



**PREVENTION OF *LOW BACK PAIN* COMPLAINTS TO STUDENTS DURING  
ONLINE LEARNING IN THE TIME OF THE COVID-19 PANDEMIC**

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**ABSTRACT**

*Low back pain* is a widespread health problem worldwide and the leading cause of disability. *Low back pain* or lower back pain is a Musculoskeletal disorder caused by strenuous physical activity, and It causes muscle spasms and back stiffness. This complaint occurs because the muscles receive pressure due to workload continuously without getting relaxation opportunities. The incidence of low back pain in the world each year varies wildly, reaching 15 - 45%. According to WHO (2013), shows that 33% of the population in persistent pain develops. Data for LBP sufferers in Indonesia is unknown but is estimated to vary between 7.6% to 37% of the total population. LBP is not caused by organic disorders but by the wrong body position at work. With the issuance of a *work from home* policy for workers and *online* at students and students, there is a shift in *low back pain* at a young age. *Low back pain* continues to increase 5% every year. The intensity of physical movement, work and study so that laptops and *smartphones* are increasing. The increase in the duration of media use causes various kinds of effects, including influencing how students and workers learn.

**Keywords: low back pain, workers, students, pandemic COVID-19**

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## INTRODUCTION

At the beginning of 2020, the world was shocked by the outbreak of a new virus, namely Corona, a new type of virus (*SARS-CoV-2*), and the disease is called *Coronavirus disease 2019 (Covid-19)*. It is known that the origin of this virus came from Wuhan, China. Found in late December 2019, according to data, WHO has confirmed that 65 countries have been infected with this virus (PDPI, 2020). The *Covid-19* pandemic entered Indonesia in the middle of March 2020 with a relatively high number of cases of *Covid 19*.

The outbreak of COVID-19 caused restrictions to be imposed social on everyone. This is useful for breaking the chain of distribution. Policy This initially only impacted the economic sector, but as time went on, the world of education also felt it (Hasanah, 2020). According to data UNESCO, 39 countries have closed educational institutions, affecting as many as 421,388,462 school students and 86,034,287 higher education students. Lots of the states took steps with the closure of learning activities. In Indonesia, provincial and local governments make various policies to minimize transmission (Puji Lestari, 2020).

One of the world of education policies through a circular letter from the Ministry of Education and Culture (Kemendikbud) Number: 36962/MPK.A/HK/2020 dated March 17, 2020, regarding Online Learning *online* and Work from Home in order to prevent the spread of *Covid-19*. Since then, all levels of schools and colleges have been eliminated while face-to-face learning is replaced with online learning (*online*). The online application aims to keep the learning system running even though it is online. According to Moore *et.al* (in Firman and Sari, 2020) states that Online learning is a learning activity that requires a network internet with connectivity, accessibility, flexibility, and the ability to give rise to various types of learning interactions. Use of the internet and technology Multimedia can change the way knowledge is delivered and become an alternative learning carried out in the classroom (Zhang *et al.*, 2004). Implementation of *online* learning requires facilities as a support, such as *smartphones*, laptops, or tablets that can be used to access information wherever and whenever (Gikas & Grant, 2013). With changes in learning methods like this, various problems can arise that One of the students is *Low back pain*.

*Low back pain* is a very common health problem worldwide and the main cause of disability. *Low back pain* or lower back pain is a Musculoskeletal disorder caused by strenuous physical activity, and It causes muscle spasms and back stiffness. This complaint occurs because the muscles continuously receive pressure due to workload without getting relaxation opportunities (Raya, 2019). From the 2010 *Global Burden of Disease Study (GBD)* data,

*Low back pain* is one of the top 10 diseases and injuries that accounted for the highest DALYs ( *disability-adjusted life years* ) worldwide. *Low back pain* can affect work productivity and general welfare. *Low back pain* is a significant cause of activity restriction and absenteeism in some worlds that imposes a high economic burden on individuals, families, community, industry, and government (De Vos *et al.*, 2012). *Low back pain* was



