Benefits of physical activity for social adaptation at school

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Abstract
Objective of the study was to rate the schoolchildren’s commitment for the school physical education and sports classes versus their peer relations and friendship survey data.

Methods and structure of the study. Saint-Petersburg Research Institute of Physical Culture (SPRIPC) leads the national research under the international Health Behavior in School-aged Children (HBSC) Project. The Project includes four-year research cycles once in different Russian regions with the large-scale anonymous surveys of school population classified into three age groups (11, 13 and 15 year-olds). The technical and institutional provisions developed by SPRIPC include a web site with a Russian version of the international survey, a cloud database for online surveys, and a special data processing and analyzing software toolkit. This article presents and analyzes the questionnaire survey data mined in the 2017-18 research cycle. Most of the survey data were mined by the web site tools and complemented by hardcopy survey reports obtained from the regional groups.

The schoolchildren’s commitment for physical education and sports classes was rated under this study by the physical activity rating standard MVPA indices (moderate to vigorous physical activity) as provided by the WHO.

We split up the sample, for the purposes of the study, into two groups reporting different weekly physical activity in excess of one hour a day. Group MVPA3 included the schoolchildren practicing three days a week, and group MVPA7 included those practicing seven days a week, with gender subgroups in both groups.

Results and Conclusion. The survey data and analysis clearly demonstrate a direct correlation between commitment for the physical education and sports classes and reported quality of the peer friendship with mutual trust and help. As demonstrated by Figures 1-2, the MVPA group 3 boys were tested with a fall on these scales with age – versus the MVPA group 7 boys tested with growth on every of the four scales versus the 13-year-old boys subgroup. The data gives reasons to believe that the physical activity and socialization success are closely correlated in the school sample, with the higher commitment for the physical education and sports classes being clearly beneficial for friendship and – as found by our prior studies under the Project – this friendship in its turn heavily contributes to the physical education and sports motivations.

Keywords: schoolchildren, peer relations, friendship, physical education and sports activity, physical activity, monitoring.
tion and sports classes versus their peer relations and friendship survey data.

**Methods and structure of the study.** Saint-Petersburg Research Institute of Physical Culture (SPRIPC) leads the national research under the international Health Behavior in School-aged Children (HBSC) Project [4]. The Project includes four-year research cycles once in different Russian regions with the large-scale anonymous surveys of school population classified into three age groups (11, 13 and 15 year-olds). The technical and institutional provisions developed by SPRIPC include a web site with a Russian version of the international survey, a cloud database for the online surveys, and a special data processing and analyzing software toolkit. This article presents and analyzes the questionnaire survey data mined in the 2017-18 research cycle. Most of the survey data were mined by the web site tools and complemented by hardcopy survey reports obtained from the regional groups.

The schoolchildren’s commitment for physical education and sports classes was rated under this study by the physical activity rating standard MVPA indices (moderate to vigorous physical activity) as provided by the WHO. The WHO guidelines recommend the schoolchildren’s daily moderate to vigorous physical activity necessary for their health protection purposes making up at least one hour [2].

We split up the sample, for the purposes of the study, into two groups reporting different weekly physical activity in excess of one hour a day. Group MVPA3 included the schoolchildren practicing three days a week, and group MVPA7 included those practicing seven days a week, with gender subgroups in both of the groups. Friendships and peer relations were rated by questions probing the emotional, communicative and practical aspects of the reported friendship. For the purposes of the study, we rated friendship in the following four aspects: sharing emotions ("sharing joys and sorrows with friends"), trustful communication ("discussing problems with friends"), mutual help ("friends are really eager to help") and support in difficult situations ("relying on friends if something goes wrong"). We gave a special priority in the analysis to the maximal agreements with the above statements.

**Results and discussion.** The MVPA3 and MVPA7 groups were tested meaningfully different in every aspect of reported friendship. Figure 1 gives an example of the group shares of the children reporting having friends to share emotions and having trustful communication with – to demonstrate meaningful intergroup differences on these scales. Thus the MVPA3 group was tested with a general sagging trend in the emotions sharing aspect with age, with a minor growth in the 15-years-old girls. The highest intergroup differences were found in the 13-year-old girls and 15-year-old boys subgroups.

![Figure 1. Group shares reporting having good friends to share joys and sorrows with](image1)

The intergroup differences were less meaningful on the trustful communication scale, with the highest peak in the 13-year-old girls subgroup (p <0.05). Given on Figure 2 are the group shares reporting good mutual peer help and support in difficult situations.

![Figure 2. Group shares reporting having good friends eager to help](image2)

The above test scales demonstrate meaningful intergroup (MVPA3 versus MVPA7) differences, with a peak of mutual help in the 13-year-old boys subgroup.
Conclusion. The survey data and analysis clearly demonstrate a direct correlation between commitment for the physical education and sports classes and reported quality of the peer friendship with mutual trust and help. As demonstrated by Figures 1-2, the moderate to vigorous physical activity group 3 boys were tested with a fall on these scales with age – versus the moderate to vigorous physical activity group 7 boys tested with growth on every of the four scales versus the 13-year-old boys subgroup. The data gives reasons to believe that the physical activity and socialization success are closely correlated in the school sample, with the higher commitment for the physical education and sports classes being clearly beneficial for friendship and – as found by our prior studies under the Project – this friendship in its turn heavily contributes to the physical education and sports motivations.

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