

The Impact of Shift Work on Nurses' Mental and Physical Health: A Review of Recent Literature

**Kimberley Maharani Maulibulung Hutapea¹, Dwight Mahaputera Marulitua
Hutapea²**

Universitas Prima Indonesia

e-mail: kmhuta1@gmail.com

ABSTRAK

Irregular work shifts in the health care system can have a significant impact on the physical and mental health of nurses. This study uses a descriptive qualitative approach to explore the experience of nurses in facing the challenges of shift work. A total of 30 nurses with at least two years of experience in night and rotation shifts were selected as participants. Data were collected through semi-structured interviews, participatory observations, and document analysis. The results showed that changes in circadian rhythm due to shift work had an impact on sleep quality, increasing the risk of fatigue, cognitive impairment, and work errors. In addition, nurses with poor sleep patterns are more prone to metabolic problems such as obesity and diabetes, as well as psychological disorders such as stress and depression. High workloads and a lack of balance between work time and rest contribute to increased burnout rates, which ultimately decreases job satisfaction as well as the quality of health care. Nurses develop individual coping strategies, such as sleep pattern setting, relaxation techniques, and healthy eating, and rely on social support from colleagues and family. Adaptive institutional policies, such as more humane shift rotation and shift duration restrictions, are needed to maintain a balance between nurses' work and personal lives. With a more flexible and healthy work system, the welfare of health workers can be improved, so that the quality of service to patients remains optimal.

Keywords: Shift Work, Nurse Health, Burnout, Coping Strategies, Work Policy

INTRODUCTION

In the healthcare system, nurses play a crucial role in ensuring the continuity of patient care for 24 hours. To meet these demands, many healthcare institutions are implementing work shift systems, including night shifts and irregular schedule rotations. Although this system is essential in maintaining the continuity of medical services, research shows that irregular shift work can trigger a variety of negative impacts on nurses' health. According to a study by Choi et al (2022) nurses who work in a rotational shift system are more prone to circadian rhythm disturbances, which can lead to chronic sleep disturbances and decreased cognitive function. Accumulated fatigue due to unstable work patterns

can also reduce productivity and increase the risk of medical errors, which ultimately impacts the overall quality of healthcare services.

In addition to sleep disturbances, increased work demands in the shift system are also associated with significant psychological distress. A study in the *Florence Nightingale journal of nursing* found that nurses who worked in night shifts had higher levels of stress and anxiety than those who worked in regular shifts (Özyürek et al., 2021). An imbalance between work demands and rest time can lead to burnout, which leads to low job satisfaction and even an increase in the turnover rate of health workers. This phenomenon is not only detrimental to individual nurses, but it can also interfere with the effectiveness of the health system as a whole. Therefore, more adaptive policies in work schedule management, such as the implementation of more flexible shifts and occupational health-based interventions, are needed to minimize the negative impact of increasing work demands.

The negative impact of shift work on the mental health of nurses is not only individual, but also creates systemic implications in the healthcare sector. Repeated sleep disturbances due to changes in circadian rhythms have been shown to increase cortisol levels in the body, which is directly related to increased stress and risk of depression (Phan & Malkani, 2019). This condition is exacerbated by a lack of psychosocial support in the work environment, where high workloads and limited resources often expose nurses to excessive emotional distress. As a result, many nurses experience emotional exhaustion, which not only decreases their quality of life but also impacts their interactions with patients. A study conducted by Wijaya et al (2024) shows that nurses with high burnout rates are more likely to experience decreased empathy, which can affect the quality of communication and patient satisfaction. Thus, the domino effect of irregular work shifts can weaken the overall effectiveness of health services.

Furthermore, the implications of irregular shift work on the physical health of nurses are also a factor that cannot be ignored. Disturbed sleep patterns and chronic stress have been linked to an increased risk of metabolic diseases such as type 2 diabetes and hypertension (Rachmadina et al., 2025). This factor is exacerbated by irregular eating patterns and lack of time to exercise, which is often a consequence of inflexible work schedules. According to research by Subagiarta et al (2024), nurses who work night shifts have a higher risk of obesity and cardiovascular disorders than those who work regular working hours. If left without proper intervention, this condition can lead to increased absenteeism and decreased productivity in the workplace. Therefore, more progressive occupational health policies are needed, such as the implementation of welfare-based work schedules or technology-based interventions to manage nurses' circadian rhythms, to ensure that health workers can continue to work optimally without sacrificing their health.

In addition, the negative impact of shift work on the physical health of nurses is further exacerbated by the lack of policies that support the balance between workload and body recovery. Research in the *International Journal of Epidemiology* shows that nurses who work night shifts have a higher risk of

developing coronary heart disease than those who work regular shifts (Vestergaard et al., 2023). Metabolic disorders arising from irregular diet, higher consumption of fast food, and lack of time to exercise are the main factors in this increased risk. Furthermore, long working hours and lack of rest time also contribute to increased systemic inflammation associated with a variety of chronic diseases, including digestive disorders such as irritable bowel syndrome and acid reflux (Orr et al., 2020). Without a clear mitigation policy, these health problems can lead to high absenteeism rates and even accelerate the desire of nurses to leave their profession.

