

***THE INFLUENCE OF PRE-EMPLOYMENT MEDICAL CHECK UP ON
EMPLOYEE PERFORMANCE AT PT XYZ***

**PENGARUH PRE-EMPLOYMENT MEDICAL CHECK UP DENGAN
KINERJA KARYAWAN PT XYZ**

Marcel Prathama¹, Sri Gustina², Meita Istianda³

Universitas Terbuka, Indonesia^{1,2,3}

Mulyantara.mp@gmail.com¹, srigustinapane@gmail.com², meita@ecampus.ut.ac.id³

ABSTRACT

Purpose of this study aims to analyze the influence of pre-employment Medical Check-Up (MCU) results on employee performance at a Nickel Company (PT. XYZ) located in Morowali, Central Sulawesi. The pre-employment MCU is one of the initial selection processes intended to ensure the health condition of prospective employees before they are officially hired. Employee performance is measured based on periodic work evaluations conducted by direct supervisors, covering aspects such as productivity, punctuality, and work quality. The research methodology used is quantitative. Data were collected from 50 employees who had undergone all recruitment process including MCU pre-employment. Data analysis was performed using partial least squares (PLS) to determine the relationship between variables and the simultaneous influence of MCU results on employee performance. The findings from this study indicate a significant impact between pre-employment MCU results and employee performance. Employees with MCU results indicating good health conditions tend to have better performance compared to those with specific health records. Suggestions for MCU results can serve as an important indicator in the recruitment process for qualified employees.

Keywords: Pre-employment Medical Check-Up, employee selection, occupational health, employee placement, employee performance

ABSTRAK

Tujuan penelitian ini adalah menganalisis pengaruh hasil Medical Check-Up (MCU) pra-kerja terhadap kinerja karyawan pada sebuah perusahaan nikel (PT. XYZ) yang berlokasi di Morowali, Sulawesi Tengah. MCU pra-kerja merupakan salah satu tahapan awal dalam proses seleksi yang bertujuan memastikan kondisi kesehatan calon karyawan sebelum mereka resmi diterima bekerja. Kinerja karyawan diukur berdasarkan evaluasi kerja berkala yang dilakukan oleh atasan langsung, mencakup aspek produktivitas, ketepatan waktu, dan kualitas kerja. Metodologi penelitian yang digunakan adalah kuantitatif. Data dikumpulkan dari 50 karyawan yang telah menjalani seluruh proses rekrutmen termasuk MCU pra-kerja. Analisis data dilakukan dengan menggunakan *partial least squares* (PLS) untuk mengetahui hubungan antar variabel serta pengaruh simultan hasil MCU terhadap kinerja karyawan. Hasil penelitian menunjukkan adanya pengaruh yang signifikan antara hasil MCU pra-kerja dengan kinerja karyawan. Karyawan dengan hasil MCU yang menunjukkan kondisi kesehatan baik cenderung memiliki kinerja lebih baik dibandingkan mereka yang memiliki catatan kesehatan tertentu. Temuan ini menyarankan bahwa hasil MCU dapat dijadikan indikator penting dalam proses rekrutmen untuk memperoleh karyawan yang berkualitas.

Kata kunci: Medical Check-Up pra-kerja, seleksi karyawan, kesehatan kerja, penempatan karyawan, kinerja karyawan

INTRODUCTION

The mining sector is a labour-intensive industry that plays a crucial role in supporting Indonesia's national economy. In 2023, the sector contributed 2.198 trillion rupiah, equivalent to 10% of the national gross domestic product (GDP) of 20.892 trillion rupiah. Among the various

subsectors, nickel mining stands out as a strategic pillar of national production.

Despite its substantial economic contribution, the mining sector presents concerning challenges in the domain of occupational health and safety. Data from the Indonesian Ministry of Manpower (KEMNAKER) indicate a

significant rise in occupational diseases (ODs) between 2022 and 2023.

In 2022, there were 298,137 reported cases of occupational diseases.

In 2023, this number increased sharply to 370,747 cases, encompassing both illnesses and workplace accidents.

Morowali, one of Indonesia's major nickel production centers, illustrates this trend vividly. In 2023, two workplace accidents resulted in 30 fatalities. Furthermore, local health centers recorded a dramatic increase in acute respiratory infections (ARI):

28,867 cases in 2022

55,527 cases in 2023

These figures highlight the insufficient prioritization of occupational safety and health (OSH) in Indonesia generally, and in Morowali specifically. Mining companies appear to emphasize production performance while neglecting workers' health and safety. The prevalence of illness and injury raises critical questions about whether employees are adequately assessed for fitness to work prior to employment.

