

Overview of Work Stress in Workers at Laundry X

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Abstract: Job stress is essential in occupational health, especially in high-demand service sectors like the laundry industry. This study examines the level of job stress among Laundry X employees by considering individual factors such as gender, age, and length of service. The design of this study was observational with a cross-sectional approach, using data from observations, interviews, and job stress diagnosis questionnaires, according to Permenaker No. 5 of 2018 concerning Occupational Safety and Health in the Work Environment. All six female employees of Laundry X became respondents. The results showed variations in job stress levels based on six categories: role ambiguity, role conflict, quantitative workload, qualitative workload, career development, and responsibility towards others. Most experienced moderate stress, especially in career development (100%) and qualitative workload (83.3%). Overall, (50%) of respondents experienced mild and (50%) moderate stress. These findings emphasize the importance of a structured job stress management program relevant to the laundry industry's conditions. By addressing the factors that cause stress, the laundry industry can improve employee well-being and work efficiency. This study contributes to the scientific understanding of job stress, especially in the context of the small-scale service industry.

Keywords: laundry, occupational safety and health, work stress, working period

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INTRODUCTION

In the modern industrial era, the issue of worker welfare has become a significant concern for organizations and researchers in various fields. One essential aspect of welfare is occupational safety and health (OHS), an integral part of efforts to maintain productivity and sustainability in the work environment (Khamisa et al., 2015). In this context, the influence of work stress on OHS has become a primary concern, given its significant impact on workers' physical and mental well-being (Keselamatan et al., 2024). In the work process or activity carried out by a person, there is always a risk of failure, which can be caused by various aspects, such as the worker's negligence, natural factors, or immature management. Such things can impact the occupational safety and health of the workers themselves and the industry/company/or institution. The International Labor Organization (ILO) in 2018 stated that every year, there are 2.78 million workers who die due to work accidents (13.7%) and work-related diseases (86.3%).

The Social Security Administration (BPJS) for Employment noted that the number of work accidents in Indonesia continues to increase. In 2017 (123 thousand cases), work accidents increased by around (20%) compared to 2016. In 2018, it increased again with 157,313 cases (Srisantyorini & Safitriana, 2020). The cases showed the lack of implementation of occupational safety and health (OSH) management. Occupational safety and health are shared responsibilities of workers, companies, and the government. However, the primary key is the workers' awareness, as individuals who carry out work always try to minimize risks or be careful in carrying out their work (Azhari & Ramadhanti, 2024). In fact, some parties (individuals or companies) still ignore occupational safety and health procedures or standards on the pretext that it has been safe so far or for cost – efficiency reasons. No matter how minor a work accident is, it will still result in a loss, so prevention should be carried out as early as effectively as possible (Sartika, 2023).

Occupational health and safety are positively and beneficially affected by awareness. This shows that improving OHS will result in increasing employee self-awareness (Herr et al., 2018). Safety awareness also encourages a positive work culture among staff members to mitigate risks (Ayu Desmayanny et al., 2020). Employees must

receive training and socialization on occupational safety to reduce the risk of work accidents. Without proper awareness and understanding, potential hazards can occur, resulting in accidents. The work environment will improve as employees become more aware of occupational safety and health. Businesses must analyze their employees' training requirements and provide the necessary knowledge, guidance, training, and supervision to the right staff members so they can do their jobs safely (Salianito et al., 2024).

Work period is the period or the length of time a worker does their work from the beginning to the end. Work period is the level of employee experience calculated from the length of work in a specific scope of work (Ganster & Rosen, 2013). If someone has had a relatively long work period, they will not encounter obstacles in the production process. The work period can affect the occurrence of work stress. Workers with longer work experience are more accustomed to facing pressure and challenges than workers with shorter work periods because their expertise is still limited (Zaelani et al., 2024). Work stress is the pressure workers feel due to unfulfilled work tasks (Wartono, 2017). This means that stressful conditions can arise when workers cannot fulfill their work tasks correctly. Stress conditions are influenced by pressure or tension from disharmony between a person and their environment. Stress experienced by workers can affect their sense of job satisfaction, which also impacts performance results. Unclear assignment of responsibilities at work, lack of time to do work tasks, no facilities to support the work process, and many conflicting tasks are the reasons behind the occurrence of stressful conditions that can occur in workers (Wartono, 2017). In addition, there are also other factors, such as roles in the organization, career development, relationships at work, and factors from outside the job (Manabung et al., 2018). It should be noted that the emergence of stress in workers affects performance results, namely decreased productivity at work, which can impact the quality of work produced (Ardecani et al., 2024).

