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Original Article

An examination of the different experiences and emotions (positive and negative) of healthcare providers dealing with COVID-19-infected or suspected cases in Ilam (2020)

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Abstract

Background and aims: The COVID-19 pandemic emerged in late 2019 with increased infection and mortality rates. Even with observing safety measures, medical staff have to deal with a high level of mental and physical pressure during an epidemic, and they might demonstrate diverse behaviors rooted in their experiences and emotions toward the situation. The paper examines different experiences and emotions of medical staff dealing with COVID-19 in Ilam, Iran.

Methods: A cross-sectional study was carried out with the participation of 200 care providers in 2020. Data was gathered using two questionnaires: the scale of positive and negative emotions (SPANE) and the positive and negative affect scale (PANAS). Data analyses were done in STATA12 using linear regression models.

Results: The mean score of positive emotion in ICU, general, maternity, and administrative wards in women were 32 ± 6.23, 34.07 ± 6.74, 35.35 ± 9.24, and 35.61 ± 6.91 respectively. The mean scores of Negative emotions in the Maternity ward and administrative departments were higher than in the ICU and CCU wards ($P = 0.05$). The midwives' mean negative emotions score was lower than the physician's (P value < 0.05). Average levels increased by about 4.41 scores in negative experiences for individuals with a work experience higher than 25 years compared to those with work experience less than ten years ($P = 0.03$).

Conclusion: Factors such as type of work, workplace, and work experience that affect care providers' positive and negative experiences and emotions should be considered in staffing arrangements and their expectations.

Keywords: Emotions, Experience, COVID-19, Healthcare worker

Introduction

The COVID-19 epidemic started in late 2019 in many countries. The cause of the disease is SARS-CoV-2 virus (1). On 30 January 2020, the World Health Organization (WHO) declared COVID-19 an international public health emergency, and in March 2020, it was recognized as a pandemic (2). Like other countries, the pandemic afflicted Iran, and almost all provinces were challenged by the pandemic. Because of the pandemic, the number of hospital patients and referrals to health centers increased drastically.

The providers of health and care services are at the frontline of the fight against the disease and experience a growing level of stress because of various issues in their careers (3). Even with adequate preventive and protective measures, care providers experience a high level of mental and physical pressure during an epidemic of contagious diseases (4). Some professions, particularly those in direct contact with patients, are affected by emotions and regulating factors, affecting the quality of services the organization expects from its staff (5). Properly expressing emotions in direct interactions with a client is a job demand for many providers of services (5). However, the question is whether the emotions and experiences of service providers receive the attention they merit. When a disease becomes a pandemic, it becomes a stressor that increases the mortality rate and other side effects in care providers (6).

It is unreasonable to think that care providers always keep their spirits high (5). Care providers might demonstrate different behaviors when they deal with pandemic and suspected cases. Some may keep their job despite all the risks, and others might leave for various reasons (6). Their reactions appear rooted in their different emotions and experiences regarding the situation (7). Emotions are one of the aspects of human behavior that play an important

role in their life. Without emotion, life becomes boring and empty of meaning (8). Emotions are categorized as positive and negative. Negative emotions represent the level of dissatisfaction in the individual, and positive emotions represent the level of energy and activity in the individual (9).

Studies on previous epidemics like SARS have shown that health system personnel had several worries about their and their families' health and experienced several social and mental pressures along with the fear of being infected (10). Following a pandemic, news and Information disseminated by the mass media about the death toll in the world adds to the concerns and worries of individuals. News about lockdown and screening and comparing the situation with the Spanish influenza pandemic in 1918 all add to the worries in individuals (11). The most important issue in the world is to produce a vaccine and adapt healthcare systems to this disease. In contrast, health personnel's encounters with the disease and the mental pressure they experience have not received the attention they need (12). Taking into account that the majority of health personnel, especially in new working environments, are at risk during the pandemic, studies have shown that an increase in physical, social, and mental problems such as anxiety, depression, and insomnia is inevitable for frontline healthcare providers who treat patients with COVID-19 (13). It is important to recognize the mental factors that predict concerns in health personnel in the face of pandemics. It is easier to prevent extreme and destructive reactions and disruption in mental and physical functions (11).

