be discharged until they get better. There is a boss somewhere. I told him that you are going to destroy Rasht, but I am crying at home alone...

D. Unfortunate observations.

1. Occurrence of the human massacre. Participant 4: Last night, two ward servants who had been working all day until the morning were sick early in the morning. People see dancing in the virtual space, but they don't know what human tragedies are happening and people's loved ones are dying one by one.

2. Death of patients. Participant 6: COVID-19 patients die of fear in ICUs. As soon as they heard that they wanted to send them to the ICU, they would get respiratory distress and die sooner.

3. Occurrence of abnormal behaviors. Participant 3: I am constantly counting equipment. I came in the morning and three containers of alcohol were stolen. I have an anti-theft camera but no time to check.

4. Occurrence of anxiety in society. Participant 2: In addition to anxiety and worry in the staff, this state of anxiety was also found in patients and caregivers. In such a way that even with the slightest symptoms of a cold, they went to the emergency departments a hospital.

5. Unpleasant changes. Participant 3: In the beginning, they moved the nurses' wards too many, which was stressful for them. It never occurred to me that was the head of gynecology and obstetrics, was the head of COVID-19 ward.

E. Pre-psychological symptoms.

1- Feeling of homesickness. Participant 3: I miss my parents very much, they both died. Good luck to those who have the shadow of their parents in this crisis.

2. Feeling of fear. Participant 2: When the Ministry of Health confirmed that the COVID-19 ward has spread in Qom and subsequently in other provinces including Guilan, a state of fear and anxiety gradually appeared in the hospital personnel who should be in the first line of patient care, and the day this became known fear and worry increased.

3. Lack of attention to appearance. Participant number 6. I don't have any boredom left, I go to work with a dull look and no make-up.

4. Feeling of mental fatigue. Participant 18: I am very tired, they say this disease is continuing now. Our work is very, very hard, it's like a war, I'm so tired, and I'm crying all the time.

5. Ignoring wishes. Participant 19: Believe me, I also have the right to have many wishes for myself, it would be nice if people stayed at home.

6. Worrie about the future. Participant 3: I don't know, can we work without personal protective equipment one day? Can you be sure that the virus is gone?

7-. Feeling of not trusting. Participant 13: My colleague and I went on strike outside the department and said that we will not go to the department until you give us good protective equipment. We forced them to prepare for us quickly. I will not throw myself into the well with these ropes.

8. The feeling of losing peace. Participant 3: I don't have the courage to hold my children in my arms now, lest I pass the disease on to them. I also lost the peace that is given to me by hugging them. I haven't sat at a dinner table with my children for a long time.

9. Feeling of insecurity. Participant 16: The duty of a COVID-19 nurse is like that of a mine destroyer in the war, who may be exposed to danger and explosions from the sky, in front and behind, as well as from the ground.

F. Psychological symptoms.

1. Feeling of panic. Participant 4: It's really scary if someone has both COVID-19 and another disease, it's really not known what will happen. A 19-year-old girl with GCS 3 is in the ICU, unfortunately, her lungs are completely white. He had appendicitis. The unfortunate is still in the ICU. They said so much that it was COVID-19, they canceled the operation, they brought him to the ward, he was getting cyanotic, and so we sent him to the ICU again.

2. Feeling stressed. Participant 18: We, who worked in difficult situations, understand that these dances are a moment, but it is hard work and stressful day and night. May God help us overcome this crisis.

3. Feeling anxiety. Participant 11: In very difficult conditions, we struggle with constant anxiety of getting sick and dying.

4. Feelings of despair and hopelessness. Participant 13: One gets disappointed. One of our colleagues, who was a member of the operating room staff, helped us during the COVID-19 crisis and served all the patients. He could not do anything for his mother and their mother died today.

5. Crying and moaning. Participant 14: Photo of a nurse from Lahijan Hospital who died today due to COVID-19, I cry. It was the New Year celebration of her wedding, she had gone to Rasht to choose her wedding dress... I am very sad.

6. Feeling is guilty. Participant 5: My job caused my wife's illness, and now she is hospitalized. His job was an architect. It is quite clear that I transferred the illness to her. Apart from the constant suffering of his illness and misery, which I will not forgive myself for my whole life, I cannot bear the look of his family, who look at me like a criminal.

7. Praying as the only solution. Participant 18: If you can not leave the house at all, stay at home, the situation is very bad. Pray for us.

8. Feeling depressed. Participant 14: I'm depressed. My friend and comrade from university, who we were guarding together, we used to joke and reminisce, got COVID-19 virus and died. As quickly and bitterly.

