



Effect of workload and job design on performance of health equipment management

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ABSTRACT

Human Resources in the Medical Devices and Household Health Supplies Section feel the workload is uneven, job specifications overlap, and the high employee turnover has an impact on monitoring and data validation activities that have not been implemented in the management of medical equipment management. Researchers propose is a positive and significant effect of workload and job design on management performance. medical tools. This study aims to determine the effect of workload and work design on the performance of management of health equipment management in the section on Medical Devices and Household Health Supplies at the District X Health Office. Quantitative descriptive research with job analysis method and FTE workload analysis. Then proceed with analysis using SPSS. In the study, it was found that the workload of employees in the Medical Devices and Household Health Supplies sections was overloaded, namely 4.06, where four employees experienced overload and two employees experienced underload. So, it is necessary to realign the job description at the X District Health Office and the needs of employees, both government employees and Freelance employees. Workload has no effect on performance and job design has a significant effect on performance. It is useful to improve the performance of employees in the Medical Devices and household health supplies section by optimizing human resources by changing the composition of the number of workers and rearranging the Job Description in the section whose workload has been measured so that the workload is evenly distributed.

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Kata kunci:

Desain Pekerjaan
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ABSTRAK

Sumber Daya Manusia di Seksi Alat kesehatan dan Perbekalan Kesehatan Rumah Tangga merasakan beban kerja tidak merata, spesifikasi pekerjaan tumpang tindih serta tingginya turnover pegawai sehingga berimbas pada kegiatan Monitoring dan validasi data masih belum terlaksana dalam manajemen pengelolaan peralatan kesehatan. Penelitian ini bertujuan mengetahui pengaruh beban kerja dan desain pekerjaan terhadap kinerja manajemen pengelolaan peralatan kesehatan di Seksi Alat kesehatan dan Perbekalan Kesehatan Rumah Tangga di Dinas Kesehatan Kabupaten X. Jenis penelitian deskriptif kuantitatif dengan metode analisa jabatan dan analisa beban kerja FTE. Kemudian dilanjutkan dengan analisis menggunakan SPSS dengan menggunakan uji validitas dan uji reliabilitas. Untuk analisis statistik, peneliti menggunakan uji tabulasi silang dan uji regresi logistik ganda. Dalam penelitian ditemukan bahwa beban kerja pegawai di Seksi Alat kesehatan dan Perbekalan Kesehatan Rumah Tangga mengalami overload yaitu sebesar 4,06, dimana terdapat 4 orang pegawai yang mengalami overload dan 2 orang pegawai yang mengalami underload. Sehingga diperlukan penataan kembali job description di Dinas Kesehatan

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Kabupaten X dan kebutuhan pegawai baik itu pegawai negeri sipil maupun Tenaga Harian Lepas. Beban kerja tidak memiliki pengaruh terhadap kinerja serta desain pekerjaan memiliki pengaruh signifikan terhadap kinerja. Bermanfaat untuk meningkatkan kinerja pegawai pada Seksi Alat Kesehatan dan perbekalan kesehatan rumah tangga dengan mengoptimalkan sumber daya manusia dengan mengubah komposisi jumlah pekerja dan menata kembali Deskripsi Pekerjaan pada bagian yang beban kerjanya sudah terukur sehingga beban kerja merata.

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INTRODUCTION

With the advancement of globalization, the world has become a system with different values that change regularly, necessitating organizational transformation as a must in the corporate sector. The high dynamics created by the demands of an organization to change, both in terms of structural arrangements, culture, and opinions related to the company's mission and vision, in its development. Especially during the COVID-19 pandemic, the demand for health services and facilities is very high. Human resource management, risk management and maintenance are three types of management which are closely related to each other all over the world. The challenges of industry 4.0 when the COVID-19 pandemic is still ongoing need to be taken seriously so that patient safety and security can be guaranteed (Kumar, 2020).

Providing capacity to local governments to achieve regional autonomy is one of the goals of the current reform era in terms of organizational transformation techniques. The transition from centralized to decentralized government requires the dedication of officials to manage public institutions. To achieve national development goals, public authorities must be able to provide services to the community by adhering to the principles of Good Governance, which include promoting the concepts of justice, accountability, transparency, and responsibility.