In the study of Godbold et al, the experiences of student nurses during a pandemic were discussed, as the self-sacrifice of this group and as a result, positive experiences were discussed, but there was no discussion about the positive or negative emotions of these people at the same time (14). As stated in this study, the passage of time will show the impact of this sacrifice. In the study of LoGiudice and Bartos, who conducted a mixed method study, in addition to the conclusion that most of the similar studies on this topic were conducted in the context of China, this study also mostly considered the issue of nurses' experiences (15). Special attention was not given to their emotions simultaneously, and there was no comparison of experiences and emotions between the personnel of different departments and groups. In Nori Chenashk study, which also investigated psychological distress and Coping strategies of female nurses on the front line of COVID-19, positive experiences or emotions in nurses dealing with the coronavirus pandemic conditions were not expressed (16). To our knowledge, qualitative studies of the experiences of these healthcare providers have yet to be published. Taking into account the absence of a study on the experiences and emotions of frontline caregivers to COVID-19 patients in Iran and the indigenous context of Ilam during the recent pandemic, the present study is an attempt to examine the experiences and emotions of care providers dealing with COVID-19 infected and suspected cases in Ilam.

Materials and Methods

The study was conducted as an analytical cross-sectional workout in 2021 to evaluate medical staff's positive and negative experiences. The sample size was 200 health personnel working in the Ilam Province centers of Medical Sciences University. Participants were recruited through purposive sampling. Physicians, nurses, midwives, and other healthcare providers recruited from their original departments to provide direct care and treatment for patients with COVID-19 were eligible.

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N}\left(\frac{z^2 pq}{d^2} - 1\right)}$$

Data gathering tools were a demographic form, the scale of positive and negative emotions (SPANE), and the positive and negative affect scale (PANAS).

The Positive and Negative Affect Schedule (PANAS) is one of the most widely used scales to measure mood or emotion. The internal consistency (alpha coefficient) for PANAS-P and PANAS-N are 0.84 and 0.85 respectively (12). This brief scale comprises 20 items, with ten items measuring positive affect (e.g., excited, inspired) and 10 measuring negative affect (e.g., upset, afraid). Each item is rated on a five-point Likert scale, ranging from 1 = Very Slightly or Not at all to 5 = Extremely, to measure the extent to which the affect has been experienced in a specified time frame. The PANAS was designed to measure affect in various contexts such as at the present moment, the past day, week, year, or general (on average). Thus, the scale can measure state affect, dispositional or trait affect, emotional fluctuations throughout a specific period, or emotional responses to events (17). Scale of positive and negative experiences (SPAN) was first introduced and validated by Diener et al with 12 items: 6 to measure positive emotions and 6 to measure negative emotions. The items are scored based on Likert's five-point scale (18). According to the designers, Cronbach's alpha for positive and negative emotions is 0.87 and 0.81, respectively, and the correlation with PANAS regarding positive and negative emotions is 0.61 and .0.70, respectively. The normality of data distribution was checked by the Shapiro-Wilk test. The SPANE consists of 12 items: six assess positive feelings, and the other six assess negative feelings. For positive and negative feelings, three items are general (e.g., positive, negative), and three are specific (e.g., happy, sad). The broad descriptors allow the SPANE to reflect the full range of people's desirable and undesirable experiences without creating an exhaustive word list.

Furthermore, the SPANE can capture positive and negative feelings regardless of their sources, arousal level, or cultural context. The specific words reflect the most important feelings related to well-being and ill-being and

capture feelings from around the emotion circumplex. The time frame of four weeks provides a balance between sampling adequacy of feelings and memory accuracy. Furthermore, using the time response style should decrease the ambiguity of people's understanding of the scale and enhance the validity of the SPANE.

The questionnaires were distributed among the personnel, completed by them in their preferred environment, and then collected 24 hours later.

Data analyses were done in STATA 12 (STATA Corp. LP) using stepwise linear regression models.

