

# Analysis Of Factors Of Occupational Fatigue In Outpatient Nurses At Siaga Medika Hospital, Banyumas

**Muhamad Heriyono<sup>1\*</sup>, Khusnul Khotimah<sup>2</sup>, Yuli Trisnawati<sup>3</sup>, Gracia Pricillia Imelida<sup>4</sup>**

<sup>1,2,3,4</sup>STIKes Bina Cipta Husada Purwokerto

Corresponding author: \*muhamadheriyono@gmail.com

## ABSTRACT

One factor that can cause workplace accidents is work fatigue. In addition to reducing productivity, work fatigue can also complicate tasks. This study aims to determine the characteristics of participants and determine the factors influencing work fatigue among outpatient nurses at Siaga Medika Banyumas Hospital in 2023. This study used a case study approach with qualitative methodology. The research sample consisted of five people selected using a purposive sampling strategy. Primary and secondary data were obtained through interviews using the Nur Indah Rintonga questionnaire in 2016 and supported by a grounded theory data analysis methodology. The findings of this study are presented in the form of respondent characteristics, namely the identities of respondents who work as three orthopedic nurses and two internal medicine nurses. Age and health conditions are examples of internal factors influencing work fatigue, while workload is an example of an external factor. Based on the feelings of fatigue experienced by respondents, 3 out of 5 respondents said they often felt work fatigue, while the other 2 only occasionally. Based on the interview results, all respondents confirmed that the main cause of their fatigue was due to excessive workload, supported by factors such as age and health status. Based on the results of the research conducted, it is recommended that the work organizer, namely the hospital, re-evaluate the real workload in the field by implementing work policies in the hospital.

**Keywords :** Work Fatigue, Age, Health Status, Workload

## INTRODUCTION

Fatigue is one of the problems that can cause workplace accidents in the field of occupational health and safety (K3). Workplace accidents can be caused by fatigue while working, which can also lead to decreased health and loss of ability. The National Safety Council (NSC) found that work fatigue was a contributing factor to approximately 13% of workplace accidents in the United States (US) in 2017. Based on data from the National Sample Survey of Registered Nurses in the US (NSSR), in a study conducted by Megha, K Shah in 2021, it showed that more than 50,000 registered nurses in the US, representing more than 3.9 million nurses nationwide, or 31.5% decided to leave their jobs as nurses due to fatigue. The reason they left their jobs as nurses was because the work environment demands a lot of pressure.

Based on geographic region in the US, the regions reporting nurse burnout were the West (16.6%) and the Southeast (30.0%). For nurses considering leaving their jobs, working in a hospital setting was associated with approximately 80% burnout and work hours that could reach 40 hours/week (Megha K. Shah, et al., 2023).

Information gathered from the 2020 Health Human Resource Development and Empowerment Program (BPPSDMK) of the Indonesian Ministry of Health reported that the total number of health human resources in Indonesia in 2016 was 1,780. Nurses constituted the largest number of health workers, comprising 296,876, or forty-nine percent (49%).

The National Nurses Association (PPNI) found that nurses in four provinces reported feeling fatigued in 50.9% of cases. To operate, public hospitals (RSU), which are health facilities established by the government or the community, must provide comprehensive medical care, curative care, and rehabilitative care, as well as basic health care, referrals, and support efforts. Hospitals operate fully or 24 hours a day with a service system for inpatient wards (Ranap), outpatient wards (Rajal), and emergency units (Ministry of Health of the Republic of Indonesia, 2010).

One of the type C private hospitals in Banyumas Regency, Central Java Province and Banyumas Regency is RSU Siaga Medika. Among the various health services offered by RSU Siaga Medika Banyumas is outpatient care (rajal), which is divided into nine polyclinics: internal medicine, orthopedics, ophthalmology, neurology, obstetrics, pediatrics, lung, and ENT. Based on medical record data in the Hospital Service System (SIMRS SIMPEL) of RSU Siaga Medika Banyumas, outpatient visits in July 2023 were 9,255 patients per month. The number of visits to the orthopedic clinic was 1,877 patients per month, 72 patients per day. Visits to the internal clinic were 1,382 per month, 55 patients per day. In its service process, the orthopedic clinic only has 3 rajal nurses and the internal clinic has 2 nurses. Based on the data, an imbalance was found between the number of nurses and patients required for a single examination on a given day (RSU Siaga Medika, 2023). The impact felt by outpatient clinic nurses who frequently exceed daily working hours or work overtime is fatigue, resulting in poor health or even illness. This fatigue was evident over a period of one month, namely in July 2023, when outpatient clinic nurses frequently experienced fatigue, characterized by a spike in the frequency of sick leave to rest at home.

