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Work Experiences of Front-Line Nurses in Field Hospitals during the Pandemic in Thailand

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Abstract:

Objective: This qualitative descriptive study explored the work experiences of front-line nurses in field hospitals during the pandemic in the three southern border provinces of Thailand.

Material and Methods: Fifteen front-line nurses in field hospitals located in the three southern border provinces of Thailand were recruited using purposive sampling strategies. In-depth, virtual face-to-face, semi-structured interviews were conducted. Data were analyzed using thematic analysis.

Results: Two domains emerged: (1) positive work experience and (2) negative work experience. Five themes were identified: (1) making sense of professional identity and pride, (2) new knowledge and skills, (3) financial and non-financial rewards, (4) health and safety concerns, and (5) emotional impacts. The results of this study indicate that front-line nurses working in the field hospitals were both positively and negatively affected by experiencing the pandemic. Although working during the pandemic could generate negative emotions, the informants reported more positive impacts, especially rewards, than negative impacts.

Conclusion: Key strategies to mitigate negative impacts on front-line nurses during outbreaks include providing financial and non-financial rewards, implementing orientation programs and training on the proper use of personal protective equipment to enhance job efficiency, and developing protocols to prevent harmful exposure.

Keywords: experience, field hospital, nurse, occupational health, pandemic

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Introduction

Since December 2019, the coronavirus disease 2019, or COVID-19 pandemic, has caused an unprecedented strain on healthcare workers and the healthcare system internationally[1]. In Thailand, the first wave of COVID-19 began in March 2020. In Thailand's three southern border provinces (Yala, Pattani, and Narathiwat), Muslim pilgrims returning from Malaysia and Indonesia had extensive community contact upon arrival. The regional hospital was not considered adequate to care for numerous infected patients; therefore, field hospitals were established as temporary healthcare facilities in order to reduce the burden on hospitals in the region[2]. From March 2020 to May 2022, the front-line nurses in field hospitals played an important role in controlling the pandemic and providing care for patients infected with COVID-19[3]. Previous studies found that the front-line nurses experienced a high degree of stress during COVID-19 because they were more susceptible to infection. Literature suggests a high prevalence of mental health problems among these workers[4,5]. After a major outbreak of the pandemic in Thailand, it was evident that studies regarding the work experiences of the front-line nurses in field hospitals were very limited, especially in the deep south of Thailand.

Beyond its classification as a special security area resulting from its instability since 2004, the three southern border provinces of Thailand have a unique context in terms of society, religion, culture, language, and way of life[6]. Much of the Muslim population uses the local Malay language to communicate in their routine and daily lives, especially those living in rural areas[7]. Regarding the local health services, healthcare facilities in the three southern border provinces provide cross-cultural healthcare services for culturally diverse recipients[8]. Furthermore, the Deep South's tropical climate, characterized by extreme heat, high humidity, and heavy rainfall, poses significant logistical challenges for field hospitals. These conditions expose front-line nurses to physiological stress and risks associated with inadequate ventilation in healthcare settings[9]. Given that front-line nurses' experiences in field hospitals during the pandemic may vary by cultural context, a descriptive qualitative study addressing their work in Thailand's three southern border provinces was required. The study findings could effectively enhance the work-related well-being of front-line nurses and other healthcare professionals in challenging and unusual circumstances.

Material and Methods

Study design

This study employed a qualitative descriptive design[10] to depict the work experiences of the front-line nurses in field hospitals during the COVID-19 pandemic in the three southern border provinces of Thailand (Yala, Pattani, and Narathiwat). Data were collected through in-depth, virtual face-to-face, semi-structured interviews with front-line nurses in field hospitals located in the three southern border provinces of Thailand.

Study setting and key informants

A purposive sampling technique based on inclusion criteria was used to recruit the key informants. Potential informants were identified and approached through the parent hospital by contacting the Nursing Department. Finally, fifteen front-line nurses in field hospitals located in the three southern border provinces of Thailand, aged between 18 and 60 years, and willing to participate in the study, were recruited.

