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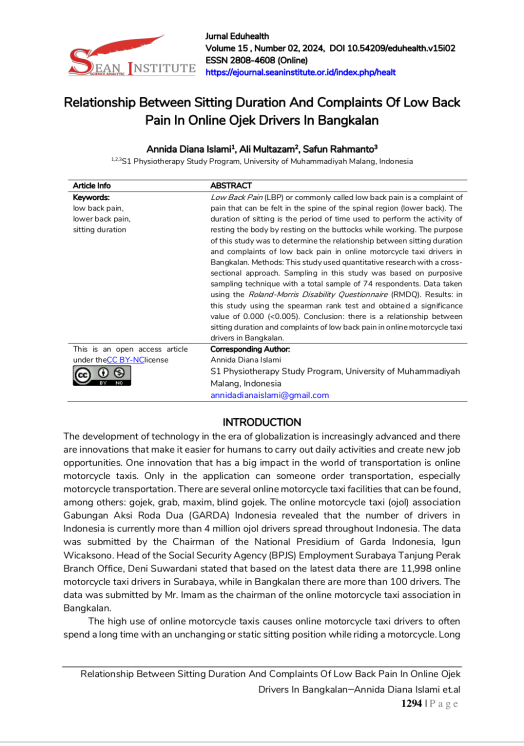

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Relationship Between Sitting Duration And Complaints Of Low Back Pain In Online Ojek Drivers In Bangkalan

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Article Info
Keywords:
low back pain,
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ABSTRACT
Low Back Pain (LBP) or commonly called low back pain is a complaint of pain that can be felt in the spine of the spinal region (lower back). The duration of sitting is the period of time used to perform the activity of resting the body by resting on the buttocks while working. The purpose of this study was to determine the relationship between sitting duration and complaints of low back pain in online motorcycle taxi drivers in Bangkalan. Methods: This study used quantitative research with a cross-sectional approach. Sampling in this study was based on purposive sampling technique with a total sample of 74 respondents. Data taken using the *Roland-Morris Disability Questionnaire* (RMDQ). Results: in this study using the spearman rank test and obtained a significance value of 0.000 (<0.005). Conclusion: there is a relationship between sitting duration and complaints of low back pain in online motorcycle taxi drivers in Bangkalan.

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INTRODUCTION

The development of technology in the era of globalization is increasingly advanced and there are innovations that make it easier for humans to carry out daily activities and create new job opportunities. One innovation that has a big impact in the world of transportation is online motorcycle taxis. Only in the application can someone order transportation, especially motorcycle transportation. There are several online motorcycle taxi facilities that can be found, among others: gojek, grab, maxim, blind gojek. The online motorcycle taxi (ojol) association Gabungan Aksi Roda Dua (GARDA) Indonesia revealed that the number of drivers in Indonesia is currently more than 4 million ojol drivers spread throughout Indonesia. The data was submitted by the Chairman of the National Presidium of Garda Indonesia, Igun Wicaksono. Head of the Social Security Agency (BPJS) Employment Surabaya Tanjung Perak Branch Office, Deni Suwardani stated that based on the latest data there are 11,998 online motorcycle taxi drivers in Surabaya, while in Bangkalan there are more than 100 drivers. The data was submitted by Mr. Imam as the chairman of the online motorcycle taxi association in Bangkalan.

The high use of online motorcycle taxis causes online motorcycle taxi drivers to often spend a long time with an unchanging or static sitting position while riding a motorcycle. Long

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INTRODUCTION

The development of technology in the era of globalization is increasingly advanced and there are innovations that make it easier for humans to carry out daily activities and create new job opportunities. One innovation that has a big impact in the world of transportation is online motorcycle taxis. Only in the application can someone order transportation, especially motorcycle transportation. There are several online motorcycle taxi facilities that can be found, among others: gojek, grab, maxim, blind gojek. The online motorcycle taxi (ojol) association Gabungan Aksi Roda Dua (GARDA) Indonesia revealed that the number of drivers in Indonesia is currently more than 4 million ojol drivers spread throughout Indonesia. The data was submitted by the Chairman of the National Presidium of Garda Indonesia, Igun Wicaksono. Head of the Social Security Agency (BPJS) Employment Surabaya Tanjung Perak Branch Office, Deni Suwardani stated that based on the latest data there are 11,998 online motorcycle taxi drivers in Surabaya, while in Bangkalan there are more than 100 drivers. The data was submitted by Mr. Imam as the chairman of the online motorcycle taxi association in Bangkalan.

