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ORIGINAL ARTICLE

Factors affecting Iranian nurses' intention to leave or stay in the profession during the COVID-19 pandemic

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Abstract

Aim: This study was conducted to explore the factors affecting nurses' intentions to leave or stay in their profession during the coronavirus pandemic in Iran.

Introduction: Because the effectiveness of a healthcare response to a disaster depends on an available, skilled, and motivated healthcare workforce, it is essential to understand and address potential barriers to and reasons for the intentions of medical staff to leave or stay in their profession.

Methods: A qualitative study with a conventional content analysis approach was conducted. The participants included nurses working in hospitals during the COVID-19 pandemic, and nurses who had previously left their job or had been absent from work for a period of time. The participants were selected using a purposeful sampling strategy. Data were collected through 19 in-depth, individual semi-structured interviews with 16 nurses. The COnsolidated criteria for REporting Qualitative research checklist was used to report the study.

Findings: Three categories; commitment and work conscience (with a subcategory of risk-taking), fear (with two subcategories of fear of family infection and fear of protective equipment shortages), and organizational factors (with two subcategories of organizational atmosphere of the hospital and motivational factors), emerged from the analysis.

Conclusion: The reasons for quitting a nursing job or to keep working as a nurse during the pandemic include both personal and organizational factors. Commitment and work conscience in pandemic conditions is one of the main factors for keeping nurses in their profession.

Implication for nursing practice and policy: Gaining insight into nurses' understanding of the situation and perspectives is the key to being able to provide appropriate support and keep them in the workforce. Peer support can play an important role in supporting novice nurses in facing challenges posed by a pandemic and should be improved. Also, programs and strategies need to be planned to improve resilience among nurses and to help them to manage their stress and fear.

KEYWORDS
coronavirus, COVID-19, intention to leave, Iran, nursing, pandemic, turnover

INTRODUCTION

Nursing organizations such as the International Council of Nurses (ICN) have emphasized the essential role that nurses play in emergencies and disasters. While most nurses are committed to their professional duties, the unprecedented pressure that COVID-19 pandemic has placed on healthcare systems has created a number of challenges for nurses. These challenges include the increased number of patients, increased burden of disease, protective protocols (Labrague & de Los Santos, 2020), high risk of infection and insufficient infection control, frustration, discrimination, isolation, dealing with patients with negative emotions, having no contact with families, and burnout (Kang et al., 2020; Yáñez et al., 2020), and each of these has the potential to affect the health of nurses.

Nurses risk their lives to perform their duties in pandemic situations, and they are afraid of being infected or infecting others (Labrague & de Los Santos, 2020). Preliminary estimates have indicated that front-line healthcare workers account for 10%–20% of positive cases of COVID-19 (TCDC,

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2020). The self-reported data from one study showed that front-line healthcare workers were at least three times more likely to contract COVID-19 than the general population (Nguyen et al., 2020). The COVID-19 emergency, like any event that leads to the transmission of infection or contamination, can influence healthcare workers' intentions to leave work for a variety of reasons. This is because, in addition to the commitment that they have to themselves and their own health, they also have a commitment to their families and friends, who are also afraid of being infected (AACN, 2020; Schroeter, 2008). Previous studies have shown that healthcare workers' response rates to public health emergencies ranged from 25% to 80% (Li et al., 2020).

The importance of keeping nurses in the profession is greater in countries with pre-existing nursing staff shortages. The shortage of nurses in Iran can best be described in terms of the statement made by officials at Iran's Ministry of Health, who state that even if 20 000 new nurses are recruited annually, it will take at least 5 years to reach the global standard. This shortage of nurses during COVID-19 pandemic has risen to 0.7–0.8, which means that there is less than one nurse per hospital bed (IUMS, 2020). With the outbreak of the COVID-19 pandemic, the workload of nurses increased even more. As a result, there is evidence of quitting and absenteeism among nurses during the pandemic in Iran (INO, 2021). The combination of a shortage of at least 100 000 nurses in Iran (MOHME, 2018), the reluctance of nurses to care for patients, and their intentions to leave the profession, makes it difficult to meet the healthcare needs required to overcome the pandemic.

A literature review showed that some of the predictors of resignation among healthcare workers include increased workload and job stress due to the outbreak of the disease; awareness about the fatality of the disease; disruption in social relations; organizational support; perceived risk of disease transmission; emotional support; and personal protective equipment (Shiao et al., 2007). Also, some of the factors that affect intention to stay at work include sense of responsibility; perceived self-efficacy; financial compensation; gender, age, and level of education (Devnani, 2012); full-time employment; perceived personal safety; pandemic response training; and confidence in personal skills (Aoyagi et al., 2015).

However, very few studies have been conducted to explore the intentions of nurses to care for patients with emerging or unknown highly infectious diseases or to leave the profession in Iran, especially with a qualitative approach. Because this is the first time that Iran has faced an emerging infectious disease with high pathogenicity, this study was conducted to explain the factors affecting the intentions of nurses to leave or stay in their profession during COVID-19 pandemic, using a qualitative approach.

Aim

The aim of the study was to explore the factors affecting nurses' intentions to leave or stay in their profession during the COVID-19 pandemic in Iran.