Work stress is a significant problem in the laundry industry that often escapes the wider community's attention. Laundry X workers face various work demands, such as tight production targets, chemical exposure, high room temperatures, and heavy physical workloads. These conditions have the potential to affect workers' mental health and productivity (Bhastary, 2020). This study aims to analyze the description of work stress levels in laundry X workers by considering demographic factors such as gender, age, and length of service as independent variables. The results of this study are expected to be the basis for developing appropriate intervention programs in managing work stress in the laundry industry to improve worker welfare and company operational efficiency.

METHODS

The type of research used is observational with a cross-sectional design. The type of analysis used is univariate analysis with analytical descriptive analysis. The study is descriptive-analytical with a cross-sectional approach, namely analyzing data to identify the correlation between risk factors and their effects at one point (Muda et al., 2025). The data collection techniques used are observation, interviews, and questionnaires. The questionnaire used is a work stress diagnosis survey from Permenaker No. 5 of 2018 concerning Occupational Safety and Health in the Work Environment in digital or Google form. This study involved all employees of Laundry X, comprising six employees. Based on research (Maududi et al., 2024), validity and reliability tests were conducted at PT X with a total of 736 employees, obtaining a validity value with a Cronbach's alpha value of $0.963 > 0.05$, which indicates that this instrument has high reliability. Meanwhile, all items have $r > 0.5$ in the Pearson correlation validity test, so all items are valid.

RESULT AND DISCUSSION

Research respondents have diverse characteristics that can be grouped based on respondent identity, namely gender, age, and length of service.

Table 1. Frequency Distribution of Characteristics Based on Individual Factor Variables

Variables		Frequency	Percentage (%)
Gender	Woman	6	100%
	Man	0	0
	Total	6	100%
Age	19	1	16,7 %
	20	3	50,0 %
	22	1	16,7 %
	34	1	16,7 %
	Total	6	100 %
Years of service	1 year	1	16,7 %
	1,5 year	1	16,7 %
	2 month	1	16,7 %
	3 month	1	16,7 %
	3 year	1	16,7 %
	5 month	1	16,7 %
	9 year	1	16,7 %
	Total	6	100%

The table presented above shows that all respondents in this study were women, with a total of 6 people, which means that the female group contributed (100%) to the population studied. The data provides an overview of the age variation in this group, with details of 2 people aged 20 years, one person aged 19 years, one person aged 22 years, and one other person aged 41 years. The data shows that most respondents are in their early 20s, especially 20 years old, represented by two people, or around (33.3%) of the total respondents. Meanwhile, the ages of 19 and 22 are represented by one respondent (16.7%). Meanwhile, the age of 41 is only represented by one respondent, which is also equivalent to (16.7%) of the total. This shows that although this group is relatively small, the dominance of young age is still apparent, while mature age (such as 41) is minimal.

This indicates that most respondents are still at an early productive age. The distribution of the respondents' working periods shows quite diverse variations. Based on the data obtained, one respondent indicated a variation of working period for 2 months, one person for 5 years, one person for one year, one person for 1.5 years, one person for 3 years, and one person has worked for 9 years. If categorized in general, two respondents (those who worked for 2 and 5 months) are included in the category of a new work period or less than one year. The medium work period includes two other people (who worked for 1 year and 1.5 years). Meanwhile, one person who has worked for 3 years is still categorized as having a medium work period, and one with 9 9-year work period is included in the long work period category. This distribution shows that although there is diversity, most employees are still in the early and middle phases of the work period. Only one person is classified as having a long work period.

