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The Influence of Knowledge, Practices, Attitudes and Perceptions on Students' Comfort in using School Chair at Secondary School in Perlis, Malaysia

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ABSTRACT

The design of school chairs plays a crucial role in supporting students' comfort and the effectiveness of the learning process. This study examines the influence of students' knowledge, practices, attitudes, and perceptions on their comfort while adopting school chairs at secondary schools in Perlis. This research utilizes a quantitative methodology through a questionnaire survey conducted with 250 students chosen via simple random sampling. Findings showed that Students demonstrated a high level of awareness of ergonomics' benefits (80.8%) and importance in chair design (80.8%). In total, 36.0% of students strongly agreed that non-ergonomic chair designs cause health problems and discomfort. A multiple linear regression analysis shows that R^2 is 0.993, which means that 99.3% of the variation in student satisfaction is explained by the independent variables in the model. The most dominant factor influencing students' comfort levels is attitude (B = 0.5981). This study suggests that schools and policymakers should focus on ergonomic factors in chair design to enhance students' comfort and well-being. It is hoped that the findings of this study can serve as a guide for relevant stakeholders to improve educational infrastructure in Malaysia.

1. Introduction

Ergonomics is the field that studies the interaction of humans with the work environment to ensure individual well-being and performance [1]. In the context of education, school chair design plays an important role in ensuring student comfort and improving learning effectiveness. However, studies have shown that non-ergonomic chair designs can cause musculoskeletal problems and reduce student focus [2,3]. Although furniture in Malaysia has been set according to certain standards by the Department of Standards Malaysia (JSM), there are still issues regarding the suitability of chair designs with students' ergonomic needs [4]. In addition, the level of students' awareness of ergonomics also affects the way they sit and use chairs. Therefore, this study was

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conducted to assess the level of students' knowledge, perception and comfort of current chair designs in school.

Fig. 1. Examples of chairs used in the classroom

Non-ergonomic chairs can cause discomfort, poor sitting posture and long-term health problems [5,6]. Lack of knowledge about ergonomics also makes students less aware of the negative effects of using inappropriate chairs. In addition, discomfort while sitting can affect students' concentration and motivation in learning [7,8]. This study aims to assess the relationship between school chair design and student comfort levels and to examine whether existing designs meet students' ergonomic needs.

The study offers practical insights for schools and policymakers on how to promote the significance of ergonomic chair design. By understanding the impact of chair design on student comfort and performance, improvement measures can be taken to ensure a more conducive learning environment [2]. In addition, this study can raise students' awareness about the importance of proper sitting posture and help other researchers in the field of educational ergonomics. It is hoped that the results of the study can be used as a reference in improving the design of school furniture and improving the quality of student learning [8,9]. The way school chairs are designed is really important for keeping students comfortable and making sure they learn effectively. While there have been studies looking into the ergonomics of school furniture, many of them have mainly concentrated on general body size mismatches or health issues [10,11]. Unfortunately, not much attention has been paid to how students' knowledge, habits, attitudes, and feelings about their chairs impact their comfort. Plus, there's a significant lack of ergonomic data from Malaysian secondary schools, especially regarding how students personally experience and perceive the comfort of their furniture. This study aims to explore how students' knowledge, practices, attitudes, and perceptions influence their comfort while using school chairs in secondary schools in Perlis.

1.1 Students' Level of Knowledge on Ergonomics and Chair Design

Students' ergonomics knowledge refers to their understanding of the significance of the layout and design of environments that promote physical health while performing daily tasks. Previous

research, such as that conducted by Hassan *et al.,* [12] has demonstrated that ergonomic education programs can improve students' understanding of ergonomic principles while also reducing health risks. However, most ergonomic improvements are aimed at the industrial sector rather than school environments, and school-based assessments remain scarce despite the identification of numerous ergonomic issues.

Deepashini *et al.,* [13] discovered that the majority of students had a good understanding of ergonomics (76.3%), and many of them also applied ergonomic principles in their daily lives (82.6%). This demonstrates that students who understand ergonomics have the potential to reduce discomfort and that may lead to musculoskeletal disorders. As a result, schools and policymakers must prioritize ergonomic education in order to raise student awareness and well-being.

