

NURSING WORK ARRANGEMENT IN HEALTH CARE SETTINGS DURING THE PANDEMIC OF COVID-19: NURSE MANAGERS' PERSPECTIVES

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ABSTRACT

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Nurses are health service provider playing pivotal role and serving at the forefront of tackling COVID-19. As such, their health and safety are pivotal. Therefore, a policy is needed in arranging their work system in response to COVID-19 pandemic. The work arrangement denotes an effort to prevent human-to-human infection transmission of COVID-19. However, the nursing work system adjustment model is not yet known. The aim of the study is to explore a model for adjusting the work system of nurses in health care facilities during the COVID-19 pandemic, from the perspective of nurse managers. This study applied descriptive qualitative method. It involved 9 (nine) managers who were recruited from 2 (two) public hospitals which became the national designated for handling COVID-19. These subjects were chosen using purposive sampling technique. Data collection employed semi-structured interviews through virtually telephone and conference. Resultant data were analyzed using content analysis. The study has unraveled five main categories related to the arrangement of the nursing work system during the pandemic, including the management of nurse personnel, adjustment of nursing work rules, adjustment of nursing work patterns, adjustment of nursing work procedures, and flexibility of nursing work. Through the work system regulation, hospital managers have implemented the principle of maintaining health, safety and security of nurses while working in health care facilities. The adjustment of nursing work system aims to reduce the negative impact of the health crisis and reduce anxiety for nurses. This is mainly because the level of anxiety associated with COVID-19 may pose adverse effects on nurses' wellbeing

BACKGROUND

Coronavirus disease 2019 (COVID-19) is a large family of viruses that cause mild to severe diseases, such as the common cold and other serious diseases such as SARS and MERS (Kementerian Kesehatan Republik Indonesia, 2020). The disease, which was first detected in Wuhan, China in December 2019 (World Health Organization, 2020), has to date reached diverse parts of the globe. Therefore, COVID-19 was announced as a global pandemic by the World Health Organization (WHO) on March 11, 2020. This is certainly one of the major global health crisis problems, adversely affecting the population across countries, ethnic groups, and all socio-economic

groups (Shanafelt et al., 2020)

Based on data released by the Ministry of Health of the Republic of Indonesia, up to October 30, 2020, there were 406,945 confirmed COVID-19 cases, and 334,295 people were declared recovered. The pandemic resulted in a death toll of 13,782 people. This record then placed Indonesia as the first country in the ASEAN regency with the highest confirmed cases of COVID-19. Interestingly, not all of the patients who died were patients or the general public; there were hundreds of health workers including doctors, nurses and dentists who have died from COVID-19 (Kompas, 2020).

It is widely known that health workers in health care facilities should play a vital role, so it is

crucial to ensure their health and safety (Liu et al., 2020). As one of the implications, health workers, especially doctors and nurses, are at the forefront of dealing with COVID-19. On the other hand, health workers are at risk of occupational exposure due to the transmission of COVID-19 disease transmission compared to other types of work (ILO, 2020). Insufficient protection will make them vulnerable to corona virus infection. As such, corona virus represents a major threat to all health workers (Liu et al., 2020).

In line with the increasing trend of hospital admissions for COVID-19 patients, this surge has certainly led to the “overload” and fatigue due to the increased workload of health workers. In addition, the protocol regarding the need to wear standard personal protective equipment (PPE) during patient care is a challenge for health workers during the COVID-19 pandemic (Liu et al., 2020). Therefore, a flexible regulations coupled with the health protocol plays a crucial role in reducing nosocomial infections (Huang et al., 2020). Thus, a several policies in regulating the work system related to nursing personnel to prevent the transmission of infections is required.

Globally, the importance of setting the work model of nurses is an integral part of an effective health care system, given that nurses are at the closest risk of infection during the COVID-19 pandemic. As a corollary, healthcare systems and providers must strive to implement effective work systems to prevent and minimize infection (Peters, 2020). As one of the efforts to prevent the spread of COVID-19 in Indonesia, the Ministry of Health issued a regulation on the limitation of face-to-face health services. This was done through the use of information and communication technology in the prevention of COVID-19 dated 29 April 2020, one of which was through telemedicine. However, ironically, this recommendation was primarily aimed at certain groups of health workers such as doctors, dentists and pharmacists; it did not specifically relate to nursing personnel. This is of course reasonable given that nurses represented the largest professional group, implying that the overall quality of the health care system is highly dependent on nurses performance (Hoedl et al., 2020).

