THE POSSIBILITIES OF REDUCING PHYSICAL INACTIVITY OF STUDENTS AT SCHOOL AND IN THE FAMILY IN THE ASPECT OF HEALTH STRENGTHENING

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Abstract
In informational society of knowledge, physical inactivity and sedentary lifestyle has gained global forms and has become an urgent Lithuanian students’ education problem. The aim of the research is to investigate ways of physical inability reduction used by physical education teachers at school and in the family. The following investigation methods: analysis of scientific literature and documents, the survey in written form, and statistical analysis of data were used. 136 physical education teachers from general education schools of 5 Lithuanian cities and regions took part in the research. According to sports teachers’ view, in PE lessons students should deeply and exhaustively perceive physical activity as a component of healthy life, to acquire the knowledge about the influence of physical activity on health, active leisure time, about the use of information systems. The most important sporting motives of girls and boys do not always coincide. It is important to increase the lessons’ attractiveness, develop the abilities to individually exercise, to improve teacher-parent cooperation. Today, in student life, the attendance of sports groups at school and sports trainings, participation in school competitions, Olympic and Health Days and other sports events are effective ways of reducing physical inactivity.

KEYWORDS: physical inactivity, health, sports teacher, physical activity, school, family.

Introduction
School is one of the main human educational institutions, the essential task of which is personal development, pursuing the person’s self-expression, and emphasizing human values without prejudice to the nature of the learner, normal body growth and maturation, and health. The essential requirements of children’s physical education are dictated not only by the latest European and Lithuanian educational changes, but also by the new technological challenges (Astra, 2005; Ustilaitė, Škėmienė, Papečkytė, 2009; Sandercock et al., 2013). Media (the internet, television etc.) and mobile phones occupy an important place in young learners’ life. New technologies provide a lot of learning, cognition and communication possibilities, however, in the internet (online) space we often face various dangers, risky behavior, much time is spent sitting in front of the PC screen. Rapid technological processes determine students’ physically inactive lifestyle which has a negative impact on physical and mental health, physical and work capacity (Bouchard, Blair, Haskell, 2007; Juškelienė, Ūstilaitė, 2009). Insufficient physical activity and negative consequences for child’s health are in most cases caused by using the internet in leisure time without any limitation or adult control.

Researchers have found that in the period of the latest decade, student physical activity has had the downward trend. This is supported by Lithuanian student PA research (Volbekienė, Griciūtė, 2007; Gažauskienė, Volbekienė, Griciūtė, 2010 et al.). Coordinated by the World Health Organization the investigation has found that in the year 2005-2006 daily PA (60 min.from average to high intensity) experienced eleven year old children (28,0% of girls and 27,0% of boys) and thirteen year old children (13,0% and 22,0% respectively). Every day more than 2 hours Lithuanian teenagers played computer games (82,3%) and watched TV (77,0%), and these indicators are among the biggest ones in Europe. Zaborski, Raskilas, (2010) determined that approximately only every second boy (45,2%) and every fifth girl (20,0%) could be considered sufficiently physically active. It has been proved by research that children of higher level of physical activity surpass their peers in physical capacity (Kardelis, Kavaliauskas, Blazneris, 2001; Rowland, 2007; Volbekienė, Emeljanovas, Rutkauskaitė et al., 2008; Trinkūnienė, Rutkauskaitė, Emeljanovas et al. 2009; Emeljanovas, Volbekienė, Rutkauskaitė et al. 2010), which is important health component. All this makes us look for physical inactivity reduction possibilities, new and effective ways of increasing children PA corresponding modern requirements.

R. J. Shephard, F. Trudeau (2000) state that the primary purpose of school physical culture is long term student health after they become familiar with great variety of physical activity forms. It has been proved by scientific investigation that the knowledge about health and physical activity promotes formation of health provisions and favourable to health behaviour (Proškuvienė, 2004); Proškuvienė, Zlatkuvienė, Černiauskiienė et al., 2006). Sports teachers have to be concerned that their students under the influence of knowledge acquired the understanding of active lifestyle and chose favourable to health
behaviour in everyday life and, what is especially important, acquired sport motivation, which is significant stimulus of PA expression in leisure time. The research conducted by Blauzdys, Bagdonienė (2007) shows that the main sources of positive approach to physical education lessons are good learners' communication with the teacher, the knowledge gained in physical education lessons, the teacher's ability to engage students.