Work fatigue at Siaga Medika Banyumas Hospital has resulted in a decline in the health of individual nurses, often leading to fatigue and reduced physical fitness for patient care.

Absence summary data from Siaga Medika Banyumas Hospital also shows a spike in the frequency of sick leave requests in a single month, specifically in July 2023.

In this study, the fatigue variables experienced by outpatient polyclinic nurses that hinder or reduce their physical health when providing patient care became the subject of further investigation by the researchers.

## **LITERATURE REVIEW**

Professionals who possess the strengths, talents, and duties to provide nursing care at various levels are known as nurses. As a vital component of health care, nursing services are based on nursing science and provide comprehensive biological, psychological, sociological, and spiritual services to individuals, families, and communities in both health and illness, encompassing the entire spectrum of human life (Kusnanto, 2004).

Outpatient nursing duties, cleaning equipment, arranging room layout and equipment storage, and verifying that all equipment is functioning properly are part of the arrangement of hospital facilities and environments to facilitate smooth service and make it easier for patients to receive care. Assessing patient needs such as history taking, measuring vital signs, and conducting anamnesis according to their authority. Performing emergency actions according to the patient's needs and their authority. Assisting doctors during the examination process, including providing explanations of the actions to be taken by the doctor and administering treatment according to the doctor's program or instructions. Recording and reporting. Referring patients to other health care professionals when necessary for nursing care or diagnostic testing (Asmadi, 2008).

**Work Fatigue:** Fatigue is a condition where the body's productivity decreases in carrying out its usual daily activities. Fatigue is also a subjective feeling experienced by people. Fatigue is a physical condition that can be felt by individuals, such as drowsiness, aches, dizziness, difficulty thinking, loss of concentration in carrying out activities, and can even cause a decline in individual health. Fatigue is an occupational health problem that requires special attention (Febriandini, et al., 2016).

**Causes of fatigue** Sudirman et al. (2014) stated that work fatigue is caused by external factors, such as workload and length of work, and internal factors, such as age, gender, health, and nutritional conditions.

The process of fatigue, Bunga Rampani Hyperkes and Occupational Health Semarang (Budiono 2003) states that there are two types of fatigue, namely general fatigue (also known

as muscle fatigue) and muscle fatigue (also known as muscle fatigue).

Corporate Hygiene and Occupational Health in Sumamur (2009) states that fatigue is categorized as follows: Fatigue caused by elements of the physical environment including temperature, noise levels, and lighting is known as physiological fatigue. Fatigue related to illness, reduced productivity, and body language in the workplace are examples of psychological fatigue.

Types of fatigue, according to Grandjean (2005), include: Eye fatigue (related to visual factors), General Bodily Fatigue originating from physical workload, Mental fatigue (intellectual work), Nervous fatigue (presence of stress factors, related to psychomotor factors, repetitive work), Chronic fatigue (accumulation of long-term effects), Circadian Fatigue (body rhythm, sleep period)

Fatigue Symptoms: There are many different signs of work fatigue, but some symptoms include a heavy head, tired body, heavy legs, yawning, disoriented thoughts, drowsiness and heaviness in the eyes, and difficulty focusing. According to Ningsih (2018), one of the problems in the field of occupational health and safety that increases the possibility of workplace accidents is work fatigue.

Methods for Measuring Work-Related Fatigue: Everyone experiences fatigue differently because it is a subjective emotion. Employee fatigue impairs their ability to perform tasks, which can lead to more errors and accidents in the workplace. Anatomically, subjective problems fall into two main categories: upper body (head, neck, shoulders, arms, hands, and waist) and lower body (thighs, knees, and feet). Lethargy, watery eyes, extreme sleepiness, and dizziness are some signs of fatigue (Antara, et al, 2022).

## **METHODS**

This research is qualitative and uses a case study methodology. The process of collecting various types of data and processing them to find solutions to address the identified problems is known as a case study.

