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Modern Methods for Identification and Reduction of Visual Problems in Children

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Abstract

The paper presents a stage of research done in order to help optometrists in the pediatric field. This stage of the research focused in particular on the development of a new solution regarding, first of all, the screening identification of certain visual problems among preschool children. The method proposed for the visual screening is an unconventional and up-to-date one, taking into account the great attraction of the little ones for tablet or mobile phone games. For this purpose, the paper presents how a software interface dedicated to a practical and rapid assessment of visual function in children in screening activities in kindergartens was designed, programmed, tested and used. The software application was designed to be flexible, useful for optometrists or ophthalmologists, as well as for school or preschool children. Concretely, with this method it was proposed that, through a virtual game, the visual function of children can be tested objectively and efficiently, by evaluating the recognition of the size, shape and color of attractive graphic entities. The evaluation procedure specific to the developed interface refers primarily to fundamental aspects related to the visual function, namely the recognition of shape, colors and the appreciation of sizes. The proposed method could be successfully applied in a rapid screening procedure in a group of 10 children, from a kindergarten group, whose parents gave their consent for the testing of their children.

Keywords: children, visual diseases, virtual games, software interface



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