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Analysis of the Impact of a Passive Interest in Sport on Student Lifestyle

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Abstract

Aim: The aim of the study was to determine the impact of a passive interest in sport on student lifestyle. Particular attention was given to analysing the relationship between the consumption of sports-related content and health behaviour, as well as attitudes toward physical activity.

Methodology: Data were collected using a custom-designed survey questionnaire administered to 258 university students. The data analysis employed the chi-square independence test, correspondence analysis, and classification trees.

Results: The study demonstrated that an interest in sport contributes to a healthier lifestyle among students, primarily by inspiring physical activity. Watching sports broadcasts and attending sports events as spectators proved to be significant determinants of a healthy lifestyle. A statistically significant, albeit weak, correlation between gender and level of interest in sport was also observed.

Implications and recommendations: The findings suggest the need to promote the positive behavioural models exhibited by athletes, as these may motivate young individuals to adopt healthier lifestyles. It is also recommended to expand educational and media initiatives that encourage physical activity, especially among young people.

Originality/value: This study provides new empirical data on the impact of the passive participation in sports culture on the daily health-related choices of young adults. It fills a gap in the literature regarding the social aspects of sports consumption and its influence on lifestyle behaviour.

Keywords: sport, correspondence analysis, chi-squared independence test, classification trees, healthy lifestyle

1. Introduction

The article is structured into five chapters. The introduction (Section 1) and the literature review (Section 2) outline the role of sport in economics and social life. In addition, the determinants of a healthy lifestyle are discussed. Within the introduction, the hypotheses and research questions, constituting an essential component of the analysis, are formulated. The research methodology (Section 3) describes the methods applied to verify the hypotheses and address the research questions. Section 4 presents the empirical findings, while the final part (Section 5) provides a discussion, conclusions, and a summary of the study, including answers to the research questions.

To simplify the matters it can be said that nowadays it is relatively easy to maintain a healthy lifestyle. The Internet offers potential support in this regard, offering healthy recipes, detailed diet descriptions, and videos of exercises that can improve one's health and physique. It is important to remember that, in addition to valuable content, there is also a significant amount of questionable material and controversial unsubstantiated claims about weight loss. Compared to the early 21st century, the number of gyms and fitness clubs has increased significantly. Outdoor gyms are also a common phenomenon, springing up in various cities across Poland (e.g. Wrocław). Furthermore, thanks to the Internet, it is very easy to find a personal trainer and dietitian who can help to choose an appropriate diet and exercise plan, and create a personalised training plan in order to lose weight or increase muscle mass. Despite these modern conveniences, obesity is one of the most serious diseases of civilisation. It is important to remember that obesity can have various causes, including adverse drug reactions or illnesses. Access to gyms, personal trainers, and dietitians entails significant expense that may exceed the means of the average wage earner.

In addition to the development of active lifestyles, the availability of passive forms of participation in sports activities has significantly increased in Poland. Thanks to the 2012 UEFA Men's European Football Championships held in Poland and Ukraine, among other factors, numerous modern stadiums were built. A significant number of these facilities have numerous facilities for people with disabilities, ensuring that everyone can participate in sports-related events. A significant increase in accessibility to the passive participation in sporting events can also be seen in the area of watching sports events. By purchasing appropriate packages offered by digital and streaming platforms, it is possible to spend many hours watching football, hockey, volleyball, and many other matches. However, as with active forms of participation in sport, the financial aspect remains a crucial factor.

Comparing the aforementioned infrastructure development, increased access to specialists in healthy eating and exercise, and the ability to independently search for information online, with the growing number of people suffering from obesity, one might get the impression of a certain dissonance, yet it should be noted once again that using gyms, seeking specialist advice, and purchasing appropriate products often requires significant financial outlay. However, if attention is directed solely to the increased promotion of sport, whether actively (through participation) or passively (watching matches on television or attending sporting events, e.g. at a stadium or indoor arena), one might get the impression that the significant popularisation of sport has not been accompanied by improvements in public health and well-being. In order to verify this hypothesis, three research questions were posed:

- Does an interest in sport depend on gender, i.e. is the percentage of men interested in sport equal to the percentage of women?
- What most significantly influences interest in sport among students?
- Do forms of passive interest in sport, such as watching sports broadcasts or attending sports events as a fan, have a real impact on implementing good dietary practices and an active lifestyle?

