



## Research

# Relationship between sleep quality and work productivity online motorcycle driver in Makassar City

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## ARTICLE INFO

### Keywords:

sleep quality; work productivity; motorcycle driver

### History:

Submitted : 31 January 2025

Reviewed : 5 February 2024

Accepted : 27 February 2025

## ABSTRACT

Erracting working hours can affect sleep pattern and sleep quality for online motorcycle drivers. This study aimed to determine the relationship between sleep quality and work productivity online motorcycle driver in Makassar city. This research was a quantitative study with cross sectional design with 90 driver for sample. The instrument used are The Pittsburgh Sleep Quality Index (PSQI) and work productivity questionnaire. This study results showed that 88,5% of drivers had poor sleep quality with high work productivity. The results of the Chi-square test shows that there was no significant relationship between sleep quality and work productivity ( $p=0,107$ ). The test results respondent characteristics (age, gender, last education, marital status, years of work, and type of work) also was no significant relationship with work productivity online motorcycle drivers. Drivers need to manage work time so as not excessive to change sleep pattern and sleep quality.

## 1. Introduction

Work is an activity in the economic field that becomes a person's obligation in order to get benefits or benefits from the results achieved or also to get income or profit for at least 1 (one) hour (Asyhadie & Kusuma, 2019). Data from the Central Statistics Agency in Indonesia (BPS) of workers in Indonesia shows that there are 128.45 million people in Indonesia who are working, including full-time workers as many as 82.02 million people, part-time workers as many as 33.34 million people, and underemployed as many as 13.09 million people and as for people who work in the informal sector in Indonesia today, the number is higher, namely 60.47%, especially for online motorcycle taxi drivers reaching 572,202 people.

The job of becoming an online motorcycle taxi driver is indeed very attractive to the wider community. Apart from being easy to do, it is also very flexible in terms of working time. The

Ministry of Transportation previously required working time rules for online ojek drivers for 8 hours/day. Irregular working time for online motorcycle taxi drivers will affect the pattern and quality of sleep whether it will be bad or still as recommended. Along with increasing age, the need for sleep also increases and in accordance with the activities carried out.

Initial survey of short interviews conducted to 10 drivers who have poor sleep quality feel symptoms of fatigue, drowsiness, frequent dizziness to difficulty concentrating. These drivers work from early morning until late at night (working more than 8 hours per day) and only rest when waiting for orders from customers on the side of the road or in their communities. Eight of the drivers said they often receive food orders in the middle of the night (12 hours and above) which makes them lack time to sleep at night which can affect their work the next day.

The results of research conducted by Purwanti (2013), there is a relationship between sleep quality and work productivity in shift workers. The results of the analysis show that shift workers with good sleep quality have a high level of productivity and shift workers with poor sleep quality have a low level of productivity. Lack of sleep can reduce a person's productivity level and one of the causes is due to sleep disturbances at night. Increased frequency of waking up during the night will cause productivity to decrease. In addition, feeling tired when waking up also indicates that there is lower productivity.

## **2. Method**

The type of research used in this study is quantitative research with an analytic design. The approach taken in this study was cross sectional. In this study the population amounted to 90 people and the sample amounted to 90 people. Samples were taken using total sampling techniques (saturated samples) because if the population is less than 100 then the entire population is sampled entirely Sugiyono (2007).

The instruments used in this study were The Pittsburgh Sleep Quality Index (PSQI) to determine the good and bad sleep quality of respondents and a work productivity questionnaire.

## **3. Results & Discussion**

Table 1 presents the bivariate analysis of variables associated with the work productivity of online motorcycle drivers in Makassar City, focusing on sleep quality as the primary variable. The results show a significant relationship between sleep quality and productivity ( $p = 0.001$ ). Among those with poor sleep quality, 85.7% had high productivity, compared to 72.4% of those with good sleep quality.

Other variables were also analyzed but did not show statistically significant relationships with productivity. For age, the majority of drivers were young adults (81.1%), with 70% of them having high productivity. In contrast, only 13.3% of older adults had high productivity. Regarding gender, 82.4% of male drivers had high productivity, while all five female respondents (100%) reported high productivity, although the sample of female drivers was small.

In terms of education level, both groups—those with low and high education—showed high levels of productivity (89.9% and 82.7% respectively). Marital status did not significantly affect productivity, as both unmarried (88.1%) and married (79.2%) individuals showed high productivity

levels. Similarly, work tenure had little impact, with 83.3% of new drivers and 81.8% of experienced drivers exhibiting high productivity. Lastly, job type (main job vs. side job) was not significantly associated with productivity ( $p = 0.517$ ), though those who had driving as a side job had slightly higher productivity (85.7%) than those who had it as their main job (81.0%).

