The Influence Of Layout System And Laundry Equipment On The Performance Of Five-Star Hotel Laundry Staff In Surakarta

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Abstract – The current existence of hotel laundries is very concerning as many are closed or non- operational. Nowadays, numerous hotels engage in out-side laundry, meaning they outsource their laundry services. This has prompted researchers to conduct this study. The objectives of this research are to determine whether the layout system of the laundry influences the performance of laundry section employees, to assess whether operational equipment affects the performance of laundry staff, and to examine whether both the layout system and operational equipment collectively impact the performance of laundry staff in five-star hotels in Surakarta. The research design used is explanatory research, with a population of 35 laundry staff members in five-star hotels in Surakarta, all of whom are included in the study through a census. Data were collected through the distribution of questionnaires using a Likert scale for measurement. The data analysis methods employed include correlation, simple and multiple linear regression using SPSS 20.0.

Based on preliminary findings, it is suggested that both the layout system and operational equipment have an impact on the performance of laundry staff, both partially and simultaneously. The Layout System variable has a greater influence compared to Operational Laundry Equipment..

Keywords – Layout system, Laundry Equipment, Performance Laundry Staff, Hotel.

I. INTRODUCTION

The increasingly intense competition in the hospitality business today poses a challenge for hotels to be able to compete. The growing competition demands hotels to develop strategies to maintain their existence in the industry.(Hasanah & Puji Agustini, 2022)

In the hotel business, accommodation provision, with lodging as its core, is essential. One of the crucial departments responsible for room provision is the Housekeeping Department. The provision of rooms is closely linked to the procurement of clean and well-organized linens, ensuring they are safe and comfortable for guests. One of the sections within the Housekeeping Department that handles these tasks is the Laundry Section. . (G.Ahmad, 2021)

The strategy implemented by the Housekeeping Department in the Laundry Section involves creating an effective layout system and optimizing the operational equipment available, particularly by maximizing the human resources at their disposal. Human resources, being the only resource with intellect, emotions, desires, skills, knowledge, motivation, power, and creativity (ratio, feelings, and intuition), play a crucial role. The management of human resources aims to enhance employee

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capabilities. To effectively manage human resources, human resource management is essential. (Febrianti et al., 2023)

The Laundry Section serves as the provider of linens for all hotel needs, catering to both house laundry and guest laundry. In some cases, larger hotels may also accept laundry from external sources (Outside Laundry) for business purposes, thereby generating revenue and profit. The creation of an effective layout system with a layout tailored to the workflow of the laundry is crucial in speeding up operations. Laundry tasks follow a step-by-step process, starting from linen marking, washing, squeezing, drying, to pressing. If the layout is not appropriately designed, problems may arise, especially during high seasons . (Ernanizar, 2016) Complete laundry equipment operation can accelerate tasks, and its results can be maximized when tailored to the linen supply needs of the hotel. However, the condition of operational equipment is also crucial in laundry work. Therefore, having complete equipment is not enough; regular maintenance, care, and repairs are necessary to ensure that the equipment is in good, safe, and comfortable working condition. . (Prastowo, 2020)
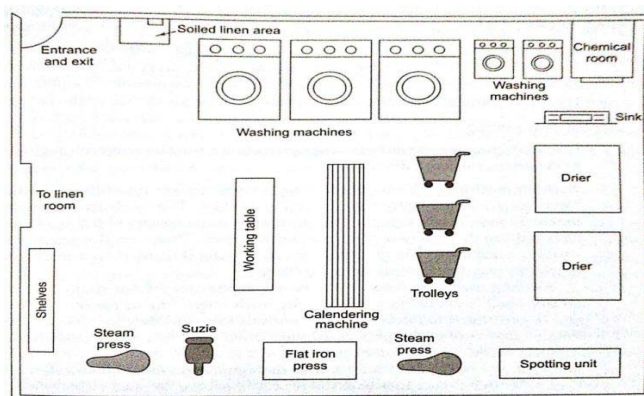
The performance of the laundry staff encompasses all tasks carried out by all human resources associated with the Laundry Section. In terms of organizational structure, the Laundry Section is under the control of the Housekeeping Department. The Housekeeping Manager, as a leader in the department, holds full responsibility for maintaining the quality and service of rooms, including the linens produced by the Laundry. The Laundry Section is led by the Chief Laundry, who oversees supervisors and laundry staff. (Yunita, 2010). Every employee in the Laundry Section must carefully maintain the quality and quantity of laundry products enjoyed by each staying guest, with the expectation that guests feel satisfied with all linens, thereby becoming loyal customers. This, of course, benefits the hotel, as frequent guest stays contribute to increased profits. To achieve this, a cohesive approach is needed, involving the creation of a well-designed layout system, supportive equipment, and dedicated employees as the implementers in carrying out their tasks.

