Exergames effects on situational interest and physical activity of high school students: a pilot program in Physical Education

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Introduction – Situational interest, arousing engagement

Low level of girls engagement in physical activity

Motivation?

Interest theory
(Hidi, 1990.; Schiefele, 1991)
Personal interest and situational interest

Theory of situational interest (SI) (Chen & Darst, 2001)
= Total interest + SI sources

5 sources in PE (Roure & Pasco, 2018):
- Novelty
- Exploration intention
- Instant enjoyment
- Challenge
- Attention demand

Scott, 2019

PHYSICAL ACTIVITY (PA)
Introduction – Exergames, SI et PA

- Exergames: active video games
- Increased SI?
- Increased PA?

Conception of a PE program, based on Exergames (Kinect, Ring Fit, connected ergocycles), AND interest theory

(Pearson et al., 2015)
Method – Participants and measures

• 47 participants:
  - 45 students (\(M_{\text{age}}= 15,205\) ans, \(SD= 3,122\)) from 2 high schools, set up with exergames, Brest, France
  - 2 teachers

• Measures
  - Situational interest: SI scale (15 items) and total interest scale (4 items) (Roure, Kermarrec & Pasco, 2016). Week 1/3/(5)
  - Physical activity: MVPA data by accelerometers, worn on the ankle
    Week 1/2/3/4/(5)

Compared with data from conventional PE studies

(Sun et al., 2012 ; De Vries et al., 2011)
Results – Situational Interest

Situational interest for PE

** p<.01

SI decrease from lesson 1 (M=16.379; SD=3.401) to 3 (M=14.550; SD=5.559) t(26)=3.229, p<.01, Cohen’s d = 0.621.
Results – Physical activity

MVPA increases between 1st lesson (M=39.326; SD=9.259) and 2nd lesson (M=44.683; SD=11.479; t(23)=-3.678, p<.01, Cohen's d=-0.751) and decreases between second and fourth lesson (M=39.497; SD=11.763; t(20)=2.155; p<.05, Cohen's d=0.470).

* p<.05
** p<.01
Discussion

• In accordance with the litterature: SI decreases, but PA increases. → Novelty?

• Exergames PE > Conventional PE.

• Which results in a full program?

• No visibility in the real dynamic... SI and PA

(Sun et al, 2012; Brusseau et Burns, 2015)
Perspectives

Co-conception of a PE program of 10 weeks

PE Teachers
Focus groups
www.reveneps.com

PE Exergames Program
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PE Exergames Program

Raise of Personal interest?

Links between PA (in PE) and health (daily)?

Pre-test and post-test
Thank you for your attention. Do you have any questions?

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