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Assessment of lifestyle of American football players training in Poland

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Summary

Introduction

In recent years, American football has gained a wide range of supporters in Poland and the number of people regularly training is growing. With the increasing curiosity about American football, many questions are asked about the sport and the people training it, especially regarding the lifestyle of players.

Aim

The aim of the study was to determine the lifestyle of American football players with particular emphasis on the assessment of health behavior and health risk determinants.

Material and method

The study authors used a questionnaire in an electronic form sent out to the leaders of American football teams in Poland.

The study included 400 people - members of sports clubs. The statistical method was the Chi square test. The adopted level of significance was $p < 0.05$.

Results

Among the respondents, 82% (327 people) assessed their physical fitness as good or very good. Evaluation of physical fitness is strongly correlated with the age of the respondent. Athletes to 30 years of age much better assessed their efficient than older respondents (Chi2 = 150.3032; p = 0.0000).

More than half - 214 football players (54%) admitted that they do not use diet supplements. The remaining part - 186 respondents (47%) - answered in the affirmative. The use of dietary supplements declares a small percentage of the youngest athletes (38%) and 100% of the athletes above 36 years of age F (Chi2 = 51.8212, p = 0.0000).

In addition, 96% of the respondents (384 people) regularly practiced other physical exercises besides training football.

Conclusion

People regularly involved in sports have a noticeable tendency to attach importance to the rational mode of life, which manifests itself in the tendency to regular meals, or a significant reduction in the use of stimulants. This may result in being less prone to many diseases.

Key words: American football, lifestyle, health determinants

Introduction

Physical activity is one of the main components of an active lifestyle, which is in turn one of the main determinants of health, as Lalonde stressed in the last century. Maintaining the appropriate level of this is therefore one of the deciding factors affecting the psychophysical condition of the body [1].

In recent years American football has acquired a wide following in Poland. There has also been an increase in the number of those regularly training. With the growing interest in American football, numerous questions arise regarding this sport and those who practice it. Interest is on the rise, as is the desire to get to know this milieu, particularly in the context of health-related behaviours.

The Polish American Football Association (PZFA) was formed in 2004. The PZFA was founded at the initiative of Poland's first two American football teams – *Warsaw Eagles* and 1. KFA Wielkopolska

The aim of the PZFA is to support newly formed American football teams in Poland, popularise American football in the country and raise the sporting standard for both young people and adults. [2]

American football is characterised by the highest rate of injuries in comparison with other sports. The average player suffers 36 injuries in the course of his career. The most common injuries are to the knee joints, but also to the ankles and shoulders. The most frequent knee injury is damage to the anterior cruciate ligament (ACL) . This is located inside the knee and is the element connecting the back of the thigh bone with the front of the shin bone. This type of injury usually results in the ligament being partly or completely torn [3]. Players in line positions are most vulnerable to knee injuries, and this joint is the part of the body most sensitive to injuries. Often surgery and long-term rehabilitation are the only way of restoring it to full working condition [3, 4].

Practising sport should constitute an integral part of any lifestyle, as this behaviour fits with the idea of promoting health with regard to disease prevention, and behaviour and reinforcement of health in general [5].

Aim

The aim of the paper is to become acquainted with the lifestyle of people who regularly train American football, and to assess the lifestyle taking into consideration health determinants in terms of vulnerability to disease and injury.

Material and methods

The research method used was a diagnostic survey, computer assisted web interviewing (CAWI) and the tool used was a specially prepared questionnaire.

The criterion for inclusion in the survey was active participation in a Polish American football team. The sample selection was based on the snowball method normally used in situations where there are difficulties seeking out members of a chosen population. The questionnaires generally reached respondents after being sent to the leaders of their teams and people responsible for online clubs, who then passed them on to their group.

The research resulted in 400 questionnaires being returned. The group being investigated consisted entirely of men. The most numerous age group were 19 to 24-year-olds - 207 people (52%).

Hypotheses were verified using the chi-square method. The assumed significance level was $p < 0.05$.

Results

The most important reason for the respondents practising American football was that this discipline allows them to get away from their everyday lives. 231 respondents agreed with this answers - 58% of all responses. In second place was the “other” response which allowed the footballers to give a reason other than those suggested. The reasons indicated included “love for American football” and “a desire to unload negative emotions on opponents”.

All the players train regularly -at least once a week. 178 people train 1-2 times a week, and 170 people 3-4 times a week, while 52 people admitted that they train 5 or more times a week. The frequency of training depended on the respondents’ professional situation ($\chi^2=265.6428$, $p=0.0000$). Interestingly, though, employed people and those working on commission contracts usually practise 3-4 times a week (96% and 86% of the group respectively), but students only train 1 -2 times a week. The results are presented in Graph 1.

