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## **Efficacy of mobile-based applications on motor recovery and physical function in stroke rehabilitation: A systematic review**

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## **Efficacy of mobile-based applications on motor recovery and physical function in stroke rehabilitation: A systematic review**

**Background:** Stroke is one of the leading causes of disability globally, resulting in motor deficits such as reduced mobility, limitations in activities of daily life and participation in society thereby leading to an overall decrease in quality of life. Health related utilization of wireless internet is on the rise, thus catalyzing the emergence of mobile health or m-Health, especially in stroke rehabilitation. Though there are studies on the use of mobile health applications in physical rehabilitation of stroke survivors, there is a dearth of a systematic summary of the evidence. **Objective:** This systematic review aims to identify relevant RCTs to determine whether there is currently any evidence to support the use of mobile health applications in the motor recovery and physical function in stroke rehabilitation.

**Methods:** We systematically searched in PubMed, Scopus, Web of Science and PEDro for randomized controlled trials (RCTs), clinical control trials and pilot studies that examined efficacy of mobile-based applications on motor recovery and physical function in stroke rehabilitation. The methodological quality was estimated by using the Physiotherapy Evidence Database (PEDro) scale.

**Results:** Eight studies published until June 2021 were included in this study. The methodological quality of the selected studies were from low to high. There were no significant differences between the experimental and control groups. **Conclusion:** The evidence about the efficacy of mobile-based applications on motor recovery and physical function in stroke rehabilitation was limited. Further randomized controlled trials are strongly warranted to understand the role of physical rehabilitation in stroke patients with motor deficits.