Data collection

An interview guide based on the literature with a descriptive qualitative approach was developed by the researchers. The interview questions, with the depth of questions ranging from general to specific, were reviewed by three expert panels. The interview guide was then revised

into simple and flexible language based on the experts' recommendations. Example questions include: "Could you please tell me about working at the field hospital?" "What's it like?" "How did you feel when you……..? "When you feel……., what did you do?" "Did it affect your life? How?" After the informants gave their consent to participate in the research, the researchers thoroughly explained the research objectives, methods, and potential benefits and impacts of the study to the informants, and provided them with time to ask questions until they understood clearly. Open-ended questions on broad topics with flexibility based on the conversation were conducted. This approach aimed to obtain in-depth and comprehensive information relevant to the study. Data were collected between September 2021 and March 2022, for a total of 6 months. During the 6-month period of data collection, 22 tape-recorded interviews were collected, with each lasting approximately 42 minutes to a little over an hour. Due to the ongoing COVID-19 pandemic in the three southern border provinces during the data collection period, the researcher conducted virtual face-to-face interviews through Google Meet to ensure safety. The informants possessed experience working in field hospitals through two-week deployment shifts. Following the completion of each 14-day rotation, personnel were mandated to undergo a 14-day quarantine period to monitor for symptoms and prevent potential transmission to family members or community contacts. These deployment rotations occurred at intervals of one to two months. The participating nurses had successfully completed four to six rotations at the field hospitals, and at the time of data collection, they were in a rest period from their clinical duties spanning one to three months.

Data analysis

After data saturation, thematic analysis based on Braun and Clarke[10] was used to analyze the interview data. The six steps of the thematic analysis method were as follows: 1) Familiarizing with the data (reading and re-reading), 2) Generating initial codes, 3) Searching for themes, 4) Reviewing themes, 5) Defining and naming themes, and 6) Producing the report. Thematic analysis occurred concurrently with data collection. The audio recordings were transcribed verbatim by the researchers. We assigned an ID code to each informant to ensure confidentiality and anonymize individuals.

Rigor and trustworthiness

The trustworthiness of this study was ensured by applying four rigorous criteria: credibility, transferability, dependability, and confirmability, adhering to the following procedures. First, the primary researcher was trained by qualitative experts and had completed a PhD with specialization in qualitative research methods. Second, to fulfill the rich context of each case, the researchers used thick descriptions, including extensive verbatim quotes. Third, the primary researcher was a local with a nursing background and fluent in the southern dialect. Therefore, this allowed the researcher to understand the study setting deeply enough to identify any misinformation. Fourth, according to data triangulation, the accuracy of the transcriptions was thoroughly confirmed by listening to the recording of each interview and comparing the data from subjective emotional expression, while checking against the transcripts. Fifth, the quantifying causal emergence of similar data demonstrated strong evidence for dependability. And finally, all of the authors discussed the data analysis and came to a consensus regarding the research findings.

Ethics statement

This study was approved by the Ethics Committee for Human Research Subjects at the Sirindhorn College of Public Health in Yala, which is part of the Faculty of Public Health and Allied Health Sciences at the Praboromarajchanok Institute in Thailand (SCPHYIRB-088/2564).

Results

Throughout the semi-structured in-depth interviews, the findings were sourced from 15 informants who were willing to participate in the study. During the period of data collection, we collected 26 tape-recorded interviews, each lasting approximately 42 minutes to 1 hour 6 minutes. Based on the data analysis, the study results could be presented in two parts as follows:

Part 1: General information about the key informants

The 15 informants in this study were aged 23-45 years, with most being female (66.7%). They were predominantly Buddhist (53.3%), had between 1 and 22 years' work experience as a registered nurse (RN), and had experience working in field hospitals in Yala, Pattani, and Narathiwat provinces, with 5 informants from each province.

Part 2: Work experiences of the front-line nurses in the field hospitals

The results regarding the work experiences of the front-line nurses in field hospitals during the COVID-19 pandemic in the three southern border provinces of Thailand, from the data analysis, were categorized into two domains and five themes as follows:

Domain 1: Positive work experience

This study found that most informants working under pandemic conditions received positive experiences. The positive impacts obtained from the interviews were: "Making sense of professional identity and pride," "New knowledge and skills," and "Financial and non-financial rewards".

