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Evaluation of Employee Work Posture for Facebook Account Creator with ROSA Approach at PT. Click Media

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Abstract. PT. Click Media is a service company in Lamongan that is engaged in web marketing to market advertising products to social media and websites. Employees of the Facebook Account Creator Section work 8 hours per day with a working posture continuously dealing with computers. These conditions make complaints in the skeletal muscles or better known as musculoskeletal disorders. In the initial interview conducted with the Nordic Body Map (NBM) questionnaire, the results showed that the highest complaints were on the back of 81.8%, 54.5% of the upper neck, right hand, right wrist and 50% on the right shoulder. The method in this study is the Rapid Office Assessment (ROSA), which is an exclusive approach to office ergonomics to assess the level of work risk for computer users. The purpose of the study was to determine the level of occupational risk, the causes of musculoskeletal disorders, and recommendations for improvement. The results of the study were 50% of the 12 employees at risk with a final score of 7 ROSA as many as 1 employee and a final score of 6 as many as 5 people. The cause of the problem occurs in the work facilities on non-adjustable chairs, the absence of armrests and rough surfaces, non-adjustable backrests, the position of the monitor used by employees when working is very low. And also the lack of awareness of employees of PT. Click Media in using the work tool creates an accumulation of risk value. Recommendations for improvement are the renewal of work facilities such as chairs that can be adjusted in height, have armrests and have a smooth surface, adjustable backrests, and monitors that are adjustable according to the employee's work position and socialization of ergonomic practices while working.

Keywords: Web marketing, facebook account creator, work posture, musculoskeletal disorders, nordic body map, rapid office assessment (rosa)

1. Introduction

The growth of technology and science is currently very fast, one of which is computers which are closely related to humans in various fields of work. The use of computers as a medium of work is now increasing. Based on the results of a survey conducted by the statistical agency that the highest use of computers is in the information and communication sector at 93.54%, followed by the processing industry at 84.12%, the food and beverage industry at 75.01%, trading 65.85% , business by 69.38%, and accommodation by 66.64%.[1]

Directly or indirectly, the high frequency of computer use will cause work risks for workers, especially problems with musculoskeletal disorders. Mosculoskeletal disorders are complaints that trigger the occurrence of major disabilities for workers.[2] These musculoskeletal disorders are often experienced by computer users or office workers, if done continuously will cause risks to the neck, shoulders and lower back. [3] This statement is supported by previous research at PT. Control System Arena Para Nusa Jakarta amounted to 65.5%.[4] In another study by Kumalapatni 2021, 86.7% of workers complained of musculoskeletal disorders.[5] In the 2019 Restruputri study, the most complaints were in the back by 100%, 90% in the neck and shoulders by 80%.[6]

PT. Click Media is a service company in Lamongan that is engaged in web marketing to market advertising products to social media and websites, where the main support for doing work is a computer. Employees of PT. Click Media works 8 hours per day in a continuous working position facing the computer. This condition makes employees feel complaints in the skeletal muscles or better known as musculoskeletal.

The initial interview was conducted by distributing the Nordic Body Map (NBM) questionnaire. According to Priyono, NBM is a questionnaire to find out complaints in 9 primary body parts.[7]

The results of the NBM questionnaire stated that the highest complaints were felt on the back with a percentage of complaints of 81.8%, upper neck 54.5%, right hand 54.5%, right wrist 54.5% and right shoulder 50%. . The results of interviews with the distribution of the Nordic Body Map questionnaire with the highest complaints felt by 12 employees of the Facebook account creator section of PT. Click Media is presented in the following table.

Table 1.1. Nordic Body Map Interview Results for Facebook Creators Employees PT. Click Media

Body Part	Number of People	Percentage
Back	9	81.8%
Upper Neck	7	54.5%
Right Wrist	7	54.5%
Right Shoulder	6	50.0%
Right Hand	7	54.5%

To minimize employee complaints in using computer can be done by knowing and identifying work postures. This identification can determine the condition of workers, the causes of complaints felt by workers and the level of risk. One approach to identify work posture is the Rappid Office Strain Assessment (ROSA). ROSA is a proprietary office ergonomics approach to assessing the level of occupational risk for computer users (Zen, 2017).[8]

Based on the above background, the authors are interested in conducting research with the title ”Evaluation of Work Postures for Facebook Account Creators with the Rappid Office Strain Assessment (Rosa) Approach at PT. ClickMedia". This study aimed to analyze the work posture of employees of PT. Click Media where recommendations for improvement from the results of the analysis are expected to minimize the causes of existing work posture problems and become a reference for PT. Click Media in improving its working system.

