Abstract

OBJECTIVE: The primary aim of this study is to examine the effects of a backrest: using a prototype of a lumbar support presented in author's earlier study on the discomfort rating of the body parts of motorcyclist. METHODS: One hundred motorcyclists participated in this study, all in good physical condition and with no immediate complaint of musculoskeletal disorders. Each participant was asked to sit for 2 hours on a motorcycle in two different sessions (with and without the lumbar support) in a controlled room environment. At every 15 minutes interval the participants were required to rate their discomfort level on the Borg's CR-10 questionnaire. RESULTS: The rate of discomfort level (in all body parts) decreased over time during the testing period with the prototype. In terms of the discomfort 'break point', participants identified low back and upper back as the most affected body parts prior to comfort changes during the testing period with the use of the prototype. CONCLUSIONS: The use of this prototype provides a protective mechanism for the motorcyclist's musculoskeletal system, particularly the spinal column. Therefore, this prototype is capable of providing ideal posture while simultaneously enhancing the comfortability of the motorcyclist during the riding process (by reducing discomfort).

Keywords

Ergonomic, Lumbar Support, Motorcyclists, Borg's CR-10 Scale, Discomfort.