

GUIDANCE PROGRAM FOR PREVENTION AND MANAGEMENT OF MUSCULOSKELETAL COMPLAINTS FOR TEACHERS AT MADRASAH ALIYAH NEGERI 3 PALEMBANG

Indri Seta Septadina^{1*}, Wardiansah¹, Nyimas Fatimah², Agita Diora Fitri³, Legiran¹, Muzhaffar Zaid Rachman⁴, Richard B Naibaho⁴

¹Departement of Anatomy, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia ²Departement of Medical Rehabilitation, Universitas Sriwijaya, Palembang, Indonesia ³Departement of Public Health, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia ⁴Medical Students of Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia

ABSTRAK

Salah satu keluhan musculoskeletal terbanyak yang dialami oleh pekerja adalah nyeri pungguh bawah (NPB) atau low back pain (LBP) dikarenakan durasi duduk yang lama dan postur kerja yang tidak sesuai. Perlunya Upaya edukasi mengenai gerakan2 peregangan yang dapat dilakukan guru di sela mengajar atau dapat dilakukan sebelaum dan setelah bekerja. Pengetahuan tentang hal ini sudah banyak tersebar di media social, namun agar lebih dapat diterapkan maka perlu adanya suatu panduan berupa checklist yang dapat dilakukan secara mandiri oleh guru. Tujuan umum kegiatan ini adalah menganalisis keluhan muskuloskeletal yang terjadi pada guru SMA lalu dilakukan upaya pencegahan seperti penyuluhan, dan pendampingan berupa peragaaan gerakan peregangan yang dapat mencegah terjadinya nyeri punggung bawah serta gerakan yang dapat membantu meningkatkan kekautan otot punggung agar nyeri punggung dapat dikurangi.

Kata kunci: musculoskeletal, LBP, guru

ABSTRACT

The most common musculoskeletal complaint experienced by workers is low back pain (LBP) due to prolonged sitting duration and inappropriate work posture. There is a need for educational efforts regarding stretching movements that teachers can do between teaching or before and after work. Knowledge about this has been widely spread on social media, but to be more applicable, it is necessary to have a guide in the form of a checklist that teachers can do independently. The general purpose of this activity is to analyze musculoskeletal complaints that occur in high school teachers and then make preventive efforts such as counseling and assistance in the form of demonstration of stretching movements that can prevent low back pain and movements that can help increase back muscle strength so that back pain can be reduced.

Keywords: musculoskeletal, LBP, teacher

Correspondence Author : Indri Seta Septadina

Departement of Anatomy, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia

Email: indrisetaseptadina@fk.unsri.ac.id



1. INTRODUCTION

Teachers spearhead successful education by developing, maintaining, and implementing curriculum so learning can walk smoothly and reach expected goals. Teachers have a minor work set at 24 (twenty-four) four) besides looking at the face and a maximum of 40 (four ten) jam look at advance in 1 (one) week on one or more unit education possessed permission establishment of the government or government area. Teachers own tasks or other known roles with EMASLIM (*educator*), manager, administrator, *supervisor*, *leader*, innovator, and motivator).

Of all the roles of the teacher above, the roles of *educator* and administrator are the most important, as they require teachers to teach students in class by burdened work. After teaching, teachers are also required to work on administrator tasks after learning, for example, recapitulating values of participants' education, creating report results learning, planning to learn by the curriculum, and other administrator tasks. In implementing the duties of an administrator, a teacher will sit for quite a long time. In addition to the many tasks, teachers must finish work in delayed time alone in every Year's teachings; some tasks are in the short term. Workload and role naturally cause trigger stress for a teacher; triggered stress can be in the form of psychological and also physique .^{6,7}

Workload and the role of teachers in Activity Study at risk causes a teacher to experience stress in work and sitting positions with improper posture for a long time, which can cause disturbance or musculoskeletal ^{8,9} Complaints complaints that result in damaged Ligaments, tendons, or joints. According to WHO, 1.71 billion people have a musculoskeletal problem. The prevalence of musculoskeletal disorders in Indonesia reached 7.3%, and one of the musculoskeletal problems often occurs in the education sector, where the prevalence of disturbance musculoskeletal disorders in teachers is around 39% to 95 %. Musculoskeletal chronic and subjective complaints caused by posture body moment work are not by this. ⁶

