

Analysis Of Work Shift Arrangements At Agung Raya Company

Calvin Kimura¹, Christian Wiradendi Wolor¹, Marsofiyati¹

¹Digital Office Administration, Universitas Negeri Jakarta, Indonesia

²Universitas Negeri Jakarta, Indonesia

³Universitas Negeri Jakarta, Indonesia.

Abstract

The purpose of this study is to analyze the shift system used in Agung Raya company, determine its impact on employees and develop strategies to reduce the negative impact of the shift system. This research used a descriptive qualitative approach with observation, interview and written data collection methods. Data were analyzed using interactive analysis techniques and purposive sampling techniques were used to identify informants. The results showed that shift work has a significant impact on employee health and well-being. The shift system implemented has considered aspects such as rest time between shifts, schedule rotation, and workload management. However, some aspects still need to be optimized to further improve employee well-being. This research provides practical recommendations for companies to manage work shift systems and contributes to the advancement of human resource management research.

Keyword: shift system; agung raya company; employee

1. Introduction

Technological developments bring benefits and convenience to human labor, but also bring problems that require special attention. Technological developments encourage humans to mobilize all their potential to develop themselves and use available equipment and resources to meet the physical and psychological needs of life. Work is a human need. Their needs vary, develop and change. A person works because there is something to achieve and people want their work activities to be more satisfying than before. Because human resource management is part of the business environment, the definition of human resource management can be concluded as follows Human resource management is the activity of regulating how human resources are obtained, developed, rewarded, integrated, maintained, and separated through the management process so that the organization achieves its goals (Ratih et al., 2020)

Every company has goals to achieve. They can achieve these goals by using the resources they have. Although there are many important resources in the company, however, what most determines the excellence of a company is human resources and how they are managed (Timur, 2019)

A few years ago, the industrialized world has demanded the optimization of resource use to increase production. As a result, employees have to work longer hours. One way of doing this is by implementing shift work or hiring employees who work more than the set time. Shift work affects occupational health and safety. This is related to circadian rhythms, also known as cyrcadia rhythms, which are associated with work accidents (Ratih et al., 2020)

According to (Suma'mur, 2014), shift time sharing is a pattern of activity times designed to organize employee performance, usually divided into morning, afternoon, and evening activities. Shift division is necessary in organizations to achieve goals that require employees to work sequentially in the morning, afternoon and evening. Therefore, shift arrangements in company operations have the potential to improve and utilize the possibilities available to employees to live physically and psychologically in the workplace and the activities therein can be transformed into a more satisfying situation than before.

The work shifts performed by employees in the company are organized based on human resource management (HRM) and human resource management is part of the business environment. The goal of human resource management is to increase the productive contribution of people within the company through various strategic, ethical, and socially responsible methods. The implementation of a shift system provides both economic and social benefits. There are internal regulations designed to have a positive impact on the company. These regulations are those made under the Government's labor laws and those made by the company itself. Law No. 11 of 2020 on Job Creation (Job Creation Law) explains that companies must choose between two schemes for the treatment of working hours: first, seven hours a day and six working days per week, and second, eight hours a day and five working days per week (Salfa Mei Dianawati et al., 2023)

The purpose of this study is to analyze the shift work system implemented at PT Agung Raya, and to determine the impact of the system on the physical, mental and social health of employees. In addition, this study aims to provide recommendations for strategies that can be implemented to reduce the negative impacts of shift work, while increasing employee

productivity. Therefore, this research is expected to provide valuable information to the management in managing a better case system.

2. Literature Review

2.1 Shift Work

The term “shift work” is adapted from English, where the word “shift” means “to move” or “to rotate”. In an employment context, “shift” refers to a specific period of time during which a group of workers work, and a shift work system involves working or moving in rotation between different work periods. In a shift work system, workers work at different times of the day and night to keep the business running, especially in sectors that require uninterrupted service or continuous production. Workers take turns filling different shifts, such as morning shift, day shift, and night shift, thus ensuring that the business or organization continues to operate efficiently for 24 hours a day. There are various reasons why businesses are turning to shift work. The main reasons include maximizing productivity, managing workload, saving energy and resources, improving customer service, managing safety, and providing work-life balance. However, it should be noted that while shift work schedules have benefits, they can also pose challenges, such as the impact on employee health, changes in sleep patterns, and work-life balance. Therefore, companies often need to carefully consider how they plan, manage, and support employees in shift work programs to ensure optimal well-being and productivity (Semnasti et al., 2023)

