Original Article

Trying to Control the Situation: A Theory of Iranian Midwives' Experiences of the Coping Process with their Professional Roles Following COVID-19

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Abstract

Background: Midwives are at the frontlines of the fight against the Coronavirus Disease (COVID-19) pandemic. Working under these circumstances threatens their lives and that of their family members; midwives' adjustment to work increases their efficiency in providing care services to pregnant mothers, but midwives' coping process is ambiguous and complex. Thus, the aim of this study was to explore the coping process of midwives with their professional roles following COVID-19. **Materials and Methods:** This study was conducted using grounded theory during 2020 to 2021. For this purpose, 30 midwives were purposively and theoretically selected from two educational hospitals and health centers in Mashhad and Torbat Heydarieh cities, Iran. The data were collected using in-depth semi-structured interviews. The collected data were analyzed using the Strauss and Corbin method (2008) in MAXQDA software. **Results:** The main concern of the participants was "perception of the threats to their health" and the core category revealed from the data was "trying to control the situation." Midwives coped with the COVID-19 pandemic in four steps, namely early initial confrontation, reaction to the COVID-19 pandemic, management of challenges, and reconstructing. Support from family and the health system and religious belief were the interventional conditions in this theory. **Conclusions:** Results of this study can be used to provide health managers with a better understanding of the conditions affecting the coping strategies of midwives with their professional roles during COVID-19. Therefore, this study provides the required data for developing an effective intervention to help nurse midwives to cope with this issue.

Keywords: *COVID-19, grounded theory, nurse midwives, Professional role*

Introduction

Coronavirus Disease (COVID-19) is a public health emergency. The outbreak of this disease has been reported since December 2019 in Wuhan, Hubei Province, China. This infection has spread quickly throughout China and beyond its borders.[1] The global COVID-19 epidemic has brought about rapid and fundamental changes in the way health care is provided around the world especially in maternal care provided to pregnant women.[2,3] According to reports, about 213 million pregnancies occur annually in the world,[4] and often midwives help these pregnant women to give birth in low-income and middle-income countries with inadequate facilities for mother and neonate care.[5] Deep exhalation and vomiting in the second stage of labor exposes midwives to COVID-19. During the corona outbreak, the lack of appropriate masks and protective equipment or not using them doubles the occupational hazards of the midwifery profession.[6] Midwives play a fundamental role in monitoring and providing care during pregnancy, childbirth, and puerperium, and because of this professional role, midwives have been at the frontline of caring for pregnant women during the COVID pandemic.[7]

Feelings of inability to care for patients infected with COVID-19 and manage conditions are among the challenges reported in a qualitative study by Liu *et al*.[8] on 9 nurses and 4 physicians working in Chinese medical centers. Liu *et al*.[8] recommended the use of supportive resources and spirituality for adaptation to these working conditions. However, these resources have not been enumerated and the description of the job adjustment process in cases of threatening

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diseases has not been provided. Job adjustment is often defined as the process through which an employer develops their employees' abilities and skills to meet job needs.[9] Job adjustment is characterized by reducing conflict and increasing efficiency at work and includes the identification of behaviors that lead to the effective and good performance and a positive attitude toward the new job role.[10] Feeling of empowerment, task familiarity, and role clarity are factors that affect job adjustment and can reduce anxiety by increasing satisfaction and acceptance.[11] In a qualitative study, Karami *et al*.[12] investigated how new female nurses adapt to the hospital environment, and reported that the work environment, the role of patient and colleagues, and communication with others lead to their adaptation and ultimately their staying in the work place, and guarantee their commitment to services. It should be noted that a higher concern for COVID-19 infection has been reported compared with other transmitted infections.[8] Now, the corona pandemic has made this situation worse and midwives are at greater risk of mental health problems.

