

The Effect of Shift Work and Burnout on Work Stress in Ternate City Hypermart Employees.

Maulidya Humaira Achsan^{1*)} Marwan Man Soleman²⁾, Zulkifli³⁾

¹Faculty of Economics and Business, Khairun University, Indonesia

²Faculty of Economics and Business, Khairun University, Indonesia

³Faculty of Economics and Business, Khairun University, Indonesia zulkifli@unkhair.ac.id

*Corresponding Author: marwan.s@unkhair.ac.id

ABSTRACT

The goal of this study is to determine the effect of shift work and burnout on work stress on Hypermart employees of Ternate City. The sample of this research is 40 employees and used multiple regression models to test hypotheses. The results showed that shift work had a negative and significant effect on work stress. Burnout had a positive and significant effect on employees. Shift work and burnout simultaneously have a positive and significant effect on work stress. Managers can pay more attention to work shifts, by adding work shifts in order to lighten the workload borne by employees so that work stress on employees is reduced. Taking into account the workload between women and men. Giving sanctions to employees who sometimes rarely come in or just relax during working hours further enhances direction on preventing work stress to create better performance.

Keywords: Shift Work, Burnout, and Work Stress

INTRODUCTION

The growth and competition in today's business world are marked by changes in information and technology and the need for competent human resources. Competent human resources have an important role to play and be managed so that the company can make continuous improvements to increase the company's success in the long term. The success of a particular business comes from the welfare of every individual in the company, however, the main problem that causes decreased productivity comes from employees, whether they see work as a milestone in life that can provide satisfaction and challenges, or a burden and responsibility that must be carried out. Proper work design and organization will provide healthy and productive employees, conversely, inadequate job design such as speed and excessive workload are among the contributing factors to work-related distractions. The mismatch of working time and workload is the cause of fatigue and work stress.

Work stress is caused by self-discomfort from the surrounding environment which affects emotional stability, physical and psychological imbalances which affect the feelings of employees (Veithzal, 2004); caused by a person's feelings, thoughts, and physical condition (Siagian, 2011); a situation where a person is faced with a task or obligation that is beyond his ability (Sasono, 2004), and; a state of tension that affects a person's thought processes, emotions, and psychological state, and as a result, too much stress can threaten a person's abilities and ultimately interfere with work performance (Handoko, 2008).

One of the causes of stress is related to work shifts according to Kawakami et al. (2002) statement that work shifts are considered one of the main causes of work stress. Shift work is a system implemented by the company to maximize productivity and continuously for 24 hours. The average work shift in Indonesia takes place in a 3-shift system divided into morning, afternoon, and evening shifts, each with 8 hours of work. However, in some companies, there are only 2 work shift systems (morning and evening), but usually for two continuous afternoon shifts until the evening.

Occupational Safety and Health Branch (OHS) is an International Standard implementing Occupational Health and Safety Management System (2008) explained that optimizing work shift arrangements can help reduce the potential adverse effects on work that may be experienced by employees. Shift work includes various work patterns and schedules where the arrangement must consider several factors such as long working hours for each shift, the number of workers per team, rest time, schedule regularity, and rotational speed (number of shift change days eg shift change every 2-3 days) and holidays.

In carrying out work at the Ternate City Hypemart uses a two shifts system but there is an additional middle shift which can be called an overtime shift. In general, the work shifts implemented at Hypermart consist of two shifts, namely:

Table 1.1 Work Shift Schedule at Ternate City Hypermart

<i>Shifts</i>	Working hours
Morning	07.00 – 15.00
<i>Middle</i>	12.00 – 20.00
Afternoon	13.00 – 21.00

Source: Primary Data, processed in 2022

Shifts work involves working hours during the morning, evening, or weekend, and weekly holidays do not always coincide with public holidays, so there is significantly less time for rest and family. In addition, the shift work schedule only allows employees one day off per month. Therefore, managers need to implement policies and regulate good work patterns to reduce the adverse effects of shift work. Employees coming to work late disrupts the work shift schedule, and can also reduce employee rest time in the previous shift. Arnani's research (2019) shows that there are differences in the fatigue of employees in the morning shift and night shift production department at the factory with the average fatigue of production employees on the night shift being higher than employees on the morning shift. Previous research reported that work shifts have a significant effect on employee work stress (Ekaningtyas and Wahyu, 2016; Rhamdani and Wartono, 2019), but different from research Irianti (2017) that work shift has no significant effect on work stress.