Results

The present study examined the experiences and emotions of medical staff dealing with COVID-19 patients in Ilam. Out of 200 members of the study population, 189 returned the questionnaires completed. 38% of the respondents were men and 62% were women. A good representation of different age groups was achieved 29% were less than 25 years old, and others were 25-55. In addition, 68% of the subjects had less than ten years of work experience, and others were 10-25. Most of them, 79%, were nurses. Approximately more than half of the respondents, 51%, were married. Linear regression was used in STATA 12 to determine the effect of different parameters on positive and negative emotions and experiences. The mean scores of different positive and negative emotions and experiences at different levels of independent parameters are listed in Table 1. For example, the mean score of positive emotions in men was higher than that in women, and the mean score of negative experiences was almost identical.

For simplicity's sake, only the final analysis table is presented for each dependent variable, and the tables of single-variable analysis are omitted. Through this, significant variables in single-variable analysis were added to the adjusted or final model at an error level of 0.05 (Tables 2-5).

The adjusted model based on other variables contains two variables for the factors in positive emotion, namely education and ward. The final analysis indicated that the ward has a marginally significant relationship. The mean scores of positive emotion in ICU, general, maternity, and administrative wards in women were 32 ± 6.23, 34.07 ± 6.74, 35.35 ± 9.24, and 35.61 ± 6.91 respectively. Working in the ICU and CCU wards was considered the base category for this variable. The regression coefficient in the final mode for the ward indicated that the mean base score of positive emotion in general, maternity, and administrative wards were 2.12, 3.22, and 3.12 units higher than that of the ICU and CCU wards, respectively. Although the p-value in these wards was higher than 0.05, it remained marginally significant. Different levels of education did not have a significant relationship with positive emotions (Table 2).

Concerning the factors in negative emotion, marital status, work experience, job, and ward were added to the final model. Based on the final analysis, job and ward had a significant relationship. Regarding job and negative emotion, the physician job category was assumed as the base category, and the relationship between other job titles relative to this job was examined. For instance, the mean score of base level of negative emotion in the midwives was 7.49 units less than that of the physicians, which is significant ($P < 0.05$). The mean score of negative emotion in the maternity ward was equal to 20.3 ± 7.30. As to the effect of the ward on negative emotions in the final model, the mean score of base score in the maternity ward (the base) was 6.39 units higher than that in other words, which is a significant difference ($P < 0.05$) (Table 3).

Concerning the factors in positive experiences, work experience, job, and ward was added to the final model, and the final analyses revealed a significant relationship between work experience and ward. The mean base score of positive experiences in individuals with work experience of 16-20 years was 3.25 units less than that in individuals with work experience under ten years ($P = 0.07$). In addition, the mean base score of positive experience in general and maternity wards was 1.57 and 3.94 units higher than that in individuals working in the ICU, respectively. Still, these relationships were marginally significant ($P = 0.06$ and $P = 0.09$) (Table 4).

Concerning the factors in negative experiences, work experience, job, and gender demonstrated a significant relationship in univariate analysis and entered the final model. The mean base score for negative experiences in individuals with work experience of more than 25 years was 4.41 units higher than that for individuals with work experience under ten years. In addition, the mean score of negative experience in this group was 19.00 ± 2.12, and there was a significant relationship between this level of work experience and negative experiences ($P < 0.05$) (Table 5).

Discussion

In the present study, we evaluate the emotions and experiences of a group of healthcare workers in a specific situation, such as being in the face of patients with COVID-19, because its outcomes are linked to healthcare provider's physical and mental well-being. The hedonic model of well-being demonstrates that positive emotions are positively associated with well-being and negative emotions negatively (19). Based on the findings of this study, The mean score of positive emotion in ICU, general, maternity, and administrative wards in women were 32 ± 6.23, 34.07 ± 6.74, 35.35 ± 9.24, and 35.61 ± 6.91 respectively. The mean scores of Negative emotions in the Maternity ward and administrative departments were higher than in the ICU and CCU wards ($P = 0.05$). The midwives' mean negative emotions score was lower than the physician's ($P < 0.05$). The mean score of positive emotions was higher in male health personnel than in female personnel. Individuals with positive emotions tend to have more reasonable and appropriate cognitions, measures, and behaviors in their personal and social lives