The high use of online motorcycle taxis causes online motorcycle taxi drivers to often spend a long time with an unchanging or static sitting position while riding a motorcycle. Long

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duration of motorcycle riding by online motorcycle taxi drivers can cause the risk of musculoskeletal disorders. One of them is low back pain (LBP). (Sylvano & Novendy, 2021). *Low Back Pain* (LBP) or commonly called low back pain is a complaint of pain that can be felt in the spine of the spinal region (lower back). (Triana et al., 2022) More than 1 million workers lose their working hours every year due to complaints of musculoskeletal disorders, namely low back pain. This has an impact on reduced productivity, loss of working time and considerable medical costs (WHO, 2010). Based on The Global Burden of Disease 2010 Study (2010), of the 291 diseases studied, LBP (*Low Back Pain)* is the largest contributor to global disability as measured by years *lived with disability* (YLD), and is ranked sixth of the total burden overall, as measured by the *disability adjusted life year (*DALY). Every year the incidence of low back pain in the world is between 40%-50%. (Triwulandari & Zaidah, 2019). The prevalence of low back pain according to data from WHO (2022) states that musculoskeletal disorders in the world amount to 1.71 billion while the incidence of low back pain is the 3rd health problem in the world including osteoatritis in 2022 totaling 528 million people, rheumatism in 2020 totaling 335 million people and low back pain in 2022 totaling 17.3 million people. (Melvin *et al*., 2020). Prevalence according to RISKESDAS (2021) sufferers of low back pain incidence in Indonesia as many as 12,914 people or 3.71% low back pain in Indonesia is ranked 2nd after influenza. Meanwhile, the highest level of low back pain complaints on the island of Java, namely East Java, has an estimated prevalence of 58.33%. (Purnomo et al., 2017)

Low back pain can be caused by several causative factors such as individual factors including age, physical activity, gender, BMI and smoking habits, work factors such as incorrect work posture, too long work duration and environmental factors in the form of vibration and temperature. LBP sufferers can be characterized by characteristics such as pain in the lower back or waist area when lifting heavy objects, sitting for a long time, or every time doing daily physical activities. (Triana et al., 2022). Someone who complains of LBP can reduce their productivity due to pain and if it will not be overcome it will cause disability.(Syafrianto, 2023). According to previous research, the results of increasing the duration of work or driving for a long time can cause fatigue in the lower back muscles and can cause tension in the lumbar region which will result in Low Back Pain. (Triana et al., 2022).. Long duration of sitting is associated with complaints of low back pain. (Triwulandari & Zaidah, 2019)

Law No.13 of 2003 states that the normal length of time workers perform their work is 8 hours/day or 40 hours/week. The longer a person does his job accompanied by the wrong work position and carried out continuously for years, there will be a decrease in muscle strength or muscle fatigue.(Navisah et al., 2021). Working with static sitting time in the range of 1.5-5 hours has a 2.35 times greater chance than working for less than 1.5 hours. The effective sitting time at work is less than equal to 4 hours. (Dinata, 2021)

METHODS

This research is a quantitative study with a *cross sectional* approach. The research was conducted on online motorcycle taxi drivers in Bangkalan. The sample used in this study was

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74 respondents. The instrument used was the *Roland-Morris Disability Questionnaire* (RMDQ) questionnaire. Data analysis was performed with univariate and bivariate analysis using the *Spearman rank* test.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Frequency of Respondent Characteristics

Variable	Category	Total	Percentage (%)
Duration of employment	Less than 1 year	37	50.0
	More than 1 year	37	50.0
Total		74	100.0
Gender	Male	74	100.0
Total		74	100.0
Duration of work	Less than 8 hours	38	51.4
	More than 8 hours	36	48.6
Total		74	100.0
Sitting duration	Less than 4 hours	33	44.6
	More than 4 hours	41	55.4
Total		74	100.0
Type of work	Side job	41	55.4
	Permanent job	33	44.6
Total		74	100.0
Lower back pain	Experience	52	70.3
	Not experienced	22	29.7
Total		74	100.0