TABLE 1 Demographic characteristics of the participants

Demographic characteristics		Frequency	Percentage
Gender	Male	2	12.5
	Female	14	87.5
Marital status	Single	11	68.75
	Married	5	31.25
	Supernumerary	7	43.75
Employment status	Contract	2	12.5
	Special plan	3	18.75
	Permanent	4	25
	Bachelor's degree	12	75
Education	Master's degree	4	25
	Min	Max	Mean
Age	23	42	30.25
Work experience	7 months	16	5.94

METHODS

Design

A qualitative-descriptive study with a content analysis approach was conducted. The participants were recruited through a purposeful sampling method from four cites that had the highest number of patients with COVID-19 when the data collection began.

Sample and setting

The inclusion criteria were having at least 6 months' working experience as a nurse, nurses who had left their job during the current COVID-19 pandemic or were absent from their work for a period of time or had changed their jobs, as well as nurses who had continued to work during the pandemic. The researchers tried to recruit participants with diverse characteristics in terms of their age, gender, work experience, level of education, and place of work in order to maximize variation and achieve information richness. A total of 16 nurses participated in the study, with a mean age of 30.25 years and an average work experience of 5.94 years. The participants had at least a bachelor's degree in nursing science, equal to four years' academic education. The majority of the participants were married (68.75%). Further demographic characteristics are presented in Table 1. The participants worked at one of the eight state-run university hospitals in the four major cities which had the highest number of patients with COVID-19 at the time of the interviews. Most of the nurses had remained in their profession and the number of nurses who had left the service was very small. Only two nurses who had left the profession during the pandemic agreed to participate in the study. The remainder who were contacted appeared to be reluctant to participate in the study.

Data collection

In-depth, individual, and semi-structured interviews were conducted during May to October 2020. The duration of interviews varied between 20 and 70 min, depending on the nurses' willingness to continue the interview. The interviews were audio-recorded and transcribed verbatim after each session. The interviews began with general questions, such as "What was your perception of working in the hospital when the COVID-19 pandemic began?"; "What were you concerned about?"; "What were your reasons for not leaving the profession despite the high risk of coronavirus infection?"; and "Under what circumstances did you decide to leave the service?". Also, to clarify the information provided and to resolve any ambiguities, the interviewer asked exploratory questions, such as "What do you mean by that?" and "Can you explain this further?". If necessary, to further reduce ambiguities, some participants were interviews twice. In total, 19 interviews were conducted with 16 participants.

Ethical considerations

This study was approved by the Ethics Committee of Tehran University of Medical Sciences (IR.TUMS.VCR.REC.1399.116). Prior to the interviews, a preliminary meeting was held with each participant via telephone or in person to provide them with information about the study, set the interview time, answer any questions, and obtain verbal informed consent. The venues for the interviews were determined by the participants' convenience and choice. At each interview session, the study information was repeated, highlighting the confidentiality of the data and the right of the participants to withdraw from the study whenever they so wished, without any consequences. All names were replaced with pseudonyms and codes in the interview transcriptions and in any reporting of the findings. The interview recordings, transcripts, and personal information have all been stored on an encrypted, password-protected hard disk in a locked cabinet, accessible solely by the researcher.

Data analysis

Data management was performed by MAXQDA-10 software, and Graneheim and Lundman's (2014, 2017) conventional content analysis method guided the analysis. Content analysis, as a research technique, involves specialized methods in processing scientific data. Qualitative content analysis reduces data and gives it structure and order. It is also a method of exploring the symbolic meanings of messages (Graneheim et al. 2017). For this purpose, the interviews were first transcribed from audio file format to text. The interviewer then listened to the recorded interviews while reading the transcripts several times to get a better understanding of them as a whole. Then, the parts relating to the aim of study were extracted and formed into semantic units, which were later condensed to generate codes. The codes were compared based on their differences and similarities and were merged into subcategories and categories. Data analysis was performed simultaneously with data collection, which continued until data saturation was reached, where no new codes were identified.

TABLE 2 Categories and subcategories

Category	Subcategory
Commitment and work conscience	Risk-taking
Fear	fear of family infection
	Fear of the lack of protective equipment
Organizational factors	Organizational atmosphere of the hospital
	Motivational factors

Rigor

Lincoln and Guba's (1985) criteria were used to ensure the trustworthiness of the study. The reliability of the study data was achieved by asking the participants to review and confirm a sample of their interview texts (member check), asking two nurse-researchers with experience in qualitative research to review the data analysis process (peer check), and having long-term engagement with the research process (prolonged engagement). Data transferability was assessed by selecting participants of greatly varied backgrounds and by accurately describing the details of the study in order to make the study process transparent. Dependability was evaluated by comparative analysis of data and the use of data triangulation. Finally, the documents were recorded over time to ensure confirmability. In the process of coding and classifying, methodological coherence, external checking, along with the peer debriefing, were also considered.

Findings

The data analysis revealed three main categories, including commitment and work conscience (with a subcategory of risk-taking); fear (with two subcategories of fear of family infection and fear of the protective equipment shortages); and organizational factors (with two subcategories of organizational atmosphere of the hospital and motivational factors) (see Table 2).

