

## ANALYSIS OF SAFETY MANAGEMENT SYSTEM IMPLEMENTATION AND OCCUPATIONAL HEALTH BASED ON PP NO 50 YEAR 2012

Eka Rakhmat Kabul<sup>1</sup>, Subhan Nur Ramadhan<sup>2</sup>, Sukiman<sup>3</sup>, Harries Madiistriyatno<sup>4</sup>

Persada Indonesia University<sup>1</sup>, Stima IMMI Jakarta, Indonesia<sup>2,3,4</sup>

Email: eka.rakhmat@upi-yai.ac.id, subhan.pa7@gmail.com, sukimanhawe@gmail.com, harries.madi@gmail.com

### ARTICLE INFO

### ABSTRACT

Received:

January, 26<sup>th</sup>  
2022

Revised:

February, 17<sup>th</sup>  
2022

Approved:

February, 18<sup>th</sup>  
2022

*This research aims to know the implementation of Occupational Health and Safety Management System which is implemented in RSUD Karawang. Research Methods: Qualitative Research, descriptive type. The sampling technique used by the researcher is purposive sample. Samples were taken as many as 3 employees of RSUD Karawang as respondents in this study. Result : Leadership commitments and policies towards the implementation of K3 already exist and in writing, the facilities and infrastructure that support the implementation of K3 have been fulfilled. While the K3 policy at this hospital is the appointment of the K3 Installation as an officer who oversees the implementation of K3 at the Karawang Hospital, the K3 Planning at the Karawang Hospital has been going well starting from risk identification to risk management. In addition, workers are also required to follow SOPs every time they do their work, and workers have been facilitated with complete PPE by the hospital. The organization has formed an organization for the K3RS Installation but it is still found that the workers from the K3 installation have double jobs where the implementation of the SMK3 program is not optimal. The implementation of OSH, most of the steps for implementing SMK3 have been going well at the Karawang Hospital where the Hospital has*

Eka Rakhmat Kabul, Subhan Nur Ramadhan, Sukiman, Harries Madiistriyatno. (2022). Analysis of Safety Management System Implementation and Occupational Health based on PP No 50 Year 2012. Journal Eduvest. Vol 2(2): 196-206

How to cite:

E-ISSN:

Published by:

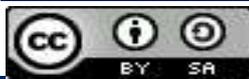
2775-3727

<https://greenpublisher.id/>

*stated a commitment, an OHS organization has been formed, conducting K3 counseling to workers, implementing K3 programs such as providing PPE, health checks, and treating sick workers with provide BPJS services. The audit at the Karawang Hospital has been running, where internal and external audits have been running to find out what are the shortcomings of the K3 program and further correct the shortcomings of the K3 program aimed at improving the K3 program.*

**KEYWORDS**

Hospital OHS Management System, K3RS Installation



**This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International**

## INTRODUCTION

The hospital is an organization that through organized professional medical personnel and permanent medical facilities provides medical services, continuous nursing care, diagnosis and treatment of diseases suffered by patients, the hospital as a service industry is an industry that has a variety of labor problems that complicated with various risks of getting work-related diseases and even work-related accidents according to the type of work, so it is obligatory to implement safety and security efforts Hospital Occupational Health (K3RS).

According to the Minister of Health of the Republic of Indonesia Number 66 of 2016 concerning K3RS, it is stated that K3RS is an activity carried out to guarantee and protect occupational safety and health for hospital workers, patients, visitors and the hospital environment through efforts to prevent work accidents and occupational diseases in hospitals (Nasution & Mahyuni, 2020). Usually there are 4 areas that are responsible for K3RS, including: occupational health, as for the work program of the K3 committee in the field of occupational health, including: employee health checks, monitoring of the provision of personal protective equipment, treatment of sick workers, K3 counseling on occupational health and safety, monitoring and reporting of KAK and PAK (Listyowati, 2021).