Theme 1: Making sense of professional identity and pride

The excessive workload did not pose major concerns to these around-the-clock healthcare workers since they continued to hold expectations of effectiveness at work during the most critical period of the pandemic. In contrast, many informants, considering COVID-19 as a positive influence on their image, perceived a better professional identity among nurses, suggesting that the sacrifice, bravery, and tremendous efforts in fighting the pandemic were highly recognized by the general public. Many of them repeatedly described their professional vocation as having a sense of occupational importance. For example, "I feel very proud that we can help other people. People have realized the value and significance of us more than before the pandemic. As we work in front-line units, our first phase consists of collecting real-time symptom data. We have been allocated to help infected patients," and "I feel proud that I'm a nurse. We conducted and played a key role in helping our patients in a pandemic situation." As these excerpts reveal, the informants perceived their actual professional identity as a positive aspect of being professional nurses.

Theme 2: New knowledge and skills

Because COVID-19 unexpectedly became a pandemic, initially, the specialized knowledge of the front-line nurses was not enough because they did not have access to sufficient information. Due to the unknown clinical and therapeutic aspects, many were actively rushed in order to better understand the nature of the COVID-19 disease. As the disease was new and not well known, the front-line nurses looked for a way to get more reliable COVID-19 information and knowledge from the Center for COVID-19 Situation Administration (CCSA), a single command center led by former Thai Prime Minister General Prayut Chan-ocha, and including relevant affiliations. This helped them get more information on how to diagnose the disease and possible treatments. Additionally, one of the key drivers of knowledge sharing among them was interpersonal communication. Some examples from the informants revealed, "It seems like I returned to being a nursing student again. I have to learn about the novel coronavirus from a reliable source of medical and health-related information, such as my hospital colleagues, healthcare team, and CCSA…" and "We, I mean all of us, no matter how low

or high our work experience, realized that it was a great opportunity to learn something new. We started receiving information from a variety of sources."

Meanwhile, working among infected patients was an entirely new experience for these workers. Some informants explicitly acknowledged that COVID-19 is a novel disease, making it challenging to identify the symptoms early on. As a result of caring for suspected cases, these nurses, for the first time, experienced caring for many confirmed patients. For example, "Our understanding of disease transmission and management has improved. I think this is because I have had the experiences of caring for confirmed patients in the field hospital," and "I thought when I was assigned to work at the field hospital, I would gain new knowledge about the pandemic and also new experiences caring for the COVID-19 patients."

Theme 3: Financial and non-financial rewards

One of the most predominant motivating factors that affected these front-line workers' performance was incentives or rewards. Financial rewards in the form of allowances and salary increments, on the one hand, were provided for frontline nurses to mitigate the undesirable effects of increased working hours and other psychological impacts during the difficult situation. In addition to the regular salaries, nurses working in the three southern border provinces have also received remuneration since the area has been designated as a special security area. Furthermore, working in field hospitals could entitle them to additional compensation on top of their current rates, which are already higher than those in other areas. These nurses received monetary benefits as a means of motivation for their effort and the continuity of service during the COVID-19 response.

For example, informants described that "I received overtime payment of around 600-1,000 baht. I think (not only me but also other workers) that we were satisfied with the overtime pay." Non-financial or non-monetary rewards, in contrast, included appreciation and recognition. These factors could not be calculated in terms of income. These excerpts from some of the informants could signify that the non-monetary rewards were also important to them, in addition to their monthly pay and other remuneration. They highly valued sincere appreciation and recognition for their work from others. "The head and senior staff nurse called me to empower and support me. They told me I will always be recognized and appreciated. This could motivate me to perform effectively on my job," and "My Facebook friends admired me with messages after my public posting about my work on a Facebook page. I thought that front-line work helped me gain greater appreciation and recognition from others."

