

Relationship of Work Position to Low Back Pain (LBP) in Convection Tailors

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Abstract

Introduction: Low Back Pain (LBP) is a health problem in the form of acute and chronic pain that is felt in the lower back which is usually caused by work, inflammation, degeneration, trauma, and metabolic disorders. One of the jobs with a risk of Low Back Pain (LBP) is a convection sewing worker. because of the long duration of work and the attitude of the tailor. This study aims to identify the relationship between work position and complaints of Low Back Pain (LBP) in convection tailors. **Method.** This study used a correlational descriptive design with a cross-sectional approach. The research sample consisted of 50 respondents with total sampling. The analysis used was bivariate analysis using the chi-square test. **Results.** characteristics of the majority of respondents were adults aged 26-45 years as many as 25 people (50%), male (64.0%), had a working duration of >8 hours (66.0%), and had worked >5 years (70%). The majority of respondents, namely 35 respondents (97.2%) worked in moderate risk positions with high LBP complaints. And 13 respondents (92.9%) experienced complaints of moderate Low Back Pain (LBP) in high-risk work positions. The results of the chi-square test between work positions and complaints of Low Back Pain (LBP), obtained a p value = 0.044 < α (0.05). **Conclusion.** There is a relationship between work position and LBP complaints from convection tailors in Sail and Payung Sekaki Districts.

Keywords: Low Back Pain (LBP) Complaints, Convection Tailor, Work Position



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INTRODUCTION

Low Back Pain (LBP) is a health problem in the form of acute and chronic pain that is felt in the lower back, which is usually local or muscle pain in the lower back caused by inflammation, degeneration and gynecological disorders, trauma and metabolic disorders. Matters related to work, such as workload, work posture, and repetition are also some of the causes of LBP (Edinburgh, 2021). LBP has a higher average Disability Adjusted Life Years (DALY) than HIV, traffic accident injuries, tuberculosis, lung cancer, chronic obstructive pulmonary disease, and complications of premature birth, and is one of the most aggravating illnesses or injuries. Lower back pain does not cause death, but causes individuals who experience it to become unproductive so that it will cause a huge economic burden for individuals, families, communities and the government (Ningsih Riski Wahyu, 2022).

One of the jobs with a risk of occupational disease is tailoring. Tailor is one of the professions or jobs that quite a lot of Indonesians do, both individually and in a business such as convection (Wijayanti & Saftarina, 2019). Convection is a business in the field of making clothing or other clothing on a large scale (Kinteki, Zumrotin & Santoso, 2018). Due to the large amount of production that must be carried out, tailors who work in the convection business have a fairly high workload. Likewise with long working hours, reaching more than 8 hours per day (Kinteki et al., 2018). This makes sewing as a job that has a fairly high risk of developing occupational diseases.

The prevalence of low back pain (LBP) in Indonesia is 18%. The prevalence of low back pain (LBP) increases with age and is most common in the middle and early fourth decades. The causes of low back pain (LBP), namely 85%, are non-specific, due to abnormalities in the soft tissues, in the form of muscle and ligament injuries, muscle spasms or fatigue, and the most specific other causes, namely vertebral fractures, infections and tumors. (Raya et al., 2019). Based on a preliminary study conducted on 22 November 2022 with 10 tailors, it was found that the average tailor worked for 12 hours per day and 10 tailors (100%) experienced LBP complaints. Most of the tailors experienced pain in the lower back, namely as many as 6 people, then complaints on the neck and waist as many as 4 people. Based on observations and interviews, tailors do work in a static position, namely in a sitting position, slightly bent and bowed. Based on the background description above, the researcher is interested in conducting research on: The relationship of work position to low back pain (LBP) in Convection Tailors. The aim of this study was to identify the relationship between work position and LBP complaints in convection tailors.

RESEARCH METHODS

This study uses a correlational descriptive design with a cross sectional approach. Correlational descriptive research is research or study of the relationship between one variable and another variable in this study, namely to determine the relationship between work position and complaints of low back pain in convection tailors. The population in this study were all tailors who worked for convection in the Sail and Umbrella Districts with a total population of 50 tailors. The technique used in determining the sample in this study is using the total sampling method with a total sample of 50 people.

