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Comparison of the physical activity in the daily program between youth basketball players and adolescents aged from 16 to 17 years in the Czech Republic

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Abstract

Life-style is an important part of human health. It is an essential part of physical, psychological and social health. In this part of the research are presented the results obtained in the Czech Republic: the volume and intensity of physical activity.

Purpose:

The aim of the research is comparison of the physical activity in the daily program between youth basketball players and regular adolescents in the Czech republic. The project " Health, Fitness and education in Visegrad Countries and neighboring Countries " is focused on mapping and comparison of selected aspects of lifestyle and somatic characteristics of adolescents from Visegrad and other European countries (Poland, Czech Republic, Hungary, Slovakia and Ukraine).

Methods:

The Czech Republic participated in the project with 227 probands (144 boys, 83 girls), basketball players were 137 (93 boys, 44 girls) and 90 pupils from high-schools in the Czech Republic (51 boys, 39 girls). There was „Mezinárodní dotazník pohybové aktivity“ (IPAQ – International Physical Activity Questionnaire, short version) used to collect data about physical activities.

Results:

There were not found significant differences between sexes in the number of days spent with physical activities. There were also not found significant differences between sexes in the level of physical activity per day.

Conclusion:

The results of the project will help not only to compare data on physical activity of adolescents in individual countries, but also to examine it in the context of the effectiveness of preventive measures in the participating countries.

Keywords: health, physical activity, adolescents, basketball

Introduction

Lifestyle is an important part of human health (physical, psychological and social health). Notwithstanding today's society supports healthy lifestyle with a broad range of sports, a huge amount of information about prevention of socio-pathological effects and optimal eating habits, we also meet with negative impacts and with inclination to sedentary lifestyle with reduced physical activity. Children and adolescents are considered to be endangered. Positive

effect of regular physical activity on humans health could be found among children and adolescents (Meriwether, Lobelo, & Pate, 2008; Pate et al., 2006; Riley & Jones, 2007; USDHHS, 2008). The profile of people's freetime activities is often connected with the quality of life (Martinik et al., 2008, 132). Unfortunately with older age the amount of PA is decreasing (Riddoch et al., 2003; Tudor-Locke, McClain, Hart, Sisson, & Washington, 2009). In the process of maturation the youth learn to social norms and social expectation which affect the behavior of adolescents. (Lu et al., 2014, 363).

Research indicates that participation in sports at least once a week among females and twice a week among males was associated with high level of physical activity in later life (Tammelin et al., 2003). Increased physical activity has a positive impact on athletic and social self-perception in girls and boys. Regular PA helps to reduce the risk of health diseases, diabetes, obesity, some sorts of cancer, high blood pressure and high cholesterol (Pharr & Lough, 2014).

Among other factors positively affecting PA of adolescents counts participation in sports club, which negatively corelates with leaving the club (Zimmermann-Sloutskis et al., 2010). Increasing of PA can be also done by an active participation in physical education lessons (Gordon-Larsen et al., 2000) and also by participation on school sports occasions (Van der Horst et al., 2007). NICE (2007) states that important factor affecting PA is a socioeconomical status (SES) which is discutable in case of adolescents.

Regular physical activity is an important factor for good physical and also mental health. Physical aktivity could increase a capacity for learning, cause social welfare and teach skills like teamwork, self-discipline and ability to leadership (Craike et al., 2014, 410).

Health advisory of PA of children and youth is defined by 60 or more minutes of medium PA per day (Pate et al., 2006; Strong et al., 2005). According to USDHHS (2008) and WHO (2012a) the activity should be of an aerobic character and during 60 minutes of medium PA adolescents should also reach at least 20 minutes of intensive PA and this should be done three times a week to streghtening supporting apparatus of the body. Frömel et al (1999) recommend participating in PA at least four times a week. Oja et al. (2010) say that any PA is better that none and by increasing level and frequency of PA also the benefits on humans health are bigger. The term of active lifestyle is nowadays very discussed because it combines lifestyle described higher with physical activity. That does not mean only movement or PA but also the education of people, because they know what benefits could PA have. (Henderson & Bialeschi, 2005).