The results of studies show that the COVID-19 outbreak has had high psychological effects on midwives and they have experienced problems such as feelings of fear, anxiety, discomfort, uncertainty, and lack of knowledge and support.[13,14] Without careful supervision, midwives could experience post-traumatic stress disorder and other mental disorder as a result of the COVID-19 pandemic.[15]

Some data are available on the impact of the COVID-19 pandemic on midwives' coping process with their professional roles in Iran. Midwives have a distinctive role in providing care to women during pregnancy and childbearing across the world. Therefore, it is important to consider midwives as at risk members of health care teams, and the best way to prevent stress and mental disorder is adjustment to the job.[7] Nevertheless, little is known about their job adjustment which is a complex phenomenon influenced by many factors, including personality characteristics and job characteristics.[16] To recognize adaptation, it is necessary to distinguish coping strategies. We considered the grounded theory, supported by symbolic interactionism, as an ideal methodology to explain the coping process of midwives with their professional roles following COVID-19. Previous studies do not reflect on new needs and resilience strategies that can assist midwives and protect them in managing this critical situation, so this study was conducted to explore the coping process of midwives with their professional roles following COVID-19.

Materials and Methods

The present qualitative study with a grounded theory approach was conducted in health centers and hospitals affiliated to Mashhad University of Medical Sciences and Torbat Heydarieh University of Medical Sciences, Iran, during 2020 to 2021. All participants of the study were eligible midwives. The inclusion criteria consisted of fluency in Persian, ability to express their experiences and emotions, at least 1 year of clinical work experience, 6 months of work experience during the COVID-19 epidemic, and willingness to participate. The exclusion criterion was the unwillingness to continue participation in the study.

In this study, purposive sampling was conducted. Key informant participants who could express their in-depth experiences and feelings were chosen from two educational hospitals and health centers in Mashhad and Torbat Heydarieh cities. Theoretical sampling was selected after the emerging of codes and categories. Midwives were invited to participate in the study after being provided with an explanation about the objectives of study. In-depth semi-structured interviews were performed for data collection. Interviews were performed in the midwives' work place or homes at a time convenient to them. All interviews were digitally recorded, lasted 30 to 40 min or longer, and were conducted between October 2020 and May 2021.

The interview started with a number of open-ended questions according to the interview guide. The questions in the interview guide focused on the major themes of the research, and then, probing questions were asked to gain more clarity. The setting of the interview was determined after the midwives agreed to participate. At the time of the interview, the researcher first introduced herself, explained the objectives of the project, obtained informed consent from the participants to record the interviews, and ensured them of the confidentiality of their information. Moreover, the interviewer inquired about their personal information, established an appropriate relationship, and gained their trust in order to prepare the atmosphere for the conduction of the interviews. Participants were then asked to share their experiences of coping with their professional roles. The interview included questions such as "How did (do) you deal with your professional roles during COVID-19?," "How has the COVID-19 pandemic changed your life?," "Did you decide to quit or continue working?," and "How did you cope with these changes?" Finally, at the end of the interview, the participants were told to feel free to add anything they thought was ignored. To keep in touch with the midwives and follow-up on the various stages of the study, the researcher gave them her phone number; therefore, she kept in touch with them throughout the data collection process and kept track of their issues.

The analysis in this study began after each interview was transcribed and typed. The collected data were analyzed in MAXQDA software (version 10; VERBI GmbH, Berlin, Germany), using the Strauss and Corbin approach (2008). The analysis began with the first performed interview and the result was used in the subsequent interviews. It was also attempted at this stage to provide the closest meaning

to the smallest units of the interview and use *in-vivo* coding as much as possible. The core category may be from the list of available categories or the abstract words and phrases that cover all existing categories.[17] The two main stages of reaching the core category are integration and refinement of the theory. Integration techniques included building a storyline, drawing charts, browsing, and categorizing through memos. Refinement of the theory was carried out after the formulation of the theoretical plan and consisted of three steps, namely review of the theoretical plan with regard to its internal consistency and logic, completion of the unprocessed categories and theory refinement, and theory validation. The authenticity of the data was evaluated through Lincoln and Guba's[18] evaluative criteria, including credibility, dependability, conformability, and transferability. The methods used in this study included the allocation of sufficient time for data collection and analysis, long-term involvement with data and frequent coding review and correction, revising of interviews and initial coding by the participants, reviewing of the interviews and the classification process by the research team, provision of a detailed description of the whole process from the first step to the last, and reviewing and clarification by peers.