Hospital occupational safety and health is a new program for hospitals in Indonesia, there are only a few hospitals that have a K3RS committee, and even then they do not have a targeted program (Prasetya, Junaedi, & Prihanto, n.d.). Therefore, there is no data on the number of disability, illness, and work-related death in hospitals (Sears, Blonar, Bowman, Adams, & Silverstein, 2013). Seeing this condition, if we rely on these data, it will be difficult to determine which hospital has a high incidence of accidents and occupational diseases (Ledford, 2021). So that an initial assessment can be made on the condition of the hospital and the work behavior of its officers (Berberoglu, 2018). Because these two things can describe the risks that can be caused and one of the hospitals that the author considers necessary to research efforts to prevent accidents and occupational diseases, (in this case the application of SMK3) is the Karawang Regional General Hospital (Polii, Wuisang, & Wuisang, 2021) (Einstein, 2018).

This study aims to determine how the implementation of the Occupational Health and Safety Management System is carried out at the Karawang Regional General Hospital.

## RESEARCH METHOD

This research approach is qualitative, descriptive type. The unit of analysis in this study were employees of K3 and Management of the Karawang Hospital. This research was conducted at the Karawang Hospital, Jl. Galuh Mas Raya No. 1 Sukaharja Telukjambe Timur – Karawang, while the time of the research will be carried out for  $\pm$  2 months, starting in July-August 2021. Participants or informants of this study were determined using purposive sampling technique, namely the sampling technique was based on a specific purpose (the right people were selected) really has the criteria as a sample) (Manuaba & Darma, 2021). So the researchers decided the first informant or key informant was most suitable for K3RS employees and Karawang Hospital Management. From this key informant, interviews with people who have broad knowledge of the implementation of occupational safety and health management systems will be conducted (Neke, Gadau, & Wasem, 2018).

Qualitative research must reveal objective truth. Therefore the validity of the data in a qualitative research is very important. Through the validity of the data, the credibility (trust) of qualitative research can be achieved.

## RESULT AND DISCUSSION

### 1. SMK 3 Value Analysis 1. SMK3 Value for the Government

In the implementation of SMK3 in Karawang Hospital, it is in accordance with PP 50 of 2012 and OHSAS 18001 regulations where the value obtained for the government is that companies that comply with applicable laws and regulations generally look healthier and exist. Because after all the rules or regulations made are for the good of all parties (Adorno, 2021). By complying with applicable laws and regulations, the company will be more orderly and this can improve the good image of the company itself. How many companies that disobey the applicable regulations experience bankruptcy or losses due to experiencing many problems with employees, the government and the local environment.

### 2. Value of SMK3 for Karawang Hospital

Value obtained by RSUD In implementing SMK3, the safety management system will be well organized and effective (Bondroini, Kurniawan, & Tistogondo, 2020). Because inside SMK3 or OHSAS 18001 requires a documented procedure, so that all activities and activities carried out will be organized, directed, in an orderly corridor and carried out consistently (Fujianti, Andarini, Aprilisa, Lestari, & Camelia, 2020). Records as evidence of system implementation are kept to facilitate verification of root cause identification of non-conformities (Anastasopoulos, Ramakrishnan, & Anastasopoulos, 2019). So that the analysis or identification of non-conformances is not protracted and widens to be disorganized, which in turn provides inappropriate recommendations or does not solve the problem (Berzins, Bøhren, & Stacescu, 2018). In this system, planning, control, review, feedback, improvement and prevention are also required (French, Deshpande, Evans, & Obregon, 2020). These are all forms of an effective management system (Kim, Oh, & Lee, 2019). This system also requires management commitment and participation from all employees, so that the total involvement of management with

workers is highly demanded in carrying out all programs related to K3. This total involvement will provide more opportunities to improve the quality of service or make improvements more effective for hospitals.

### **3. Value of SMK3 for Customers (Patients)**

The value obtained by customers (patients) in the application of SMK3 in Karawang Hospital, namely in the implementation of SMK3 properly will affect customer satisfaction. How many customers require their suppliers or suppliers to implement SMK3 or OHSAS 18001. Because the implementation of SMK3 will be able to guarantee patient and visitor satisfaction so that they can improve service quality and improve the quality of good service. Workers will work better, because they are well protected so they can be more productive. Accidents can be avoided so as to ensure that the hospital provides full and normal service to ensure the quality of service to customers.