The solution could be by the way in the spectrum of preventive actions and also in the effectivity of its effects. The results were collected as a part of the project „Health, Fitness and education in Visegrad countries and neighboring Countries“ n. 01/08/13-31/01/14, Visegrad fund (International Visegrad project), aimed on mapping certain aspects of the lifestyle of adolescents in Visegrad countries (V4) and comparison of these data by all the participating countries. Participating Universities are Kazimierz Wielki University in Bydgoszcz (Poland) – coordinator of the project, Palacký University in Olomouc (Czech Republic), University of Matej Bela in Banská Bystrica (Slovakia) and University of Debrecen (Hungary).

Material and Methods

There were 227 probands (144 boys, 83 girls), basketball players were 137 (93 boys, 44 girls) and 90 pupils from high-schools in the Czech Republic (51 boys, 39 girls). According to the age of the probands there was an informed agreement guaranteed by legal representatives. There was an anonymity of probands guaranteed and they could leave or end the project anytime. They also could ask any question if necessary. There was „Mezinárodní dotazník pohybové aktivity“ (IPAQ – International Physical Activity Questionnaire, short version) used to collect data about physical activities. Moderate PA was meant PA 1 – 3 MET, as medium PA 3,1 – 6 MET and as an intensive PA > 6 MET (Ainsworth et al., 2000). Time of sitting was meant inactivity. Categories (intensive PA, medium PA, walking, sitting etc.) which appeared in the questionnaire were explained to probands. Probands filled the questionnaires by themselves under the supervision of instructed administrators and could ask a question if they did not understand the text. The research was anonymous and voluntary. For the statistical processing were used basic statistical values and non-parametric test in the programme STATISTICA 9.0. Statistical importance of possible differences in the level and intensity of PA from intersexual point was valued by M-L chi-square.

Results and Discussion

There were not found significant differences between sexes in the number of days spent with physical activities. (Figure 1.). Players had only higher number of days spent with intensive physical activity (Figure 1.), but only one day versus regular teenagers (students).