2.2 Effects of Shift Work

According to Fish cited by (Firdaus, 2005), the effects of shift work include:

a) Physiological effects

- 1) Sleep quality: daytime sleep is not as efficient as nighttime sleep and experiences many disturbances, usually having to take time off work to compensate for sleep deprivation during night shifts.
- 2) Decreased physical performance due to drowsiness and fatigue.
- 3) Decreased appetite and indigestion.

b) Psychosocial effects

The consequences are greater than just physiological problems and include disruption of family life, loss of leisure time, reduced opportunities to socialize with friends and disruption of group activities in the community. (Saksono in Syafar & Fiatno, 2018) argues that night work affects community life. Night work is usually done in the afternoon or evening. For night workers, this time is used for rest and sleep, so they cannot actively adapt to the social environment.

c) Performance effects

During night shifts, performance is reduced due to physiological and psychosocial effects. Reduced work capacity leads to reduced mental capacity, which affects professional behaviors such as quality control and monitoring.

d) Effects on health

Shift work can cause digestive problems, and these problems tend to occur between the ages of 40-50. Shift work also has a negative effect on the blood sugar balance of diabetics.

e) Effects on occupational safety

A study conducted by (Smith in Syafar & Fiatno, 2018), on the impact of shift work on occupational health and safety reported that the highest number of accidents occurred at the end of the work shift (night), with an average of 0.69% accidents per worker. However, not all studies mentioned that an increase in the frequency of occupational accidents occurred on night work shifts. However, not all studies mention that an increase in the frequency of occupational accidents occurs on night shifts. In fact, accidents tend to occur more frequently in the morning shift and less frequently in the night shift.

3. Material and Method

3.1 Design Study

This research uses a qualitative approach. Qualitative research is descriptive research and tends to use an inductive approach to analysis. In qualitative research, more emphasis is given to the process and perspective of the subject. In qualitative research, theoretical evidence is used as a guide to ensure that the research focus is aligned with reality in the field, but theoretical evidence is also useful as an overview of the research context and a resource for discussing research findings (Hasan et al., 2022).

Qualitative research methods are one of the most widely applied research designs in various research fields, especially to explore the experiences of research subjects and informants (Raskind et al., 2019). Qualitative research methods focus on the perspectives, experiences, and behaviors of different participants in survey research (Schmieder, 2020). Qualitative research applies methods that are not much different from quantitative research, including the data collection process and the data analysis process. Specific differences are found in the way of extracting data from informants and in-depth research subjects. Research applying qualitative methods requires comprehensive and detailed examination of information (Quirkos, Edinburgh, United Kingdom et al., 2021).

Data collection includes individual interviews, group interviews, direct observation, and document analysis (Mataji Amirroud et al., 2023). Direct interviews to obtain individual perceptions, group interviews to provide insight into shared norms and views (Moolman et al., 2023). Direct observation aims to facilitate understanding of the behavior of participants and informants. Documentary data sources allow for meta-analysis of data and finding patterns in the documents obtained according to research needs (Mahmudah et al., 2022).

3.2 Data Validity Technique

Data validity is a criterion for the truth of research data that emphasizes data/information rather than attitudes or the number of people. In essence, data validity in research focuses only on checking validity and reliability. There is a fundamental difference between quantitative and qualitative research in terms of validity and reliability. In quantitative research, validity and reliability are tested by using research instruments to obtain valid and reliable data. In contrast, in qualitative research, it is the data that is validated. In qualitative research, findings and data can be considered valid if there is no difference between what the researcher reports and what actually happens to the research subject (Husnullail & Jailani, 2024).

Source triangulation refers to research that uses data from different sources using the same methodology in data collection to check data validity through data verification (Ule et al., 2023). In this study, researchers obtained data sources provided by several employees from

related departments to ensure the suitability and similarity of the data needed for this study. In addition, this study uses triangulation techniques in collecting data through observation, interviews and documentation related to the data needed for this study.