### **4. Value of SMK3 for Employees**

The value obtained for employees in implementing SMK3 in Karawang Hospital is seen from the main purpose of implementing SMK3 is to protect workers from all forms of work-related accidents (KAK) and occupational diseases (PAK). However, employees are the company's most important asset. By implementing K3 the number of accidents can be reduced or eliminated altogether, this will also benefit the company, because workers who feel safe from the threat of work accidents and occupational diseases will work more enthusiastically and productively.

## **Analysis of SMK3 in Karawang Hospital**

### **1. Commitment and Policy of SMK3 in Karawang Hospital**

The commitment and policy of the Karawang Hospital management in implementing Occupational Safety and Health (K3) is realized by establishing a hospital occupational safety and health installation. Commitments and policies in the implementation of occupational safety and health have been written and signed by the hospital director. Next, the researcher asked about the commitments and policies in the Karawang Hospital to the interviewees as follows:

Informant 1

“Hospital management's commitment related to K3RS has been realized in written form regarding K3 which follows the Regulation of the Minister of Health No. 66 of 2016 and PP No. 50 of 2012, in addition, funding related to K3RS and K3RS facilities has been carried out. K3 efforts against work accidents have also been carried out by reducing risks through the use of PPE”. “The Karawang Hospital already has an organization that is responsible for organizing or implementing K3 namely the K3RS committee/Installation and there are already hospital human resources who have received K3RS training, although not all members have received training. The current K3 human resources do not meet the needs of the workforce in the hospital, where there are still employees who have double jobs and do not have an K3 background. RSUD Karawang also uses a budget that comes from the hospital's APBDN and BLUD funds. Where the allocated funds are sufficient for the work safety program at K3RS. Karawang Hospital also has Complete PPE, where cabinets and PPE storage boxes are available in every room. And for existing facilities, repairs will be made if there are reports of damage from the room.”

Informant 2

"The policy of the Karawang Hospital has been facilitated, especially for workers by applying the mandatory use of PPE (gloves, masks, etc.) when exposed to patients and visitors, and procedures in every job already exist, and we also make rules that all employees are obliged to carry out their work. in accordance with standard operating procedures that have been set by the Regulation of the Minister of Health No. 66 of 2016 and PP No. 50 of 2012, later from the K3 Installation or from the PPI Hospital there will be someone who supervises every work, so later if there are employees who do not follow the procedures we will give a warning, and if it continues, we will give a warning letter".

Based on the results of the interview seen from the statements of the informants above, the Karawang Hospital in the Occupational Safety Regulations and Procedures has been going well, the regulations regarding K3 at the Hospital have been well organized based on the Minister of Health Regulation No. 66 of 2016 and PP No. 50 of 2012, structured and easy to understand and reviewed against the relevant K3 regulatory policies and procedures. In regulations, the implementation of regulations on work safety has a significant effect on the success of SMK3, this is evidenced by the Karawang Hospital by establishing regulations on work safety properly and correctly, it will help the success rate of implementing the Management System Occupational safety and health.

## 2. Planning for SMK3 in Karawang Hospital

In planning for SMK3 at RSUD Karawang, an effective plan must be made in order to achieve the successful implementation of an OHS management system with clear and measurable targets. OHS planning in hospitals can refer to the standards of the Hospital OHS Management System, including self-assessment of Hospital K3 accreditation and SMK3 following the results of interviews with informants:

Informant 1

"In planning the implementation of K3 at the Karawang Hospital, the first thing the K3 installation does is identify problems or potential hazards where to find out where the place or environment causes accidents, where the identification results are made a report once a year in the hospital risk management program".

Informant 2

"The implementation of the program is based on the readiness of the equipment and the determination of the program is based on the results of meetings with other units and from the reports given the main priorities are made which will later be used as a work program by K3RS".