1.2 Students' Attitudes Towards Chair Design

Several studies such as by Deepashini *et al.,* [13] show that there is a significant relationship between education level and attitude towards ergonomics. However, these findings are inconsistent as a study by Mbada *et al.,* [14] reported no significant relationship between the two variables. In any case, ergonomic education is thought to be important in raising awareness and shaping students' attitudes toward better practices, thereby reducing the risk of injuries and posture-related problems during the schooling process [15].

1.3 Ergonomic Practices Carried Out by Students in the Classroom

Despite having a high level of ergonomic knowledge, students do not practice ergonomic principles in their daily lives. Good working postures, such as the neutral body position, can help reduce muscle and joint stress and prevent musculoskeletal problems [16]. Knowledge alone is insufficient if students do not apply it in their daily lives, particularly when sitting for extended periods of time in the classroom [17].

Sarfaraz *et al.,* [18] discovered that dental students in India and Egypt have a high level of knowledge and attitude toward ergonomics, but their practice is still limited. In Egypt, 95.4% of students failed to consistently practice ergonomic principles, resulting in high levels of body pain and musculoskeletal stress. This situation also has an impact on how well they perform their daily tasks.

However, there are studies that show a positive increase among students in ergonomic practices. El-Sallamy *et al.,* [19] reported that 85% of students showed a positive attitude towards ergonomic practices. A study by Deepashini *et al.,* [13] also supported this finding when two-thirds of their students practiced ergonomics during practical placements. This proves that an educational approach and continuous exposure can effectively improve ergonomic practices among students.

1.4 Perception of Students towards Ergonomics and Chair Design

According to Che Hassan *et al.,* [12], the school environment has a significant impact on students' health because they spend so much time there during a critical developmental stage in their lives. Although schools are generally considered safe places, they can also pose health risks due to differences in student behavior patterns. Meyer's [20] study lends support to this viewpoint, emphasizing how students' behavior at school affects their overall health.

The study also discovered that the majority of teachers understood the importance of ergonomic safety, with 78% having basic knowledge, but 22% lacked adequate understanding. This

highlights the importance of providing comprehensive ergonomic safety training in schools. With proper training, teachers can help students adopt correct body posture and create a safer environment at school [12].

1.5 Students' Comfort with Chair Design in Schools

According to Ahmad *et al.,* [21], the majority of students reported discomfort in the neck, shoulders, and back as a result of poor posture and prolonged sitting. Approximately 31.7% of respondents reported waist discomfort. This suggests that the lack of comfort while sitting in school chairs can have a negative impact on students' health, particularly if the sitting time is excessive and their posture is incorrect.

Bettany-Saltikov *et al.,* [22] found that school furniture, including chairs and desks, improves students' learning performance. If students do not feel uncomfortable while sitting, they will be more focused in their studies. Khan [23] also emphasized that chairs that do not fit the students' body sizes can interfere with their ability to concentrate in class. Obinna *et al.,* [24] also found that most students struggle when their chairs and desks are not in line with one another, particularly shorter students whose elbows are lower than the desk.

According to Khan [23], using ergonomic chair designs can help students learn healthier and more effectively. Jaafar *et al.,* [9] supported this viewpoint by stating that students who use ergonomic principles in their learning environment can maintain physical well-being and good posture, allowing them to learn more effectively and comfortably. Even though there has been a growing focus on classroom ergonomics, not much research has looked into whether students' discomfort mainly stems from poorly designed chairs, a lack of supervision, a reluctance to report problems, or the fact that discomfort often was not taken seriously in schools [25,26]. These issues could lead to students spending too much time in unsuitable seating, which might negatively impact their well-being and academic performance.

2. Methodology

2.1 Participants Selection

The target population for this study is secondary school students in Perlis. It is estimated that there are 704 students aged from 13 years to 17 years who study at the selected school. Simple random sampling technique is the sampling technique used to represent the population of this study. A total of 250 students of were randomly selected based on name list given by the school administrative consisting of Form 1 to Form 5 to be respondents in this study.

2.2 Questionnaire Survey

The research instrument used in this study is a questionnaire. This questionnaire was distributed physically to students at selected secondary school in Perlis. Students at this school consist of Malays in the majority and this caused the researcher to give the questionnaire in Malay. This can help students to understand more easily about the research questions given and encourage them to answer better.