With a combination of a well-designed layout system and supportive operational equipment that is effective and efficient, employees can carry out their tasks effectively and meet targets. Consequently, the desired improvement in employee performance, sought by the hotel, can be achieved.

II. LITERATURE REVIEW

1. Lay Out System

The creation of a good layout in the laundry is crucial for speed and excellent service in the laundry department. Laundry plays a supporting role for the hotel in achieving room sales targets. The layout of the laundry depends on the space available and the use of laundry machines. . (G.Ahmad, 2021)

Picture 1. Lay-out System

The location of the room and machines should be aligned with the washing process flow to make the work practical, ultimately saving energy and time. Additionally, attention should be paid to several aspects, including:

a. Ventilation system

    b. Blower system

    c. Air conditioning (AC) system

    d. Clean water drainage system

    e. Dirty water drainage system

    f. Hot steam drainage system (Steam)

    g. Proper electrical installation

The Ventilation System is a mechanism for regulating the inflow and outflow of air in the laundry room, ensuring that the air entering the laundry room is always clean and healthy. Laundry processes involving fabrics can generate airborne particles such as fabric dust or threads. If these are not promptly expelled and are allowed to mix with the air, they can pose a danger. Additionally, the heat generated in the process can be hazardous if not addressed promptly. Ventilation can be achieved through windows or doors in open spaces, and in closed spaces, it may involve the use of ducting. .

The Blower System is employed to expel hot air generated by the operation of machines. It also aids in removing dirty air produced from fabric particles. Typically, this device is powered by a motor that drives a fan, and electricity serves as its energy source.

The Air Conditioning (AC) system is utilized as an air cooler to maintain a comfortable working environment in the laundry room by preventing it from getting too hot. AC machines can come in various forms, such as Split AC, Window AC, or even Central AC.

The Water System is the most fundamental aspect of laundry operations because the washing process cannot proceed without water. It is essential to use clean water that meets drinking water standards, considering hygiene and sanitation requirements. Additionally, in the laundry process, clean hot water is also crucial for washing fabrics effectively.
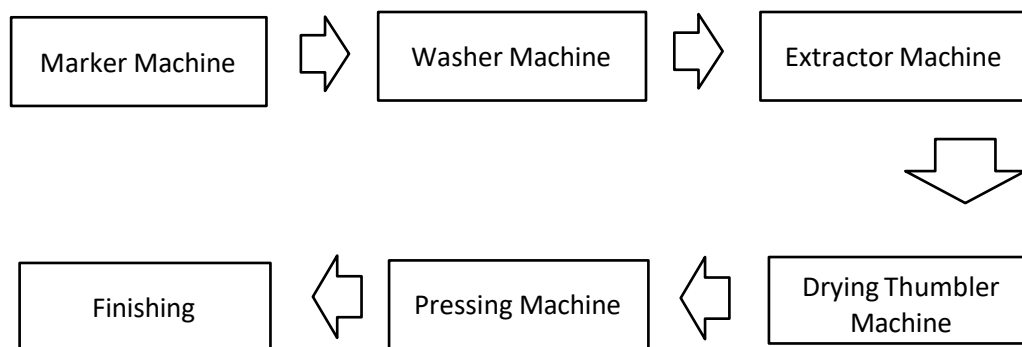
The Dirty Water Drainage System (drainage) is employed to dispose of used or dirty water from the laundry process, preventing unpleasant odors and keeping the space clean from water contaminants. Thus, sanitation is crucial for a laundry facility.

