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### The Prevalence of Musculoskeletal Symptoms among Welders and Non-Welders in Ikenne, Ogun State, Nigeria: A Comparative Cross-Sectional Study

*La Prévalence des Symptômes Musculo-Squelettiques chez les Soudeurs et les non-Soudeurs à Ikenne, État d'Ogun, Nigéria: une Étude Transversale Comparative*

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#### ABSTRACT

**BACKGROUND:** Musculoskeletal symptoms in welders may affect their health and quality of life. This study determined the prevalence of musculoskeletal symptoms among welders compared to non-welders and determined the body part(s) mostly affected.

**METHODOLOGY:** The study is a comparative cross-sectional study. 142 welders and 136 security officers in Ikenne local government area of Ogun State, Nigeria were included in the study. The Nordic Musculoskeletal Questionnaire (NMQ) was used to obtain information on the prevalence of musculoskeletal disorders (MSDs). Descriptive statistics methods were used to summarize the data. Chi-square bivariate analysis was conducted to test for associations between welders' occupational characteristics and the 12-month prevalence of back pain.

**RESULTS:** The mean age of respondents was 36.8±13.9 years and 36.7±9.4 for non-welders. Two-fifth (40.8%) of the welders had less than 10 years of work experience. About half (50.7%) of them worked six days a week, and many (54.9%) worked more than eight hours daily. The prevalence of back pain was higher among welders (74.6%) than in security officers (33.8%). This finding was significant ( $P<0.001$ ). Also, knee pain was more common among welders (31.7%) compared to security officers (16.2%). The 12-month prevalence of back pain among welders and control was 74.6% and 33.8% respectively and knee pain among welders and control was 31.7% and 16.2% respectively. Both were statistically significant ( $p=0.001$ ). In the last seven days, back pain was present more among welders than in controls (50.0% Vs 26.5%).

**CONCLUSION:** The study shows a high prevalence of musculoskeletal symptoms among welders compared to non-welders. The lower back is the part of the body most affected. Training and health education of the workers on the negative effect of musculoskeletal symptoms on the body, and the right posture to adopt at work would go a long way in reducing the occurrence of these symptoms. **WAJM 2023; 40(9): 943–949.**

**Keywords:** Musculoskeletal symptoms, Welders, Nigeria, Nordic Musculoskeletal Questionnaire.

#### RÉSUMÉ

**CONTEXTE:** Les symptômes musculo-squelettiques chez les soudeurs peuvent affecter leur santé et leur qualité de vie. Cette étude a déterminé la prévalence des symptômes musculo-squelettiques chez les soudeurs par rapport aux non-soudeurs et a déterminé la ou les parties du corps les plus touchées.

**MÉTHODOLOGIES:** L'étude est une étude transversale comparative. 142 soudeurs et 136 agents de sécurité dans la zone de gouvernement local d'Ikenne de l'État d'Ogun, au Nigéria, ont été inclus dans l'étude. Le questionnaire nordique sur les troubles musculo-squelettiques (NMQ) a été utilisé pour obtenir de l'information sur la prévalence des troubles musculo-squelettiques (TMS). Des méthodes statistiques descriptives ont été utilisées pour résumer les données. Une analyse bivariée du chi carré a été effectuée pour vérifier les associations entre les caractéristiques professionnelles des soudeurs et la prévalence des maux de dos sur 12 mois.

**RÉSULTATS:** L'âge moyen des répondants était de 36,8±13,9 ans et de 36,7±9,4 ans pour les non-soudeurs. Les deux cinquièmes (40,8 %) des soudeurs avaient moins de 10 ans d'expérience de travail. Environ la moitié (50,7 %) d'entre eux travaillaient six jours par semaine, et beaucoup (54,9 %) travaillaient plus de huit heures par jour. La prévalence des maux de dos était plus élevée chez les soudeurs (74,6 %) que chez les agents de sécurité (33,8 %). Ce résultat était significatif ( $P<0,001$ ). De plus, la douleur au genou était plus fréquente chez les soudeurs (31,7 %) que chez les agents de sécurité (16,2 %). La prévalence à 12 mois des maux de dos chez les soudeurs et les témoins était de 74,6 % et 33,8 % respectivement, et la douleur au genou chez les soudeurs et le groupe témoin était de 31,7 % et 16,2 % respectivement. Les deux étaient statistiquement significatifs ( $p = 0,001$ ). Au cours des sept derniers jours, les maux de dos étaient plus présents chez les soudeurs que chez les témoins (50,0 % contre 26,5 %).

**CONCLUSION:** L'étude montre une prévalence élevée de symptômes musculo-squelettiques chez les soudeurs par rapport aux non-soudeurs. Le bas du dos est la partie du corps la plus touchée. La formation et l'éducation sanitaire des travailleurs sur l'effet négatif des symptômes musculo-squelettiques sur le corps, et la bonne posture à adopter au travail contribueraient grandement à réduire l'apparition de ces symptômes. **WAJM 2023; 40(9): 943–949.**

**Mots clés:** Symptômes musculo-squelettiques, Soudeurs, Nigeria, Questionnaire nordique sur les troubles musculo-squelettiques.

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