Relationship Between Nurse Workload And Implementation Patient Safety During The Covid-19 Pandemic At Dr Soedarso Hospital Emergency Room

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Abstract:

Background: To provide optimal quality of health services, hospitals need health workers who are truly productive at work. But there are aspects that also affect the quality of service in a hospital. And this should be a big concern for the hospital as a service provider. This aspect is patient safety. Patients not only need quality services but also conditions that assure them that the services provided are safe and do not harm them.

Materials and Methods: This type of quantitative research design is correlational. The sampling technique used Total Sampling using 57 research respondents. The data analysis used was univariate bivariate analysis using the pearson chi square test because the data were not normal P <0.05 in this study the normality test used was the Kolmogorov Smirnov test.

Results: Significant results were obtained with a p value of 0.025, meaning P value <0.05. **Conclusion**: There is a relationship between the workload of nurses and the application of patient safety during the Covid-19 pandemic in the Emergency Room of RSUD Dr. Soedarso Pontianak. **Key Word**: Nurse Workload; Implementation of Patient Safety.

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I. Introduction

Health development as part of national development aims to increase the will and ability as well as awareness of healthy living for everyone to achieve optimal public health status. Article 5 of the Law of the Republic of Indonesia Number 36 of 2009 concerning Health states that everyone has the right to obtain safe, quality and affordable health services¹. The quality of health services is a measuring tool that can measure consumer needs for service provision to find out how much demand will be obtained with efficient costs so that health services can be obtained by consumers. Patients are important consumers and to ensure patient satisfaction, quality services are needed according to the wishes of the patient². Providing optimal quality of health services, the hospital requires health workers who are truly productive by working. Health workers include doctors, nurses, midwives, pharmacists, physiotherapists and other health workers³. But there are aspects that also affect the quality of service in a hospital. And it should be a big concern for the hospital as a service provider. This aspect is patient safety. Patients not only need quality service but also a condition that convinces them that the service provided is safe and does not endanger them⁴. Patient safety is something far more important than just service efficiency. The behavior of nurses with the ability of nurses plays an important role in the implementation of patient safety. Unsafe behavior, forgetfulness, lack of attention/motivation, carelessness, inaccuracy and ability that does not care about and maintain patient safety is at risk for errors and will result in injury to the patient, in the form of a Near Miss or Adverse Event. It is hoped that further error reduction can be achieved by modifying behavior. Nurses must involve cognitive, affective and actions that prioritize patient safety⁵.

The World Health Organization (WHO), 2014 states that patient safety is a serious global public health problem. In Europe experienced patients with an infection risk of 83.5% and evidence of medical errors showed 50-72.3%. Collected hospital research figures in various countries, found adverse events with a range of 3.2 - 16.6%⁵. The high number of patient safety incidents is the basis for the importance of patient safety efforts in health care facilities. With a span of time in health care facilities. With a period of January-December 2016, the National Patient Safety Agency reports the number of patient safety events from the UK as many as 1,879,822 events. The Ministry of Health Malaysia (Ministry of Health Malaysia) reported the number of patient safety incidents with a range of January-December 2013 as many as 2,769 incidents and for Indonesia with a period of 2008-2011 there were 877 patient safety incidents¹. The 2017 Indonesia Health Profile states that the number of health workers in Indonesia is 1,143,494 and the number of nurses is 345,276 (30.19%) nurses. The number of

health workers in West Kalimantan Province in 2017 was 15,850 and the number of nurses was 7,690 nurses/ Based on the number of nurses and the population in Indonesia, Indonesia is experiencing a shortage of nurses. This can be seen from the ratio of nurses in Indonesia of 10:10,000, while the ideal ratio according to WHO is 18:10,000. The minimum number of nurses affects the provision of health services to patients⁶. A pandemic is a condition caused by a virus. The viruses that cause pandemics are organisms to which most people do not have immunity, can be transmitted easily from one person to another, and cause severe illness⁷. Coronavirus disease (COVID-19) is an infectious disease caused by a new virus, namely the corona virus. COVID-19 can be transmitted easily. This is due to the spread of the COVID-19 virus itself through droplets from saliva or snot that come out when a person who is positive for COVID-19 coughs or sneezes⁷. The virus was first identified in December 2019 in the City of Wuhan, China⁸. From the data reported as of May 25 2020, a total of 216 countries have confirmed the spread of the Covid-19 virus with the number of people who have confirmed positive as many as 5,257,419 and as many as 341,155 reported deaths. With these new cases, the number of patients who come to the hospital is higher so that there is an increase in the workload experienced by nurses⁹. In Indonesia, the first case of Covid-19 was confirmed on March 2, 2020. The number of cases is increasing day by day, data as of May 29 2020 reported that as many as 34 provinces in Indonesia were affected by Covid-19. The number of positive cases reached 24,538 cases, patients recovered as many as 6,240 people and died as many as 1,496 people⁹.

