



The Relationship Between Working Time and Fatigue of Online Motorcycle Taxi Drivers in Medan

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Abstract

A common problem among online motorcycle taxi drivers that can negatively affect their health and performance is fatigue. One factor that can reduce the level of fatigue is long working hours. Excessive working time can increase work errors due to increased fatigue and reduced sleep hours. This study aims to determine the effect of working time on fatigue of online motorcycle taxi drivers in the field of struggle. This research is quantitative using observational analytic method with cross sectional approach with univariate and bivariate analysis using chi-square test. The sampling technique with total sampling of 97 online motorcycle taxi riders. This study shows that there is an effect of working time with fatigue in online motorcycle taxi drivers in Medan city with a significance value of $0.00 < 0.05$. this study is that there is a relationship between the effect of working time and fatigue of online motorcycle taxi drivers in the city of Medan and for online motorcycle taxi drivers in the city of Medan to pay more attention to conditions while working, and not to work late at night. Because it can cause fatigue and worsen their sleep quality so as to develop a degree of health and safety in driving.

Introduction

The World Health Organization (WHO, 2020) in 2020 for sustainable development has set an decreased alertness and sluggishness in every activity. Law No. 36 of 2009 concerning Health Article 164 states, occupational health efforts are aimed at protecting workers to live healthy lives and free from health problems and adverse influences related to work (Dyah Syahfitri, 2021).

Work fatigue can cause several conditions, namely decreased performance, the body feels bad in addition to decreased morale (Indah, 2020). Feelings of fatigue tend to increase the occurrence of work accidents, so that it can follow the workers themselves and their companies because of a decrease in work productivity (Adisty, 2023). Occupational fatigue is proven to contribute more than 60% in the incidence of workplace accidents Fatigue is influenced by several factors (Kincal & Irk1, 2024).

Fatigue is a decline in mental and physical strength that can reduce a person's performance to a level lower than the desired level (Nieznański et al., 2020). Fatigue can lead to several adverse outcomes in different occupational populations (Cho & Steege, 2021). Some of the most important consequences of fatigue include impairment of cognitive functions such as attention, concentration and reaction time, negative mood swings, reduced physical activity, reduced performance and human error and injury (Jeffri & Awang Rambli, 2021). Factors contributing

to occupational fatigue have been investigated and mental workload is recognized as one of the causes of fatigue in the workplace (Afriansyah et al., 2022).

The causes of work fatigue, namely: Work factors (Monotonous conditions, load and length of work both physical and mental, circumstances). Work environment factors (working weather, lighting and noise in the workplace, psychological state, worry or conflict). Individual factors (age, length of service, height and weight) related to the individual characteristics of workers, as well as external factors related to work and the work environment (Jalali et al., 2023). The length of working time can affect job fatigue. According to Suma'mur, the length of a person's working time is 8 hours a day and if you extend the time, you will get tired.

Working beyond this level is usually not accompanied by high efficiency, and there is usually a decrease in productivity and a tendency to develop fatigue, illness, and accidents (Casey et al., 2024). To overcome this, it is necessary to take a break and be given the opportunity to eat which raises blood sugar levels as fuel to produce body energy for carrying out work (Kida & Takemura, 2022). Therefore, a half-hour break after 4 hours of continuous work is very important both for restoring physical and mental abilities and replenishing energy whose source comes from food (Hakzah et al., 2022). Workload is too much workload that can cause tension in a person, causing stress (Paramita & Suwandana, 2022). This can be caused by the level of expertise required is too high, the speed of work may be too high, the volume of work may be Too much and so on.

The effect of online motorcycle taxi fatigue in the city of Medan is the length of working time resulting in sleepiness when driving, resulting in accidents while riding a motorcycle (Ghaffarpassand et al., 2021). The International Labor Organization (ILO) also suggests that work accidents are basically caused by 3 factors, namely worker factors (including age, education level, work experience), work factors (including work shifts, types or units of work), and environmental factors including physical, chemical and biological environments (Ferusgel et al., 2021).

Transportation is something that is close to the community. There are various types of transportation, both two-wheeled and four-wheeled (Datu et al., 2019). Public transportation is still used by the community as a means to get somewhere even though it is very easy to have a private vehicle nowadays (Agustina & Lupita, 2019). Currently, online ojek is the latest public transportation trend among the public. Online ojek itself is a transformation of conventional ojek which is located at a base to wait for customers, or commonly called base ojek (Soraya, 2021; Claudya, 2020). The ease of ordering using smartphone technology makes online ojek increasingly popular. This can be a transportation solution in Indonesia, especially in big cities that often experience congestion. Ojek, which is a vehicle using a motorcycle, is very effective for mobility in the city of Medan.

