

**PENERAPAN *WORKPLACE STRETCHING EXERCISE* MENURUNKAN
KELUHAN MUSKULOSKELETAL DAN STRES AKADEMIK SERTA
KONTRIBUSINYA TERHADAP HASIL BELAJAR PESERTA DIDIK DI
SMAN BALI MANDARA**

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui penerapan *workplace stretching exercise* menurunkan keluhan muskuloskeletal dan stres akademik serta kontribusinya terhadap hasil belajar peserta didik. Jenis penelitian ini adalah eksperimental semu (*quasi experimental*) dengan rancangan *randomized pre and posttest group design (treatment by subject design)*. Variabel terikat dalam penelitian ini adalah: (a) keluhan muskuloskeletal peserta didik yang didata dengan kuesioner *Nordic Body Map*, (b) stres akademik peserta didik yang didata dengan kuesioner stres akademik yang sudah valid dan reliabel, dan (c) kontribusi keluhan muskuloskeletal dan stres akademik terhadap hasil belajar peserta didik yang didata dengan tes di akhir pembelajaran. Perlakuan yang diberikan dalam penelitian ini berupa *workplace stretching exercise*. Data keluhan muskuloskeletal dianalisis dengan uji *t paired*, stres akademik dianalisis dengan uji *Wilcoxon* dan kontribusi keluhan muskuloskeletal dan stres akademik terhadap hasil belajar dianalisis dengan uji regresi pada taraf signifikansi 5%. Berdasarkan hasil uji hipotesis keluhan muskuloskeletal dan stres akademik didapatkan nilai $p=0,0001$ ($p<0,05$) itu berarti terdapat penurunan yang signifikan pada keluhan muskuloskeletal sebesar 42,33% dan penurunan stres akademik sebesar 31,66%. Keluhan muskuloskeletal tidak berkontribusi terhadap hasil belajar peserta didik, karena kontribusinya hanya sebesar 14,4% dan stres akademik juga tidak berkontribusi terhadap hasil belajar peserta didik karena kontribusinya hanya sebesar 4,2%. Berdasarkan hasil analisis tersebut dapat disimpulkan bahwa penerapan *workplace stretching exercise* dapat menurunkan keluhan muskuloskeletal dan stres akademik, akan tetapi keluhan muskuloskeletal dan stres akademik tidak berkontribusi terhadap hasil belajar peserta didik.

Kata kunci : *workplace stretching exercise*, keluhan muskuloskeletal, stres akademik, hasil belajar

**THE APPLICATION OF WORKPLACE STRETCHING EXERCISE
REDUCE MUSCULOSKELETAL DISODERS AND ACADEMIC STRESS
AND ITS CONTRIBUTION TO STUDENTS LEARNING OUTCOMES IN
SMA NEGERI BALI MANDARA**

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ABSTRACT

This study aims to determine the application of workplace stretching exercises to reduce musculoskeletal disorders and academic stress and its contribution to student learning outcomes. This type of research is a quasi-experimental with a randomized pre and posttest group design (treatment by subject design). The dependent variable in this study is: (a) students' musculoskeletal disorders which were recorded using a Nordic Body Map questionnaire, (b) students' academic stress which was recorded using a valid and reliable academic stress questionnaire, and (c) the contribution of musculoskeletal disorders and academic stress on the learning outcomes of students who were recorded with a test at the end of the lesson. The treatment given in this study was a workplace stretching exercise. Data on musculoskeletal disorders were analyzed by paired t test, academic stress was analyzed by Wilcoxon test and the contribution of musculoskeletal disorders and academic stress to learning outcomes was analyzed by regression test at a significance level of 5%. Based on the results of hypothesis testing of musculoskeletal disorders and academic stress, it was found that the value of $p = 0.0001$ ($p < 0.05$) means that there is a significant decrease in musculoskeletal disorders by 42.33% and a decrease in academic stress by 31.66%. Musculoskeletal disorders do not contribute to student learning outcomes, because their contribution is only 14.4% and academic stress also does not contribute to student learning outcomes because its contribution is only 4.2%. Based on this analysis it can be concluded that the application of workplace stretching exercise can reduce musculoskeletal disorders and academic stress of students, but musculoskeletal disorders and academic stress does not contribute to students learning outcomes.

Keywords: workplace stretching exercise, musculoskeletal disorders, academic stress, learning outcomes