The need for education for teachers regarding the prevention of musculoskeletal complaints can bother quality education in deep schools . In terms of long-term matters, this can also cause disturbance in system studies in teaching and educating in a way generally in schools. One of the most common musculoskeletal complaints experienced by workers is painful lower back pain (LBP) or lower back pain (NPB) due to prolonged sitting duration and posture work that is not appropriate. There is a need for educational efforts regarding possible stretching movements carried out by teachers between teaching or can be done before and after work. Knowledge about the matter is already Widespread on social media. However, to make it more applicable, we need a guide in the form of a checklist that can be done independently by the teacher. General objectives activity This is an analysis of what occurred in high school. Teachers have effort prevention like counseling and mentoring in the form of demonstration movement stretches that can prevent the occurrence of painful lower back as well as movements that can help increase strength muscle back pain .

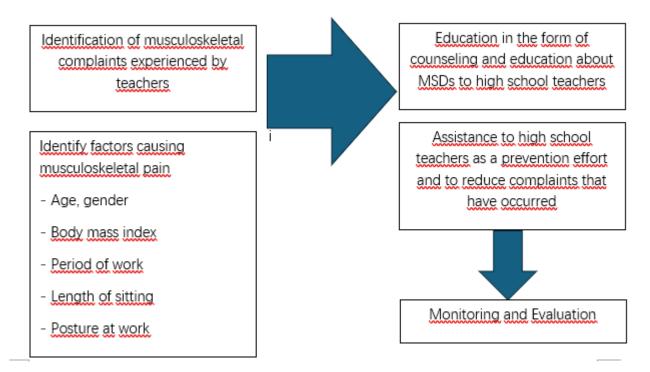
2. METHOD OF IMPLEMENTING ACTIVITIES

The audience target activity is high school teachers, who are the target of this activity. This is a teacher at the Madrasah Aliyah Negeri 3 Palembang who has synergy with activities study students in undergo skripsi. The team has carried out an activity study from September to



October 2024, then will continue with activity devotion in November 2024 to expose the study results at a time of education and mentoring To prevent complaints of musculoskeletal disorders experienced by teachers. Activities involve Unsri Medical Faculty students cooperating with power physiotherapy from the Muhammadiyah Hospital of Palembang. Apart from being activity devotion, activities also aim to facilitate student settlement tasks through a skripsi.

2.1 PROBLEM SOLVING FRAMEWORK

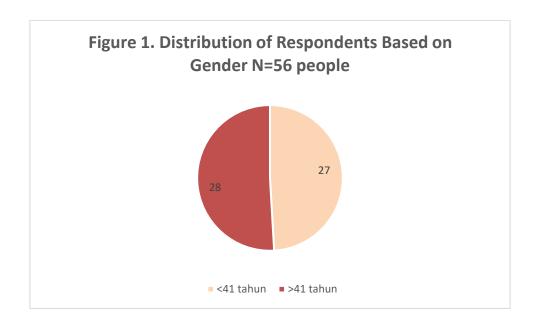


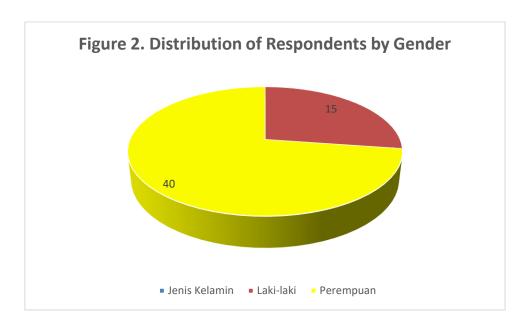
The method of activities carried out is identification and inspection of complaints of musculoskeletal disorders experienced by teachers with Nordic Body Map, identification factor reason with use it questionnaire and ergonomic office table, education and assistance and monitoring and evaluation.