According nurses definitely need to receive work protection, so they are protected from the corona virus, but on the other hand there are no special arrangements regarding occupational health protection for nurses during the pandemic. Therefore, in a health care system, a good work adjustment model for nurses, especially during the COVID-19 pandemic, will affect their productivity and performance. In the context of health services, nursing manager is respon-

sible for exercising control of nursing staffs in hospital or clinical setting. The nursing manager has to ensure that the nursing team has sufficient personal protective equipment and to maintain the nurses' immunity while on duty. To that end, this study aims to explore the adjustments to nursing work system within a hospital health service as a form of adjustment in response to COVID-19 pandemic from the perspective of a nurse manager.

METHODS

The present study employed descriptive qualitative method in which the researcher aimed to naturally reveal phenomena related to nursing and individual feelings, as well as individual experiences (Kim et al., 2017). Participants in this study were a group of nurse managers who were recruited from 2 (two) public hospitals that became the national reference for handling COVID-19 in Besuki regency. The nurse managers included the head of the nursing division, the nursing committee, and the head of the room from 5 (five) units of special COVID-19 treatment rooms from two public hospitals. The number of participants was determined based on the level of data saturation, resulting in recruited 9 nurse managers selected through purposive sampling.

Data were collected using semi-structured interviews regarding the adjustments to the work system of nurses. This concern was investigated by posing a central question - how are nurses work arranged during the COVID-19 pandemic at the hospital? The research guideline was developed by the researcher and tried out on two nurses who had the same characteristics. In the recruitment, eligible participants were directly approached by the research team and were informed about the aims and benefits of the study. After that, the researchers requested and gained informed consent from the respondents.

This study approved by the health research ethics committee (KEPK), Faculty of Nursing, Jember University, No. 3694/UN25.1.14/SP/2020. Data collection was carried out from July to August 2020 virtually via telephone or virtual conference applications, which were recorded digitally. Each participant was interviewed once with the entire interview duration ranging from 35:56 to 66:55 minutes. The collected data were then transcribed, to be analyzed using content analysis. The analysis resulted in list of categories generated inductively as the basis for drafting the conceptual map. To ensure data trustworthiness, the research design had incorporated by purposive sampling, data saturation and a flexible

sequence during the interview. Participants were assured that every detail was kept confidential, so they were allowed to share their perspectives at their disposal, were allowed to share their perspectives at their disposal which were accurately transcribed to for robust trustworthiness. Afterward, the researchers scrutinized the whole data by re-reading the transcripts several times to promote authenticity and credibility.

RESULTS

The profile participants of nine nurse manager's is displayed on table 1. Based on the nurse managers points of view, the following five main categories emerged and further portrayed the adjustment of the nursing work system during the COVID-19 pandemic in hospitals. These categories include the management of nursing personnel, working regulations for nurses, setting the work patterns of nurses, setting up nurse work procedures, and the flexibility of the nurse's work system as shown in figure 1.

The Management of Nursing Personnel

The first main category was the management of nursing personnel in the COVID 19 special inpatient unit, which led to the arrangement by nurse managers in managing the workforce of the nurses assigned. The management of nursing personnel includes considerations related to determining the number of nurses, the ratio of beds: nurses, and the composition of nurses.

The Determination of Number of Nurses

The determination took into account the adequacy of the number of nurses assigned to the COVID-19 room. This was based on the consideration of excessive number of nurses compared to that before the pandemic to ensure sufficient recovery time.

"... Ideally, if I personally have more energy, the better it is, because it can be used for isolation in particular. It allows more time for my colleagues to rest" (NM3). "The number of nurses staff were arranged more than before, so that health recovery from the nurse staff is considered sufficient and aspects related to service quality will increase" (NM 6).

Beds-to-Nurses Ratio

The ratio was a method used by nurse managers in determining workforce needs in special COVID-19 care rooms. The number of nurses which

exceeded the availability of beds was taken into account to provide more time to rest. The ratio was one of the bases in the management of nursing personnel.

