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Physical activity in high school and while studying as factors of later job and life satisfaction

Adam Metelski

Summary

Studies suggest that the people most physically active are the ones with higher education and highest earnings. It makes one wonder, is playing sports conducive to getting education and money, or maybe only after graduating and finding good job people start to play sports. It turns out that it is physical activity that helps to achieve career success and better life quality. Young people physically active are in a better position later on the labour market and are characterised by a higher life satisfaction. The aim of the article is to present research results on the relationship of the physical activity in high school and while studying for later job and life satisfaction.

Keywords: physical activity, sport, income, job satisfaction, life satisfaction

Physical activity in high school and while studying as factors of later job and life satisfaction

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Abstract

Studies suggest that the people most physically active are the ones with higher education and highest earnings. It makes one to wonder, is playing sports conducive to getting education and money, or maybe only after graduating and finding good job people start to play sports. It turns out that it is physical activity that helps to achieve career success and better life quality. Young people physically active are in a better position later on the labour market and are characterised by a higher life satisfaction. The aim of the article is to present research results on the relationship of the physical activity in high school and while studying for later job and life satisfaction.

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Introduction

The relationship between sport, child and youth development and education was first formalised in the international dimension in 1952, when the United Nations Educational, Scientific and Cultural Organization (UNESCO) recognised sport as an educational tool (SDP IWG, 2008). Sport helps in the development of a person because it provides educational experiences that are difficult to duplicate in a school's classroom. While playing sports, competitors are forced to act quickly and efficiently under time pressure. It is important to work on one's own imperfections

and perseverance in it. It is believed that through sport an individual can develop teamwork skills, communication, problem solving ability and stress resistance (Bailey et al., 2013).

Research conducted in Canada (Curtis et al., 2003) showed that participation in organised high school sports was associated with later higher earnings. Among men who did not graduate from high school, the difference in earnings exceeded 8%, and among those who did graduate, over 14%, in favour of those playing sports. However, among women the differences were not so pronounced. In another study (Anderson, 2001) the difference in earnings in favour of physically active people amounted to 13% among men and 7% among women. Playing sports in childhood also increases the likelihood of working in a managerial position in the future (Cabane, Clark, 2013). In addition, playing sports while studying is also combined with subsequent bigger career success (Eccles et al., 2003). For example, men in managerial positions who played sports during their studies earned later USD 1,337 a year more than those who did not play sports (Caudill, Long, 2010). Greater successes and earnings may result from the fact that physically active students are characterised by good health, have high self-esteem, like to compete and are persistent in pursuing their goals (Pfeifer, Cornelissen, 2010). It is worth adding that playing sports brings benefits at every stage of life, which is why increasing physical activity at a later age can have a positive impact on the professional situation (Lechner, Sari, 2014). According to M. Lechner (2009), playing sports translates into higher earnings by exactly EUR 1,200 per year. Interestingly, being physically active also increases the likelihood of employment by 4.7% (Kavetsos, 2011).

Proper physical activity, regardless of age, also affects well-being and life quality and is the most effective element in the prevention of civilization diseases (Sieńko-Awierianów, Wesołowska, 2011). According to M. Jungiewicz and A. Marchewka (2008) “physical education has a great impact on improving the current and future quality of life. Creating a habit of physical activity at the level of primary and junior high school, followed by the development and improvement of acquired competences in high school prepares for physical activity for life”. It is worth adding that physical activity before the age of 35 has a significant impact on the quality of life at a later age (Jungiewicz, Marchewka, 2008). Respondents who were physically active in the past assess their current health better and cope better with everyday activities.

An interesting example of people who practiced sports at a young age and later achieved career success are the presidents of the United States, since 13 of the last 19 have practiced sports while they were studying (Athlete Network, 2012). They did different disciplines, ranging from boxing to dance performances – cheerleading. For example, Bill Clinton played rugby, George W. Bush did cheerleading, and Barack Obama played basketball. It is also worth noting that many CEOs of the largest

American corporations in their youth practiced sport (Snyder, 2014). For example, Jeff Immelt (General Electric) played American football and Brian Moynihan (Bank of America) played rugby. Interestingly, some of them presented high sports skills, were captains of their teams and had a chance to become professionals (e.g., Walter Rob – Whole Foods, and Alan Mullay – Ford). Intriguing are the words of J. Immelt (CEO at General Electric) about his adventure with sports: “It was great to be a part of a team that had wanted to do something very dramatic and wanted to win. Not every play works, not every situation works, but you’ve got to figure it out, and there’s always a next play. And I think all of those things just happen to stick with you for a lot of your life, and in my case for my whole life” (as cited in Elkins, 2015). According to J. Immelt, he moved the culture of pursuit of excellence he learned in sports to the world of business.