The current growth of health care facilities in an effort to improve the health status of the community is very good. But good health services without a good maintenance system can deviate from the ultimate goal of the service. The role of human resource management is very important in providing manpower for the agency and distributing it to parts that need it, besides that it also pays attention to the expectations of the workforce and the community, aiming to obtain a work unit that is satisfied and satisfying so that it fulfills three interests. These are the institution, the workforce and the community. Various challenges affect human resource management activities such as: rapid development of technology, changes in design and organizational structure, availability of human resources for certain types of personnel, current existence of internal human resources.

One of the important aspects in the protection and safety of patients is to avoid the dangers of using inappropriate and inaccurate medical devices. Therefore, the function, accuracy and accuracy of medical equipment that must be owned is very important to note because the impact will be felt directly by the community (Ombudsman, 2018). To make it happen, the requirements for quality, security and safety standards are necessary to manage health equipment. According to previous research, human resources play an important role in the management performance of medical equipment management (Suprihatin, 2021)

The implementation of calibration activities in District X is known from the Health Equipment Management Information System belonging to the Ministry of Health of the Republic of Indonesia named ASPAK, only 67.82% of puskesmas carry out calibration activities and only 10.02% of health equipment that has been calibrated. The management of medical equipment management at the Pasuruan District Health Office is the responsibility of the Medical Devices and Household Health Supplies Section. This problem shows that the management performance of medical equipment management has not been running optimally.

One of the factors that are thought to affect the performance of the management of health equipment management that has not been running optimally is the human resource factor. For this reason, the Department of Health is expected to conduct a job analysis related to this matter. District Health Office X has conducted a job analysis for government employees every year. However, the workload analysis and job analysis for casual daily workers who work in the organization have not been included in the annual job analysis. So that in the process of activities within the organization, job analysis is expected to optimize effective collaboration, duties and responsibilities, be it for government employees or freelancers to achieve jointly planned goals.

In this study, the researcher proposes several hypotheses, namely the first hypothesis that there is a positive and significant effect of workload on the management performance of medical equipment management, the second hypothesis is that there is a positive and significant effect of job design on the performance of medical equipment management, and the third hypothesis has a positive and significant effect on workload. and job design on health equipment management performance.

METHOD

Descriptive research with quantitative methods is the type of research used in this study. The researcher made observations and observations of documents related to job specifications. The research was conducted in 2021 at the X District Health Office. The sampling technique used total sampling with a sample of 6 employees in the Medical Devices and Household Health Supplies section.

The first stage in this research is to analyze the workload using the FTE method. FTE is used to analyze time-based work responsibilities to measure the time to complete work and convert the results into an index of FTE scores. The procedural steps in data collection and research process begin with job analysis accompanied by a preliminary survey of the profile data of the X District Health Office which

includes job maps, and employee data. The output will be in the form of job descriptions and job requirements, which include duties and responsibilities, professional relationships, authority, and required qualifications and experience. Calculation of workload begins with 1) obtaining work units and number of employees, 2) calculating available working time for a year, and 3) calculating effective working days. In this study, five working days are effective working days. The Full Time Equivalent (FTE) method determines:

$$\text{FTE Index} = \frac{\text{Job Completion Time} \times \text{Workload}}{\text{effective working time}}$$

With the provisions of 1) Low load (Underload) worth 0 - 0.99, where this condition shows the need for a review of the tasks given so that the workload becomes normal, 2) Appropriate Load (Normal) of 1 - 1.28, where this The condition shows that the workload has been fulfilled and only one person is needed in the position held or occupied, and 3) High load (Overload) worth more than 1.28, where the workload is large enough so that additional employees are needed to complete it.

The second stage is distributing questionnaires to informants, then collecting and analyzing the questionnaires. The questionnaire consists of several questions given to the informants and assessed using a Likert scale. Table 1 describes the provisions of the Likert scale used in the study.

Table 1.
Terms of the Likert Scale

No	Agreement	Kode	Score
1	Dont Agree	DA	1
2	Agree	A	2
3	Strongly Agree	SA	3

The third stage of data will be analyzed using SPSS using validity and reliability tests. For statistical analysis, the researcher used cross tabulation test and multiple logistic regression test.

RESULTS AND DISCUSSION

Calculation of workload

Human Resource Planning is especially needed during operational planning, this will determine the type of human resource needs, both in quantity and quality. In the Medical Devices and Household Health Supplies section there is a Section Head and has 5 employees consisting of two people who the status of government employees and three people who are casual daily workers according to table 2. The Medical Devices and Household Health Supplies Section has 13 types of work.