"So, for example, a room unit had 8 beds, while the total number of staff was 24 nurses, meaning that the ratio was 1:3" (NM7). "In our room that having 11 beds capacity and there are 22 nurses, so the advantages for them are that the nurses can rest" (NM 6).

Nurse Team Composition

The composition of nurses refers to work shift arrangements based on the consideration of the mobilization of nurses in the COVID-19 special care room. This was dominated by male, rather than female.

"We were in one shift of 2 to 3 people ... But the proportion of female nurses was much lower than that of men in one team" (NM8). "In a team which consisted of 16 nurses, there were only 2 women, so the ratio of male and female nurses was 14:2" (NM 3).

Adjustment of Nursing Work Rules

The second main category for adjusting the nursing work system was the work regulations for nurses in hospitals during the COVID-19 pandemic, which led to the working principles of nurses in providing health services during the COVID-19 pandemic. These regulations included increasing the application of universal precautions, PPE compliance, standard precaution, compliance with the COVID-19 protocol, safety-first principles, and personal hygiene and health.

Universal Precaution

The application of universal precautions was an obligatory for nurses, especially in COVID-19 special care rooms. Nurses were required to comply with regulations related to established procedures for infection prevention and control aiming to minimize the transmission of disease transmission.

"So the key was compliance fixed procedures and strict adherence to the infection control, which was also known was universal precaution" (NM8)

PPE Compliance

Compliance with the use of personal protec-

Table 1. Profile Participants (N=9)

Variable	M (SD)	n	%
Age (years)	45.44 (6.167)		
Length of tenure (years)	20.56 (7.196)		
Gender:			
Male		5	55.6
Female		4	44.4
Religion			
Muslim		9	100
Education:			
Diploma		1	11.1
Bachelor degree		7	77.8
Master degree		1	11.1
Marital status:			
Married		9	100
Single		0	0
Employment status:			
Civil servant		9	100
Non-civil servant		0	0
Job Position:			
Room Manager		5	55.6
Hospital Manager		4	44.4
Hospital:			
Hospital A		4	44.4
Hospital B		5	55.6

tive equipment had to be applied by nurses at all cost. It was compulsory for nurses to always wear personal protective equipment before taking care of a patient.

“To the nurses, we always advised them to put on the PPE and remain compliant with protocol, so before they (nurses) entered the patient room, they wore complete PPE first” (NM6)

Standard Precaution

Standard precaution referred to the preparedness and attitude of nurses in anticipating that all patients being treated were at risk of transmitting COVID-19. This precaution was especially true when treating patients with impaired consciousness, who lived in the red zone and had cough symptoms.

“We have to be cautious. Otherwise, we would feel anxious of being infected. As such, we would socialize it to consider all incoming patients to be suspects at this time. What concerned us was patients with decreased awareness, patients from the red zone, and those with cough symptoms” (NM4)

Compliance with COVID-19 Protocol

Compliance with the COVID-19 health protocol had to be applied in all sections, including between colleagues. Wearing a mask, maintaining distance (not crowding), and maintaining hand hygiene were important conducts to prevent the transmission of COVID-19.

“We had to carry out health protocols even though with fellow team members. We had to wear masks and ensure a minimum distance of one meter and a half. Also, we should not eat in groups. Rather, it was advisable to take turns when having meal” (NM9)

Safety-first Protocol

Prioritizing safety was the main principle, which was compulsory for all nurses before acting to provide assistance or treatment to patients. In any emergency situation, nurses had to prioritize personal safety by using personal protective equipment first.

“In principle, we were like applying emergency science. It is important that new officers are to provide assistance, right? That is the principle we respect. It