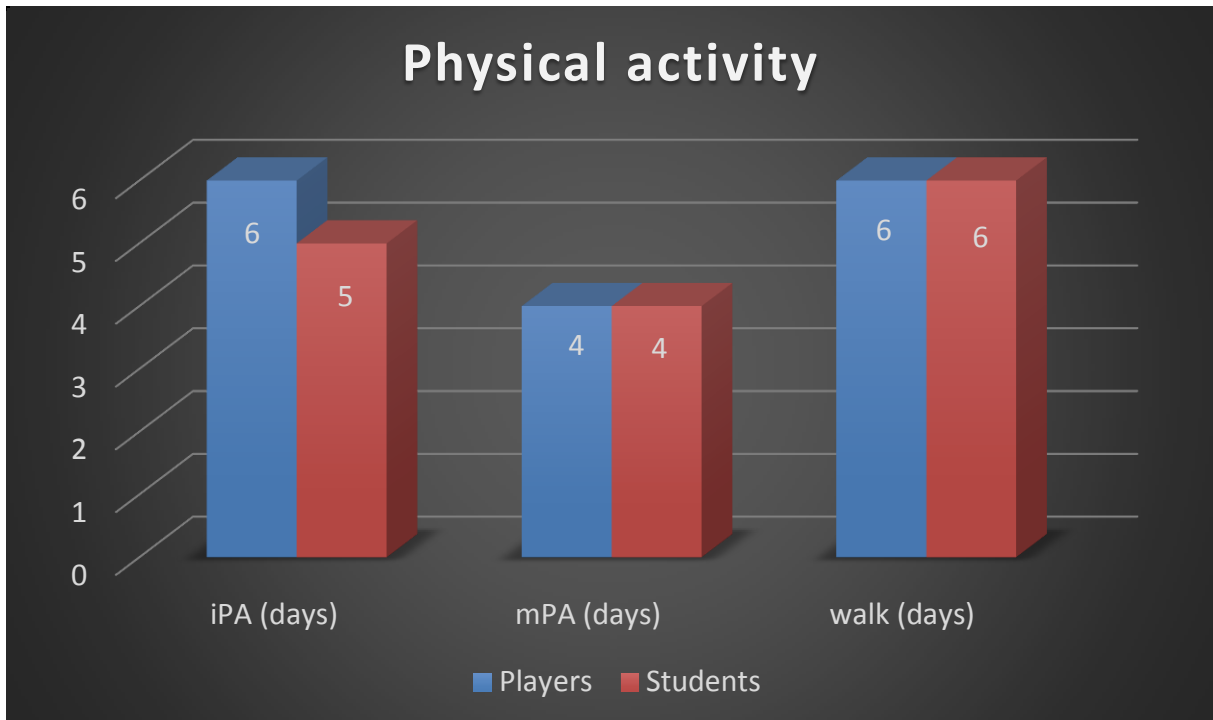


Figure 1. Physical activity performed in week (days/week) n=227

There were also not found significant differences between sexes in the level of physical activity per day (Figure 2.). But what is interesting is, that players had higher numbers in minutes spent by sitting or inactivity. This could be caused by training units, because after them they need to regenerate their physical fund. Players also had more minutes per day spent in intensive physical activity, which could be definitely caused by their training units in their sports clubs. But students get, on the other hand, higher number of minutes per day spent in moderate or medium activity and also in walking (Figure 2.).

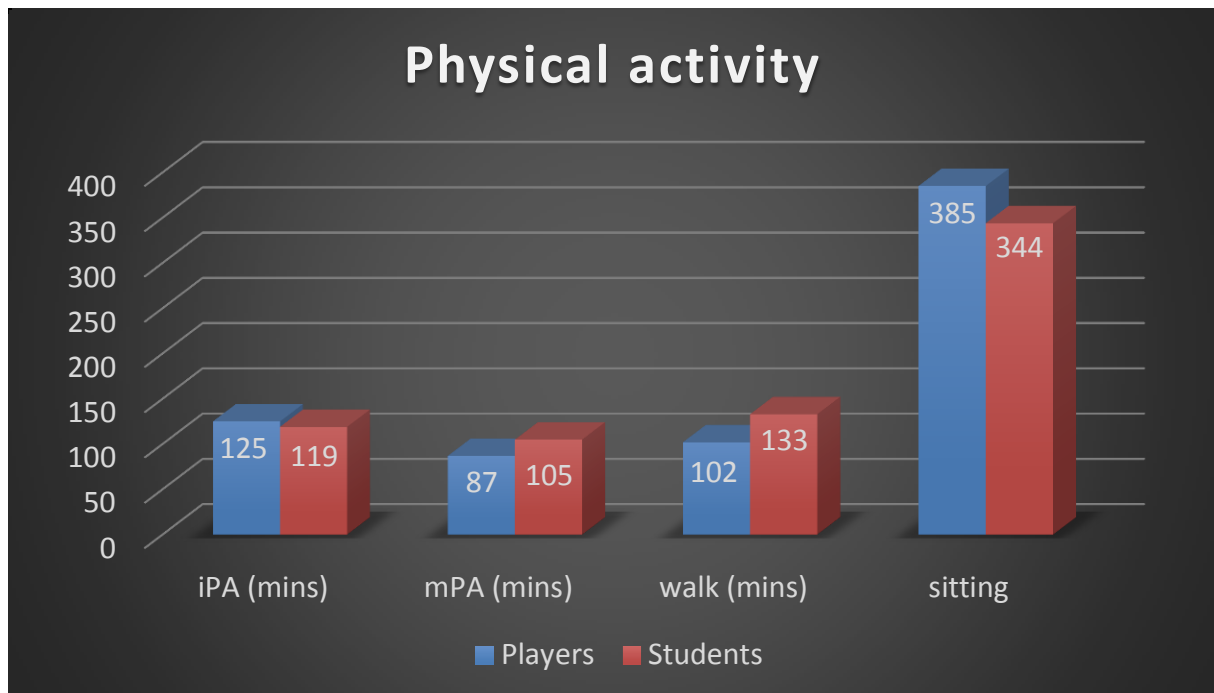


Figure 2. Level of physical activity (mins/day) n=227

Conclusion

Based on the our results we can say that there is a decline in the PA of adolescents. Limitating factors of the research could be the low number of probands and choice of the locality of schools. With eliminating these factors our research can be compared to different countries and also evaluate the effectivity of preventive programmes in the participating countries. Increasing of PA could be a part of daily routine activities like walking into stairs, active transport to school, active participaion on houseworks, leisure-time activities, physical education lessons, social and familly occasions (CSEP, 2012; WHO, 2012a). Another advice logically coresponding with examples above is the reduction of time spend by inactivity (watching TV, playing PC games, surfing the internet, ...) (Jannsen, 2007).

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