Student PA is affected by sports teacher competence, skills, values and personal qualities which are important factors influencing students' views of physical activity and changing their attitude, behaviour and values (Poteliūnienė, 2000). In recent years, a number of studies exploring PA importance and impact on student health has increased (Grabauskas, Zaborskis, Klumbienė et al. 2004; Volbekienė, Kavaliauskas, 2007; Rowland, 2007; Armonienė, 2007; Skurvydas, 2008; et al.), however, there is a lack of a more comprehensive theoretical and empirical study of physical inactivity reduction of students not engaged in sports, physical activity increasing ways used by teachers and their effectiveness in educational process. Trying to find out teachers' view of both physical inactivity reduction and its increasing possibilities the following problematic issue has been raised: what ways to increase PA are effective to the students', not engaged in sports, physical inactivity reduction in the family and at school.

**Research object:** the possibilities of students' physical inactivity reduction.

**Research aim** – to investigate teachers' view of students', not engaged in sports, physical inactivity reduction possibilities at school and in the family in order to optimize PA in everyday activities.

**Research methodology.** The following research methods were used: analysis of scientific literature and documents, the written survey, statistical analysis of the data, physical education teachers questioning. In order to emphasize the educational situation of children’s PA, the ways for increasing PA used in educational reality, a PE teachers' questioning was applied. The questionnaire consisted of 53 statements which were divided into separate blocks: student health improvement, increasing PA at school, increasing PA in the family and setting up a favourable PA environment. All the statements of the questionnaire were assessed using a five-point Likert scale and the response options could be from the response very important (5 points) to not important at all (1 point). 4 open questions were presented as well. 136 PE teachers from general education schools of 5 Lithuanian towns and districts took part in the investigation. The characteristics of the respondents of the questionnaire is presented in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Characteristics of the diagnostic test respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (y. / %)</strong></td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>4,5</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
</tr>
<tr>
<td>56,1%</td>
</tr>
<tr>
<td><strong>Pedagogical qualification</strong></td>
</tr>
<tr>
<td>22,4</td>
</tr>
</tbody>
</table>

The teacher survey was conducted by the author of the article in November and in December, 2012. Sports teachers were asked to objectively evaluate the statements and to present their sincere suggestions for children physical inactivity reduction, the development of the need to exercise and creating conditions for PA. Describing the results of the survey, facts and ideas significant to sports education science and educational reality synthetically uniting all the PA educational components were indicated. **Statistic analysis of the data.** To process the research data SPSS analysis programme (version 15.0) MS Excel calculator 2003 was used. Arithmetic average of the parameter ($X$) and standard deviation (SN) were analysed, chi-square criterion ($\chi^2$) was applied. Significance levels of statistical conclusions were used: $p > 0,05$ – statistically not significant, $p < 0,05$ – significant, $p < 0,01$ – very significant, $p < 0,001$ – especially significant.
Sports teachers’ opinion about the significance of PA and health knowledge in students’ daily activities

The investigation aimed to find out sports teachers’ opinion about what the most important knowledge is appropriate to provide the students, what is the influence of knowledge on physical inactivity reduction. From the teachers’ responses the attitude stands out that it is necessary to provide the students with the knowledge about PA influence on their health, which was recognized as a very significant component of PA by most of the teachers (very important 72,1%, important – 26,5%) and all the respondents gave this feature the highest grade (at an average 4,69± 0,55 grade) (Table 2).