identified as the most common cause of disability in young adults, with more than 100 million workdays lost per year. In Sweden, low back pain accounted for four times the number of job losses from 7 million in 1980 to 28 million in 1987. In the United States, It is estimated that 149 million workdays are lost each year due to low back pain, with total costs estimated at US\$100 to 200 billion a year (two-thirds caused by lost wages and lower productivity). The incidence of low back pain in the world each year varies greatly, reaching 15 - 45%. According to WHO (2013), shows that 33% of the population in persistent pain develops. The number of LBP sufferers is unknown but is estimated between 7.6% to 37% of the total population. LBP is not an organic disorder but the wrong body position at work (Harahap, 2019). The highest peak of *low back pain* occurs at 35 to 55 years and increases with age. This is due to tissue damage and decreased function. *Low back pain* is the first gateway to more severe conditions like calcification of the bones back (*spondylosis*), spinal shift (*spondylolisthesis*), *pinched* nerves (*ischialgia*), bone cancer, and so on (Duthey, 2013). Due to the nature of the pain recurrence, *low back pain* is rarely a concern for people who experience it, so that at the time of treatment, the condition of *low back pain* had become chronic.

With the issuance of a *work from home* policy for workers and *online* at students and students, there is a shift in *low back pain* at a young age. *Low back pain* continues to increase 5% every year. Some changes in the intensity of physical movement, work, and study to increase laptops and *smartphones*. Due to the increase in the duration of media use, It causes various kinds of effects, including influencing how students and workers learn. Students and workers will be looking for positions that comfortable online, starting from lying down, sitting back, without a table, and on his stomach.

Based on these problems, before the phenomenon of WFH and LBP, online learning was common in the elderly, but along with current developments, it is starting to be seen that young people can experience LBP. If LBP occurs at a young age, it will interfere with productivity when entering the school working world. Students have a curriculum that is time-consuming and has a sedentary style of life. They can spend > 3 hours per day studying in a sitting position two times more often than other activities. LBP can be one of the causes of health problems in a more severe direction if not handled quickly and accurately. Therefore, an early analysis of the cause of LBP to prevent and reduce the incidence of LBP by setting a good pattern for the student.



## METHOD

This activity aims to screen the incidence of Low Back Pain in students and provide assistance in the form of socialization on preventing LPB during the online learning period. This effort is expected to provide students knowledge about the effects of low back pain during the learning period if it is unknown how the symptoms are felt and how prevention efforts can be made independently. material through socialization in the form of education to students is planned online in the form of counseling about the concept of prevention of low back pain, exercise demonstration

LBP prevention and evaluation will be carried out online, as well as using a questionnaire with a *google form*.

## DISCUSSION

**On Sunday**, November 14, 2021, educational activities were carried out in order to prevent low back pain carried out online. The activity was attended by 136 people with the most backgrounds among student from the Faculty of Medicine, Sriwijaya University

**Table 1. Characteristics of participants by demographics**

Characteristic	N	%
Age		
17	33	24,3
18	66	48,5
19	29	21,3
>20	8	5,7
Gender		
Man	40	29,4
Woman	96	70,6
Body Mass Index		
underweight	16	11,7
normoweight	104	76,5
obese	16	11,8
Smoking		
Yes	1	1
No	135	99



**Table 2. Characteristics Based on Incidence of Low Back Pain**

Low Back Pain	N	%
Yes	60	44,1
No	76	55,9

Most of the participants who had experienced lower back pain more than choose to manage pain independently, for example, by self-massage or using topical drugs freely sold in the market. Others choose to go to the masseur, physiotherapy, and visit the doctor. By position sitting during lectures, most of the participants sat in a bent position as much as 82 people (60.3%), sitting in an upright position 52 people (38.2%) and lying down next to 2 people (1.5%).

**Table 3. Characteristics of Participants based on the duration of online activities and activities carried out, including**

Activity	Frequency	Percent	Valid Percent	Cumulative Percent
Walking	20	14.7	14.7	14.7
Sitting and playing gadget	20	14.7	14.7	29.4
Sleeping while resting	37	27.2	27.2	56.6
Sleeping while playing gadget	59	43.4	43.4	100.0
Total	136	100.0	100.0	



## CONCLUSION

*Low Back Pain* is a condition where muscle contraction causes excess in the lower back due to contraction or overuse of muscles repeatedly, causing the muscles to tense up. *LBP* is associated with stress/strain back muscles, tendons, and ligaments usually felt after excessive activity. Such as; lifting heavyweights in the wrong position, bending over too long, standing/sitting for too long in the wrong position, lower back pain that arises can result in loss and disrupt work productivity, especially when schooling from home during the current pandemic COVID-19.

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