Table 4.
Calculation of the workload of the Medical Devices and Household Supplies Section

NO	JOB DESCRIPTION	Volume	Completion Time work (minutes)	Workload
1	prepare ingredient composing preparation of program change of events and control administration, creation and socialization tool clinical and Household Health Supplies	5	150	0,01

Table 2.
Characteristics of Respondents

Variabel	Count	%
Gender		
Man	4	66,7
Woman	2	33,3
Age		
Less Than 30 years old	2	33,3
More Than 30 years old	4	66,7
Level of education		
Bachelor Degree	5	83,3
Master Degree	1	16,7
Employee Status		
government employees	3	50
Freelance	3	50
Marital status		
Not married	1	16,7
Married	5	83,3
Years of service		
Less Than 5 Years	1	16,7
6-10 Years	3	50
More Than 10 Years	2	33,3

Source: Data Processed in 2021

Most of the respondents are male with age more than 30 years and are married. The highest education level is Bachelor Degree, which is 83.3%. This section consists of government employees and casual daily workers who are evenly distributed with a maximum working period of 6-10 years (table 2). The results of the questionnaire distributed to informants obtained details of work assignments and job specifications. Then calculated job responsibilities based on the FTE method. The number of working days in the Medical Devices and Household Health Supplies Section is five working days a week. 365 days minus 130 days of holidays, then 235 effective working days are obtained. Effective working week is 47 weeks, effective working month is 11.75 months. Formal working hours are 1880 hours per year.

The allowance value for employees at the administrator level is shown in table two, so the average effectiveness factor is 85% so that we get 1598 effective hours per year, 136 hours per month, 34 effective hours per week, 6.8 effective hours per day, and 408 effective minutes per day. Then the calculation of the number of workloads per year for the Medical Devices and Household Health Supplies Section can be seen in Table 4. so that the workload of the section can be analyzed at 4.57.

Table 3
Allowance Value

No	Allowance Factor	Percentage (%)
1	Working in an office	3.0
2	Sitting	1.0
3	Normal vision	3.0
4	Room Temperature	3.0
5	Physical state	5.0
	Total	15.0

2	prepare material for directing and controlling program strategy administration, manufacture and distribution tools clinical and Household Health Supplies;	5	150	0,01
3	prepare ingredients for implementation of the change of events strategy and control program for administration, manufacture, and distribution tool clinical and Household Health Supplies;	5	150	0,01
4	ingredient plan for principles overall, guide implementation, direction special and highly durable method for program direction and control for administration, manufacture, and the circulation clinical tools and Household Health Supplies ;	5	150	0,52
5	ingredient plan preparation and implementation socialization strategy, rules general, directions implementation, guidelines special, as well method permanent for change of events and control program for administration, creation and dissemination equipment clinical and Household Health Supplies	5	150	0,01
6	prepare ingredients for setting and implementation of instruction special and supervision project for a change of events and control administration, manufacture and distribution of clinical tools and Household Health Supplies;	5	150	0,10
7	prepare ingredients for implementation inspection, direction, control and assessment administration, manufacture and transportation tool clinical and Household Health Supplies;	5	150	0,18
8	prepare ingredient coordination maintenance, manufacture and distribution tool clinical and Household Health Supplies;	5	150	0,04
9	do supervision to manufacture and distribution tool clinical and Household Health Supplies	5	300	0,18
10	assist site audits proposal publishing confession Medical devices Distributor branch ;	5	300	0,12
11	publishing license shop medical equipment and optics ;	5	450	0,18
12	publishing alkes manufacture certificate class one particular first-class Household Health Supplies domestic worker	2	180	0,09
13	Carry out other assigned work Head Division	4	120	0,18
14	Do maintenance, restoration, and development of facility health in the area of the District Health Office Pasuruan (Community Health Center, Assistant Community Health Center and Hospital)	50	5.640.000	2,23
15.	Do maintenance, testing, and calibration of medical equipment at the facility health in the area of the District Health Office Pasuruan (Community Health Center, Assistant Community Health Center and Hospital)	34	930.240	0,30
16.	Do procurement and monitoring of Facilities and Infrastructure as well as medical equipment at 1 facility service health in the district Pasuruan (Community Health Center, Assistant Community Health Center and Hospital)	34	930.240	0,40
Total		179	7.503.030	4.57