In Table 1, information is obtained that in the characteristics of the length of employment there are 37 respondents working less than 1 year (50.0%) and 37 respondents working more than 1 year (50.0%). In the characteristics of gender, most of the respondents were male with a total of 74 (100.0%). In the characteristics of work duration there were 38 respondents less than 8 hours (51.4%) and 36 respondents more than 8 hours (48.6%). In the characteristics of sitting duration with a sitting time of less than 4 hours, there were 33 respondents (44.6%) and 41 respondents more than 4 hours (55.4%). In the characteristics of the type of work, most respondents work as a side job with 41 respondents (55.4%) and 33 respondents (44.6%) work as a permanent job. Then in the characteristics of low back pain 52 respondents (70.3%) experienced low back pain and 22 respondents (29.7%) did not experience low back pain.

Bivariate Analysis

Table 2. Correlation results of sitting duration with the incidence of low back pain

	N	P	R
Duration of sitting	74	000	405
Lower back pain	74	000	405

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Description : N = Number of samples
P = Significant value
R = Contingency coefficient value

Based on the table above, the results of the *Spearman rank* correlation test obtained a significant value of 0.000, which means that there is a relationship between sitting duration and complaints of low back pain in online motorcycle taxi drivers in Bangkalan.

Discussion

Low back pain is pain or pain in the spine between the ribs to the tailbone and can radiate to other areas such as the upper back or groin area and the pain or pain can be caused by poor body activity. The appearance of complaints is significantly influenced by the duration of doing an excessive job. Complaints of low back pain also arise due to the position of the body when it is not ergonomic for a long time, resulting in muscle tension in the back of the body. (Dinata, 2021)

Low back pain can be classified into two namely acute low back pain which usually occurs in less than 12 weeks characterized by sudden onset of pain. Chronic low back pain occurs in more than 3 months. The pain may recur or recur (Rina, 2016) Factors that can cause low back pain are individual characteristics including Body Mass Index (BMI), height, exercise habits, length of service, work position, and workload weight. (Febriany et al., 2023). Sitting duration is the period of time used to perform the activity of resting the body by resting on the buttocks while working. (Dinata, 2021). The longer a person does his job accompanied by the wrong work position and carried out continuously for years, there will be a decrease in muscle strength or muscle fatigue. (Navisah et al., 2021)

The results of this study found a relationship between sitting duration and complaints of low back pain in online motorcycle taxi drivers in Bangkalan. Respondents who became samples had been selected based on the inclusion and exclusion criteria using purposive sampling method with a total sample of 74 people obtained from the results of the Spearman rank correlation test and obtained a significant value of 0.000 so that someone who works with static sitting time in the range of 1.5-5 hours has a 2.35 times greater chance of experiencing low back pain than just working less than 1.5 hours. The effective sitting time at work is less than equal to 4 hours. (Dinata, 2021)

The results of this study are in line with research conducted by Novia et al (2019) regarding the relationship between the long duration of sitting with complaints of low back pain with a value (p = 0.027 <0.05). Sitting is one of the postures of the body supporting the upper torso by the hips and some thighs that are limited in movement to change their position again. The length of sitting and sitting posture are subtopics that are closely related to low back pain. Prolonged sitting causes excessive load and tissue damage to the lumbar vertebrae. Some studies have found that prolonged sitting can reduce lubrication in the joints and cause stiffness. Respondents with a sitting time of more than 4 hours and experiencing low back pain can be caused by a work duration of more than 1 year. According to (Navisah et al., 2021) someone who does work with the wrong sitting position and is carried out continuously for years will cause low back pain.

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CONCLUSION

The results showed that; 1) Of the 74 samples found 52 of them experienced low back pain with a percentage (70.3%). 2) Of the 74 samples 41 of them worked with a sitting duration of more than 4 hours with a percentage (44.6%). 3) Based on the *Spearman rank* correlation test, a significant value of 0.000 is obtained, which means that there is a relationship between sitting duration and complaints of low back pain in online motorcycle taxi drivers in Bangkalan.

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