Ethical considerations

This study was approved by the regional ethics committee of Mashhad University of Medical Sciences with the code IR.MUMS.NURSE.REC.1399.049. In this study, the first and sometimes corresponding authors explained the purpose of this research to the midwives, and after obtaining written consent, requested their participation in the study. Moreover, they were provided with information about security, confidentiality, and the right to withdraw from the study.

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Results

This study was conducted on 30 midwives. The mean (SD) age of the participants was 38.30 (7.30) years. Their work experience varied from 1 to 30 years, and their mean work experience was 12.00 (7.70) years. A majority of the participants were married (76.70%) and employed in a hospital. The rest were employed in health centers (23.30%). In addition, 66.67% had between 1 and 3 children. A high percentage of midwives (83.30%) reported that COVID-19 threatened the lives of their children and families and they had little expectation of experiencing such a critical situation. The other characteristics of the participants are presented in Table 1.

This study developed a theoretical scheme for midwives' experiences of coping with their professional roles following COVID-19. The concept of "trying to control the situation" was the core category. In this process, the four major categories of early initial confrontation, reaction to the COVID-19 pandemic, management challenges, and reconstructing were identified [Figure 1].

Core category

In this study, the core category that expresses the main theme of the research was the concept of "trying to control the situation" that emerged from participants' experiences, was frequently repeated in the data, and was related to other major categories. It should be noted that in the process of coping with the work place following COVID-19 and when facing the challenges of perception of threats to their health, midwives tried to adapt to these changes by attempting to control the situation. The basic concepts of this theory are outlined below.

Early initial confrontation

Early initial confrontation refers to the actual encounter with the issue of the COVID-19 pandemic. This exposure encompasses a wide range of sentimental, emotional, and cognitive responses. In fact, for most midwives, the initial emotional-mental involvement with the work place following COVID-19 is the starting point of the process, with initial reactions such as anxiety, stress, fear, and worry. They were anxious about getting the disease in the work place and passing it onto their family members, including children, spouses, and parents, with underlying diseases. Moreover, their fear was due to the unknown nature of the disease, lack of information about the disease, lack of proper treatment, lack of rapid diagnosis, and lack of protocols developed for patient care. In their experiences, midwives expressed many concerns, including concerns about disease transmission in the work place, worries about transmission to their family, and concerns about the lack of protective equipment.

A participant described her experiences as follows: "*I had a lot of stress in the beginning and I was worried about my family, especially because some members of my family have underlying diseases and … I was worried and I wanted to come to work I did not know what to do ….*" (Participant No. 17).

For midwives, this phase began with the disruption of emotional cohesion, living in fear and terror, and mental preoccupation which led to the belief that the threats to their health are serious.

Reaction to the COVID-19 pandemic

Active responses to the COVID-19 pandemic refer to the reactions of midwives to the seriousness of its health threats. This means that midwives used various strategies, including seeking the latest information about

