

Academic routine impact on physical activity level of university students: A longitudinal study

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ABSTRACT

Objective: The aim of this study was to investigate the impact of routine academic physical activity level (PAL) in university students. **Method:** Participants were 30 students (17 girls and 13 boys) of physical education course, aged between 18 and 32 years. The PAL was accessed by the short version of International of Physical Activity Questionnaire (IPAQ) validated for Brazilian population by Matsudo et al. (2001). The participants included in this longitudinal study answered the IPAQ during every academic path (2015, 2016, 2017 and 2018). For the statistical analysis was utilized the Anova-One Way for repeated measurements test with Bonferroni post-hoc. **Results:** The results showed significant differences between the 1st year and other schooling years. **Conclusion:** It is possible to conclude that the academic routine negatively impacts the PAL, especially in the last year of course (4th year). **Keywords:** Academic routine; Health; Physical activity.

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INTRODUCTION

Communication and strengthening of friendship bonds are made during the organized sports practices and spontaneous physically active play, that is, the movement has strong social and cultural meanings (Miyabayashi and Pimentel, 2011). Therefore, the relationship between peers has been suggested as a strong predictor of the physical activity levels in children, as youth are more likely to be active when they are in the company of friends (Haye et al, 2011). These influences have been associated with factors such as motivation and social modelling and are based on the social facilitation theory and social learning theory (Salvy et al, 2012). Specifically, imitation is a behaviour which emerges from the relations of the individuals in a complex social system and which establishes collective norms and restrictions on individual behaviour. Thus, the objective of the study was to investigate the relative importance of children in school friendship groups and their associations with LPA in the early years of basic school.

MATERIAL AND METHODS

Participants

This research included Thirty-two children (girls=13), aged 8-9 years, enrolled in the 3rd year of elementary education, in the city of Santos, São Paulo, Brazil. The children Who participated in the experiment were children with chronological age compatible with the school year and that presented the free and informed consent form signed by a person responsible.

Measures

To identify the ties of friendship a questionnaire was used to composed by a closed question, where the children indicated how often they play with each student in their classroom (often, sometimes or never). The physical activity was evaluated through the self-reporting questionnaire proposed and validated by Godin and Shephard (1985). Children reported the number of times they spent more than 15 minutes in mild activities (3 METs), moderate (5 METs) or strenuous (9 METs) in a typical week. The measurement of the weekly physical activity level was calculated by multiplying the frequency indicated by the respective MET value for each intensity.

Procedures

Data collection was performed on a typical day during the school period. Both questionnaires were applied individually through an interviewer assisted by the researcher. Then a database was created for statistical treatment.

Analysis

The relative importance of the child in the group was evaluated through the number of reciprocal appointments (degree centrality) through the Yed Software for analysis of networks. After the verification of normality of the data through the Bronferroni test, the data were submitted to the Pearson correlation coefficient test with significance level accepted at $p \leq 0.05$. The degree of centrality and the level of physical activity were the variables of investigation and the body mass index and the sex were the control variables of the study.

RESULTS

The results of this study showed a positive correlation between the degree of relative importance of the child in the group of friends and the frequency of moderate and vigorous physical activities ($r=363$, $p=.041$; $r=362$,

p=.042. In contrast the mild activities, BMI and sex are not associated with interpersonal relationships of children.

DISCUSSION

The associations found between interpersonal relations and physical activity in children are consistent with corroborate with the literature. Relationships between peers are essential for a physically active lifestyle in children, specifically in increasing motivation (Salvy, Roemmich and Bowker, 2009), distance between friend's group residence, active transportation in groups for school (Jerina et al, 2018), companionship in organized sports practices and free play (Todisco et al, 2017).

CONCLUSIONS

The interpersonal relationships are directly associated with physical activity levels in childhood. However, cross-sectional studies do not allow the identification of cause and effect relationships between variables.

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