Figure 3.1 Data Validity Technique

3.2 Data Analysis

Data analysis is the process of measuring and organizing a sequence of data into a pattern, category and basic description. Therefore, data analysis must be carried out from the early stages of data collection in the field and carried out intensively to ensure that all data are collected in the field (Moleong in Nurdewi, 2022). This research uses Miles and Huberman's interactive modeling approach for data analysis and involves four stages, namely data collection, data reduction, data presentation, and conclusion/validation (Utomo, 2021) as follows :

1. Data Collection

Data collection is the search, recording, and collection of everything that is objective and as it is, from the results of field observations and interviews, namely recording data from the field in various formats.

2. Data Reduction

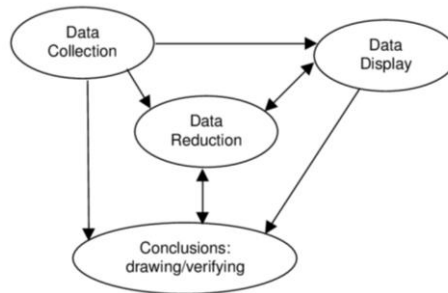
Data reduction is the process of selecting or sorting, focusing and simplifying all types of information that form the basis of survey data obtained or recorded during the field data research process. Basically, data reduction is a step in qualitative data analysis that aims to clarify, categorize, direct, clarify, and focus by discarding the less important and simplifying the more important ones (Zulfirman, 2022).

3. Data Presentation

Data presentation is a process of summarizing information that allows conclusions to be drawn in qualitative research, and the presentation of this data can be in the form of simple explanations or diagrams. Presentation of data helps researchers to understand the problem at hand and plan further action based on the knowledge gained.

4. Verification or Conclusion

Drawing conclusions is the final process in the steps above. Conclusions are drawn based on data that has been analyzed and data that is reinforced by facts obtained at the research location. In this stage, the researcher draws conclusions related to work shift arrangements at PT Agung Raya.



From: Huberman, A.M. & M.B. Miles (1984). *Qualitative Data Analysis*. Beverly Hills: Sage.

Figure 3.2 Qualitative Data Analysis (Miles & Huberman, 1984)

4. Result

4.1 Data Description

This research uses a qualitative approach to analyze work shift arrangements at PT Agung Raya which operates in the field of logistics and warehousing located in North Jakarta. The company has several divisions. Four people from various divisions participated in this research, namely supervisor, leader, admin, and surveyor.

Table 4.1 Participant Data

No	Participant	Length of Service	Position
1	Participant A	5 Years	Admin
2	Participant B	3 Months	Surveyor
3	Participant C	6 Years	Leader
4	Participant D	8 Years	Supervisor

4.2 Data Result

To gain an in-depth understanding of the work shift arrangement at PT Agung Raya, the researcher collected data through observation, interviews, and documentation. During the interview process, the researcher developed a series of questions to discuss the research topic.

The questions were addressed to four participants relevant to this research. In the interviews, participants provided answers regarding their perceptions and views on the work shift arrangement at PT Agung Raya. The purpose of these interviews was to obtain data and information directly from informants in the field regarding work shift arrangements at PT Agung Raya.

1. Work Shift System

The work shift system is an important aspect of human resource management to optimize productivity and employee welfare. To better understand the implementation of the shift system at PT Agung Raya, researchers conducted interviews with several participants from various divisions. The following are their views on the existing work shift arrangements:

Participant A: “The company has a shift system that is enforced every week. For example, if an employee works the morning shift this week, then the following week will work the night shift.”

Participant B: “The work system at Agung Raya is divided into two shifts, namely morning shift and night shift. The morning shift runs from 07:00 to 17:00, while the night shift is from 21:00 to 06:00.”

Participant C: “The work system consists of two shifts, with shifts changing every week. In one working week, employees work for five days, where they switch between morning shift and night shift every week.”

Participant D: “At PT Agung Raya, we implement a shift system that is divided into two types, namely morning shift and night shift. This ensures that all employees have equal opportunity to work in both shifts, which also contributes to the smooth running of the company.”