Table 1: Characteristics of Midwives and their professional roles

Participants number	Age	Employment years	Marital status	Degree of education	Work place	Infected with COVID-19*
1	47	28	Married	BSc**	Hospital	+
2	43	18	Married	BSc	Hospital	−
3	41	15	Married	MSc	Hospital	−
4	37	7	Single	BSc	Hospital	−
5	46	19	Married	BSc	Hospital	−
6	33	4	Married	MSc	Hospital	+
7	26	1.50	Married	BSc	Hospital	−
8	40	12	Single	BSc	Hospital	−
9	38	12	Married	BSc	Hospital	−
10	38	12	Married	MSc	Hospital	+
11	47	24	Single	BSc	Health center	+
12	42	18	Married	MSc	Hospital	+
13	48	21	Single	BSc	Health center	−
14	36	12	Married	BSc	Hospital	−
15	28	4	Married	BSc	Hospital	−
16	27	1.50	Married	BSc	Hospital	+
17	25	1.50	Single	BSc	Hospital	+
18	41	12	Married	BSc	Hospital	−
19	26	1.50	Married	BSc	Hospital	+
20	49	22	Married	BSc	Hospital	−
21	34	8	Married	BSc	Health center	+
22	47	19	Married	BSc	Health center	+
23	40	13	Married	BSc	Health center	+
24	37	7	Married	MSc	Hospital	−
25	44	17	Married	BSc	Hospital	−
26	29	1.50	Married	BSc	Hospital	−
27	38	7	Married	BSc	Hospital	+
28	40	10	Single	BSc	Health center	+
29	48	24	Married	BSc	Hospital	+
30	35	8	Married	BSc	Hospital	−

*Coronavirus disease **Bachelor of Midwifery

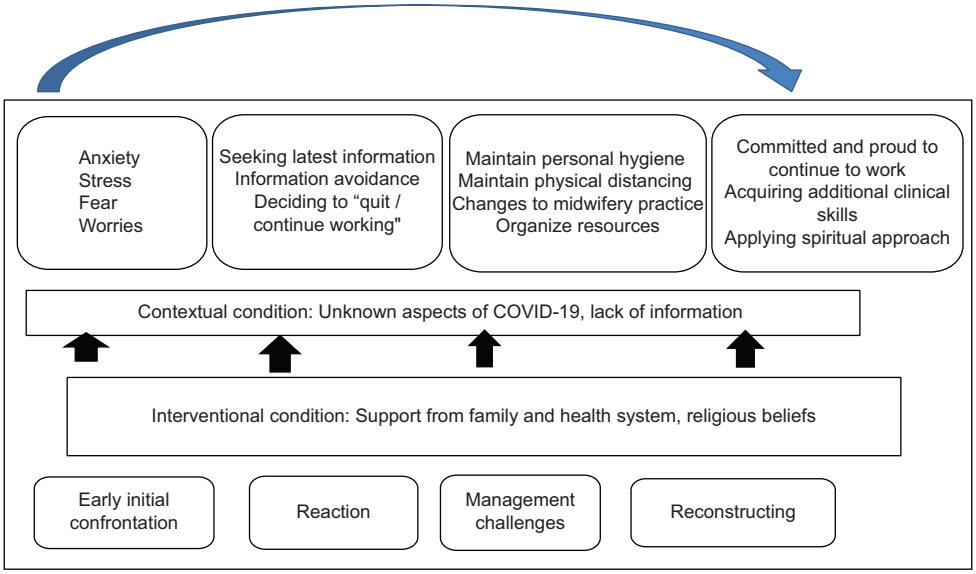

Figure 1: Trying to control the situation: Coping process of Iranian midwives with their professional roles during the COVID-19 epidemic. *Coronavirus disease

COVID-19, information avoidance about COVID-19, and decision-making regarding "quitting/continuing work" to maintain their health status and that of their family. One of the positive strategies of midwives to protect themselves

and prevent the transmission of the disease in the work place while trying to adapt themselves to their new situation was to seek the latest information on COVID disease.

In this regard, one of the participants stated: "*… I tried to increase my information about COVID-19 disease, what the latest studies and protocols say about the ways of transmission and prevention, and how I can take care of myself in the face of COVID-19"* (Participant No. 16).

Intervening factors, such as marital status, employment years, and the COVID infection history of the person or their relatives were all affective on the implementation of the abovementioned strategies.