2. Literature Review

Sport is undoubtedly a crucial element of social life. Whether viewed as entertainment or business, it has become deeply ingrained in the broader social system. Antonowicz and Wrzesiński (2009, p. 122) defined the fans as "a religious community, united by the cult of the sacred idea of the club, with its own religious guides." Their devotion to the club extends beyond simply attending the stadium and watching matches. It involves a specific subordination of life, daily and weekly schedules, to attend the match, travel (in the case of an away match), and purchase additional fan merchandise, from typical items such as T-shirts, scarves, and hats to keychains, mugs, and pillows. Antonowicz and Wrzesiński (2009) argued that from a fan's perspective, a sporting event is a kind of liturgical ceremony, and the venue (stadium or arena) becomes a sanctuary. It is impossible not to notice, however, that many clubs strive to cash in on their fans' faith as much as possible. Antonowicz, Kossakowski, and Szlendak (2011, p. 127) called this the "supermarketisation of the stands." Just entering the stadium can be a significant expense for even the most ardent fan. While purchasing a single match ticket costs several tens of zlotys, season tickets can cost over 1,000 zlotys. VIP season tickets represent an even greater potential expense for fans, with prices in some cases reaching as much as 4,600 zlotys in the 2023/2024 football season (a Super VIP season ticket at the ŁKS Łódź stadium) (Śliwiński, 2023).

It is also worth noting the important role sport plays in economics. Besides analysing the sports events themselves (for example, in the case of attempting to predict the outcome and potential profits from betting), it is also possible to study everything that happens around the events, including the commercialisation of sport. Furthermore, the issue of sport, at the intersection of economic and sociological analyses, can concern tourist activity, the educational process, and be a significant factor in medical procedures (Fiedor, & Gorynia, 2021). It is also important to remember that sport, broadly defined, is not only about practicing it – professionally or as a hobby – but also involves (especially important in the economic context) a certain number of additional jobs. Grabowski (2014) noted that in 2005, over 1.1 million people in Germany found employment in sports-related jobs, representing over 3% of all employees. In Austria, a country strongly associated with winter sports, over 5% of the workforce—205,863 people—were employed in the sports sector (Grabowski, 2014).

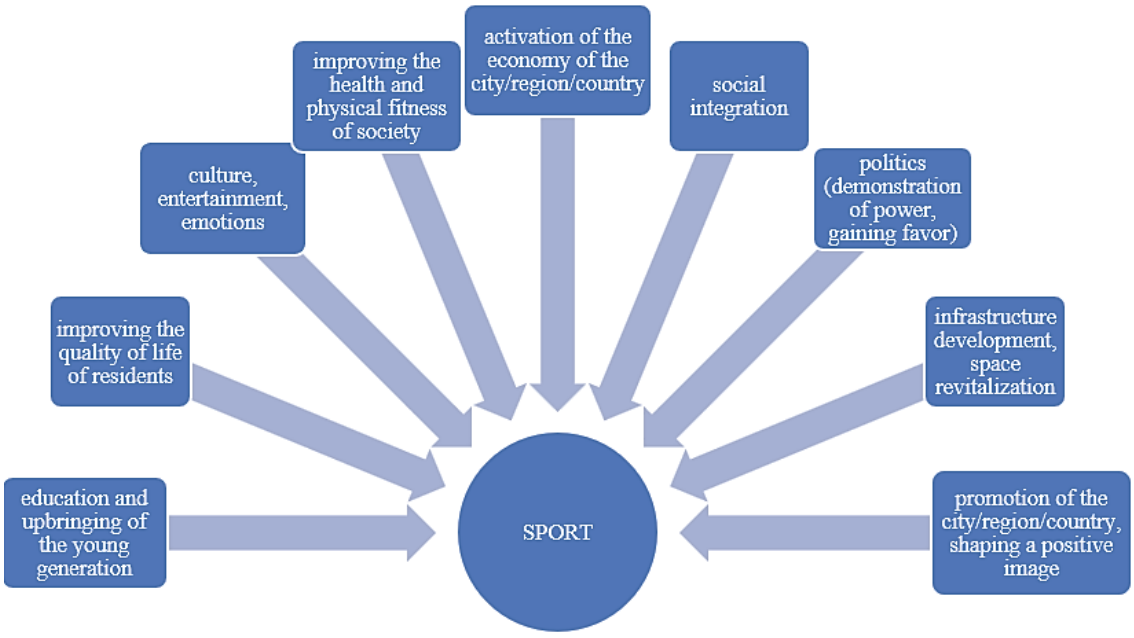

Fig. 1. The contemporary role of sport

Source: own elaboration (based on (Wiśniewski, 2012)).