2. Methods

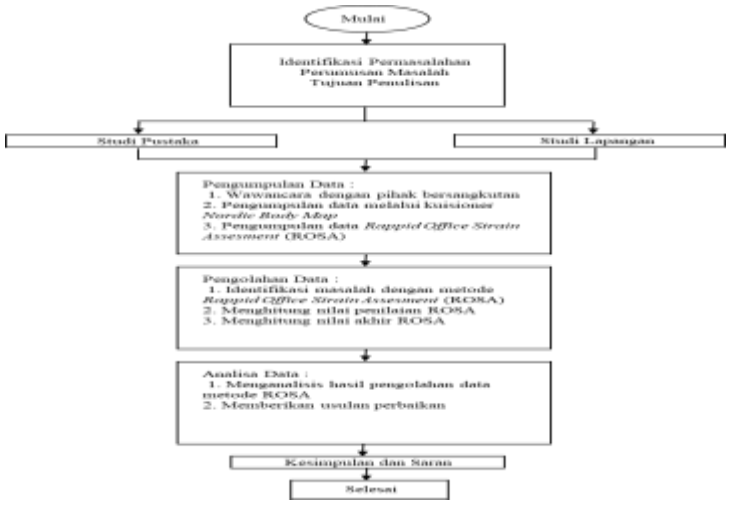
This research was conducted at PT. Click Media by collecting body posture data on employees of the Facebook account creator as a respondent as many as 12 people with 4 women and 8 men

working 8 hours a day. This research was conducted from May to June 2021. The research instrument used a Nordic Body Map (NBM) questionnaire to determine complaints of musculoskeletal disorders. Then to determine the level of work risk using the Rapid Office Assessment (ROSA) method.

Rappid Office Strain Assessment (ROSA) is a measurement technique in office ergonomics to determine the level of work risk based on the final ROSA score, where the final score can determine recommendations for improvement from information on employee perceived work complaints (Tarigan, 2021).[9] This method analyzes work posture by giving a score between 1 to 3 on the risk aspect, namely chair, telephone, mouse and keyboard. In the final ROSA assessment, the score is between 1 to 10. High-risk work posture is having a final ROSA score of more than 5 and further action is needed regarding the work facilities used. The duration considerations in this method are:

1. The addition of a score of -1, if the duration is < 30 minutes continuously or < 1 hour per day.
2. The addition of a score of 0, if the duration is between 30 minutes to 1 hour continuously or between 1 to 4 hours per day.
3. The addition of a score of +1, if the duration is > 1 hour continuously or > 4 hours per day.

The research steps are presented in Figure 2.1 below.



In the early stages of identification of problems to see the problems that occur now in the company through a survey of PT. Click Media. After the problem is identified, formulate the problem and make the objectives to be achieved in the research in line with the formulation of the problem.

Literature study is collecting references in the form of information relevant to research sourced from books and journals to support problem solving.

The field study aims to determine the situation and condition of the company in the form of research conducted at PT. Click Media so the problem can be resolved.

Work complaint data collection was conducted by interview using the NBM questionnaire and body posture data collection was carried out through direct observation, namely taking pictures using a digital camera while work activities were in progress without disturbing the work process.

After the data is collected, the next step is to process the data using the Rappid Office Strain Assessment (ROSA) method. Data processing using the Rappid Office Strain Assessment (ROSA) method consists of:

A. Calculating the Rappid Office Strain Assessment (ROSA) Score The

results of working posture images taken using a digital camera, can be assessed using the ROSA Assessment Form which consists of 3 sections, namely Section A Chair (seat height, seat depth, armrest, backrest), Section B Monitor and Telephone, and Section C Mouse and Keyboard.

B. Calculating the Final ROSA Score

From the results of the ROSA assessment, it can be determined the final ROSA score using a matrix table. First, determine the Section A Chair (the score from the sum of the seat height with the depth of the seat and the score from the sum of the armrests and the backrest), Section B Monitor and Telephone, and Section C Mouse and Keyboard. Second, after the scores for Section A, Section B and Section C have been determined, it is possible to determine the score for monitors and peripherals by calculating the scores obtained from drawing the mouse and keyboard section tables with monitors and telephones. Third, after determining the score of Section A, B, C, Section Monitor and Section Peripheral, it is possible to determine the final ROSA score by calculating the score obtained from section A and Monitor and Peripheral.