In addition, B. Moynihan (CEO at Bank of America) stated that there is a significant relationship between sport and business because “The lessons of leadership do transfer — how to motivate people, how to try to get people to do more than a team can do apart. You can only win in rugby if you play as a team” (as cited in Elkins, 2015). The above statements show that the managers of the largest companies in the United States appreciate the importance of practicing sport for professional work.

Research results (GUS, 2013; EU, 2014) show that practicing sport is the domain of educated and wealthy people. In order to answer the question of whether it is playing sports that contributes to the completion of studies and achieving high earnings, it is worth reaching for research tracking lives of people, from their youth until they are old. Panel data that rely on multiple measurements of the same people are valuable. Thanks to this type of research, it is possible to check, among other things, whether well-educated and wealthy people practiced sport in their youth. If so, it can be concluded that, among other things, playing sports contributed to their achievements. It should be added that more and more scientific articles indicate such a relationship. In Poland, however, this subject is not yet sufficiently popular among scientists. So, the purpose of this article is to determine whether in Poland physical activity in high school and while studying, is important for later satisfaction with one’s work and life.

Playing sports in youth and subsequent career and life success

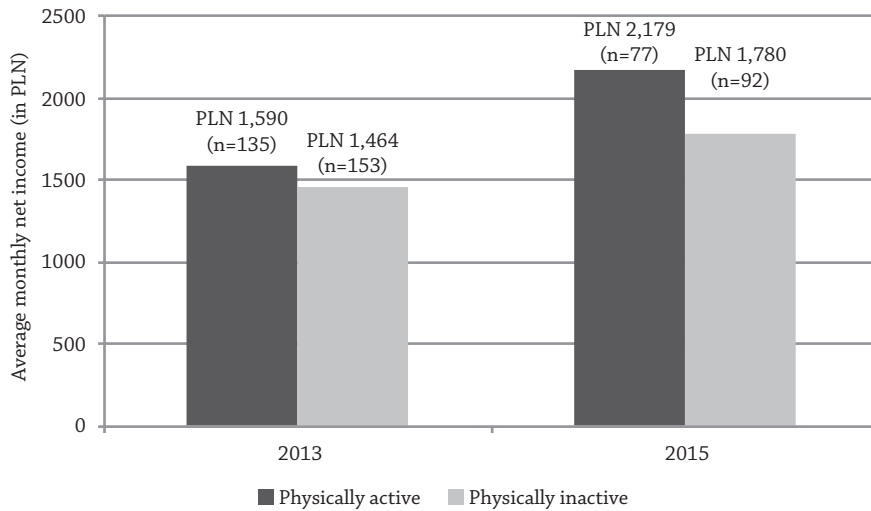
In order to check whether physical activity in high school and while studying is a factor differentiating later work and life satisfaction, a Social Diagnosis database was used. The Social Diagnosis is a comprehensive study of households and the conditions and quality of life of Poles (Czapiński, Panek, 2015). Research under

Social Diagnosis is panel-based. In 2009, the questionnaire used as a part of the Social Diagnosis was supplemented with a question “Do you actively practice any of the forms of sport or physical exercise?”. Respondents could choose from two possible answers: “yes” or “no”. Based on these indications, it was possible to divide the respondents into physically active and inactive people. Time period of the data used is 2009–2015. Four measurements were carried out during this period: in 2009, 2011, 2013 and 2015.

High school pupils and university students were found in the database. It was also checked who of these people combined learning with playing sports. In 2009, 895 people attending high schools and 1,346 students participated in the Social Diagnosis. In 2009, 62.9% of high school pupils and 54.1% of students declared that they play sports. The next step was to consider the occupational situation of these people in 2013–2015. It was decided not to analyse the data from 2011, because too many people continued their education during this period. So, it was possible to check whether the effects of playing sports will manifest themselves after 4 or 6 years. Calculation results regarding the importance of physical activity in high school or while studying for later job and life satisfaction are presented in the following order: 1) monthly income, 2) sense of job satisfaction, 3) having managerial position, 4) life satisfaction, 5) satisfaction with one’s achievements.