2. Pros and Cons of the Shift Work System

The shift work system has various advantages and disadvantages that need to be considered to create a balanced work environment. Some of the advantages of a shift work system are the flexibility it offers to employees, allowing them to customize their working hours to suit their individual needs. In addition, this system can also increase the company's productivity by ensuring operations continue to run without interruption. But on the other hand, there are also significant disadvantages.

The shift work system implemented at PT Agung Raya has various advantages and disadvantages that are felt by employees. The following are their responses regarding the experience of working in this system.

Participant A: “For the morning shift, the advantage is that employees get Saturday and Sunday off. As for the night shift, there are some disadvantages, especially regarding rest time at home. Employees on the night shift start work at 21:00 and go home at 06:00, then return the same night. This means that time at home is more limited and only sufficient for physical rest, making it impossible to do other activities.”

Participant B: “There are several advantages and disadvantages related to the night shift at PT Agung Raya. One of the advantages is that employees can carry out activities or fulfill needs that cannot be done during the morning shift. However, the disadvantage of the night shift is the drowsiness that is often experienced during work.”

Participant C: “The morning shift has advantages, namely when work is running normally and there is no overtime, we can go home early and meet with family. On the other hand, night shifts also provide an opportunity to meet family in the morning. However, one of the disadvantages of night shifts is that sleep patterns often change.”

Participant D: “The shift work system has advantages such as work flexibility and increased productivity. However, the disadvantages include negative effects on health, sleep disturbances and impact on employees' social lives. Frequent schedule changes also increase stress levels. Therefore, despite the operational efficiency of this system, it is imperative to take care of the well-being of employees.”

3. Impact of Shift Work

Work shifts can have various impacts, both positive and negative, on employee health. On one hand, a good shift system can improve productivity and performance. But on the other hand, negative impacts such as sleep disturbances, stress, and physical and mental health

problems often stem from irregular work schedules. Research shows that shift workers often have difficulty regulating their circadian rhythms, which can lead to insomnia and chronic fatigue. This is important to note, as employee health greatly affects their performance and productivity at work.

Shift work has various impacts on employees, both physically and mentally. The following interview results show how employees feel these impacts in their daily lives:

Participant A: “I have experienced insomnia, especially during the transition from morning shift to night shift. It lasted for one year, so it started in January and only felt in December. For other activities, nothing was disturbed.”

Participant B: “Because I have a family, when I do the night shift, I need to sleep to prepare for activities. However, because I have a toddler, my sleep is often disturbed by my child.”

Participant C: “Actually, nothing is disturbed, because I only work five days a week, so I still have two days off. On Saturday and Sunday, I can still socialize and meet up with my family, so it's still safe.”

Participant D: “I often have to lead the team on the night shift. Although I don't have a problem with sleep myself, I find that many team members have difficulty adapting. I try to create a supportive work environment by giving them enough time to rest and providing schedule flexibility. This is especially important at night to keep them productive.”

4. Strategies that can be implemented

By knowing the arrangements and impacts of shift work, it is important to formulate a strategy that PT Agung Raya can implement to reduce the negative impacts. These strategies aim to improve employee welfare while maintaining company productivity. In an effort to improve the effectiveness of the shift work system and reduce its negative impacts, participants provided input on strategies that PT Agung Raya could implement. Here are their views:

Participant A: “For shift issues, the most important thing is communication between shifts. Ideally, each shift should complete its tasks, so that when the night shift comes in, the work from the morning shift has already been completed. This makes us feel more comfortable and in a better mood. However, if the opposite shift is not paying attention to their performance and the work is not finished, we have to finish it and it affects our mood.”

Participant B: “Nothing, it's good enough.”

Participant C: “Perhaps when working shifts, there needs to be additional motivation, such as facilities, accommodation, and shift money. These things provide a plus point for employees who work in the shift system.

Participant D: “It is important to provide proper support to employees who work shifts. One way to do this is through time management and stress management training, which helps them better organize their sleep and work routines. We also try to provide access to convenient facilities such as quiet break rooms and healthy food. This helps to improve employee well-being during night shifts.”