According to data from the West Kalimantan Provincial Health Office, on November 24 2020 there were 2257 confirmed cases of Covid-19, 562 patients were treated, 1673 patients recovered and 22 patients died. Pontianak took first place with the most confirmed cases, namely 708 patients and the most treatment locations for Covid-19 patients in West Kalimantan were at Dr. Soedarso Pontianak Hospital with a total of 127 confirmed patients¹⁰. Health services in hospitals, especially in the Emergency Room (IGD) have a role as the main gate for emergency patients to enter. One indicator of the success of an effective and efficient hospital is the availability of sufficient, high-quality, professional Human Resources (HR) in accordance with the functions and duties of every health worker. The capacity of a health facility. The ability of a health facility is an important factor in providing quality health services and requires health workers to be more professional with speed, skill and alertness at all times when serving patients¹¹. The quality of nursing services is inseparable from the role of the classification of patients in inpatient rooms, because with this classification patients feel that their rights are respected and the conditions and workload of nurses are known in each treatment room. It is necessary to know the conditions and workload in the emergency room (IGD) so that the quantity and quality of nurses needed in the emergency room can be determined so that there is no inappropriate workload which ultimately causes work stress¹². It is necessary to know the conditions and workload in the emergency room (IGD) in order to determine the quantity and quality of nurses needed in the ER room. Emergency management has a philosophy that is "Time saving it's Live Saving". Which means that all actions taken during an emergency situation must be truly effective and efficient. Improving the quality of service will certainly affect the work of each service provider. Feedback and information are important elements in building an effective service delivery system, including service quality. The higher the quality of service to be provided to customers, the greater the working time that must be provided by service providers in order to be able to review the expectations of customers. This of course can add to the workload that must be borne by service providers¹³. Data from Doctor Soedarso Pontianak Hospital in 2017 there were medical errors and KNC in July by 96.6%, August decreased to 91.8% and September increased by 92.2%. Meanwhile, the lowest incidence of phlebitis in hospitalization was 0.02% (2 of 6697 patients) in December and the highest was in June of 0.2% (13 of 5486 patients) who were treated in inpatient rooms. 9 Implementation of the 2017 SKP, the lowest hand hygiene compliance rate was in January (59.8%), and the highest was 95.8% in September (standard 100%). For the target accuracy of installing identity bracelets in October by 96%, November by 91% and 93% in December. Meanwhile, the target for increasing the safety of administering antibiotics with the 7 correct principles was the lowest at 94.7% in October¹⁴.

Based on the phenomena and results of preliminary studies conducted at RSUD Dr. Soedarso Pontianak above, the researcher is interested in conducting research with the title "Relationship of Nurse Workload with the Implementation of Patient Safety During the Covid-19 Pandemic in the Emergency Room of RSUD Dr. Soedarso Pontianak".

II. Material And Methods

Study Design: This research is a type of quantitative research. The design or design of this research includes the correlational type, namely to determine the relationship between variables. The approach used is Cross Sectional, where the time variable is independent measurement of workload and the dependent variable is regarding the implementation of patient safety.

Study Location: This research was conducted at the Regional General Hospital Dr. Soedarso Pontianak, West Kalimantan.

Study Duration: This research was conducted in August 2021.

Sample size: In this study, the population was all nurses in the emergency room at RSUD Dr. Soedarso Pontianak, totaling 57 nurses.

Sample size calculation: The technique used in determining the sample in this study was Total Sampling (all existing nurses), namely all nurses working in the emergency room, totaling 57 nurses.

Subjects & selection method: The research population taken was all nurses in the emergency room of RSUD Dr. Soedarso Pontianak, totaling 57 nurses. The technique used in determining the sample in this study was Total Sampling (all existing nurses), namely all nurses working in the emergency room, totaling 57 nurses. This research was conducted at the Regional General Hospital Dr. Soedarso Pontianak West Kalimantan in August 2021.