Commitment and work conscience

Professional commitment is a mental state that expresses a desire, need, and obligation to work in a profession. One reason for not leaving the profession during the COVID-19 pandemic was the sense of commitment that the nurses had toward their profession and colleagues. The nurses expressed that, by leaving the service, they knew that the workload

of their colleagues would increase. They considered it their duty to encourage young and inexperienced nurses and to make them believe that they were no different from other nurses working in the COVID wards. The nurses considered the nursing profession a highly responsible profession and believed that, as they had made an oath at their university graduation, they should take the responsibilities involved with this profession seriously and not leave their colleagues alone in difficult conditions such as the COVID-19 pandemic. One of the nurses, in regard to this sense of commitment, stated:

> "Well, when you have studied in a profession, you are a kind of committed. If I say I do not work and others say the same thing, what will happen?" (Participant 16)

Work conscience refers to the satisfaction, commitment, and practical obligation to the tasks that human beings are supposed to perform. Participating nurses considered that leaving the service would result in having a troubled conscience and feeling embarrassed to return to work. A sense of commitment and work conscience made nurses accept the risks associated with their work.

> "When we accept to be a nurse, we have to be available if there is a need, and if we do not, we will be really indebted no matter how hard it is for us. For example, when we feel that we are needed in a situation, we will suffer from a guilty conscience if we don't respond." (Participant 10)

Risk-taking

Several participants describe that they volunteered to work at COVID wards. These nurses also said that they had accepted the nursing profession and that their professional responsibilities dictate that they must take the risks involved in the profession. They considered that working as a nurse entails constantly facing high-risk conditions such as hepatitis, AIDS, and tuberculosis, and COVID-19 pandemic is no exception. Participating nurses expressed that being responsible and facing occupational hazards and issues makes them proud in performing their professional duties. One of the nurses who volunteered to work in a COVID ward said:

> "I want my head to be held high in front of me and patients, and be able to say that I worked from the beginning to the end of this crisis and did not give up in the middle of it." (Participant 4)

The nurses considered not having a troubled conscience, not being ashamed at the end of the pandemic, and not being embarrassed in front of their colleagues as the positive consequences of maintaining their commitment and work conscience and to keep working as a nurse. The nurses described their acceptance of the risks involved with the nursing profession and that they have developed their skills that are now urgently required. Therefore, it is their duty to face the risks associated with working during the pandemic. In this regard, one of the nurses stated:

> "We have the experience and knowledge to protect ourselves, so why should we escape? Where can we escape to? We have to accept the situation and we have studied for a day like this. If we cannot use the knowledge we have acquired to protect ourselves and others, who can protect us?" (Participant 11).

Fear

Fear is an unpleasant but natural feeling that arises in response to real or potential dangers. Fear was mentioned by all participants, despite their diverse demographic characteristics. There was a fear of spreading the infection to their family members, a fear of protective equipment shortages, and the fear of the consequences of leaving the service. Fear in some nurses had decreased over time, but others continued to carry out their duties amid fear.

Fear of infecting the family

Fear was one of the most prominent results revealed during the data analysis. At the beginning of the pandemic, many nurses reported the fear of infecting their families. Nearly all of the nurses in the study reported the fear of infecting their families due to having to work in the hospital. Some of them stated that, although they themselves are not worried about getting infected by COVID-19, they fear that their family members might become infected. By family members, they meant their parents, spouse, and children. A nurse working in a COVID ward in this regard stated:

> "I am not worried about myself at all, and my only concern is to pass the infection to others and to my family members. My second brother is in primary school and has asthma." (Participant 6)

Many participants were concerned about the underlying diseases of their family members, such as parents or older family members. Some of them were also afraid of their children being infected, and this fear led them to live in nursing homes away from family members in order to reduce the transmission of the disease to their families. Fear of infecting family members was also one of the reasons given by some nurses who had left their job during the COVID-19 pandemic. One of the nurses, who had 15 months of work experience and left the service at the beginning of COVID-19 pandemic, cited the fear of infecting the family as one of the important reasons for leaving, and stated:

> "Since my mother is diabetic and my father is taking immunosuppressive drugs and his immune system is compromised, I was afraid of infecting them, so I quit." (Participant 3)

Only two nurses who had left the service participated in this study. They also referred to the fear of infecting their children as one of the reasons for their decision to leave the service. One of these young nurses said:

> "My sister was a nursing student who lost her life in an accident (silence). My mother told me that if you get sick, I may lose you too. I do not want to lose you." (Participant 2)

Nurses who had left their service for the fear of infecting their family members considered their family as an important priority in their life and believed that losing a job was better than infecting and killing a family member.

Fear of protective equipment shortages

One of the reasons given by the nurses who had left the service in this study was the fear of lack of personal protective equipment, especially at the beginning of the COVID-19 pandemic. One of the nurses, who worked in the emergency room, referred to the lack of personal protective clothing and N95 face masks as one of the reasons for leaving the profession. This male nurse said:

> "In the beginning, we only had a simple gown. The proper space suit, which is shown on virtual networks or on TV, was not available in our hospital at first. I do not know about other hospitals. There was not even the N95 face mask in our hospital. We only had simple surgical mask, simple gloves and simple apron." (Participant 3)

According to the participating nurses, the shortage of personal protective equipment and supplies was rectified after passing the sudden and acute phase of the pandemic, and the hospitals were able to provide complete personal protective equipment to all nurses, especially the nurses in the COVID ward. They also stated that, over time, their fears of the lack of protective equipment and getting infected by COVID-19 diminished. A number of participants also stated that the fear among nurses at the beginning of pandemic was due to the unknown nature of the disease, but, over time, they realized that not all sufferers would die, so their anxiety and fear decreased.