RESEARCH RESULTS AND DISCUSSION

Research Result

This research was conducted on December 2022 - May 2023 on parents who were in the work area in Sail District and Payung Sekaki District, Pekanbaru City with a total of 50 respondents, namely convection tailors. The results of this study were analyzed using univariate analysis.

Table 1. Distribution of Respondent Characteristics

Respondent Characteristics	Frequency (n)	Respondent (%)
Age		
Teenagers (12-25 Years)	1	2.0
Adult (26-45 Years)	25	50.0
Elderly (46-65 Years)	23	46.0
Seniors > 65 Years)	1	2.0
Gender		
Man	32	64.0
Woman	18	36.0
Working Duration		
< 8 Hours	17	34.0
> 8 Hours	33	66.0
Years of Service		
< 5 Years	15	30.0
> 5 Years	35	70.0
Respondent Education		
Elementary School	10	20.0
Junior High School	27	54.0
Senior High School	13	26.0
Total	50	100

Based on the table, it can be seen that the majority of respondents in this study were elderly, namely 25 people (50.0%), 32 male respondents (64.0%), had a working duration of more than 8 hours per day, namely 33 people (66.0%) and the majority of respondents worked for less than 8 years as many as 35 people (70.0%), and the majority of the last education of junior high school tailors were 27 people (54.0%).

Table 2. Frequency Distribution of Work Positions

Respondent's Work Position	Frequency (n)	Respondent (%)
Moderate Risk	14	28,0
High Risk	36	72,0
Total	50	100,0

Based on the table above, it can be seen that the majority of respondents, namely as many as 36 people (72.0%) work with a high-risk work attitude and as many as 14 people (28.0%) of respondents work with a medium-risk work attitude.

Table 3. Frequency Distribution of Low Back Pain

Complaints of Low Back Pain	Frequency (n)	Respondent (%)
Currently	36	72,0
High	14	28,0
Total	50	100,0

Based on the table above, it can be seen that the majority of respondents, namely 36 respondents (72.0%) had moderate LBP complaints, 14 people (28.0%) had high LBP complaints.

Table 4. Relationship Between Work Position and Low Back Pain Complaints

Job Position Category	Low Back Pain Complaint Category				Total		P Value
	Currently		High		n	%	
	N	%	N	%			
Moderate Risk	1	2,8	35	97,2	36	100	0,044
High risk	13	92,9	1	7,1	14	100	
Total	14	28	36	72	50	100	

The results of the analysis of the relationship between the category of work position and the category of LBP complaints found that among respondents with a moderate risk work attitude. there was 1 respondent (2.8%) with moderate LBP complaints and 35 respondents (97.2%) with high LBP complaints. Meanwhile, among respondents who worked with a high risk work attitude, there were 1 (7.1%) and 13 (92.9%) respondents with moderate risk. The statistical test results obtained a p value (0.044) < α (0.05), so it can be concluded that there is a relationship between the work attitude category and the musculoskeletal complaints category.

Discussion

The results showed that the characteristics of the majority of respondents were in the adult age range (26-45 years), namely 25 people (50.0%), male respondents, namely 32 people (64.0%), had a working duration of more than 8 hours per day, namely as many as 33 people (66.0%) and the majority of respondents have worked as tailors for more than 5 years, namely as many as 35 people (70.0%). According to Tarwaka (2019), complaints of Low Back Pain will generally be felt in that age range. The onset of complaints is generally felt when workers are 35 years old and can continue to increase with age. The increased risk of muscle complaints is due to middle age, muscle strength and endurance will begin to decrease.

