Conceptual design of motorcycle's lumbar support using motorcyclists' anthropometric characteristics

ABSTRACT

This study presents the design and development of a prototype of lumbar support for motorcyclists corresponding to their anthropometric dimensions. The total design process model was used for this purpose. The critical design dimensions for the lumbar support (height, width, adjustable range and thickness) were obtained from the anthropometric dimensions of motorcyclists (1032 samples). The initial testing (trial runs) of the prototype proved to be successful as it was capable of providing comfort to the motorcyclistsô lumbar region during their riding process. However, further evaluation needs to be done in order to evaluate the stability, solidity, durability and safety of the prototype.

Keyword: Design; Ergonomics; Anthropometrics; Motorcycle; Lumbar support