Informant 3

"We are the hospital and the installation"

K3RS collaborates to plan programs on occupational safety and health for employees where work safety signs are installed in every corner of the hospital that has potential hazards, and employee health checks are always carried out every 6 months or once a year to find out whether the employee is exposed to work-related diseases or not, and for the workers we have completed everything so that workers are always safe and secure".

From the results of the interview, it was found that the OHS Planning had been carried out with various underlying reasons, the informant's answer was dominated that the planning was carried out by conducting an initial analysis and determining the priority

of the problem or source of the hazard. And the implementation of PPE equipment for workers has been fulfilled and PPE equipment for workers is also one of the indicators that supports the success rate of implementing the occupational safety and health management system, if you look at the Karawang Hospital, the plan for the work equipment needed includes signs that can bind workers to work. be more careful, and the need for PPE that can protect workers from work accidents.

### 3. Organization of SMK3 in Karawang Hospital

In a clear division of tasks by determining the position of personnel, an organizational structure for the K3 installation is made so that each personnel can carry out their functions. Some of the informants' opinions regarding the organization of K3 at the Karawang Hospital:

Informant 1

“The personnel who manage the K3 installation have been appointed by the Director of the hospital, but they are still in the form of double jobs. For example, he is the Sanitation Coordinator who also serves as a K3 field officer to monitor the hospital fire system, and the work safety system for employees. The personnel assigned to manage the installation have been taken from people who have a special educational background for K3”.

Informant 2

“For the K3 installation personnel, some already have an K3 background or certificate but there are 3 K3 personnel who do not yet have a basic knowledge of hospital K3. And there are 4 K3 personnel who have workers double job in K3 and sanitation installations for waste transportation”.

From the results of the interview, it was obtained that in PP No. 50 of 2021 it is explained that every hospital is obliged to make an organizational structure for K3 or P2K3 where the organization is tasked with carrying out occupational safety and health management and supervising the implementation of K3 by hospital workers. In the implementation of the organization at the Karawang Hospital, there is already a K3 organization which can facilitate the division of work according to the field and can support the success rate of implementing a work safety management system.

### 4. Application of SMK3 in Karawang Hospital

The implementation of occupational safety and health in hospitals has stages including; preparation, planning, implementation, evaluation, review and improvement stages. Opinions from interviews with informants regarding the application of K3 in RSUD Karawang as follows:

Informant 1

"We are Karawang Hospital in implementing the K3RS implementation, where the director of the Karawang Hospital himself has prepared an K3 organization, so that the implementation of the SMK3RS can be carried out according to a predetermined plan. In the implementation of SMK3RS, what has been done at the Karawang Hospital is to hold a medical check-up, namely an initial examination for workers and periodic checks for employees as well as Hepatitis B immunization and Covid 19 vaccination. In preventing the occurrence of work accidents within the Karawang Hospital. The Karawang Hospital also conducts training for employees, such as the use of work tools, how to use fire extinguishers, training in the event of a disaster, training on the use of PPE, monitoring

whether workers are working according to SOPs, using hazardous chemicals (B3), and implementing a fire hazard management system. In the results of interviews, it was found that at the Karawang Hospital, most of the steps for implementing SMK3 had gone well at the Karawang Regional Hospital where the hospital had stated a commitment, carried out K3 counseling to workers, implemented K3 programs such as providing PPE, health checks, and treating workers who were sick. sick by providing BPJS services.

#### 5. SMK3 audit at Karawang Hospital

In carrying out this evaluation (audit) to determine the effectiveness of the implementation of SMK3 in the workplace, the results of interviews from several informants were as follows:

##### Informant 1

"We at the Karawang Hospital for audit issues are divided into 2 internal audits, namely from the K3 Installation itself which checks for work safety every month, 3 months, or 6 months, and there is an external audit where the hospital accreditation itself is once a year. carried out by the MFK Audit team from outside the Hospital".

##### Informant 2

"Where the results of internal and external audits will be documented or followed up on the findings obtained, after that we from the RSUD will fix whatever is lacking or be improved from the hospital in the future".