Burnout is also a serious problem in the work environment because it causes work stress. Burnout usually occurs due to a mismatch in the duration of the work. Leiters and Maslach (2005) report that in various parts of the world, companies are forced to downsize, outsource and restructure, stress employees at various levels, are insecure, misunderstood, worthless, and so on. Burnout is defined as a condition accompanied by a decrease in efficiency and resilience at work (Suma'mur, 2009). Burnout is often experienced in the form of physical, mental, and emotional fatigue, and most of it is cumulative, because psychobiological (mental tension) shifts to physical appearance, for example, lack of concentration. Previous research findings indicate that there is a significant relationship between job burnout and work stress (Rhamdani & Wartono (2019).

Based on the background described above, the purpose of this research is to determine the effect of shift work and burnout on work stress partially and simultaneously.

THEORETICAL STUDIES

Work Stress

Stress is sometimes seen as a negative term or caused by something bad (distress), but also have the positive and pleasurable side caused by good things or called eustress (Luthans, 2006) on the other hand, Robbins and Judge (2009: 671) say that stress is not necessarily bad, although much is discussed in a negative context, but stress also has positive potential. Stress is an opportunity when it offers potential results. It is the employee who determines to what extent the situation at hand is a stressful situation or not. Employees are also influenced in their interactions at work. Stress is very individual and basically destructive if there is no balance between the individual's psychological resilience and the burden that is felt.

Saragih (2010) suggests that stress at work is something workers experience almost every day. Stress is a factor that is difficult to avoid and can reduce employee and company performance. Naqvi et al. (2013) defines stress as a state of mental, physical and psychological disorders that occur in stressful situations when resources cannot meet individual demands. Inadequate work design and organization such as speed and excessive workload are other factors that can cause work stress, both physical and psychological and emotional reactions, while

workloads that are too low where work is carried out due to repetitive movements cause boredom, every aspect of work can become stressful (Sumarsono, 2021).

The three main causes of work stress according to Robbins and Judge (2009: 673) include: a) Environmental factors, there are three things that can burden environmental factors, namely, first, changes in the business cycle create economic uncertainty where if the economy worsens, employees feel worried about continuity of work. Second, political uncertainty, and third, technological change, as new innovations can quickly make employees' skills and experience obsolete; b) Organizational factors, such as pressure to avoid mistakes or complete tasks in a short time, excessive workload, demanding and insensitive superiors, and unpleasant co-workers, and; c) Individual factors, involving family problems, personal economic problems, personality and character inherent in one's self.

Shift Work

Shift work is defined as a method of managing the daily working hours of different people or teams continuously for a total of 24 working hours, usually 8 hours (Srivastava, 2010). Work shifts usually consist of at least two or three people who take turns according to a predetermined shift schedule. The International Agency for Research on Cancer (IARC) (2010: 564), suggests that the work shift system in each country is different. Work shifts are divided into 3 types, namely: 1) Permanent, where work is carried out routinely in only one shift, namely morning, afternoon or evening, or taking turns (several people are rotated at a specified time in different shifts); 2) Continuous, working a full week, or discontinuous holidays only on weekends or Sundays, and; 3) With or without night work,