This questionnaire is divided into four parts, namely Part A: involving respondent demographics which contains information such as gender, age, weight and height; Part B: contains 15 items regarding students' Knowledge, Attitude and Practice (KAP) towards ergonomics in chair design at school; Part C: contains 7 items of questions related to students' perceptions towards chair design

at school and Part D; related to body chart discomfort using the Borg scale, sitting in classroom and using current school chair. The questionnaire used in this study was carefully evaluated for content validity by a group of experts in ergonomics and education. Reliability testing has been conducted, and the results were promising, showing a solid internal consistency with a Cronbach's alpha value of 0.82.

3. Results

3.1 Respondents' Demographic

According to Table 1, the majority of respondents were 16 years old (25.6%), followed by 15 years old (22.4%) and 14 years old (20.8%). The gender distribution was nearly equal, with 48.4% male and 51.6% female respondents. Most students had a weight range of 50–59 kg (34.8%) and a height between 150cm to 169cm (70.4%). Regarding posture, 76.4% of students stood for more than an hour daily, while 86.8% sat for over five hours in school. Additionally, 52% reported experiencing body injuries, while 48% had no prior injuries. These findings provide insight into students' ergonomic conditions and potential impacts on their comfort.

Table 1
Demographic information

Variable	Frequency (n)	Percentage (%)
Age		
13	42	16.8
14	52	20.8
15	56	22.4
16	64	25.6
17	36	14.4
Gender		
Male	121	48.4
Female	129	51.6
Weight (kg)		
50 – 59	93	34.8
60 – 69	29	13.6
70 – 79	13	6.0
80 – 89	5	2.0
90 – 99	5	2.0
100 – 199	3	1.2
Height (cm)		
130 – 139	1	0.4
140 – 149	10	4.0
150 – 159	87	34.8
160 – 169	89	35.6
170 – 179	58	23.2
180 – 189	5	2.0
Standing time at school		
Less than 1 hour	59	23.6
More than 1 hour	191	76.4
Sitting time at school		
Less than 5 hours	33	13.2
More than 5 hours	217	86.8
Experienced injury to body part		
Yes	130	52.0
No	120	48.0

The Table 2 study's findings revealed a high level of ergonomic knowledge among students. The majority of respondents (84.0%) were familiar with ergonomics, with an average score of 1.16 and a

standard deviation of 0.367, indicating response consistency. Students demonstrated a high level of awareness of ergonomics' benefits (80.8%) and importance in chair design (80.8%). Furthermore, 82.0% of students recognized the significance of the distance between the table and chair, while 83.2% understood the proper sitting position. All statements had a low average score (between 1.16-1.20) and a small standard deviation, indicating that students have consistent and positive knowledge of ergonomic principles in the school setting. Previous research has also shown that understanding ergonomics is crucial for reducing the risk of muscle tension and posture problems caused by the use of inappropriate furniture [4].

Table 2
The distribution of respondents' knowledge on ergonomics in school chair design

No.	Statement	Yes (%)	No (%)	Mean	Standard Deviation
1.	I am aware of what ergonomics is.	84.0	16.0	1.16	0.367
2.	I know the benefits of ergonomics.	80.8	19.2	1.20	0.398
3.	I understand the importance of ergonomics in school chair design.	80.8	19.2	1.19	0.395
4.	I find that there is an appropriate distance between the seat and the study desk.	82.0	18.0	1.18	0.385
5.	I know the correct sitting posture during learning sessions.	83.2	16.8	1.17	0.375

According to Table 3, students' attitudes toward the use of chairs in schools are generally positive, but there is some variation in their understanding of the importance of proper sitting posture. In total, 12.4% of students strongly agreed that they sit with proper posture, while 46.4% chose neutral, indicating that students have moderate awareness. At the same time, 27.6% of students strongly agreed that they frequently have back, neck, and shoulder pain after learning, which could be caused by non-ergonomic chairs [13]. The average values for these two statements were 3.25 and 3.72, with standard deviations indicating moderate to high levels of variation among students.

