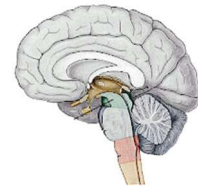


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The Relationship Of Sitting Duration And Neck Pain Complaints In Final Level Health Students At STIKES Ngudia Husada Madura

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ABSTRACT

To meet the criteria for prospective students, students must prepare a final assignment or thesis before the end of the study session and submit it according to the specified deadline. Students have to spend a lot of time studying in front of laptops because of the demands of their final assignments. This increases the risk of musculoskeletal disease, including neck discomfort. The aim of this study was to investigate whether students' sitting duration was associated with complaints of neck pain. The research strategy used in this research is cross-sectional correlational analysis. The population of this study was 126 students in the final stages of study at STIKES Ngudia Husada Madura, with a total sample of 93 participants. A person's sitting duration acts as an independent variable in this study, while complaints of neck pain are a related variable. A questionnaire was used as a data collection tool, the results of which were analyzed using the Lambda test with a significance level of 0.05. Among the students surveyed, 74.2% (69 people) reported sitting for more than four hours. Of the students surveyed, 90.3% (or 84 people) reported experiencing neck pain. The significance threshold of lambda α (0.05) was exceeded by the statistical test findings, which showed a p value of 0.016. Final year students at STIKes Ngudia Husada Madura reported more neck pain when they sat for long periods of time, according to the study. There is a moderate relationship between differences in sitting duration and pain complaints as indicated by a correlation coefficient of 0.472. It is hoped that STIKes Ngudia Husada Madura students will be required to always change their seating positions. Sitting for four hours in a row can cause neck pain, so get up and move as soon as possible. Apart from that, students can try to gently stretch the neck muscles to reduce the discomfort that may be the cause.

INTRODUCTION

Students in their final year of study are known as final year students. To meet the criteria for prospective students, students must prepare a final assignment or thesis before the end of the study session and submit it according to the specified deadline. Due to the pressure of final assignment requirements, students have to spend a lot of time studying in front of a laptop, thereby increasing the risk of developing symptoms of musculoskeletal problems. Asrun (2019).

Medical illnesses called musculoskeletal disorders affect the function of soft tissues, which include the nervous system, muscles, tendons, and supporting structures including the intervertebral discs. Between

the ages of 15 and 24 years, pupils and students have an increased risk of 1.5–7% for experiencing musculoskeletal problems (Riskesdas 2013).

One common concern among students is neck discomfort. This problem stems from the fact that students have to use computers for the entire learning process. This can also be caused by prolonged neck conditions, poor body posture, or pressure or movement on the neck muscles (Motimath, 2017). Students can study for six to eight hours at a time; Even outside lecture hours, they can spend a lot of time sitting quietly and doing learning activities. The length of time spent sitting is related to the tension experienced by the neck muscles. As stated by Liles (2018), Increased muscle tone, caused by statistical tension in the neck, can ultimately cause neck discomfort.

In industrialized countries, the prevalence of mechanical neck pain complaints can range between 27 percent to 48 percent each year (Kuri, 2016). The incidence and prevalence of neck pain were 806.6 and 3551.1 per 100,000 population, while years lived with disability was 352 per 100,000, which was found to be higher among women. The prevalence of neck pain should increase with age. The highest burden is among men aged 45–49 years and women aged 45–54 years (Safiri et al., 2017). The prevalence of neck pain is still increasing in Indonesia. 16.6% of adults complain of discomfort in the neck area, in fact 0.6% of the first symptoms are discomfort which eventually develops into severe pain. When compared with men, women are more likely to suffer from this condition (1.67 : 1.6). In addition, the severity of the disease increases with age. (Juliastuti 2017 edition).

The pain experienced by sufferers of mechanical neck pain is related to mechanical features, such as: symptoms that arise due to the neck being maintained in a static position for a long duration (Phadke, 2016).

Based on research conducted by the Ministry of Home Affairs in 2022, the chi-square test ($p < 0.05$) shows that there is a correlation between the duration of time students spend sitting and the incidence of tension neck syndrome in students. The amount of time students spend sitting is the basis of this relationship. Stiffness and increased tension in connective tissues (tendons, ligaments) are the result of such impacts. Various factors can contribute to the development of neck pain, such as psychological, behavioral, and physical/biomechanical aspects, which can cause discomfort in the neck (Genebra, 2017). Activities that involve long periods of time and improper sitting positions can cause neck discomfort. Those with neck pain may be experiencing one of these problems.

METHODS

In this study, a cross-sectional correlative analytical study design was used as the methodology. During December 2023, this research was carried out at STIKes Ngudia Husada Madura. Participants in this research were final year students of STIKes Ngudia Husada Madura. With a population of 126 students with a sample of 93 final year students. Complaints of neck pain were the dependent variable in this study, while duration of sitting time was the independent variable. The variables considered in this research are the two components that are taken into consideration. The tool used was a questionnaire, and questionnaire analysis was carried out using the lambda test (0.05)

RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents

Characteristics	Frequency (f)	Percentage (%)
Age		
19 years old	1	1.1
20 years	6	6.5
21 years	39	41.9
22 years	32	34.4
23 years	13	14.0
24 years old	2	2.2
Total	93	100
Gender		
Man	25	26.9
Woman	68	73.1
Total	93	100
Study program		
Bachelor's Degree in Nursing	32	34.4
D4 Obstetrics	19	20.4
Bachelor of Health Administration	7	7.5
Bachelor of Clinical and Community Pharmacy	16	17.2
D3 Medical Records	8	8.6
D3 Health Analyst	11	11.8
Total	93	100