Procedure methodology

After consent, the respondent will sign the informed consent sheet as a form of approval to be a sample of the research to be carried out. The primary data used in this study includes socio-demographic characteristics such as age, gender, education and for secondary data which includes observation sheets, namely from data owned by RSUD Dr. Soedarso Pontianak.

Statistical analysis

In this study, the researchers used the pearson correlation test because the data were abnormal P < 0.05. In this study, the Kolmogorov Smirnov test for normality was used.

III. Result

In this study the researchers used univariate analysis to determine the characteristics of the respondents which included age, gender, education, the relationship between the workload of nurses and the implementation of patient safety during the Covid-19 pandemic in the Emergency Room of RSUD Dr. Soedarso Pontianak. Table no 1 Shows the most common age is in the age range of 20-60 years, totaling 57 nurses or (100%)

Table no 1 Distribution of respondent characteristics based on age in the Emergency Room of Soedarso

Po	ntianak	Hosp	ital (N=57)	

	Age	Percent
20-60	57	100
Total	57	100

Table no 2 Distribution of respondent characteristics based on gender in the Emergency Room of

Soedarso Pontianak Hospital (N=57)		
	Gender	Percent
Woman	31	54,4
Man	26	45.6
Total	57	100

Table no 2 show the majority were female, namely as many as 31 people or (54.4%).

 Table no 3 Distribution of respondent characteristics based on Education in the Emergency Room of RSUD Soedarso Pontianak (N=57)

	Education	Percent
Associate Nursing Expert	23	40,4
Bachelor Of Nursing	34	59.6
Total	57	100

Based on table 3, the most Nurse Education is 34 people or (59.6%).

Table no 4 Distribution of Respondent Characteristics Based on the Application of Patient Safety in the Emergency Room of RSUD Dr. Soedarso Pontianak (N=57)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Applied	44	77,2	77,2	77,2
vanu	Not Applied	13	22,8	22,8	100
	Total	57	100	100	

Based on the table above, 44 people or (77.2%) implemented the most patient safety, while 13 people or (22.8%) did not implement patient safety.

Table no 5 Distribution of Respondent Characteristics Based on Workload of Nurses in the Emergency Room of RSUD Dr. Soedarso Pontianak (N=57)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Heavy	15	26,3	26,3
	moderate	27	47,4	47,4
	Light	15	26,3	26,3
	Total	57	100.0	100.0

Based on the table above, the most moderate workload is 27 people or (47.4%)

In the bivariate analysis, this study used the Pearson correlation test because the data were abnormal P <0.05. In this study, the Kolmogorov Smirnov test for normality was used.

Table no 6 Distribution of normality results. The relationship between the workload of nurses and the implementation of patient safety (N=57)

			Kolmogorov Spirnov
	Statistic	Df	Sig
workload	0.259	44	0.00
Patient safety	0.331	13	0.00

The results of a bivariate analysis of the relationship between nurse workload and the application of patient safety during the Covid-19 pandemic in the emergency room of RSUD Dr Soedarso Pontianak.

Table no 7 Correlation or Relationship between Nurse Workload and the Implementation of Patient Safety During the Covid-19 Pandemic at the Dr. Soedarso Hospital Pontianak Emergency Room (N=57)

	Patient Safety
Correlation coefficient	
Sig(2-tailed)	0.025
N	57

Based on table 7 it is known that the correlation test obtained significant results with a p value of 0.025, meaning P value <0.05 so it can be concluded that there is a relationship between the workload of nurses and the application of patient safety to nurses in the IGD Soedarso Pontianak Hospital.

IV. Discussion

Gender

Based on the results of the research conducted by the researchers, it was found that most of the respondents in this study were female, namely as many as 31 people or (54.4%) Gender greatly influenced the length of work and workload because men tended to have stronger workforce. and physically compared to women so that when faced with equal work between the two men will tend to be more capable than women, This is in line with other research which states that there is a relationship between gender and the length of time or workload experienced by a person¹⁵. In doing work, women have more inspiration, but if the work requires too much energy and physique, such as nurses, then men will tend to have a stronger physique so they will be able to work longer than women so that gender in the study will affect the application of patient safety. because physical endurance can also affect a person's performance.