Qualitative research is research that aims to understand the phenomena of what is experienced by research subjects such as behavior, perception, motivation, actions, etc. holistically and with descriptions in the form of words and language, in a specific natural context with various natural methods (Moleong 2017).

This research method uses grounded theory. Grounded theory was first introduced by scientists Glaser and Strauss in 1967, employing an inductive approach aimed at expanding the

explanation of phenomena from the general to the specific. Data collection, data generation, theoretical concept development, and review are all part of the cyclical (ongoing) process of grounded theory, which is an open and reflexive method.

The purposive sampling method was used to select research participants, taking into account certain data considerations such as who is considered to know our expectations best, more effective for small samples and easier to generalize the sample (Idrus, 2009). The subjects of this study were 5 outpatient poly nurses divided into 2 internal medicine poly nurses and 3 orthopedic poly nurses with a work period of more than two years.

## RESULTS

**Respondent characteristics** This study obtained results in the form of characteristics or identities of respondents, namely outpatient poly nurses at Siaga Medika Banyumas Hospital with a minimum length of service of 2 years as follows: Respondent 1 = R1, Respondent 2 = R2, Respondent 3 = R3, Respondent 4 = R4, Respondent 5 = R5.

Name	R1	R2	R3	R4	R5
Age	27 years old	25 years	38 years old	32 years old	30 years
Education	DIII Nursing an	DIII Nursing an	DIII Nursing	DIII nursing	S1 nursing
Profession	Polyclinic nurse in	Polyclinic nurse in	Orthopedic poly nurse	Orthopedic poly nurse	Orthopedic poly nurse
Long Work	3 years	4 years	7 Years	8 Years	7 Years
Tall body	153 cm	175 cm	150 cm	170 cm	150 cm
Weight	48 kg	67 kg	67 kg	74 kg	43 kg
Pressure blood	91/63 mmHg	120/80 mmHg	110/75 mmHg	115/75 mmHg	104/84 mmHg
Status Health	Hypotensi on	Normal	Normal	Normal	Normal

Source: primary data of outpatient polyclinic nurses 2023

Analysis of Work Fatigue Factors: Age, Based on the interview questions on the age factor, the answers of each respondent were as follows: R1: "I think it is definitely influenced by the age factor, so it is impossible for our energy to be the same as when we were young", R2: "Yes, of course, the older we get, the faster we get tired", R3: "Yes, it definitely decreases", R4: "Yes, yes, it does, I get tired quickly now", R5: "Eh, the quality of work has decreased, no, but I feel a decrease in my energy, yes"

Health status: Based on health status factors, researchers asked three questions: symptoms experienced, the impact of fatigue, and how to cope with fatigue. This was supported by primary data from interviews, including Body Mass Index (BMI) results, including height, weight, and blood pressure.

Based on the symptoms of fatigue, R1: "usually the aches, like in the legs, waist, neck. Oh yes, sometimes I also often feel sleepy. Both of them, miss, yawning, yes, my eyes water, yes, so my eyes feel tired", R2: "the first symptom is probably drowsiness, drowsiness is often yawning, aches and weakness. If the aches are usually in the shoulders, sometimes the legs are also sore. If the weakness is sometimes a headache and the body also lacks energy", R3: "most often it is aches, aches in the legs, shoulders, waist, most often in the legs, yes, sometimes I feel sleepy, yes, I often yawn", R4: "ee it hurts, sometimes my back feels sore and then the shoulders and arms are sore during the day, I definitely feel sleepy", R5: "ee usually I feel weak, then the neck is sore, I cry, aches in the hands and feet, the weakness is weak because of too much movement"

Based on the impact felt, R1: "The biggest impact is eh..it's hard to sleep, eh..it's like insomnia because I'm so tired I can't even sleep", R2: "The biggest impact is that it's a bit difficult to concentrate, yes, and maybe it's hard to sleep too", R3: "I often forget things and sometimes it's hard to concentrate and focus", R4: "Well, what's it like, coming home from work, sometimes my body is sore, tired, those who are usually still able to take care of the house end up feeling lazy because they're tired, and it affects their concentration", R5: "What are the impacts? Sometimes it's hard to concentrate"

Based on how to overcome fatigue, R1: "Well, if it's like that, it's definitely healing, like a vacation, actually I want to be like someone who doesn't do anything but has me time, sis, just staying at home and getting enough sleep is good enough for me," R2: "My way is to take a few minutes to take a nap or maybe go on vacation during the break or maybe do a little

exercise," R3: "I often sleep, sometimes I take a nap, sometimes when the patient is finished, I take a nap or lie down," R4: "The most common way is to drink coffee, yeah, if the load isn't too high, I'm tired and sore, then I take a short break for about 15 minutes and share it with another friend," R5: "Um... the way to overcome this is to take a short break, drink water, and then when it's time to go home, it doesn't really feel like it."

