

# A review of fit to work assessment program on the work performance of heavy equipment operators during the pandemic covid-19 at Indonesia



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## ABSTRACT

**Introduction:** Fit-to-work assessment is one of the health examination efforts to assess the physical function and occupational health of workers before starting work. This fit-to-work assessment is very important during the current pandemic because the workplace is a place that is at risk of transmitting the COVID-19 virus, especially a workplace that continues to operate during the pandemic. Thus, this study aims to analyze the influence of fit-to-work assessment on the work performance of Heavy Equipment Operators at a port service terminal in Indonesia during the COVID-19 pandemic.

**Methods:** The type of research used descriptive analytics with the cross-sectional study. The sample was collected with a simple random sampling technique. The population in this study is heavy equipment operators in one of the sub-holding of PT. Pelindo Terminal Petikemas Surabaya- Indonesia with a sample of 54 operators who can represent each work shift. Each participant was given a questionnaire and needed to fulfill it. The data will be analyzed using SPSS 25. The data analyzed was descriptive only.

**Results:** According to the study of the characteristics, mostly the ages were 31-40 (46.30%), with a high prevalence of high school (76%). The work shift schedule was classified into three parts. Shift two from 3.30 pm until 11.40. The length of work was also more than five years or greater than others (59.25%), with the work performance from 54 respondents, we found that they had a high work performance (72%), and all of the respondents were mostly in a reasonable condition (94.04%).

**Conclusion:** Fit-to-work assessment is carried out before work to determine whether the worker is fit or unfit to work according to the level of health required. The work performance we found that mostly they have a high work performance. It was also in line with the fit-to-work assessment results that most respondents were in a reasonable condition.

**Keywords:** fit to work, fitness to work, work performance, covid-19 pandemic.

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## INTRODUCTION

The workplace as a place of interaction and community gathering is a risk factor that needs to be anticipated for the impact of transmissions, particularly in the pandemic era. Therefore, efforts are necessary to limit activities in a safe workplace from all these threats and potential hazards. Thus, the company must implement the fit-to-work assessment program as a mitigation measure that must be taken during a pandemic. To reduce the spread of the COVID-19 virus in the workplace, several countries have issued national policies and guidelines for a safe return to work and other plans to do so when the situation is open. The formulation of any policy guide

needs to be informed by a people-centered approach to the future of work that places workers' rights and needs, aspirations and rights of all, at the heart of economic, social and environmental policies.<sup>1</sup> Fitness-to-work is done by objectively assessing employees' health about their specific jobs. The proposed risk-based FTW design process includes 5 key steps: health risk assessment, control options, legal assessment, implementation, and review.<sup>2</sup>

Fit-to-work is usually assessed in several ways, such as a physical examination (including a functional capacity test) specific to the task. These checks are designed to apply equally to

everyone performing the work and should produce consistent results on retesting. Such an evaluation should also take into account "direct risks" (i.e., the working conditions themselves) and "indirect risks" (i.e., those arising due to logistical challenges). Put another way, this is the difference between a "fit for the task" and a "fit for location and condition".<sup>3</sup>

Several previous studies have shown that fit-to-work assessment is only carried out for workers in the oil and gas sector. Work suitability assessments have never been carried out on heavy equipment operators, even though heavy equipment operators are jobs that require focus and have a high risk of experiencing work

**Table 1. The respondents' background information**

Background	Category	Frequency (n)	Percentage (%)
Age	20-30 years old	13	24.07
	31-40 years old	25	46.30
	More than 40 years old	16	29.63
Education Level	Junior High School	2	3.70
	High School	41	76.0
	Bachelor degree	11	20.3
Work shift schedule	Shif 1 starts from 07.30 am-3.30 pm	18	33.30
	Shift 2 starts from 3.30 pm -11.30 pm	23	42.60
	Shift 3 starts from 11.30 pm-07.30 am	13	24.10
Length of work	≥ 5 years	32	59.25
	< 5 years	22	40.75

accidents. During the pandemic, company management made various efforts to prevent the spread of the virus without reducing the obligation to reduce the number of work accidents that occurred in the workplace, one of which was at port service companies in Indonesia.<sup>1-3</sup>

Work performance can be defined as the quality and quantity of work an employee performs by his responsibilities.<sup>4</sup> Although relatively difficult to measure directly, organizations are interested and developing tools to accommodate these goals. Job performance can be confused with productivity because both are often discussed at the same simultaneously that keep it measurable are sure to benefit in the long run. Productivity is the ratio between output size and input size. Inputs and outputs, in most circumstances, must be determined by the company.<sup>5</sup> Thus, this study aims to analyze the influence of fit-to-work assessment on the work performance of Heavy Equipment Operators at a port service terminal in Indonesia during the COVID-19 pandemic.

