Artikel Penelitian
Jurnal Penelitian Keperawatan Kontemporer, Volume 3, No 2, Juli 2023 || ISSN 2775-8958 (Media Online)

ANALYSIS OF THE LEVEL OF MENTAL HEALTH OF WORKERS USING THE BOGOR – JAKARTA ELECTRIC TRAIN TRANSPORTATION WITH WORK PRODUCTIVITY

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Abstrack

Background: Mental health in an all-digital world, especially market expansion which tends to increase sharply, especially after the Covid 19 pandemic, is a very important scourge to maintain in increasing work competition capacity. Job competition in terms of career prospects and lifestyle, is something that is seen as elite, because the level of income is categorized as high. However, for workers who continue to target material outputs, without paying attention to mental health, it will result in decreased performance productivity in the field they carry out. Productivity is the ability of employees to achieve certain tasks in accordance with standards, completeness, cost, and speed so that the efficient and effective use of human resources in an organization. **Aim:** to find out whether the level of mental health of workers in increasing productivity, has a relationship with the mobility of electric rail transportation. **Method:** This study uses a quantitative approach with the method of regression analysislinear simple. Simple linear regression analysis is an approach method for modeling the relationship between one dependent variable and one independent variable. In regression, the independent variable explains the variableits dependent. In simple regression analysis, the relationship between variables is linear, where changes in variable X will be followed by changes in variable Y permanently. **Results:** The results of the correlation value between x and y using the help of Microsoft excel 0.792, while the coefficient of determination is 62.8%, and the value of X is the equation Y = -8.13 + 1.17X. **Conclusion:** The result of the correlation value between x and y can be 0.792 while the coefficient of determination is 62.8%, which means that the x value can explain y of 62.8%, the rest is influenced by other factors. Or you could say valuelevel stress which has a negative impact on mental health problems, affects valuesproductivity as well as the results of the intercept and the value of X with Y = -8.13 + 1.17X.

Keywords: Mental Health, Productivity, Regression, Stress, Workers.

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INTRODUCTION

Mental health in an all-digital world, especially market expansion which tends to increase sharply, especially after the Covid 19 pandemic, is a very important scourge to maintain in increasing work competition capacity. Job competition in terms of career prospects and lifestyle, is something that is seen as elite, because the level of income is categorized as high. However, for workers who continue to target material outputs, without paying attention to mental health, it will result in decreased performance productivity in the field they carry out. Productivity is the ability of employees to achieve certain tasks in accordance with standards, completeness, cost, and speed so that the efficient and effective use of human resources in an organization.

Work productivity is an important challenge in organizations, especially in managing human resources. Organizational success depends on the work productivity of employees. Companies definitely want employees who have high work productivity at work (Purnami & Utama, 2019). The level of productivity in the world of work is very much needed in companies that focus on and are oriented towards one sustainable goal. Not only that, productivity is also seen as a company benchmark in fostering, creating and maintaining its performance achievements. Productivity capacity of workers, is also influenced by the level of emotional state, distributionJobdesk in the field, as well as mobilization to the office area.

Mobilization during working hours, especiallyin the area Indonesia's capital city, Jakarta, tends to experience obstacles in the form of traffic jams. Invitations regarding the use of public transportation, as well as reducing pollution, allegedly can reduce congestion. However, the inadequate allocation of public transportation, and accommodating the number of users, can create new problems. Cases that occur and are often discussed on social media, namely the transportation capacity of electric trains or KRL, do not match the number of users, resulting in excessive crowded activity on the train, or passengers having to wait for the next schedule. This activity is often found on one of the Jakarta - Bogor routes. Previous research results of 125respondent with quantitative methods through multiple linear regression analysis approach, reveals thattransportation electric trains were chosen because of the quality of service and price aspects, affecting the interests of passengers (Waode Utari Nur Aisyah et al., 2019). A relatively cheap price option via KRL transportationcommuterline, from previous research, is the main reason for passengers to choose this transportation.

The background described earlier is the reason for the researchers to make observations with the title 'analysis of the level of mental health of workers using the Bogor - Jakarta electric rail transportation with work productivity'. This study aims to determine whether the level of mental health of workers in increasing productivity has a relationship with the mobility of electric rail transportation. This research is also expected to be an evaluation for workers to always maintain mentality while working, as an investment for future health..

RESEARCH METHODS

This study uses a quantitative approach with a simple linear regression analysis method. Asimple linear regression

analysis is an approach method for modeling the relationship between one dependent variable and one independent variable. In regression, the independent variable explains the dependent variable. In simple regression analysis, the relationship between variables is linear, where changes in variable X will be followed by changes in variable Y permanently. Meanwhile, in non-linear relationships, changes in variable X are not followed by variable Y proportionally (Muhartini et al., 2022).