The results of the Body Mass Index (BMI) and blood pressure tests, based on the original data, showed the following results: R1's height is 153 cm, his weight is 48 kg, and his blood pressure is 91/46 mmHg. He suffers from hypotension, or low blood pressure, and often feels dizzy. R2 is a healthy individual with a height of 175 cm, a weight of 67 kg, and a blood pressure of 120/80 mmHg. R3 is 150 cm tall, weighs 67 kg, and is in normal health with a blood pressure of 110/75 mmHg. With a height of 170 cm, a weight of 74 kg, and a blood pressure of 115/75 mmHg, R4 is in normal health. R5 is 150 cm tall, weighs 43 kg, and has a normal blood pressure of 104/84 mmHg.

Workload factor, Frequency of feeling tired after working all day R1: "uh..sometimes, because it doesn't seem to always happen, but mostly yes", R2: "yeah, sometimes I feel tired, sis", R3: "yes, I often feel tired", R4: "often", R5: "yes, often"

Factors causing work fatigue, R1: "Em, I think it's because there are a lot of patients but there are still not enough nurses, so the workload is a lot, yes, it's not comparable", R2: "Maybe the cause is the workload, because there are a lot of patients, sometimes they replace shifts of friends who are on leave or permission, so the workload is a lot", R3: "Yes, there is a lot of workload, there are a lot of patients, there are a lot of patients going back and forth so my legs often get tired", R4: "Usually, if there are a lot of patients from the polyclinic, I automatically work on a lot of patients, so sometimes ee GB, or others, it requires concentration, there are a lot of patients, so it's automatically tiring, automatically this body is definitely standing, yes, it's impossible to sit for hours, serving patients, you also have to go here and there writing and so on" R5: "Well, this is also because of the workload. The workload usually increases on certain days, usually after a red date or for example on Monday, it usually piles up there"

## DISCUSSION

Someone experiencing work fatigue also experiences decreased productivity at work. Work fatigue is a consequence of their work.

**Internal factors (Age)** Based on the results obtained during the interview process, all respondents felt that as they age, they are more susceptible to fatigue and experience a decline in their workforce. Furthermore, the results of this study align with the research of Mallapiang et al. (2016) which showed that 53.3% of nurses over 30 years old experience work-related fatigue. These results support the research of Deby Aulia Fadani (2021), Hutabarat (2017), and Setyawati (2010) which found a relationship between age and work-related fatigue. As employees age, their organs will experience a process of deterioration which will reduce their abilities, making them more susceptible to fatigue.

**Factor internal, (Health Status)** The health status obtained from this study is in the form of 1 respondent aged 25 years old nurse of internal medicine polyclinic experiencing hypotension or low blood pressure with the results of his blood pressure of 91/63 mmHg with a body condition often dizzy and weak, while the other 4 respondents are in normal condition seen from the results of observations of the Body Mass Index (BMI) which includes weight, height and blood pressure. Based on the results of the interview, the results obtained are that all respondents confirmed that the decline in health is characterized by decreased concentration and the emergence of sleep disorders or insomnia. Then in the body of individuals who experience fatigue, discomfort appears such as aches in the shoulders, neck, waist, hands and feet. The findings of this study also support the findings of Adriyant (2016) and Suma'mur (2013) which state that humans and workload are closely related and that disparities between the two can cause fatigue, decreased productivity, health problems, disability, and even death. According to Zuniawati et al. (2022), the findings of this study are in line with research showing that persistent and almost daily fatigue can lead to chronic fatigue, which can have psychological impacts such as depression, digestive problems, insomnia or difficulty sleeping, memory loss, or often forgetting what has been done or planned. The findings of this study are also in line with the findings of Kars and Wijaya (2016), Wahyudi (2020), and Kurniandita (2021) who stated that work fatigue can cause perceptual barriers, slowed and difficult thinking, decreased motivation or drive to work, decreased attention, and decreased physical and mental productivity, all of which can lead to work-related accidents. The findings of this study are in line with research conducted by Elpin Vovantree in 2022 at Santa Maria Hospital Medan, where nurses with the fatigue category of 50.5% reported general symptoms such as tired legs, eyes, and body as well as decreased capacity for activities. The findings of this study are also in line with research conducted by Nur Indah Ritonga in 2016 on new graduate nurses