5. Discussion

5.1 Work Shift System at PT Agung Raya

PT Agung Raya implements a shift work system with the aim of maintaining the company's operational continuity for 24 hours. This shift system is divided into two types: morning shift (07:00 to 17:00) and night shift (21:00 to 06:00), and the shifts change every week. Based on interviews with participants, this shift rotation provides a fair opportunity for

employees to work two hours while maintaining the company's operational productivity. This work system is tailored to the needs of industries that require smooth operations (Semnasti et al., 2023) While this scheme is considered operationally effective, employees face a number of challenges, particularly the impact on their physical and mental health. This is in line with previous research which shows that shift work can disrupt circadian rhythms and cause health problems such as insomnia and chronic fatigue (Syafar & Fiatno, 2018).

5.2 Pros and Cons of the Shift Work System

The work shift system at PT Agung Raya has several advantages that are felt by the employees. The morning shift allows employees to enjoy time with family & complete exclusive tasks outside of work. Meanwhile, the night shift provides flexibility for employees to fulfill exclusive needs during the day. Additional incentives for night shift employees are also one of the attractions according to this system (Winarsunu in Marchelia, 2014)

However, this system also has significant drawbacks. Night shifts, for example, often result in sleep disturbances, fatigue, & increased stress. This condition has an impact on the work productivity and social life of employees. In addition, the uncertainty of the work schedule can make it difficult for employees to manage the time between work & exclusive life (Tjendera & Yulia, 2020). These impacts need to receive focused attention by management so that permanent employee welfare is maintained.

5.3 Impact of Shift Work

The impact of shift work at PT Agung Raya appears to vary depending on individual circumstances and the support employees receive. Some employees reported having difficulty sleeping and feeling tired, especially during shift changes. This is consistent with research showing that shift work, especially night shifts, increases the risk of sleep disorders and other health problems (Lee et al., 2017).

From a psychosocial perspective, shift work also affects employees' social lives. Erratic work schedules make it difficult for some workers to maintain social relationships, which in turn has an impact on their mental health (Firdaus, 2005). Therefore, a holistic approach is needed to reduce these negative impacts, including providing convenient break options and stress management training.

5.4 Strategies to Reduce the Negative Impact of Shift Work

To reduce the negative impact of shift work, PT Agung Raya can implement the following strategies:

1. Communication between shifts: Ensure each shift completes tasks on time before handover and communicates with the next shift to function optimally without additional burden. (Suma'mur, 2014)
2. Increased incentives: To increase employee motivation and well-being, provide additional incentives such as overtime pay and supporting facilities such as healthy food and comfortable break rooms.
3. Time and Stress Management Training: Provide training to help employees better manage their sleep and work routines. This strategy has proven effective in reducing fatigue and increasing productivity (Syafar & Fiatno, 2018).
4. Fair Shift Change: Ensure fair shift changes to avoid excessive employee fatigue.

6. Conclusion, Implication, and Recommendation

6.1 Conclusion

Based on the results of research on the work shift system at PT Agung Raya, it can be concluded that the following are the main points:

1. The work shift system at PT Agung Raya is designed to be divided into two shifts (morning and afternoon) alternating every week. Although effective in maintaining business operations 24 hours a day, this system still has challenges due to the disruption of employees' circadian rhythms, especially when working at night.
2. Morning shifts give employees the opportunity to enjoy family time and personal activities. In contrast, night shifts offer flexibility during the day but often have a negative impact on employees' sleep, health and social life.
3. Shift work has a significant impact on physical health, such as fatigue and sleep disturbances, as well as mental health, such as stress and impaired work-life balance. - personal life. These disruptions are especially pronounced during team changes or over long periods of time.
4. To reduce negative impacts, better management strategies are needed, such as improving communication between teams, providing additional incentives, providing stress management training and support facilities. This approach will not only improve employee well-being but also company productivity.