Organizational factors

Factors related to the work environment, performance, and the way in which managers support nurses, were other influential factors in deciding whether to quit the service among nurses. The organizational atmosphere of the hospital and motivational factors were the components of the organizational factors.

Organizational atmosphere of the hospital

Some of the participants cited their interest in the working environment and maintaining friendly relationships with colleagues as reasons for not leaving the profession. They stated that the presence of kind and compassionate colleagues and the support of nursing managers and supervisors prevented them from leaving the profession. They were also reluctant to leave their colleagues behind and increase their workload and preferred to work together in the hope of better days, when the pandemic is over. Some nurses referred to the support of nursing managers in providing personal protective equipment, holding training classes to familiarize nurses with the unknown nature of coronavirus at the beginning of pandemic, and conducting periodic laboratory tests for nurses as being effective factors in creating a supportive atmosphere in the organization and encouraging the nurses to stay in their profession. One of the nurses working in a COVID ward stated:

> "I like the hospital that I work in. It really did everything for us. Masks, gloves, and hand disinfectant solution were all available at our disposal. The physician on night call (I do not know if other hospitals have one or not) visits all the wards at night and if we do not have the mask, he would immediately prepare some for us." (Participant 7)

An inadequately organized atmosphere was one of the reasons for the two nurses participating in this study to leave their job. The two nurses, who were supernumerary and inexperienced, believed that, due to lack of experience, they had been asked to work more than others while not receiving support from their colleagues and managers. They were not interested in working at the local hospital, so they made the pandemic an excuse to leave the service. One of these young nurses, with 7 months of experience said:

> "I prefer to die than to work with people who harass me. More than anything, the stress and disrespect made me to leave my job." (Participant 2)

Motivational factors

According to the analysis, the creation of external motivations by the organization was effective in encouraging the nurses to remain in the profession. Although most nurses participating in this study had strong internal motivations to continue working in COVID-19 pandemic, organizational

rewards, financial incentives, and the hope of changing their employment status were all motivating factors for them to continue working. Motivational factors were especially important for young and novice nurses who did not have a very stable employment status. One of the nurses in regard to motivational factors stated that

> "I hope that they would change my employment status, but it is not just that, I want to work." (Participant 6)

Many nurses participating in this study considered the existence of internal motivations, such as commitment, conscience, interest in nursing, and sense of responsibility, as the most important factors in convincing them to stay in the profession.

> "We do not do this because we want our contract to be changed and make more money. However, these promises make us much stronger and in a better mood, and also make us feel more comfortable, so we can focus more on our work." (Participant 4).

DISCUSSION

The study showed that one of the most important and main reasons for staying in the nursing profession, and even volunteering to work in the COVID wards, despite the fear of infection, was the nurses' sense of commitment and work conscience. Duran et al. (2021), in a study in Turkey, concluded that, during the COVID-19 pandemic, certain factors, such as intention to leave the profession, choosing a profession voluntarily, family support, perceived organizational blockage, job satisfaction, and educational status, affect nurses' professional commitment, respectively (Duran et al., 2021). Professional commitment is a concept that is related to culture, context, and time (García-Moyano et al., 2017), and Iranian nurses work in a traditional and religious culture. They make a professional commitment as a result of their religious beliefs (Kalateh Sadati et al., 2021). According to the statements of people who have been brought up with true and logical religious and moral teachings, they have made more efforts to achieve valuable social goals than those who do not have such teachings and also have a spirit of self-sacrifice and commitment (Azim & Islam, 2018; Bahrami et al., 2016).

In the present study, those who left the service or were absent from work were mostly nurses with time-limited employment contracts and those with less work experience. The nurses with longer work experience considered the hospital as their second home and had become acquainted with the hospitals they work in. Other studies also report a negative relationship between age and retirement that younger employees were more likely to leave work than older employees (Chen et al., 2021; Yáñez et al., 2020). The findings of another study in Taiwan showed that nurses who had more than 12 years of experience in the nursing profession and were supported by their families during the SARS crisis were very committed (Chang et al., 2006).

Another category in this study was the category of fear, with two components comprising the fear of infecting family members and the fear of personal protective equipment shortages. This indicates importance of addressing the fear of COVID-19 among nurses to increase their job satisfaction and to reduce psychological distress and the intention to leave the service (Labrague & de Los Santos, 2020). Nurses need to share their experiences of working through similar healthcare crises with younger and less experienced colleagues to help them to acquire a broader perspective. The nurses who felt they have sufficient knowledge and skills felt more obliged to provide care for patients with COVID-19. In line with the findings of this study, a study in Qatar showed that nurses with a higher level of knowledge were more willing to care for patients with COVID-19 (Nashwan et al., 2020). In another study in Turkey, nurses stated that they had not received adequate training on COVID-19 and felt unable to adequately care for patients with COVID-19, and they also feared that their patients would die (Coşkun şimşek & Günay, 2021).