In light of these issues, the present study seeks to examine the relationship between medical check-ups and employee performance, with selection, placement, and occupational health serving as intervening variables. The research is conducted at PT. XYZ, a company engaged in construction and mining. While the company demonstrates strong production performance, its safety performance has declined, as reflected in reduced free man hours without Lost Time Injury (LTI). Importantly, medical check-ups are a mandatory prerequisite for employment at PT. XYZ.

LITERATURE REVIEW

Medical check up

Medical Check Up is an activity aimed at ensuring that human resources (HR) remain healthy and productive, thereby serving as valuable assets for the company. This is because occupational health directly influences the level of corporate productivity and is inherently linked to the company's profitability. In this regard, employee health is assessed through various specific aspects, particularly in relation to their productivity (Notadmodjo, 2007). According to Mondy (2010), health refers to employees being free from both physical and emotional illness. Health-related problems can significantly affect employee productivity as well as the overall quality of work life.

Selection

Selection is the process of choosing prospective employees who meet the predetermined requirements or standards, as well as determining whether applicants are accepted or rejected as company employees (Kasmir, 2016). In the selection process, human resource management plays a central role in identifying and selecting available human resources, and subsequently placing them in positions that best match their qualifications (Halim, 2016). Health examinations are included as part of the employee selection stages. Pre-employment medical examinations serve as a health screening step for prospective workers. Medical evaluation is an inseparable component of the selection process. Pre-employment health examinations require accurate assessments and the detection of potential risks that may arise for workers in relation to the jobs they will perform (Straus, 2006).

Occupational Health

Occupational health refers to the promotion and maintenance of the highest possible degree of physical, mental, and social well-being of workers across all types of employment. It encompasses the prevention of health disorders caused by working conditions, the protection of employees from health risks arising in the workplace, and the placement and maintenance of workers in roles that are compatible with their physical and psychological capacities (Joint ILO/WHO Committee, 1995).

Job Placement

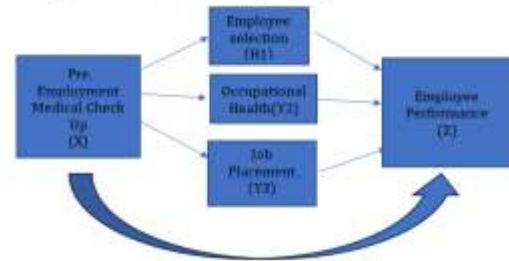
Job placement of employees is the follow-up to the selection process, namely assigning accepted candidates to positions or jobs that require them, while simultaneously delegating authority to those individuals (Hakim, 2019). Similarly, human resource placement or employee placement is the continuation of the selection process, which involves assigning accepted candidates to the appropriate positions or jobs needed, while at the same time delegating responsibilities to them (Hasibuan, 2012).

Employee Performance

According to the National Institute of Public Administration of the Republic of Indonesia, as cited in Tri Maryati (2020:7), employee performance is defined as “an achievement at a certain level in a job, program, or policy that is aligned with the realization of the company’s goals, vision, and mission. Meanwhile, Kasmir, as cited in Fachrezi Hakim and Hazmanan Khair (2020:109), explains that performance refers to the work

results and work behavior of an individual within a given period.

Conceptual Framework



RESEARCH METHODS

Research Design

The This study employed a quantitative research method with the objective of testing hypotheses and analyzing data collected through research instruments.

Research Stages

The research consisted of three stages: **first**, observation by examining medical check-up results from the first to the third quarter of 2023; **second**, interviews with employees who had been accepted after completing all stages, including the medical check-up; and the **third**, administering questionnaires containing a list of questions to be completed by sampled employees. The study involved 50 employees of PT XYZ, comprising 25 field employees and 25 office employees.

RESULTS AND DISCUSSIONS

Statistic Analysis

Based on the validity and reliability tests, all indicators have outer loading values greater than 0.7 and AVE values greater than 0.5. An outer loading value above 0.7 indicates that all research instruments are valid and reliable, as presented in Table 1.

Table 1. Validity and Reliability Test

<i>Variable</i>	<i>Outer Loading</i>	<i>AVE</i>	<i>CR</i>
<i>Pre- medical check up(X)</i>	<i>0.998-0.999</i>	<i>0.94-0.95</i>	<i>0.97-0.98</i>
<i>Employee Selection(Y1)</i>	<i>0.998-0.999</i>	<i>0.94-0.95</i>	<i>0.96-0.97</i>
<i>Occupational Health (Y2)</i>	<i>0.999</i>	<i>0.94-0.95</i>	<i>0.97-0.98</i>
<i>Job Placement (Y3)</i>	<i>0.997-0.999</i>	<i>0.93-0.94</i>	<i>0.96-0.97</i>
<i>Employee Performance (Z)</i>	<i>0.997-0.999</i>	<i>0.93-0.94</i>	<i>0.96-0.97</i>

The results of the correlation test indicate that all paths are positive and significant, as evidenced by a p-value < 0.05. Furthermore, the multicollinearity test results show that the outer VIF values are less than 5, thereby confirming the absence of multicollinearity, as presented in Table 2.