Source: Data Processed in 2021

Table 5
Workload employee at Section on Medical Devices and Household Health Supplies

Position work/position	FTE Index	Information
Section Chief	4.57	Overload
Health analyst	3.47	Overload
Manager medicine and medical supplies	0.66	Underload
Staff administration of facilities and infrastructure facility health	9.28	Overload
Staff Administration Procurement medical equipment	5.80	Overload
The technical staff of facilities and infrastructure facility health	0.61	Underload

Source: Data Processed in 2021

When viewed from the FTE index, the workload table shown in table 5 concluded that the employees in the Medical Devices and Household Health Supplies Section experienced an overload of 4 employees and an underload of 2 employees.

1. Reability and Validity Test

The job design questionnaire variable consists of 5 items and 6 items of performance. The validity analysis was carried out with the SPSS 25 for windows program which aims to determine whether each item assessed or evaluated can be declared valid or not. The result is by comparing the

coefficient of rcount with the critical value (r table) the results are obtained from the report. The following is a validity test for each research variable.

The Reliable analysis aims to determine whether each item of the question that is assessed or evaluated by the respondent can be declared valid or not. Testing the results by comparing r count with r table whose results can be reported.

Job Design Variable

The results of the validity in the table 6 show that the value of r count is greater than r table (0.6) so it can be said

that the job design variable items are valid. Table 6 shows that the alpha magnitude of the job design variable has a value greater than the value of r table so it can be concluded that all statement items are declared reliable.

job design variable items are valid. Table 7 above shows that the amount of alpha of the job design variable has a value greater than the value of r table so that it can be concluded that all statement items are declared reliable.

Performance Variables

The results of the validity in the table 7 that the value of r count is greater than r table (0.6) so it can be said that the

Table 6.
Validity and Reliability Test of Job Design

Number of question	r _{hitung}	r _{tabel 5%}	Alpha Cronbach's	Information
1	0.956	0.811	0,984	Valid and reliable
2	0.878	0.811	0.978	Valid and reliable
3	0.878	0.811	0.978	Valid and reliable
4	1.000	0.811	0.984	Valid and reliable
5	0.878	0.811	0.978	Valid and reliable

Source: Data Processed in 2021

Table 7.
Performance Validity and Reliability Test

Number of question	r _{hitung}	r _{tabel 5%}	Alpha Cronbach's	Information
1	0.946	0.811	0.792	Valid and reliable
2	1.000	0.811	0.792	Valid and reliable
3	0.878	0.811	0.790	Valid and reliable
4	0.878	0.811	0.790	Valid and reliable
5	0.878	0.811	0.790	Valid and reliable
6	0.878	0.811	0.980	Valid and reliable

Source: Data Processed in 2021

Tabel 8.
Cross-tabulation test of job design variables on the performance of medical equipment management

Job Design	Performance						p value
	Bad		Currently		Good		
	n	%	n	%	n	%	
It is not in accordance with	3	100	0	0	0	0	0,004*
In accordance	0	0	1	33,3	2	66,7	

Source: Data Processed in 2021

2. Effect of Workload and Job Design on Health Equipment Management Performance

When viewed from table 8 shows that p = 0.004 so it can be concluded that job design has a significant effect on the performance of medical equipment management.

When viewed from table 9, it shows that p = 0.833, so it can be concluded that the workload has no significant effect on the performance of the management of medical equipment management.

Table 9.
Cross tabulation test of workload variables on the performance of medical equipment management

Workload	Performance						p value
	Bad		Currently		Good		
	n	%	n	%	n	%	
Overload	2	50	1	25	1	25	0,833
Normal	0	0	0	0	0	0	
Underload	1	50	0	0	1	50	

Source: Data Processed in 2021

Based on the results of the simultaneous test (table 10), it can be seen that the value of -2 log likelihood (G) = 7.638. Degree of freedom (df) = N-1 = 6-1 = 5. Using = 5%, we get Chi Square (X²) = 11,070. Because G < X², then H₀ is accepted and it can be

concluded that there is no influence between workload and job design on performance.