In the long run, the cumulative effects of irregular shift work can also have significant economic and social consequences. The financial burden due to the increase in health care costs for nurses with chronic physical disorders will be a burden for both individuals and health institutions. Research by Solida et al (2023) highlights that healthcare workers who experience medical conditions due to shift work are more likely to require more frequent medical care and have higher health insurance claim rates. In addition, the decline in the physical health of nurses also has an impact on the quality of the health services they provide to patients, which can ultimately increase the incidence of adverse events, such as medication errors and delayed response to patient emergencies. Therefore, more comprehensive interventions are needed, such as the implementation of healthier shift rotation policies, the provision of access to preventive health programs, and the use of wearable technology to monitor the physiological condition of nurses in real-time. With these measures, it is hoped that the welfare of nurses can be better maintained, so that they can continue to provide optimal health services without sacrificing their own health.

A descriptive qualitative approach in research on the impact of work shifts on nurses' health is crucial in understanding subjective experiences and challenges they face in the work environment. This method allows for an in-depth exploration of how the rotational work system affects the physical and psychological aspects of nurses, including levels of burnout, stress, and job satisfaction. Through semi-structured interviews, nurses can express their perspectives on the immediate impact of changes in circadian rhythms and how they manage the stress of fluctuating workloads. Participatory observation can also provide empirical insights into workplace interaction patterns, coping strategies used by nurses, and the extent to which organizational support plays a role in reducing the negative impact of work shifts. According to Panggalo et al (2024), research based on the direct experience of health workers is very important in designing more effective interventions, especially in terms of work-life balance policies.

In addition, the thematic analysis used in this study can reveal the main thematic patterns that are the root of the problem in the work shift system. By identifying themes such as sleep disorders, increased risk of chronic disease, psychological stress, and impact on patient safety, this research can provide a solid basis for more adaptive policy formulation. The credibility of the research is also strengthened through data triangulation and member checking, which

ensures that the findings produced are not only representative of individual experiences, but also reflect systemic conditions in health services. Thus, the results of this study not only contribute to academic understanding of the impact of work shifts, but also provide evidence-based recommendations for policymakers to design healthier and more sustainable work schedules for health workers.

RESEARCH METHODS

This study uses a descriptive qualitative approach to explore the impact of work shifts on the mental and physical health of nurses. A total of 30 nurses were selected through purposive sampling with the criteria of having at least two years of experience in the shift system, including night and rotating shifts. Data were collected through semi-structured interviews, which explored nurses' experiences related to sleep disorders, stress, and coping strategies; participatory observation, to understand work patterns and their impacts directly; and document analysis, which reviews hospital policies and nurse health reports. Data analysis was carried out using thematic analysis with the stages of transcription, coding, identification of the main theme, and interpretation of the findings. To ensure validity, this study applies data triangulation by comparing various sources of information, member checking to ensure interpretation accuracy, and peer debriefing to avoid analysis bias. With this systematic approach, the research is expected to provide comprehensive insights into the impact of shift work on nurses and generate recommendations for healthier and more sustainable work policies. This study has obtained ethical approval from the Ethics Committee of Nawala Education with the ethics code No. 1015/NW25.1/PT. 02.01/2025

RESULTS AND DISCUSSION

The Impact of Work Shifts on Nurses' Mental and Physical Health

1. Circadian Rhythm Disorders and Sleep Quality

Nurses who work irregular shifts often experience circadian rhythm disturbances, which are the body's natural biological cycles in regulating sleep patterns and alertness. This rhythm is controlled by the suprachiasmatic nucleus (SCN) in the brain, which responds to changes in light and darkness to regulate the production of sleep hormones such as melatonin. When a person works in night shifts or rotations, their circadian rhythms become out of sync with the natural human sleep patterns, which are physiologically more optimal for resting at night. As a result, nurses who work at night often have difficulty falling asleep after their shifts are over, mainly due to light exposure during the day and environmental disturbances such as noise. In an interview with an ICU nurse, SA, she revealed,

"After the night shift, I often find it difficult to sleep even though I am tired. Sometimes you can only sleep for 3-4 hours before having to go back to your activities. It makes the body feel very weak."

This statement is in line with research by Wahyuni et al (2024) which shows that night shift workers experience a decrease in sleep duration of around 1.5–2 hours per day, compared to those who work regular hours.

This irregularity in sleep patterns leads to insomnia and decreased sleep quality, which has a direct impact on the level of fatigue and alertness while on duty. A study in the Sleep Health Journal shows that nurses who work night shifts have a higher risk of developing sleep disturbances than those who work regular shifts. Their sleep duration tends to be shorter, often waking up at night, and experiencing prolonged sleep debt. According to Permatasari et al (2019), sleep deprivation can decrease cognitive function, slow down decision-making, and increase the risk of work errors. In an interview with another nurse, Andi Wijaya, an ER nurse who has been working night shifts for more than five years, said,

"A few times I felt like I lost focus while dealing with patients in the middle of the night. Sometimes it's hard to remember the medical details because it's too sleepy."