Table 2. Physical education teachers’ opinion about enhancement of children PA and health education

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>Very important (%)</th>
<th>Important (%)</th>
<th>Neither important nor unimportant (%)</th>
<th>Average of the evaluation (scores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To provide students with knowledge about the impact of PHA on the health</td>
<td>72,1</td>
<td>26,5</td>
<td>1,4</td>
<td>4,69±0,55</td>
</tr>
<tr>
<td>2.</td>
<td>To encourage students to do exercises</td>
<td>54,4</td>
<td>41,2</td>
<td>4,4</td>
<td>4,49±0,63</td>
</tr>
<tr>
<td>3.</td>
<td>To organize individual PE lessons to students of a special group (according to illnesses)</td>
<td>45,5</td>
<td>39,4</td>
<td>15,1</td>
<td>4,32±0,53</td>
</tr>
<tr>
<td>4.</td>
<td>To provide knowledge about the work and rest schedule</td>
<td>35,3</td>
<td>60,3</td>
<td>4,4</td>
<td>4,28±0,68</td>
</tr>
<tr>
<td>5.</td>
<td>To give students a task that would help them to clearly understand the impact of PA on health</td>
<td>35,3</td>
<td>58,8</td>
<td>5,9</td>
<td>4,26±0,68</td>
</tr>
<tr>
<td>6.</td>
<td>To educate the students on the question of the impact of media on health, to regulate the time spent in front of the screens</td>
<td>33,8</td>
<td>60,3</td>
<td>5,9</td>
<td>4,20±0,48</td>
</tr>
</tbody>
</table>

A- The respondents’ statement evaluation unimportant and not important at all was not found.

According to the teachers’ opinion, it is important to stimulate the students to do exercises and to provide them with the knowledge about work and leisure routine. 35,3% of the respondents indicated that this is very important and 58,8% that it is important to give students tasks helping to clearly understand the impact of PA on health. This teachers’ view shows that it is necessary to develop their abilities to apply the knowledge in daily activities because the knowledge might be not fully realized, declarative. It was found that the teachers support the problem raised in scientific literature, that in this era of technological prosperity uncontrollable media (computers, TV, internet, etc.) in educational reality endangers children’s health. 33,8% of the respondents indicated that it is very important and 60,3% of the respondents indicated that it is important to educate students on the issues of media impact on health, to regulate and control the time spent in front of the screens. A lot of sports teachers thought that it is necessary to conduct separate physical education lessons to the special group of students differentiating and individualizing the tasks and physical exercise taking into account their illnesses, and to organize school Health Days. The fifth part of the respondents state that it is very important and more than half of them indicated that it is important to systematically analyze students’ health issues together with a public health specialist and accordingly (14,7%) and (63,2%) that it has to be done together with the class head teachers. According to the teachers’ view, attention of school authorities to PE and sports is very important (72,1%) and important (26,5%). The majority of the respondents chose the statement that the issues of special group student education should be discussed together with school authorities. It is clear
that today a PE teacher alone is not able to solve children’s PA problem, and that it has to be the concern of the whole school community.

**Sports teacher’s insights on the issue of students’ physical inactivity reduction at school**

Looking for the answer that could help reduce students’ physical inactivity and to increase physical activity connected with students’ health, it is important to investigate which ways to encourage inactive students to go in for sports can be effective. In literature it is emphasized that motivation is the essential child physical activity enhancement factor. Strong motivation is the factor stimulating an individual to exercise. It was found that teachers support this view stating that it is necessary to develop children’s motivation to exercise in PE lessons, increasing the PE lessons’ attractiveness so that the students would feel pleasure of movement (Table 3).

**Table 3. Teachers’ insights on the issue of the students not engaged in sports PA enhancement at school**

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>Very important (%)</th>
<th>Important (%)</th>
<th>Neither important nor unimportant (%)</th>
<th>Average of the evaluation (scores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To develop children’s motivation to do sports during physical education lessons</td>
<td>49,3</td>
<td>50,7</td>
<td>-</td>
<td>4,49±0,50</td>
</tr>
<tr>
<td>2.</td>
<td>To encourage students to attend sports clubs</td>
<td>47,8</td>
<td>52,2</td>
<td>-</td>
<td>4,48±0,50</td>
</tr>
<tr>
<td>3.</td>
<td>To form children’s skills to exercise individually during their leisure time</td>
<td>43,3</td>
<td>56,7</td>
<td>-</td>
<td>4,43±0,49</td>
</tr>
<tr>
<td>4.</td>
<td>To encourage students to attend sports trainings</td>
<td>40,9</td>
<td>54,5</td>
<td>4,6</td>
<td>4,26±0,68</td>
</tr>
<tr>
<td>5.</td>
<td>To make PE classes more desirable, in order for the students to experience the pleasure of movement</td>
<td>35,8</td>
<td>31,3</td>
<td>32,9</td>
<td>4,33±0,52</td>
</tr>
</tbody>
</table>