Table 2. Frequency Distribution of Characteristics Based on Work Stress Variables

Variables		Frequency	Percentage (%)
Role Ambiguity	Mild stress	1	16,7 %
	Medium stress	4	66,7 %
	Severe stress	1	16,7 %
	Total	6	100%
Role Conflict	Mild stress	2	33,3 %
	Medium stress	4	66,7 %
	Total	6	100%
Quantitative Overload	Mild stress	1	16,7 %
	Medium stress	4	66,7 %
	Severe stress	1	16,7 %
	Total	6	100 %
Qualitative Overload	Medium stress	5	83,3 %
	Severe stress	1	16,7 %
	Total	6	100 %
Career Development	Medium stress	6	100%
	Total	6	100%
Responsibility Towards others	Mild stress	1	16,7 %
	Medium stress	4	66,7 %
	Severe stress	1	16,7 %
	Total	6	100 %

Based on the results of the study conducted on six respondents, a picture was obtained regarding the level of stress experienced based on several variables contained in the Minister of Manpower Regulation No. 5 of 2018 concerning Occupational Safety and Health in the Work Environment, namely:

In the Role Agility variable, it is known that one respondent (16.7%) experienced mild stress, four respondents (66.7%) experienced moderate anxiety, and one respondent (16.7%) experienced severe stress. Role ambiguity occurs when an employee does not clearly understand the tasks, responsibilities, and expectations associated with their job. For the Role Ambiguity variable, two respondents (33.3%) experienced mild stress, while four other respondents (66.7%) experienced moderate stress. No respondents experienced severe stress in this category. Role conflict is stressful when employees experience incompatible expectations from two or more roles. In the Quantitative Overload variable, it was found that one respondent (16.7%) experienced mild stress, four respondents (66.7%) experienced moderate anxiety, and one respondent (16.7%) experienced severe stress. Quantitative Overload is a condition when employees are given a lot of tasks or workloads that must be completed in a short time. Meanwhile, in the Qualitative Overload variable, the majority of respondents, namely five people (83.3%), experienced moderate stress, and only one respondent (16.7%) experienced severe stress.

There were no respondents who experienced mild stress in this category. For the Career Development variable, all respondents, namely six (100%), were in the moderate stress category. None experienced mild or severe stress. Qualitative Overload is a condition when employees feel they do not have the resources or abilities to complete their tasks. Finally, in the variable Responsibility Towards Others, one respondent (16.7%) experienced mild stress, four respondents (66.7%) experienced moderate anxiety, and one respondent (16.7%) experienced severe stress. Responsibility to others impacts employees who experience work stress because they have to be responsible for others in their workplace. In general, of all the variables studied, moderate stress was the category most frequently experienced by respondents.

Table 3. Frequency Distribution of Characteristics Based on Overall Work Stress Variables

Variables	Frequency	Percentage (%)
Work Stress Mild	3	50,0 %
Medium	3	50,0 %
Total	6	100%

The table above shows the distribution of overall work stress levels. Based on the stress diagnosis survey analysis of 6 employees, the survey results showed that three employees (50.0%) experienced mild work stress, and three other employees (50.0%) experienced moderate work stress.

CONCLUSION

Based on the findings of this study, it can be concluded that work stress is a significant issue faced by employees in the laundry industry, especially in laundry X. The level of stress experienced by six employees varies in several variables such as role dexterity, role conflict, quantitative and qualitative workload, career development, and responsibility towards others with a dominance in the moderate stress category. The variable with the highest percentage of stress is career development, with a mild stress result of (100%), and qualitative workload, with a moderate stress result of (83.3%), and severe stress of (16.7%). In general, of all the variables studied, respondents experienced the most moderate stress. The survey found that three employees experienced mild work stress (50%), and three others experienced moderate work stress (50%). The diversity of age and length of service shows that workers from various backgrounds can experience stress, especially in a demanding and less structured work environment. Therefore, this finding emphasizes the importance of structured and sustainable work stress management efforts to improve employee welfare and operational effectiveness in the laundry industry.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI or AI-assisted technologies were used in the writing process of this manuscript.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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REFERENCES