Table 3
The distribution of respondents' attitudes toward the use of chairs in school

No.	Statement	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Standard Deviation
1.	I sit with correct body posture	3.6	15.2	46.4	22.4	12.4	3.25	0.979
2.	I often experience pain in the back, neck, and shoulders after learning sessions.	4.0	11.2	21.6	35.6	27.6	3.72	1.106
3.	I frequently change my body position during the learning process.	3.2	2.0	14.4	40.0	40.4	4.12	0.951
4.	I think ergonomics should be part of the learning curriculum.	2.0	2.0	20.0	36.0	40.0	4.10	0.924
5.	I believe that school furniture plays a role in ergonomic principles.	3.2	2.8	15.6	36.0	42.4	4.12	0.985

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Students were also very aware of the importance of ergonomics in learning. A total of 40.4% of students strongly agreed that they frequently change positions during class, most likely due to discomfort from sitting. Furthermore, 40.0% of students strongly agreed that ergonomics should be integrated into the learning process, while 42.4% strongly agreed that school furniture plays an important role in ergonomic principles. The high average value of 4.10 to 4.12 for this statement

indicates strong student support for the use of ergonomic furniture in schools. This emphasizes the importance of schools prioritizing furniture designs that support students' posture and comfort for their well-being and academic performance [13].

According to Table 4, students' practices for using school chairs show varying levels of awareness and implementation. Only 12.8% strongly agreed with the statement about sitting upright with the spine resting on the chair backrest, while the majority of students remained neutral (mean score 3.25). Similarly, 18.4% strongly agreed to maintain a neutral posture while learning, with a higher mean score of 3.74. These findings suggest that, while many students recognize the importance of proper posture, their consistency in applying it in class remains moderate and may be influenced by individual awareness and the design of school furniture. In contrast, fewer students reported chair discomfort to teachers, with 4.0% strongly agreeing and 32.0% strongly disagreeing, resulting in a low mean of 2.23. This suggests a lack of initiative or the belief that complaints will result in change. Meanwhile, 22.4% of students strongly agreed that it was difficult to sit due to unsuitable chairs, for a mean score of 3.40. These findings emphasize the importance of ergonomic chair design for improving students' comfort and health. According to the scoring system, the majority of students had a moderate level of practice, indicating that there is still room for improvement in translating ergonomic awareness into consistent habits.

Table 4
The distribution of respondents' practices toward the use of chairs in school

No.	Statement	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Standard Deviation
1.	I often sit in an upright position with my spine resting against the back of the chair during lessons.	4.8	15.6	42.4	24.4	12.8	3.25	1.023
2.	I often try to maintain a neutral posture while studying in class.	2.4	9.6	18.4	51.2	18.4	3.74	0.950
3.	I try to follow the correct sitting posture while learning.	2.8	7.6	19.6	50.0	20.0	3.77	0.950
4.	I have complained to the teacher about the discomfort caused by the classroom chair.	32.0	32.8	19.2	12.0	4.0	2.23	1.142
5.	I find it difficult to sit during lessons because the chair is not suitable for me.	8.8	15.2	26.0	27.6	22.4	3.40	1.235

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

According to Table 5, students' perceptions of current school chair design reflect a growing concern about health and comfort issues. In total, 36.0% of students strongly agreed that non-ergonomic chair designs cause health problems and discomfort, with only 2.8% strongly disagreeing. This is supported by an average score of 3.97 and a standard deviation of 1.005, indicating that students generally agree that improper chair design has a negative impact on their physical well-being [27]. Furthermore, 31.6% of respondents strongly agreed that poorly sized chairs impair concentration and learning performance. The average score of 3.73 and standard deviation of 1.103 showed that discomfort caused by chair dimensions may reduce students' attention and learning outcomes.

Furthermore, 28.8% of students strongly agreed that the chair's height contributes to comfort while learning, with an average score indicating agreement on this point. In contrast, fewer students strongly agreed that they were not disturbed during lessons, indicating that many continue to be distracted, most likely due to discomfort from the chairs. This is supported by the lower average score of 3.12. Finally, 36.0% of students strongly agreed that they had no health or comfort concerns when using school chairs, while 22.8% strongly disagreed. Therefore, with an

average of 3.12 and a relatively high standard deviation, it shows that many students are still experiencing discomfort. This finding emphasizes the critical need for ergonomically designed chairs in schools to prevent musculoskeletal problems and improve student comfort and learning experience [24].