Data analysis is analyzing work posture with the Rappid Office Strain Assessment (ROSA) method so that the level of work risk and causes of musculoskeletal disorders can be known. After knowing the level of work risk from the analysis of work postures using the Rapid Office Assessment (ROSA) method, a repair analysis can be carried out so as to get recommendations for improvement.

Conclusions and suggestions are the final stage of research, namely scientific findings in the form of a summary of research results to answer research objectives.

3. Results and Discussion of

3.1 Data Collection and Processing The data

used in this study includes qualitative data, namely data from interviews in the form of job descriptions and quantitative data which is data from the NBM questionnaire and *form* in the form of percentage of complaints of *musculoskeletal disorders* and data on posture of employees of PT. Click Media.

Body posture data collection is done through direct observation, namely taking pictures using a digital camera when work activities are in progress without disturbing the work process.

The following is the processing of body posture data that has been collected using the *Rapid Office Assessment* (ROSA) method.

3.1.1 Assessment *Form ROSA*

A. Chair Height Data

Source: Research Data, 2021

Figure 4.1: Seat Height Data

In Figure 4.1 is the image data of PT. Click Media which shows that the seat height of PT. Click Media forms an angle of 75.91° which means the seat height is < 90° with a *non-adjustable*. The following is the result of collecting seat height data on the ROSA assessment form.

Tabel 3.1 : Data Tinggi Kursi

No	Name of Employee	The Angle Formed By Feet	Attitude of Legs Toward Desk	Chair Height Adjustment	Value
1	Akhmad Maulana Hidayatullah	<90°	Not Attached to	*Non-Adjustable*	2
2	Muizul Akrom	>90°	Attached to	*Non-Adjustable*	4
3	Rio Ardian	90°	No Sticking to a	*Non-Adjustable*	2
4	Mita Andriani	90 °	Not Sticking to a	*Non-Adjustable*	2
5	Uthman Affan Nursiyam	90 °	Not Sticking to a	*Non-Adjustable*	2
6	Lugas Dwi Sujatmiko	<90 °	Not Sticking to a	*Non-Adjustable*	3
7	Uswatun Chasanah	>90 °	Does not stick to a	*non-adjustable*	3
8	Diamond Junaidah	>90 °	table	*non-adjustable*	3
9	M. Nur Faizin	90 °	table	*non-adjustable*	2
10	Nifti	>90 °	does not stick to a table	*Non-Adjustable*	3
11	Joko Saputro	>90 °	Not attached to a	*Non-Adjustable*	4

12	Dini Apriyanti	>90 °	Not attached to a	*Non-Adjustable*	3

B. Seat Depth Distance The seat

depth distance which shows the distance between the knee and the seat pan seb large 2.78 inches which means < 3 inches with *seat pan* that can not be adjusted *(Non-Adjustable*). The following is the foot depth distance data on the *form* ROSA assessment

No.	**Employee Name**	**Distance *Seat Pan* to Knee**	**Adjustment Seat Depth**	**Value**
1	Akhmad Maulana Hidayatullah	3 inches	*Non-Adjustable*	2
2	Muizul Akrom	>3 inches	*Non-Adjustable*	3
3	Rio Ardian	<3 inches	*Non-Adjustable*	3
4	Mita Andriani	3 inches	*Non-Adjustable*	2
5	Uthman Affan Nursiyam	3 inches	*Non-Adjustable*	2
6	Straightforward Dwi Sujatmiko	>3 inches	*Non-Adjustable*	3
7	Uswatun Chasanah	3 inches	*Non-Adjustable*	2
8	Junaidah diamonds	>3 inches	*Non-Adjustable*	3
9	M. Nur Faizin	3	*NonAdjustable*	2
10	Nifti	>3 inches	*Non-Adjustable*	3
11	Joko Sampurno	3 inches	*Non-Adjustable*	2
12	Dini Adriyanti	>3 inches	*Non-Adjustable*	3