Age

Based on the results of research conducted by researchers, it was found that most of the respondents in this study were mostly aged 20-60 years, namely as many as 57 people or (100%) age greatly influences one's workload and experience in doing work. So that the higher a person's age and the longer it takes to do work in a field, the better and more precise it will be in doing the job. This is in line with other research which explains that there is a relationship between workload and years of service and working age¹⁶. A person's age will greatly affect a person's experience in a field of work, one of which is a room nurse, the longer or older a person is in the productive age category, the more experience a person has in a field of work. This is done so that the better a person's experience, the more proficient at doing the job so that it will reduce the workload he does.

Level of Education

Based on the results of the research conducted by the researchers, it was found that most of the respondents in this study were 34 nurses or (59.6%) educated as S1 fellowships so this is one of the factors in the implementation of patient safety because the higher the level of education a person's level of understanding the better this is in line with the results of other studies which state that there is a relationship between education and length of work of a person with the level of patient safety while in the room. The education level of nurses in the emergency room at Soedarso Pontianak Hospital, most of whom have bachelor's degrees will improve the quality of their performance while in the field, including in implementing patient safety when carrying out work¹⁷. With a better level of education, the experience and quality of a person's work will increase so that a person's way of working will be better, especially in team work where teamwork is needed in implementing patient safety in the room.

Workload of Nurses

Based on the results of the research conducted by the researchers, it was found that most of the respondents in this study were mostly nurses in the emergency room of RSUD Dr Soedarso Pontianak who had a heavy workload of 15 people (26.3%) and moderate. 27 people or (47.4%), this is heavily influenced by several factors, one of which is the sex of the staff at the Emergency Room of RSUD Dr. Soedarso Pontianak, most of whom were women who had less energy and physical strength than men. This is in line with other research which explains that there is a relationship between gender and the length of time or workload experienced by a person¹⁵. Apart from gender, age and experience also greatly affect a person's workload, this is because the older and longer a person's experience in doing work, the person will know more about tricks and ways to do work more effectively so that it will reduce energy. used, this will reduce a person's workload and a person's length of work and working age¹⁶. So these two things are very important when someone is doing a job, especially for nurses on duty at the Emergency Room at RSUD Dr Soedarso Pontianak who tend to be crowded with patients plus during a pandemic like this the number continues to increase. The number of patients is very high so that it will increase the workload of nurses.

Implementation of Patient Safety

Based on the results of the research conducted by the researchers, it was found that most of the respondents in this study were 44 nurses or (77.2%) nurses at the Soedarso Pontianak IGD who implemented patient safety. also has nurses who have long work experience so they know how to cope and do work well and efficiently, this is in line with the results of other studies which state that there is a relationship between age and fatigue levels where someone under 40 years old is productive for work¹⁸. In addition, the thing that affects the high implementation of patient safety in the IGD room at Soedarso Pontianak Hospital is because most of the nursing staff have undergraduate nursing education qualifications where the higher the level of education the more knowledge and experience they have so that this will increase one's knowledge, this is in line with the results of other studies which state that there is a relationship between education and a person's length of work with the level of patient safety while in the room. So that the level of education and age are very important in the course of one's life and work career where both can make a person better and skilled in doing a job that has been done¹⁷.

The Relationship between Nurse Workload and the Implementation of Patient Safety in the Emergency Room of RSUD Dr. Soedarso Pontianak

Based on the results of statistical tests that have been carried out by researchers with correlation tests, significant results were obtained with a p value of 0.025, meaning P value <0.025 so it can be concluded that there is a relationship between the workload of nurses and the application of patient safety to nurses in the IGD Soedarso Pontianak Hospital. This is in line with the results of other studies which explain that there is a relationship between education and a person's length of service and the level of patient safety while in the room¹⁷. There are several factors that influence the application of patient safety to nurses while on duty in hospitals, one of which is gender, where women panic more easily when faced with something, so this will further increase the risk of human error. In addition, women usually find it difficult to work under high pressure which will cause them to experience stress. This is in line with the results of other studies which explain that there is a relationship between and the incidence of stress while working in the inpatient room of Kwaingga Hospital, Keerom Regency¹⁹. In addition, individual characteristics, in this case nurses, also affect the workload of nurses while on duty, the characteristics referred to, such as gender, age, which affect nurse performance. This is in line with the results of other studies which explain that there is a relationship between such as gender, age, which affect nurse performance. This is in line with the results of other studies which explain that there is a relationship between studies which explain that there is a relationship between studies which explain that there is a relationship between the individual characteristics and workload.

