

## Fingers Exergames to Improve Fine Motor Skill in Autistic Children

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**Abstract :** Autism is a lifelong developmental disability that affects how people perceive the world and interact with others. Most of these children have difficulty with fine motor skills which typically struggle with handwriting and fine activities in their routine life such as getting dressed and controlled use of the everyday tool. Because fine motor activities encompass so many routine functions, a fine motor delay can have a measurable negative impact on a person's ability to handle daily practical tasks. This project proposed a simple fine motor exercise aid plus the game (exergame) for autistic children who discover from fine motor difficulties. The proposed exergame will be blinking randomly and user needs to bend their finger accordingly. It will notify the user, whether they bend the right finger or not. The system is realized using Arduino, which is programmed to control all the operated circuit. The feasibility studies with six autistic children were conducted and found the child interested in using exergame and could quickly get used to it. This study provides important guidance for future investigations of the exergame potential for accessing and improving fine motor skill among autistic children.

**Keywords :** autism children, Arduino project, fine motor skill, finger exergame

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