Source: Data Processing Results, 2021

C. Data Armrest

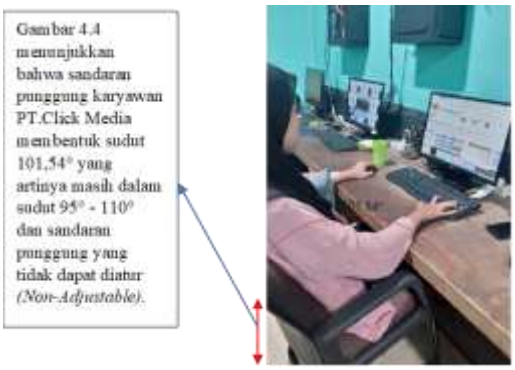
In the figure Figure 3.3 shows that the armrest on employees PT. Click Media does not exist / does not support, the seat back is too wide from one backrest to another and the armrest is not adjustable *(Non-Adjustable)*. The following is the armrest data on the *form* ROSA assessment

Tabel 3.3 : Data Sandaran Tangan

No	Employee Name	Attitude Armrest	Surface Armrest	Adjustment Armrest	Value
1	Akhmad Maulana Hidayatullah	Not *Support*	-	*Non-Adjustable*	3
2	Muizul Akrom	Not *Support*	-	*Non-Adjustable*	3
3	Rio Ardian	Not *Support*	-	*Non-Adjustable*	3
4	Mita Andriani	*Support*	-	*Non - Adjustable*	2
5	Uthman Affan Nursiyam	Supported *Not*	-	*Non-Adjustable*	3
6	Lugas Dwi Sujatmiko	Not *Support*	-	*Non-Adjustable*	3
7	Uswatun Chasanah	Not *Supported*	-	*Non-Adjustable*	3
8	Intan Junaidah	*Support*	Rude	*Non-Adjustable*	4
9	M. Nur Faizin	*Supported*	-	*Non-Adjustable*	2
10	Nifti	*Support*	Coarse	*Non-Adjustable*	4
11	Joko Sampurno	No *Support*	-	*Non-Adjustable*	3
12	Dini Adriyanti	*Support*	Coarse	*Non-Adjustable*	4

Source: Data Processing Results, 2021

D. Backrest Data



Source: Research Data, 2021

Figure 3.4 : Backrest Data

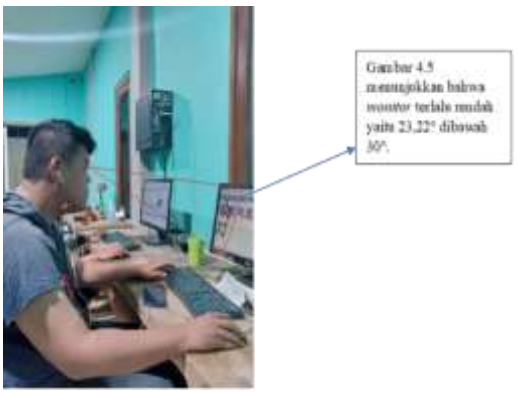
In Figure 3.4 shows that the backrest of employees of PT. Click Media forms an angle of 101.54° which means it is still within an angle of 95° - 110° and the backrest cannot be adjusted *(Non-Adjustable).* The following is the backrest data on the *form* ROSA assessment

Table 3.4: Backrest Data

No.	Employee Name	Attitude Backrest	Adjustment Backrest	Value
1	Akhmad Maulana Hidayatullah	No *Support*	*Non-Adjustable*	3
2	Muizul Akrom	No *Support*	*Non-Adjustable*	3
3	Rio Ardian	No *Support*	*Non-Adjustable*	3
4	Mita Andriani	*Support* (95° - 110°)	*Non-Adjustable*	2
5	Uthman Affan Nursiyam	Not *Supporting*	*Non-Adjustable*	3
6	Lugas Dwi Sujatmiko	Not *Supporting*	*Non-Adjustable*	3
7	Uswatun Chasanah	Not *Supporting*	*Non-Adjustable*	3
8	Intan Junaidah	*Support* (95° - 110°)	*Non-Adjustable*	2
9	M. Nur Faizin	*Support* (95° - 110°)	*Non-Adjustable*	2
10	Nifti	*Support* (95° - 110°)	*Non-Adjustable*	2
11	Joko Sampurno	Not *Support*	*Non-Adjustable*	3
12	Dini Adriyanti	*Support* (95° - 110°)	*Non-Adjustable*	2

Source: Data Processing Results, 2021

E. Data *Monitor*



Source: Research Data, 2021

Figure 3.5: Data Monitor

In Figure 3.5 shows that the *monitor* is too low, namely 23.22° below 30°. In the monitor rating, the monitor is positioned straight with the eyes and between 40 cm to 70 cm is given a value of 1. The following is *a monitor* on *form* the ROSA assessment