- Al Maududi, A. A. A., Ani, N., Ayudia J, S., & Samedhi, B. P. (2024). Validity and Reliability Test of Work Stress Diagnosis Survey. *Journal of Industrial Hygiene and Occupational Health*, 8(2), 144–153.
- Anwar, R. (2024). Tinjauan Literatur tentang Pengaruh Stres Kerja terhadap Keselamatan dan Kesehatan Kerja. *Ecohealth: Jurnal Inovasi Kesehatan Lingkungan dan Keselamatan Kerja*, 1(1).
- Ardecani, F. B., Kumar, A., & Shoghli, O. (2024). Assessing the Impact of AR-Assisted Warnings on Roadway Workers' Stress Under Different Workload Conditions.
- Ayu Desmayanny, D., & Wahyuni, I. (2020). Literature Review: Faktor Terjadinya *Unsafe Action* pada Pekerja Sektor Manufaktur. *Jurnal Kesehatan Masyarakat*, 8(6).
- Azhari, M., & Ramadhanti, M. (2024). Pengaruh Masa Kerja terhadap Produktivitas Kerja Tim Field Coaxial Engineering PT. XYZ di Zona 1 Regional Central Jakarta Selatan. *Jurnal Manajemen*, 11(3), 98-107.
- Bhastary, M. D. (2020). Pengaruh Etika Kerja dan Stres Kerja terhadap Kepuasan Kerja Karyawan. *Jurnal Ilmiah Magister Manajemen*, 3(2).
- Ganster, D. C., & Rosen, C. C. (2013). Work Stress and Employee Health: A Multidisciplinary Review. *Journal of Management*, 39(5), 1085–1122.
- Herr, R. M., Barrech, A., Riedel, N., Gündel, H., Angerer, P., & Li, J. (2018). Long-Term Effectiveness of Stress Management at Work: Effects of the Changes in Perceived Stress Reactivity on Mental Health and Sleep Problems Seven Years Later. *International Journal of Environmental Research and Public Health*, 15(2).
- Khamisa, N., Oldenburg, B., Peltzer, K., & Ilic, D. (2015). Work Related Stress, Burnout, Job Satisfaction and General Health of Nurses. *International Journal of Environmental Research and Public Health*, 12(1), 652–666.
- Manabung, A. R., Suoth, L. F., & Warouw, F. (2018). Hubungan antara Masa Kerja dan Beban Kerja dengan Stres Kerja pada Tenaga Kerja di PT. Pertamina TBBM Bitung. *Kesmas: Jurnal Kesehatan Masyarakat Universitas Sam Ratulangi*, 7(5), 1–10.
- Muda, V. N., Fanani, E., Marji, & Supriyadi. (2025). Hubungan Faktor Individu dan Waktu Kerja dengan Stres Kerja Karyawan Laundry PT. AMNT Kabupaten Sumbawa Barat. *Sport Science and Health*, 6(12), 1311–1324.
- Salianto, S., Syahri, Y. A., Harahap, S. S. M., & Sinaga, R. (2024). Literature Review Pengaruh Stress Kerja Terhadap Keselamatan Kesehatan Kerja (K3) pada Karyawan di Industri. *Plenary Health: Jurnal Kesehatan Paripurna*, 1(3), 115-119.
- Sartika, D. (2023). *Stres Kerja*. Widina Bhakti Persada.
- Wartono, T. (2017). Pengaruh Stres Kerja terhadap Kinerja Karyawan (Studi pada Karyawan Majalah Mother and Baby). *Jurnal Ilmiah Prodi Manajemen Universitas Pamulang*, 4(2), 41-55.
- Zaelani, U., Fazriyah, S. N., Aisyah, E., Cahyati, N. M., & Gunawan, A. (2024). Studi Literatur: Pentingnya Implementasi Sistem Manajemen Kesehatan dan Keselamatan Kerja di Perusahaan Manufaktur. *Jurnal Perubahan Ekonomi*, 8(12), 327-333.