



Assessment of Occupational Stress on Health Workers in Maternal and Infant Hospitals

Devi Angeliana Kusumaningtiar[✉], Siti Nuraini
Universitas Esa Unggul, Indonesia

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Abstract

Background: Stress is a distortion of the body and mind caused by changes and demands of life. During the Covid 19 pandemic it was shown that the highest levels of stress occurred in health workers, nurses and teachers. Excessive amounts of stress can have harmful effects on the body, mind and psychology. The purpose of this study was to determine the description of the occurrence of work stress on health workers in the inpatient room at Hospital.

Methods: The study used a cross sectional design, with a sample of 42 health workers. The sampling technique uses total side method with univariate data analysis.

Results: Results with the highest proportion were health workers who experienced work stress as many as 24 respondents (57.1%) which were more dominantly influenced by factors of high workload variation of 31 respondents (73.8%).

Conclusions: The hospital is expected to be more aware of the workload and working hours of health workers in order to minimize the risk of work stress.

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[✉] Correspondence Address:
Email : deviangeliana@esaunggul.ac.id

INTRODUCTION

Occupational safety and health program management is the main program in employee safety and health because it can increase productivity, worker safety and can reduce budgets related to employee safety and health (Veltri et al., 2007).

Stress is a common problem in modern life, including work-related stress (ILO, 2016). Job stress is a dangerous physical and emotional response and can occur when the existing job demands exceed the work ability or control possessed by the worker (Alberta G, 2014). Work stress becomes a risk to the health and safety of workers when the work done exceeds the capacity, resources and abilities of the workers for a prolonged period (ILO, 2016).

The job factor is a factor that includes the environment and factors from the work itself. Stress is caused by several factors, one of which is job characteristics such as workload, job ambiguity, job uncertainty, work shift, conflict between individuals, lack of control (HSE, 2014; ILO, 2016). Leadership style in organization is also considered very important, leaders must involve health workers in decision making so that they feel valued (Donovan, Doody and Lyons, 2013). Individual factors consist of gender, education level, marital status, age, work shift, physical activity training, medical history, family medical history, and family relationships (Muzzi, Pawlina and Schnorr, 2018). The working environment conditions cause the greatest burden for health workers which is very important to understand (Moustaka, 2011). Activities outside of work are a potential stress generator category that includes all elements of a person's life that can interact with life and work events within an organization, and thus put pressure on the individual. Family issues, life crises, financial difficulties, conflicting personal and organizational beliefs, conflicts between family demands and company demands can all constitute pressure on the individual at work, just as stress at work has a negative impact on family life. and personal. Supporting factors are abilities or skills and all the resources needed to reduce the impact of stress on the individual. Social support from leaders and colleagues is an important factor in reducing work-related

stress levels and mental health among health workers (Hsieh and Tsai, 2019). Social support is pleasure, assistance, or information that a person receives through relationships, formal and informal with others or groups. Social support can maintain good physical and mental health. Increasingly positive, high-quality social support can increase stress resistance, fostering the development of trauma-related psychopathology (Hsieh and Tsai, 2019). Stress can cause a variety of actions on the body from changes in homeostasis to life-threatening effects and death. A person who experiences stress can cause complications in the illness. Someone who works or lives in a stressful environment is more likely to experience a lot of distraction. Stress can be a trigger factor for many diseases and several effects on the major physiological systems of humans (Yaribeygi et al, 2017). During the COVID-19 pandemic, health workers experienced very high stress. Stress on health workers can have an impact on leaving their jobs, mental health problems, to regret their profession (Rey and Lerman, 2009; Çelmeçe and Menekay, 2020). A hospital with excellence in the Maternal and Neonatal Sector stands which has a strategic location and is easy to reach. Being more than 100 years old, the hospital has been trusted from generation to generation to provide health services to the public. A preliminary study conducted on health care workers at the same hospital found that health workers often show symptoms of stress and fatigue, and that health workers who do not attend nurses are due to illness.

Health workers should have good skills and understanding in the health sector so that they can demonstrate better health practices. Good knowledge and skills will minimize the occurrence of work stress on health workers and health workers will better understand the best service for patients by working sincerely and happily. Based on the results of preliminary studies, there are 60% of health workers experiencing stress which is marked by psychological and physiological changes.