No	Employee Name	Attitude *Monitor*	Value
1	Akhmad Maulana Hidayatullah	Too low	2
2	Muizul Akrom	Aligned	1
3	Rio Ardian	Too low	2
4	Mita Andriani	Aligned	1
5	Uthman Affan Nursiyam	Aligned	1
6	Straightforward Dwi Sujatmiko	Too low and far	3
7	Uswatun Chasanah	Aligned	1
8	Intan Junaidah	Parallel	1
9	M. Nur Faizin	Too low	2
10	Nifti	Parallel	1
11	Joko Sampurno	Parallel	1
12	Dini Adriyanti	Sejajar	1

Source: Data Processing Results, 2021

F. Data *Telephone*

Source: Research Data, 2021

Figure 3.6: Telephone Data

In figure 3.6 shows that employees of PT. Click Media uses a headset when processing work. The following is telephone data on *form* the ROSA assessment

Tabel 3.6 : Data Telephone

No.	Name	Availability Telephone	Value
1	Akhmad Maulana Hidayatullah	Available (*headset*)	1
2	Muizul Akrom	None	1
3	Rio Ardian	None	1
4	Mita Andriani	None	1
5	Uthman Affan Nursiyam	Yes (*headset*)	1
6	Straightforward Dwi Sujatmiko	None	1
7	Uswatun Chasanah	None	1
8	Intan Junaidah	None	1
9	M. Nur Faizin	None	1
10	Nifti	None	1
11	Joko Sampurno	None	1
12	Dini Adriyanti	None	1

Source: Data Processing Results, 2021

G. *Data* Mouse

Source: Research Data, 2021

Figure 3.7: Mouse Data

Figure 3.7 shows that *the mouse* of PT. Click Media is in a line with your hand or shoulder. The following is the *Mouse* on *form* the ROSA assessment

Tabel 3.7 : Data Mouse

No	Name	Attitude *Mouse*	Value
1	Akhmad Maulana Hidayatullah	Easy to reach	1
2	Muizul Akrom	Easy to reach	1
3	Rio Ardian	Easy to reach	1
4	Mita Andriani	Easy to reach	1
5	Uthman Affan Nursiyam	Easy to reach	1
6	Lugas Dwi Sujatmiko	Easy to reach	1
7	Uswatun Chasanah	Easy to reach	1
8	Diamond Junaidah	Easy to reach	1
9	M. Nur Faizin	Easy to reach	1
10	Nifti	Easy to reach	1
11	Joko Sampurno	Easy to reach	1
12	Dini Adriyanti	Easy to reach	1

Source : Data Processing Results, 2021

H. Data *Keyboard*

Source : Research Data, 2021

Figure 3.8 : Data Keyboard

In Figure 3.8 shows that there is no angle formed from *keyboard* used by employees of PT. Click Media. The following is the *keyboard* on *form* the ROSA assessment.

Tabel 4.7 : Data Telephone

No.	Name	Attitude *Keyboard*	Value
1	Akhmad Maulana Hidayatullah	Straight	1
2	Muizul Akrom	Straight	1
3	Rio Ardian	Straight	1
4	Mita Andriani	Straight	1
5	Uthman Affan Nursiyam	Straight	1
6	Dwi Sujatmiko	Straight	1
7	Uswatun Chasanah	Straight	1
8	Diamond Junaidah	Straight	1
9	M. Nur Faizin	Straight	1
10	Nifti	Straight	1
11	Joko Sampurno	Straight	1
12	Dini Adriyanti	Lurus	1

Source: Results of Data Processing, 2021

3.1.2 Determination *Score* of ROSA

A. *Section* A Chair

		SKOR BAGIAN A							5
		Sandaran Tangan dan Sandaran Punggung							
		2	3	4	5	6	7	8	9
Ketinggian Kursi dan Kedalaman Kursi	2	2	2	3	4	5	6	7	9
	3	2	2	3	4	5	6	7	8
	4	3	3	3	4	5	6	7	8
	5	4	4	4	4	5	6	7	8
	6	5	5	5	5	6	7	8	9
	7	6	6	6	6	7	8	8	9
	8	7	7	7	7	8	9	9	9