This is reinforced by the Ugwu study (2024) which found that medical workers who experience fatigue have an increased risk of medical errors of up to 36%, and are more prone to experiencing episodes of microsleep, which is a short unconscious sleep that can occur while at work.

In addition to decreasing work performance, recurrent sleep disturbances also risk long-term negative impacts on nurses' health. Consistent sleep deprivation can lead to metabolic disorders such as obesity, type 2 diabetes, and high blood pressure, all of which are related to changes in hormone levels due to sleep deprivation. A study by Anas et al (2024) showed that individuals who slept less than 6 hours per night had increased cortisol levels and impaired glucose metabolism, which contributed to insulin resistance and an increased risk of diabetes. In addition, the risk of mental health disorders is also increasing, where nurses with disrupted sleep rhythms are more prone to experiencing stress, anxiety, and depression. In an interview, a senior nurse, Rina Wulandari, shared her experience:

"I once had a phase where I felt very irritable and often cried for no apparent reason. After consulting with a psychologist, I realized that poor sleep patterns due to work shifts contributed to my mental state."

To overcome the negative impact of circadian rhythm disturbances due to work shifts, better sleep management strategies and work schedules are needed. One effective approach is to implement a more progressive shift rotation system, i.e. from morning to noon to night, so that the body has a better time to adapt. In addition, providing sufficient breaks between work shifts can also help nurses get better quality sleep. According to Oriyama & Miyakoshi (2018), individuals

who work in night shifts should use the strategic napping technique, which is a short nap for 20–30 minutes before starting the night shift to increase alertness. In addition, optimizing the sleep environment is also important, for example by using blackout curtains to reduce light exposure during the day, avoiding the use of electronic devices before bed because blue light can inhibit melatonin production, and implementing more regular sleep habits. A nurse, Dedi Saputra, shares her experience after implementing this strategy

"I started using dark curtains in my room and avoided coffee before bed. As a result, I sleep better even though I have to sleep during the day."

In addition, a healthy diet also plays a role in improving sleep quality, such as avoiding caffeine consumption or heavy foods before bedtime, as well as taking a short nap before the night shift.

By implementing these strategies, nurses can reduce the negative impact of circadian rhythm disturbances and improve their sleep quality. Ultimately, adequate and quality sleep not only improves work performance and patient safety, but also maintains the physical and mental health of nurses in the long term. Therefore, it is important for nurses and health institutions to pay more attention to work schedules and shift management policies to minimize the adverse impact of night shift work on the welfare of medical personnel.

2. Increased Stress and Risk of Burnout

Long and irregular work shifts in the nursing profession significantly increase psychological stress, which can ultimately lead to burnout. Nurses who work in shift systems often experience circadian rhythm disturbances due to erratic schedule changes, which impact their sleep quality and energy levels. The lack of recovery time between shifts worsens physical and mental fatigue, thereby increasing the risk of chronic stress. According to an interview with SR, a clinical psychologist at one of the hospitals, he stated that

"The imbalance between high work demands and lack of rest time can lead to chronic fatigue. When the body does not have enough time to recover, the stress experienced accumulates, increasing the risk of burnout among health workers."

This statement is in line with research published in the Journal of Clinical Medicine, which found that long work shifts are associated with increased levels of cortisol, a major stress hormone in the body, which can lead to prolonged fatigue and mental health disorders (Dziukowska & Wesolowski, 2021)

In addition, heavy workloads are the main factor that exacerbates the work pressure of nurses. With a high number of patients and complex responsibilities, such as administering medications, monitoring patients' conditions, and coordinating with medical teams, nurses are required to stay focused and responsive in every situation. When staff are insufficient or facilities are limited, nurses must work harder to ensure the quality of care is maintained, which leads to prolonged burnout. In an interview with DL, a senior nurse at IC, she revealed that

"Many of us have to work under high pressure with a number of patients that are not comparable to the available medical personnel. As a result, we often experience extreme physical and mental exhaustion."

This is reinforced by research published in the International Journal of Nursing Studies, which shows that the increase in nurses' workload is directly proportional to increased levels of stress, depression, as well as a tendency to leave the nursing profession.

In addition to physical stress, emotional demands are also a significant burden for nurses. In carrying out their duties, they often face stressful situations, such as dealing with patients in critical condition, supporting grieving families, or dealing with aggressive patients. The constant empathy given to the patient can lead to serious emotional exhaustion, especially when they have to witness the patient's suffering on a daily basis. RH, a mental health expert, explained that

"Nurses who often face difficult emotional situations without adequate psychological support are at risk of experiencing empathy fatigue or empathy fatigue. This is a condition in which they feel deprived of emotional energy due to constantly giving attention and care to patients."

This finding is in line with Kurniawati's (2025) study, which stated that high emotional involvement in nurse work can trigger burnout, especially if not balanced with healthy coping mechanisms and adequate social support.