Seen from table 10, the logistic regression model is: $\pi(x) = \frac{\exp(-0.693+21.896X_2)}{1+\exp(-0.693+21.896X_2)}$, it can be concluded that where job design

has an influence on performance. When viewed from the interpretation of the Odds Ratio value, the value of $\exp(B)$: Job design (Reg_ID) indicates that the probability of an employee with an appropriate job design having a good performance is 3.231E+9 times compared to an inappropriate job design.

Table 10.
Simultaneous Testing of Simultaneous Test Results

Iteration	-2 log likelihood	Coefficients Constant
1	7.639	0.667
2	7.638	0.693
3	7.638	0.693

Source: Data Processed in 2021

The next step is to redesign the position map of the Medical Devices and Household Health Supplies Section. According to Davis (1966) job design is an activity to organize tasks and responsibilities into one job which involves identifying individual tasks, specifying methods of performing tasks, combining tasks into specific jobs to be assigned to individuals. Job Design or job map is the process of determining the activities or work activities of employees, both individually/groups/organizations that are needed in the composition of positions required by an organizational unit, so

that in work assignments, technological and behavioral needs can be fulfilled (Tatin et al, 2021).

Job maps offer benefits such as structuring and improving organizational structures, materials for improving work systems and procedures, preparing employee needs plans based on workloads, performance appraisals using the employee work target method, program selection, rotation, and employee promotion. from units to overworked staff to units with a shortage of manpower, and materials to determine training requirements. The job map design previously consisted of only 3 positions in the Medical Devices and Household Health Supplies Section, namely health analyst, Medical equipment program manager and Household Health Supplies program manager. Household Health Supplies section according to Figure 1. So according to the workload analysis and job analysis, a new job map design is prepared which can be seen in Figure 2.

Differences in Anxiety Levels of HIV Patients Before and After Cognitive Behavior Therapy

The mean level of death anxiety of HIV patients before CBT was 9.6 with a standard deviation of 2.539. After the CBT action was carried out, the average death anxiety score was obtained at 6.4 with a standard deviation of 4.014. There is a significant difference between the level of death anxiety of HIV patients before and after CBT ($p = 0.004$)