Table 3.9 : Section A Chair

Source: Results of Data Processing, 2021

B. *Section* B *Monitor* and *Telephone*

		SKOR BAGIAN B							2
		Monitor							
		0	1	2	3	4	5	6	7
Telepone	0	1	1	1	2	3	4	5	6
	1	1	1	2	2	3	4	5	6
	2	1	2	2	3	3	4	5	6
	3	2	2	3	3	4	5	6	7
	4	3	3	4	4	5	6	7	8
	5	4	4	5	5	6	7	8	9
	6	5	5	6	7	8	8	9	9

Figure 4.10 : Section B Monitor and Telephone

Source : Data Processing Results, 2021

C. *Section C Mouse* and *Keyboard*

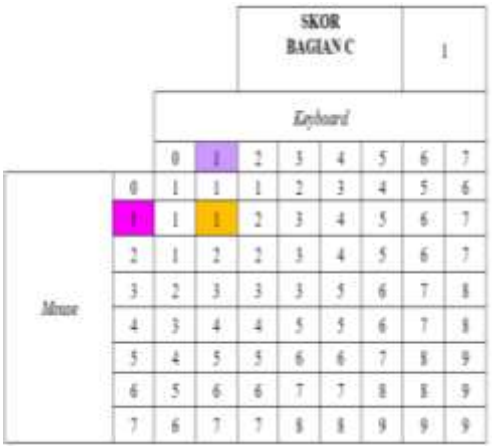


Figure 4.11 : Section C Mouse and Keyboard

Source : Data Processing Results, 2021

D. *Section Monitor* and *Peripherals*

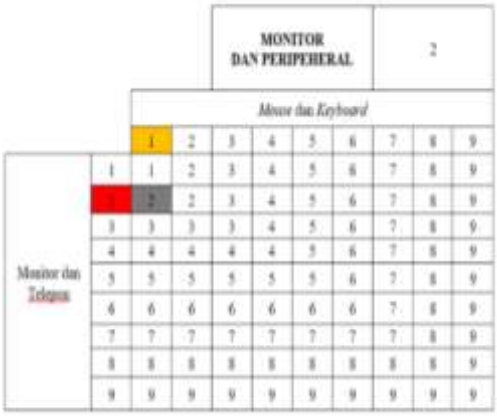


Figure 4.12 : Section C Mouse and Keyboard

Source : Results Data Processing, 2021

E. *Score* Final ROSA

Figure 4.1: Rosa Final Score

Source: Data Processing Results, 2021

The example of calculating the ROSA matrix table on Akhmad Maulana Hidayatullah is as follows:

A. Peni ROSA *Form* Section

1) *Seat* A Chair
   a) Height Chair
      Height = Angle formed < 90° + *Non-Adjustable*
      Seat Height = 1 + 1
      Seat Height = 2
   b) Seat Depth
      Distance Seat Depth Distance = 3 inch Distance + *Non-Adjustable*
      Seat Depth Distance = 1 +1
      Seat Depth Distance = 2
   c) Armrest
      Armrest = No *Support* + *Non-Adjustable*
      Armrest = 2 + 1
      Armrest = 3

   d) Backrest
      Backrest = Not *Supported* + *Non-Adjustable*
      Backrest = 2 + 1
      Backrest = 3
2) *Section* B *Monitor* Telephone
   a) *Monitor*
      Monitor = Too low angled <30°
      Monitor = 2
   b) *Telephone*
      Telephone = Using *a headset*
      Telephone = 1
3) *Section* C *Mouse* and *Keyboard*
   a) *Mouse*
      Mouse = Easily accessible and in one hand or shoulder line
      Mouse = 1
   b) *Keyboard*
      Keyboard = Straight and no angle formed
      Keyboard = 1
      Keyboard= 1

B. Score *Section* Final ROSA

a) *A* Chair
   Section A Chair = (Armrest + Backrest) ☎ Seat Height Distance Depth Seat)
   Section A Chair = (3+ 3 ☽ (2 + 2)
   Section A Chair = (6) ☎4)
   Section A Chair = 5
b) *Section* B *Monitor* and Telephone
   Section B *Monitor* and Telephone = *(Monitor)* ❄♏●♏◘♒□■♏)
   Section B *Monitor* and Telephone = (2) ♠♏♍♦♓□■ (1)
   Section B *Monitor* Telephone = 2
c) *Section* C *Mouse* and *Keyboard*
   Section C *Mouse* and *Keyboard* = *(Mouse)* ☺♏♲♌□♋❒♎ *)*
   Mouse C *and* and *Keyboard* = (1) ♠♏♍♦♓□■ (1)
   Section C *Mouse* and *Keyboard* =
d) *1 Monitor* and *Peripheral*
   Section Monitor and *Peripheral* = (*Monitor* and Phone) and *(Mouse* Keyboard *)*
   Section Monitor and *Peripheral* = (2) (1)
   Section Monitor and *Periperal* = 2
e) *Score* Final
   Score = *(Monitor* and *)* ♑♏❒♓◘♏❒♋● (Seat)

