Design and Functional Requirements for School bags for children with Down Syndrome

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Abstract:
The research deals with identifying the design and functional requirements of children with Down syndrome and studying the ergonomic factors for the design of school bags and accessories that help in designing bags that suit designally, aesthetically, and functionally with the needs of children and the nature of movement and thinking.

The research followed the descriptive analytical approach in collecting the scientific material about the research, in addition to the applied study and the development of proposed design groups that achieve the ergonomic factors in the design of school bags and accessories and suit the needs of the research sample.

The results of the research reached the most important ergonomic factors that must be met in the design of school bags and accessories for children with Down syndrome, and to determine the aesthetic design and functional requirements for the design of the bag. In addition to providing (6) proposed design groups (collection) for school bags and their various accessories to achieve the needs of children aesthetically and functionally according to their physical and motor abilities. The design groups (collection) obtained the highest degrees of acceptance for specialists, parents and teachers, as the design groups were arranged according to all the opinions of the arbitrators, so the fourth design group won the first place, while the sixth design group (collection) won the second place, the second design group (collection) won the third place, and in the fourth place the fifth design group (collection) ranked, while the third design group (collection) ranked fifth, and came in last place as the sixth place of the first design group (collection).

Keywords:

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