A – The respondents’ statement evaluation unimportant and not important at all was not found.

Positive emotions experienced by children in sports activities encourage them to do sports. Teacher ability to get the students interested in sports activities helps to understand its impact on health, motivating everyday physical activity. Creatively modelling and organizing educational process, developing humane contact with students all physical and mental force of a child quickly revives in their memory and is a stimulus for inactive children. While children’s PA is decreasing, teachers try to look for new, interesting PA forms conforming to the needs of today’s children. According to the teachers, it is very important to encourage students to attend sports groups, sports trainings, to teach them exercise techniques and develop the ability to do exercises self-dependently after school. The teachers also suggest setting up more sports groups at school and increasing the number of weekly PE lessons. However, only every tenth teacher supported the statement that it is very important to organize morning exercises, sport parties, quizzes or contests on sports issues. Fewer possibilities to optimize children’s PA are seen by teachers in increasing efficiency of PE lessons, compiling PE textbooks, increasing student PA during the breaks.

Younger teachers would prefer separate PE lessons for special group students to be conducted ($\chi^2=7,019$, df = 6, $p = 0,030$) and physical inactivity problem to be solved by a more often organized PA action at school ($\chi^2=9,291$ df = 24, $p = 0,026$). Older teachers see more possibilities to reduce physical inactivity in more often organized school competitions and other sports events ($\chi^2=6,580$, df = 2, $p = 0,037$), teacher – parent cooperation enhancement ($\chi^2=6,127$, df = 18, $p = 0,047$) and School Olympic Days organization ($\chi^2=7,832$, df = 8, $p = 0,020$).
Teacher position in the aspect of physical inactivity reduction in the family

Majority of sports teachers evaluated as important or very important the statements of increasing PA in the family. According to them, the greatest impact on increasing children’s PA is when parents do sports together with their children (evaluation 4,15 ±0,55 point), get information about their children’s achievement in sports activities (evaluation 4,12 ±0,53 point), buy sports equipment for their children (evaluation 4,04 ±0,65 point). Majority of teachers chose the statement that it is important (50%) and very important (13, 2%) to educate parents on children’s PE issues and to prepare reference material about physical activity for parents. In teachers’ view, trying to increase children’s PA, parents’ involvement is less effective in preparing school community sports event plan, enlistment of parents in organizing sports fitness events, active participation of parents in school sports events. According to teachers, it is very important (38, 2%) and important (60, 3%) to improve teacher-student interaction and teacher-parent cooperation (respectively 29, 9% and 65, 7%), to provide opportunities for children, teachers and parents to exercise in school sports base after school (26, 6% and 61, 8%). The teacher should not limit himself only by the performance of educational functions; it is important to cooperate with parents, to help them get closer to the values of sport, to earn their respect.

Creating favourable environment for children’s PA is the life dictated task

In educational reality, children’s interests and needs are often ignored while the preference is given up to achieve sports results. An important condition trying to involve inactive children in sports activities and to make educational influence on them is to properly understand and assess the challenges posed by students themselves. In response to the question what the main motives that encourage the 10th form girls to exercise and do sports in their leisure time are 76, 5% of the teachers indicated that the girls want to have nice body shape and half (50%) of the teachers stated that they want to lose weight and be healthier, and to improve their physical capacity (30, 2%). And approximately only every third teacher answered that girls do sports because they feel better and experience pleasure. The respondents indicated such main boys’ motives to do sports: they like sports, they feel pleasure (73, 5%), they want to improve their physical capacity (70, 6%), want to be healthier (45, 6%), and they feel better when they do sports (42, 6%). It was found that the most significant sports motives of boys and girls are not adequate. Sports teachers acknowledge that it is important to disseminate the knowledge about PA and sports in the school community in various ways (very important 22, 1% and important 70, 6%), every fifth teacher supported the statement that it is very important (22, 1% and important 54, 4%) to encourage the students to go to school by bicycles on condition that they could safely leave them near the school. Creating a favourable environment for children PA, material base of sports is very important. It was given a special attention by PE teachers (very important 72, 1%, important 35, 3%) among other PA fields (evaluation 4, 71± 0,49 score, t= 28, 68, p < 0,001).

