### 4th International Conference on

# Sports Medicine-Fitness and Physiotherapy

November 16-17, 2023 | Paris, France

Volume: 14

# Effects of Commercially Available Wearable Devices on Physical Activity Promotion and Health in Children and Adolescents: Systematic Review

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Children and adolescents do not participate in enough physical activity (PA) to meet the recommended levels, which stops them from benefiting from regular PA's positive effects on their health. In recent years, technology-based initiatives have provided children and adolescents with a compelling and viable way to encourage PA. Based on the results of previous research, we have conducted this review to gain a better understanding of if and how specific commercially available wearable devices impact physical activity promotion and health in children and adolescents. We have conducted this review, that was based on a theoretical framework of the self-determination theory (SDT), and focused on the impact that wearable devices have on physical activity promotion and health. The electronic databases of Google Scholar, Web of Science, and PubMed were searched between 2010 and 2023 for all available literature. Eleven studies overall satisfied the requirements for inclusion criteria. The sample sizes for the studies ranged from 32 to 502, and they included both boys and girls between the ages of 4 and 14. Wearable technology was used for no less than one week and no more than four months. The current review revealed that commercial wearable activity tracker-based programs among children and adolescents had a positive influence on daily levels of MVPA and step totals, as well as sedentary behavior.

#### **Biography**

Prof. Dr. Tomislav Stantić, an accomplished radiologist, graduated from Subotica's medical school and pursued further education at Novi Sad's Faculty of Medicine. His extensive journey led to a master's degree from Novi Sad and a doctorate from Belgrade, with a focus on "Quality Assurance and Control in Diagnostic and Screening Mammography.

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