Score = (2) (5)
Score = 5

3.1.3 Work Posture Analysis Using the *Rappid Office Strain Assessment* (ROSA)

Tabel 4.14 : Tingkat Risiko Kerja

No.	Name of Employee	Final Value ROSA	Risk Level
1	Akhmad Maulana Hidayatullah	5	Not Risky
2	Muizul Akrom	7	Risky
3	Rio Ardian	5	Not Risky
4	Mita Andriani	3	Not Risky
5	Uthman Affan Nursiyam	5	Not Risky
6	Straightforward Dwi Sujatmiko	6	Risky
7	Uswatun Chasanah	5	Not Risky
8	Intan Junaidah	6	Risky
9	M. Nur Faizin	3	No Risk
10	Nifti	6	Risky
11	Joko Sampurno	6	Risky
12	Dini Adriyanti	6	Risky

Sourced in table 4.14 shows that as many as 6 out of 12 people or 50% of employees have a level of risky work risk and as many as 6 employees have a level of work risk that is not risky. Where *score* is 7 with 1 employee and the final score of 6 with 5 employees. So that this phenomenon needs to be carried out to improve the work posture of employees by recognizing the triggers of the problem and improving the relevant work facilities.

3.2 Analysis of Risk Causes

Based on the final ROSA score and the level of work risk in table 4. 14, the identification of risk triggers is carried out so that the high risk experienced by workers can be minimized. The following are some of the triggers for the high risk of work.

The following are some of the risk aspects that give rise to a high level of occupational risk in the ROSA evaluation.

A. Chair Height

In the aspect of chair height, the chair used is *non-adjustable* which has an impact on the position of the feet of PT. Click Media so that it forms an angle of less or more than 90°.chairs *Non-adjustable* result in the formation of complaints of musculoskeletal disorders in computer users.[11] The following is a picture of 4.15 seat height of PT. Click Media. Media.

Source: Research Data, 2021

Figure 4.15 : Chair Height of PT. Click Media

B. Seat Depth Distance

Based on information on seat depth data, the chair used has a *non-adjustable depth of field.* The following is a picture 4. 16 seat depth distance of PT. Click Media.

Source: Research Data, 2021

Figure 4.16 : Seat Depth Distance PT. Click Media

C. Armrests

In the armrest aspect in table 4.3 there are 9 employee chairs that do not have armrests or *are non-adjustable* and 3 employee chairs that have armrests but are negligent in their use (rarely used). The following table 4.17 employee armrest PT. Click Media.

Source: Research Data, 2021

Figure 4.17: Armrests on PT. Click Media

D. Backrest

Sourced on data information on the backrest of employees of PT. Click Media obtained shows that all employees have backrests, but the backrests on the chairs are *non-adjustable*and there are still some employees who do not have an understanding of using backrests. This causes the occurrence of *musculoskeletal disorders*. [11] The following is photo 4. 18 backrests on PT. Click Media.

Source: Research Data, 2021

Figure 4.18: Backrest on PT. Click Media

E. *Monitor*

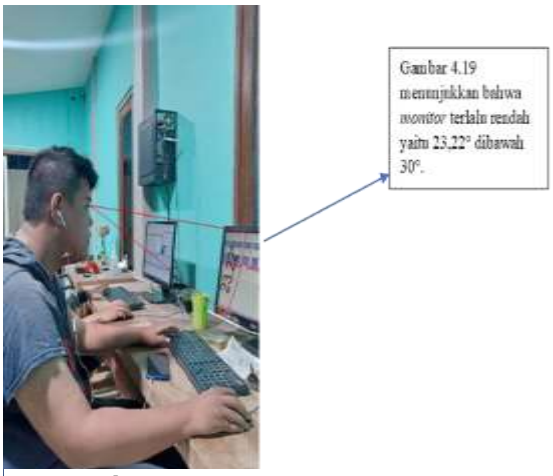
Based on the data in table 4.5, employees of PT. Click Media with *monitor* too low amounted to 4 people. So that this position can cause the employee's neck to feel pain or what is called a complaint of

musculoskeletal disorders. [11] The following is a picture of 4.19 *Monitor* employees of PT. Click Media.Research Data Sources, 2021

Figure 4.19: Monitor Employees of PT. Click Media

3.3 Proposed Improvements

After analyzing the causes of risk, here are some suggestions for improvement at PT. Click Media can be seen in the following table 5.16.