The Olympic Games are by far the most important sporting event. Their organization, however, is associated not only with splendour and prestige but, above all, with great expenditure. Just a few decades ago they were held primarily in Western Europe (e.g. Munich in 1972, Barcelona in 1992) and North America (e.g. Atlanta in 1996) (Rotkiewicz, 2012). Nowadays the Olympic Games have become an attempt to improve the image of the organizing country, as was the case in 2008 with the XXIX Summer Olympic Games, which took place in Beijing. Wiśniewski (2012) suggested that the contemporary role of sport relates not only to health and cultural aspects, but also to politics and the promotion of the city/country see Figure 1).

Nessel (2016) pointed out that although hosting the Olympics rarely yields a favourable economic outcome, it is image-related issues that encourage countries like China to undertake such a large undertaking. On the other hand, perhaps by investing in sports infrastructure, countries not previously known for achieving good results in sports will significantly improve their standing in the sports arena. Andreef and Szymanski (2006) confirmed that countries with larger populations, wealthier nations, and those able to guarantee a variety of disciplines achieve better results at sports events. Furthermore, Matheson and Baade (2004) stressed that hosting major sporting events can become an economic stimulus, citing the 2002 FIFA Men's World Cup held in South Korea and Japan as an example. This is because organizing such a large event requires not only sports infrastructure (stadiums, halls, swimming pools, tracks, etc.) but also hotels, roads, and a broadly defined catering service. A similar situation was also encountered in Poland during the co-hosted European Men's Football Championship in 2012. Increased tourist traffic was observed – as many as 60% of fans visited Poland for the first time during the 2012 Championship (Borzyszkowski, 2012). A similar situation, in the context of tourism development and popularisation of the country as a tourist destination, occurred during the FIFA World Cup, which was held in Russia (2018) and Qatar (2022). However it should be noted that in both host country selections, there is a suspicion of corruption, with the authorities of the International Federation of Association Football (FIFA) being accused of corruption, and the championships themselves organized primarily to improve the country's image (Nessel, 2016).

Moreover, it is important to remember that physical activity (active participation in sport) is just one of the pillars of a healthy lifestyle. One of the fundamental factors influencing human health is sleep. Research indicates that prolonged sleep deprivation contributes to the development of diabetes, increased cholesterol levels, and hypertension (Krajewska et al., 2017). Furthermore, sleep disorders affect stress levels. Sleep duration of less than six hours leads to higher stress levels (Krajewska et al., 2017), yet stress is often the cause of sleep problems, thus creating a vicious cycle. The consequences of stress can be truly diverse: from nausea, stomach aches, and headaches, to speech disorders, aggression, and apathy (Biskupek-Wanot et al., 2020). Another problem that long-term sleep deprivation contributes to is obesity, which, in turn, has a very negative impact on human health. Obesity is the most common cause of cardiovascular problems and contributes to the development of atherosclerosis (Drygas, 2006). According to the research conducted in Łódź at the turn of 2001 and 2002, 61.6% of people reported having a sedentary lifestyle, while among women, this percentage reached 69.6% (Drygas, 2006). Once again a vicious cycle can be observed, which is difficult to break. Reduced activity leads to obesity and a greater susceptibility to vascular diseases, and this in turn, makes these people less likely to engage in even the simplest forms of physical activity, such as leaving the house to go shopping. Jeukendrup and Gleeson (2019) indicated a diet rich in fruit and vegetables, occasional alcohol consumption, and regular physical activity as important factors influencing human health and immunity, and also noted that stress and lack of sleep can significantly lower immunity. Sadowski (2020) concluded in a similar vein, speaking more from an athlete's perspective, pointing out how poor diet, sleep deprivation, and prolonged stress can adversely affect health and immunity. This raises a different issue: when an infection occurs, treatment is necessary. According to ECDC (European Centre for Disease Prevention and Control) research, Poland ranks fifth in terms of antibiotic use per capita, and their frequent usage can have negative consequences for the patient's health (Mikołajska, 2024).