6.2 Implication

This research makes a significant contribution to the development of theory in the field of human resource management, especially in the context of shift work. The theoretical conclusion that can be drawn from this is that the shift work system has a direct impact on the physical and mental health of employees and can ultimately affect their productivity. Therefore, the results of this study support the circadian rhythm theory that work rhythm disturbances can cause various health problems (Grandjean in Supomo, 2014). In addition, these findings also support previous research which states that shift work is associated with an increased risk of mental and social health disorders (Syafar & Fiatno, 2018) and (Lee et al., 2017). In practice, PT Agung Raya and other companies that implement shift work systems can use the findings from this study to develop policies that better support the health of their employees. Suggested practical steps include providing training and stress management programs to help employees cope with the challenges of shift work, and regularly revising shift schedules to ensure employees get adequate rest. This includes reviewing and adjusting shift schedules. Furthermore, providing additional incentives to night shift workers can be a form of appreciation for their contributions. Finally, ensuring effective communication between shifts is important to keep operations running smoothly and boost employee morale.

6.3 Recommendation

Based on the results of this study, there are several recommendations for future research, including exploring more deeply the psychosocial aspects related to shift work, such as its impact on family relationships, mental health, and work-life balance. Long-term studies can also be conducted to monitor the cumulative impact of shift work on workers' physical and mental health. In addition, it is important to further investigate the role of the work environment to mitigate the negative impacts of shift work. We also recommend comparing shift work systems across different industries to understand how industry factors influence the impact and

effectiveness of shift work. Finally, testing the effectiveness of certain policies, such as flexible work schedules and health incentives can help improve the well-being of shift workers. By focusing on these topics, it is hoped that future research can provide more comprehensive insights and contribute to the development of better shift work strategies.

7. References

- Firdaus, H. (2005). Pengaruh Shift Kerja Terhadap Kejadian Stres Pada Tenaga Kerja di Bagian Produksi Pabrik Kelapa Sawit PTPN 4 Kebun Pabatu Tebing Tinggi 2005. *Medan: Skripsi Fakultas Kesehatan Masyarakat Universitas Sumatera Utara*.
- Hasan, D. M., Pd, S., Pd, M., Harahap, D. T. K., Si, M., Hasibuan, S., Rodliyah, I., Si, S., Pd, M., Thalhah, S. Z., Pd, S., Pd, M., Ratnaningsih, P. W., Pd, S., & Hum, M. (2022). *METODE PENELITIAN KUALITATIF*.
- Husnullail, M., & Jailani, M. S. (2024). TEKNIK PEMERIKSAAN KEABSAHAN DATA DALAM RISET ILMIAH. *Jurnal Genta Mulia*, 15(2), 70–78.
- Lee, A., Myung, S.-K., Cho, J. J., Jung, Y.-J., Yoon, J. L., & Kim, M. Y. (2017). Night Shift Work and Risk of Depression: Meta-analysis of Observational Studies. *Journal of Korean Medical Science*, 32(7), 1091. <https://doi.org/10.3346/jkms.2017.32.7.1091>
- Mahmudah, F. N., Baswedan, A. A.-G. R., Usman, H., Mardapi, D., & Putra, E. C. S. (2022). The importance of partnership management to improve school-to-work transition readiness among vocational high school graduates. *The Education and Science Journal*, 24(5), 64–89. <https://doi.org/10.17853/1994-5639-2022-5-64-89>
- Marchelia, V. (2014). *STRES KERJA DITINJAU DARI SHIFT KERJA PADA KARYAWAN*. 02.
- Mataji Amirroud, M., Ghaffari, M., Ramezankhani, A., & Soori, H. (2023). Developing and validating an instrument to assess women’s empowerment in dealing with domestic violence in Iran: A mixed-methods study protocol. *BMJ Open*, 13(8), e073826. <https://doi.org/10.1136/bmjopen-2023-073826>
- Moolman, B., Tolla, T., Essop, R., Isaacs, N., & Makoae, M. (2023). “I felt like I was going to cause conflict. So, I kept quiet ...” (Female child rape victim, 15 years). *Child Abuse & Neglect*, 144, 106355. <https://doi.org/10.1016/j.chiabu.2023.106355>
- Quirkos, Edinburgh, United Kingdom, Turner, D., Ting, H., Faculty of Hospitality and Tourism Management, UCSI University, Malaysia, Wong, M. W., School of Design & Architecture, Swinburne University of Technology, Australia, Lim, T.-Y., Faculty of Business, Design and Arts, Swinburne University of Technology, Sarawak Campus, Malaysia, Tan, K.-L., & Division of Business Management, BNU-HKBU United International College, China. (2021). Applying Qualitative Approach in Business Research. *Asian Journal of Business Research*, 11(3). <https://doi.org/10.14707/ajbr.210111>
- Raskind, I. G., Shelton, R. C., Comeau, D. L., Cooper, H. L. F., Griffith, D. M., & Kegler, M. C. (2019). A Review of Qualitative Data Analysis Practices in Health Education and Health Behavior Research. *Health Education & Behavior*, 46(1), 32–39. <https://doi.org/10.1177/1090198118795019>
- Ratih, R. M., Mulyatini, N., & Suhendi, R. M. (2020). *PENGARUH SHIFT KERJA TERHADAP EFEKTIVITAS KERJA PEGAWAI (Suatu Studi Pada PT. BKS (Berkat Karunia Surya) di Kota Banjar)*. 2.