Online transportation in the form of motorcycles or online motorcycle taxis is considered as an alternative transportation because it is more easily accessible to every citizen (Huu & Ngoc, 2021). They no longer need to walk to the ojek base and only need to wait for the online ojek to approach the location where they are.

Medan City has a fairly high level of development both from the socio-economic aspect and the increase in population. The people of Medan City have various types of activities including trade, industry, services and services and are very dependent on public transportation to carry out daily activities using both private vehicles and public transportation. According to BPS Kota Medan Dalam Angka 2020, the total population in Kota Medan in 2020 was 2,279,894 people with a labor force of 1,104,418 people. The number of registered job seekers was 14,654 people while registered job vacancies require 2,211 people.

From the condition of job seekers and job vacancies, it can be seen that there is still an imbalance between the two aspects, resulting in an unemployment rate that is still quite high.

The open unemployment rate is 8.53% with a Labor Force Participation rate of 64.89%. The percentage of people in productive age who are still in school is 60.62% and the percentage of poor people in Medan City is 5.66% with 183,790 poor people. Based on the above background, the authors are interested in examining the effect of working time on fatigue of online motorcycle taxi drivers in Medan City. The purpose of this study aims to determine the effect of working time on fatigue of online motorcycle taxi drivers in Medan.

Methods

This thode uses a quantitative approach research method. This research method is an analytical method with a cross sectional research design in accordance with the research objectives of analyzing the relationship between working time and worker fatigue. The population of this study is the community: rgn-pb 28 members, c.dom 1 rise 20 members, morning spirit 23 members, dlom 26 members of online motorcycle taxi riders in Medan Perjuangan. The sample used in the study was a total of 97 samples of online motorcycle taxi riders. This research was conducted on February 29 March 4, 2024. The independent variable in this study is working time. The dependent variable in this study is job fatigue.

This research data uses primary data, namely data obtained directly. To obtain data collection using a questionnaire research instrument. The form of the questionnaire is closed, namely the respondent is given an alternative answer choice for each question. All variables will be measured using a Likert scale, with research data obtained through filling out google forms.

Research instruments to measure subjective job fatigue to research subjects can be done using tools in the form of questionnaires. Subjective Self Rating Test (SSRT) is a method using a questionnaire issued by the Industrial Fatigue Research Committee (IFRC). The Subjective Self Rating Test (SSRT) method is a subjective measurement method of work fatigue by containing questions covering various indicators of work fatigue.

Data analysis was done by univariate analysis, bivariate analysis. Bivariate analysis was conducted to see the relationship between two variables. Bivariate analysis in this study was analyzed using the chi-square test.

Result and Discussion

In this results study, data were collected on respondent characteristics, job fatigue, working time, and correlations between variables. Numerical data consisted of the age of the respondents. Numerical data is presented as mean, median, standard deviation, minimum, and maximum values. Categorical data consisted of gender, education level, and occupation. Categorical data is presented in the form of percentages or proportions. The following is a table of research data with univariate and bivariate analysis.

Unibivariate Analysis

Table 1. Respondent Characteristics Data

Variable	f	%
AGE		
<45 year	80	82.5%
>45 year	17	17.5%
Gender		
Male	94	96.9%
Women	3	3.1%
Education		
Elementary school	12	12.4%
Junior School	39	40.2%
High School	44	45.4%

Bachelor	2	2.1%
Working Time		
>8 hours	60	61.9%
<8 hours	37	38.1%
Work Fatigue		
Medium	16	16.5%
High	74	76.3%
Very High	7	7.2%

Table 1 shows that 80 respondents belong to the age group ≤ 45 and 17 belong to the age group > 45 years. Based on gender, 94 male respondents and 3 female respondents. In the education category, respondents with a high school education level dominated by 44 (45.4%). A total of 37 respondents worked ≤ 8 hours and 60 respondents worked > 8 hours per day. Based on the level of fatigue dominated by workers with high fatigue levels of 74 (76.3%).

Analysis Bivariat

Tabel 2. Uji Chi-Square

	Work Fatigue				p value
	Medium	High	Very high	Total	
<8 time	11	24	2	37	0,022
>8 time	5	50	5	60	
Total	16	74	7	97	

Based on the results of table 2 chi square test shows that the results of the Chi-Square statistical test, obtained a p value of 0.022 ($p < 0.05$), so there is an influence between working time on fatigue in online ojek workers in the field of struggle. Factors causing online motorcycle taxi drivers to work more than 8 hours, namely because based on interviews that have been conducted, online motorcycle taxi drivers want to pursue targets of more than 8 hours totaling 60 respondents to increase income. Extending working time more than the ability of the length of work is usually not accompanied by optimal work efficiency, effectiveness and productivity, even usually seen a decrease in the quality and results of work and work with prolonged time there is a tendency for fatigue, health problems, diseases and accidents and dissatisfaction.