Another crucial aspect of a healthy lifestyle is a well-balanced diet, including whole grains, vegetables, fruit, and dairy products. Proper nutrition and physical activity help maintain a healthy BMI (Body Mass Index); based on data from worlddata.info (as of April 2024), the average BMI of Poles falls within the overweight range, at 27.4 for men and 26.1 for women. Ostrowska (1999) emphasised that key determinants of health also include the complete elimination of stimulants, regular preventive examinations, appropriately maintained sexual activity, and social support. However, considering the realities of today's world and comparing it with observations from everyday life, this proves to be a challenging task. It is therefore not surprising that more and more people are seeking the advice of specialists such as psychologists, dietitians, and personal trainers. Given the important role of sport, both in the economy and in human life, it was decided to examine the impact of sports on lifestyle.

3. Methodology

3.1. Survey Research

The survey was based primarily on studies by Hague (2006), Fatuła (2007), and Krok (2015), and it was electronic in nature, both in terms of its completion and distribution method. A snowball sampling method was employed, which involved sending the survey to students with a request to share it with other students. This method is usually used for specific population groups, e.g. immigrants or drug addicts (Jabłońska, & Sobieraj, 2013), but in this study, due to the lack of access to a sampling frame enabling the selection of a representative sample, its use was motivated by the desire to reach the widest possible group of students. Another objective of employing this method was to enhance the responsiveness of the surveys. However, this limits the possibility of generalising the obtained results to the entire population.

In terms of the survey design, the principles outlined by Fatuła (2007) were followed, including:

- appropriate questionnaire length,
- page layout and readability (to avoid discouraging the respondent),
- absence of unnecessary questions (those that will not be included in the analysis),
- well-thought-out order of questions (from general to specific),
- vocabulary, grammar, and style used,
- suggestiveness,
- emotionality and sensitive issues included in the questions.

As responses to closed-ended questions are much easier to analyse, only this type of question was employed, the exception being the possibility of adding a personal answer if, in the respondent's opinion, none of the provided answers were appropriate (semi-open questions). A five-point Likert scale was used to generate possible answers to closed-ended questions. The following rules were applied to construct the response scale (Klimas, 2021):

- appropriate evaluation of respondents' responses,
- having a neutral value,
- symmetry, i.e. having the same number of responses on both sides of the neutral value,
- homogeneity, i.e. containing homogeneous and contradictory responses.

The questionnaire for the respondents consisted of several questions, including gender, declared interest in sports, and participation in sports events as a spectator. All questions were closed-ended, with answers provided. The survey participants were students, defined as individuals currently enrolled in an educational programme and aged between 18 and 26. Each question specified whether it pertained to passive or active participation or interest in sport. Participation was considered to encompass both competitive and recreational physical activities.

3.2. Chi-squared Test of Independence

The basic tool for examining the relationship between metric variables is the Pearson linear correlation coefficient. Its equivalent for nonmetric variables is the chi-squared test of independence (Witkov, & Zengel, 2019). The formula for calculating the chi-squared statistic is (Słowińska, 2019):

$$\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij}-E_{ij})^2}{E_{ij}}, \quad (1)$$

where
O_{ij} – empirical frequencies, E_{ij} – theoretical frequencies, r – number of categories of the first variable, k – number of categories of the second variable, i – row number, j – column number.

The number of degrees of freedom is determined based on the rules (Aczel, 2000; Pułaska-Turyna, 2008):

- if $r > 1$ and $k > 1$, then $df = (r-1)(k-1)$,
- if $r = 1$ and $k > 1$, then $df = k - 1$,
- if $r > 1$ and $k > 1$, then $df = r - 1$,
- when $r = k = 1$, in such a case, the test of independence cannot be applied.

As indicated by Kwasiborski and Sobol (2011), when the sample size exceeds 40 observations and empirical frequencies are smaller than 5, the chi-square test of independence with Yates' correction is recommended. The formula for the chi-squared test with Yates' correction is (Kończak, & Chmielińska, 2013):

$$\chi^2 = \sum_{i=1}^{2} \sum_{j=1}^{2} \frac{(|O_{ij}-E_{ij}|-0{,}5)^2}{E_{ij}}. \quad (2)$$

Regardless of whether the test is performed with Yates' correction (2) or without (1), the null hypothesis of independence of the tested variables is verified each time. The alternative hypothesis is the negation of this statement, i.e. the dependence of the tested variables is demonstrated. The critical region is constructed based on the chi-squared distribution, while determining the critical value requires determining the number of degrees of freedom and the significance level (Słowińska, 2019).