Table 5
The distribution of student perception on ergonomics and physical comfort in school furniture design

No.	Statement	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Std. Deviation
1.	I believe that non-ergonomic chair designs in schools cause health problems and discomfort for students.	2.8	4.4	22.0	34.8	36.0	3.97	1.005
2.	I believe that chair designs that do not match students' body sizes affect focus and disrupt learning performance.	2.0	5.6	24.4	36.4	31.6	3.90	0.979
3.	The height of the stool or chair I sit on during lessons provides me with comfort.	4.8	7.6	26.0	32.8	28.8	3.73	1.103
4.	I do not feel disturbed throughout the teaching and learning process that takes place in this classroom.	5.2	26.0	35.2	18.8	14.8	3.12	1.113
5.	I do not experience any health or comfort issues when using chairs at school.	9.2	20.0	34.4	22.8	13.6	3.12	1.154

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

The Figure 2 shows the students' level of comfort with the current school chair design during the first 15 minutes using the Borg Scale. The lower back was the most commonly affected body part, with 55 students reporting moderate pain and 20 reporting severe pain. The upper back also showed high levels of discomfort, which 44 students reporting moderate pain and 32 reporting severe pain. Furthermore, the neck and shoulders showed significant discomfort which 47 students experiencing moderate neck pain and 36 students reporting moderate shoulder pain. This pattern of discomfort, particularly around the back and neck, is consistent with the findings of Obinna *et al.,* [24], who found that poor ergonomic design of school furniture can lead to musculoskeletal problems among students.

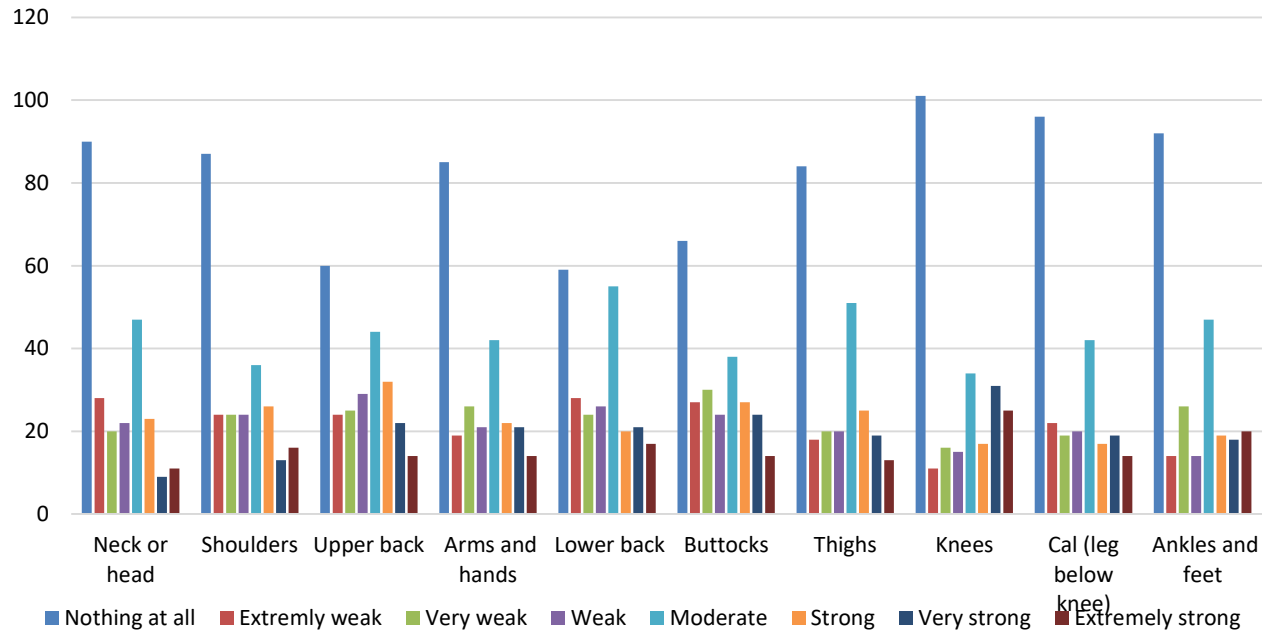

Fig. 2. Student comfort in using school chair during 15 minutes

However, some body parts showed high levels of comfort. For example, 90 students had no neck discomfort, and 87 students had no shoulder pain. The lower body parts, such as the knees, calves and ankles, demonstrated the greatest level of comfort, with 101 students experiencing no discomfort in the knees and 96 in the calves. However, 31 students reported severe pain in their knees and 18 in their ankles. This demonstrates that the design of school chairs is still not fully ergonomic and appropriate for all students. As suggested by Bai *et al.,* [27], incorporating ergonomic principles into chair design is critical for reducing physical discomfort and improving student concentration during learning activities.