METHODS

The research design used in this study was cross sectional where the measurement of work stress was carried out simultaneously

or once at a time. This research was conducted with a quantitative approach which aimed to describe the risk of work stress occurrences that occur in health workers in the inpatient room of Hospital. The sampling technique in this study is total sampling. The number of samples in this study is a total sample of 42 health workers. The research has received ethical approval from the Ethics Commission of the Esa Unggul University Code of Ethics Enforcement Council with No 0551-19.558/DPKE-KEP / FINAL-EA/ UEU / XII / 2019.

The research instrument used in this study was a job stress questionnaire developed by the National Institute of Occupational Safety and Health, namely the NIOSH Generic Job Stress Questionnaire (NIOSH, 2014). This questionnaire consists of 21 stress-causing variables and three stress indicators in the form of symptoms of psychological, physiological and behavioral changes. Univariate analysis was carried out to describe the frequency distribution of each variable consisting of work stress, job factors (physical environment, role conflict, role imbalance, interpersonal conflict, job uncertainty, lack of control, lack of job opportunities, total workload, workload variation, responsibility towards others, unused abilities, mental endurance, Type A Personality (competitive, ambitious, impatient, aggressive and very critical) and work shifts), factors outside of work (activities outside of work), individual factors (age, gender, marital status, years of service, and supporting factors (social support)). All of these variables are given scoring and measurement results each variable is the average answer score which is obtained by dividing the total score by the number questions for each variable.

The job stress variable consists of related questions physiological, psychological and behavioral changes experienced by respondents. Questions related to physiological changes consist of 17 questions contained in the questionnaire section P1 - P17. The scoring on this question consists of a score of one if never, a score of two rare, a score of three if

occasional, a score of four if often, and a score of five if very often. Furthermore, questions related to psychological change consist of 20 questions contained in Questionnaire sections Q1 - Q20 (Appendix I). The scoring for this question consisted of a score of zero if almost never (less than 1 day), a score of one if it rarely occurs (1-2 days), a score of two if it occurs occasionally (about 3-4 days), and a score of three if it almost happen every time (about 5-7 days). Questions related to behavior change consisted of three questions contained in the questionnaire section R1-R4. The result of measuring the work stress variable is the average score of answers to questions related to physiological, psychological and behavioral changes.

Calculation of the average is done by dividing total score by the number of questions related to physiological, psychological and behavioral changes. Univariate analysis was performed to describe the distribution the frequency of each variable consisting of job stress, work factors (physical environment, role conflict, role ambiguity, interpersonal conflict, job uncertainty, lack of control, lack of job opportunities, total workload, workload variations, responsibility towards others, abilities that are not use, mental demands, and work shifts), factors outside of work (activities outside of work), individual factors (age, gender, marital status, tenure and supporting factors (social support)). Analysis was performed with the help of data processing software (SPSS). To describe the independent variable and the dependent variable, using a distribution table, frequency and percentage, a table consisting of columns.

RESULTS AND DISCUSSIONS

The results of this study explain the incidence of work stress with several influencing factors in the inpatient room health workers at Hospital, Jakarta. Respondents of this study were health workers whose individual characteristics were also assessed. The number of respondents was 42 inpatient health workers.

Table 1 Distribution of stress indicators using niosh generic job stress questionnaire on health office in maternal and neonatal hospitals

Variables	N (42)		
		20-30	28 (66.7)
		31-40	8 (19)
		41-50	5 (11.9)
		> 50	1 (2.4)
Work stress		Gender	
Stress	24 (57.1)	Female	40 (95.2)
No Stress	18 (42.9)	Male	2 (4.8)
Physical Environment		Marital status	
Not good	28 (66.7)	Single	9 (21.4)
Good	14 (33.3)	Married	33 (78.6)
Role Conflict		Time work (years)	
High	21 (50)	1-5	17 (40.5)
Low	21 (50)	6-10	17 (40.5)
Role Abomination		> 10	8 (19.0)
High	21 (50)	Type A Personality	
Low	21 (50)	Type A Personality	24 (57.1)
Interpersonal Conflict		No Type A Personality	18 (42.9)
High	22 (52.4)	Self-assessment	
Low	20 (47.6)	Low	19 (45.2)
Job Uncertainty		High	23 (54.8)
High	18 (42.9)	Social Support	
Low	24 (57.1)	Low	21 (50)
Lack of Control		High	21 (50)
High	16 (38.1)		
Low	26 (61.9)		
Lack of Job Opportunities			
High	18 (42.9)		
Low	24 (57.1)		
Total Workload			
High	22 (52.4)		
Low	20 (47.6)		
Workload Variation			
High	31 (73.8)		
Low	11 (26.2)		
Responsibility Towards Other			
High	24 (57.1)		
Low	18 (42.9)		
Unused Abilities			
High	9 (21.4)		
Low	33 (78.6)		
Mental endurance			
High	29 (69)		
Low	13 (31)		
Shift work			
Shift	39 (92.9)		
No Shift	3 (7.1)		
Outside Work Activities			
High	15 (35.7)		
Low	27 (64.3)		
Individual characteristics			
Age (years)			