Occupational Safety and Health Branch (2008:4) explained that the design of an optimal shift work system can help reduce bad health. Work shift management requires the following considerations: a) 24 hour operation required; b) The need for permanent night shifts (Leaders must employ several employees who take turns on the night shift); c) Direction of shift rotation: Medical opinion generally recommends forward rotation in the morning, afternoon, and evening sequence for shift workers because the biological clock is more adaptive than reverse rotation; d) Length of rotation period (ie, number of days for rotational shifts): Medical guidelines suggest a rapid rotation pattern (eg rotating shifts every 2-3 days); e) Morning shift start time: Early shifts can be associated with sleep deprivation and greater fatigue; f) Duration of work shifts: Duration of working time per shift. Fatigue from working long hours can be detrimental to health; g) Breaks from work: Adequate rest periods allow employees to relax and recover. This is especially important for employees who work shifts; h) Days off in the shift schedule: Regular holidays in the shift schedule allow employees to plan social activities and outings. The results of previous research from Ekaningtyas (2016), reported that the work shift system has a significant effect on work stress. Based on the considerations above, we propose the following hypothesis:
H1: Shift work has a negative and significant effect on work stress.

Burnout

Burnout is a syndrome of physical and psychological exhaustion that includes the development of negative concepts, poor concentration, and negative work

behaviors (Pines & Maslach, 1993). Burnout is also influenced by a mismatch between effort and what is obtained from work (Harnida, 2015).

According to Sugeng (2003) fatigue can be prevented and overcome by: 1) Introduction of product design changes (if the company produces goods); 2) Change how to work more efficiently and effectively; 3) Applying the use of work tools and equipment that meet ergonomic standards; 4) Schedule adequate rest periods; 5) Creating a healthy, safe and comfortable work environment, and; 6) Conduct employee performance tests and assessments to identify early signs of burnout and find appropriate solutions. Among the previous findings Satrio (2014) and, Rhamdani et al, (2019) found that burnout has a positive and significant effect on work stress.

Based on the considerations above, we propose the following hypothesis:

H2: Burnout has a positive and significant effect on work stress.

H3: Shift work and burnout simultaneously affect work stress.

Based on the background description, literature review and hypothesis development, the following research model drawings can be made:

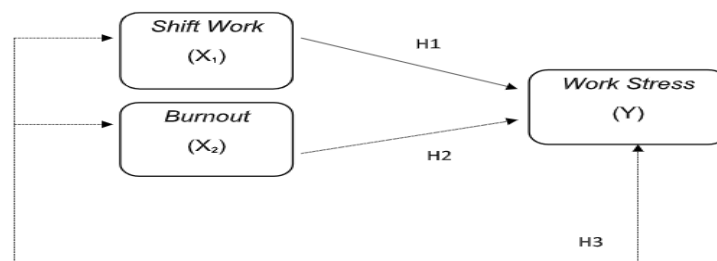


Figure 1. Research Concept Framework Model and Hypotheses

RESEARCH METHODS

Sample

Questionnaires were distributed to 40 respondents through HRD Hypermart. Ternate City. Based on tabulation of data, it was found that 73% were female, and 27% male. Respondents aged 17-20 years were 33%, and ages 21-25 were 66%. The last education of all respondents or 100% had high school education.

Measurements

Measurement of the variables by respondents using a five-point Likert scale (strongly disagree = 1 to strongly agree = 5). The main variables in this study consist of three parts, namely: Shift Work, Burnout and Work Stress. The Work Stress indicator in this study uses measurements from Robbins and Judge (2009) which consists of three indicators, namely: 1) Physical symptoms, such as insomnia, indigestion, and getting sick easily; 2) Psychological symptoms, in the form of feelings of anxiety, irritability, boredom, and lack of concentration, and; 3) Behavioral symptoms, such as irregular meal times, frequent absences, and decreased work performance. Measurement of shift work indicators uses Ekaningtyas (2016), which consists of: namely: 1) the number of workers or teams; 2) shift change speed; 3) break time; 4) holidays, and; the regularity of working hours shifts. Burnout uses measurements from Baron and Greenberg (2003) which are divided into four dimensions, namely: a) Physical fatigue, namely a lack of energy in a person due to prolonged fatigue and shows physical complaints such as

headaches, nausea, body aches, sleeplessness and changes in appetite lead to less enthusiasm for work and more mistakes; b) Emotional fatigue manifests as a feeling as a result of excessive psycho-emotional demands characterized by loss of emotion and attention, trust, interest and enthusiasm. People who experience emotional exhaustion feel empty, tired, and unable to cope with the demands of work; c) Mental fatigue, namely the human tendency towards other people. This is the development of a cynical attitude towards one's own career and achievements. People with depersonalization problems feel that their activities have no value or meaning. This attitude is manifested by indifference, cynicism and indifference to others, and; d) Low self-esteem (low of personal accomplishment) is an indicator of low work motivation and decreased self-confidence. Often this condition is seen in the tendency to achieve low achievements.

