

Ergonomics in agriculture: an approach in prevention of work-related musculoskeletal disorders (WMSDs)

ABSTRACT

A review of articles was performed by categorizing the selected articles into four approaches of ergonomic design, ergonomics task analysis, educational and epidemiological concepts in order to highlight the ergonomic problems in the agriculture industry. The articles were retrieved from four search engines (PubMed, Scopus, Metapren, and Ebsco) by using specified key words "ergonomics", "agricultural workers" and "awkward posture". The results highlight that ergonomists are capable of providing a safer work environment for the agricultural workers in both developing and developed countries. In addition, the results show that it needs global cooperation of international organizations to enhance the occupational health intervention in agriculture. Furthermore, the efforts of ergonomists to develop a practical ergonomic task analysis for the interventions in agriculture seem significant, as is the necessity for hand tool designs based on ergonomic considerations. Based on the evaluation of articles and related experiences, a recommended model has been introduced to promote health for farmers. This model covers a participatory ergonomic approach to practical ergonomic changes.

Keyword: Ergonomics; Agriculture; WMSDs; Task analysis; Hand tool design