People who were physically active in high school or while studying in 2009, achieved later higher average income. In 2013, the difference in average income was almost PLN 126 in favour of physically active people. Then, in two years it increased and amounted to an average of almost PLN 400. Detailed data are presented in Figure 1. The numbers in brackets indicate sample size.

The second indicator considered is a sense of job satisfaction. People who – while being in 2009 in a high school or who were studying at that time and also played sports – more often in 2013 and 2015 chose the answers: “very satisfied” and “satisfied”. Interestingly, physical activity was also associated with more frequent indication of such responses as “rather not satisfied” and “not satisfied”. However, the answer “very not satisfied” prevailed in responses of people who do not practice any sport. Just like the answer “rather satisfied”, which was also more common among physically inactive people in high school or while studying. It is therefore difficult to clearly interpret the results, because playing sports was simultaneously combined with the preference of both very positive and partly negative responses. Perhaps, moderate dissatisfaction of physically active people is due to unfulfilled expectations, because some people probably associated their professional future with sport, which failed to happen. Therefore, such people in their current job may feel a bit unsatisfied or have different expectations.

Figure 1. Average monthly net income in 2013 and 2015 among active and physically inactive high school pupils and students from 2009

Source: The Council for Social Monitoring. *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

Table 1. The distribution of the degree of job satisfaction among people who in high school or while studying in 2009 played sports or did not play sports (in %)

Degree of job satisfaction	2013		2015	
	PA (n=145)	PI (n=146)	PA (n=87)	PI (n=85)
Very satisfied	8.3	6.1	11.6	5.9
Satisfied	37.2	30.8	37.9	35.3
Rather satisfied	34.5	42.5	26.4	40.0
Rather not satisfied	9.0	6.2	13.8	10.6
Not satisfied	7.6	8.9	8.0	3.5
Very not satisfied	3.4	5.5	2.3	4.7

PA – physically active, PI – physically inactive.

Source: The Council for Social Monitoring. *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

When considering the initial professional careers of young people, one also planned to check whether combining education with sport predestines to managerial positions after graduating. Detailed data is presented in Table 2. Average values show that people who practiced sport in high school or while studying in 2009, later more

often occupied managerial positions. It is also worth noting how the percentage of managers increased – it doubled in two years. This is probably due to the promotions of young people to senior positions.

Table 2. Percentage of persons performing managerial functions in 2013 and 2015 among physically active and high school pupils and students from 2009

Year	Physically active	Physically inactive
2013 (n=262)	6.1	4.6
2015 (n=161)	12.2	10.1

Source: based on The Council for Social Monitoring, *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

Next, the respondents' answers to the following question were analysed: how do you assess your current life? It should be noted that both groups (active and physically inactive high school pupils or students from 2009) most often chose the “pleasing” answer. It is worth mentioning that in both periods (2013 and 2015) people who played sports in high school or while studying in 2009, chose the “delightful” answer more often, and people who did not play sports then, more often chose the “mostly dissatisfying” answer. Detailed data is showed in Table 3.

Table 3. Distribution of answers regarding current life among people who were physically active or inactive in 2009 when in high school or while studying (in %)

Assessment of one's life	2013		2015	
	Physically active (n=311)	Physically inactive (n=265)	Physically active (n=144)	Physically inactive (n=137)
Delightful	8.7	7.5	9.7	8.8
Pleasing	50.8	46.4	46.5	48.2
Mostly satisfying	31.2	31.3	28.5	32.8
Neither good nor bad	6.8	11.4	13.2	6.6
Mostly dissatisfying	1.9	3.0	0.7	2.9
Unhappy	0.3	0.4	1.4	0.7
Terrible	0.3	0.0	0.0	0.0

Source: based on The Council for Social Monitoring, *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

Next, the satisfaction with life achievements was checked. The responses of the respondents in both compared groups were similar, but it is worth pausing to consider that those who were physically active in high school or while studying in 2009, more often, in both rounds of Social Diagnosis, chose the answer “very satisfied”. Detailed responses of the respondents are presented in Table 4.