Management challenges

This step begins with the decision of midwives to continue their work, and refers to the strategies used by midwives after the emergence of challenges following the COVID-19 pandemic. This means that midwives maintained personal hygiene, endured physical distancing, changed their midwifery practice, and organized their resources. Hand hygiene, use of personal and protective equipment, avoidance of unnecessary gathering in the workroom, and physical distancing were some of the strategies used to manage the challenges of COVID-19 pandemic.

Participant No. 1 stated: "*It was difficult for metochangemy mask for each delivery. From the beginning to the end of the shift, we could have 5 deliveries and I had to take all the deliveries myself, so I prepared a personal mask myself. There was no choice and this was the best thing I could do to take care of myself so as not to endanger my family and those around me*" (Participant No. 1).

Other strategies for managing the challenges in this phase were application of special clinical measures for patients suspected of infection or infected, relocation of patients' blood samples, and determination of the process of dealing with suspected or infected patients in the work place to adapt to the COVID-19 epidemic.

Reconstructing (recasting hope)

Recasting hope refers to the measures that midwives took to restore their hope for their health and the future of their career. These measures included being committed and proud to continue to work, acquiring additional clinical skills, and applying spiritual approaches, which resulted in the emergence of hope amidst the existing anxieties. For example, regarding being committed and proud to continue to work, one participant said: "*Being commitment to work for the organization and the client gave us a sense of duty that made us committed to staying and continuing. Just as the organization has obligations toward us, we are committed to doing our job well for the organization*" (Participant No. 25).

Interventional condition

In this theory, interventional condition refers to support from the family, the health system, and religious beliefs. Support from family and health system refers to the concept of support that midwives received from their family, society, and organization. Midwives cited examples of organizational support such as receiving written encouragement from the hospital, emotional support from hospital managers, and support in case of occupational injury, inserting incentive in their file, and use of incentive leave and wage increase. Such circumstances play an undeniable role in the process of adopting a coping mechanism. For example, regarding health system support, a participant said: "*The organization did not provide adequate financial and non-financial support, and the organization played a negative role in coping with this situation*" (Participant No. 24).

Discussion

This is the first study to explain the steps of coping with the corona pandemic crisis in Iranian midwives. Trying to control the situation is the core category or heart of this theory. This core category represents midwives in the process of coping with professional roles following COVID-19 and in the face of numerous stressful challenges. Anxiety, stress, fear, and worry about being infected with COVID-19 at work and transmitting the disease to their family were the initial reactions that occurred in the first step of coping among midwives; early initial confrontation describes this step.

Welsh *et al*.[19] conducted a study with a qualitative approach using grounded theory to explore the theoretical explanations for how emergency physicians cope with the COVID-19 pandemic. In the study by Welsh *et al*.,[19] the core category has not been clearly reported. Therefore, it is not possible to compare the studies in this regard, but the emotional experiences of these physicians in dealing with this pandemic have been described as a wide range of negative emotions such as anxiety, sadness, and anger, which is similar to the first step of coping in the present study. Concerns about exposing family members, medical uncertainty, and resource availability were causes of anxiety and sadness in emergency physicians. Lack of personal protective equipment and inability to managing patient expectations were also the reasons for anger in emergency physicians. These concerns expressed by emergency physicians were similar to the concerns of midwives in our study. Akbar *et al*.[20] conducted a study with a qualitative approach using grounded theory with the aim to explore the theoretical explanations for how nurses cope with job stress. In their study, core category was also defined as comprehensive effort to calm stressed conditions which seems to be similar to the core category of our study, but there is a difference between "control" and "effort," and control is more comprehensive than effort

because the word control does not include effort alone,[20] and in the Webster Dictionary, it has been defined as power or authority to guide or manage.[21]

