

The Effect of an Occupational Therapy Programme on Sewing Machine Operators

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Abstract : Background: The work requirements of sewing machine operators cause physical and emotional strain. Past ergonomic interventions have been provided to alleviate physical concerns; however, a holistic, multimodal intervention was needed to improve these factors. Aim: The study aimed to examine the effect of an occupational therapy programme on sewing machine operators' pain, mental health, and productivity within a factory in the South African context. Methods: A pilot randomised control trial was conducted with 22 sewing machine operators within a single factory. Stratified randomisation was used to determine the experimental (EG) and control groups (CG), using measures for pain intensity, level of depression (mental health), and productivity rates as stratification variables. The EG received the multimodal intervention, incorporating education, seating adaptations, and mental health intervention. In three months, the CG will receive the same intervention. Pre- and post-intervention testing have occurred with upcoming three- and six-month follow-ups. Results: Immediate results indicate a statistically significant decrease in pain in both experimental and control groups; no change in productivity scores and depression between the two groups. This may be attributed to external factors. The values for depression further showed no statistical significance between the two groups and within pre-and post-test results. The Statistical Program for Social Sciences (SPSS) version-24 was used as the data analysis testing, where all the tests will be evaluated at a 5% significance level. Contribution of research: The research adds to the body of knowledge informing the Occupational Therapy role in work settings, providing evidence on the effectiveness of workplace-based multimodal interventions. Conclusion: The study provides initial data on the effectiveness of a pilot randomised control trial on pain and mental health in South Africa. Results indicated no quantitative change between the experimental and control groups; however, qualitative data suggest a clinical significance of the findings.

Keywords : ergonomics programme, occupational therapy, sewing machine operators, workplace-based multimodal interventions

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