Table 2. Colinearity and Multicollinearity Test

<i>Path</i>	<i>Coefficient</i>	<i>P-value</i>	<i>VIF</i>
<i>MCU->job selection</i>	<i>0,521</i>	<i>0,002</i>	<i>1.000</i>
<i>MCU-> Occupational Health</i>	<i>0,458</i>	<i>0,010</i>	<i>1.000</i>
<i>MCU-> Job placement</i>	<i>0,589</i>	<i>0,003</i>	<i>1.000</i>
<i>MCU-> Employee Performance</i>	<i>0,612</i>	<i>0,001</i>	<i>1.000</i>
<i>Selecti on-> Employee Performance</i>	<i>0,474</i>	<i>0,004</i>	<i>1.000</i>
<i>Occupational Health-> Employee Performance</i>	<i>0,395</i>	<i>0,016</i>	<i>1.000</i>
<i>Job Placement-> Employee Performance</i>	<i>0,502</i>	<i>0,002</i>	<i>1.00</i>

Then, the evaluation of the inner model and hypothesis testing confirmed that all proposed hypotheses (H1–H7) were supported. The pre-employment medical check-up (MCU) was found to have a direct and significant effect on employee performance, while the intervening variables also contributed meaningfully to performance outcomes as presented in Table 3.

Table 3. Inner Model and Hypothesis Test

<i>Hypothesis</i>	<i>Variable</i>	<i>T-statistik</i>	<i>P-value</i>	<i>Remarks</i>
<i>H1</i>	<i>MCU-> selection</i>	<i>3.12</i>	<i>0.002</i>	<i>Accepted</i>
<i>H2</i>	<i>MCU-> Job placement</i>	<i>2.65</i>	<i>0.010</i>	<i>Accepted</i>
<i>H3</i>	<i>MCU-> Occupational Health</i>	<i>3.05</i>	<i>0.003</i>	<i>Accepted</i>
<i>H4</i>	<i>MCU-> Job performance</i>	<i>3.45</i>	<i>0.001</i>	<i>Accepted</i>
<i>H5</i>	<i>Selection-> Job Performance</i>	<i>2.98</i>	<i>0.004</i>	<i>Accepted</i>
<i>H6</i>	<i>Occupational Health-> Job performance</i>	<i>2.42</i>	<i>0.016</i>	<i>Accepted</i>
<i>H7</i>	<i>Job placement-> Job performance</i>	<i>3.21</i>	<i>0.002</i>	<i>Accepted</i>

Hypothesis Results Pre- Medical Check Up and Employee Selection

Based on the results of data processing, it can be concluded that variable X (Pre-Employment Medical Check-Up) has a positive and significant effect on variable Y1 (employee selection). This is evidenced by the hypothesis testing results, which demonstrate a direct influence. This finding is also consistent with the study by Gutterbarga (2014), which reported that the pre-employment health assessment module was able to evaluate work capacity across more than 100 types of occupations in the Dutch construction industry. In addition, it

contributed to preventing injuries and occupational diseases among workers.

Pre-Medical Check Up and Occupational Health

Based on the results of data analysis, it can be concluded that the Pre-Medical Check Up has a positive and significant effect on occupational health. This is evidenced by the hypothesis testing results, which show that MCU outcomes have a positive and significant relationship with employees' occupational health. Employees with favorable MCU results tend to have better health and are ready to work. This finding is consistent with the study conducted by Cahyati (2016), which stated that pre-employment medical check ups can reduce the risk of disability among the elderly. In that study, based on the Odd ratio, elderly individuals who had never undergone a medical check up were 5.702 times more likely to experience disability compared to those who had undergone medical check ups.

Pre-Medical Check Up and Job Placement

Based on the results of data analysis, it can be concluded that Pre-Employment Medical Check-Up has a positive and significant effect on job placement. This is evidenced by hypothesis testing, which confirms that an MCU with measurable parameters can assist in placing employees according to their physical condition and health status. This finding is consistent with Van Dijk (1997), who emphasized that pre-employment health examinations must be specific to the worker's job description in order to properly assess their effectiveness.

