

ABSTRAK

Gangguan muskuloskeletal (MSDs) merupakan masalah kesehatan kerja yang penting, terutama bagi pekerja yang menghabiskan banyak waktu di depan komputer. Studi ini bertujuan untuk menganalisis faktor risiko individu dan pekerjaan yang terkait dengan tingkat keluhan MSDs di kalangan pekerja PDAM Tirtanadi Kota Medan. Penelitian ini menggunakan desain survei analitik dengan pendekatan *cross-sectional*, melibatkan 150 responden yang dipilih melalui metode *simple random sampling*. Data dikumpulkan menggunakan kuesioner *Nordic Body Map* untuk mengukur keluhan dan *Rapid Office Strain Assessment* (ROSA) untuk menilai postur. Analisis data dilakukan menggunakan uji *chi-square*. Hasil studi mengungkap bahwa mayoritas pekerja (64,0%) mengalami tingkat keluhan MSDs yang tinggi. Analisis bivariat menunjukkan hubungan yang signifikan antara keluhan MSDs dengan tiga faktor utama. Postur tubuh saat bekerja menjadi faktor risiko paling dominan, di mana pekerja dengan postur berisiko tinggi memiliki prevalensi keluhan MSDs tingkat tinggi secara signifikan (83,8%). Selain itu, usia yang lebih tua (69,3%) dan masa kerja yang lebih lama (69,4%) juga terbukti meningkatkan risiko keluhan secara signifikan. Sebaliknya, penelitian ini tidak menemukan hubungan yang bermakna antara tingkat keluhan dengan jenis kelamin ($p=0,146$) maupun Indeks Masa Tubuh ($p=0,718$). Kesimpulannya, postur tubuh yang tidak ergonomis, usia, dan lama masa kerja adalah prediktor utama keluhan MSDs pada populasi studi ini. Oleh karena itu, disarankan agar pihak manajemen menerapkan program ergonomi komprehensif yang mencakup perbaikan stasiun kerja, pelatihan postur, dan manajemen kerja yang lebih baik untuk meningkatkan kesehatan pekerja.

Kata kunci: gangguan muskuloskeletal, postur kerja, faktor risiko, *Rapid Office Strain Assessment*

ABSTRACT

Musculoskeletal disorders (MSDs) are a significant occupational health issue, particularly for workers who spend extensive time at computers. This study aimed to analyze the individual and occupational risk factors associated with the level of MSD complaints among workers at PDAM Tirtanadi in Medan City. This research employed an analytical survey design with a cross-sectional approach, involving 150 respondents selected via simple random sampling. Data were collected through interviews, observations, and questionnaires, specifically the Nordic Body Map to measure MSD complaints and the Rapid Office Strain Assessment (ROSA) to evaluate posture. The data were subsequently analyzed using the chi-square test. The findings revealed that a majority of the workers (64.0%) experienced a high level of MSD complaints. Bivariate analysis indicated several significant associations. Work posture was identified as a critical factor; workers with high-risk posture had a significantly higher prevalence of high-level MSD complaints (83.8%). Furthermore, demographic factors were also influential. Older age was associated with a higher susceptibility to high-level MSDs (69.3%). Similarly, a longer duration of employment showed a strong correlation, with workers having longer tenures facing a higher risk of high-level MSD complaints (69.4%). Conversely, no significant relationship was found between the level of MSD complaints and gender ($p=0.146$) or Body Mass Index (BMI) ($p=0.718$). This study concludes that non-ergonomic posture, age, and work duration are the primary risk factors contributing to musculoskeletal disorders among the workers at PDAM Tirtanadi. Therefore, it is highly recommended that the management of PDAM Tirtanadi implement a comprehensive ergonomics program. This program should include workstation improvements, training on correct posture, and better work schedule management, all aimed at enhancing the health and well-being of the workers.

Keywords: Musculoskeletal Disorders, Work Posture, Risk Factors, ROSA