



PREVALENCE OF CALF MUSCLE TIGHTNESS ASSOCIATED WITH ANKLE RANGE OF MOTION AMONG SEWING MACHINE OPERATORS IN TEXTILE INDUSTRY IN KURUNEGALA DISTRICT, SRI LANKA

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ABSTRACT

Tailoring industry is a vast scale industry employed by a large number of Sri Lankans. The objective was to find out the prevalence of calf muscle tightness associated with ankle range of motion of sewing machine operators. The calf muscle tightness and range of motion were assessed by a knee to wall test and measured using a measuring tape in centimetres. To perform the test the worker should be barefoot and kneeling with the tested leg in front. The 1st toe should be 10cm away from the wall depending on their height. The worker then shifts their knee forward, trying to touch the wall with the knee while keeping the heel flat on the floor. If the knee cap touches the wall, it stated that the worker has sufficient dorsiflexion mobility. If the knee cap cannot touch the wall, dorsiflexion is restricted. A mixed method was performed on 110 conveniently selected sewing machine operators in a textile factory in Kurunegala district. Operators were assessed through an interviewer-administered questionnaire. Ethical clearance for this study was obtained from the bio-inquirer ethics review committee. Statistically analysed data using SPSS revealed that among participants 83.6% used their right leg as their dominant leg to operate the sewing machine. The workers who used their right leg to operate the machine obtained a knee to wall test average mean value of 20.53cm for their right leg and 21.02cm for their left leg. Respectively, the workers who used their left leg to operate the machine was 21.31cm for their right leg and 22.14cm for their left leg. The results show that they do not have statistically a significant difference in their calf tightness regardless of the dominant leg of machine operation ($P=0.5$).

Keywords: Calf muscle, tightness, range of motion, sewing machine operators, textile industry