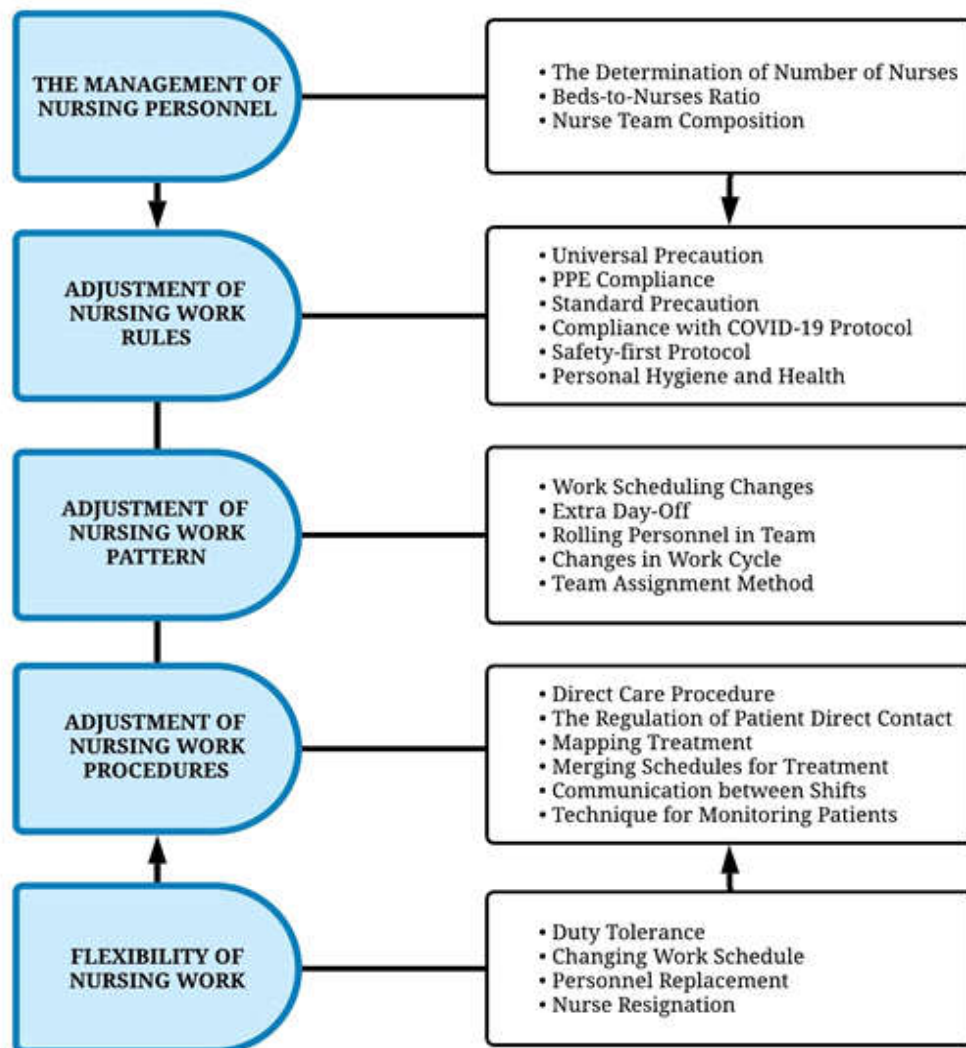


Figure 1. Conceptual Maps
Nursing Work Arrangement in Health Care Settings
During The Pandemic of COVID-19

has to be safe for new helpers to take part, so they need to prepare PPE first and then enter patient's room, no matter how bad it is" (NM9)

Personal Hygiene and Health

Maintaining personal hygiene and health was important for nurses in providing health services, especially during the COVID-19 pandemic. When starting and ending service, the nurses had to be clean because they were required to clean themselves before leaving the hospital.

"Oh, we came to the hospital. We had brought clothes from home, so before going home we took a shower and changed our clothes ... I left the hospital and

took a shower and changed my clothes. When I came home, I also went straight to the bathroom" (NM2)

Adjustment of Nursing Work Pattern

The third main category was the adjustment of the work pattern concerned with the arrangement of a nurse's work model specifically adapted to the situation and conditions of the COVID-19 pandemic. This was pertinent to changing work schedules, allowing extra day-off, rolling personnel in the team, changing the work cycle, and differentiating team assignment.

Work Scheduling Changes

The sub-category of work scheduling

changes related to reducing the workload of the nursing service schedule during the pandemic period. This was done by joint decision making.

“Changes, for example, were related to a change in schedule. To reduce exposure to COVID, we had to change the schedule system. Usually, we had to work from morning to afternoon and sometimes evening. For example, we worked in the morning for two days, in the afternoon for another couple of days, in the evening for another two days. Afterward, we had two days off. We were free on Sundays and any holidays. However, that was before the pandemic. Now, it has changed” (NM2)

Extra Day-Off

Adjusting the work pattern of nurses was actualized through affording extra holidays, extending their holidays, adjusting the ratio between active days of service and days off in a month during the days of service and days off in a month during the pandemic period, which was normally in a balanced 50%:50% manner. Extra day off were considered vital because nurses assigned in COVID-19 care room were at high risk of exposure to the infection, so they needed more rest time for maintaining high immunity.