Table 4. Distribution of the level of satisfaction with one’s achievements to date among physically active and inactive people in high school or while studying in 2009 (in %)

Level of satisfaction with one’s achievements	2013		2015	
	Physically active (n=312)	Physically inactive (n=265)	Physically active (n=143)	Physically inactive (n=137)
Very satisfied	15.1	10.6	13.3	9.5
Satisfied	35.6	38.9	38.5	33.6
Rather satisfied	34.5	30.1	30.7	41.6
Rather not satisfied	9.0	12.1	10.5	8.8
Not satisfied	4.2	7.2	4.9	3.6
Very not satisfied	1.6	1.1	2.1	2.9

Source: based on The Council for Social Monitoring. *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

Using the non-parametric U Mann-Whitney test and Pearson’s chi-square test, it was checked whether the differences in individual indicators of life and job satisfaction were statistically significant. A summary of the results of all statistical analyses is presented in Table 5.

Table 5. The importance of physical activity for indicators of job and life satisfaction of people who played or did not play sports in high school or while studying in 2009

Pos.	Indicator	Did physical activity prove to be a factor differentiating a given indicator?	
		2013	2015
1	Monthly income	No (p=0.213)	No (p=0.104)
2	Sense of job satisfaction	No (p=0.209)	No (p=0.497)
4	Performing a managerial function	No (p=0.583)	No (p=0.677)

cont. table 5

Pos.	Indicator	Did physical activity prove to be a factor differentiating a given indicator?	
		2013	2015
5	Satisfaction with life	No (p=0.101)	No (p=0.770)
6	Satisfaction with achievements	No (p=0.201)	No (p=0.281)

Source: based on The Council for Social Monitoring. *Social Diagnosis*: The integrated database. Retrieved from: www.diagnoza.com (access: 9.05.2017).

The study was supposed to check whether physical activity in high school and while studying is a factor differentiating subsequent satisfaction with life and work. Tracing lives of former high school pupils and students made it possible to see how the beginnings of their careers are shaped. Study results indicate that there are no statistically significant differences (indicated by $p > 0.05$). However, the lack of significance may result from the small number of compared groups. For example, in the case of income in 2013, the two compared groups comprised a total of 288 people, and in 2015 just 169 people. It stems from the fact that in each subsequent round of *Social Diagnosis* the number of respondents from previous years decreased.

Conclusions

Increasingly often, literature states that sport has a positive effect on professional life and thus on life satisfaction (Barron et al., 2000; Bailey et al., 2013). In Poland, however, this subject is not yet sufficiently popular among scientists. There are no Polish studies that would raise the issues described in this article. It should be added that this study is one of the first attempts to verify this assumption in Poland.

Another important aspect is that the promotion of physical activity in Poland should be particularly important among young people, because almost 40% of youth from secondary schools does not participate in physical education lessons (NIK, 2013). Moreover, in Polish schools, in four years (from 2012 to 2016), the percentage of overweight, obese or underweight children and adolescents increased by more than five percentage points and in 2016 amounted to as much as 22% (NIK, 2017). It is worth remembering that healthy habits learned in childhood usually remain for life, so it is important to teach children from an early age. According to K. Kwilecki (2011) "the earlier the habit of pro-health behaviour is instilled, the greater the chance for a longer life without diseases".

Summing up the results of this study, it can be said that the differences in the average monthly personal income between people who in high school or while studying in 2009 were physically active or inactive, indicate that physical activity can be a factor increasing income in a later career. In the case of a sense of job satisfaction, people who played sports at school, presented more often later in life a higher level of satisfaction. Looking at the average values, one can also get the impression that combining sports with education in high school or while studying is conducive to performing later a managerial function. People practicing sports also more often indicated high levels of satisfaction with their lives and achievements. To conclude, however, it should be stated that despite some noticeable differences one cannot say that they are statistically significant. The lack of statistically significant differences may result from the insufficient number of compared groups, because due to the nature of the study, they considerably decreased in time. The reason may also be that the positive effects of physical activity can only be fully observed after a long time. In this study, however, the observation period could not be extended beyond 2009–2015. Therefore, in order to deepen the analysis of the importance of playing sports in high school or while studying, it would be worthwhile in subsequent studies to extend the observation period and increase the research sample.

It is worth paying attention to some suggestions indicating that the positive impact of physical activity on earnings may be manifested only after some time – in the case of high school pupils – only five years after leaving school (Howell et al., 1984). The best effects, however, are visible even later, when professional careers are fully developing. Only then one can reliably assess whether playing sports has had any effect. According to J.E. Long and S.B. Caudill (1991), the minimum period to observe positive effects is five years from graduation. It is only after this period that the earnings of people who were physically active in their youth begin to exceed the earnings of people who did not play sports.

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