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Description of JA Medical Skincare Medan Beautician's Low Back Pain Based on Duration of Work

Vivienne[1], Abdurrahman Mousa Arsyad[2], Bastian Lubis[3], Hilfan Ade Putra Lubis[4]

[1]*Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia*

[2]*Department of Neurosurgery, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia*

[3]*Department of Anesthesiology and Intensive Therapy, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia*

[4]*Department of Cardiology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia*

Corresponding Author: viviennechandra@gmail.com

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ABSTRACT

Introduction :Low Back Pain (LBP) is defined as pain and discomfort located below the costal margin to the inferior gluteal fold, with or without pain in the legs. LBP is a common condition that can occur in all age groups with acute or chronic episodes. Beauticians are more susceptible to musculoskeletal disorders. This line of work tends to involved limited positions, repetitive movements, and standing for more than 8 hours or sitting in a bent position during activities. This study aims to determine the characteristics of low back pain based on work duration among beauticians of the *JA Medical Skincare* beauty clinic Medan.

Method : The method used in this research was descriptive quantitative with total sampling technique. The research population was 60 beauticians of the *JA Medical Skincare* beauty clinic Medan. The data were collected by having the respondents filled out a questionnaire.

Results : The research results revealed that beauticians at the JA Medical Skincare beauty clinic who were at risk of experiencing low back pain were individuals aged under 30 years (51.8%), those with BMI > 27 or categorized as obese (60%), and those with a working duration of more than 8 hours (49,1%). These groups exhibited higher percentages of complaints related to low back pain. In general, almost all ages have the potential to experience low back pain. Beauticians who work long hours and do not pay attention to ergonomic factors would have cause continuous static loads on their back and are at risk of experiencing complaints of low back pain.

Keywords : Beautician; Duration of work; Low back pain

1. Introduction

Low Back Pain (LBP) is defined as pain and discomfort located below the costal margin and above the inferior gluteal fold, with or without leg pain. LBP is a common musculoskeletal condition that can occur in all age groups from children to the elderly, as well as in all countries from developing to developed countries with acute or chronic episodes. LBP has become a leading cause of disability worldwide. LBP is a common symptom that everyone has experienced. LBP can be caused by various injuries or diseases, the most common being injury to the muscles or tendons of the back. Those who have physically demanding jobs, have physical and mental comorbidities, smokers, and people who are overweight have the greatest risk of complaining of

low back pain. The classification of LBP based on duration is divided into 3, namely acute LBP (< 4 weeks), subacute LBP (4 - 12 weeks), and chronic LBP (> 12 weeks or 3 months) [4,9,10].

Risk factors associated with the prevalence of LBP include individuals aged between 35 - 55 years, obesity, smoking habits, 5 - 10 years of work, physical activity and family history of musculoskeletal disorders. LBP disorders can also be influenced by other factors such as gender, height, body mass index (BMI), length of working hours, working position, and the weight of a person's workload. Incorrect working positions, excessive weights, and techniques used to lift weights are the most common things that cause work accidents, namely injuries or back pain [1].

Beauty clinics, similar to barbershops, are among the lesser-known professions or workplaces that are generally associated with workplace risk factors. Beauty clinic workers are often more vulnerable to adverse health impacts, such as work-related musculoskeletal disorders. This field of work is characterized by limited body positions, repetitive movements, and concentration of activity on small parts of the body, such as the hands and wrists, with work pace that does not allow time for recovery. Beauticians usually have stand for more than 8 hours or sit in a bent position during activities which can increase the risk of musculoskeletal disorders, namely in the back and lower legs [8].

Working in a sitting position for a long period of time can cause continuous muscle contractions and vasoconstriction of blood vessels resulting in pain in the body such as the upper limbs, back, joints and other muscle tissue. Therefore, several researchers have concluded that the prevalence of musculoskeletal disorders related to the work of beauty clinic workers is universal. For information, recent research reveals that the reported prevalence of work-related musculoskeletal disorders is 76.3% in Nigeria, 27.4% in Turkey and around 39% reported in Brazil [5,8].

2. Method

A total of 60 respondents were reported in this study. Data was collected from beautician who worked at the JA Medical Skincare beauty clinic Medan. The collected variables included: age, gender, Body Mass Index (BMI), working duration, sitting duration, Numeric Rating Scale (NRS) and the Pain and Distress Scale (PDS) score on admission. We classified the age group into ≥ 30 years and < 30 years old, the BMI group into > 25 kg/m2 and ≤ 25 kg/m2, the working duration into > 8 hours and ≤ 8 hours, and the sitting duration into > 7 hours and ≤ 7 hours. The data was computed using the SPSS 22th edition.

3. Results

Based on table 1, the data showed that the all of the respondents were female (100%) and within the age group of under 30 years (93.3%). Most respondents had a normal BMI (83.3%) and worked for more than 8 hours per day (95%). Additionally, around half of the respondents reported LBP complaints (51.7%), with the majority experiencing moderate pain (65%).

The table 2 illustrates the relationship between respondent characteristics and the presence or absence of low back pain complaints. It shows that among respondents aged ≤ 30 years, 51.8% reported low back pain complaints, while 48.2% had no complaints. Additionally, 51.7% of female respondents reported low back pain complaints. The table also highlights that none of the respondents with a "Thin" BMI (< 18.5) reported low back pain complaints, while 54% of those with a "Normal" BMI (18.5 - 25) did report complaints. Furthermore, 49.1% of respondents working under 8 hours per day reported low back pain complaints, while 50.9% had no complaints. The table indicates sitting duration of > 7 hours, has an equal proportion (50%) reported low back pain complaints and no complaints. In contrast, among those with a sitting duration ≤ 7 hours, 52.4% reported low back pain complaints, while 47.6% had no complaints.