The Figure 3 shows the level of comfort of students with the chair design in classroom after 30 minutes of sitting, using the Borg Scale. The most uncomfortable body parts were the arms and hands, with 51 students reporting moderate pain and 28 reporting severe pain. The back was also impacted with 48 students reporting moderate pain and 26 experiencing severe pain. This indicates that the chair design does not provide adequate support for the arms and back, especially when used for long periods of time [28]. The lower and upper back also recorded high levels of discomfort, with over 70 students reporting moderate to severe pain each. On the other hand, the ankles and calves showed the highest levels of comfort, with 77 students for the ankles and 75 students for the calves reporting no discomfort. While the lower body was less affected, the upper body clearly required improvements in chair design to better support students' posture and comfort [29].

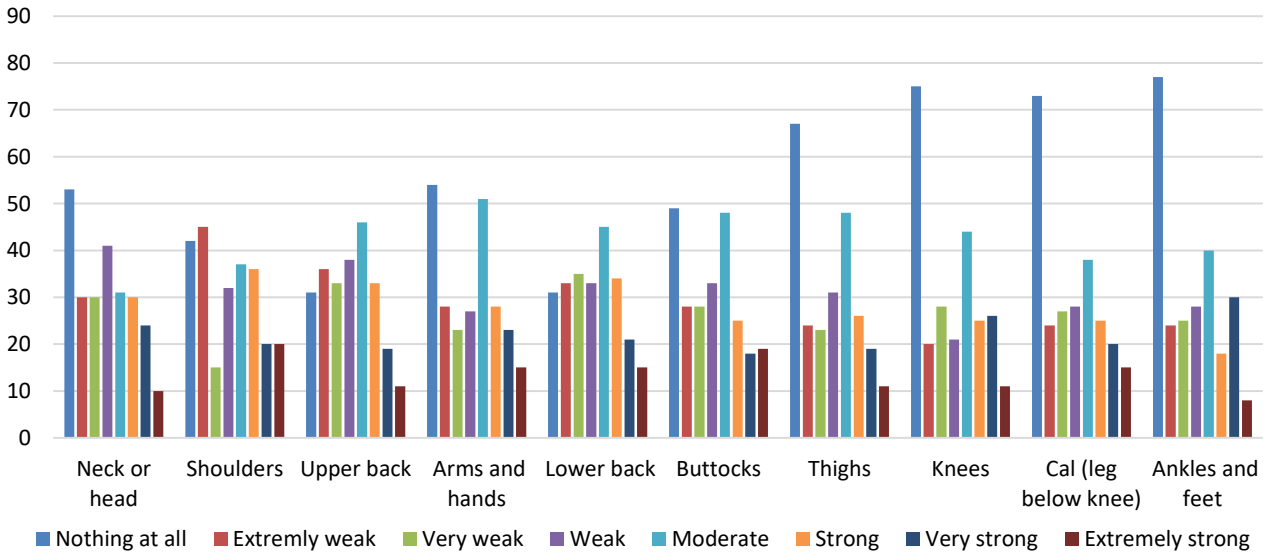

Fig. 3. Student comfort in using school chair during 30 minutes

This Figure 4 shows the decrease in students' comfort level with the current school chair design after sitting for 45 minutes. The neck or head area began to experience more discomfort than in the previous period, with 35 students reporting moderate pain and 34 people reporting severe pain. The thighs were the most affected area, with 47 students reporting moderate pain and 21 reporting severe pain. This demonstrates that longer periods of sitting increase pressure, especially on areas with less support, such as the thighs and neck [30]. In addition, the buttocks, knees and calves also experienced significant discomfort. The buttocks were recorded by 40 students at a moderate level and 26 at a severe level, while the knees and calves were recorded by 37 and 28 students at a moderate and severe level, respectively. On the other hand, the knees showed little discomfort among the majority of students, with 60 students reporting no pain. This suggests that serious

attention needs to be paid to the ergonomic design of the chair, especially to support the thighs, buttocks and lower body when used for longer period [31].