Discussion

The lack of not perception of categories was the result of assessment of the psychological experiences of nurses at the COVID-19 Center in Guilan province. It was also reported in previous texts that the conflict between work and family becomes a source of stress because a person tries to sacrifice one for the other. Flexible work is associated with less work-family conflict (22). The existence of differences in language, culture and religion between patients and nurses creates obstacles to clear perception and effective communication and creates a negative impact on the health outcomes of patients. Therefore, the need to improve communication between patients and healthcare providers in order to provide safety performance contributes to the higher quality of care and patient satisfaction (23).

Worries were the next category. Nurses have a right to be worried about the health of themselves and their families. Similarly, in one study, a significant level of worry was reported in health workers. These results should encourage public health officials to increase educational efforts to disseminate reliable information about the different types and provide recommendations on receiving a vaccine booster. Further research on methods to reduce health worker worries about emerging types is warranted (24).

The next category was pretending and looking good. The professional mission of nurses taught them to provide health services with maximum honesty and courage. The conflict between fear and conscience is another experience reported by nurses in a previous study. The result will be that in crises, nurses see themselves in danger but try to perform their duties with good quality. Therefore, they experience internal pressure regarding professional ethics (25-27). In this regard, proper support and creating a sense of security can increase the quality of performing this task by nurses (25, 27).

The next category was the unfortunate observations that these nurses had. In the past, the occurrence of symptoms of post-traumatic stress disorder predominantly overwhelmed by intrusive thoughts in these nurses following unfortunate observations and frequent association of these observations in the minds of nurses was previously reported (28, 29).

The next category was the occurrence of pre-psychological symptoms. It was previously reported that 54.5% of nurses and midwives described their lives as worse since the start of COVID-19, 62.4% felt uncertain in this situation, 42.6% wanted psychological support and 11.8% quit from their profession (30). In a study, the proportion of nurses who received psychological counseling during this pandemic was higher than that of doctors (31).

And similarly, in an Iranian study of nurses' experiences in dealing with a crisis, the themes of psychological reactions with characteristics such as fear and depression were identified. Nurses exposed to severe stress are the hidden victims of these crises. These disorders have a significant impact on their performance. Especially situations such as the loss of loved ones and friends, who are among the victims, and with the extent and severity of the incident, it causes mental and emotional confusion for people (32).

The final category was the occurrence of psychological symptoms in these nurses. Psychological experiences were very wide and were observed in nurses of all ages and positions, i.e., it was described in line nurses who were responsible for taking care of a few patients and head nurses who were responsible for taking care of a large number of patients. These experiences were observed even in nurse educators who were not in charge of direct care of COVID-19 patients. Similarly, among nurses caring for MERS, one of the themes revealed was "extreme pressure due to the presence of MERS"(20). Crisis situations and pandemics can cause mental health disorders even in previously healthy people, and severe stress, anger, irritability, insomnia, sleep disturbances, and mood disorders, including symptoms of depression, panic, anxiety and stress (33, 34).

Psychological symptoms were acknowledged by the participants in its various titles, and anxiety was one of the most important and frequent ones. In a similar study, psychological distress among medical staff, especially fear and anxiety, appeared first, and later post-traumatic stress disorder and depression appeared and continued (35). Since psychological symptoms were evident almost from the first weeks of the crisis when the interviews began, it is recommended to start psychological counseling as these crises pass each day and one should not wait for the formation of post-traumatic stress disorder and depression in them and then treat them (36). In previous studies, to address the mental health issues of hospital workers who are exposed to overwork, stress, difficult moral decisions and multiple deaths, along with the fear of contaminating themselves and their families, a special line they have suggested remote psychiatric consultation (37, 38).

One of the limitations of the present study was the lack of sufficient reference articles and sources due to the relative novelty of the subject, especially in the field of qualitative studies. Examining long-term mental disorders, which is one of the limitations of the study, is suggested in the future.

Conclusions

The psychological experiences of caring nurses in the COVID-19 centers in Guilan were expressed in a range of not perceptions and worries... and until the occurrence of numerous pre and psychological symptoms. The psychological needs of this group should be taken into consideration at all stages of the crisis. Psychological support by mental health workers should be considered along with the development of the crisis to reduce the psychological pressure of nurses..

Author contribution

MH and **NKH** participated in the research design, content analysis and writing the first draft; **SMAMS**, and **ZS** participated in the performance of the interviews and content analysis; All authors reviewed and confirmed the final manuscript.

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Conflict of interest

There are no potential conflicts of interest.

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