- Salfa Mei Dianawati, Lilis Sulandari, Sri Handajani, & Niken Purwidiani. (2023). Analisis Penerapan Shift Kerja Karyawan Pada Main Kitchen Best Western Papilio Hotel Surabaya. *Journal of Creative Student Research*, 1(4), 395–407. <https://doi.org/10.55606/jcsrpolitama.v1i4.2326>
- Schmieder, C. (2020). Qualitative data analysis software as a tool for teaching analytic practice: Towards a theoretical framework for integrating QDAS into methods pedagogy. *Qualitative Research*, 20(5), 684–702. <https://doi.org/10.1177/1468794119891846>
- Semnasti, M. T. S., Semnasti, M. C. P. I., Semnasti, R. N. S., Semnasti, A. L. M. P., & Semnasti, A. M. (2023). Analisis Shift Kerja Terhadap Kelelahan Pegawai Produksi Melalui Pengukuran Beban Kerja Fisik Menggunakan Metode Cardiovasculair Load (CVL) dan Perhitungan Konsumsi Energi Pada Perusahaan Pabrikasi di Surabaya. *WALUYO JATMIKO PROCEEDING*, 511–520. <https://doi.org/10.33005/wj.v16i1.75>
- Suma'mur, P. K. (2013). *Higiene Perusahaan dan Kesehatan Kerja (Hiperkes)*, Edisi Kedua. Jakarta: CV. Agung Seto.
- Supomo, T. M. (2014). Shift Kerja Terhadap Kinerja Pegawai Satuan Polisi Pamong Praja Kota Tarakan. *Jurnal Ilmiah Psikologi Terapan*, 2(1), 75–88.
- Syafar, S., & Fiatno, A. (2018). PENGARUH SHIFT KERJA TERHADAP KELELAHAN PEKERJA PABRIK SAWIT DI PTPN V SEI GALUH. *Jurnal Teknik Industri Terintegrasi*, 1(2), 88–97. <https://doi.org/10.31004/jutin.v1i2.323>
- Timur, H. N. (2019). *PENGARUH SHIFT KERJA DAN LINGKUNGAN KERJA TERHADAP PRODUKTIVITAS KERJA KARYAWAN PADA BAGIAN BLOWING UNIT DI PT. TIRTA SUKSES PERKASA*. 08.
- Tjendera, M., & Yulia, L. (2020). HUBUNGAN SHIFT KERJA DENGAN KADAR HBA1C PASIEN DIABETES MELITUS TIPE II DI RUMAH SAKIT CAMATHA SAHIDYA KOTA BATAM. *Zona Kedokteran: Program Studi Pendidikan Dokter Universitas Batam*, 9(3), 41–55. <https://doi.org/10.37776/zked.v9i3.301>
- Ule, M. Y., Kusumaningtyas, L. E., & Widyaningrum, R. (2023). STUDI ANALISIS KEMAMPUAN MEMBACA DAN MENULIS PESERTA DIDIK KELAS II. *Widya Wacana: Jurnal Ilmiah*, 18(1).