Graph 1. Number of trainings per week vs. occupational situation of player

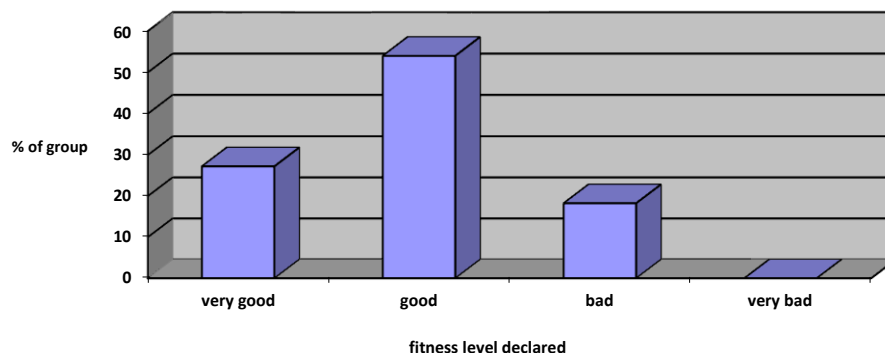


The research indicated that 384 of the respondents also exercise outside the compulsory training sessions - a full 96% of those surveyed. The most popular forms of exercise included gym (337 responses), running/jogging (185 responses) and stretching exercises (166 responses). In addition, the respondents had the chance to include other forms of training than those mentioned in the questionnaire. The most popular turned out to be martial arts, relaxation and conditioning exercises, and specific exercises for positions in the game.

When asked about their physical fitness, 111 respondents (28%) described it as very good, 216 good (54%), and 73 people as bad (18%). None of the athletes choose the response

“very bad” (Graph 2). The assessment of physical fitness correlates strongly with the age of the respondents. Players aged to 30 assessed their fitness significantly better than older respondents ($\chi^2=150.3032$, $p=0.0000$).

Graph 2. Self-assessment of physical fitness



Over half of the respondents admitted that they did not follow a special diet. 163 footballers, or 41% of those surveyed, had changed their nutritional habits because of practising the sport. High-protein diets dominate in the group, far less popular are high-carbohydrate, high glycemic index diets and others. Over half of the respondents plan their own diets. Nearly 30 people (17%) follow a diet prepared by a dietician, with the same percentage using a diet suggested by a trainer. 4 people (2%) marked the response “other” and indicated that their diet had been created by a company that composes diets for athletes and delivers them food for the entire day, or that they followed a footballers’ diet created by a Canadian university.

The results indicate that athletes following any kind of diet, regardless of the type, evaluated their physical fitness better than the remaining respondents ($\chi^2=6.6834$, $p=0.0353$).

As the research shows, 67 respondents had changed their dietary habits in order to strengthen their bodies (41%). Almost as common was changing nutritional habits to gain weight, which 64 people (39%) admitted to doing. 7 people (4% of those surveyed) dieted in order to cleanse their bodies. Respondents were given the chance to provide their own response to the question, by giving a different reason for their diet, and 25 people (15%) did so. The answers filled in by the respondents mainly consisted of “increasing muscle mass while reducing fatty tissue”.

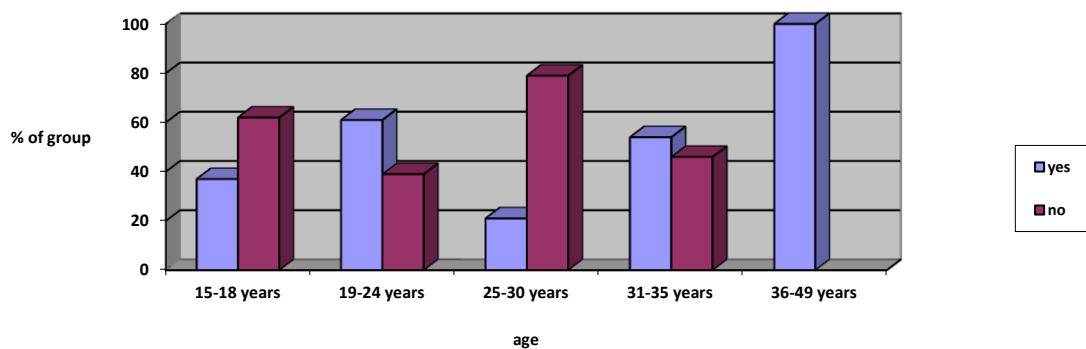
One of the aims of the study was to evaluate how the athletes nourish themselves. When asked “How often do you eat breakfast in the morning?” 299 replied “every day” (75%). 19% of respondents eat breakfast several times a week. More than 350 people (89%) declared that they eat fast-food, of which 48.5% said they did so once a month or less, and 35% several times a month. Only 45 of those surveyed (11%) admitted that they never eat products of this type.