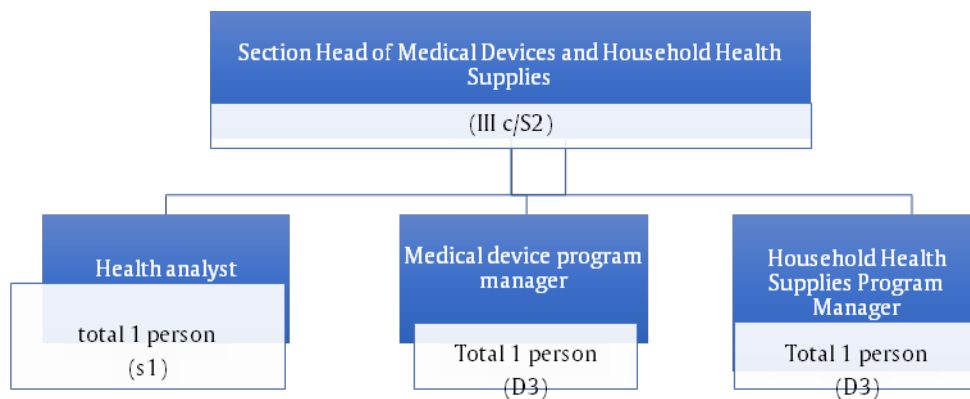


Figure 1 Job map now Medical Devices and Household Health Supplies Section

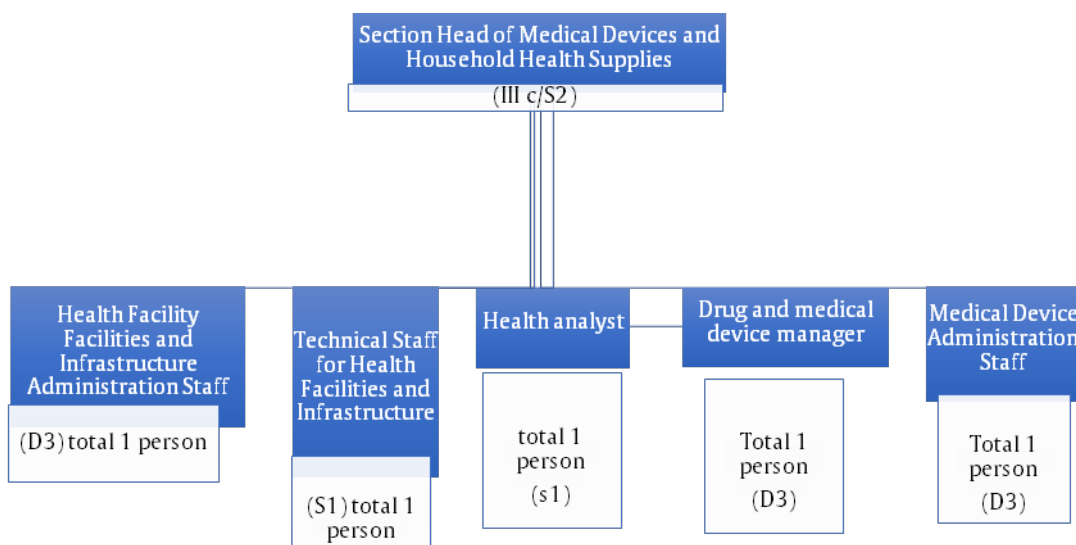


Figure 2 Job map proposed Medical Devices and Household Health Supplies Section

The policy of bureaucratic reform by structuring civil servants as conveyed by Irfan (2020) is very influential on the division of tasks in local governments. The distribution of civil servants does not match the needs of job specifications and position competencies. This also occurs in the Medical Devices and Household Health Supplies Section according to the results of the calculation of the effect of job design on the performance of management of health equipment management which shows a significant effect. So if the District X Health Office has not been able to increase the number of civil servants, it can carry out job enrichment which aims to maximize employee interests and job challenges and provide as much variety as possible, decision-making responsibilities, and control in carrying out work. According to Herzberg (1986) in Magaji (2017) by increasing the number and variety of jobs can also eliminate boredom but does not produce a positive increase in motivation.

According to Ahlam's research (2020), there is a positive relationship between job design and job satisfaction, so redesigning the job map by rearranging job descriptions for the part whose workload has been measured can be done to optimize employee performance and work can be completed and employee responsibilities can be distributed. -bust fairly. The proposed job enrichment is for the positions of administrative staff of health facilities and infrastructure, administrative staff of medical devices, and technical staff of health facilities and infrastructure.

For this reason, it is necessary to carry out further research such as that conducted by Mario (2021) that leaders need to review and create artificial scenarios and input parameters that are in accordance with the scenarios of what will happen in the future in human resource planning.

LIMITATION OF THE STUDY

The researcher limits the workload analysis research only in the Medical Devices and Household Health Supplies Section because it is to evaluate the management of health equipment management from the performance of human resources, not to assess the performance of human resources in the Health Office as a whole.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the workload analysis using the FTE method, the recommendations given to overcome the workload problem of the Medical Devices and Household Health Supplies Section which experienced an overload were 4.57. According to statistical test calculations, it was found that workload had no effect on performance and job design had a significant effect on performance

Suggestions for the Medical Devices and Household Health Supplies Section include 1) carrying out job enrichment, and 2) redesigning the job map to improve the performance of employees in the Medical Devices and Household Health Supplies Section to be more effective and efficient and to increase employee responsibilities. evenly distributed

ETHICAL CONSIDERATIONS

Scientific work obtained ethical approval from the Health Research Ethics Committee, Faculty of Public Health, Airlangga University with No: 31/EA/KEPK/2021

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COMPETING INTEREST STATEMENT

There are no possible conflicts of interest with respect to the authoring and publishing of this work, according to the authors