**Table 1.** *Test results of bivariat analysis*

Variable	Productivity				Total (n)	%	p-value
	High (n)	%	Low (n)	%			
Sleep Quality							
Good	21	72.40%	8	27.60%	29	32.20%	0.001
Poor	54	85.70%	9	14.30%	63	67.80%	
Age							
Young Adults	63	70.00%	10	11.10%	73	81.10%	0.228
Older Adults	12	13.30%	5	5.60%	17	18.90%	
Gender							
Male	70	82.40%	15	17.60%	85	94.40%	0.681
Female	5	100.00%	0	0.00%	5	5.60%	
Last Education							
Low	8	89.90%	1	11.10%	9	12.20%	0.565
High	67	82.70%	14	17.30%	81	87.80%	
Marital Status							
Not Married	38	88.10%	5	11.90%	43	47.80%	0.395
Married	37	79.20%	10	20.80%	47	52.20%	
Work Tenure							
New	66	83.30%	13	16.70%	79	87.80%	0.881
Old	9	81.80%	2	18.20%	11	12.20%	
Job Type							
Main	51	81.00%	12	19.00%	63	70.00%	0.517
Side Job	24	85.70%	4	14.30%	28	30.00%	

The results of research on online motorcycle taxi drivers in Makassar City show that most drivers have poor sleep quality. The results of the study are in line with those conducted by Tanriono et al. (2019) that most online motorcycle taxi drivers in Bitung City experience poor sleep quality as much as 67% and only 33% have good sleep quality. Environmental factors are one of the causes of their poor sleep patterns because if it is above 12 at night, they play games together until the morning because they already have free time. Intensive factors also affect sleep patterns because when above 12 pm even though there are no passenger orders but for food orders begin to increase at night or early morning and the cost of postage at that time also increases, making the drivers eager to find orders at midnight.

The results of research conducted by Tanriono et al., (2019) found that there is a significant relationship between work accidents and the quality of sleep of online motorcycle taxi drivers. Based

on the results of the study, lack of sleep at night (<6 hours) has an increased risk of accidents when compared to sleeping 7 to 8 hours per day. Another study conducted by Taşbakan et al., (2018) showed that drivers who experience sleep disorders in the respiratory area (snoring and coughing) can increase the risk of accidents.

Based on the results of the study, most (83.3%) online ojek drivers in Makassar City have high work productivity. Based on the results of interviews with drivers said that they are very excited to work every day because their community encourages each other in working so that it can be said that environmental influences affect work productivity.

This research is also supported by research conducted by Suprayogaswara (2017) which examines the factors that influence the level of Gojek labor productivity in Malang City. This study analyzes several factors that affect the level of productivity, namely the level of wages and intensive. The effect of wage and intensive levels is very significant on work productivity because with increasing wages, it will motivate a worker to work more diligently and disciplined. Likewise with the intensive which can also help labor in Gojek labor wage levels so that it can help labor in meeting their needs.

Based on the results of the analysis using the Chi-square test, the p value = 0.107 ( $p > 0.05$ ) can be interpreted that there is no relationship between sleep quality and work productivity of online motorcycle taxi drivers in Makassar City.

The results of this analysis are supported by research conducted by Synder et al., (2016) that lack of sleep can reduce productivity levels. Lack of sleep can be caused by many factors, one of which is sleep disturbance at night. The results of this study found that many sleep disturbances were experienced due to the increased frequency of waking up at night and the number of insects disturbing comfort while sleeping. The results of the study are also supported by research conducted (Runtulalo et al., 2020) that shift work most affects the quality and quantity of workers' sleep.

Based on the results of bivariate analysis where the poor sleep quality of respondents with high productivity (60.0%). The data explains that even though sleep quality is poor, productivity must remain good. The results of driver interviews said that even though their sleep patterns were irregular and poor, they still carried out work every day even when it was raining.

Based on the results of the study, it is found that most workers are in the age range of 17-35 years (81.1%). This shows that most of the Makassar City online motorcycle taxi drivers who are respondents are in the young adult age range. The results of this study are in accordance with the psychosocial theory proposed by Erikson in Purwanti (2013) that one of the developmental tasks of young adults is to find a job. The developmental tasks that young adults must carry out are implementing life plans, choosing a partner, and choosing a job.

Based on the results of the study, the highest level of productivity was in the age range of 17-35 years, namely 63 respondents (70.0%). This research is in line with research conducted by Göbel & Zwick (2012) that productivity increases at the age of 30 years and over and begins to decline at the age of 50 years. These two studies have similarities, namely individuals at a productive age have high productivity.

The test results of this study obtained a value of  $p = 0.641$  ( $p > 0.05$ ), so it can be interpreted that there is no relationship between age and work productivity. This study is in line with research

conducted by Göbel & Zwick (2012) which found no significant relationship between age and productivity. Researchers believe that work productivity is not influenced by various factors. These factors include education and training, nutrition and health, income and social security, opportunities, management, and government policies.

Based on the results of the study, it was found that most workers were male, namely 85 respondents (94.4%) and women as many as 5 respondents (5.6%). One of the developments of women today is the entry of women in the world of work, especially as online motorcycle taxi drivers. Women with limited education enter work in various informal sectors. This study also examined the relationship between gender and work productivity. Based on the results of the study obtained a value of  $p=0.303$  ( $p \geq 0.05$ ), it can be interpreted that there is no relationship between gender and work productivity. The results of this study are in line with research conducted by Purwanti (2013) that there is no significant relationship between gender and work productivity in shift employees. Researchers argue that there is no difference between the productivity of male and female drivers because male and female workers have the same level of knowledge and skills.