Table 1. Distribution of demographics and background of variables in the sample group

Variable	Frequency (%)	Positive affect (mean ± SD)	Negative affect (mean ± SD)	Positive experiences (mean ± SD)	Negative experiences (mean ± SD)
Age (y)					
>25	54 (28.6)	34.07 ± 6.50	18.81 ± 6.89	20.45 ± 4.09	15.08 ± 3.94
25-35	91 (48.2)	33.62 ± 7.75	19.80 ± 7.01	19.81 ± 5.27	14.79 ± 4.58
36-45	35 (18.5)	32.71 ± 5.92	19.63 ± 5.59	19.86 ± 4.58	14.11 ± 3.26
46-55	9 (4.7)	33.67 ± 7.79	21.22 ± 8.26	21.56 ± 5.12	16.78 ± 3.83
>55	0 (0)	0.00	0.00	0.00	0.00
Gender					
Male	71 (37.6)	34.22 ± 6.40	19.69 ± 7.06	20.61 ± 4.53	14.21 ± 4.29
Female	118 (62.4)	33.19 ± 7.25	19.47 ± 6.62	19.77 ± 4.96	15.22 ± 4.04
Education					
Diploma	7 (3.7)	36.71 ± 6.52	20.14 ± 10.48	20.43 ± 6.24	13.86 ± 5.27
Associate Degree	1 (0.5)	36.00 ± 00	20.00 ± 0.00	26.00 ± 0.00	18.00 ± 0.00
Bachelor	154 (81.5)	33.22 ± 6.76	19.39 ± 6.76	20.14 ± 4.87	14.85 ± 4.02
Master's degree	25 (13.2)	34.32 ± 8.24	20.2 ± 5.77	19.28 ± 4.13	14.72 ± 4.70
Doctor or PhD	2 (1.1)	40.00 ± 1.41	23.00 ± 11.31	21.50 ± 4.95	17.50 ± 6.36
Marital status					
Married	96 (50.8)	33.20 ± 7.48	20.24 ± 6.78	19.96 ± 4.95	14.98 ± 4.06
Single	93 (49.2)	33.98 ± 6.36	18.85 ± 6.72	20.22 ± 4.69	14.70 ± 4.26
Ex-married	0 (0)	0.00	0.00	0.00	0.00
Work experience (y)					
≥10	128 (67.7)	33.82 ± 7.41	19.12 ± 6.94	19.94 ± 4.8	14.58 ± 4.35
11-15	37 (19.6)	33.68 ± 6.10	20.05 ± 6.12	21.05 ± 4.4	15.54 ± 3.39
16-20	11 (5.8)	31.45 ± 7.01	22.00 ± 8.10	19.55 ± 5.97	14.73 ± 4.67
21-25	8 (4.2)	33.25 ± 4.17	19.88 ± 4.58	17.13 ± 4.16	13.25 ± 2.92
>25	5 (2.7)	32.00 ± 4.30	21.20 ± 7.46	22.60 ± 3.05	19.00 ± 2.12
Job					
Physician	5 (2.65)	33.80 ± 6.61	23.20 ± 5.72	20.00 ± 5.43	17.40 ± 7.27
Nurse	146(77.25)	33.22 ± 6.63	19.67 ± 6.82	19.91 ± 4.86	14.69 ± 3.87
Midwife	24 (12.70)	33.75 ± 8.99	18.88 ± 6.76	19.33 ± 4.67	15.46 ± 5.04
Health expert	11 (5.82)	38.00 ± 5.60	16.36 ± 5.54	23.82 ± 3.37	13.36 ± 3.67
Assistant nurse	3 (1.59)	33.33 ± 7.57	25.00 ± 7.00	21.00 ± 2.65	18.33 ± 4.04
Service location					
Hospital	186 (98.4)	33.53 ± 6.96	19.47 ± 6.66	20.04 ± 4.83	14.82 ± 4.15
Health centers	3 (1.6)	36.67 ± 5.86	25.00 ± 12.49	23.00 ± 2.65	16.33 ± 4.93
Home care	0 (0)	0.00	0.00		
Hospital ward					
ICU or CCU	72 (38.4)	32.00 ± 6.23	19.00 ± 6.86	19.06 ± 4.77	14.47 ± 3.91
General	73 (38.8)	34.07 ± 6.74	20.64 ± 6.99	20.65 ± 4.71	15.28 ± 4.48
Maternity ward	20 (10.6)	35.35 ± 9.24	20.30 ± 7.30	19.90 ± 4.29	15.30 ± 4.43
Administrative department	23 (12.2)	35.61 ± 6.91	17.43 ± 4.69	21.57 ± 5.29	13.87 ± 3.24