The Steam System is hot vapor produced from the boiling process of water through a boiler machine, which is a container filled with water then heated with fuel sources like solar energy, gas, oil, and others. This steam is utilized for the production of hot water, which is also used in laundry processing and the drying process.

The Electrical Installation System is essential as a supporting power source for laundry operations, powering laundry machines and providing illumination for the laundry area. The electrical power used in the laundry is tailored to its specific needs. Larger machines typically use 380 volts, while standard machines operate on 220 volts. . (Prastowo, 2015)

2. Equipment Operasional

All equipment in the laundry section plays a crucial role as it is closely related to hotel operations. Therefore, the equipment within it, which is used daily, must be consistently maintained to prevent rapid deterioration.

Picture 2. Circle Of Laundry Operation

The tools found in the laundry include Marking Machine, Washing Machine, Extractor, Drying Tumbler, Pressing Machine, Dry Cleaning Machine, and Spot Removing Table. (Investigator et al., n.d.)
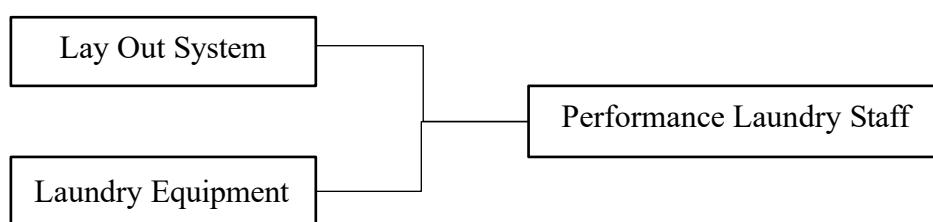
3. Performance Laundry Staff

Performance is a translation of the word "performance," which refers to the results of an individual's work, a management process, or an entire organization. In this context, performance should be tangible and measurable, demonstrated through concrete evidence, and compared against predefined standards. (Tuliabu et al., 2022)

According to (Nurlaila, 2018) Performance is the quality and quantity of work achieved by an employee in carrying out their duties according to the responsibilities assigned to them. To assess the excellence or deficiency of employee performance in this study, the following indicators are utilized:

a. Job knowledge (Understanding of the tasks at hand)

b. Work quantity and quality (Quantity and quality of work)

c. Initiative or judgment (Handling issues that arise)

d. Conduct (Adherence to rules and superiors' directives)
e. Communications(Flexibilityin communication)

f. Adaptability (Response to changes in the work environment)

g. Attendance (Attendance record) Theoretical
framework :

Hypotheses in this research are as follows:

a. There is an influence of laundry lay out system on the performance of employees in five-star hotels in Surakarta.

b. There is an influence of laundry equipment on the performance of employees in five- star hotels in Surakarta.

c. There is an influence of both laundry lay out system and laundry equipment on the performance of employees in five-star hotels in Surakarta.

III. RESEARCH METHODE

This research employs the explanatory research type, which is a type of research that seeks to explain the relationships among variables in the study. It also aims to elucidate the influence of independent variables on dependent variables and to test the proposed hypotheses. The population in this study consists of the Laundry staff in the Laundry Section within the Housekeeping Department, who have permanent employee status at a five-star hotel in Surakarta.

"Sampel is a portion of the quantity and characteristics possessed by the population." . (Sugiyono, 2019). Based on the opinion mentioned, the sample in question refers to all permanent employees in the Laundry Section within the Housekeeping Department of a five- star hotel in Surakarta, totaling 40 individuals. The sampling technique used in this study is a saturated sample or commonly known as a census. This technique is employed with the aim of obtaining more accurate results. The measurement scale uses Likert, and the instrument utilized is a questionnaire.

This research employs both qualitative and quantitative analysis techniques. Quantitative analysis includes validity testing, reliability testing, cross-tabulation, correlation coefficient, determination coefficient, simple and multiple linear regression analysis, two-way significance test (t-test), and two-way significance test (F-test), using the SPSS version 20.0 program.