Discussion

Physical activity of people in many countries, especially the economically developed ones, is insufficient, that is why specialists make every effort to motivate them to be physically active because physical inactivity is a risk factor of chronic, non-infectious diseases (Jankauskienė, 2009). Students’ interacting with teachers take over an active life values, they are influenced by the culture of the school community. The ability of teachers to interest students in sports, to maintain motivation, to promote physical self, to provide them with constructive information helps the children understand the meaning of active leisure time and the necessity to strengthen health by physical activity. Tilindienė (1999) found that sporting activities have influence on an adolescent’s relationship with himself only through his own experienced success. The author states that there is a connection between the success of the activity and the means of pedagogical impact which encourage it and are applied by teachers. Professional abilities of teachers as a system determining students’ physical activity consist of many components which combine both general pedagogical and practical skills, and determine success of pedagogical activity. Kardelienė, Trinkūnienė, Kardelis and others (2013) found that a negative attitude of social communication is more characteristic of PE teachers than of the teachers of other subjects. Relationships of PE teachers, especially men, with other colleagues, students and their parents are not good partly because of the low prestige of teacher’s profession in the consumer society. PE teachers indicate such qualities of their
students as indifference, laziness, poor health and poor learning environment as the disturbance of pedagogical interaction in their lessons. Blauzdys, Bagdonienė (2007), investigating the education of the positive students' attitude towards PE subject, found that PE teachers considered the lack of sports equipment and the gym occupancy the main disturbance of the innovation in PE lessons.

Reasons and motives because of which a person chooses everyday physical activity are various. The motives found by us are close to the findings of other researchers (Blauzdys, Bagdonienė, 2007; Jankauskiene, 2009). Medonis, Blauzdys (2009), investigating the influence of the 10th form boys' attitude towards physical activity and healthy lifestyle on their understanding of education, found that the health knowledge of the students having more and better quality information about physical activity and healthy lifestyle became their self-expression form, and their understanding of physical self-education improved effectively. Vainienė, Kardelis (2008) state that majority of motives encouraging to do sports are connected with the necessity of self-esteem or, in other words, with self-dissatisfaction, dissatisfaction with one's appearance and possibilities.

Undoubtedly, reducing children’s physical inactivity, the family influence is most important. This is supported by the research of foreign (Golan, 2001; Whitt-Glover, Taylor, Floyd et al., 2009) and Lithuanian scientists (Gaižauskienė, Volbekienė, Griciūtė, (2010). Having investigated the opinion of adolescents about their parents' attitude towards children's physical activity, they found that parents encourage younger teenagers to be physically active by buying necessary sports equipment, urging them to be in fresh air, devoting more funds for various sports groups and by their personal example. The lack of willingness and funds were indicated as reasons restricting family physical activity. Analysis of teachers' opinion revealed that the greatest effect appears when parents do sports together with their children, get information about their children's achievements in sports activities, buy sports equipment. Majority of teachers think that it is necessary to educate parents on issues of PE and to prepare for them information material on physical activity.

So, aiming to reduce students’ physical inactivity and the time spent at the computer screen, to lead a healthy life under fast changing social and cultural conditions an important sports teacher's role is to reduce physical inactivity with the help of modern effective ways of increasing physical activity which arouses the need for movement and gives meaning to PA as the tool of educational value and for health strengthening. Health problems which appear due to increasing general physical inactivity may be considered one of the greatest challenges connected with the health of young learners in the 21st century.