According to Tarwaka (2019), physiologically, muscle strength in men is higher than that of women. According to Johanson's research (1994) it was found that muscle complaints in men and women were 3:1. Astrand & Rodahl (1996) stated that muscle strength in women is only 2/3 compared to the muscle strength of men, so that male muscle endurance is higher than in women (Tarwaka, 2019). The majority of respondents in this study worked more than 8 hours per day, namely 33 people (66.0%). These results are in line with Muslim research (2018) which found that the majority of respondents, namely 29 respondents (67.4%) worked >8 hours. Based on the results of observations, it was found that most of the respondents worked in the duration range of 8 hours to 15 hours per day depending on the number of existing sewing orders. This is not in accordance with the effective working hours that workers should have, namely 8 hours per day as stipulated in Law No. 13 concerning Manpower. According to Tarwaka (2015), if working hours exceed the predetermined time, there can be a decrease in work speed, decreased work productivity to health problems.

Based on the results of observations, it is known that respondents have worked as tailors in the range of 1 year to the longest, namely 49 years. A worker is said to have worked for a relatively long working period if he has worked for more than five years and is said to be a new employee if he has worked for or less than 5 years (Saputra, 2012). According to Tarwaka (2004), complaints of pain decrease after working for 1-5 years, but will increase if working for more than five years.

The results of the analysis of work positions found that the majority of respondents in this study were at moderate risk, namely 14 people (28.0%) and there were 36 respondents (72.0%) with a high risk work attitude. The results of this study are in line with research by Majuntina et al (2021) which found that the majority of respondents were 21 people (70.0%) working with a moderate risk attitude. The results of the research by Pinatik, Rattu and Kawatu (2016) are also in line with this study where it was found that the majority of respondents, namely 15 people (41.7%) had a moderate-risk work attitude.

The results of this study are in line with Sihombing's research (2015) that the majority of respondents, namely 22 respondents (71.0%) experienced moderate LBP complaints. This research is also in line with research conducted by Majuntina et al (2021) which found that the majority of respondents experienced moderate LBP complaints, namely 19 respondents (63.3%). Likewise with the research results of Wulandari et al (2017), namely as many as 11 respondents (68.75%) experienced moderate levels of LBP complaints. The results of the study were based on observations of work positions and assessment of LBP complaints. with a moderate risk position. and 13 respondents (92.9%) experienced high level LBP complaints. The results of the statistical test between work attitude and LBP complaints, obtained a p value = 0.044 < α (0.05), which means there is a relationship between work position and LBP complaints in convection tailors in Sail District and Payung Sekaki District.

The results of this study are in line with research conducted by Irawati, Yogisutanti and Sitorus (2020) where a p value = 0.026 < 0.05 was obtained, which means that there is a relationship between work attitude and LBP complaints. This research is also supported by the research of Majuntina, Paturusi and Bawiling (2020) which found a relationship between the risk of work attitudes and LBP complaints in tailors (p value = 0.042). LBP complaints are caused by various factors including excessive muscle stretching, secondary factors such as lighting, individual factors, or due to work factors such as work attitude. Work attitudes that can cause musculoskeletal complaints are inappropriate work attitudes that are carried out when working for a long time, causing emphasis on the body's muscles and causing muscle fatigue and increasing physical complaints. The limitation of this research is that there are not many tailors who work in convection in Pekanbaru City, both in Sail and Umbrella Districts or

in other sub-districts so that the number of respondents is also not large. This study did not examine the relationship between height and differences in the angle of the respondent's body position while working which causes LBP complaints.

CONCLUSION

The results showed that the characteristics of the majority of respondents were in the adult age range (26-45 years), namely 25 people (50.0%), male respondents, namely 32 people (64.0%), had a working duration of more than 8 hours per day, namely as many as 33 people (66.0%) and the majority of respondents have worked as tailors for more than 5 years, namely as many as 35 people (70.0%). The results of the study were based on observations of work positions and assessment of LBP complaints, it was found that the majority of respondents, namely 35 respondents (97.2%) worked in moderate risk work positions. and 13 respondents (92.9%) experienced high level LBP complaints. Statistical test results between work attitude and LBP complaints, obtained p value = 0.044 < α (0.05), which means there is a relationship between work position and LBP complaints in convection tailors in Sail District and Payung Sekaki District.

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