Nurses who work during an outbreak of infectious disease often worry about their families due to the possibility of infection, which is a major barrier to their willingness to work. In this study, nurses expressed that they were more afraid of infecting their families than being infected themselves. Like many West Asian countries, Iranian society is highly family-oriented (Nasrabadi et al., 2004), and understanding the concerns of nurses at a time of such crisis can help managers provide appropriate support. A study in China, which, like Iran, has a family-oriented culture, found that 32.9% of nurses working in COVID wards were not supported by their family members, and 19.4% of nurses did not inform their families about their participation in COVID care (Zhang et al., 2021). Good family support can lead to better nursing performance (Zhang et al. 2021), increased professional commitment (Duran et al., 2021), increased job satisfaction, and decreased intention to leave (Ganji & Johnson, 2020). However, due to the shortage of vaccines, vaccination in Iran has started with the priority of medical staff, older people and people with high-risk conditions (Bagheri Sheykhangafshe, 2021), so the families of healthcare workers were left unvaccinated, which is a source of concern for the working nurses.

One of the causes of fear among the nursing staff in this study was the lack of protective equipment. It appeared that one reason that the nurses volunteered to work in the COVID wards was that those wards had adequate protective clothing, and those who left their job in non-COVID wards cited the lack of safety assurance as their main reason. Similar to the results of this study, Coşkun Şimşek and Günay (2021) in Turkey stated that lack of adequate protective equipment at the beginning of the pandemic caused nurses to get infected with COVID-19 and develop negative emotions such as anxiety. All nurses in this study expressed that they are afraid of getting infected. But nurses who had experience in caring for infectious patients were less afraid. Absenteeism and leaving

the profession also occurred more in less-experienced and younger employees (both in epidemics and in nonepidemic periods), and this finding is supported by numerous studies (Çamveren et al., 2020; Yáñez et al., 2020). In general, the longer the work experience is, the greater the self-efficacy will be, followed by less stress and an increased willingness to care (Heo et al., 2021).

Another important category found in this study was organizational factors. The support of senior managers is a successful strategy to deal with stress and reduce the intention to leave the service in any epidemic. This support system should be provided at administrative, organizational, and national levels (Jung et al., 2020). It is not enough to call nurses heroes, as they should be rewarded for the important and vital role they play in health care (Turale & Nantsupawat, 2021). In this study, some nurses were fearful about the cancellation of their contract or the suspension of their degree due to temporarily leaving the profession, although this issue was not formally raised by the management and health policy-makers of Iran. But, in some countries, such as China, nurses are required to participate in the control of general illness, otherwise their certificate will be revoked (Li et al., 2020). In a study in Iran, the authors concluded that financial compensation during the COVID-19 pandemic had a positive effect on nurses' job satisfaction and commitment and, ultimately, their intention to care for patients (Sharif Nia et al., 2021). Insufficient salary of nurses compared to other jobs is the third reason for the shortage of nurses in Iran (Shamsi & Peyravi, 2020). However, in the present study, internal motivators, such as professional commitment, were superior to external motivators, such as financial rewards. This finding differs from those of Neshan et al. (2020) in a study conducted in Qatar, which showed that Asian nurses are more motivated by financial rewards (Nashwan et al., 2020). This could be due to the fact that most nurses in this study were dissatisfied with the amount of financial rewards and the discrimination that existed between the rewards, and also did not consider it a motivational factor for working in COVID wards. In Iran, to compensate for the shortage of manpower, there is a government law that requires all nurses and other healthcare providers to work in public hospitals for the first 1–2 years after graduation (Farsi et al., 2010). After that, nurses can continue their work on a temporary, corporate, agency, or permanent contract. However, situations such as temporary, corporate, or agency employment are periodic and insecure. In this study, young and agency nurses who had unstable and temporary jobs were very happy with the managers' promise to change their employment status and even considered this better than financial promises. This could be due to the fact that a nurse's financial situation naturally improves as their job security stabilizes. Sokhanvar et al. (2018) found that about 22.6% of Iranian nurses have low job security. In addition, one-third of nurses reported that they would leave their profession if they found another job (Sokhanvar et al., 2018).

In this study, more female nurses were absent from work than male nurses, which is consistent with the study of Heo et al. (2021) in Korea. According to sex selection theory, men exhibit more risky behaviors than women (Pawlowski et al., 2008). Another explaination for less abscence of men may be the fact that Iranian men are responsible for the livelihood of their family, and losing a job makes it difficult for them to do so. However, many studies have shown that gender has no effect on leaving the profession during the outbreak of emerging infectious diseases (Yáñez et al., 2020), which can be investigated with few studies.

Limitations

The small number of nurses who had left the service or were absent from work during the pandemic is a limitation of the study. Except these two nurses, the others did not consent to participate in the study and talk about their reasons for quitting their job. Interviewing more nurses who had left the service could have contributed in enriching the data. Choosing a qualitative approach could be counted as a limitation, as it does not allow generalizability of the findings. However, the qualitative approach made the explorative nature of the study possible.