than those with negative emotions (20).

Speed et al reported results that were consistent with the present study and argued that men tend to have more positive emotions (21). However, Brebner indicated that women and men were not different in terms of positive emotions, and as to negative emotions, women had higher and more intense emotions (22). Negative emotions refer to one's tendency to experience negative emotions such as anger, anxiety, and hate in different situations; these individuals also feel less energy and more worries (23). Fujita et al stated that women tend to feel less happy, and negative emotions in them are higher than in men (24). However, Riyahi and Mahmudabadi argued that suppression of emotions and anger were more common in women, which can lead to depression (25). Considering the effect of gender on the expression of some emotions,

Table 2. Linear regression analysis for the significant factors in positive emotion in multivariate analysis

Variable	Regression coefficient (95% CI)	Coefficient SE	*P* value
Education			
Diploma	1*	-	-
Associate degree	1.08 (13.55 – 15.72)	7.42	0.88
Bachelor	-3.16 (8.47 – 2.14)	2.69	0.24
master's degree	-2.36 (-8.21 – 3.48)	2.96	0.43
Doctor or PhD	1.91 (-9.16 – 12.99)	5.61	0.73
Hospital ward			
ICU or CCU	1	-	-
General	2.12 (-0.15 – 4.39)	1.15	0.06
Maternity ward	3.22 (-0.26 – 6.71)	1.77	0.07
Administrative department	3.12 (-0.25 – 6.48)	1.70	0.07

Table 3. Linear regression analysis for significant factors of negative emotions in multivariate analysis

Variable	Regression coefficient (95% CI)	Coefficient SE	*P* value
Marital status			
Single	1*	-	-
Married	0.64 (-1.78 – 3.05)	1.22	0.60
Work experience (y)			
≥10	1	-	-
11-15	-0.12 (-3.01 – 2.76)	1.46	0.93
16-20	3.29 (-1.36 – 7.93)	2.35	0.16
21-25	1.22 (-3.97 – 6.41)	2.63	0.64
>25	1.05 (-5.56 – 7.67)	3.35	0.75
Job			
Physician	1	-	-
Nurse	-1.82 (-8.32 – 4.68)	3.29	0.58
Midwife	-7.49 (-15.09 – -0.12)	3.85	0.05**
Health expert	-0.95 (-9.32 – 7.43)	4.24	0.82
Assistant nurse	3.35 (-6.88 – 13.58)	5.18	0.52
Service location			
Hospital	1	-	-
Health centers	6.14 (-2.18–14.46)	4.22	0.14
Hospital ward			
ICU or CCU	1	-	-
General	2.00 (-0.32–4.32)	1.17	0.09
Maternity ward	6.39 (0.19–12.99)	3.34	0.05**
Administrative department	-2.21 (-6.51–2.09)	2.18	0.31

**Statistically significant.

Table 4. Linear regression analysis for the significant factors in positive experiences in multivariate analysis