“In my opinion, nurses had specific work ours, say from 7 to 14 o'clock, but now during the pandemic we allow more day off since they work in rooms with high chance of infection. Usually, they work for one high chance of infection. Usually, they work for one week and then they can have longer break than when working in normal room. We usually gave them three days off to improve their immunity” (NM7)

Rolling Personnel in Team

Rolling personnel in one team was conducted regularly, with a relatively slow cycle. The scheduling was based on the level of expertise of nursing personnel, so that each shift was kept balanced. This aimed to reduce the feeling of boredom among nurses. It was expected that rolling personnel t increased the morale at work.

“For the time being, we usually shifted the members within a team every certain period of time, not all the time. Normally it was done every week, every couple of weeks, or even every month. This was aimed at ensuring fresh energy to support the whole time, lower boredom, and improve morale at work. That was the intention” (NM9)

Changes in Work Cycle

Changes in the nurses' work cycle during the pandemic were implemented by reducing the frequency of nursing services and extending nurses' holiday. The work cycle changes aims to ease the workload of nurses during a pandemic. It was assumed that the regular work cycle would lead to more stress and exhaustion on the part of nurses.

“When we applied the service as usual, it meant that the service ran for 2 days in the morning, 2 days in the afternoon, and 2 days in the evening, with only 2 days off. Our colleagues were tired and overwhelmed to cope with quite heavy duties. Therefore, now it is changed by assigning 1 morning schedule, 1 afternoon schedule, and 1 evening schedule. This is then followed by a 3-day off, or even 4 days” (NM6)

Team Assignment Method

The current team assignment method in nursing care management was considered effective during the COVID-19 pandemic. This was presumed to be relevant because the mechanism of changing shifts between two serving teams allowed more sufficient time for rest.

“For the care management so far, even though some rules of thumbs may work, we prefer talking to the team. For example, in the morning shift there was me [head of the room], one team leader, and two mentor nurses. This team was assigned to handle 6 patients. The team leader was then responsible for 6 patients, and each mentor nurse took care of 3 patients” (NM9)

Adjustment of Nursing Work Procedures

The fourth category pertained to the adjustment of nursing work in COVID-19 inpatient unit. The adjustment led to regulating nurses' treatments at work to anticipate the spread of the COVID-19 disease including direct care procedures, forms of communication between shifts, patient monitoring techniques, combining treatment times, and mapping treatments.

Direct Care Procedure

The first sub-category was direct care procedures which referred to the pattern of direct care arrangements for patients on a scheduled basis in the special COVID-19 treatment service. The direct care was adjusted to the patients' condition and their level of dependence. To contrast, for patients in non-COVID-19 treatment rooms, the implementation of

treatment remained similar to the regular schedule.

“In the past, it was easy to go in and out of the room. Now, everything is scheduled. For those working on patients with non-contagious diseases, they can work in accordance with patient's time and needs” (NM4)

The Regulation of Patient Direct Contact

During the COVID-19 pandemic, the special treatment rooms applied a specific pattern for limiting the direct contact between nurses and patients. This direct-patient contact restriction was carried out by minimizing the frequency of direct contact in each shift.

“To minimize contact with the patient, the average treatment to the patient was once in each shift. So we did not meet the patient too often” (NM3)

Mapping Treatment

Treatments to patients in the COVID-19 special care room were carried out in the morning and evening shifts. Treatment mapping was carried out to minimize the workload of nurses during night shifts. Then, we managed to do injections in the morning, but not to all patients. We focused on the morning and evening shifts. For those who worked at night, we minimized their treatment" (NM3)

Merging Schedules for Treatment

Treatments for patient care in the COVID-19 special care room were carried out in merged schedules. A series of treatment measures to patients is attempted in one treatment. This aimed to minimize the frequency of contact with patients and reduce the length of time nurses wear PPE.