REFERENCES

- Ristiani, I. Y. (2020). Public Service Management at the Public Service Mall in Sumedang Regency, West Java Province. *Coopetition*, 11(2), 325691. <https://ejournal-new.ipdn.ac.id/JPKP>
- Kumar, M. S., Raut, D. R. D., Narwane, D. V. S., & Narkhede, D. B. E. (2020). Applications of industry 4.0 to overcome the COVID-19 operational challenges. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(5), 1283–1289. <https://doi.org/10.1016/j.DSX.2020.07.010>
- Barriers to innovation in the field of medical devices. (n.d.). Retrieved January 22, 2022, from [https://scholar.googleusercontent.com/scholar?q=cache:vcEWs3\[WmO4\]:scholar.google.com/&hl=id&as_sdt=0.5&scioq=1.%09World+Health+Organization.+\(2010\).+Barriers+to+innovation+in+the+field+of+medical+devices:+Background+paper+6,+August+2010+\(No.+WHO/HSS/EHT/DIM/10.6\).+World+Health+Organization](https://scholar.googleusercontent.com/scholar?q=cache:vcEWs3[WmO4]:scholar.google.com/&hl=id&as_sdt=0.5&scioq=1.%09World+Health+Organization.+(2010).+Barriers+to+innovation+in+the+field+of+medical+devices:+Background+paper+6,+August+2010+(No.+WHO/HSS/EHT/DIM/10.6).+World+Health+Organization)
- Homauni, A., Mosadeghrad, A. M., & Jaafaripooyan, E. (2021). The Effectiveness of Employee Performance Appraisal System in Health Sector: Evidence from Iranian organizations. *Asia Pacific Journal of Health Management*, 16(4), 36–44. <https://doi.org/10.24083/apjhm.v16i4.813>
- Teguh Hendra, V. H. (2020). The Effect of Position Analysis on the Performance of Civil Servants at the Pekanbaru City Health Office. *Riau College of Economics*, 11(2), 179–189. <https://doi.org/10.36975/jeb.v11i2.270>
- Salemm, O. A., Ahlam, A., & Fatma, M. B. (2018). The relationship between job design and nurses' satisfaction. *SOJ Nur Health Care* 4 (2): 1-9. https://fac.ksu.edu.sa/sites/default/files/the_relationship_between_job_design_and_nurses_satisfaction.pdf
- Zulher. (2020). Analysis of work ethic, work environment and workload on employee job satisfaction (Survey of UPTD employees at Bangkinang City Health Center). *Tower of Economics Journal: Research And Scientific Studies*, VI(2), 99–105. <https://doi.org/10.31869/me.v6i2.1826>
- Muafi. (2018). Exposure in Focus Group Discussion Activities; Position Analysis and Its Benefits for Government Organizations. *Asian Journal of Innovation and Entrepreneurship*, 03(01), 43–53. <https://journal.uui.ac.id/ajie/article/view/10013>
- Yulaika, N. (2018). Planning of Pharmaceutical Technical Personnel Based on Workload Analysis Using the WISN Method at RSIA KM. *Indonesian Journal of Health Administration*, 6(1), 46. <https://doi.org/10.20473/jaki.v6i1.2018.46-52>