IV. RESULTS AND DISCUSSION

The results of this research attempt to address the formulated hypotheses through correlation tests, regression analysis, determination analysis, and t-tests (partial significance tests) using the SPSS for Windows version 20.0. Based on the conducted tests, the obtained results are as follows:

Table 1 Research findings

No	Hypothesis testing	Test Result			
		Correlation	Determination	t-value	Hypothesis statement
1	Lay Out System towards the performance of Laundry Staff	0,446	30,3%	4,964	Ha Accepted
2	Laundry equipment towards the performance of laundry staff.	0,413	15,7%	4,636	Ha Accepted

Source: Processed Primary Data, 2023

Based on Table 1, it can be observed that the t-test results (partial significance test) indicate that:

a. The Lay Out System has a positive and significant effect on the performance of laundry staff, where the calculated t-value (4.964) > the tabulated t-value (2.040).

b. Laundry Equipment has a positive and significant effect on the performance of laundry staff, where the calculated t-value (4.636) > the tabulated t-value (2.040)

Table 2. Results of Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.952	6.109		.557	.000
	Lay Out System	.467	.143	.528	3.294	.003
	Laundry Eq	.328	.160	.328	2.045	.048

a. Dependent variable: Performance Laundry Staff

Source: Processed Primary Data, 2023

Based on Table 2, it can be observed that the regression coefficient values for the variables Leadership and SOP are positive. This indicates that the variables Lay Out System and Laundry Equipment have a positive relationship with the performance of the Laundry Staff. The larger the Lay Out System and Laundry Equipment variables, the higher the employee performance is expected to increase.

Table 3. Results of the F-test analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	406.178	2	203.101	6.022	.005[b]
	Residual	1.045.338	31	33.620		
	Total	1.451.527	33			

a. *Dependent Variable*: Performance Laundry Staff

b. *Predictors*: (Constant), Lay Out System

Source: Processed Primary Data, 2023

Based on the calculations above, the obtained F-value is 6.022 > the F-table value of 3.305, thus rejecting Ho and accepting Ha. Additionally, based on the calculated significance level of 0.000 < 0.05, rejecting Ho and accepting Ha. This means that simultaneously, the Lay Out System and Laundry Equipment variables have a positive and significant impact on the performance of the Laundry Staff.

Based on the simple linear regression test conducted, it is indicated that the Lay Out System variable has a positive influence on the performance of the Laundry Staff, with a calculated t-value of 4.964 > the tabulated t-value of 2.040.

The positive regression coefficient indicates that the better the assessment of the Lay Out System in the five-star hotel in Surakarta, the more it will enhance the performance of the Laundry Staff. As for the Laundry Equipment, it has a calculated t-value of 4.636, which is greater than its tabulated t-value of 2.040. This suggests that the more comprehensive the Laundry Equipment is in the five-star hotel in Surakarta, the more it will improve the performance of the Laundry Staff.

Based on the conducted research, the Lay Out System (X1) and Laundry Equipment (X2) variables contribute 28.00% in explaining the variable performance of the Laundry Staff (Y). Therefore, it can be concluded that in this study, the Lay Out System (X1) and Laundry Equipment (X2) variables collectively (simultaneously) have a positive impact on

the variable performance of the Laundry Staff.

From the existing analysis, it can be seen that the simultaneous influence on the performance of the Laundry Staff is predominantly affected by the Lay Out System (30.30%), which is higher than the Laundry Equipment variable (15.70%). The Lay Out System refers to the arrangement of laundry equipment based on the workflow in the laundry washing process. In other words, the Lay Out System is the appropriate method for executing effective and efficient work processes, ultimately contributing to the business profitability in the hospitality industry.

V. CONCLUSION

Based on the results of the conducted research on the influence of Lay Out System and Laundry Equipment on the performance of the Laundry Staff in a five-star hotel in Surakarta, the following conclusions can be drawn:

1. The Lay Out System variable in the laundry is perceived very well by the respondents (67.73%), although there is still a small portion that does not provide a very good assessment. This is evidenced by the presence of Laundry Staff who feel that the laundry layout is not yet suitable and is still considered inadequate.

2. The Laundry Equipment variable is perceived as effective by the respondents (58.80%), although there is still a small portion that does not give a very effective assessment. This condition may be caused by the incompleteness of laundry equipment hindering the completion of tasks.

3. The performance variable of the Laundry Staff is perceived very well by the respondents (73.50%), although there is still a small portion that does not provide a very good assessment. This is evidenced by the presence of layout systems that do not match the workflow and incomplete laundry equipment.