3.3. Correspondence Analysis

Correspondence analysis is a data mining technique that involves dimensionality reduction (Stanimir, 2012). Its goal is to present the co-occurrences of categories of two or more variables in a two-dimensional or three-dimensional space, enabling their visualisation while preserving the data structure and relationships between them (Nenadic, & Greenacre, 2007). For correspondence analysis to be meaningful, the chi-squared test of independence described above must first be conducted. Only if the null hypothesis is rejected in the independence test can correspondence analysis be applied.

The entire procedure for correspondence analysis is based on the studies by Stanimir (2011), Stanimir (2012), Machowska-Szewczyk and Sompolska-Rzechuła (2010), Wawrzyniak (2011), and Nenadic and Greenacre (2007). The first step is to compute the matrix of standardised differences (Stanimir, 2012):

$$\mathbf{A} = \mathbf{D}_{\mathrm{r}}^{-\frac{1}{2}}\left(\mathbf{P} - \mathbf{r}\mathbf{c}^{\mathrm{T}}\right)\mathbf{D}_{\mathbf{c}}^{-\frac{1}{2}}, \quad (3)$$

where
$\mathbf{D}_{\mathbf{r}}$ – row frequency matrix, $\mathbf{D}_{\mathbf{c}}$ – column frequency matrix, **P** – observed frequency matrix, **r** – row marginal frequency vector, **c** – column marginal frequency vector.

The next step is to decompose the matrix **A** into singular values (Stanimir, 2012):

$$\mathbf{A} = \mathbf{U}\boldsymbol{\Gamma}\mathbf{V}^{\mathrm{T}}, \quad (4)$$

where
Γ – a $k \times k$ diagonal matrix of the non-zero singular values of matrix **A**, arranged in non-increasing order, **U** – a $((r-1) \times k)$ matrix of left singular vectors, **V** – a $((c-1) \times k)$ matrix of right singular vectors.

Based on the singular values, the projection coordinates of the categories stored in the rows (matrix **F**) and columns (matrix **G**) of the contingency table are determined (Stanimir, 2012):

$$\mathbf{F} = \mathbf{D}_{\mathbf{r}}^{-\frac{1}{2}}\mathbf{U}\boldsymbol{\Gamma}, \tag{5}$$

$$\mathbf{G} = \mathbf{D}_{\mathbf{c}}^{-\frac{1}{2}}\mathbf{V}\boldsymbol{\Gamma}. \tag{6}$$

To assess the quality of the mapping, indices based on the total inertia λ are used (Stanimir, 2011):

$$\mathrm{tr}\mathbf{A}^{\mathrm{T}}\mathbf{A} = \mathrm{tr}\mathbf{A}\mathbf{A}^{\mathrm{T}} = \mathrm{tr}\Lambda = \frac{\chi^2}{\mathrm{n}} = \lambda = \sum_{\mathrm{k}=1}^{\mathrm{K}}\gamma_{\mathrm{k}}^2 . \tag{7}$$

The total inertia is the sum of the principal inertias. The squares of the singular values are eigenvalues. The first principal axis is created using the highest eigenvalue λ_1. Hence, this eigenvalue has the greatest contribution to explaining the total inertia (Stanimir, 2012). After graphically presenting the results of correspondence analysis, it is possible to make an interpretation based on the position of points on the plane (in the case of a two-dimensional presentation). The close proximity of categories of two different variables to each other means that their co-occurrence is common (Stanimir, 2012). Furthermore, points located close to the projection centre have the least impact on rejecting the null hypothesis of independence of the studied variables (Stanimir, 2012). Based on this it can be concluded that points located furthest from the projection centre have the greatest impact on rejecting the hypothesis of independence of the studied variables. For a pair of analysed variables it is possible to determine the actual co-occurrence space of the variables based on the formula (Wawrzyniak, 2011):

$$K = \min\{r-1; c-1\}, \tag{8}$$

where
r – number of categories of the first variable, c – number of categories of the second variable.

