TEACHING STYLES IN PHYSICAL EDUCATION AND CHANGES OF DAILY PHYSICAL ACTIVITY AFTER ONE ACADEMIC YEAR IN ADOLESCETS: GEOS STUDY. AISEP 2015.

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INTRODUCTION

Increased Moderate-Vigorous physical activity (MVPA) and reduced sedentary time (ST) are key factors for a healthy lifestyle during adolescence. Studies have suggested that schools may be effective resources to promote healthy habits (Sallis, McKenzie et al. 2012). Therefore, in PE, is important to assess how teachers use strategies and provide students tools to engage in PA with the purpose of reduce the risk of sedentary behavior and contribute to promotion MVPA habits for a healthy lifestyle (Lonsdale, C. et al., 2013). Many factors may be involved in the successful PE class to promote healthy out-school behaviors, as teaching styles (TS), learning styles, learning time, motivation and so on (Mosston, M. 1966). Regarding TS, there is a lack of knowledge about influence of the teaching style (TS) in the promotion of daily MVPA. It was our aim to observe the differences of total daily MVPA between two groups of adolescents who were taught during a whole academic year using reproducing (RK) or producing knowledge (PK) TSs.

METHOD

Fifty adolescents from the same high school accepted to wear an accelerometer (ACL) to record one week of total daily PA at the beginning of the academic year (0M) and other week at the end (1M). After analyzing ACL data, 15 adolescents (9 girls and 6 boys) obtained valid records. Four groups of PE classes were randomized to be taught during the whole academic year according with two different strategies: RK and PK following the classical Spectrum of Mosston (Mosston, M., Ashworth, S., 2002). The contents and PE teacher were the same for all students.

One week of total daily physical activity was recorded using ACLs (Actigraph GT3X). Briefly, children wear a click-belt to fix the ACL around waist. ACL was worn off only to sleep, take shower and swim. We removed days with incomplete information. A day was considered complete if it contained ≥ 10 hours of wear time for weekdays and ≥8 hours for weekend days (Yildirim, M. et al., 2011). A decision was taken to consider accelerometers as not worn if a period of 60 minutes of consecutive zeros, allowing for 2 minutes of non-zero interruptions, was encountered anywhere in the data array. Only participants with ≥4 complete days, including one weekend day were included (Holman, R.M., Carson, V. & Jansson, I., 2011).

Differences among 0M and 1M were calculated for patterns of PA and total daily PA. Differences were compared between RK and PK by independent sample T-test.

RESULTS AND DISCUSSION

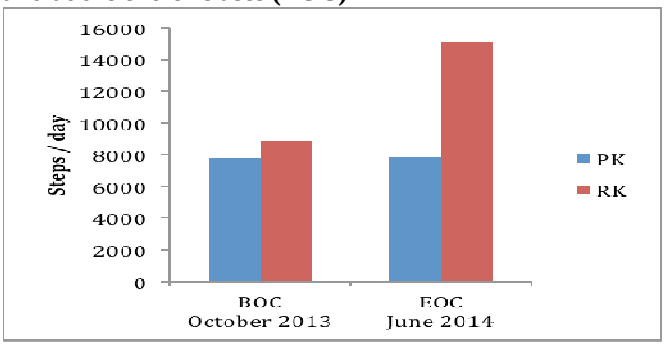
Significant differences were found between RK (n=6) and PK (n=9) on Vigorous PA (2.18 ± 27.88 min/day vs. -2.38 ± 5.63 min/day, respectively; P = 0.037) and steps per day (6,249 ± 12,457 steps/day vs. 84 ± 3732 steps/day, respectively; P = 0.036).

Table 1. Sample characteristics by TS group.

Variables		PK (*n*= 9)		RK (*n*= 6)	
		Mean	SD	Mean	SD
Age	(years)	14.99 ±	0.89	15.75 ±	1.05
Sex	(boys/girls)	4/5		2/4	
Weight	(kg)	63.16 ±	20.49	54.55 ±	10.05
Height	(m)	1.62 ±	0.87	1.62 ±	0.40
BMI	kg/m^2	24.04 ±	7.22	20.86 ±	4.13
FMP	(%)	29.44 ±	10.18	24.07 ±	10.39

BMI: Body Mass Index; FMP: Fat Mass Percent; PK: Producing Knowledge; RK: Reproducing Knowledge.

Figure 2. Steps per day at the beginning of classes (BOC) and at the end of clases (EOC)



CONCLUSIONS

The main finding of this study was that RK styles promoted a higher amount of vigorous PA during PE than PK. The implication of our results to rise chronically total daily PA is a question that needs to be confirmed in longitudinal studies with larger samples, wider range of activities during PE and different schools.

REFERENCES

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