Domain 2: Negative work experience

Negative work experiences of the front-line nurses, obtained from the interview, were "health and safety concerns" and "emotional impacts" as follows:

Theme 4: Health and safety concerns

Severe shortages in personal protective equipment (PPE) in Thailand during the first wave of the COVID-19 crisis were almost the same as in some other developing countries. At the start of the pandemic in the three southern border provinces of Thailand, PPE against infection, such as surgical masks, eye protection (face shield), and surgical isolation gowns, was scarce. The front-line nurses working in field hospitals mentioned that providing healthcare without using proper PPE increased their probability of infection due to the risk of exposure to COVID-19. For example, "We (nurses) provided healthcare for confirmed COVID-19 patients. I think that we were potential sources of the disease because of a lack of PPE. In addition, working in close contact with infected patients for long hours, resulted in a lack of rest, which was also seen as a factor increasing the risk of becoming infected with COVID-19, in accordance with the following statement: "I think that prolonged working hours and direct contact with a considerable

number of infected patients could affect my physical skills causing fatigue and could increase the risk of infection." A combination of the PPE deficiency and prolonged working time, including close contact with infected patients, was generally the cause of additional safety concerns.

Theme 5: Emotional impacts

In the face of the emerging outbreak, the constraints occurring at field hospitals, which led to a huge emotional impact on the front-line nurses, were working conditions and unfamiliarity with the disease. As per the working conditions, inadequate job-oriented information, long-term fatigue, adverse working environments, limited PPE, and a shortage of staff could negatively affect their mental health in the workplace.

Some informants complained that the orientation period was not sufficient, this contributed to increased job related stress and confusion among them, and may have led to the postponement of work, as illustrated with the following examples, "A short orientation was given, while I had no experience in dealing with the disease. I had to learn myself in the real-world situations, this made me feel stress," and "because of inadequate orientation, I initially made various mistakes, such as documentation errors. Not only did it cause me to be stressed, but it also caused a delay in the work."

In addition to the limited orientation, adverse working environments, long-term shift work, and a shortage of staff all contributed to physical and mental exhaustion. Regarding the working environment, the climatic conditions of the three southern border provinces, characterized by high temperatures and frequent rainfall, posed significant operational challenges for field hospitals, particularly where tents were utilized. These difficult working environments subsequently contribute to elevated stress and fatigue among nursing staff. For example, "the environment could not be controlled. We were in a tent; it rained and leaked. The weather was extremely hot, really like an oven. When it rained, water leaked from the roof. We had to wear PPE, and the atmosphere inside the tent was stifling. We were stressed and tired. When we took off the suits, we were drenched in sweat. People who have never worn PPE could likely last only an hour before feeling faint. We were allowed to wear the PPE for just two hours before being told to come out."

Apart from the climatic conditions, undesirable patient behavior, such as smoking, was also considered an adverse working environment, contributing to emotional impacts among front-line nurses. Also, the use of the local Malay language could lead to miscommunication for nurses who did not understand the dialect, resulting in client dissatisfaction. For example, "the behavior of some patients was really difficult to manage. They complained that the service was bad or the food was not tasty. Honestly, getting three free meals is already excellent, yet they still craved fruits and sweets. We (nurses) had to deal with all sorts of issues: patients destroying property, smoking, breaking things, and even running away from the building. On top of that, some spoke Yawi (the local Malay dialect), which I did not understand well. We often misunderstood each other, and things got blown out of proportion, leading to them filing complaints about me. This made me feel stressed and mentally exhausted."

With the long-term shift work and staff shortages, despite offering higher incomes compared to other regions, the three southern border provinces continue to face a nursing shortage due to the ongoing unstable situation. During the COVID-19 outbreak, a portion of the nursing staff was deployed to field hospitals, necessitating the implementation of extended shifts. For example, "I was assigned to provide health services in both regional and field hospitals. I felt tired, stressed, and anxious due to working hours from extended shifts and a lack of staff."

Despite the fact that the front-line nurses working among infected patients were able to gain new nursing

experiences, our findings reported that the emotional impacts caused by unfamiliarity with the disease, including the inability to estimate the size of the event, could make the living conditions of these nurses even more difficult. Most informants mentioned that they continued to work in fear and with stress due to the limited resources, all while they were under constant threat of exposure and infection. The extra stress of feeling unsafe, stemming from the fear of infection and eventual death, was mentioned as follows: "Because of inadequate PPE, I worried that I would get the infection. I had a fear of death. I did not sleep well because of strain and stress."