1. Determination of Problem Formulation
   This stage aims to provide a limitation of questions to researchers, what is to be discussed in the analysis (discussion) stage.
2. Data Collection and Literature Selection
   Data collection was carried out by distributing closed questionnaires to respondents, namely KRL users from the Bogor - Jakarta route. closed questionnaires, namely questionnaires that have already provided answers, the reason the authors use closed questionnaires is because this type of questionnaire makes it easy for respondents to provide answers, closed questionnaires are more practical, and can compensate for limited research costs and time (Purnia et al., 2020)**.** Then literature selection was carried out by selecting similar keywords, and sorting them based on the focus and scope of this research
3. Data Processing 1
   The results of data processing 1 are carried out based on data processing references from collecting questionnaire data to respondents.
4. Selection of Respondents
   This selection stage will later be used as data for the interview stage, for data processing 2.
5. Interview Stage
   This interview stage aims to investigate why respondents input data at that value.
6. Data Processing 2
   This stage was carried out to recap the results of the interview stages with the relevant respondents.
7. Analysis Phase
   This stage is used to analyze data from beginning to end, which is then used as a reference for the conclusion stages.
8. Conclusion
   This final stage, as a form of final analysis, is what is then used as the core of the results, and is used as the final evaluation. Drawing conclusions is one of the qualitative data analysis techniques. Conclusions are the results of analysis that can be used for taking action (Cecilia & Usmany, 2020).

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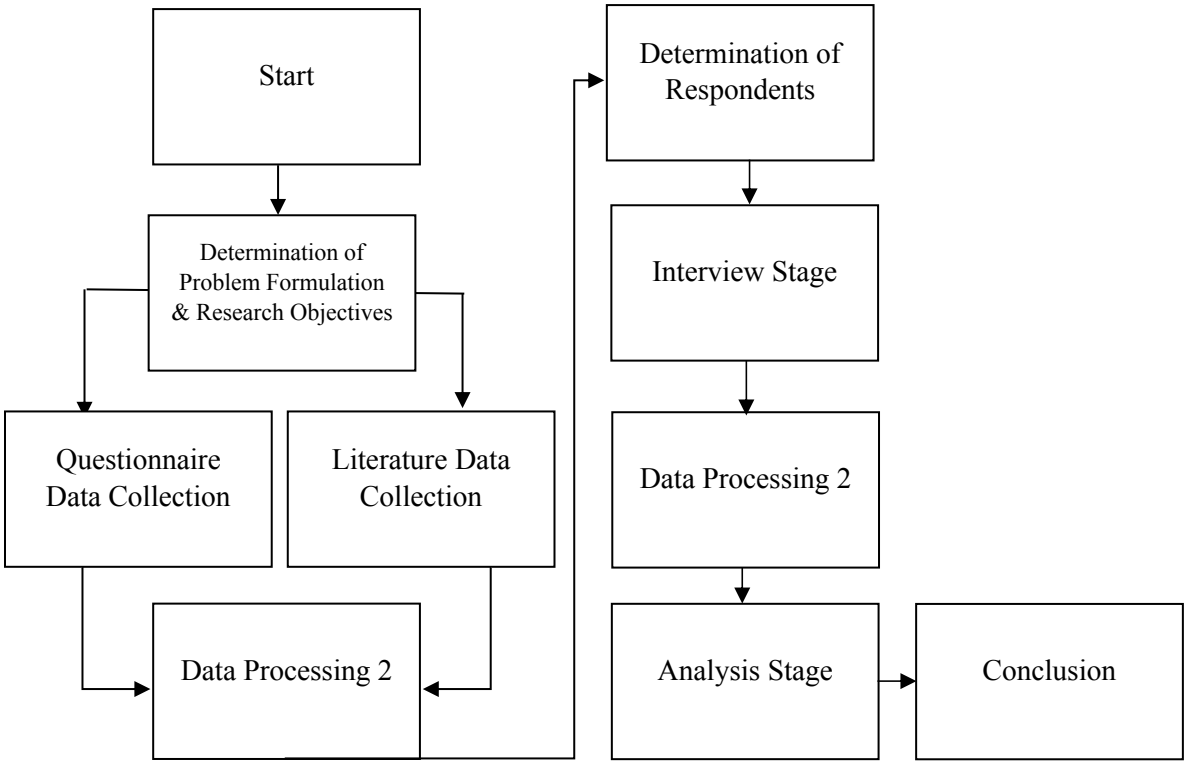

Figure 1 Observacy Method

RESULT AND ANALYSIS

Determining the formulation of the problem, based on the aspect of the purpose of this study, namely to find out whether the level of mental health of workers in increasing productivity has a relationship with the mobility of electric rail transportation. The second stage is data collection using a closed questionnaire, containing only two questions, namely the value of mental health and productivity. As for the determination of the scale for each value, namely within the range of 0 – 100. the higher the value filled in by the respondent, the better the value of mental health and productivity.