Over 93% of the athletes declared that they eat sweets. 158 among them (40%) indicated that they did so only sometimes, 135 people (34%) rarely, and 80 said (20%) often. The results are similar with regard to fizzy drinks. 356 respondents admitted drinking them (89%), including 137 (35%) who drink them sometimes, 132 (33%) rarely and 87 (22%) often. 44 (11%) of the football players never drink fizzy drinks. A breakdown of the responses to the question about drinking water and/or isotonic drinks shows that nearly half of the athletes - 192 (48%) - drink 1-2 litres of them per day. 138 of those questioned (35%) drink 3-4 litres a day. It is worrying that 59 of them (15%) claimed to drink less than 1 litre of water and/or isotopic drinks a day

Correlating individual questions concerning respondents' diet with their age and professional situation did not reveal any statistically significant dependency ($p>0.05$). The frequency of consumption of breakfasts, fast food, fizzy drinks and sweets does not therefore dependent on the age of the player or the type of job he has.

When asked "Do you use diet supplements?", over half of the footballers (214, or 54%) stated that they did not. Creatine was taken by 90 of the athletes (23%), caffeine by 18 (5%), beta-alanine by 2 (1%), and bicarbonate of soda by one person (0.5%). Most of the respondents – 75 people (19%) - marked "other", with their responses being mainly "protein", amino acids" and "joint supplements". Relatively few of the youngest players admitted to using diet supplements - 38% as opposed to 100% of those aged over 36 ($\chi^2=51.8212$, $p=0.0000$). The correlation between a respondent's age and use of diet supplements is presented below.

Graph 3. Player's age vs. use of dietary supplements



The study showed that most often devoted 6-8 hours a day to sleeping (70% of those surveyed). 72 gave the response "9-10 hours" (18%), while 43 answered "6 hours or less" (11%) and 6 of the sportsmen slept for over 10 hours (2%). Nearly half of them claimed that they feel tired after getting out of bed (49%). Only 6% never have such problems. Table I presents the relationship between the number of hours per day devoted to sleeping, and having a proper sleep. The largest group are those who sleep for 6-8 hours a day, with 33% of them sometimes feeling tired after getting up in the morning.

Table I. Correlation between duration of sleep per 24h and feeling well-rested

How many hours a day do you spend sleeping?	Do you feel tired after getting up in the morning?				Total (n)
	Usually (n)	Sometimes (n)	Rarely (n)	Never (n)	
6 hours or less	12	26	5	0	43
6-8 hours	50	132	83	14	279
9-10 hours	8	35	23	6	72
10 hours or more	1	2	1	2	6
Total	71	195	112	22	400

When asked "How often do you drink alcohol?", a third replied "several times a month", and 34% "less than several times a month". The response given by the fewest respondents was "I

never drink” – 58 people (15%), “once a week” – 53 people (13%), “several times a week” – 32 people (8%).

A relationship exists between the frequency of alcohol consumption and the age of the respondent ($\chi^2=110.0540$, $p=0.0000$). The most common response given by players aged 18 and under was “several times a month”, while all the oldest participants declared that they consumed alcohol less than several times a month. The age group who drink alcohol most often (several times a week) are the 25-30-year-olds.

Most of the footballers surveyed do not currently smoke cigarettes. There were 301 of them, accounting for 75% of all respondents. The remaining 99 people (25%) replied in the affirmative to the question. Due to the effects of smoking on physical fitness, confirmed by many studies, the relation between smoking and the self-evaluation of physical fitness was investigated. No such connection was discovered in this study, though ($p>0.05$).

The diet of the group of players surveyed was based on providing a large amount of protein, which is typical of people practising sports requiring great physical effort. The average weight of the sportsmen in the group was around 90 kilograms with a height of 181 cm. The BMI for these parameters is 27.5, which is typically considered overweight. It should be remembered, however, that the physique of sportsmen is slightly different to that of people leading a different lifestyle. The American football players in the study take care to eliminate as much fatty tissue as possible, while simultaneously increasing muscle mass, hence they are not overweight in the classic sense.