RESULTS AND DISCUSSION

Research Results

The research data analysis model uses multiple linear regression analysis. The multiple linear regression analysis model was processed using the SPSS program, so it will be known how much influence shift work and burnout have on work stress in Hypermart employees in Ternate City. The results of the instrument test are declared valid because the correlation is greater than 0.3 according to Arikunto's opinion (2006), and the reliability has an alpha coefficient (α) ≥ 0.6 according to Gozali dan Ratmono's opinion (2018).

Table 3.1 Results of Multiple Regression Analysis Calculations

Research variable	<i>Unstandardized Coefficients</i>		t-count	Sig
	(B)	std. Error		
Constant	2,497	4,567		
X1	-0.765	0.186	-4,121	0.000
X2	1,200	0.130	9,250	0.000
F count	45,984			
Sig	0.000			
R Square	0.713			

Source: Primary data (2022)

The results of the calculation of multiple linear regression analysis in Table 3.1 show that the t count value of shift work = -4.121, and the t count value of the burnout = 9.250, while the t table value is 1.688 with a significant level of alpha (α = 0.05). From the comparison between the t count value and the t table value, it shows that the t count value of the shift work = -4.121 is smaller than the t table (1.688), so H_0 is rejected and H_a is accepted, so it can be concluded that partially the shift variable work has a significant negative effect on the employees work stress. From comparison the t count value of the burnout = 9.250 is also greater than the t table value (1.688) then H_0 for the burnout is rejected and H_a is accepted, so it can be concluded that partially the burnout has a significant positive effect on the work stress. The results of the calculations in Table 3.1 show that the variable shift work and burnout simultaneously have an influence on the work stress of Hypermart Ternate employees.

DISCUSSION

The test results show that shift work has a significant negative effect on work stress. This means that the value of the shift work variable is low and not in the same direction as the work stress variable. Shift work is considered as organizational work time with different teams which sequentially covers more than 8 working hours per day normally up to 24 hours. Shift work can have both positive and negative impacts. The positive impact is maximizing the company's existing resources, while the negative impact is a decrease in performance. Shift work is not something that everyone can adapt to because it requires a lot of time adjustments such as sleeping time, meal time, time with family, and so on.

Ternate City Hypermart employees have a rule of applying 2 shifts to work, namely the morning shift and the afternoon shift, while an additional shift is called the middle shift (employees in this shift arrive earlier than the afternoon shift and leave earlier than the afternoon shift). The shift schedule at the Ternate City Hypermart is in accordance with the company's standard provisions which then provide optimal work results. In working shifts, the direction of shift rotation does not change according to the direction of the afternoon shift or middle shift where employees have not been able to develop themselves due to changes in shift direction.

Ardiansyah & Kusmindari (2020) suggests that shift work is a system implemented by companies to maximize productivity. According to Marchelia (2014) that shift work is a strategy carried out in various companies to obtain maximum and efficient productivity. Managers can pay more attention to work shifts by supervising employees in implementing shifts so that they can prevent work stress on employees and can also add shifts so that stress on employees is reduced.

The test results show that burnout has a positive effect on work stress. This means that the value of the burnout variable increases simultaneously and in the same direction as the work stress variable. Burnout is considered as physical and mental exhaustion involving the development of negative concepts, poor concentration and negative work behaviors.