X = Stress Level Value
Y = Productivity Value

Selection of respondents based on the following conditions:Pekerjaan responden harus berinteraksi dengan banyak orang

1. The respondent's job is to interact with many people
2. The location of the work placement in the mobilization of the electric railroad must pass Manggarai Station.
3. Allocation of working hours from 08.00 – 17.00 WIB.

The results of collecting X and Y correlation data can be seen in Table 1 below:

Table 1 Determination of X and Y Correlation

No	X	Y
1	60	60
2	60	50
3	60	70
4	70	80

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No	X	Y
5	50	50
6	50	60
7	50	60
8	50	50
9	40	30
10	50	40
11	60	60
12	70	80
13	60	50
14	40	50

Source: Data processed by the author (2023).

The determination of the correlation category can be seen in Table 2 below:

Table 2 References for Determining Correlation Categories

Correlation Category	
0,09 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Currently
0,60 – 0,799	Strong
0,80 – 1,00	Very Strong

Source: Data processed by the author (2023).

The output results of the simple linear regression analysis method can be seen in Table 3 below

Table 3 Outcome Of Regression Statistics

Regression Statistics	
Multiple R	0.792796115
R Square	0.628525681
Adjusted R Square	0.597569487
Standard Error	8.834807877
Observations	14

Source: Data processed by the author (2023).

The results of the correlation value between x and y can be seen in the Multiple R area of 0.792, while the coefficient of determination is 62.8%, which means that the x value can explain y of 62.8%, the rest is influenced by other factors. These results are different from previous research, namely mental workload does not affect work fatigue. In other words, there is no significant relationship between mental workload and work fatigue (Abdulla, 2023). Other previous research said, based on univariate analysis of the dependent and independent research variables, it is known that most workers experience moderate category work fatigue (45.9%), work for more than 7 hours a day (67%), have a workload heavy physical so that it is necessary to redesign the work (56.9%), and has a moderate category of mental workload (68.8%). There is a significant relationship between work duration (p-value = 0.000) and workload (p-value = 0.000) with work fatigue while the mental workload variable does not have a significant relationship to work fatigue (p-value = 0.377) (Sejati Sihotang et al., 2021)

The results of ANOVA calculations using Microsoft Excel can be seen in Table 4 below:

Table 4 ANOVA Results

	df	SS	F	Significance F
Regression	1	1584.78	20.3	0.00071
Residual	12	936.6		
Total	13	2521.4		

Source: Data processed by the author (2023).

ANOVA is a standard technique for measuring the statistical significance of a set of independent variables in predicting the dependent variable. ANOVA takes a single feature and class associated with a sample of data and measures the significance of the class variable in

predicting the average for that feature. The resulting measure of the ANOVA is the p value for the feature set and class variables (Wenda, 2022). The calculation results are Table 4, then the intercept results and the X value are obtained, namely Y = -8.13 + 1.17X which can be seen in Table 5.

response that is disruptive or detrimental, which occurs when task demands do not match the capabilities, resources or desires of the worker (Awalia et al., 2021)

Table 5 Intercept and X Results

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-8,136645963	14,52208	-0,56029	0,585586885	-39,77753838	23,50425
X	1,173913043	0,260524	4,505964	0,000719148	0,606279419	1,741547

Source: Data processed by the author (2023).

Answer 1

"Based on my independent screening, mental health is in the low category below 60, because access to KRL mobility must be crowded with other users. Regarding its influence on my work productivity, it is said to be influential, because if my emotional level is high, plus the fatigue factor, then my productivity in the company is not optimal"

Respondent 2

"The level of stress in mobilization using electric rail transportation, especially during the time of going to work, I put in the high category, because it raises concerns about not being able to enter the carriage access, regarding overloading. If you can get in, you have to squeeze in with other passengers, which results in fatigue before work"

Previous research revealed that stress is a stimulus or action of the human body, both from outside and within the human body which can cause adverse effects ranging from declining health to suffering from a disease. Work-related stress is also an emotional and physical

CONCLUSION

The conclusions in this study are as follows:

1. The result of the correlation value between x and y can be 0.792 while the coefficient of determination is 62.8%, which means that the x value can explain y of 62.8%, the rest is influenced by other factors. Or you could say value level stress which has a negative impact on mental health problems, affects values productivity
2. The result of the intercept and the value of X is Y = -8.13+1.17X

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