Fatigue felt by ojek drivers in the field of struggle is a feeling of exhaustion. Fatigue that is felt cannot be seen directly. Decreased concentration, difficulty thinking, easily emotional and difficult to speak is one sign of fatigue symptoms. this is in accordance with Law No. 13 of 2003 and those who work more than 8 hours amounted to 29 people (70.7%), this is not in accordance with Law No. 13 of 2003. This is in line with Butar-butur's research (2017), showing that of the 32 respondents, 17 respondents experienced severe fatigue. Factors causing online motorcycle taxi drivers in the field of struggle to experience severe fatigue, namely because based on filling out the questionnaire of work fatigue variables that can be seen in the appendix, the most dominant aspect is the aspect of physical weakening.

The results of research and statistical analysis show that there is an influence between working time and fatigue in online ojek where the p value = 0.022 ($p < 0.05$). Factors causing online ojek riders to work more than 8 hours, namely because based on interviews that have been conducted, online ojek riders want to pursue targets of more than 8 hours totaling 60 respondents to increase income. Extending working time beyond the ability of the length of work is usually not accompanied by optimal work efficiency, effectiveness and productivity, even usually seen a decrease in the quality and results of work and work with prolonged time there is a tendency for fatigue, health problems, diseases and accidents and dissatisfaction.

The results of this study are in line with research conducted by (Datu et al., 2019) showed that of the 12 online motorcycle taxi drivers who worked less than equal to 8 hours who had low

fatigue as many as 4 people (33.3%), who had moderate fatigue as many as 7 people (58.3%), while those with severe fatigue were 1 person (8.3%) and of the 29 online motorcycle taxi drivers who worked more than 8 hours who had low fatigue as many as 6 people (20.7%), who had moderate fatigue as many as 8 people (27.6%) and who had severe fatigue as many as 15 people (51.7%). The results of the analysis using the Chi-Square test obtained a value of $p = 0.033$ where $p < \alpha = 0.05$ which means there is a relationship between length of work with job fatigue in online motorcycle taxi riders of the Sario online rider manguni community.

The results of this study as previously described there is a relationship between length of work with job fatigue in online motorcycle taxi riders Manguni Rider Online Community Sario, with a p value below 0.05, namely 0.023. From the results of this study also obtained from 12 riders who work less than equal to 8 hours who have low fatigue as many as 4 people (33.3%), who have moderate fatigue as many as 7 people (58.3%), while those who have severe fatigue as many as 1 person (8.3%) (in accordance with Law No. 13 Year 2003) and from 29 riders who work less than equal to 8 hours who have low fatigue. 13 Year 2003) and of the 29 online motorcycle taxi drivers who work more than 8 hours who have low fatigue as many as 6 people (20.7%), who have moderate fatigue as many as 8 people (27.6%) and who have severe fatigue as many as 15 people (51.7%) (not in accordance with Law No. 13 Year 2003).

Fatigue felt by ojek drivers in the field of struggle is a feeling of exhaustion. Fatigue that is felt cannot be seen directly. Decreased concentration, difficulty thinking, easily emotional and difficult to speak is one sign of fatigue symptoms. this is in accordance with Law No. 13 Year 2003 and who work more than 8 hours amounted to 29 people (70.7%), this is not in accordance with Law No. 13 Year 2003.

This is in line with Butar-butar's research 2017, showing that of the 32 respondents, 17 respondents experienced severe fatigue. The factor causing online motorcycle taxi drivers in the field of struggle to experience severe fatigue, namely because based on filling out the questionnaire of work fatigue variables that can be seen in the attachment, the most dominant aspect is the aspect of physical weakening. The results of this study are in line with the results of research conducted by (Agustina & Lupita, 2019) on the relationship between work duration and job fatigue in construction workers at PT Nusa Raya Cipta Semarang. It is known that of the 24 respondents who had a low risk of fatigue 8 respondents (33.3%) and 16 respondents (66.7%) experienced severe fatigue due to having working hours of more than 8 hours.

Conclusion

Based on the conclusion that there is a relationship between the effect of length of sleep at work time with fatigue in online motorcycle taxi drivers in the struggle and fatigue is at risk of causing work accidents. There is an influence between sleep quality and work accidents in online motorcycle taxi drivers in Medan. There is an influence between driver fatigue with fatigue at work time on online motorcycle taxi drivers in the struggle and unsafe driver behavior is at risk of causing work accidents. There is an influence relationship between headache when online motorcycle taxi riders with fatigue working time on online motorcycle taxi riders in the struggle zone. The effect of working time is the most dominant variable causing fatigue and work accidents in online motorcycle taxi riders in Medan.

This study recommends that related agencies such as the police, in order to provide information and education for online motorcycle taxi drivers in the struggle to pay more attention to conditions while working, and not to work until late at night. Because it can cause fatigue and worsen the quality of their sleep, so as to develop the degree of health and safety in driving.

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