Based on the data in table 1, it shows that 24 respondents (57.1%) experienced work stress in the inpatient room of Budi Kemerdekaan Hospital. Physical environmental conditions are not good many experienced by health workers as many as 28 respondents (66.7%). As many as 21 respondents (50%) respectively. High interpersonal conflict as many as 22 respondents (52.4%). The low category of job uncertainty was 24 respondents (57.1%). Lack of control in the low category as many as 26 respondents (61.9%). Lack of job opportunities in the low category as many as 24 respondents (57.1%). The number of high workloads was 22 respondents (52.4%). Variations in high workload were 31 respondents (73.8%). Responsibility towards others in the high category was 24 respondents (57.1%). Abilities that are not used in the low category are 33 respondents (78.6%). High mental demands were 29 respondents (69.0%). Work shift with shift P-S-M as many as 39 respondents (92.9%). Low activity outside of work as many as 27 respondents (64.3%). The highest proportion was in the 20–30-year age category, namely 28 health workers (66.7%). The sex of health workers is more dominant in women as many as 40 respondents (95.2%). The

highest proportion is married health workers as many as 33 respondents (78.6%). The highest proportion of 17 health workers (40.5%) with a working period of 1-5 years, 17 respondents (40.5%) with a working period of 6-10 years. Personality type A as many as 24 respondents (57.1%). A person with a type A personality tends to work under moderate to high stress levels. They are constantly putting themselves under time pressure, creating a life full of deadlines for themselves (Robbins, 2008). The highest proportion is high category self-assessment as many as 23 respondents (54.8%). The proportions that are comparable between low and high social support are 21 respondents (50%) respectively.

The reaction of each individual in dealing with stress is different. For some individuals it is possible to cope with high job demand but this may not necessarily be the case for other individuals. Physiologically stress refers to the physical or psychological force / force that is applied to a person which causes a response or response. Physiological changes are changes in the body, physical function to support life, seen in terms of the questionnaire related to these changes, many health workers experience complaints such as feeling headaches, feeling stiff and tense muscles, sleep disturbances at night, dry mouth, and often feel dizzy. While psychological changes are changes in mental aspects or activities caused by changes in the body, seen in terms of questionnaire questions related to these changes, many health workers experience complaints such as crying easily, talking less than usual, feeling sad, and feeling that people around don't like it. In measuring work stress, it is not only seen from these 2 aspects, there is one aspect, namely a change in behavior, but this aspect is considered to be 100% unchanged. Based on the results of the questionnaire, there were several respondents who had been smokers before working at this hospital. This does not support work stress due to working in the hospital. According to observations that have been made, there are several officers who experience general physiological changes, namely the onset of headaches.

This is most likely due to variation in high workload, which has an impact on the health of

officers, namely headaches and fatigue. If this is allowed, it can reduce the work productivity of health workers also obtained Information was regarding programs to minimize work stress on officers, namely holding a family gathering between units which is held once a year. With this program, it can tie the ties of friendship and togetherness between individuals. In addition, Health workers are always given training to improve skills and update their knowledge.

Judging from the results of the questionnaire, the physical environment is bad (66.7%) because many health workers feel that the temperature in the work area during the dry season tends to be uncomfortable, the air circulation in the work area is not good, and the noise level in the work area is high. However, when viewed from the observations of researchers, the physical environment from several aspects is in good category. Because from the results of observations related to temperature, all visitors can feel comfortable. In addition, related to the results of observations regarding high noise, it is most likely due to complaints of patients who often press the bell button to assist in serving patient difficulties.