from PSIK UIN Jakarta, which found that respondents experienced physical fatigue with symptoms of whole-body fatigue or fatigue due to various nursing tasks.

External factors, (Workload) The results of the interview process also stated that 3 out of 5 respondents often experienced work fatigue and this work fatigue was confirmed by all respondents due to the increase in the number of patients, the lack of a comparable number of nursing staff and the large number of nursing care or actions given to patients in a standing position also contributed to the workload that must be completed by nurses. The results of this study are in line with the research of Fitri Dahlia et al. (2023) at Madani General Hospital, Medan, which involved 66 nurses and found that 32 nurses experienced work fatigue due to heavy workload. The nurses' workload comes from repetitive routine tasks and requires both mental and physical energy. The results of this study are also in line with the research of Deivy Tengor (2019) at GMIM Pancaran Kasih General Hospital, Manado, which found that a high workload will have an impact on nurse fatigue if the work to be completed is quite large and requires considerable time and energy to complete it. The results of this study are also in line with the research of Wiyarso (2018) which found a relationship between workload and work fatigue. This is because an increased workload will reduce a person's ability to work. The results of this study are in line with Suwandi's (2017) study on the workload and work fatigue of nurses at Bhayangkara Hospital Class III Manado, which found that an increased workload requires nurses to be more focused and more responsive in serving patients, resulting in fatigue. The results of this study also support the research of Simamora (2012) and Hariyanti (2011), which found that nurses have very high expectations in assisting doctors in carrying out their duties and obligations and in providing care to patients with constantly changing conditions. If the number of nurses is not balanced with the number of patients, the nurse's workload can also increase. The results of this study are in line with the research of Nurfiani Azizah et al. (2023) at Zainuttagwa Hospital, Kota Bekasi, which found that work fatigue in nurses is characterized by feelings of fatigue quickly and the emergence of feelings of laziness, which reduces the nurse's emotional and physical activity.

## CONCLUSION

Respondent characteristics are identities related to the criteria of the subjects being studied such as age, length of service, and profession with the following results: Respondent (R1) is 27 years old, a DIII Nursing graduate, has worked for 3 years, height 153 cm, weight 48 kg, blood pressure 91/63 mmHg, and has hypotension. Respondent (R2), a 27-year-old DIII

Nursing graduate with 4 years of service, height 175 cm, weight 67 kg, blood pressure 120/80 mmHg, and normal health. Respondent (R3) is 38 years old, a DIII Nursing graduate with 7 years of service, weight 67 kg, height 150 cm, blood pressure 110/75 mmHg, and normal health. Respondent (R4) is 38 years old, a DIII Nursing graduate with 8 years of service experience, is 170 cm tall, weighs 74 kg, has a blood pressure of 115/75 mmHg, and is in normal health. Respondent (R5) is thirty years old, has a Bachelor of Nursing degree, has worked for seven years, is 150 cm tall, weighs forty-three kilograms, has a blood pressure of 104/84 mmHg, and is in fairly good health.

Work fatigue factors: Internal factors Age analysis where the results obtained are that all respondents confirmed that age is one of the factors they experience fatigue in the form of decreased energy produced while working. Health status analysis where sometimes health history or history of disease can affect the performance or productivity produced by the workforce. In this study, looking at the Body Mass Index (BMI including height, weight and blood pressure, it was found that 4 respondents were in normal condition and 1 other, namely Respondent 1 (R1), was found to have low blood pressure or hypotension. External factors, Workload Analysis is one of the factors studied in the study of work fatigue where most of the time spent by workers is 7 hours/day at work. From this study, the results obtained are that all respondents confirmed that the main cause of their feeling work fatigue is due to high workload.

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