Design of Ergonomic Computer Mouse Pad to Improve Comfort and Reduce Mouse Elbow Injury

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Abstract

Ergonomic design on a computer mouse is very important to prevent injury in the arm called mouse elbow. Mouse elbow injury is a minor injury that occurs due to a hand position error when using a computer mouse. Musculoskeletal Disorder (MSD) is experienced by workers who interact with computers intensively where fifty percent of mouse users experience MSD. Studies show that mouse use can cause several injuries such as: Carpal Tunner Syndrome and other MSDs. Designated injury is caused by the bending position of the wrist with a radical angle coupled with the overall movement of the fingers during the operation of the computer mouse. This research aims to design an ergonomic computer mouse by considering the MSD injury factor so that computer mouse users can anticipate the occurrence of MSD. The principle of Anthropometry parallel to design thinking became the method used in this research. The results of this research are in the form of mouse design concepts that can accommodate the prevention of Mouse elbow injury. The contribution of this research is exploring the optimal degree of freedom on elbow during the movement of using mouse computer.

Keywords

Mouse Pad, Mouse Elbow Injury, Ergonomic, Anthropometry.

