Effect of Smart Mobile Applications in the Care of Children with Cerebral Palsy

Elahe Gozali[1*], Rahimeh Tajvidi Asr[2], Kasra Kashani[3], Bahlol Rahimi[1]

[1]Department of Health Information Technology, Faculty of Paramedicine, Urmia University of Medical Sciences, Urmia, Iran
[2]Health and Biomedical Informatics Research Center, Urmia University of Medical Sciences, Urmia, Iran
[3]Medical Informatics, Faculty of Paramedicine, Urmia University of Medical Sciences, Urmia, Iran

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***Corresponding Author:**
Dept. of Health Information Technology, Faculty of Paramedicine, Urmia University of Medical Sciences, Urmia, Iran

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ABSTRACT

Introduction: Cerebral palsy is a common neurodevelopmental disease that causes motor dysfunction and affects the lives of patients and their families. It seems that the smart mobile phone application, in the care of children with cerebral palsy, creates suitable opportunities for the development of assistive technologies that can support disabled people in daily life activities by increasing awareness and recognition and have an effective role in reducing the consequences and management costs of these patients. This study was conducted with the aim of investigating the impact of smart mobile phone applications in the care of children with cerebral palsy.

Methods and Materials: In this study, we conducted a search for articles published from 2018 to 2023 in databases such as PubMed, Scopus, Web of Science and Google Scholar, using MESH keywords, including "cerebral palsy", "mobile application", "mobile health", and other similar terms. After reviewing the full text of the articles, relevant data were extracted and categorized, and the findings were presented in descriptive manner.

Results: The objectives of the developed smart mobile phone applications included training caregivers of children with cerebral palsy, implementing occupational and physiotherapy approaches, and increasing the use of the affected upper limb during daily activities. Additionally, the applications aimed to enhance game-based training and empower children to communicate more effectively. Advanced tools were also incorporated for measuring the rotation percentage of the femur and pelvis, as well as for measuring hip radiography.

Conclusion and Discussion: The findings of this systematic review show that despite reporting the impact of smart mobile phone applications in the care of children with cerebral palsy in developed countries, no complete studies have been conducted in this regard in our country. Hence, considering the importance of the impact of this programs on children with cerebral palsy, it is suggested that more studies are conducted in Iran in line with the design of smart mobile phone applications for training caregivers and parents of children with cerebral palsy.

Keywords: Cerebral palsy, Mobile application, Smartphone

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