The cause of the emergence of interpersonal conflicts is often due to competition between workers. In some companies, workers are required to achieve several targets in order to get an award, promotion or reward. Judging from the results of the questionnaire, high interpersonal conflict (52.4%) is because many health workers have differences of opinion among their unit members, there are disputes between their unit and other units, and a lack of assistance between their unit and other units. According to the results of the observations obtained, the conflict between units is more dominant than within one unit, this can be proven by the lack of information obtained by one of the parties, causing conflicts, for example related to patient transfer and inpatient room bookings. During the COVID-19 pandemic, someone who did work repeatedly made him often feel bored. To reduce boredom, work routines can carry out activities such as exercising at home which can maintain and reduce work stress levels (Kusumaningtiar and Anggraini, 2020). Judging from the results of the questionnaire, the lack of control is low

(61.9%) because there are many health workers who have a big influence on the quality of their work, the numbers of rights of health workers in determining the time for completion of work, the amount of rights of health workers in regulating the order of work performed, the amount of rights of officers health in managing the work area, and the numbers of rights of health workers in determining the amount of work performed.

The higher the workers' worry about the lack of job opportunities, the more work stress they experience will increase (Karima A, 2014). Judging from the results of the questionnaire, the lack of job opportunities in the low category (57.1%) is because many health workers find it easy to find jobs in other hospitals. The ease of getting a job can be seen from the competence of each officer, because the skills possessed from the ability in college and Internal and external training is always carried out every day. This can support the ease of finding a job.

Excessive workload (overload) will be a source of work stress on nurses, both at a mild and moderate level, this depends on the coping mechanisms that each individual has (Lasima, 2014). Judging from the results of the questionnaire, the workload was high (52.4%) because many health workers had to complete a lot of work, were often demanded to work very fast, and spend little time contemplating. Through observations, the high workload can also be seen from the tasks performed by each health worker. The work sequence related to the job descriptions carried out visually is quite large with a mismatch in the ratio of human resources to treated patients.

Diverse assignments that are not in accordance with the competencies and skills of employees will have an impact on job stress. Judging from the results of the questionnaire, the variation in workload is high (73.8%) because many health workers are often required to increase concentration while working, are often required to think quickly during work, and often increase the workload. In addition, working hours are excessive due to practices outside of actual working hours (overload). It is hoped that the hospital will be more concerned with the workload and working hours of health workers in order to minimize the risk of work

stress.

Responsibility towards other people can significantly trigger coronary heart disease compared to holding responsibility for objects. The older and more responsible they are, the more likely they are to develop symptoms of coronary heart disease (Cooper C.L, 2013). Judging from the results of the questionnaire, the responsibility for others is in the high category (57.1%) because the responsibility of health workers is very large to ensure the safety of other people's work. Related to this aspect, it is usually owned by the person in charge (PIC) because they have a big responsibility in the alignment of workers with the environment.

Unused workers abilities can cause stress for these workers. Conditions like this often occur when workers have a lot of ability to do a job. However, this ability cannot be used because they have used tools or other workers are doing the task. In a study conducted by Zhu et al (2020) showed that professional staff at Tongji Hospital in Wuhan, China were found to have a higher stress score for female employees compared to men. So in a study conducted by (Lai et al 2020) women's stress levels were found to be high, and in another study conducted on healthcare workers during the COVID-19 pandemic in China, it was observed that nurses had more psychological symptoms than doctors (Huang et al., 2020).

Mental demands are a significant source of stress, especially in jobs that require direct interaction with clients, especially in the service sector. In general, the standards applied require workers to always be friendly to the client at hand. However, jobs that require good emotional conditions are closely related to the low level of mental welfare of workers (Koradecka D, 2010). Judging from the results of the questionnaire, mental demands are high (69.0%) because there are many health workers whose jobs require high concentration, their jobs require health workers to remember many things, and must always focus on working all the time. According to the observations obtained, the mental demands of health workers are high due to the high demands of the patient and the patient's family for the best service for them. It is hoped that health workers will better understand the best services for patients.

Judging from the results of observations, the work shift with the P-S-M shift (92.9%) is because in addition to the head of the room, health workers are divided into schedules according to rotating shifts. The shift starts from morning 2 days, evening 2 days, night 2 days and holidays. If the shift rotation is not suitable, it may be due to abnormal work or an increase in patients who need more human resources.