Variable	Regression coefficient (95% CI)	Coefficient SE	*P* value
Work experience (y)			
≥10	1*	-	-
11-15	0.64 (-1.22 – 2.49)	0.94	0.49
16-20	-0.43 (-3.57 – 2.71)	1.59	0.79
21-25	-3.25 (-6.82 – 0.31)	1.81	0.07
>25	1.58 (-2.96 – 6.12)	2.29	0.49
job			
Physician	1	-	-
Nurse	0.73 (-3.73 – 5.19)	2.26	0.75
Midwife	-2.25 (-7.57 – 3.07)	2.69	0.41
Health expert	4.00 (-1.89 – 9.90)	2.99	0.18
Assistant nurse	1.62 (-5.55 – 8.78)	3.63	0.66
Hospital ward			
ICU or CCU	1	-	-
General	1.57 (-0.09 – 3.23)	0.84	0.06
Maternity ward	3.94 (-0.72 – 8.60)	2.36	0.09
Administrative department	1.24 (-1.76 – 4.24)	1.51	0.41

Table 5. Linear regression analysis for the significant factors in negative experiences in multivariate analysis

Variable	Regression coefficient (95% CI)	Coefficient SE	*P* value
Gender			
Male	1*	-	-
Female	0.75	0.66	0.27
Work experience (y)			
≥10	1	-	-
11-15	1.03 (-0.49 – 2.56)	0.77	0.18
16-20	0.17 (-2.38 – 2.71)	1.29	0.89
21-25	-1.03 (-4.03 – 1.97)	1.52	0.49
>25	4.41 (0.57 – 8.25)	1.95	0.03**
Job			
Physician	1	-	-
Nurse	-2.83 (-6.54 – 0.87)	1.88	0.13
Midwife	-2.19 (-6.19 – 1.80)	2.02	0.28
Health expert	-3.86 (-8.67 – 0.94)	2.43	0.11
Assistant nurse	-0.19 (-6.23 – 5.86)	3.06	0.95

**Statistically significant.

it seems reasonable to have specific tools for positive and negative emotions (26). Considering the different findings, one possible explanation is that women and men are equally happy, and both genders experience the same emotional challenges. In addition, the findings indicated that the mean score of negative experiences was almost the same between both genders. However, men tend not to express such feelings compared to women and try not to seek help when they deal with their problems (24). Health personnel have similar experiences regarding their encounter with the disease; however, these emotions have different expressions in different individuals in their social and professional lives. For example, in the case of stressful situations at work, like during a pandemic, the probability

of women leaving the job for personal reasons is higher than that of male physicians (27).