Conclusions

1. Literature analysis showed that negative impact of physical inability on health is based on scientific research. Technological challenges and changes of educational paradigm makes us look for effective ways of physical inactivity reduction in order to avoid adverse effects on the health of young learners.

2. According to sports teachers' view, in PE lessons students should deeply and exhaustively perceive physical activity as a component of healthy life, to acquire the knowledge about the influence of physical activity on health, active leisure time, about the use of information systems and to reflect their experience so that the knowledge would not be declarative. Linking cognitive, sports and health values and the aspects of wakening positive emotions makes the process of physical activity more meaningful, more attractive and more acceptable for the learner.

3. The most important sporting motives of girls and boys do not always coincide. It is important to increase the lessons' attractiveness, develop the abilities to individually exercise, to improve teacher-parent cooperation. Today, in student life, the attendance of sports groups at school and sports trainings, participation in school competitions, Olympic and Health Days and other sports events are effective ways of reducing physical inactivity.

References

MOKINIŲ FIZINIO PASYVUumo REDUKAVimo GALIMybės MOKYKLOJOJE IR ŠEIMOJE SVEIKATOS STIPRINIMO ASPEKTU

Eugenija Adaškevičienė, Neringa Strazdienė

S ant r a u k a

Informacineje žinių visuomenėje mokinių fizinis pasyvumas, sėdimas gyvenimo būdas įgavo globalias formas ir tapo aktualia Lietuvos mokinių ugdymo problema.

Tyrimo tikslas – ištirti sporto pedagogų naudojamus fizinio pasyvumo redukcijos būdus mokykloje ir šeimoje. Tyrimo tikslą tikėtina išsorskėti mokinių fizinio pasyvumo redukcijos būdai mokytojai, dirbantys bendrojo ugdymo mokyklose į penkių Lietuvos miestų ir rajonų, tyrimui atrinktų patogiosios atrankos du.

Anketinės aplaškos duomenų analizė atskleidė, kad svarbiais nesportuojančių vaikų fizinio pasyvumo redukavimo būdais mokytojai nurodė: skatinti mokinius lankyti sporto būrelius (labai svarbu-47,8%, svarbu-52,2%), sporto treniruotes (atitinkamai 40,9% ir 54,5%), ugdinti gebėjimą savarankiškai mankštintis (atitinkamai 43,3% ir 56,7%). Paaškėjo mokotojų nuomone, jog berniukų ir mergačių savarankiškai mankštinimos sportavimo motyvus negalima taikyti įvairiems vaikams. Sporto pedagogų nuomone, mokiniai kūno kultūros pamokose turėtų giliai ir išsamiai pažinti fizinį aktyvumą, išgerti žinių apie jo įtaką sveikatai, gelbėti savarankiškai mankštinimos aktyvų laisvalaikį. Nūdienos mokinių gyvenime veiksmingai fizinio pasyvumo redukavimo būdai yra sporto būrelių mokykloje ir sporto treniruočių lankymas, dalyvavimas mokyklinėse varžybose, olimpinėse ir sveikatos dienose bei kituose sporto renginiuose. Svarbu didinti kūno kultūros pamokų patrauklumą, ugdinti gebėjimą savarankiškai mankštintis, gerinti mokotojų ir tėvų bendradarbiavimą. Jaunesni mokotojai labiau norėtų, kad būtų vykdomos atskiros kūno kultūros pamokos specialiosios grupės mokiniams (χ²=7,019, df=6, p=0,030), o fizinio pasyvumo problemą padidinti dažniau organizuojamos įvairios FA akcijos mokykloje (χ²=9,291, df=24, p=0,026). Vyresni mokotojai daugiau galimybės mato padidinti vaikų FA dažniai organizuojant mokyklinės varžybas ir kitus sporto renginius (χ²=6,580, df=2, p=0,037), gerinant mokotojų ir tėvų bendradarbiavimą (χ²=6,127, df=18, p=0,047), bei organizuojant mokykloje olimpines dienas (χ²=7,832, df=8, p=0,020).