The emergence of burnout can be a risk for employee work stress, apart from the result of work demands that must be maximized, employees are required to work hard to improve better performance, meanwhile the number of shifts divided by employees can be counted a little, this can affect employee work stress. The results of the research support the opinion according to Wignjosoebroto (2003) who argues that of the many types of fatigue as described above, the feeling of fatigue in employees is a process that accumulates from various causal factors and causes tension (stress) experienced by the human body. This is in line with research conducted by Rahmawati (2011) and Oesman et al. (2019) which showed that fatigue has a positive and significant effect on work stress.

CONCLUSION

The results of this study prove that shift work has a negative and significant effect on work stress on Hypermart employees in Ternate City, this explains work stress on employees. These findings also prove that burnout has a positive and significant effect on work stress on employees. Simultaneously, shift work and burnout affect work stress on employees.

This research has a limitation that the researcher cannot give the questionnaire directly to the respondent and accompany the respondent in filling out the questionnaire, due to the uncertain busyness of the respondent. All respondents did not agree to answer the questionnaire immediately and asked for a long time, even up to a month. These constraints cause it is not known whether the respondent actually filled out the questionnaire properly or not so the researcher cannot immediately answer things that the respondent does not know about the questions listed on the questionnaire.

For future research, based on the work shift indicator in the statement item "the direction of the morning shift changes according to the afternoon shift and the middle shift". Shift time needs to be improved so that changes in the direction of a shift are better at shifting the object under study; on the burnout indicator there is a statement item "I always try to fix mistakes at work", and; on the work stress indicator on the item statement "I often find it difficult to focus at work because work is piling up" also received a low rating from respondents. Therefore, future research needs to be able to use mediation or moderation in the use of supervisory variables or leadership supervision in relation to increased employee productivity.

REFERENCE

- Ardiansyah, Y., & Kusmindari, C. D. (2020). Pengaruh Shift Kerja terhadap Kinerja Karyawan PT. Tetra Agung Sentosa. In Bina Darma Conference on Engineering Science (BDCES). Vol. 2, No. 2, Pp. 585-595.
- Arikunto. (2006). *Prosedur Penelitian*. Jakarta: Bineka Cipta
- Arnani, H. C. (2019). *Perbedaan Kelelahan Kerja Pada Shift Pagi dan Shift Malam Karyawan Bagian Produksi Di Pabrik Teh PTPN IV Bah Butong* (Doctoral Dissertation, Universitas Islam Negeri Sumatera Utara).
- Baron, A. R. & Greenberg, J. (2003). *Organizational Behaviour in Organization. Understanding and Managing the Human Side of Work*. Canada: Prentice Hall.
- Ekaningtyas dan Wahyu, S. (2016). Pengaruh Sistem Shift Kerja terhadap Stres Kerja Karyawan Bagian Operator di SPBU Baratan Jember. In *Psikologi*. [http://repository.unej.ac.id/bitstream/handle/123456789/78603/Septika Wahyu Ekaningtyas_.pdf?sequence=1](http://repository.unej.ac.id/bitstream/handle/123456789/78603/Septika%20Wahyu%20Ekaningtyas_.pdf?sequence=1)
- Ghozali, Imam, and Dwi Ratmono. (2017). *Analisis Multivariat Dan Ekonometrika Dengan Eviews 10*. Semarang: Badan Penerbit Universitas Diponegoro.
- Handoko T. Hani. (2008). *Manajemen Personal*, Yogyakarta BPFE Yogyakarta.
- Harnida., Hanna (2015). Hubungan Efikasi Diri dan Dukungan Sosial Dengan Burnout pada Perawat. *Persona, Jurnal Psikologi Indonesia*. Januari 2015, Vol. 4, No. 01: 31-43.
- International Agency for Research on Cancer. (2010). *Painting, Firefighting, and Shiftwork* (Vol. 98). IARC Press, International Agency for Research on Cancer.
- Irianti, L. (2017). Pengaruh Shift Kerja terhadap Kelelahan dan Performansi Pengendali Kereta Api Indonesia. *Jurnal Rekayasa Sistem Industri*, 6 (2), 79. <https://doi.org/10.26593/jrsi.v6i2.2656.79-92>