3. ACTIVITY RESULTS

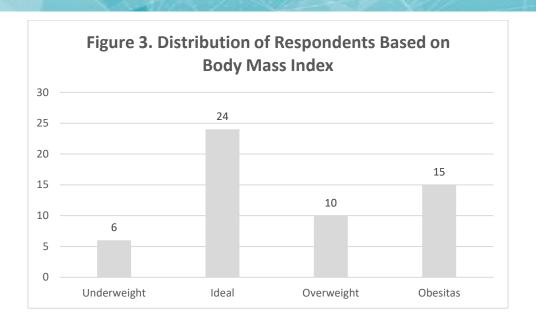
Analysis results distribution characteristics based on age obtained average age 41.93 years with minimum age 22 years and maximum 59 years, age most \geq 41 years as many as 28 people (50.9), types sex Woman more Lots namely 40 years (72.7%), index mass body part The ideal size is 24 people (43.6%). The results of the analysis are presented in the table following:











2.2 Distribution disturbance musculoskeletal disorders in teachers at MAN 3 Palembang

Analysis results in distribution disturbance musculoskeletal obtained that respondents who experienced painful extremities above part 1 as many as 32 people (58.2%), pain extremities for part 2 as many as 26 people (47.3%), respondents with painful back on as many as 37 people (67.3%) and respondents with painful back lower as many as 36 people (65.5%). The results of the analysis are presented in the table following:

Table 1. Distribution disturbance musculoskeletal

Posture Work	Number (n)	Percent (%)
Pain in the extremities above part 1		
- Yes	32	58.2
- No	23	41.8
Pain in the extremities above part 2		
- Yes	26	47.3
- No	29	52.7
Back pain on		
- Yes	37	67.3
- No	18	32.7
Back pain lower		
- Yes	36	65.5
- No	19	34.5



Standing hamstring stretch Pelvic tilt Partial curl Extension exercise Gluteal stretch Side plank

Figure 4. Education stretching To prevent LBP

3. CONCLUSION

Many musculoskeletal complaints experienced by teachers at Madrasah Aliyah Negeri 3 Palembang are pain in the back area. The distribution of painful back pain was on as many as 37 people (67.3%), and the number of respondents with painful back pain was lower, as many as 36 people (65.5%). This program is done to prevent pain through education about back pain and demonstration of movement stretching and strengthening muscles that can be done daily. Purpose of the activity This expected can prevent and reduce musculoskeletal complaints experienced by teachers so that complications can prevented as early as possible.



BIBLIOGRAPHY

- 1. Batara GO, Doda DVD, Wungow NYA musculoskeletal Consequence Use Gadgets for Students Faculty of Medicine, Sam Ratulangi University During COVID-19 Pandemic Biomedicine: JBM.2021;13(2):152–60.
- 2. Aripin TN, Rasjad US, Nurimaba N, Djojosugito MA, Irasanti SN duration type computer and position type computer with Symptoms of carpal tunnel syndrome (cts) in Islamic university employees Bandung. Journal of Health & Science Integration.
- 3. Mardiyanti F. Measurement risk work and complaints musculoskeletal in workers user computer . Journal Research and Knowledge Innovation .
- 4. Parinduri AI, Siregar AF, Zusriani T. Health Education and Provision of Stretching Exercises For Reduce Carpal Tunnel Syndrome Risk in Workers Users of the JOURNAL OF HUMAN RESOURCES (JPK 2021;1(2):451–5.
- 5. Pulek GD, Ma'Rufa SA . ANALYSIS OF TEACHING POSITIONS TOWARDS MUSCULOSKELETAL COMPLAINTS IN TEACHERS OF UPTD SMP NEGERI 02 KALABAHI.
- 6. Sharan D, Mohandoss M, Ranganathan R, Jose J. Disorders musculoskeletal in the extremities on consequence use device handheld in a way extensive .
- 7. Azizie HA, Susilowati IH.Risk Factor Analysis Complaint Subjective Disturbance Musculoskeletal Disorders (MSDs) in High School Teachers and Students Due to Distance Learning In Bogor.
- 8. Gebhart GF. Problems Scientific on Pain and Distress. In: Definitions of Pain and Distress as well as Condition Reporting for Laboratory Animals: Proceedings Workshop Held on June 22, 2000. National Academies Press (USA);
- 9. Costa F, Janela D, Molinos M, Moulder RG, Lains J, Francisco GE, et al . Digital rehabilitation for painful hands and wrists hand : study cohort prospective longitudinal one arm . Pain Rep. 2022;7(5): e1026 .
- 10. Hakim IA, Kurniawan SN. HAND AND WRIST PAIN. Journal of Headache and Vertigo 2022;3(1):6–11.