“Now finally we minimized contact with patients. All treatments to patients were conducted at the same time. We gave one injection and TTV at the same time. Doctor visit was also limited at once. After the procedure had been complete, we just took off the PPE” (NM7)

Communication between Shifts

Communication between shifts by means of consideration for the current pandemic is currently undergoing adjustments. This consideration is carried out without a patient care room round, but only in front of the patient's room, this aims to minimize direct contact to the patient.

“There were changes. The first one was the clinic

assignment model, which was the handover. This change was the most influential, from our colleagues' perspectives. Previously, we had to gather and the handover was done afterwards. Now, during the pandemic we did not do it, so it was conducted only in front of the patient's room” (NM5)

Technique for Monitoring Patients

Monitoring patients in the COVID-19 treatment room was still carried out intensively even though there were restrictions on direct contact with patients. Patient monitoring was carried out indirectly, namely through panes or through a monitor screen in the nurse station. As such, the patient's conditions were monitored by the nurse.

“For example, when the patients had received injection, they were safe and we could leave the room. However, we still monitored the patients through the panes" (NM2). "To observe heart rhythm, tension, oxygen saturation, and respiration rate, we simply referred to the information on the central monitor. From the 7 monitors, we were able to monitor all patients in both the regular rooms and isolation rooms. The information was shown on a screen, with details divided into 7 smaller windows. Each patient's condition was shown there, so the nurse in the nurse station were required to do regular observation” (NM9)

Flexibility of Nurse's Work

The flexibility was the fifth category associated with the adjustment the nursing work system related to the management of nurses. This was concerned with the freedom in managing nurses assigned in treating COVID-19 patients. This category included duty tolerance, change of schedules, change of personnel, and resignation of nurses from assigning COVID-19.

Duty Tolerance

There was more tolerance than before, during the pandemic. Nurses could be free whenever they felt unwell and exhausted. Nurse manager also granted tolerance for nurses who expected to retreat to the initial room, non-COVID-19 room. This was applied when they were assigned through the isolation mechanism during the transition.

“Yes, one form of solidarity was when a nurse felt tired or unwell. They were allowed to take some rest" (NM7) "I also told them that when someone was sick, bored, or unable to proceed with their duty, I asked them to see me to for transition to the previous room,

by first doing self-isolation for 14 days at home” (NM1)

Changing Work Schedule

Flexibility in changing service schedules was implemented to prevent a shortage of personnel in nursing services in the COVID-19 special care room. If one of the nurses had an urgent issue that required him to leave the office, the other nurse, who was off duty, would replace him.

“Suppose there was one nurse who happened to be scheduled for work, but her child was sick, she then could change her shift with her colleague. The same thing applied to the other nurse. Whenever she had to deal with an important matter, her friend would replace her. So I usually changed shifts with my colleagues who were off duty” (NM2)

Personnel Replacement

Replacing nursing personnel assigned in the COVID-19 special care was carried out flexibly. When there was one nurse who volunteered to resign from his assignment as a COVID-19 special room nurse, the manager was tasked to find a replacement from another unit.

“If there was one of the nurses who resigned from the COVID-19 unit, we immediately attempted to find a replacement. Previously, we found replacement from those working in the ER” (NM5)

Nurse Resignation

Flexibility in resignation was granted by the nurse managers to its members. Nurse managers offered resignation to nurses who desired to resign from their assignment in COVID-19 special room. Personalized offers were given to nurses due to age and health concerns.

“I had offered resignation to my colleagues, in case they were thinking about moving to another room. The offer was eligible to anyone. They could talk to the manager. Just like in the beginning, we were against the government regulation since we wanted to uphold solidarity. Particularly for those who were over 50 or unwell, they were allowed to have break” (NM7).

DISCUSSION

This study describes a model for adjusting the work system of nurses during the COVID-19

pandemic in Indonesia from the perspective of nurse managers at two referral hospitals in the Besuki regency, East Java province. The results of this study illustrate the adjustment of nurses' work patterns that took place from July to August 2020, which is the 5th to 6th month of the outbreak of the coronavirus in Indonesia after Task Force for the Acceleration of Handling COVID 19 announced the confirmation of the first case occurred on March 2, 2020.