Tabel 1 Data Distribution of Respondent Characteristics

Respondent Characteristics	Frequency	Percentage (%)
Age		
≤ 30 years	56	93.3
> 30 years	4	6.7
Gender		
Male	0	0
Female	60	100
BMI		
Thin (BMI < 18.5)	3	5
Normal (BMI 18.5 - 25)	50	83.3
Overweight (BMI > 25 - 27)	2	3.3
Obesity (BMI > 27)	5	8.3
Working Duration		
> 8 hours	57	95
≤ 8 hours	3	5
Sitting Duration		
> 7 hours	18	30
≤ 7 hours	42	70
LBP		
Complaints	31	51.7
No Complaints	29	48.3
NRS		
No Pain	0	0
Mild Pain	12	20
Moderate Pain	39	65
Severe Pain	9	15

Tabel 2 Respondents Characteristics Based on Low Back Pain

Respondent Characteristics	Low Back Pain					
	Complaints		No Complaints		Total	
	n	%	n	%	n	%
Age						
≤ 30 years	29	51.8%	27	48.2%	56	100%
> 30 years	2	50%	2	50%	4	100%
Gender						
Woman	31	51.7%	29	48.3%	60	100%
BMI						

Thin (BMI < 18.5)	0	0%	3	100%	3	100%
Normal (BMI 18.5 - 25)	27	54%	23	46%	50	100%
Overweight (BMI > 25 - 27)	1	50%	1	50%	2	100%
Obesity (BMI > 27)	3	60%	2	40%	5	100%
Working Duration						
> 8 hours	28	49.1%	29	50.9%	57	100%
≤ 8 hours	3	100%	0	0%	3	100%
Sitting Duration						
> 7 hours	9	50%	9	50%	18	100%
≤ 7 hours	22	52.4%	20	47.6%	42	100%

4. Discussion

One noteworthy finding is the association between age and low back pain complaints. The table reveals that individuals aged ≤ 30 years constitute the majority of respondents, with a prevalence of low back pain complaints at 51.8%. Based on research obtained, at vulnerable ages it is actually very possible to experience low back pain because increasing age results in tissue damage, replacement of tissue with scar tissue, dehydration and a decrease in bone elasticity. The existence of repetitive movement processes and all risk factors in the workplace carried out by employees trigger LBP. At a relatively young age, it is possible that low back pain occurs due to continuous work processes. In general, almost all ages have the potential to experience low back pain [7].

Table 2 showed that 51.7% or 31 of female respondents complained about LBP. This showed female are more risk and often affected by LBP. Overall LBP was higher in women than men. Women are affected by menstrual cycle fluctuations in pain sensitivity, biological responses to pregnancy and childbearing, physical stress when raising children, perimenopausal weight gain is an additional cause of LBP, and pain sensitivity is higher in women. The prevalence of LBP increases after women reach menopause. This is partly related to the acceleration of lumbar disc degeneration and spinal degeneration after women menopause [11].

Respondents classified as having obesity (BMI > 27) exhibit the highest percentage of low back pain complaints at 60%. Someone who is overweight is 5 times more likely to suffer from LBP than someone with an ideal body weight. As body weight increases, the spine will experience pressure to support this load, so that the spinal structure will be easily damaged and endangered. One of the spinal areas most at risk due to the effects of obesity is the lumbar vertebrae [1].

In terms of working duration, the table reveals that respondents working for more than 8 hours per day have a relatively high prevalence of low back pain complaints at 49.1%. This may be attributed to prolonged sitting or repetitive movements associated with certain occupations. On the other hand, respondents with a working duration of ≤ 8 hours per day report a low prevalence of low back pain complaints, suggesting that shorter work hours may have a positive impact on reducing the risk of low back pain. Work duration was called the length of time a person exposed to risk factors. this research is also supported by Hadyan and Saftarina's research that a person's work duration is generally around 6 – 8 hours a day. Extending the duration of work risks causing a decrease in productivity related to fatigue, work accidents and work-related illnesses [3,6,8].

Lastly, respondents who reported sitting for more than 7 hours per day had an equal distribution 50% prevalence of low back pain complaints and no complaints. However, respondents who reported sitting for less than 7 hours per day slightly higher prevalence of low back pain complaints at 52.4%. These findings suggest

that sitting duration may have a minor impact on the occurrence of low back pain, but further research is needed to determine the exact relationship between sitting duration and low back pain. Several studies show that prolonged sitting can reduce joint lubrication and cause stiffness. Sitting too long causes stressoveruse of the lumbar spine and tissue damage. Around 60% of workers complain of low back pain due to lack of movement and sitting for a long time (bending position) resulting in muscle tension and damage to the surrounding soft tissue [2].

5. Conclusion

The research results revealed that beauticians at the JA Medical Skincare beauty clinic who were at risk of experiencing low back pain were individuals aged under 30 years (51.8%), those with a BMI categorized as "Obese (BMI > 27)" (60%), and those with a working duration of more than 8 hours (49.1%). These groups exhibited higher percentages of complaints related to low back pain.. Although, there is no significant difference in the prevalence of low back pain complaints and no complaints based on gender female reporting similar percentages at 51.7% and 48.3% respectively. On the other hand, individuals who reported sitting for less than 7 hours per day had a slightly higher prevalence of low back pain complaints at 52.4%. These findings suggest that sitting duration may have a minor impact on the occurrence of low back pain. In general, almost all ages have the potential to experience low back pain. Beauticians who work long hours and do not pay attention to ergonomic factors would have cause continuous static loads and are at risk of experiencing complaints of low back pain.

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Conflict of Interest

The authors declare no conflicts of interest in preparing this article.

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