

ABSTRAK

FAKTOR RISIKO YANG MEMENGARUHI KELUHAN *MUSCULOSKELETAL DISORDERS* PADA PETANI DI METRO UTARA PROVINSI LAMPUNG

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Musculoskeletal Disorders (MSDs) merupakan penyumbang utama disabilitas global, termasuk di Provinsi Lampung dan Kota Metro. Petani menjadi kelompok kerja dengan risiko tinggi mengalami *MSDs* akibat paparan berbagai faktor risiko. Penelitian ini bertujuan menganalisis faktor-faktor yang memengaruhi keluhan *MSDs* pada petani di Kecamatan Metro Utara, Provinsi Lampung. Desain penelitian menggunakan *cross-sectional* dengan jumlah sampel 329 petani yang dipilih melalui *consecutive sampling*. Penelitian dilaksanakan pada April–September 2025 dengan pengumpulan data melalui kuesioner dan pemeriksaan fisik. Variabel penelitian terdiri atas variabel eksogen (faktor predisposisi, penguat, dan pendukung) serta variabel endogen (risiko keluhan *MSDs*). Analisis dilakukan dengan *Structural Equation Modeling (SEM)* untuk menguji hubungan antar faktor. Hasil penelitian menunjukkan mayoritas responden berusia 18–59 tahun (90,6%), berpendidikan tinggi (52,0%), memiliki IMT overweight (62,3%), masa kerja >10 tahun (81,8%), durasi kerja sedang (81,8%), postur kerja berisiko sedikit tinggi (45,6%), aktivitas fisik sedang (58,7%), kebiasaan merokok sedang (58,7%), dan pendapatan rendah (50,8%). Sebanyak 41,3% responden memiliki risiko tinggi keluhan *MSDs*. Analisis *SEM* menunjukkan faktor pendukung (masa kerja dan postur kerja) berpengaruh paling kuat terhadap keluhan *MSDs* ($\beta=0,356$; $p<0,001$), diikuti faktor penguat (aktivitas fisik dan kebiasaan merokok) ($\beta=0,327$; $p<0,001$), serta faktor predisposisi (IMT dan pendidikan) ($\beta=0,183$; $p=0,001$). Ketiga faktor terbukti berpengaruh terhadap risiko keluhan *MSDs*, dengan faktor predisposisi dan pendukung berperan melalui mediasi faktor penguat. Dengan demikian, intervensi yang menekankan perbaikan postur kerja, gizi seimbang, dan manajemen durasi kerja sangat direkomendasikan untuk menurunkan risiko *MSDs* pada petani.

Kata Kunci: *Musculoskeletal Disorders*, Petani, *Structural Equation Modeling*, Ergonomi

ABSTRACT

RISK FACTORS AFFECTING MUSCULOSKELETAL DISORDERS IN FARMERS IN NORTH METRO, LAMPUNG PROVINCE

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Musculoskeletal Disorders (MSDs) are a major contributor to global disability, including in Lampung Province and Metro City. Farmers represent a high-risk occupational group for developing MSDs due to exposure to various risk factors. This study aimed to analyze the risk factors influencing MSD complaints among farmers in Metro Utara District, Lampung Province. A cross-sectional design was employed with a total of 329 farmers selected through consecutive sampling. The study was conducted from April to September 2025, and data were collected using questionnaires and physical examinations. The variables included exogenous factors (predisposing, reinforcing, and enabling factors) and an endogenous variable (risk of MSD complaints). Data were analyzed using Structural Equation Modeling (SEM) to examine the relationships among variables. The results showed that the majority of respondents were aged 18–59 years (90.6%), had higher education (52.0%), were overweight (62.3%), had more than 10 years of work experience (81.8%), worked moderate durations (81.8%), had slightly high-risk working postures (45.6%), engaged in moderate physical activity (58.7%), reported moderate smoking habits (58.7%), and had low income (50.8%). A total of 41.3% of respondents were at high risk of experiencing MSD complaints. SEM analysis revealed that enabling factors (work experience and working posture) had the strongest effect on MSD complaints ($\beta=0.356$; $p<0.001$), followed by reinforcing factors (physical activity and smoking habits) ($\beta=0.327$; $p<0.001$), and predisposing factors (BMI and education) ($\beta=0.183$; $p=0.001$). All three factors significantly influenced MSD risk, with predisposing and enabling factors exerting their effects through reinforcing factors. Therefore, interventions focusing on improving ergonomics, working posture, balanced nutrition, and work duration management are strongly recommended to reduce MSD risk among farmers.

Keywords: Musculoskeletal Disorders, Farmers, Structural Equation Modeling, Ergonomics