The results of this study portray five main categories associated with adjustment of the nursing work system during the COVID-19 pandemic in hospitals. These include the management of nurse personnel, work regulations for nurses, work patterns of nurses, work procedures for nurses, and work system flexibility. A review of the adjustment model based on the perspective of the nurse manager will provide an understanding of work management from the point of view of room managers and even hospitals, which hold the responsibility of ensuring optimal allocation of human resources and preventing nurses from being overwhelmed by unexpected events. Such issue can result in chaos in hospitals. In times of health crisis, all available resources remain focused at the forefront of providing the highest-standard healthcare to all patients (Wu et al., 2020).

This work system adjustment is a form of social support in providing a sense of security to nurses. In addition, the existence of adequate organizational support by nurse managers through implementing of a safety work environment is crucial for supporting and protecting nurse's physical and mental health (Labrague & Santos, 2020). This is of course reasonable considering the possible transmission of COVID-19 among nursing personnel, which generally remains high. Therefore, an alternative work arrangement is needed to avoid undesirable things (Kluger et al., 2020).

The nurse managers participating in this study reveal that the adjustment of nurse's work system during the COVID-19 pandemic begins with the arrangement of personnel to ensure nurse's readiness and sufficient number of nurses in special assignments for the COVID-19 special unit. The number of personnel assigned to this special room depends on the number of available nurses. Normally, there are more nurses than beds to allow them to rest. Also, male nurses outnumber female nurses. This is because male nurses have better health status, namely better mental health, lower rates of chronic disease, lower levels of stress, lower sleep problems, and greater levels of physical activity (Liminana-Gras et al., 2013). To that end, it is hoped that they will have better body

immunity for dealing with COVID-19 unit.

The work regulations for nurses during the COVID-19 pandemic emphasize the principles of safety and security. This is because the COVID-19 special care room has extremely high risk of disease transmission from patients to health workers, especially nurses (Kluger et al., 2020). Therefore, it is important to protect nurses in the workplace to minimize the direct effects of the corona virus, such as increasing OSH measures. The protection is done through social distancing, providing protective equipment, maintaining adequate hygiene procedures, and encouraging flexible work arrangements in accordance with pandemic conditions (International Labour Organization, 2020a).

Adjusting nurse work pattern is one approach to reduce the risk of infection rates through scheduling patterns of nurses, affording extra holidays, and regulating changes in their work cycle to prevent excessive physical work (Wu et al., 2020) so as to minimize their fatigue (Kluger et al., 2020). The existence of control over shift schedules is a recommended strategy to reduce emotional fatigue and increase nurse job satisfaction. This is presumed to pose positive impact on their performance when providing service to patients (Siqueira et al., 2019). Therefore, nurse managers must foreground building personal resilience among nurses by strengthening positive coping strategies and supporting nurse self-efficacy (Labrague & Santos, 2020).

The adjustment of work procedures aims to adjust nurses' workload during the pandemic. This is associated with organization's responsibility to provide practical treatment by maintaining physical distancing to reduce the transmission of the COVID-19 pandemic. Environmental control and engineering aim at reducing the spread of disease. This includes providing adequate space to exercise physical distance protocol between patients and nurses (International Labour Organization, 2020b).

Flexible work arrangements are alternative arrangements from conventional work arrangements. More flexibility is deemed relevant to be applied during this COVID-19 pandemic. Flexible work arrangements for nurses are aimed at improving the nurses' welfare and increasing their work productivity. Flexible scheduling for nurses focuses on scheduling strategies that conform to the needs and goals of the organization and personnel (Alsayed, 2018). Flexible work arrangements provide a more efficient workforce to cope with the demands at work. Flex-

ible work practices are good policy as it enables nurses to take more control within stressful working conditions, such as during this COVID-19 health crisis.

CONCLUSION

This study describes a framework for adjusting the work system of nurses from the perspective of nurse managers, after the first quarter of the outbreak of COVID-19 cases in Indonesia. Five categories stemming from the data portray the adjustment of nursing works during the COVID-19 pandemic, which include the management of personnel, the regulations for nurses, setting the work patterns, setting work procedures, and allowing flexibility. By regulating the work system, hospital management has implemented the principle of maintaining health, safety and security of nurses while working in hospital health care facilities during this health crisis. The adjustment helps to reduce the negative impact of the health crisis and bring down nurses' anxiety, which can adversely affect nurse well-being. Through a particular work system arrangement, managers seek to minimize the negative effects of work-life imbalances. This will result in higher productivity, stronger work morale, better service quality, and more robust commitment and dedication.

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