The Imola Active Breaks study: a new strategy in child public health to reduce sedentary

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Background:
Physical inactivity is worldwide considered one of the biggest public health problems of the 21st century. WHO recommended in children, at least 60 minute of Moderate Vigorous Physical activity (MVPA) per day, but low percentages comply with guidelines. Considering that children spend many hours at school, classroom is the ideal setting to increase their PA. Active Breaks (AB) are a 5-15-minute bouts of PA led by the teachers during academic lessons. The aim of the Imola AB study is to implement a 1-year intervention based on AB (10min/3per-day) in primary school as a new strategy to reduce inactivity. We present the baseline results.

Methods:
Quasi-experimental pre-post study in 6-10aged primary school children, in Imola(Italy).We evaluated PA level with Actigraph accelerometers: time (in minutes) spent in MVPA Weekly and Daily (W-MVPA; D-MVPA) and Weekly Sedentary behaviours (W-SB).

Results:
We recruited 152 children: N = 110 in Active Breaks experimental group (AB) and N = 42 in control group (CG). Actigraph's analysis showed that 42,5% of children in the ABG vs 31.0% in the CG reach the WHO recommendation (p=ns). We investigated baseline differences between groups using ANOVA dividing children by grade. In 3-4 grades: W-MVPA (AB = 318.3±15.5 vs CG = 310.4±98.0 p = 0.78); D-MVPA (AB = 53.0±20.3 vs CG = 51.8±16.3 p = 0.79);W-SB (AB = 6,687.5±375.3 vs CG = 6,754.7±281.0 p = 0.45). In 1grade: W-MVPA (AB = 376.1±127.9 vs CG = 300.3±120.0 p = 0.02); D-MVPA (AB = 62.7±21.3 vs CG = 50.0±20.0 p = 0.02); W-SB (AB = 6,436.0±496.0 vs CG = 6,373.3 ±1,532.0 p = 0.7).

Conclusions:
Only the 39.2% of the total sample met the 60-minute/day of MVPA recommended. We found no significant baseline differences in PA level measured by Actigraph between CG and AB, excepted in 1 grade. The intervention implemented in the Imola AB study could be a good strategy to reduce sedentary in children and reach the WHO recommendation, thus contributing to the aims of the new Global Action Plan on PA 2018-2030.

Key messages:
- Less than 50% reach the WHO recommendations of PA. AB implemented in the Imola Study could be a public health school-based strategy to reduce sedentary and increase healthy behavior in children.
- Active breaks (AB) are emerging as a good strategy to increase the PA level, reducing the time in sedentary habits.