Pre-Medical Check Up and Employee Performance

Based on the hypothesis testing conducted, there is a positive and significant effect of Pre-MCU (medical check-up) results on employee performance. This was confirmed by the hypothesis test, which demonstrated that MCU outcomes are positively and significantly associated with employee performance. Employees with favorable MCU results tend to work more productively, adhere to standards, and achieve the targets set by the company. These findings are consistent with Nurohman and Aprianti (2025), who stated that medical check-ups play an important role in enhancing employee performance. Medical check-ups have been proven effective in improving performance by reducing the risk of workplace accidents, increasing efficiency, and fostering a healthier and more productive work environment.

Employee Selection and Employee Performance

Employee selection has a positive and significant effect on employee performance. This is evidenced by positive test results indicating that employee selection has a positive and significant influence on performance. A well-conducted selection process will produce employees who are capable of contributing positively to the company's overall performance. This finding is consistent with the study conducted by Latiff (2018) on employees of Bank Rakyat Indonesia in Yogyakarta, which revealed an indirect effect of 0.1404 between employee selection and performance.

Occupational Health and Employee Performance

There were positive and significant influence between occupational health and employee performance. This is explained in the

hypothesis testing, which shows that occupational health has a positive and significant effect on employee performance. Healthy employees tend to be able to demonstrate good performance, thereby having a positive impact on company performance. This finding is consistent with the explanation of Rachmadany, Haryati, and Yuliastanty, who reported that among the 54 employees sampled, occupational health accounted for 96.70% of the influence on employee performance.

Job Placement and Employee Performance

Job placement has a positive and significant effect on employee performance. This is evidenced by the results of hypothesis testing, which show a positive and significant influence of job placement on employee performance. Therefore, it can be concluded that employees who are placed in positions aligned with their competencies are able to demonstrate good performance. This finding is consistent with the study conducted by Tanjung and Sofyanda (2015), which explained that among 57 employees of Eco Green Park, East Java, taken as the sample, there was a significant effect of job placement on employee performance.

CONCLUSION AND SUGGESTION

Pre-employment medical check-ups have a positive and significant effect on employee performance. Employees with favorable medical check-up results tend to work more optimally, meeting the standards and targets set by the company. Based on data analysis, the direct effect is significantly stronger compared to the indirect effect through relationships among intervening variables.

Through this research, the company can re-evaluate the existing medical check-up standards and determine which parameters remain relevant and which need to be revised in accordance with the company's needs and capabilities. Furthermore, every employee undergoing the Medical Check-Up process must prepare themselves by maintaining optimal health, as the Medical Check-Up is a crucial stage in the selection process.

In view of the limited research on Medical Check-Up both domestically and internationally, it is recommended that the academic community and future researchers further develop studies on this topic, as it is of great importance. At present, health examinations are not merely a formal requirement but have become a fundamental necessity especially in Human Resource Development

REFERENCES

- [1] W. Alwi. (2014). *Manajemen Sumber Daya Manusia Dalam Organisasi Publik*. Jatinangor: IPDN Press.
- [2] A. Ameyaw et al. (2017). *Mandatory Pre-Employment Medical Examination—The Practice and The Law: Is It Justifiable?*. Beijing: Scientific Research Publishing.
- [3] S. Andriyani. (2016). *Analisis Penerapan Medical Check Up Karyawan RS Islam Pondok Kopi Jakarta*. *Jurnal Universitas Muhammadiyah Jakarta*.
- [4] N. Cahyati. (2016). *Hubungan Antara Status Medical Check Up Terhadap Kejadian Disabilitas Fisik Pada Lansia di Kecamatan Punung Kabupaten Pacitan*. *Unnes Journal of Public Health*.
- [5] Fahrudin et al. (2021). *Pre-Employment Health Screening*