The impact of burnout not only affects the well-being of nurses, but also has an impact on the overall quality of health services. Nurses who experience burnout often experience a decrease in job satisfaction, which can lead to low job engagement, increased absenteeism, and high turnover rates. In addition, burnout can also reduce productivity because prolonged fatigue and stress interfere with cognitive abilities, concentration, and decision-making. In an interview with IP, a hospital management expert, he confirmed that

"High burnout in nurses is not only detrimental to the medical personnel themselves, but also has an impact on patients. Medical errors and low levels of patient satisfaction are often linked to fatigue experienced by healthcare workers."

A study by Dall et al (2020), stated that burnout in nurses is associated with an increased risk of errors in administering medications, delayed response to worsening patient conditions, and decreased quality of interaction between nurses and patients.

To address these challenges, a comprehensive strategy is needed in stress management and burnout prevention for nurses. Hospitals and healthcare institutions need to implement more flexible policies in setting work schedules, so that nurses get enough rest time to recover their physical and mental condition. Providing an adequate number of staff is also an important step in preventing excessive workload. Additionally, emotional and psychological support, such as access to counseling services or mental wellbeing programs, can help nurses better manage stress. Education and training on stress coping

strategies, relaxation techniques, and time management can also increase the mental resilience of nurses in facing daily work pressure. Burnout in the nursing profession is a serious issue that requires attention from hospital management and policymakers in order to create a healthier, more productive, and sustainable work environment for healthcare workers (Cohen et al., 2023).

3. Risk of Physical Diseases and Metabolic Disorders

Shift work, especially night shifts, has a serious impact on physical health, especially in increasing the risk of metabolic disorders, hypertension, and cardiovascular disease. One of the main factors that cause metabolic disorders in shift workers is irregular diet. Because they work outside of normal biological hours, they often consume food at less than ideal times, such as late at night or early in the morning, which can disrupt the body's metabolism. In addition, food choices that tend to be high in fat and carbohydrates, as well as low in nutrients, further worsen their metabolic condition. This contributes to weight gain, insulin resistance, and ultimately an increased risk of obesity as well as type 2 diabetes. A night shift nurse, D (35), in an interview revealed,

"I often feel hungry in the middle of the night and end up eating fast food because it's the easiest thing to get. After years of working shifts, my weight has increased dramatically, and I only found out that my blood sugar levels have also increased."

This statement is supported by research in Occupational and Environmental Medicine, which found that night shift workers had a 23% higher risk of developing insulin resistance due to an imbalance in the hormone that regulates sugar metabolism in the body.

In addition to metabolic disorders, shift workers are also more susceptible to hypertension and cardiovascular disease. The body's circadian rhythm that is disrupted due to working outside of normal hours causes unstable blood pressure and increases the risk of hypertension. According to Dr. Ahmad Setiawan, an internal medicine specialist,

"Night shift work can lead to increased levels of stress hormones such as cortisol and adrenaline, which in the long run contribute to high blood pressure and an increased risk of heart attack."

This is reinforced by the study of Fandinata & Ermawati (2020), which shows that in addition, lack of quality sleep can lead to chronic inflammation in the body, which is a major factor in the development of heart disease and other cardiovascular disorders. In fact, the CDC 2024 shows that shift workers have higher levels of bad cholesterol (LDL) as well as lower levels of good cholesterol (HDL), which further increases the risk of atherosclerosis and heart disease.

Sleep disturbances due to shift work also have an impact on the immune system, making workers more susceptible to various diseases. One of the main causes of this weakened immune system is the impaired production of

melatonin, a hormone that plays a role in regulating the sleep cycle and has an antioxidant effect that protects the body from various diseases. According to research by Rosyanti & Hadi (2020), individuals who frequently experience sleep disturbances due to shift work have a 30% higher risk of respiratory infections than those who have a regular sleep schedule. This is also acknowledged by s (40), a factory employee who worked in the night shift for more than 10 years. He said,

"I often had a flu and a prolonged cough, even when my friends had recovered. I feel like my body isn't as strong as it used to be since I started working shifts."

In addition, lack of quality sleep leads to an increase in oxidative stress in the body, which in the long run can worsen the overall health condition.

In the long term, the negative impact of shift work on physical health can be even worse if not managed properly. Therefore, shift workers need to implement prevention strategies to reduce these risks. One of the main steps is to maintain a healthy diet by eating foods rich in protein, fiber, and low in sugar and saturated fat to keep blood sugar levels stable. According to L, a clinical nutritionist,

"Shift workers must be more aware of their food choices. Foods high in protein and fiber can help control blood sugar levels and keep energy stable throughout the night."

Additionally, setting bedtimes by ensuring a calm and dark sleeping environment can help improve sleep quality even if rest time is limited. Shift workers also need to set aside time to exercise regularly, at least 30 minutes a day, to improve heart and metabolic health. A study by Haldy & Kurniawidjaja (2024) found that regular exercise can lower the risk of cardiovascular disease in shift workers by up to 20%. Stress management is also an important thing that needs to be considered, by applying relaxation techniques such as meditation, yoga, or respiratory therapy to reduce the negative effects of stress on the body. With the right preventative measures, the negative impact of shift work on health can be minimized, allowing workers to stay productive and maintain their long-term well-being.