In the interview results obtained where the Karawang Hospital must verify this aims to ensure the core elements of the K3 program have been fully implemented and review the audit results whether there are deficiencies in the program that has been implemented so that the implementation of the occupational safety and health management system can run properly and in accordance with PP No. 50 of 2012.

## DISCUSSION

### Commitments and Policies

Based on the results of the study, it can be concluded that the commitment and policies of the Karawang Hospital in the Occupational Safety Regulations and Procedures have been going well but are still in written form, the regulations regarding K3 at the Hospital have been well organized based on the Minister of Health Regulation No. 66 of 2016 and PP No. 50 of 2012, structured and easy to understand and reviewed against the relevant K3 regulatory policies and procedures. In regulation the implementation of regulations on work safety has a significant effect on the success of SMK3, this is evidenced by the Karawang Hospital by establishing regulations on work safety properly and correctly will help the level of success of the implementation of the Occupational Safety and Health Management System. PPE for employees to avoid work accidents and hospitals have completed work SOPs in each work unit. This research is also in line with previous research according to Wati, N. Dkk. (2017). With the research title Analysis of Occupational Safety and Health Management Systems at the Mukomuko Regional General Hospital in 2017, it states that the results of the study can be concluded that the commitment of the Muko-Muko Hospital related to K3RS is only an initial commitment that is expressed verbally, but the commitment has been realized in written form is proven by the issuance of a decision letter from the Director of Hospital regarding K3. Which is specifically about K3. However, policies regarding structure and organization have been

formed and several work programs have been implemented, although not yet fully. In addition, funding related to K3RS and facilities such as personal protective equipment is complete.

#### Planning

The research concluded in planning the implementation of SMK3 seen from SMK3 Karawang Hospital which has established a planning program has followed the Minister of Health Regulation No. 66 of 2016, which stipulates that K3 planning according to requirements must pay attention to initial identification, by estimating potential hazards, how to control them. Then formulate a program with clear goals. In addition, the Karawang Hospital has followed the regulations of PP No. 50 of 2012 it is explained that companies must make effective plans and contain goals, targets and performance indicators. Karawang Hospital has significantly set OHS goals and objectives. RSUD Karawang has also outlined the timeframe and responsibilities for achieving the goals and objectives of the K3 program and documenting it. This research is also in line with previous research conducted by Wati, N. Etc. (2017). With the research title Analysis of Occupational Health and Safety Management Systems at the Mukomuko Regional General Hospital in 2017, it states that the results of the study can be seen that the Muko-muko Hospital has identified potential hazards that may occur to workers, including contracting infectious diseases when in contact with patients. . Follow-up from the hospital is the installation of safety signs, immunization of employees, namely Hepatitis B and providing personal protective equipment. In addition, workers are required to follow the SOP for every existing job to prevent work accidents. Some things are in accordance with the SMK3 guidelines in hospitals, where in this guideline it is stated that planning includes:

- a. Identification of hazard sources, assessment and control of risk factors. Hospitals must conduct studies and identify sources of hazards, assess and control risk factors.
- b. Making regulations by setting and implementing standard operating procedures (SOPs) in accordance with regulations. Meanwhile, other planning parts have not been implemented, such as:
  - 1) Hospitals must consider statutory regulations, potential hazards and measurable OHS risks, units/indicators of measurement, achievement targets and timeframe for achievement (SMART).
  - 2) Performance indicators must be measurable as a basis for evaluating K3 performance which is also information about the success of achieving SMK3 RS.
  - 3) The hospital must establish and implement the K3RS program, to achieve the target there must be monitoring, evaluation and recording and reporting.

