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**Associations between physical activity and digital gaming activity among Finnish adolescents**

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**Background:**

Physical activity (PA) for adolescents is an important health promotion habit to develop, yet other activities may be more appealing during this stage in life. According to the displacement hypothesis, time on digital games takes away the opportunity to be physically active. As there is a notable decline in PA levels between the ages of 11y- 15y in Finland, there is an urgent need to investigate potential areas that contribute to the decline. According to the 2021 Finnish Player Barometer, 65% of Finns play digital games regularly. The aims of this study were to investigate the associations between PA and digital gaming, and to examine how these associations may change by gaming genres.

**Methods:**

A Finnish national representative sample (n = 1979) of 11y-15y olds, completed a self-report survey in spring 2022. Variables included PA behaviour, the frequency of digital gameplay, by sport simulation and Esports genres, and various confounders (gender, age, disability, economic status). Analyses were carried out by chi-square tests and multi-logistic regression analyses (no/low activity as reference categories).

**Results:**

A third (32%) reported daily PA. Daily digital gameplay was more common among males (74%) than females (26%) and decreased from 11y (53%), 13y (30%) to 15y (17%) olds. After controlling for confounders, playing ball sport simulations (e.g. FIFA) was associated with taking part in 5 or more days/week of PA, or sport club participation (OR = 2.8, CI = 1.7-4.4), whereas playing a lot of first-person shooter games, as an Esport, was negatively associated with sport club participation (OR = 0.6, CI = 0.4-0.9) when compared to the reference categories.

**Conclusions:**

The displacement hypothesis was supported partly among Esport players, but not by simulated sport gamers. Targeted interventions to promote physical activity with digital gaming, require a genre-specific approach.

**Key messages:**

- Associations between physical activity and digital gaming activity among young adolescents is genre specific.
- Frequent playing of digital games were more common among male 11-15y olds than females.