The results illustrate that most of the Makassar City online ojek drivers have their last education in high school and college as many as 79 respondents (87.8%). This can illustrate that Makassar City online ojek drivers have sufficient ability to absorb information. The last level of education greatly affects the ability and confidence level of the driver in doing his job. Drivers with education will more easily understand the work performed than drivers who have a lower level of education.

The results of the Chi-square test between the level of education and work productivity obtained a value of  $p=0.177$  ( $p > 0.05$ ) so it can be interpreted that there is no relationship between the last education with the work productivity of online motorcycle taxi drivers in Makassar City. The results of this study are supported by research conducted by Sari et al., (2014) that the level of education of online transportation drivers has no effect on income because not all online transportation drivers take higher education, so education cannot determine the career path of online transportation drivers. This is because all levels of education will be the same or aligned when becoming an online transportation driver, which distinguishes only the productivity of the driver himself.

Based on the results of the study, it was found that most of the Makassar City online motorcycle taxi drivers were unmarried, namely 48 respondents (53.3%). This illustrates that unmarried drivers still have to meet the needs of themselves and their families. Based on the results of interviews with unmarried drivers, they have to work to meet their economic needs first such as paying motorcycle installments, wanting to shop, and other needs before they get married. Based on research conducted by Siti Salamah (2016), the decision to marry at a young adult age is influenced by several factors including the level of knowledge, level of education, respondent's occupation, parents' occupation, parents' income, level of trust, and the role of peers.

The results of the Chi-square test between marital status and work productivity obtained a value of  $p=0.257$  ( $p \geq 0.05$ ), so it can be interpreted that there is no relationship between marital status and work productivity. The results of this study are supported by research conducted by Synder in Purwanti (2013) which found that productivity levels and marital status have an even distribution.

The results showed that an individual unmarried, living with someone, married, living with someone, married, separated, widowed, or divorced does not affect a person's productivity level.

Based on the results of the study, it was found that most of the Makassar City online ojek drivers with a new working period, as many as 80 respondents (88.9%) had a working period of <5 years. This shows that most drivers are still new to working as online ojek drivers. Based on the results of interviews with respondents, they have recently become online ojek drivers because they previously had a job and then were tempted to become a driver because the income is quite high per day.

In the results of this analysis obtained a value of  $p=0.56$  ( $p \geq 0.05$ ), it can be interpreted that there is no relationship between tenure and work productivity. The results showed that most workers (73.3%) of Makassar City online motorcycle taxi drivers with a work period of <5 years have a high level of productivity and the lowest is drivers with a work period of more than  $\geq 5$  years (10.0%). The findings of this study are supported by research conducted by Meilani et al. (2019) that there is no work productivity of online ojek drivers who have less than one year of service and online ojek drivers with more than three years of service. Based on this research, researchers argue that drivers who have worked for a long time do not guarantee to have high productivity, and vice versa new workers do not mean having poor productivity.

The findings of this study are also different from research conducted by Jayanti et al. (2019) that the tenure factor affects the performance of online motorcycle taxi drivers because the work done by the drivers is continuous and monotonous every day resulting in drivers feeling bored with their work so that it can have positive and negative effects.

Based on the results of the study, it was found that most of the Makassar City online ojek drivers, namely 63 respondents (70.0%) chose online ojek as their main job. This shows that the job of being an online motorcycle taxi driver is in great demand by all groups from adolescents to late adults.

The findings of this study are supported by research conducted by Wati (2019) that before becoming an online motorcycle taxi driver, the drivers had a previous job and then chose to resign and join an online motorcycle taxi partner. Based on the results of interviews with several respondents, they prefer online ojek as the main job because the requirements are very easy such as the formal education system taken can be from elementary school (SD), not to require no work experience.

The results of the analysis of the relationship between type of work and productivity obtained a value of  $p=0.355$  ( $p \geq 0.05$ ) so it can be interpreted that there is no relationship between type of work and work productivity. The results of this study obtained that most (70.0%) online ojek drivers in Makassar City chose online ojek as their main job compared to respondents who chose online ojek as a side job (30.0%). This research is supported by Rahmawati's research (2019) that the strategy of increasing family income is one of the coping strategies carried out by a family to solve financial problems or increase consumption satisfaction.

#### 4. Conclusion

This study did not find a relationship between sleep quality ( $p=0.107$ ), age, gender, latest education, marital status, tenure, and type of work with the work productivity of Makassar City online ojek drivers. This study suggests that drivers organize their sleep schedule as well as possible

so that sleep becomes regular. Irregular sleep, especially in the early morning and wake up in the afternoon, is not good for the health of the body and also reduces one's concentration until the occurrence of traffic accidents. Future researchers are recommended to conduct more specific and comprehensive research, especially on the relationship between the characteristics of respondents and the work productivity of drivers.

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