#### Organizing

The results of the study where the researcher stated that in the implementation of the organization at the Karawang Hospital there was already a K3 organization which could facilitate the division of work according to the field and could support the success rate of implementing a work safety management system. The organizational structure of the Karawang Hospital already has an K3 committee responsible for occupational safety and health activities at the Karawang Hospital, but because of the double job of K3 members, the implementation of the program is not optimal. The Karawang Hospital has completed its organizational structure with the issuance of a decree for the establishment of an

occupational safety and health executive committee based on the Decree of the Director of the Karawang Regional General Hospital Number:

445.1/Kep.72/Sekrt/2016 which was set in Karawang on February 24, 2016. This research is in line with previous research by Arikhman, N. Dkk (2020) in the research title Analysis of Application of Occupational Safety and Health in Work Safety Programs at Home The Sungai Dareh Regional General Hospital, stated that the organizational structure of the Sungai Dareh Hospital already has an K3 committee responsible for occupational safety and health activities at the Sungai Dareh Hospital, but because of the double job of the K3 members the program implementation is not optimal. Coordination between members of the K3 committee is usually carried out at coordination meetings or more often through group chats that have been provided.

#### Application

In the results of interviews, it was found that at the Karawang Hospital, most of the steps for implementing SMK3 had gone well at the Karawang Regional Hospital where the hospital had stated a commitment, carried out K3 counseling to workers, implemented K3 programs such as providing PPE, health checks, and treating workers who were sick. sick by providing BPJS services. This research is in line with previous research conducted by Wati, N. Etc. (2017). With the research title Analysis of Occupational Health and Safety Management Systems at the Mukomuko Regional General Hospital in 2017, stated that in In the implementation of K3RS, the Director of the Muko-Muko Hospital has arranged an K3 organization, so that the implementation of the SMK3RS can be carried out according to the predetermined plan. The implementation of SMK3RS that has been carried out at the Muko-Muko Hospital is to hold a medical check-up, namely an initial examination for workers as well as Hepatitis B immunization and providing health insurance. To prevent work accidents, Muko-muko Hospital conducts training for employees, such as using work tools, PPE, making SOPs, using hazardous chemicals, and implementing a fire protection system.

#### Audit

In the results of the audit research conducted by researchers, the Karawang Hospital has audited and evaluated internally or externally. internal audit on RSUD Karawang which is carried out by the K3 Installation committee while the external audit is carried out after an internal audit by the relevant institution (Team MFK) once a year. As for the things that must be improved from the results of the external audit, among others, being asked to implement the OHS program consistently. Where the results of the audit and evaluation will look at the shortcomings of the K3 Program, and correcting the shortcomings of the K3 program aims to improve the K3 program that is no longer relevant to be more effective or add a new K3 program so that the occupational safety and health management system runs as expected. This research is in line with previous research researched by Marfiana, P. (2020) in the title Overview of the Occupational Health and Safety Management System at Hospital "P", stating that the SMK3 audit is appropriate and is carried out at least once a year by the internal auditor. The division of skills development is carried out regularly, while in PP no. 50 of 2012 has explained that employers are required to monitor and evaluate K3 performance through

inspection, testing, measurement, and internal audit of SMK3 and carried out by competent human resources, if they do not have competent human resources they can use the services of other parties.

## **CONCLUSION**

Based on the results of data analysis, conclusions can be drawn regarding the application of the occupational health and safety management system at the Karawang Hospital as follows:

1. The commitment and management policy of the Karawang Hospital to the implementation of K3 has existed and is written, the facilities and infrastructure that support the implementation of K3 have been fulfilled. While the K3 policy at this hospital is the appointment of the K3 Installation as an officer who oversees the implementation of K3 in this hospital.

2. OHS planning at the Karawang Hospital has been going well, starting from risk identification to risk management. In addition, workers are also required to follow SOPs every time they do their work, and workers have been facilitated with complete PPE by the hospital.

3. The K3 organization at the Karawang Hospital has been formed and has carried out their respective duties and functions, but it is still found that workers from the K3 installation have double jobs where the implementation of the SMK3 program is not optimal.

4. Implementation of K3 Most of the steps for implementing SMK3 have been going well at the Karawang Hospital where the Hospital has stated a commitment, K3 organizations have been formed, conducting K3 counseling to workers, implementing K3 programs such as providing PPE, health checks, and treating sick workers with provide BPJS services.

5. The K3 audit at the Karawang Hospital has been running, which has been running Internal and external audits to find out what are the shortcomings of the K3 program and further correct the shortcomings of the K3 program aimed at improving the K3 program.

