Analisis Keluhan Gotrak (Gangguan Otot dan Tulang Rangka Akibat Kerja) Pada Operator Alat Berat di Sektor Proyek Konstruksi Daerah Sulawesi Tengah

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Abstrak

Keluhan gangguan otot dan tulang rangka akibat kerja (GOTRAK) merupakan salah satu permasalahan kesehatan kerja yang umum dialami oleh operator alat berat di sektor konstruksi. Penelitian ini bertujuan untuk menganalisis hubungan antara faktor pekerjaan (jam kerja, shift kerja, masa kerja, beban kerja), faktor karakteristik individu (usia, waktu tidur, kebiasaan merokok, kebiasaan olahraga, konsumsi kafein, antropometri), dan faktor lingkungan kerja (getaran, pencahayaan, desain unit kabin) terhadap tingkat keluhan GOTRAK. Penelitian dilakukan secara kuantitatif dengan desain cross-sectional pada 100 operator alat berat di proyek konstruksi tambang di Sulawesi Tengah. Data dikumpulkan melalui kuesioner berbasis SNI 9011:2021 dan dianalisis menggunakan uji Chi-Square. Hasil menunjukkan bahwa 72% operator mengalami keluhan GOTRAK tingkat tinggi. Faktor yang memiliki hubungan signifikan antara lain jam kerja, beban kerja, usia, waktu tidur, kebiasaan olahraga, konsumsi kafein, antropometri, getaran, dan desain kabin unit. Penelitian ini merekomendasikan penguatan intervensi ergonomi dan pengelolaan kerja berbasis data antropometri guna menurunkan risiko GOTRAK pada operator alat berat. <hr /> Work-related musculoskeletal disorders (MSDs) are a common occupational health issue among heavy equipment operators in construction sectors. This study aimed to analyze the relationship between work factors (working hours, shifts, work tenure, workload), individual characteristics (age, sleep duration, smoking habits, physical activity, caffeine consumption, anthropometry), and environmental conditions (vibration, lighting, cabin design) with the severity of MSD complaints. A cross-sectional quantitative study was conducted involving 100 operators from mining-related construction projects in Central Sulawesi. Data were collected using a questionnaire based on the Indonesian national standard (SNI 9011:2021) and analyzed using Chi-Square. Results revealed that 72% of respondents experienced high levels of MSD complaints. Significant associated factors included long working hours, heavy workload, older age, insufficient sleep, low exercise frequency, caffeine intake, anthropometric mismatch, exposure to vibration, and cabin design inconsistencies. The findings suggest the need for ergonomic interventions and equipment design improvements based on anthropometric data to mitigate MSD risks among operators. Key words: MSD, heavy equipment, ergonomics, work factors, mining construction.