Based on the results of our study, in the second step of the coping process following COVID-19, some midwives decided to leave their job and the reason for their decision was the stress of getting their family infected, especially their children. Ali *et al*.[22] reported that 82% of the 109 nurses working in hospitals in Alabama, USA, were concerned about their family and friends being infected during the corona pandemic. However, in the mentioned study, the decision to quit and apply for retirement was not reported by the nurses, but younger nurses and maternity and pediatric nurses showed less willingness to take care of infectious patients. In the study by Ali *et al*.,[22] about half of the nurses were married, 12 of them were men, and the number of their children was not reported. The difference in gender, marital status, and the number of children could have influenced the decision to continue or leave work. Del Boca *et al*.[23] reported that women were more capable of job adjustment than men during COVID-19.

In our study, management challenges were the third step of the coping process of midwives with their professional roles following COVID-19. In this step, in the third phase, personal protection strategies, such as hand washing and wearing masks, were mainly used by midwives. In the study by Ali *et al*.,[22] only 75% of nurses used personal protection strategies such as wearing a face mask and hand washing and only 60% avoided public transportation and crowded spaces. Welsh *et al*.[19] reported that the four strategies used by 26 American emergency physicians during the corona pandemic included social support from colleagues, social support from others, humor, exercise, and sleep. Interventional condition was not mentioned in this study. Although the study by Welsh *et al*.[19] was designed with a grounded theory approach, the interventional conditions were not described. In this study, the grounded theory method was used to explore the coping process of midwives with their professional roles following COVID-19. Therefore, family and health system support and religious beliefs have emerged as the interventional conditional theory. Neglecting exercise and sleep can reflect a cultural difference among countries or regions,[24] and these strategies were not used by the participants in our study.

The fourth step of the coping process, or reconstructing, showed a clear change in the participants' attitudes and beliefs. They were able to revive the hope of overcoming the current stressful circumstances by gaining additional skills, applying their spiritual beliefs, and feeling useful to society and responsible, so they were able to continue their work with satisfaction. The shock and disbelief caused by the onset of the COVID-19 crisis in midwives was transformed finally into positive attitude or hope. This positive attitude was the result of gaining knowledge of prevention, developing care skills, and awakening social motivations that placed midwives increased their ability to cope with their work place. Based on the analysis of participants' experiences, in this transformation, "coping though applying spiritual beliefs" was a very strong motivational strategy and much broader than religious beliefs, but religious beliefs were away to alleviate their own anxiety through acts such as praying, so it was categorized in interventional condition. Hope is one of the most important indicators that is associated with high satisfaction of midwives and their health in their stressful work place. These findings are consistent with that of Cai *et al*.[25] who indicate that commitment and a sense of responsibility among the nurses suppressed anxiety and fear in caring for patients with COVID-19. Nevertheless, Ali *et al*.,[22] in their study of nurses' stress and coping strategies during the outbreak of COVID, reported that this relationship was not observed between religion and professional responsibility. This difference can be due to differences between the two communities, self-confidence,[23] and the religious attitudes of the participants, so further studies are suggested.

One of the strengths of this study was the consistency between these results and the structure of the famous transactional theory coping of Lazarus and Folkman. According to this theory, a potentially stressful phenomenon leads to primary assessments in a person (first evaluation), then the person identifies the appropriate strategies, the effects of the stressors on his/her comfort, and manages the stressful situation (secondary evaluation).[26] Furthermore, according to Lazarus and Folkman's theory, coping is a dynamic process that is constantly changing under the circumstances. One of the limitations of this study was the lack of the continuity assessment of this dynamic process due to time constraints.

Conclusion

In the coping process with their professional roles following COVID-19, Iranian midwives used numerous individual and environmental strategies to reduce perceived stress. By analyzing the experiences of midwives, it is possible to better understand these hidden strategies in the coping process. Knowing the facts of this process helps policymakers to facilitate it and by facilitating this confrontation, they can increase the health and efficiency of midwives during this crisis.

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Conflicts of interest

Nothing to declare.

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