4. The influence of Lay Out System (X1) on the performance of the Laundry Staff (Y) is significant and positive in a partial context. From the coefficient of determination, it can be seen that Lay Out System influences the performance of the Laundry Staff by 30.3%.

5. The influence of Laundry Equipment (X2) on the performance of the Laundry Staff (Y) is significant and positive in a partial context. From the coefficient of determination, it can be seen that Laundry Equipment influences the performance of the Laundry Staff by 15.40%.

6. The simultaneous influence of Lay Out System and Laundry Equipment is significant and positive. From the coefficient of determination, it can be seen that Lay Out System and Laundry Equipment collectively influence the performance of the Laundry Staff by 28.20%.

7. The Lay Out System variable has a greater impact on the performance of the Laundry Staff than Laundry Equipment.

VI. SUGGESTION

Based on the discussion and conclusions drawn from the research findings, the researcher attempts to provide some suggestions or input that may be helpful for the company or other researchers. The researcher's recommendations are as follows:

1. The research results indicate that the Lay Out System has an impact on the performance of laundry staff in five-star hotels in Surakarta. Therefore, to enhance employee performance, stakeholders in five-star hotels in Surakarta can develop an effective Lay Out System that can be implemented to streamline laundry work. By doing this, it is expected to address the existing laundry issues in the hotel.

2. The research findings show that Laundry Equipment affects the performance of laundry staff in five-star hotels in Surakarta. To improve employee performance, stakeholders in the hotel can provide suitable laundry equipment for every stage of the laundry process. With complete laundry equipment, the production process can run smoothly, leading to increased profitability.

3. A suggestion for future researchers is to conduct further studies that are more specific or with new variables, such as Standard Operating Procedures, occupational health and safety, work environment, or employee motivation.

REFERENCES

[1] Ernanizar. (2016). Modul Paket Keahlian Akomodasi Perhotelan Sekolah Menengah Kejuruan (SMK). *Pusat Pengembangan Dan Pemberdayaan Pendidik Dan Tenaga Kependidikan Bisnis Dan Pariwisata, Direktorat Jenderal Pendidik Dan Tenaga Kependidikan*, *Februari*, 6–77.

[2] Febrianti, S. Y., Labib Musyaffa, F., Zahra, A., Alkatili, A. A., Nugraha, I. S., & Maesaroh, S. S. (2023). *Analisis Manajemen Risiko Dengan Metode HIRARC Pada Laundry (Studi Kasus Pada Usaha Bobo Laundry)*. *2*(1), 154–164.

[3] G.Ahmad. (2021). *PENERAPAN STANDAR OPERASIONAL PROSEDUR LAUNDRY di*

[4] *Hotel Hilton Bandung*. *7*(5), 1683–1688.

[5] Hasanah, U., & Puji Agustini, E. (2022). *Pengembangan Manajemen Sistem Layanan Jasa Laundry Berbasis Web Menggunakan Model Spiral Boehm*. *21*(Desember), 161. http://ejournal.upi.edu/index.php/manajerial/

[6] Investigator, P., Chancellor, V., Investigator, C., Coordinator, P., Co-coordinator, P., Writer, C., & Reviewer, C. (n.d.). *Paper 06: Hotel Housekeeping Module 35:Ergonomics in Housekeeping*.

[7] Prastowo, I. (2020). Studi Tentang Tata Kelola Keselamatan Dan Kesehatan Kerja (K3) Laundry Department Pada Industri Perhotelan. *Hotelier Journal*, *6*.

[8] Sugiyono. (2019). *BAB III Sugiyono (2019:199)*. 34–46.

[9] Tuliabu, A. Della, Areros, W., Tatimu, V., William, T., Areros Ventje, A., Jurusan, T., Administrasi, I., & Bisnis, A. (2022). *Pengaruh Motivasi Terhadap Kinerja Karyawan Rk Laundry dan Moto Wash*. *3*(4), 372–377.

[10] Yunita, D. N. (2010). *Efisiensi Kerja seorang Laundry Attendant dalam Meningkatkan Mutu Pelayanan di Hotel Intercontinental Jakarta Midplaza*.