Another factor that affects the performance and workload of a nurse on duty at the hospital is a person's education level because the higher a person's education level, the workload given will be higher so that it will affect performance but there is a positive side to this. higher education means that a person's knowledge will usually be better so that they are more experienced in handling the work they are doing, this is in line with the results of other studies which explain that there is a relationship between workload and level of education with the quality of nursing documentation in inpatient rooms at the Jakarta Harbor Hospital²⁰. Physical workload also greatly affects a person's workload. The higher the physical workload, the higher the energy that must be expended so that a person will tire more easily. If someone is tired it will affect the work quality of room nurses, this is in line with the results of other studies which explain that there is a relationship between length of physical work and age on the quality of a person's work²¹.

V. Conclusion

Based on the results of research and discussion, it can be concluded that:

- 1. Based on the research results, the most dominant age is 20-60 years.
- 2. All respondents in this study had more undergraduate education levels

- 3. Most of the nurses in the emergency room at Soedarso Pontianak Hospital have a moderate workload.
- 4. There is a relationship between the workload of nurses and the implementation of patient safety in the emergency room of RSUD Dr Soedarso Pontianak.

References

- Ulumiyah, N. H. (2018). Improving The Quality Of Health Services By Implementing Patient Safety Efforts At The Community Health Centers. Journal Of Indonesian Health Administration, 6(2), 149-155. Retrieved From Https://E-Journal.Unair.Ac.Id/JAKI/Article/Download/8294/6418/39433
- [2]. Wowor, J., Rumayar, A.A., And Maramis, F.R. (2019). The Relationship Between The Quality Of Health Services With Inpatient Satisfaction In Cantia Tompaso Baru Hospital. Public Health Journal, 8(6). Retrieved From Https://Ejournal.Unsrat.Ac.Id/Index.Php/Kesmas/Article/View/25739
- [3]. Retnaningsih, D., & Fatmawati, D. F. (2018). Nurse Workload On Implementation Of Patient Safety In The Inpatient Room. Nursing Journal Sudirman, 11(1), 44-52. Retrieved From Https://Jks.Fikes.Unsoed.Ac.Id/Index.Php/Jks/Article/View/637
- [4]. Satria, W. A., Sidin, A. I., & Noor, N. B. (2013). Relationship Between Workload And Nurse Performance In Implementing Patient Safety At Hasanuddin University Hospital In 2013. UNHAS. Retrieved From Https://Core.Ac.Uk/Download/Pdf/25491034.Pdf
- [5]. Lombogia, A., Rottie, J., & Karundeng, M. (2016). The Relationship Between Behavior And The Ability Of Nurses To Carry Out Patient Safety In The Acute Room Of The Emergency Room At Prof. Dr. RD Kandou Manado. Journal Of Nursing, 4(2). Retrieved From Https://Ejournal.Unsrat.Ac.Id/Index.Php/Jkp/Article/View/12916
- [6]. Indonesian Ministry Of Health.(2018). Indonesian Health Profile [Online Serial].
 Https://Pusdatin.Kemkes.Go.Id/Resources/Download/Pusdatin/Profilkesehatanindonesia/PROFIL_KESEHATAN_2018_1.Pdf [28 December 2020].
- [7]. Santoso, D. H., & Santosa, A. (2020). Covid-19 In Various Reviews Perspective. Mbridge Press. Retrieved From Https://Lppm.Mercubuana-Yogya.Ac.Id/Wp-Content/Uploads/2020/07/BUKU-RAPID-RESEARCH-COVID-UPDATE-1.Pdf
- [8]. Kumparan. (2021). WHO Investigation Team Begins To Search For The Origins Of The Corona Virus In Wuhan. Kumparan Video. Retrieved From Https://Kumparan.Com/Kumparanvideo/Tim-Investigasi-Who-Mulai-Cari-Asal-Usul-Virus-Corona-Di-Wuhan-1v4xl0xbpi1/Full