Discussion

The negligible amount of publications dealing directly with the matter in question is an obstacle to discussion in the present work. In 2002, the IPAQ (*International Physical Activity Questionnaire*) study was carried out in 15 EU states. This showed that over 60% of those surveyed spent time on activities which do not require physical effort - sitting at desks, watching television or reading. The average time spent on those activities varied between 1.3 - 5.3 hours a day. A full 57% of them had not performed any physical activity during the 7 days preceding the survey. Only 8% of those surveyed practised any physical activity once a week. 41% of respondents reported a total lack of active movement. [6] Correlating those results with our own study, in which 100% of the respondents exercise at least once a week, reveals a huge difference. Such a result leaves no doubt, and shows unambiguously that a commitment to practising a specific sporting discipline at a professional or semi-professional level predisposes people to physical exercise on a regular basis.

When studying Poles, the “*Bridging EAST-West Health Gap*”, which showed that 6% of respondents did any physical activity, was borne in mind. A study was conducted in 2004 with the aim of evaluating the situation with regard to participation in sport and in recognising obstacles to doing those activities. It was shown that 38% of those surveyed practised some physical activity at least once a week. 34% of respondents displayed a lack of physical activity and admitted that they never practised sport due to a lack of time [7].

In 1991-1994 in the US, it was shown that 30% of 18-year-olds were involved in physical activity, a percentage which by 2004 had fallen to 24%. The proportion of people training to increase their strength and muscle mass rose, though. In our study, 85% of those surveyed declared that they trained in this way (337 people). The study mentioned earlier indicates that in 1998, 18% of adults practised sport, training twice a week. In 2004, the number of adults training had increased to 20%.

It was concluded on the basis of this research that the level of physical activity in society is still too low to ensure an optimum state of health. In the case of Poland, the physical activity of the population is very low compared to other countries. [8] In 2004, the country’s Main Statistical Office published a report concerning the physical activity of Poles. It

emerged that almost 100% of those surveyed spent at least 1 hour a day on actions requiring no physical effort. On the basis of the Main Statistical Office's research from 2006, it was concluded that the percentage of people practising sport in an organised way decreases with age. 6% of people aged over 15 train 1 hour or more per week at sports clubs, exercise at a gym or practise sport competitively. Only 2% of 40-year-olds were in this category, and for 60-year-olds the figure stood at 1%. [8] It should be emphasised, then, bearing in mind the results of our own study, that one way of getting society moving is encouraging people to regularly practise a chosen sport, at least at an amateur level. The results obtained in our study confirm that such people engage in physical exercise more often and more willingly, even outside their training. This is also confirmed by the research cited below.

In 2011, Woitas-Ślubowska presented the results of a study concerning former athletes compared to a group which had not practised sport either in the past or during the study. The results of this analysis clearly showed that people who have been physically active in the past maintain a high level of motor activity compared to people who lack movement.

This testifies that people for whom physical activity is or has been a basic part of their lifestyle show a greater tendency to exercise during their free time. This thesis is substantiated by the results of our study - a full 384 respondents declared that they exercise outside their compulsory training sessions. This is 96% of those questioned. The most popular exercises practised by them are weight training (337 people).

Woitas-Ślubowska's work studied the behaviours covered by the research mentioned in this paper. These included eating breakfast daily, eating fruit and vegetables daily, and eating sweets daily. The results included in this paper are reflected in the results of our own work. Woitas-Ślubowska points to a greater percentage of people having breakfast every day among men who used to train than among those who never trained [9]. Our study clearly matches these results, with 299 of the respondents declaring that they have breakfast every day, or 75% of those surveyed. It can therefore be postulated that practising sport regularly goes together with displaying other pro-health behaviours, including with regard to diet.

This is particularly important due to the increased need for nutrients due to high levels of physical activity. Insufficient nutrient intake among physically highly active people leads to a risk of nutrient and vitamin deficiency [10]. 163 footballers, or 41% of the respondents, declared that they took into account changes and adapted their diet to their body's needs. 30 people (17%) follow a diet prepared by a dietician, with the same percentage using a diet suggested by a trainer. People in sporting circles are often involved in campaigns to promote health by popularising physical activity [11]. The active lifestyle displayed by the group surveyed, and manifested in their extracurricular exercise among other things, forms such an action.

Conclusions

People who practise sport regularly are noticeably more likely to attach importance to a rational lifestyle, which is manifested in, among other things, a tendency to eat meals regularly, or limit consumption of alcohol, cigarettes and drugs. This may lead to less of a tendency to suffer from many illnesses.

When the results are analysed, the respondents' lifestyle may be considered to be pro-health. Practising sports can be seen to lead to a greater interest in one's own health, particularly in matters connected with nutrition, which is considered one of the basic determinants of health.

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