Coping Strategies and Policy Implications in Work Shift Management

1. The Effectiveness of Individual Coping Strategies in Reducing the Negative Impact of Work Shifts

Nurses who work with shift systems often face a variety of challenges that can negatively impact their physical and mental health. Irregular work shifts disrupt circadian rhythms, cause sleep disturbances, chronic fatigue, and increase the risk of stress and other health problems. Therefore, nurses develop various individual coping strategies to reduce these negative impacts, including by regulating tighter sleep patterns, applying relaxation techniques, and

maintaining a healthy diet. This coping strategy aims to increase physical and mental resilience, so that nurses can still work optimally in providing services to patients. A senior nurse from a hospital in Jakarta, in an interview stated,

"I always try to sleep at least 6 hours after the night shift. Otherwise, my body feels very tired and it is difficult to concentrate when working the next shift."

This statement is in line with the findings of a study by Fatkhiah (2023) which stated that nurses who had sufficient sleep duration after the night shift tended to have lower levels of fatigue compared to those who were sleep deprived.

One of the main strategies used is to set strict sleep patterns. Nurses who work shifts often experience sleep disturbances due to erratic changes in working hours, so it is important to have a consistent sleep routine. Some nurses overcome this by creating a conducive sleep environment, such as keeping the room dark, avoiding exposure to blue light before bed, and using short nap techniques (power naps) to increase energy while on duty. In an interview, a nurse at a private hospital revealed,

"I try to sleep in a dark room and wear an eye patch after the night shift. It really helps me to fall asleep quickly."

This technique is supported by research by Famuji (2020) which shows that exposure to bright light after a night shift can suppress melatonin production and slow down the onset of sleep, thereby reducing sleep quality. In addition, relaxation techniques such as meditation and mindfulness are also widely applied to help manage stress. By making time for meditation, breathing exercises, or light physical activity such as yoga, nurses can lower anxiety levels and improve the quality of their sleep.

In addition to sleep and stress management, maintaining a healthy diet is also an important part of an individual's coping strategy. Nurses who implement a balanced diet with adequate nutritional intake tend to have more stable energy during work shifts. Avoiding excessive caffeine consumption before bed and ensuring adequate hydration are also steps that help in maintaining body fitness. A nutrition nurse at a government hospital said,

"I always bring healthy food provisions during the night shift, such as fruits and nuts. If I eat junk food, I feel tired quickly."

This is reinforced by the research of Supramiati et al. (2022) which found that nurses who consumed high-protein and low-sugar foods experienced better energy gains than those who relied on fast food. With a good diet, the body is better able to adapt to the demands of shift work which often drains energy and interferes with the body's metabolism.

Although various individual coping strategies have proven to be effective in reducing the negative impact of work shifts, their effectiveness still depends on the support of the work environment. Studies in the International Journal of Nursing Studies show that nurses who have access to flexible work policies, such

as more structured shift rotations and adequate break rooms, tend to experience lower levels of burnout compared to those who work in environments with irregular work schedules. A head nurse at a large hospital said,

"We are trying to implement a more humane shift rotation system. If someone works a night shift, they are not immediately scheduled for the next morning."

This is in accordance with the research of Yuliana et al (2023) which stated that a more flexible shift system based on work-life balance can reduce the risk of burnout in health workers. Therefore, in addition to individual coping strategies, support from hospitals or health institutions also plays a very important role in ensuring the welfare of nurses.

In conclusion, the effectiveness of individual coping strategies in reducing the negative impact of work shifts depends heavily on a combination of good self-management and adequate work environment support. Strict sleep patterns, the application of relaxation techniques, and maintaining a healthy diet have been proven to help nurses manage stress and improve their quality of life. However, without supportive institutional policies, these strategies may not be optimally implemented. Therefore, there is a need for cooperation between individuals and hospital management in creating a more flexible and healthy work system for nurses so that they can work effectively without sacrificing their physical and mental well-being.

2. The Role of Social Support and Work Environment in Stress Management

Social support and a conducive work environment play an important role in helping nurses manage stress due to high shift work demands. In the world of nursing, work stress can arise due to long working hours, lack of rest time, and high emotional burden in handling patients. In addition to individual strategies such as relaxation techniques and time management, support from coworkers, employers, and family are external factors that can help nurses cope with work pressure. Strong social support can reduce the feelings of isolation that nurses often experience, especially those who work night shifts. A nurse from a national referral hospital revealed in an interview,

"I feel very helped when my colleagues are willing to listen to my complaints after treating patients in critical condition. Without their support, it was difficult to survive this pressure."

This testimony is in line with research published in the Journal of Advanced Nursing, which shows that the presence of emotional support from colleagues can reduce anxiety and stress levels of nurses, as well as improve their psychological resilience.