- For Nurses During Covid-19 Pandemic From Occupational Health Perspective: A Document Review. *Scientific Journal of Health Research*.
- [6] F. Fitrijaningsih, S. Andriyani, Munaya et al. (2022). *Panduan Pelaksanaan Sistem Manajemen Keselamatan dan Kesehatan Kerja*. Jakarta: Fakultas Kesehatan Masyarakat Universitas Muhammadiyah.
- [7] Goutterborge et al. (2014). *Developing a Best Evidence Pre-Employment Medical Examination: An Example From The Construction Industry*. Netherlands: Elsevier Safety and Health at Work.
- [8] Gunawan, Agusyahbana, Kartasurya. (2020). *Perancangan Sistem Informasi Medical Check Up Guna Mempercepat Pelayanan MCU di RSUD Brebes*. *Jurnal Kesehatan Polije*.
- [9] International Labour Organization. (1998). *Technical and Ethical Guidelines For Worker's Health and Surveillance*. Geneva: International Labour Office.
- [10] H. Rachmadany, Haryati, Yuliantanty. (2021). *Pengaruh Kesehatan Kerja dan Keselamatan Kerja Terhadap Kinerja Karyawan Pada Hotel Kawana Padang*. *Jurnal Matua* 3(4).
- [11] J. Jinshan, Hakro. (2018). *Workplace Employee Annual Physical Check Up and During Hire to Job to Increase Healthcare Awareness Perception to Prevent Disease Risk: A Work for Policy Implementable Option Globally*. China: OSHRI Safety and Health at Work.
- [12] Jungbauer et al. (2016). *Pre-Employment Examinations For Preventing Injury, Disease, and Sick Leave in Workers (Review)*. Cochrane Library.
- [13] R. Kamariah, Ridwan. (2019). *Evaluasi Penerapan Pemeriksaan Kesehatan Tenaga Kerja di Balai Besar Pengembangan Keselamatan dan Kesehatan Kerja Kota Makassar*. *Jurnal Administrasi Negara*.
- [14] A. Latif. (2018). *Pengaruh Rekrutmen, Seleksi, dan Pelatihan Terhadap Kinerja Karyawan Melalui Komitmen Organisasional Sebagai Variabel Intervening Pada PT Bank Rakyat Indonesia C.G Cikditiro, Yogyakarta*. Skripsi. Universitas Islam Indonesia Yogyakarta.
- [15] Mulyawati, Nugroho, Kusumapraja. (2019). *Strategi Pemasaran Mampu Menentukan Loyalitas Karyawan PT Peserta Medical Check Up (MCU) Melalui Variabel Kepercayaan*. *Journal of Hospital Management*.
- [16] Moniharapon, Lengkong, Potale. (2016). *Pengaruh Proses Rekrutmen dan Seleksi Terhadap Kinerja Karyawan Pada PT Bank Sulutgo*. *Jurnal Ilmiah Berkala Efisiensi*.
- [17] A. Nurrohman, Aprianti. (2025). *Intervensi Medical Check Up Dalam Menstimulasi Kinerja Organisasi Berkelanjutan di PT. Elnusa Tbk. Nusantara: Jurnal Ilmu Pengetahuan Sosial*.
- [18] Pachman. (2009). *Evidence Base For Pre-Employment Medical Screening*. *Bulletin of the World Health Organization*.
- [19] K. Pauzi, A. Karmila, Aeni. (2023). *Pengaruh Kompensasi dan Gaya Kepemimpinan Terhadap Kinerja Karyawan Pada CV. Giri Putra di Kota Tasikmalaya*. *Jurnal Bisnis Mahasiswa.com*.

- [20] L. Putra, Laksmi, Laksmi. (2023). Penempatan, Motivasi, dan Lingkungan Kerja Terhadap Kinerja Pegawai UPTD Pal Propinsi Bali. *Bisma: Jurnal Bisnis dan Manajemen*.
- [21] Peraturan Menteri Tenaga Kerja dan Transmigrasi. (2007). Tentang Pedoman Pemberian Penghargaan Keselamatan dan Kesehatan Kerja. Jakarta: Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia.
- [22] Rusby. (2016). *Manajemen Sumber Daya Manusia*. Pekanbaru: Pusat Kajian Studi Islam FAI UIR.
- [23] Supinganto et al. (2020). Implementation of Health Examination for Elector Recruitment Process in the West Nusa Tenggara Province. *Macedonian Journal of Medical Sciences*.
- [24] Sambul, Tatimu, Marganto. (2021). Pengaruh Keselamatan dan Kesehatan Kerja Terhadap Kinerja Karyawan PT. Mahagatra Sinar Karya. Manado: *Productivity Jurnal Universitas Sam Ratulangi*.
- [25] Tanjung. (2016). Pengaruh Penempatan Kerja Terhadap Kinerja Karyawan. *Jurnal Ilmiah Mahasiswa FEB*.
- [26] S. Trisanti. (2019). *Manajemen Sumber Daya Manusia di Bidang Pelayanan Kesehatan*. Malang: Wineka Media.
- [27] M. Yuwarni, Meilin, Dwiratih. (2020). *Pemeriksaan Kesehatan Tenaga Kerja*. Jakarta: Perhimpunan Dokter Kesehatan Kerja Indonesia (IDKI).
- [28] Van Dijk. (1997). Preventive Effectiveness of Pre-Employment Medical Assessment. *Occupational and Environmental Medicine*.