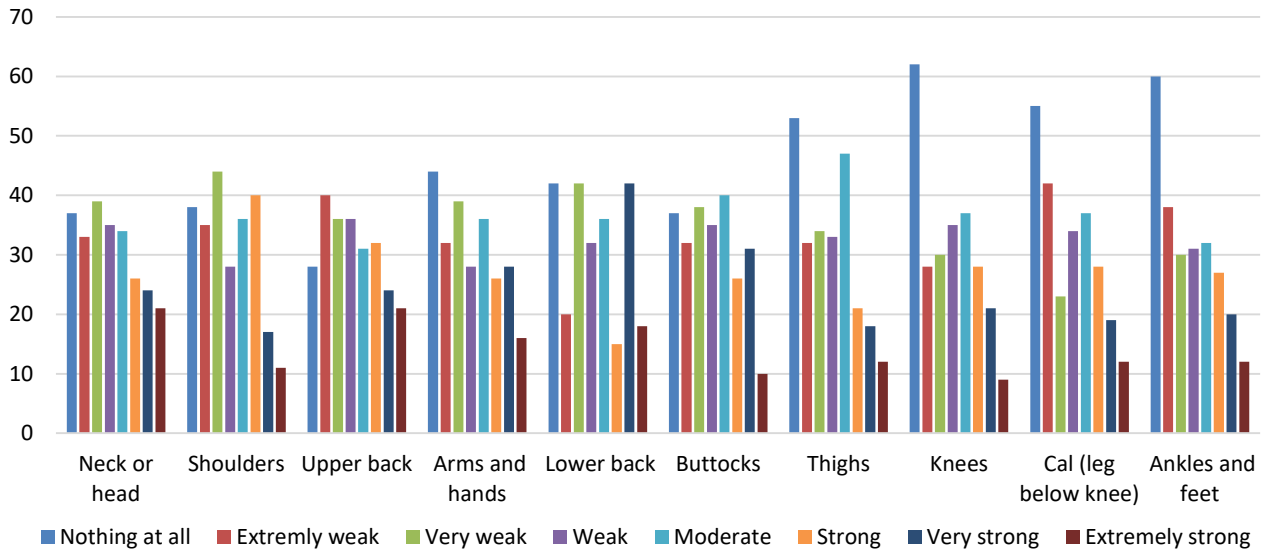

Fig. 4. Student comfort in using school chair during 45 minutes

After sitting for 60 minutes, students' discomfort with the usage of school chair has been increased, particularly in the arms and hands. In these areas, 44 students reported moderate pain, 28 experienced severe pains, and 21 reported very severe pain. The thighs, ankles, and feet also showed high levels of discomfort, with more than 60 students experiencing moderate to severe pain. This suggests that the current chair design may not support students' overall posture, particularly after extended periods of sitting [32]. However, the calves reported the least amount of discomfort, with 60 students reporting no pain at all, implying that this area may have more freedom of movement or less pressure from the chair. Although only a few students reported severe or very severe pain, the overall data highlights the need to improve the ergonomics of school chairs so that they can better support students during extended periods of learning [21]. Attitude is the dominant factor that influences the level of comfort of students in secondary school in Perlis.