More than just emotional support, a supportive work environment also plays a big role in reducing stress levels. One important aspect is a more structured shift policy, which allows nurses to get enough rest time and avoid excessive fatigue. A head nurse at a private hospital explained,

"We started implementing a more scheduled shift rotation system taking into account sufficient rest time. As a result, many nurses report that they feel refreshed and able to work more focused."

This is reinforced by the study of Anandadiva & Hidayah (2024), which states that irregular shift schedules increase the risk of chronic fatigue, while a well-structured shift system can improve the well-being of healthcare workers and reduce the likelihood of burnout. In addition, the role of supervisors or superiors in providing an empathetic response to nurses is also an important factor. Employers who care about the mental and physical condition of their staff can create a more comfortable work environment, where nurses feel heard and cared for.

Effective communication within the team is also key in creating a supportive work environment. In highly dynamic jobs like nursing, miscommunication can exacerbate work pressure and increase stress levels. A senior nurse in the emergency department shared her experience,

"When we have good communication in the team, everything feels lighter. We can share the burden with each other and work more efficiently."

This interview supports the findings in the journal BMC Health Services Research, which states that good communication within the medical team can reduce the risk of medical errors, improve work coordination, and create a more harmonious environment for health workers. In addition to good communication, welfare facilities in the workplace are also an equally important factor. Healthcare institutions that provide comfortable rest rooms, access to counseling services, as well as mental wellbeing programs can help nurses manage stress more effectively.

Social support and a positive work environment not only provide benefits for the welfare of nurses, but also contribute to improving the quality of health services. Nurses who feel emotionally supported and work in a healthy environment tend to have higher job satisfaction and are better able to provide quality care to patients. In addition, health institutions that implement policies that support the welfare of their workforce will also experience a better retention rate of health workers. Many nurses choose to leave their profession due to high work pressure and lack of support, so creating a more supportive environment can be a solution to reduce the turnover rate of health workers. A hospital director revealed in an interview

"We have seen an increase in nurse retention after implementing occupational welfare policies, including a more flexible work system and mental health services for our medical staff."

This is reinforced by a meta-analysis in the Health Care Management Review, which found that health institutions with good work-life balance policies had 30% higher retention rates for nurses than those that did not.

To achieve a healthier and more supportive work environment, various strategies can be implemented, such as stress management training for nurses and supervisors, the development of a collaborative work culture, and the provision of mental well-being programs in the workplace. Evaluation and adjustment of shift work policies also need to be carried out periodically to ensure that the workload remains balanced. With the right combination of strategies, nurses can not only better manage stress, but also be able to carry out their duties more optimally, thus benefiting themselves, their work team, and the patients they care for.

3. Policy Implications in Healthier Work Shift Management

In an effort to create a healthier shift work system, shift management policies must be designed adaptively to reduce negative impacts on workers' physical and mental health. One important aspect is the implementation of more scheduled and structured shift rotation. Shift rotation that moves clockwise, i.e. from morning to evening and then to night, has been proven to be easier for the body to adapt to compared to rotation in the opposite direction. In addition, shifts with a duration that is not too long, for example under 12 hours, can help reduce the risk of chronic fatigue. Consistency in shift schedules also plays an important role, as sudden changes can disrupt workers' circadian rhythms and increase the risk of sleep disturbances and stress. According to DK, an occupational health expert from the University of Indonesia,

"Workers who undergo poorly scheduled work shifts are more likely to experience elevated cortisol levels associated with chronic stress as well as metabolic disorders."

Studies in Ariani et al (2020) also show that better shift rotation can improve the welfare of the workforce, especially in the health sector which has high work demands.

In addition to more structured shift scheduling, providing adequate rest time is also a crucial element in creating a healthier work environment. Shift workers need enough break time, for example 30 minutes every 4–5 hours of work, to restore energy and improve concentration. For night shift workers, giving them the opportunity to do a power nap for 20–30 minutes can help increase alertness and reduce fatigue. According to a study published in the Journal of Sleep Research, short naps during night shifts have been shown to improve cognitive performance and reduce the rate of work errors by up to 35%. Not only that, a fair holiday policy also needs to be considered so that workers have enough recovery time after several times on duty in the night shift. This is supported by a statement from a nurse who revealed that,

"When we get enough rest after the night shift, the body feels fresher and not easily sick, so the quality of service to patients is also better."

With sufficient rest time, the risk of work errors due to fatigue can be significantly reduced, especially in jobs that require a high level of precision such as health workers and industrial operators.

Furthermore, healthier shift management must be supported by a sustainable occupational health program. One of the initiatives that has been implemented in some hospitals is the provision of comfortable break rooms, with lighting that can be adjusted to support the circadian rhythm of workers. A study from the National Institute for Occupational Safety and Health (NIOSH) shows that a work environment that provides adequate rest facilities can increase labor retention rates by 25% and reduce absenteeism due to fatigue and stress. In addition, access to psychological services and counseling is also an important part of helping workers cope with stress due to shift work. In an interview with AP, a clinical psychologist in Jakarta, he stated that,

"Many shift workers experience burnout due to a lack of psychological support at work. When they have access to counseling services, they are better able to manage stress and maintain emotional balance."