CONCLUSION

The reasons for leaving the nursing job or to keep working as a nurse during the pandemic include both personal and organizational factors. Among the personal reasons, the nurses described having commitment and their working conscience as factors that encourage them to continue to work, and the fear of spreading the infection to their families and shortage of protective equipment as prohibiting factors. The organizational atmosphere within the hospitals and the existence of motivational factors were among other influential factors for retaining the nursing workforce in the clinical wards.

Implications for nursing practice and health policy

Gaining insight to nurses' understanding of the situation and from their perspectives is the key to being able to provide appropriate support and keep them in the workforce.

Iran, like many other countries, faces a large number of patients with COVID-19 and a shortage of nursing staff. In such circumstances, in addition to attracting new nurses, the need to retain employed nurses is critical. The findings of this study showed that, in order to retain nurses and increase their intention to serve during a pandemic, the use of interventions that promote professional commitment, work conscience and sense of responsibility is a good solution.

Using the outbreak of COVID-19 as an excuse to quit the profession, as described by one of the participants, suggests that hospital managers should have strategies in place to contend with any such condition and at any time, not just within pandemic conditions. One of these strategies is to create job

satisfaction by providing a healthy and respectful work environment, nurturing friendly relations between colleagues, and paying more attention to new employees. This is because employees do not leave the organization all at once, but by first evaluating their job and satisfaction, and then gradually developing thoughts and desires to leave the service. However, what distinguishes pandemic conditions from normal conditions is the existence of fear. The most common cause of absenteeism at the beginning of the outbreak was employees' fear due to insufficient knowledge about the disease, lack of adequate personal protective equipment and fear of transmitting the disease to family members. Therefore, applying strategies to provide adequate personal protective equipment, ensuring safety of nurses and their families, prioritizing the families of health workers in performing COVID tests and in giving vaccinations and treatments, and providing reasonable conditions and work plans to address the families of health workers, whether online or in person, are effective ways to protect nurses and to prevent conflicts between work and family life. These strategies also help families to support the nurses and reduce the loss of manpower. Increasing nurses' knowledge about the disease reduces their fears over time and enables them to return to work after a period of absence. Therefore, health organizations are advised to provide frequent training sessions to keep nurses up to date with the latest and most accurate information about the coronavirus to reduce fears and negative feelings associated with the disease.

As a health policy, nursing organizations should also plan programs to improve resilience and manage stress and fear among nursing staff. Nurses' mental health should be monitored, both during and after the pandemic, and psychiatric and psychological counseling should be provided to help them. In nursing practice, crisis support systems, such as peer support programs, should also be established to encourage senior nursing staff to support and advise young nurses on COVID-19 prevention measures.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Study design: Maryam Esmaeili and Saeideh Varasteh. *Data collection*: Saeideh Varasteh. *Data analysis*: Saeideh Varasteh and Maryam Esmaeili. *Study supervision*: Maryam Esmaeili. *Manuscript writing*: Maryam Esmaeili, Saeideh Varasteh, and Monir Mazaheri. *Manuscript writing*: Maryam Esmaeili, Saeideh Varasteh, and Monir Mazaheri. *Critical revisions for important intellectual content*: Maryam Esmaeili and Monir Mazaheri.

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REFERENCES

American Association of Critical Nurses. (2020) *Moral distress in times of crisis*. AACN Position Statement. Available at: https://www.aacn.org/~/media/aacn-website/policy-and-advocacy/stat-20_position-statement_moral-distress.pdf?la=en [Accessed 25th March 2020].

Aoyagi, Y., Beck, C.R., Dingwall, R. & Nguyen-Van-Tam, J.S. (2015) Healthcare workers' willingness to work during an influenza pandemic: a systematic review and meta-analysis. *Influenza and Other Respiratory Viruses*, 9, 120–130. https://doi.org/10.1111/irv.12310

Azim, M. & Islam, M. (2018) Social support, religious endorsement, and career commitment: a study on Saudi nurses. *Behavioral Sciences*, 8, 8. https://doi.org/10.3390/bs8010008

Bagheri Sheykhangafshe, F. (2021) Coronavirus vaccination 2019 (Covid-19): priority for people with psychological disorders. *Payesh*, 20, 243–245. http://doi.org/10.52547/payesh.20.2.243 (in Persian).

Bahrami, M.A., Ghasemipanah, F., Montazeralfaraj, R., Tafti, A., Chaman-Ara, K., Ardekani, S. E. & Barati, O. (2016) The relationship between religious beliefs and organizational commitment among nurses in teaching hospitals of Yazd. *Medical History Journal*, 7, 185–207. https://doi.org/10.22037/mhj.v7i25.13602 (in Persian).