Discussion

Our study findings concluded that the front-line nurses in field hospitals were both positively and negatively affected by experiencing the pandemic. Although working in field hospitals during the COVID-19 pandemic generated negative emotions, it appears that overall the informants experienced more positive impacts, especially rewards, than negative impacts. Most relevant studies also found that rewards, both financial and non-financial, were the predominant reasons for work motivation among health workers during the pandemic[11,12]. Because of the unique nature of the situation and the services provided, the factors that drove these front-line workers were very different from what drives workers in other fields, and they were hard to compare[13]. When working under pandemic conditions, these front-line nurses sacrificed their time, energy, family and social relationships, and even their personal lives to help others[14]. Meanwhile, their working context, environment, and socio-cultural context may have negatively impacted their psychological safety and well-being[14–16].

One strategy that could be used to overcome this negative impact is providing financial and honorary rewards to front-line workers during outbreaks, making them feel appreciated, valued, and thus empowered to continue the hard work through abnormal circumstances[17–20]. The effective use of rewards not only engages and motivates workers but also ensures they receive just and reasonable treatment[21]. Previous studies concluded that non-financial rewards could be either or both work/life rewards, such as adjusted hours, cultivating and encouraging social support, more flexible working conditions, alternative work schedules, more vacation time, or other goods or services that might satisfy workers and their families' needs[22,23]. Also, relevant studies found that non-financial rewards can be especially important for dealing with the negative impacts of work because financial rewards alone cannot adequately reduce the work stress of health workers in a crisis like the COVID-19 pandemic[22]. This means that in addition to monetary rewards, such as attractive wages and benefits, the front-line nurses expect their efforts to be valued, appreciated, and treated fairly[24].

According to the definition of professional identity and pride, the way health professionals view themselves in their role influences every aspect of their practice[20,25]. Some studies identified that making sense of pride could be considered as rewards, called perceived professional benefits[20] or intrinsic rewards, i.e., self-reward and self-praise[26]. This kind of reward could be tapped to help workers feel adequate to carry out their professional responsibilities[25]. Professional identity, consequently, can lead to greater unity, purpose, and empowerment and help the front-line nurses to prevent burnout and strain during the pandemic situation[20]. Furthermore, it is essential to prioritize the management of the work environment for front-line nurses, encompassing improvements to physical facilities to minimize fatigue[27] and the enhancement of language-specific skills in intercultural healthcare communication, particularly in areas where a second language is used[28]. Finally, orientation programs and training in proper PPE use remain the most important procedure for the front-line nurses, not only to perform their job efficiently and smoothly, but also to prevent harmful exposure[29].

Conclusion

Even though working in field hospitals during the COVID-19 pandemic had some negative effects, the informants emphasized the more positive effects, particularly the rewards. Important strategies for overcoming the negative impacts are giving financial and non-financial rewards to the front-line nurses during outbreaks, providing orientation programs and training in the proper use of the personal protective equipment necessary to perform their jobs efficiently and smoothly, and preventing any harmful exposure.

Implication

Since findings suggest financial rewards alone are insufficient to mitigate stress, administrators should design a compensation package that combines financial incentives (supplemental compensation) with non-financial rewards. This includes guaranteed leave or vacation time post-deployment, flexible scheduling, and enhanced welfare benefits for nurses' families. Moreover, to capitalize on the findings regarding "professional identity and pride," institutions could establish formal recognition systems. This could include public acknowledgment of service or awards for bravery to promote self-worth. Addressing the negative impact of the physical environment requires practical infrastructure investment. Management must prioritize upgrading ventilation systems, creating cooling stations or rest areas, and ensuring adequate supplies to minimize physical fatigue caused by the hot weather and humid environment mentioned in the context of the study. Since the findings also note that nurses sacrifice "family and social relationships," management should facilitate communication channels for nurses to maintain contact with their families while in isolation.

In addition, based on the conclusion that PPE training is the "most important procedure," institutions should implement repetitive, high-fidelity simulation training for donning and doffing PPE to build muscle memory, reduce anxiety, and ensure physical safety. Lastly, in the specific context of the three southern border provinces, short-course training in local dialects or the languages of neighboring countries (Malay/Yawi) should be offered to front-line nurses to reduce work friction and improve patient interaction. It can be concluded that supporting front-line nurses in field hospitals requires a multi-faceted approach that moves beyond standard compensation. Practically, this entails a synergistic combination of tangible environmental improvements, psychological recognition, and specific intercultural training.

Conflict of interest

We have no conflicts of interest to disclose.

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