Judging from the results of the questionnaire, activity outside of work is low (64.3%) because many health workers do not have jobs elsewhere, are not currently pursuing further education or taking courses for diploma adjustment, and do not participate in voluntary or religious organizations where health workers spend at least 5 to 10 hours per week. Age is a risk that can significantly increase work stress (Rasasi et al, 2015). Older individuals experience less stress because their experience in dealing with stress is better than younger individuals. Based on the results of the study, the results obtained were the highest proportion of 28 health workers (66.7%) with the age category of 20-30 years. Judging from the results of interview observations, this is because many health workers graduated from midwifery classes who continue to Budi Kemerdekaan Hospital from level to level. In this age range, it spurs the impact of work stress because of a lack of experience in dealing with various problems related to work.

Gender is one of the factors that can cause stress in the workplace. According to the International Labour Organization (2003) Women are more at risk of experiencing stress which can lead to illness due to stress and a high desire to leave their jobs. In relation to stress, women have a tendency to experience greater stress wherein a woman's body occurs hormonal changes. Women are more prone to feelings of guilt, anxiety, increased or even decreased appetite, sleep disorders and eating disorders. When stressed, it is easier for women to be sad, sensitive, angry, and easy to cry. Characteristics of women who prioritize emotional rather than rational. Based on the results of the study, the results obtained were the highest proportion of health workers who were female as many as 40 respondents (95.2%). Judging from the results

of interview observations, this is due to the large number of health workers who come from midwifery college where as a whole midwifery courses are interested in the female gender. A low percentage of male sex comes from the nursing field that does not originate in a single health institution.

Marital status can affect a person's stress level. Individuals who are married usually have lower stress levels than individuals who are not married. This happens because if workers get support in their spouse's career, the work stress they experience will tend to be due to support from their partners (Fink G, 2010). Based on the research results, the highest proportion of health workers with married status was 33 respondents (78.6%). Judging from the results of interview observations, this is due to the large number of health workers who started a family in their 20s and 30s. Support from spouses and families can relieve work stress.

Individuals who have type A personalities tend to be competitive, ambitious, impatient, aggressive and very critical. Individuals with this personality type always try to achieve their goals regardless of the feeling of happiness in them. Individuals who have this personality type tend to overreact so that they have high blood pressure. In addition, type A personality also makes individuals irritable so they tend to experience hostility to the environment around them (McLeod S, 2011). Judging from the results of the questionnaire, health workers with type A personality (57.1%) are due to the large number of health workers who do not let the problem resolve itself, are very fast when talking on the phone, how to walk fast, how to eat quickly, and work quickly. and energetic. According to the results of observations that have been made, this type A personality is in health workers who are responsive at work and very ambitious about their work so that every job that is passed can be carried out properly and appropriately. Work stress can occur due to the absence of social support which can be in the form of support from the work environment or the family environment. So, it tends to be more susceptible to stress. This is due to the absence of social support which causes inconvenience to carry out their work and duties (Indah Faiqoh Alifin & Suratmi, 2010).

Therefore, high social support is needed to minimize the risk of work stress. Judging from the results of the questionnaire, the proportion is comparable to social support (50.0%) due to the large number of health workers who are supported by colleagues making work easier, colleagues help when there are difficulties at work, and it is easy to discuss work with colleagues.

CONCLUSION

Inpatient health workers at the hospital experienced work stress with a percentage of 57.1%. This is caused by several related factors including occupational factors, individual factors, external factors and social support factors. The more dominant factor is the work factor, namely the high workload variation with a percentage of 73.8% and high mental demands with a percentage of 69.0%. Diverse assignments that are not in accordance with the competencies and skills of employees will have an impact on work stress. Mental demands are a significant source of stress, especially in jobs that require direct interaction with clients, especially in the service sector.

In general, the standards applied require workers to always be friendly to the client at hand. However, jobs that require good emotional conditions are closely related to the low level of mental welfare of workers. It is hoped that the hospital will be more aware of the workload and working hours of health workers in order to minimize the risk of work stress. The influence of the promotion and education program for health workers will have an impact on the increase in worker performance. It is advisable for the hospital to make routine socialization or pre-work briefings and provide important materials that must be done by a health worker in handling patients, and install SOPs in every inpatient room and nurse room. Regarding the existence of interpersonal conflicts between units, it is hoped that communication is established in an informative manner in detail so as not to cause misunderstandings that have an impact on conflict.

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