Çamveren, H., Arslan Yürümezoğlu, H. & Kocaman, G. (2020) Why do young nurses leave their organization? A qualitative descriptive study. *International Nursing Review*, 67, 519–528. https://doi.org/10.1111/inr.12633

Chang, C.-S., Du, P.-L. & Huang, I.-C. (2006) Nurses' perceptions of severe acute respiratory syndrome: relationship between commitment and intention to leave nursing. *Journal of Advanced Nursing*, 54, 171–179. https://doi.org/10.1111/j.1365-2648.2006.03796.x

Chen, H.-M., Liu, C.C., Yang, S.-Y., Wang, Y.R. & Hsieh, P.-L. (2021) Factors related to care competence, workplace stress, and intention to stay among novice nurses during the coronavirus disease (COVID-19) pandemic. *International Journal of Environmental Research and Public Health*, 18, 2122. https://doi.org/10.3390/ijerph18042122

Coşkun Şimşek, D. & Günay, U. (2021) Experiences of nurses who have children when caring for COVID-19 patients. *International Nursing Review*, 68, 219–227. https://doi.org/10.1111/inr.12651

Devnani, M. (2012) Factors associated with the willingness of health care personnel to work during an influenza public health emergency: an integrative review. *Prehospital and Disaster Medicine*, 27, 551–566. https://doi.org/10.1017/S1049023X12001331

Duran, S., Celik, I., Ertugrul, B., Ok, S. & Albayrak, S. (2021) Factors affecting nurses' professional commitment during the COVID-19 pandemic: a cross-sectional study. *Journal of Nursing Management*, 1–10. https://doi.org/10.1111/jonm.13327

Farsi, Z., Dehghan-Nayeri, N., Negarandeh, R. & Broomand, S. (2010) Nursing profession in Iran: an overview of opportunities and challenges. *Japan Journal of Nursing Science*, 7, 9–18. https://doi.org/10.1111/j.1742-7924.2010.00137.x

Ganji, S. & Johnson, L.W. (2020) The relationship between family emotional support, psychological capital, female job satisfaction and turnover intention. *Studies*, 7, 59–70. http://doi.org/10.20448/802.71.59.70

García-Moyano, L., Altisent, R., Pellicer-García, B., Guerrero-Portillo, S., Arrazola-Alberdi, O. & Delgado-Marroquín, M.T. (2017) A concept analysis of professional commitment in nursing. *Nursing Ethics*, 26, 778–797. http://doi.org/10.1177/0969733017720847.

Goldfarb, N., Grinstein-Cohen, O., Shamian, J., Schwartz, D., Zilber, R., Hazan-Hazoref, R., Goldberg, S. & Cohen, O. (2021) Nurses' perceptions of the role of health organisations in building professional commitment: insights from an Israeli cross-sectional study during the COVID-19 pandemic. *Journal of Nursing Management*, 29, 1102–1110. https://doi.org/10.1111/jonm.13248

Graneheim, U.H., Lindgren, B.-M. & Lundman, B. (2017) Methodological challenges in qualitative content analysis: a discussion paper. *Nurse Education Today*, 56, 29-34. http://doi.org/10.1016/nedt.2017.06.002

Heo, Y.-M., Lee, M. & Jang, S.J. (2021) Intentions of frontline nurses regarding COVID-19 patient care: a cross-sectional study in Korea. *Journal of Nursing Management*, 1–9. https://doi.org/10.1111/jonm.13333

Iran University of Medical Science (IUMS). (2020). *We have a severe shortage of nurses*. News, 18 December. Available at: https://iums.ac.ir/content/109960/%DA%A9%D9%85%D8%A8%D9%88%D8%AF-%D8%B4%D8%AF%DB%8C%D8%AF-%D9%BE%D8%B1%D8%B3%D8%AA%D8%A7%D8%B1-%D8%AF%D8%A7%D8%B1%DB%8C%D9%85 [Accessed 5th May 2021].

Jung, H., Jung, S.Y., Lee, M.H. & Kim, M.S. (2020) Assessing the presence of post-traumatic stress and turnover intention among nurses post–middle east respiratory syndrome outbreak: the importance of supervisor support. *Workplace Health & Safety*, 68(7), 337–345. http://doi.org/10.1177/2165079919897693

Kalateh Sadati, A., Zarei, L., Shahabi, S., Heydari, S.T., Taheri, V., Jiriaei, R., et al. (2021) Nursing experiences of COVID-19 outbreak in Iran: a qualitative study. *Nursing Open*, 8, 72–79. https://doi.org/10.1002/nop2.604

Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yang, B.X., et al. (2020) The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *The Lancet Psychiatry*, 7, e14. https://doi.org/10.1016/S2215-0366(20)30047-X

Labrague, L.J. & Santos, J.A.A. (2020) Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of Nursing Management*, 29, 395–403. https://doi.org/10.1111/jonm.13168

Lee, J. & Kang, S.J. (2020) Factors influencing nurses' intention to care for patients with emerging infectious diseases: application of the theory of planned behavior. *Nursing & Health Sciences*, 22, 82–90. https://doi.org/10.1111/nhs.12652

Li, J., Li, P., Chen, J., Ruan, L., Zeng, Q. & Gong, Y. (2020) Intention to response, emergency preparedness and intention to leave among nurses during COVID-19. *Nursing Open*, 7, 1867–1875. https://doi.org/10.1002/nop2.576

Lincoln, Y.S. & Guba, E.G. (1985) *Naturalistic inquiry*. Newbury Park, California: SAGE Publications.

Ministry of Health & Medical Education (MOHME). (2018). *We need 100,000 new nurses in the country*. News, 5 March. Available at: https://behdasht.gov.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1-%D8%A7%D8%AE%D8%AA%D8%B5%D8%A7%D8%B5%DB%8C/-%D8%A8%D9%87-100%D9%87%D8%B2%D8%A7%D8%B1-%D9%BE%D8%B1%D8%B3%D8%AA%D8%A7%D8%B1-%D8%AC%D8%AF%DB%8C%D8%AF-%D8%AF%D8%B1-%DA%A9%D8%B4%D9%88%D8%B1-%D9%86%DB%8C%D8%A7%D8%B2-%D8%AF%D8%A7%D8%B1%DB%8C%D9%85 [Accessed 8th June 2021].

