ABSTRACT

Prevalence of workrelated musculoskeletal disorders and effect of structured ergonomic intervention on upper quadrant function and quality of life among medical laboratory professionals.

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Background: Work related musculoskeletal disorders are common health problem and increasing cause of disability. Laboratory professionals are unique group of healthcare professionals who play an essential part in diagnosis and therapy planning and often their work is associated with potential health hazards. They are considered as sedentary workers and, most often the musculoskeletal stress among them is ignored due to more focus on infection which are easily remembered than hazardous events. Additionally there is dearth of literature pertaining to prevention and intervention in these professionals among Indian population. Hence, this study aimed to estimate the prevalence of musculoskeletal disorders and to determine the effect of structured ergonomic intervention on upper quadrant function and quality of life among medical laboratory professionals.

Methods: To achieve first aim, cross sectional survey was done on 250 laboratory professionals of Udupi district. Validated questionnaire was used to screen for the disorders and find the risk factors. For the second objective, subjects were selected using purposive sampling method with sample size of 32 in each group. It was a quasi
Experimental design. Subjects were allocated into intervention and control group using non randomized technique. Intervention group received ergonomic intervention which was combination of education, workstation modification and structured exercise for 12 weeks. Control group did not receive any intervention. Outcome measures used were visual Analog scale (VAS) to check pain, Neck disability index (NDI) and Disability of Arm Shoulder and Hand (DASH) to check the upper quadrant function and Short Function 36(SF36) to check the quality of life. To report the prevalence descriptive statistics was used. Repeated measure ANOVA and Two way Freidman test was used to compare between the groups.

**Results & Discussion:** Prevalence of musculoskeletal disorders among laboratory professionals was found to be 18%. The neck was observed to be the most affected with symptoms of pain and discomfort. Ergonomic intervention was beneficial in reducing the scores of NDI clinically as well as statistically and scores of DASH clinically, thereby improving the upper quadrant function. However, only Physical component summary scores in quality of life questionnaire showed the improvement.

**Conclusion:** WRMSD is prevalent among medical laboratory professionals. Ergonomic intervention is one of the effective ways of dealing with WRMSD.

**Key words:** WRMSD, upper quadrant function, quality of life, laboratory professionals