Based on table 1, it was found that 19 year old students were 1 respondent (1.1%), 20 year old students were 6 respondents (6.5%), almost all of the 21 year old students were 39 respondents (41.9%), students 22 year olds were 32 respondents (34.4%), 23 year old students were 13 respondents (14.0%), and 24 year old students were 2 respondents (2.2%). There were 25 male students who answered, namely 26.9%, and most of the female students were 68 people, namely 73.1%. The study programs of most respondents were 32 people (34.4%), 19 respondents with a D4 Midwifery study program (20.4%), 7 respondents with a Bachelor of Health Administration study program (7.5%). %, respondents with the Bachelor of Clinical and Community Pharmacy study program were 16 people (17.2%), respondents with the D3 Medical Records study program were 8 people (8.6%) and respondents with the D3 Health Analyst study program were 11 people (11.8%).

Table 2. Frequency Distribution of Sitting Duration

Sitting Duration	Frequency (f)	Percentage (%)
> 4 Hours	69	74.2
< 4 Hours	24	25.8
Total	93	100

Based on table 2 above, it shows that the sitting duration of students was > 4 hours as many as 69 respondents (74.2%) and almost the majority of students' sitting duration was < 4 hours as many as 24 respondents (25.8%).

Table 3. Frequency Distribution of Neck Pain Complaints

Complaints of neck pain	Frequency (f)	Percentage (%)
Experiencing complaints of neck pain	84	90.3
Did not experience complaints of neck pain	9	9.7
Total	93	100

The data shown in table 3 shows that almost all students experience complaints of neck pain. Of these students, 84 students (91.3%) reported experiencing neck pain, while only 9 students (9.7%) did not experience complaints of neck pain.

Table 4. Cross Tabulation of the Relationship between Sitting Duration and Neck Pain Complaints

Duration of sitting * Complaints of neck pain Crosstabulation							
		Complaints of Neck Pain					
		Experience		Not Experienced		Total	
		F	%	F	%	F	%
Sitting Duration	<4 hours	28	30.4%	3	3.3%	31	33.7 %
	>4 hours	56	60.9%	5	5.4%	61	66.3 %
Total			91.3%	8	8.7%	41	100%
Lambda Statistical Test							
$\alpha = 0.05$							
$p = 0.016$							

The results of this statistical test, known as Lambda, can be seen in table 4 in the previous section, showing a p value of 0.016. This figure shows that the p value is smaller than the significance threshold α (0.05). H_0 is rejected, but H_1 is accepted. This shows that there is a relationship between sitting duration and complaints of neck pain in final year students at STIKes Ngudia Husada Madura. It is known that the correlation coefficient value is 0.472, which indicates that the degree of strength of the relationship (correlation) between the sitting duration variable and complaints of neck pain is moderate.

1. General Characteristics

Data from STIKes final student Ngudia Husada Madura showed that 84 respondents (90.3%) experienced complaints of neck pain, while 9 respondents (9.7%) did not experience neck pain. According to Elevarasi (2016), neck pain is an unpleasant sensation that arises in the neck and is related to tissue damage, both specific and non-specific.

A musculoskeletal disorder called neck pain is characterized by discomfort, weakness and stiffness in the muscles of the neck, shoulders and even the head without a history of musculoskeletal disease such as cervical disc herniation or degenerative processes in the limbs. Neck pain can also be experienced by students who have to carry out the learning process in an uncomfortable sitting position and tend to be static for long periods of time, which is done repeatedly. Neck pain that is left for a long time can cause undesirable things, one of which is decreased ability and performance at work. One risk factor is the duration of sitting.

2. Relationship between Sitting Duration and Neck Pain Complaints

Based on table 4, it can be concluded that 16 students who experienced neck pain with a sitting duration of <4 hours were 16 people (17.2%), 8 students who did not experience neck pain with a sitting duration of <4 hours were 8 people (8.6%) and There were 68 students who experienced neck pain with a sitting duration of > 4 hours (73.1%), 1 student who did not experience neck pain with a sitting duration of > 4 hours was 1 person (1.1%). It can be concluded that the majority of respondents, between respondents with a sitting duration of <4 hours and a sitting duration of >4 hours, mostly experienced complaints of neck pain, 84 respondents (90.3%) and 9 respondents who did not experience neck pain (9.7%).).

This research is confirmed by Bianca (2022), whose research results show that sitting time varies and most students experience complaints of neck pain after seven to nine hours of intensive lectures every day. The test results obtained $p < 0.008$, which shows a strong correlation between sitting duration and the incidence of Tension Neck Syndrome.

This research data shows that there is a relationship between sitting duration and complaints of neck pain in final year students at STIKes Ngudia Husada Madura. Cross tabulation results showed that 90.3% of respondents reported experiencing neck pain, while 9.7% did not. It can be interpreted that there is a meaningful or significant relationship between sitting duration and complaints of neck pain. And the correlation coefficient number is positive, namely 0.359, so the relationship between the two variables is unidirectional (unidirectional type of relationship) and the level of strength of the relationship (correlation) between the sitting duration variable and pain complaints is moderate.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research on final year students of STIKes Ngudia Husada Madura, it can be concluded as follows, nearly 84 respondents experienced neck pain and there is a relationship between sitting duration and complaints of neck pain in final year students of Stikes Ngudia Husada Madura.

The researcher advises all final year students of STIKes Ngudia Husada Madura to always change their sitting position, if the sitting time has reached 4 hours, you should immediately change your position from sitting to standing or walking, you can also do light stretches on the neck muscles so that the cause of neck pain does not cause complaint.

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