Another study finding was the difference between health wards in terms of the mean score of base positive emotions, so positive emotions were less common in the ICU and CCU compared to other wards. Positive emotion is one of the factors in job satisfaction (28,29); lack of job satisfaction is one of the key factors in leaving the nursing profession and the care behaviors of health personnel (30). According to Babanataj et al, nurses who work in the ICUs and CCUs feel a higher level of job stress compared to the personnel in other wards (31). During the COVID-19 pandemic, factors such as an unknown disease, lack of a reliable treatment, severe symptoms, and needing personal protection equipment (PPE) all increase job stress in individuals (32). Chinese researchers found that a lack of thorough knowledge about new infectious diseases during the early stages of an outbreak can cause higher negative emotions in health personnel (33). Providing proper educational and consulting interventions and attention to improve positive emotions in health personnel and those in ICUs and CCUs is essential. Based on the results, the highest level of positive emotions between wards was in the maternity ward, followed by administrative and general wards. In addition, the midwives experienced a lower level of negative emotions compared to physicians. Due to the spread of COVID-19 disease, healthcare personnel in maternity blocks had a key role in preserving and improving pregnant women, the fetus, and infants' health during the pregnancy period and child delivery. Like most other wards, working with infected patients or suspicious cases of the disease created stress in the personnel of the maternity ward, which was not only due to worries for their own and their relatives but also worries about the mothers (34). The disagreement between the felt stress in midwives and negative emotions in them and the higher positive emotions in a maternity ward is consistent with Skinner et al. Although stress was confirmed in the midwives, job satisfaction was also confirmed in them (35). Inconsistent with Mirmolaei et al, midwives' lack of job satisfaction can be due to a lack of satisfaction with work conditions (36). It appears that experiencing the phenomenon of childbirth and initiation of a new life in the maternity ward, along with other issues and problems caused by the pandemic, were the causes of positive emotions in the maternity ward. There was a positive relationship between happiness and midwives' communicational performance (37). In addition, over time, and realizing the necessity of taking timely measures to save the mother and infant's lives, midwives have learned that they have the power to manage health services for mothers and devise strategies to provide decent services to care seekers (33). Rahmanian et al reported that the lowest level of anxiety during COVID-19 was in administrative personnel (38), consistent with our findings that the highest level of positive emotion was in the midwives, followed by administrative and general ward personnel. The mean score of positive experiences in individuals with 16-20 years of work experience working with COVID-19 infected and suspected cases was lower than that in those with less than ten years of work experience. Considering that individuals with longer work experience are generally older, this finding can be consistent with Rahmanian et al, who argued that there was a relationship between clinical personnel's age and their anxiety (38). During the outbreak of COVID-19 disease, the healthcare profession was one of the professions with direct encounters with infected and suspicious cases. The spread of the disease has been a cause of worry for these individuals (39). A key factor in developing negative experiences and emotions in health personnel is the lack of knowledge about the virus and the disease (33). In addition, the lack of PPEs in the early days of the outbreak was another stressor for the health personnel (40). Care providers and personnel working in ICUs and CCUs had to deal with both stressors and expectedly felt a higher level of negative emotions (41). On the other hand, other health personnel who, along with stressors, had the chance to have a positive experience like childbirth gradually moved toward positive experiences and emotions (35). With age and gaining more work experience, health personnel tend to develop job burnout. Job burnout can be due to professional pressures and stresses, which affects emotional depression, job satisfaction, and psychophysical health (42). Given the noted points, it appears that health personnel issues and problems during the COVID-19 pandemic create a potential and actual risk to the physical and mental health of health personnel, an issue that needs further attention. Here, the negative experiences and emotions of health personnel in Ilam Province highlight the need to pay more attention to physical and mental health to ensure a healthy professional and social life. Notably, the patient's health is in the hands of health personnel.

Conclusion

As the findings indicated, Factors such as type of work, workplace, and work experience affect positive and negative experiences and emotions in care providers. They should be considered in staffing arrangements in different wards of medical centers. It should also be considered in expectations from each healthcare professional according to his potential and experiences.

The male participants experienced more positive emotions compared to women in their encounter with COVID-19 disease. Using male health workers in the frontline care for this kind of disease might be better.

The highest level of positive emotions was in the maternity ward, so the midwives felt less negative emotions than physicians. A mother with COVID-19 after recovery or giving birth to a baby gives a sense of happiness to the environment and personnel and creates positive emotions and experiences in them. Positive emotion and positive experience were the lowest in the ICU and CCU wards. Measures such as rest shifts and programs to strengthen

their confidence and hope should be considered to increase positive emotions in these personnel, especially in times of crisis and infectious disease pandemics. In addition, the mean base level of positive experience in individuals with 16-20 years of work experience working with COVID-19 patients was less than that of individuals with less than ten years of work experience. Although people with high work experience have experienced more exposure to various diseases, maybe due to mental and physical fatigue and not meeting some expectations, they have less motivation and as a result, they have less positive experiences and are also more vulnerable, and people with less work experience still are fresh and as a result, have more positive experiences.

Paying attention to the emotions and experiences of health personnel in different fields and departments of health centers in the face of patients with COVID-19 is one of the strengths of this study, and the limitation of this study is the lack of sufficient similar studies to compare the results.

It is suggested that studies be carried out to investigate the factors that increase positive emotions and reduce negative emotions, as well as to investigate the relationship between the emotions and experiences of health personnel and the types of their behavior toward patients and their colleagues.

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Competing Interests

The authors declare no conflict of interest.

Ethical Approval

Ethical considerations in this study included obtaining permission from the Ethics Committee of the Ilam University of Medical Sciences (Ethical Code: IR.MEDILAM.REC.1399.246) and obtaining written consent from the participants to participate in the study.

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