## METHODS

This research tried to analyze the influence fit to work assessment on the work performance of heavy equipment operators at a port service terminal in Indonesia during a pandemic by using a cross sectional study. The sample was collected with a simple random sampling technique. The population in this study are heavy equipment operators in one of the sub-holding of PT—Pelindo Terminal Petikemas Surabaya-Indonesia, with a sample of 54 operators who can represent each work shift. Before the project began, ethical approval was obtained from the

**Table 2. Work performance perception result**

Work Performance Category	Frequency (n)	Percentage (%)
High Work performance	39	72.0
Middle Work performance	13	24.0
Low Work performance	2	4.0

**Table 3. Fit to work assessment result**

Operators Condition	Frequency (n)	Percentage %
Fit	51	94.40
Unfit	3	5.60

Medical Research Ethics Committee of Nahdlatul Ulama University. All participants provided informed consent.

To collect information on this research, each participant was given a questionnaire containing two sections to fill in as follows and fit to work assessment such as 1) socio-demographic questionnaire, a simple questionnaire requesting about age, gender, educational level, length of work and work shift schedule. 2) Perception work performance questionnaire, there are 15 questions about the perception of how the operators value their quality of work, the quantity of work, reliability, attendance of work, and work as a team. Likert scale of 1-5 is applied to measure the opinion (1: strongly disagree- 5: strongly agree). Based on the questionnaire result, work performance and productivity classify into 3 categories: high, medium, and low. 3) Fit-to-work assessment to check the operator's health and physical before working. For the vital sign parameters on health and physical checks at the Port Services Terminal, as shown in Table 1. Suppose one of six parameter fit to work assessment parameters does not meet the requirements. In that case, the worker is declared "unfit" and will be observed

by a doctor or paramedic 3 times for 10 minutes and a maximum of 2 hours. If the results still do not match the indicator, the worker is declared unfit and cannot work or is referred to a hospital if needed. The parameter of vital protocol fit to work assessment gas glows coma scale, oxygen saturation, systolic blood pressure, diastolic blood pressure, pulse rate, respiratory rate, and body temperature.

All of the data were collected and analyzed in SPSS 25. The descriptive analysis provided the frequency and percentage of each variable in the table. This research was approved by the Health Research Ethics Committee of University Nahdlatul Ulama. Letter of exemption Ref. No. 162/EC/KEPK/UNUSA/2021.

## RESULTS

According to the study of the characteristics, mostly the ages were 31-40 (46.30%), with a high prevalence of high school (76%). The work shift schedule was classified into three parts. Shift two from 3.30 pm until 11.40. The length of work is also more than five years or greater than others (59.25%) (Table 1).

According to the work performance from 54 respondents, we found that they

have a high work performance (72%), followed by middle work performance (24%). Only a few respondents had a low work performance (4%) (Table 2).

Based on the fit-to-work assessment to check the health and physical of operators, like, the gas glow coma scale, oxygen saturation, blood pressure, pulse, respiratory rate, and body temperature, the result fit-to-work assessment classifies into two categories: fit and unfit. This result indicated that most heavy equipment operators were in appropriate condition, although three operators were declared inappropriate (Table 3). In the table below, all respondents were mostly in a reasonable state (94.04%). It also aligned with the work performance above (Table 2).

## DISCUSSION

The flow of the implementation of the fit-to-work program for operational workers is carried out to see the suitability of implementation with technical instructions from the company. Fit to work is defined as evaluating a worker's capacity to work without risking his health and safety.<sup>3</sup> The rules that underlie the implementation of health checks refer to the regulation of the Indonesia Minister of Manpower and Transmigration No. 02/MEN/1980 about worker health checks in the implementation of work safety in the workplaces.<sup>6</sup> The health checks that must be given to all workers include health checks before entering work, periodic health checks (once in a year) and special health checks. Health checks (fit-to-work assessment) are carried out by company doctors or paramedical teams certified in corporate hygiene and occupational health training.<sup>7</sup>

The results of preliminary studies are known if fit to work is carried out on only some workers (only given to workers who voluntarily feel unfit). This can lead to workers who continue to work even in inappropriate conditions, which triggers unsafe action and reduce worker performance. Another study about the influence of health, training and using personal protective equipment against work accidents by construction workers shows that the higher the health factor, the

lower the work accident factor in workers.<sup>8</sup>

In our finding of the work performance of 54 respondents, we found that they have a high work performance (72%), followed by middle work performance (24%). Only a few respondents had a low work performance (4%), and it was also in line with the fit-to-work assessment results that most respondents were in a reasonable condition.

Previous studies have shown that maintaining occupational health conditions can improve performance and reduce the risk of work accidents. Workers who continue to work even in unfit conditions can increase the possibility of unsafe acts due to a lack of concentration. Occupational health conditions can be maintained by maintaining the workforce's health, including health insurance, health services and labor inspections for each worker.<sup>9</sup>

## CONCLUSION

Fit-to-work assessment is carried out before work to determine whether the worker is fit or unfit to work according to the level of health required. The weakness of this program is that appropriate to-work assessment takes a very long time, needing about five minutes for each person and health workers on duty only consist of 1 doctor and 1 paramedic. In our finding of the work performance, we found that mostly they have a high work performance, followed by middle work performance. Only a few respondents had a low work performance, and it was also in line with the fit-to-work assessment results that most respondents were in a reasonable condition.

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## DISCLOSURE

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### Author Contribution

All of the authors contributed to this publication.

### Conflict of Interest

This paper didn't have a conflict of interest with anyone or any company.

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