## **REFERENCES**

[Adorno, Theodor W.](#) (2021). The meaning of working through the past. In *Remembering the Holocaust in Germany, Austria, Italy and Israel* (pp. 157–169). Brill.

[Anastasopoulos, G. I., Ramakrishnan, P. S., & Anastasopoulos, I. G.](#) (2019). Improving Performance of Testing Laboratories—A Statistical Review and Evaluation. *International Congress and Exhibition " Sustainable Civil Infrastructures "*, 16–34. Springer.

[Berberoglu, Aysen.](#) (2018). Impact of organizational climate on organizational commitment and perceived organizational performance: empirical evidence from public hospitals. *BMC Health Services Research*, 18(1), 1–9.

[Berzins, Janis, Bøhren, Øyvind, & Stacescu, Bogdan.](#) (2018). The under-researched family firm: New insights from unique Norwegian data. *At the Forefront, Looking Ahead*, 99.

[Bondroini, S., Kurniawan, Fredy, & Tistogondo, Julistyana.](#) (2020). Implementation of Occupational Health and Safety Management Systems (SMK3) in Development Projects Mall and Apartments " X" in Surabaya. *ADRI International Journal of Civil Engineering*, 5(2), 39–47.

[Einstein, Herbert H.](#) (2018). Landslide risk—systematic approaches to assessment and

- management. In *Landslide risk assessment* (pp. 25–50). Routledge.
- French, Jeff, Deshpande, Sameer, Evans, William, & Obregon, Rafael. (2020). Key guidelines in developing a pre-emptive COVID-19 vaccination uptake promotion strategy. *International Journal of Environmental Research and Public Health*, 17(16), 5893.
- Fujianti, Poppy, Andarini, Desheila, Aprilisa, Sarah, Lestari, Mona, & Camelia, Anita. (2020). *Safety Analysis of Light Rail Transit in Palembang*.
- Kim, Jaewan, Oh, Jinwoo, & Lee, Hoseong. (2019). Review on battery thermal management system for electric vehicles. *Applied Thermal Engineering*, 149, 192–212.
- Ledford, Heidi. (2021). COVID vaccines and blood clots: five key questions. *Nature*, 592(7855), 495–496.
- Listyowati, Wiwin Wiwin. (2021). Overview of The Implementation of Occupational Health and Safety (OHS) in Preventing The Transmission of Covid 19 in PT PKUA Bogor West Java 2021. *Muhammadiyah International Public Health and Medicine Proceeding*, 1(1), 491–498.
- Manuaba, Ida Ayu Pradnyani Utami, & Darma, Gede Sri. (2021). Examining recruitment strategies and millennial employee selection. *International Research Journal of Management, IT and Social Sciences*, 8(1), 110–122.
- Nasution, A. D., & Mahyuni, E. L. (2020). *Hospital Occupational Safety and Health Management System based on Internet of Things (IoT)*.
- Neke, Nyasule Majura, Gadau, Gema, & Wasem, Jürgen. (2018). Policy makers' perspective on the provision of maternal health services via mobile health clinics in Tanzania—Findings from key informant interviews. *PloS One*, 13(9), e0203588.
- Polii, Intama Jemy, Wuisang, Jerry Rommy Herter, & Wuisang, Justien R. R. (2021). Implementation of Quick on the Draw Strategy in Learning to Understand Description Text Information. *Society*, 9(1), 140–150.
- Prasetya, Tofan Agung Eka, Junaedi, Tiyyar, & Prihanto, Mas Udi. (n.d.). *Implementation of Patient Safety Program as a Prevention and Controlling Health Care-Associated Infection (Hais) Effort in Outpatient and Inpatient Room Of Radjiman Wediodiningrat Mental Hospital*.
- Sears, Jeanne M., Blonar, Laura, Bowman, Stephen M., Adams, Darrin, & Silverstein, Barbara A. (2013). Predicting work-related disability and medical cost outcomes: estimating injury severity scores from workers' compensation data. *Journal of Occupational Rehabilitation*, 23(1), 19–31.