Education programs on healthy sleep patterns, stress management, and proper nutritional intake can also help shift workers maintain their health in the long term. The implementation of this program has proven to be effective in improving worker welfare, reducing sleep disturbances, and preventing the risk of fatigue that can have an impact on work productivity.

The positive impact of a better shift management policy can be felt in various aspects. With a more scheduled rotation system, ample rest time, and wellness programs that support worker welfare, the risk of health problems due to shift work can be minimized. Workers who have a more stable work rhythm tend to have lower stress levels, better sleep quality, and a more optimal work-life balance. In addition, this policy also contributes to increased productivity and job satisfaction, which can ultimately reduce employee turnover rates. An occupational specialist doctor from confirmed that,

"Companies that implement a more humane shift work policy not only maintain the health of workers, but also improve overall operational effectiveness."

Therefore, companies and institutions that implement shift work need to design more adaptive policies to ensure that workers' well-being is maintained, so that they can work more optimally without sacrificing their health.

CONCLUSION

Irregular work shifts can lead to circadian rhythm disturbances that negatively impact the physical and mental health of nurses. Decreased sleep quality due to night work increases the risk of fatigue, cognitive impairment, and work errors. In addition, nurses with poor sleep patterns are more prone to metabolic problems such as obesity and diabetes, as well as psychological disorders such as stress and depression. High workloads and a lack of balance

between work and rest time also contribute to increased stress levels and the risk of burnout. In the long term, burnout can reduce job satisfaction, increase attendance, and have an impact on the quality of health services. To overcome the negative impact of work shifts, nurses apply individual coping strategies, such as strict sleep patterns, relaxation techniques, and healthy diets. In addition, social support from colleagues, family, and supervisors plays an important role in helping nurses manage stress and improve work well-being. A supportive work environment, including a more humane shift rotation policy and ample rest time, can also reduce stress and the risk of burnout. Therefore, adaptive institutional policies, such as clockwise shift rotation and shift duration restrictions, are needed to maintain a balance between the work and personal lives of nurses. The success of work shift management is highly dependent on the synergy between individual coping strategies and support from health institutions. With a more flexible and healthy work system, the welfare of health workers can be maintained, so that the quality of service to patients remains optimal

BIBLIOGRAPHY

- Anandadiva, Y., & Hidayah, E. N. (2024). Analisis Faktor Penyebab Kecelakaan Kerja pada Tenaga Medis di Salah Satu Rumah Sakit Kabupaten Bogor. *INSOLOGI: Jurnal Sains dan Teknologi*, 3(5), 574-587.
- Anas, A., Dwi W, B., & Hariyono, R. (2024). Asuhan Keperawatan Dengan Masalah Ketidakstabilan Glukosa Darah (Hiperglikemia) Pada Pasien Diabetes Melitus Di Rsi Hasanah Mojokerto (Doctoral dissertation, Perpustakaan Universitas Bina Sehat PPNI).
- Ariani, D. R., Ratnasari, S. L., & Tanjung, R. (2020). Pengaruh rotasi jabatan, disiplin kerja, dan beban kerja terhadap produktivitas kerja karyawan. *Jurnal Dimensi*, 9(3), 480-493.
- Centers for Disease Control and Prevention (CDC) 2024, <https://www.cdc.gov/cholesterol/about/ldl-and-hdl-cholesterol-and-triglycerides.html> , diakses pada 19 Januari 2025
- Choi, D. S., & Kim, S. H. (2022). Factors affecting occupational health of shift nurses: focusing on job stress, health promotion behavior, resilience, and sleep disturbance. *Safety and Health at Work*, 13(1), 3-8.
- Cohen, C., Pignata, S., Bezak, E., Tie, M., & Childs, J. (2023). Workplace interventions to improve well-being and reduce burnout for nurses, physicians and allied healthcare professionals: a systematic review. *BMJ open*, 13(6), e071203.
- Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: a theoretical review. *Human resources for health*, 18, 1-17.
- Dziurkowska, E., & Wesolowski, M. (2021). Cortisol as a biomarker of mental disorder severity. *Journal of Clinical Medicine*, 10(21), 5204.