Data Penelitian, 2021

Gambar 4.19: Monitor Karyawan PT. Click Media

Table 4.20 : Proposed Improvements

No	Before Improvements	Proposed Improvements
1	Previously employees of PT. Click Media is difficult to adjust the seat height so that the legs form an angle of less or more than 90° due to *the non-adjustable seat height.* So that this matter can cause a body posture that does not match the height of the chair, eventually triggering the occurrence of musculoskeletal	The proposed improvement is to renew the employee seats of PT. Click Media with an *adjustable seat.* Source: Alfatiyah,  2020

	disorders (Alfatiyah, 2020). [12] Source: Research Data, 2021 	
2	Most of PT. Click Media, which has no armrest, has a rough surface and is *non-adjustable* , causing pain in the hands of employees. On the other hand, some employees who have armrests tend to ignore them and don't use them, causing an accumulation of work risk values. (Istiqomah, 2017)	The proposed improvement is that the company is obliged to change the employee's chair with a chair that has armrests with a smooth surface so that the employee's hands do not feel pain. 

	 Source: Research Data, 2021	Source: Alfatiyah, 2017
3	Backrest on PT. Click Media is *non-adjustable* and there are some employees who do not have an understanding in using it, causing pain in the shoulders and back, thus triggering the occurrence of *musculoskeletal disorders.* (Alfatiyah, 2020). [12] Source: Research Data, 2021 	The proposed improvement is that the company is obliged to change employee chairs with adjustable backrests so that employees do not feel pain in the back and shoulders. Source: Alfatiyah,  2020
4	*Monitors* used by employees of PT. Click Media has a very low attitude, causing pain in the neck or musculoskeletal (Istiqomah, 2017)[11]	The proposed improvement is that the company must update the position of the monitor used by each employee by adjusting the monitor distance between 60 - 90 cm and tilting between 10°-20°

Tabel 4.20 : Usulan Perbaikan

	 Source: Research Data, 2021	and above away from the view of employees.  Source: Alfatiyah, 2020

Conclusions and Suggestions

4.1. Conclusion

Based on the research that has been done, the following conclusions can be drawn.

1. The results of the analysis are based on table 4. 19 obtained from 12 employees with a final value of 7 as many as 1 employee and a final value of 6 as many as 5 people. The six employees have a high level of risk so that there needs to be an improvement in the company PT. Click Media.
2. Sourced in table 4.20 triggers a high level of risk in employees of PT. Click Media is an inadequate working facility such as an unadjustable chair height, the absence of an armrest on the employee's chair and a rough surface on the armrest, an unadjustable backrest, the position of the monitor used by employees when working is very low. And also the lack of awareness of employees of PT. Click Media in using the work tool creates an accumulation of risk value.

3. Based on table 2.20 improvements that can be made are the renewal and replacement of work facilities such as chairs that can be adjusted in height, chairs that have armrests and have a smooth surface, chairs with adjustable backrests, and *monitors* that can be adjusted according to the employee's work position. . In addition, there is a need for socialization, which means practicing ergonomics at work. These improvements were attempted in order to create a healthy physical condition so as to minimize the formation *of musculokeletal disorders* and fatigue when working for employees of PT. Click Media.

4.2. Suggestion

1. Sourced in table 4.20 the company PT. Cilck Media needs to update facilities and replace work facilities such as adjustable chair height, chairs with armrests with a smooth and adjustable surface, adjustable backrests on chairs and monitor positions that can be adjusted according to the employee's work position.
2. Based on table 4.20, the company needs to socialize the meaning of practicing ergonomics at work in order to minimize the level of work risk for employees of PT. Click Media.
3. For further research, to make more accurate analysis results, you should record activities in the form of videos so that each main movement can be clearly analyzed.

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