OMICS Group Conferences
Accelerating Scientific Discovery

International Conference and Exhibition on
Physical Medicine & Rehabilitation

August 19-21, 2013 Embassy Suites Las Vegas, NV, USA

A cross-sectional survey of quality of work life, work related musculoskeletal disorders prevalence and associated risk factors among quarry workers in a Nigerian community

Egwuonwu Afamefuna Victor
Nnamdi Azikiwe University, Nigeria

Background: Work-related musculoskeletal disorders (WRMSDs) represent significant occupational problems that affect quarry workers, causing disability, lost time from work and increased health care cost. However, there is a dearth of literature on the quality of work life, risks and prevalence of WRMSDs among quarry workers in Nigeria.

Aim: This study described the quality of work life, risks, pattern and prevalence of WRMSDs among quarry workers in a Nigerian community.

Methodology: This was a cross-sectional descriptive survey of quarry workers recruited using non-probability sampling technique from four purposively selected quarries registered with the federal ministry of solid minerals, in a Nigerian community. The study was conducted between May and August 2012. A modified version of CDC Quality of Work Life and Parts A, B, C and D of Standard Nordic musculoskeletal questionnaires were administered to the subjects to collect data on the participants' quality of work life, demographic characteristics, job history, prevalence and risk factors of WRMSDs. Data obtained was summarized using frequency counts, mean, standard deviation, percentages and bar charts. Additionally, chi-square test was used to determine association between quality of work life, prevalence and risk factors of WRMSDs. Finally, logistic regression analysis was done to predict the risk factors with the highest contribution to the presence of symptoms. The alpha level was set at $p< 0.05$.

Result: A total of 114 participants (100% male) with mean age, 28.58 ± 8.09 years and age range, 16-52 years were included in the study. The prevalence rate of WRMSDs was 83.30%. Low back discomfort was the most prevalent (90 (78.9%)). All the participating drivers and mechanics were found to suffer from WRMSDs, while about 66.67, 81.25 and 77.50 of blasters, crushers and drillers also suffered from WRMSDs respectively. The 12-month prevalence of WRMSDs was significantly associated with the quality of work life responses of the workers ($p=0.04$ and $\chi^2 = 3.43$). Repetitive movement and years of working experience were significantly associated with the occurrence of the symptoms. Task repetition was found to be the major risk factor of low back discomfort.

Conclusion: The findings of this study highlighted the health problems faced by quarry workers and that their quality of work life in Nigeria was poor. As such, the findings reflect the dire need for designing ergonomic interventional programs to reduce the risks of WRMSDs among quarry workers. Designing such ergonomics interventional programs will have the potential of improving productivity among quarry workers. However, further studies should be conducted using a longitudinal design to take care of the limited information provided by participants during the cross sectional survey which was mainly subjective. Therefore, an objective outcome measure such as the use of electromyographic biofeedback to predict muscle fatigue time during work task to determine maximum time a worker should be on task is recommended. This may help reduce the risk of WRMSDs among the quarry workers.

Keywords: Prevalence, Quality of Work Life, Work Related Musculoskeletal Disorders, Risk factors, Quarry workers

va.egwuonwu@unizik.edu.ng