- Shofiah, R., Prihatini, D., & Viphindartin, S. (2019). Health Human Resource Planning for Public Health Centers in Jember Regency. *Bhishma*, 13(3), 181. <https://doi.org/10.19184/bisma.v13i3.11633>
- Liu, H. Y., Chao, C. Y., Kain, V. J., & Sung, S. C. (2019). The relationship of personal competencies, social adaptation, and job adaptation on job satisfaction. *Nurse Education Today*, 83(May), 104199. <https://doi.org/10.1016/j.nedt.2019.08.017>
- Goss, L., Volkman, J. C., Garcia-Houchins, S., Sutton, A., & Glowicz, J. (2021). A job analysis of knowledge and tasks for the certification in infection control and epidemiology examination. *American Journal of Infection Control*, 49(12), 1561–1563. <https://doi.org/10.1016/j.ajic.2021.09.014>
- Gordon, H. J., Demerouti, E., Le Blanc, P. M., Bakker, A. B., Bipp, T., & Verhagen, M. A. M. T. (2018). Individual job redesign: Job crafting interventions in healthcare. *Journal of Vocational Behavior*, 104(April 2016), 98–114. <https://doi.org/10.1016/j.jvb.2017.07.002>
- Gultom, S. P., & Sihotang, A. (2019). Analysis of the Need for Medical Record Workers for Foreign Workers in the Registration Section of the Medan Haji General Hospital in 2018. *Scientific Journal of Recorders and Health Information Imelda*, 4(1), 524–532. <https://doi.org/10.52943/jipiki.v4i1.72>
- Rismayadi, B., & Maemunah, M. (2020). Analysis of Employee Planning in the Framework of Developing Decentralization Policies at the Subang District Health Office. *PAPATUNG: Journal of Public Administration, Government and Politics*, 3(1), 270–283. <https://doi.org/10.54783/japp.v3i1.69>
- Kariyamin, K., Hamzah, N., & Lantara, N. (2020). The Influence of Motivation, Competence, and Work Environment on Employee Performance. *Governance*, 7(1), 10–18. <https://doi.org/10.52103/tatakelola.v7i1.65>
- Mustikaningsih, D., Rahmat, R., & Frastika, R. (2019). Nurse Workload in the Implementation of Integrated Management of Sick Toddlers at the Health Center in the Work Area of the Bandung Regency Health Office. *Journal of Smart Nursing*, 6(1), 13. <https://doi.org/10.34310/jskp.v6i1.219>
- Irfan, Pitaloka, J. D., & Nugraha, A. R. (2020). Recruitment of ASN Health Workers to Respond to Covid-19. *The Indonesian Journal of Development Planning*, IV(2), 215–222. <https://journal.bappenas.go.id/index.php/jpp/article/download/115/87>
- Pasuruan, D. K. (2018). The Strategic Plan of the Pasuruan District Health Office 2018-2023. Pasuruan: Author. <https://jdih.pasuruankab.go.id/index.php/hukum/detail/peraturan-bupati-pasuruan-nomor-32-tahun-2019-tentang-rencana-strategis-dinas-kesehatan-kabupaten-pasuruan-tahun-2018-2023.html>
- Pasuruan, D. K. (2020). Profile of the Pasuruan District Health Office. Pasuruan: Author. <https://dinkes.pasuruankab.go.id/>
- Wahyanto, T., Kom, S., Damayanti, N. A., Wulandari, R. D., & KM, S. (2021). *Human capital management as competitive advantages in health care*. Zifatama Jawara. https://books.google.co.id/books/about/HUMAN_CAPITAL_MANAGEMENT_AS_COMPETITIVE.html?id=IH8-EAAAQBAJ&redir_esc=y
- Wardhani, PK (2018). Implementation of Government Regulation Number 11 of 2017 concerning Transparency in Recruitment of Candidates for Civil Servants in Custody in the Establishment of the Office of Security Officer at the Ministry of Law and Human Rights of Central Java. *Journal of Sovereign Law*, 1(2), 551-556. <http://dx.doi.org/10.30659/jdh.v1i2.3333>
- Afandi, M. (2021). Analysis of implementation of government employee management with a work agreement (PPPK) based on government regulation number 49 of 2018 (Doctoral dissertation, Sultan Agung Islamic University Semarang). <http://repository.unissula.ac.id/eprint/24923>
- Ardiyawan, K. W., Suardita, I. K., & Dahana, C. D. (2016). Implementation of government regulation no. 18 of 2016 concerning local equipment in the establishment and collection of local equipment in Gianyar regency. <https://ojs.unud.ac.id/index.php/Kerthanegara/article/download/37356/22656>
- Iqbal, M. (2022). Implementation of employee placement based on the results of position analysis and workload analysis in 2021 (Study at the Office of the Agency for Personnel and Human Resources Development in Batu City) (Doctoral dissertation, University of Muhammadiyah Malang). <http://eprints.umm.ac.id/id/eprint/86030>
- Indonesia, P. N. R. (2014). Law number 5 of 2014 concerning State Civil Apparatus. <http://digilib.isi.ac.id/2668/1/UU-5-2014-ASN.pdf>
- Pasuruan Regent Regulation, Number 5 of 2018 concerning Position, Organizational Structure, Duties, and Functions and Work Procedures of the Pasuruan District Health Office. <https://peraturan.bpk.go.id/Home/Details/93047/perbup-kab-pasuruan-no-5-tahun-2018>
- Sunarta, S. Human Resource Planning: The Key to Organizational Success. *UNY Journal of Educational Management*, 113468. <https://www.neliti.com/publications/113468/perencanaan-sumber-daya-manusia-kunci-keberhasilan-organisasi>
- Ilyas, Yaslis. 2011. Hospital HR Planning, Theory, Methods and Formulas. Center for Health Sciences FKM-UI. Jakarta. Prima Business CV.
- Kabul, E. R., & Febrianto, M. N. (2022). Implementation of Full Time Equivalent (FTE) Method in Labor Needs Analysis. *IKRAITH-ECONOMICS*, 5(1), 162-168. <https://journals.upi-yai.ac.id/index.php/IKRAITH-EKONOMIKA/article/view/1723>