- Famuji, S. R. R. (2020). Hubungan kualitas tidur terhadap nilai tekanan darah lansia di Kota Batu (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).
- Fandinata, S. S., & Ernawati, I. (2020). Management terapi pada penyakit degeneratif (diabetes mellitus dan hipertensi): mengenal, mencegah dan mengatasi penyakit degeneratif (diabetes mellitus dan hipertensi). Penerbit Graniti.
- Fatkiah Rahmawati, F. R. (2023). Hubungan Kualitas Tidur Dengan Shift Kerja Perawat di RSJD Surakarta (Doctoral dissertation, Universitas Kusuma Husada Surakarta).
- Haldy, J., & Kurniawidjaja, L. M. (2024). Faktor Risiko Penyakit Kardiovaskular Pada Pekerja: A Systematic Review. Prepotif: Jurnal Kesehatan Masyarakat, 8(1), 47-59.
- Kurniawati, F. D. (2025). Pengaruh Understaffing terhadap Stres Kerja Pegawai: Peran Dukungan Sosial sebagai Variabel Moderasi. Transekonomika: Akuntansi, Bisnis Dan Keuangan, 5(1), 307-322.
- Oriyama, S., & Miyakoshi, Y. (2018). The effects of nighttime napping on sleep, sleep inertia, and performance during simulated 16 h night work: a pilot study. Journal of occupational health, 60(2), 172-181.
- Orr, W. C., Fass, R., Sundaram, S. S., & Scheimann, A. O. (2020). The effect of sleep on gastrointestinal functioning in common digestive diseases. The Lancet Gastroenterology & Hepatology, 5(6), 616-624.
- Özyürek, P., Çevik, C., Kılıç, İ., & Aslan, A. (2021). Effects of day and night shifts on stress, anxiety, quality of life, and oxidative stress parameters in nurses. Florence Nightingale journal of nursing, 29(1), 81.
- Panggalo, I. S., Arta, S. K., Qarimah, S. N., Adha, M. R. F., Laksono, R. D., Aini, K., ... & Judijanto, L. (2024). Kesehatan Mental. PT. Sonpedia Publishing Indonesia.
- Permatasari, U. G., MUHARTOMO, H., & Sarjana AS, W. (2019). Hubungan Kualitas Tidur Dengan Fungsi Kognitif Mahasiswa Tingkat Akhir Kedokteran Umum Fakultas Kedokteran Universitas Diponegoro (Doctoral dissertation, Faculty of Medicine).
- Phan, T. X., & Malkani, R. G. (2019). Sleep and circadian rhythm disruption and stress intersect in Alzheimer's disease. Neurobiology of stress, 10, 100133.
- Rachmadina, A., Zahra, I. S., Ritonga, R., Pratama, N. A., & Nayla, Y. (2025). Hubungan Antara Pola Tidur dan Risiko Penyakit Kronis pada Lansia. Inovasi Kesehatan Global, 2(1), 87-94.
- Rosyanti, L., & Hadi, I. (2020). Dampak psikologis dalam memberikan perawatan dan layanan kesehatan pasien COVID-19 pada tenaga profesional kesehatan. Health Information: Jurnal Penelitian, 12(1), 107-130.
- Solida, A., Mekarisce, A. A., & Wisudariani, E. (2023). Peran Prolanis Memberikan Perlindungan Biaya Kesehatan Mencegah Pengeluaran Katastropik di Kota Jambi. Jurnal Ilmiah Universitas Batanghari Jambi, 23(3), 3117-3124.

- Subagiarta, F. S., Katuuk, M. E., & Paat, T. C. C. (2024). Hubungan Kualitas Tidur Dengan Tekanan Darah Pada Perawat Di Siloam Hospitals Manado. *Jurnal Keperawatan*, 12(1), 89-96.
- Supramiati, I., Azizah, L. M. R., & Kusumaningrum, U. A. (2022). Hubungan Frekuensi Makan Dengan Kadar Gula Darah Pada Pasien Diabetes Melitus Di Wilayah Puskesmas Kedundung (Doctoral dissertation, Perpustakaan Universitas Bina Sehat).
- Ugwu, L. E., Idemudia, E. S., & Onyedibe, M. C. C. (2024). Decoding the impact of night/day shiftwork on well-being among healthcare workers. *Scientific Reports*, 14(1), 10246.
- Vestergaard, J. M., Dalbøge, A., Bonde, J. P. E., Garde, A. H., Hansen, J., Hansen, Å. M., ... & Kolstad, H. A. (2023). Night shift work characteristics and risk of incident coronary heart disease among health care workers: national cohort study. *International Journal of Epidemiology*, 52(6), 1853-1861.
- Wahyuni, M. M. D., Sahalessy, Y., Blongkod, F. R., Claartje, M. M. D., & Fauzi, A. Z. (2024). Analisis Faktor Risiko Yang Berhubungan Dengan Kejadian Hipertensi Pada Tenaga Kerja Perusahaan. *Ensiklopedia of Journal*, 6(3), 158-163.
- Wijaya, L. I., Susanti, I. H., & Apriliyani, I. (2024). Hubungan Burnout Dengan Perilaku Caring Perawat Di Rumah Sakit Tentara Wijayakusuma Purwokerto. *Jurnal Ilmiah Wahana Pendidikan*, 10(9), 370-381.
- Yuliana, C. T., Widhiantika, W., Jumaedi, J., Muhidin, M., & Darmawan, W. (2023). Pengaruh Jam Kerja Terhadap Kesehatan Fisik Dan Mental Karyawan Di Klinik Fatimah Kecamatan Cilamaya Kulon Kabupaten Karawang. *Journal of Innovation Research and Knowledge*, 3(2), 481-494..