Nashwan, A.J., Abdulqadir J.N., Abujaber, A.A., Mohamed, A.S., Villar, R.C. & Al-Jabry, M.M. (2020) Predicting the willingness of nurses to work with COVID-19 patients: the impact of knowledge and attitude. *Research Square*. [preprint] https://doi.org/10.21203/rs.3.rs-60995/v1

Nasrabadi, A.N., Lipson, J.G. & Emami, A. (2004) Professional nursing in Iran: an overview of its historical and sociocultural framework. *Journal of Professional Nursing*, 20, 396–402. https://doi.org/10.1016/j.profnurs.2004.08.004

Nguyen, L.H., Drew, D.A., Graham, M.S., Joshi, A.D., Guo, C.-G., Ma, W., et al. (2020) Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *The Lancet Public Health*, 5, e475–e483. https://doi.org/10.1016/S2468-2667(20)30164-X

Pawlowski, B., Atwal, R. & Dunbar, R.I.M. (2008) Sex differences in everyday risk-taking behavior in humans. *Evolutionary Psychology*, 6, 29–42. http://doi.org/10.1177/147470490800600104

The International Council of Nurses. (2020) *Protecting nurses from COVID-19 a top priority: A survey of ICN's national nursing associations*. Geneva ICN. Available at: https://www.icn.ch/system/files/documents/2020-09/Analysis_COVID-19%20survey%20feedback_14.09.2020%20EMBARGOED%20VERSION_0.pdf [Accessed 14 September 2020].

Schroeter, K. (2008) Duty to care versus duty to self. *Journal of Trauma Nursing*, 15, 3–4. http://doi.org/10.1097/01.JTN.0000315779.97341.d3

Shamsi, A. & Peyravi, H. (2020) Nursing shortage, a different challenge in Iran: a systematic review. *Medical Journal of the Islamic Republic of Iran*, 34, 8. http://doi.org/10.34171/mjiri.34.8

Sharif Nia, H., Arslan, G., Naghavi, N., Sivarajan Froelicher, E., Kaveh, O., Pahlevan Sharif, S. & Rahmatpour, P. (2021) A model of nurses' intention to care of patients with COVID-19: mediating roles of job satisfaction and organisational commitment. *Journal of Clinical Nursing*, 30, 1684–1693. https://doi.org/10.1111/jocn.15723

Shiao, J.S.-C., Koh, D., Lo, L.-H., Lim, M.-.K. & Guo, Y.L. (2007) Factors predicting nurses' consideration of leaving their job during the SARS outbreak. *Nursing Ethics*, 14, 5–17. http://doi.org/10.1177/0969733007071350

Sokhanvar, M., Kakemam, E., Chegini, Z. & Sarbakhsh, P. (2018) Hospital nurses' job security and turnover intention and factors contributing to their turnover intention: A cross-Sectional study. *Nursing and Midwifery Studies*, 7, 133–140. http://doi.org/10.4103/nms.nms_2_17

The Iranian Nursing Organization (INO). (2021) *Nurses shortage is a major issue as the Coronavirus crisis begins*. News, 28 June 2021. Available at: http://ino.ir/%D8%A7%D8%AE%D8%A8%D8%A7%D8%B1/%da%a9%d9%85%d8%a8%d9%88%d8%af-%d9%be%d8%b1%d8%b3%d8%aa%d8%a7%d8%b1-%d8%a8%d8%a7-%d8%b4%d8%b1%d9%88%d8%b9-%d8%a8%d8%ad%d8%b1%d8%a7%d9%86-%da%a9%d8%b1%d9%88%d9%86%d8%a7-%db%8c%da%a9-%d9%85%d9%88%d8%b6%d9%88%d8%b9-%d8%a7%d8%b5%d9%84%db%8c-%d8%a7%d8%b3%d8%aa [Accessed 2nd July 2021].

Turale, S. & Nantsupawat, A. (2021) Clinician mental health, nursing shortages and the COVID-19 pandemic: crises within crises. *International Nursing Review*, 68, 12–14. https://doi.org/10.1111/inr.12674

Yáñez, J.A., Afshar Jahanshahi, A., Alvarez-Risco, A., Li, J. & Zhang, S.X. (2020) Anxiety, distress, and turnover intention of healthcare workers in Peru by their distance to the epicenter during the COVID-19 crisis. *The American Journal of Tropical Medicine and Hygiene*, 103, 1614–1620. https://doi.org/10.4269/ajtmh.20-0800

Zhang, Y., Yang, M. & Wang, R. (2021) Factors associated with work–family enrichment among Chinese nurses assisting Wuhan's fight against the 2019 COVID-19 pandemic. *Journal of Clinical Nursing*, 1–12. https://doi.org/10.1111/jocn.15677

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COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of nonparticipants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	

(Continues)

Topic	Item No	Guide Questions/Description	Reported on Page No.
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care . 2007. Volume 19, Number 6: pp. 349 – 357