- [9]. Covid 19. Retrieved From Https://Covid19.Go.Id
- [10]. West Kalimantan Provincial Government Health Service. 2020. Dashboard Covid-19 West Kalimantan. Https://Dinkes.Kalbarprov.Go.Id/ [28 December 2020]
- [11]. Sholachudin, I. M., & Sari, D. J. E. (2018). Relationship Between Workload And Nurse Performance In The Emergency Installation Room (IGD) Ra Basoeni Mojokerto Hospital. Infokes (Health Information), 10(1), 59-67. Retrieved From Http://Eprints.Umg.Ac.Id/4073/
- [12]. Aini, F., & Purwaningsih, P. (2013). The Relationship Between Workload And Work Stress Of Nurses In The Emergency Room At Semarang District Hospital. Journal Of Nursing Management, 1(1). Retrieved From Https://Jurnal.Unimus.Ac.Id/Index.Php/JMK/Article/View/949
- [13]. Triwijayanti, R. (2018). Description Of Nurse Workload And Response Time Of Emergency Nursing Services According To Patient Perception In The Emergency Installation Room Of Tmuhammadiyah Hospital Palembang. Medical Masks, 6(2), 576-582. Retrieved From Http://Jmm.Ikestmp.Ac.Id/Index.Php/Maskermedika/Article/Download/326/277
- [14]. Triputra, A. The Relationship Between The Workload Of The Implementing Nurse And The Implementation Of Patient Safety In The Inpatient Room Of The Doctor Soedarso Hospital, Pontianak. Proners, 4(1). Retrieved From Https://Jurnal.Untan.Ac.Id/Index.Php/Jmkeperawatanfk/Article/Download/34337/75676582195
- [15]. Apriluana, G., Khairiyati, L., & Setyaningrum, R. (2016). The Relationship Between Age, Gender, Length Of Work, Knowledge, Attitudes And Availability Of Personal Protective Equipment (PPE) With The Behavior Of Using PPE Among Health Workers. Indonesian Journal Of Public Health Publication (JPKMI), 3(3), 82-87. Retrieved From Http://Eprints.Ulm.Ac.Id/5614/
- [16]. Fadillah, A.I. (2020). The Relationship Between Workload, Working Time And Age With Work Stress On Online Ojek Drivers In Banjarbaru City In 2020 (Doctoral Dissertation MAB, Islamic University Of Kalimantan). Retrieved From Http://Eprints.Uniska-Bjm.Ac.Id/2493/
- [17]. Astriana, N.B.N., & Sidin, A.I. (2014). The Relationship Between Education, Years Of Service And Workload With Patient Safety At The Haji Makassar General Hospital. Management Of Rs Fkm Unhas, 1(1), 1-8. Retrieved From Https://Core.Ac.Uk/Download/Pdf/25495910.Pdf
- [18]. Budiman, A., Husaini, H., & Arifin, S. (2016). The Relationship Between Age And Workload Index With Fatigue In Workers At PT. Gold Tab Caries. Journal Of Periodic Health, 1(2), 121-129. Retrieved From Https://Ppjp.Ulm.Ac.Id/Journal/Index.Php/Berkala-Kesehatan/Article/View/3151
- [19]. Awalia, M. J., Medyati, N. J., & Giay, Z. J. (2021). Relationship Between Umjur And Gender With Work Stress In Nurses In The Inpatient Room Of Kwaingga Hospital, Keerom Regency. JISIP (Journal Of Social Sciences And Education), 5(2). Retrieved From Https://Ejournal.Mandalanursa.Org/Index.Php/JISIP/Article/View/1824
- [20]. Linda, S. E. (2017). The Relationship Between Workload And Education Of Nurses With The Quality Of Nursing Documentation In Inpatient Rooms At The Jakarta Harbor Hospital, 2001. Journal Of Health, 10(2), 22-40. Retrieved From Https://Journal3.Uin-Alauddin.Ac.Id/Index.Php/Kesehatan/Article/View/4381
- [21]. Kusgiyanto, W., Suroto, S., & Ekawati, E. (2017). Analysis Of The Relationship Between Physical Workload, Years Of Service, Age, And Gender On The Level Of Work Fatigue In Workers In The Lumpia Skin Making Section In Kranggan Village, Central Semarang District. Journal Of Public Health (Undip), 5(5), 413-423. Retrieved From Https://Ejournal3.Undip.Ac.Id/Index.Php/Jkm/Article/View/18963