- Kawakami, T., Kogi, K., Gaertner, J., and Kundi, M. 2002. *Working Time Research Abstracts from the 15th International Symposium on Night and Shift Work*, Hayama, Japan. *Shift Work International Newsletter*. Vol. 19 (2): 1-24.
- Leiter, M. P., & Maslach, C. (2005). A Mediation Model of Job Burnout. A Research Companion to Organizational Health Psychology, 544.
- Marchelia, V. (2014). Stres Kerja Ditinjau dari Shift Kerja pada Karyawan. *Jurnal Ilmiah Psikologi Terapan*, 2 (1), 130-143.
- Luthans, Fred (2006), *Perilaku Organisasi*. Edisi Sepuluh, PT. Andi: Jogjakarta
- Naqvi, S., Khan, M. A., Kant, A.Q., and Khan, S. N. (2013). Job Stress and Employees' Productivity: Case of Azad Kashmir Public Health Sector, *Interdisciplinary Journal of Contemporary Research in Business*, vol. 5(3): 525-542.
- Occupational Safety and Health Branch. (2008). *Guide on Shift Work*. Hongkong: Labour Department.
- Oesman, T. I., Simanjuntak, R. A., & Ocktavian, R. (2019). Pengaruh Postur dan Kelelahan Kerja terhadap Stres Kerja pada Bagian Pembuatan Sepatu PT. MJI Yogyakarta. *Prosiding SNST Fakultas Teknik*, 1 (1).
- Pines, A., & Maslach C., (1978). Characteristics of Staff Burnout in Mental Health Settings. *Hospital and Community Psychiatry*, 29:233-237
- Rahmawati, E. F. (2011). Pengaruh Kelelahan Kerja terhadap Stres Kerja pada Tenaga Kerja Bagian Penempaan Gong di Industri Gamelan Desa Wirun Mojolaban Sukoharjo.
- Rhamdani, I., & Wartono, M. (2019). Hubungan antara Shift Kerja, Kelelahan Kerja dengan Stres Kerja pada Perawat. *Jurnal Biomedika dan Kesehatan*, 2 (3), 104–110. <https://doi.org/10.18051/jbiomedkes.2019.v2.104-110>
- Robbins, S. P. dan Judge, T. A. (2009). *Organizational Behavior 13th Edition*. USA: Pearson Prentice Hall.
- Saragih, E. H. (2010). Manajemen Stres di Tempat Kerja. <http://ppm-manajemen.ac.id>. [19 Januari 2015]
- Sasono, Eko. 2004. *Mengelola Stres Kerja*. Universitas Pandanaran, Semarang.
- Satrio, M. (2014). Stres Kerja terhadap *Burnout* Serta Implikasinya pada Kinerja (Studi terhadap Dosen pada Universitas Widyagama Malang). *Jurnal Manajemen dan Akuntansi*, 3(1), 52–63.
- Siagian P. Sondang (2011). *Manajemen Sumber Daya Manusia*, Jakarta, Bumi Aksara
- Srivastava, U. R. (2010). Shift Work Related to Stress, Health and Mood States A Study of Dairy Workers. *Journal of Health Management*, vol. 12 (2): 173-200.
- Sugeng Budiono (2003). Bunga Rampai Hiperkes dan Keselamatan Kerja, eds 2. Semarang: Badan Penerbit Universitas Diponegoro, pp: 33- 97.
- Suma'mur.(2009). *Hiegiene Perusahaan dan Keselamatan Kerja*. Jakarta. CV Sagung Seto
- Sumarsono, T. G. (2021). *Intensi Kewirausahaan dan Keberhasilan Usaha*. Media Nusa Creative (MNC Publishing).
- Veithzal, Rivai (2004). *Manajemen Sumber Daya Manusia Untuk Perusahaan: Dari Teori Ke Praktik*. Jakarta, Raja Grafindo Persada.

Wignjosoebroto, S. (1995). Ergonomi Studi Gerak dan Waktu: Teknik Analisis untuk Peningkatan Produktivitas Kerja. Penerbit Guna Widya Surabaya.

