

Development and Validation of Composite Ergonomic Analysis Module Applicable to Fabric Embellishment Workers

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ABSTRACT India is a country known for its culture and traditions all over the world. Handicrafts sector plays a significant and important role in the country's economy. Among several embroidery works *aari* is traditional hand embroidery carried out on a wooden cot like frame with *aar* needle. embellishment workers for long hours sitting on without any seating aids, and are prone to developing musculoskeletal symptoms. A survey was carried out to identify the need to develop the ergonomic analysis module. The literature search on ergonomic evaluation tools, revealed the availability of about 12 qualitative, 9 quantitative tools and 10 ergonomic analysis modules mostly in the form of software packages. Among them, Ergomaster module was selected as a frame of reference as it covered all the aspects of analyzing any work environment. A total of seven tools including four ergonomic checkpoints formats, five rating scales on degree of difficulty were developed using the Likert scale method of summated ratings. The constructed analysis module was analyzed by thirty experts of various research and technical experts for its content validation in terms of four qualities and was found consistent. The tool was also tested for reliability with p value above 0.9 confirming the tool for its dependability in eliciting the needed data from the subjects.