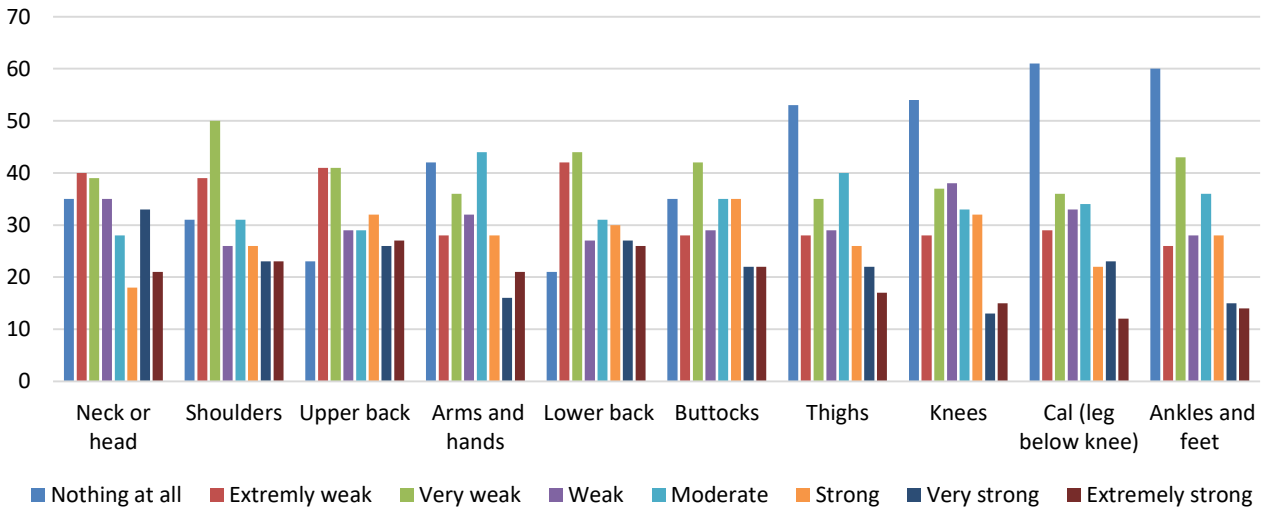

Fig. 5. Student comfort in using school chair during 60 minutes

This study uses multiple linear regression analysis to identify the dominant factors that influence the level of student comfort in using chairs in classroom. Before diving into multiple regression analysis, few diagnostic tests were applied to validate this model. Normality of the residuals by using the Shapiro-Wilk test and took a good look at the Q-Q plots. Multicollinearity among the independent variable has been checked by calculating the Variance Inflation Factor (VIF), and all VIF values were below 5 and confirmed that the analysis was on solid ground with the assumptions for linear regression.

Based on Table 6 below, the F-value obtained is 8242.648 with a significant level of $p < 0.001$, which indicates that this regression model is statistically significant. Based on the analysis, the R-square value is 0.993, which indicates that 99.3% of the variation in the level of comfort can be explained by the factors tested, namely knowledge, attitude, practice, and perception. This high R-square value indicates that the effect of the independent variables on the level of student comfort is very strong. The results of the regression analysis show that all independent variables in this study have a significant effect on the level of student comfort. Attitude is the most dominant factor with an unstandardized coefficient of 5.981 and a standard Beta coefficient of 0.895, as well as a t value = 142.135 ($p < 0.001$). This shows that students' attitudes towards chair use have the greatest impact on their comfort level.

Table 6
Dominant factor influencing students' comfort level in chair usage

Variables	Unstandardized Coefficient		Standardized Coefficient	t	Sig
	B	Standard Deviation	Beta		
Constant	80.611	0.181		445.201	0.000
Knowledge	0.171	0.017	0.140	10.050	0.000
Attitudes	0.5981	0.042	0.895	142.135	0.000
Practices	0.481	0.040	0.074	12.110	0.000
Perceptions	0.240	0.017	0.197	14.056	0.000

4. Conclusions

The purpose of this study is to investigate the impact of Knowledge, Attitudes, and Practices (KAP) and perceptions of current school chair design on student comfort levels at secondary school in Perlis. A total of 250 students from Forms 1–5 participated as respondents, and a questionnaire instrument was used to collect data on background, KAP, perception, and comfort (Borg Scale). Overall, students demonstrated high ergonomic attitudes and practices, with moderate knowledge. This suggests that students' understanding and application of ergonomic principles can still be improved. The correlation analysis revealed that the independent variables, attitudes, practices, and perceptions, had a significant positive relationship with student comfort. Multiple regression analysis revealed that these four variables explained 76.7% of the variation in student comfort levels, with the remaining 23.3% possibly influenced by other factors that were not investigated. Among all the factors, student attitudes were identified as the most dominant contributor to comfort, indicating that a positive attitude toward the importance of ergonomics has a significant impact on physical comfort during learning sessions.

This study has important implications for schools and policymakers seeking to improve chair designs based on empirical data. Chair improvements that incorporate ergonomic principles are expected to improve student comfort, reduce the risk of physical pain, and thus support the effectiveness of the learning process. The findings also pave the way for future research, which

could include mixed approaches (quantitative and qualitative), a larger study location, and the inclusion of other variables such as students' psychological or physical factors in order to obtain a more comprehensive picture of classroom comfort.

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The researchers want to extend their heartfelt thanks to the students and teachers from the secondary school in Perlis for their invaluable participation and support in this study. Their willingness to share their time, experiences, and insights truly made this research possible. The researchers deeply appreciate their contributions, which have significantly advanced the understanding of ergonomics and student comfort within the school environment.

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