3.4. CHAID Classification Trees

According to the definition provided by Łapczyński (2010), classification trees are non-cyclic graphs consisting of a root with at least two nodes (leaves). Matczak and Kozłowski (2011) further pointed out that trees are a type of hierarchical cluster analysis. The goal of building trees is to obtain groups that are as homogeneous as possible in terms of the dependent variable (Łapczyński, 2003). As observed by Larose (2006), the main advantage of presenting results using classification trees is their simplicity and the ease of identifying the rules underlying the classification. In this paper, CHAID (Chi-squared Automatic Interaction Detection) trees were used, while partitioning into individual nodes was based on the chi-squared statistic. To perform the partitioning, the chi-squared statistic was calculated for each variable. The variable with the lowest p-value was selected, suggesting the most significant split in the population (Zasłona, & Ząbkowski, 2018).

The procedure for creating a classification tree involves several steps (*Internetowy Podręcznik Statystyki*, n.d.):

- defining criteria for assessing classification quality,
- selecting a splitting method,
- creating a stopping rule for the tree creation process,
- selecting a tree based on size.

To avoid overfitting the tree a stopping rule is applied, which involves specifying the minimum node size. Overfitting is a common phenomenon, especially in CHAID trees, and occurs as a result of excessive tree growth (Łapczyński, 2003).

4. Results

Due to the nature of the collected data, simple and yet in the author's opinion, adequate research methods were selected. The primary tool was the chi-square test of independence, a simple tool for identifying relationships between categorical variables. Correspondence analysis and CHAID classification trees were used to visualise these relationships. The data necessary to examine the relationship between passive interest in sports and lifestyle were collected via an online survey conducted among students between January and March 2024. A total of 258 individuals participated in the study of whom 160 were men (62%) and 98 women (38%). The data were aggregated into contingency tables.

In each case the null hypothesis for the chi-squared test is independence of the variables, while the alternative hypothesis is the negation of this, i.e. the existence of a relationship between the variables. The significance level for this study was $\alpha = 0.05$. First, the author examined whether interest in sport differed by gender. Table 1 presents the contingency table based on the survey data.

Table 1. Contingency table for variables: gender and interest in sport

Are you interested in sport?/Gender	Men	Women	Total
Agree	156	84	240
Disagree	4	14	18
Total	160	98	258

Source: own elaboration.

Based on the information in Table 1, the chi-squared test statistic was calculated as $\chi^2 = 13.007$, which means that with df = 1 and a significance level of $\alpha = 0.05$, the null hypothesis of independence of the studied characteristics should be rejected. Therefore, it should be concluded that there is a relationship between gender and interest in sport.

The next pair of characteristics tested for a relationship was gender and regularity of attending sports events. The contingency table is presented in Table 2.

Table 2. Contingency table for variables: gender and participation in sports events

Attending sporting events as a spectator/Gender	Men	Women	Total
Never	72	50	122
Several times a year	74	42	116
At least once a month	8	6	14
At least once a week	6	0	6
Total	160	98	258

Source: own elaboration.

Based on the contingency table presented in Table 2, the test statistic was calculated as $\chi^2 = 4.43$. For a significance level of $\alpha = 0.05$ and three degrees of freedom, the critical value was 7.81, which means that there is no basis for rejecting the null hypothesis of independence of the studied variables.

Regarding issues strictly related to testing the hypothesis about the impact of passive interest in sport on lifestyle, the relationship between keeping up with sports events, e.g. watching sports broadcasts, and regular sports participation was examined. The contingency table for this pair of characteristics is presented in Table 3.

Table 3. Contingency table for variables: being up to date with current sports events and regular engagement in sports activities

Being up to date with current sports events/Regular engagement in sports activities	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
Strongly agree	16	16	0	0	0	32
Agree	30	6	10	6	0	52
Neither agree nor disagree	26	4	0	4	6	40
Disagree	10	30	0	18	10	68
Strongly disagree	0	24	10	10	22	66
Total	82	80	20	38	38	258

Source: own elaboration.

Based on the contingency table, the χ^2 statistic was calculated as 104.9. At a significance level of $\alpha = 0.05$ and with 16 degrees of freedom, the hypothesis of independence of the studied variables was rejected; total inertia was $\lambda = 0.406$. The first principal inertia was 0.246 (60.4% of the total inertia), while the second principal inertia was 0.128 (31.6% of the total inertia), hence the first two principal inertias retained 92% of the information, therefore the choice of a two-dimensional space was considered optimal. The scatterplot is presented in Figure 2.

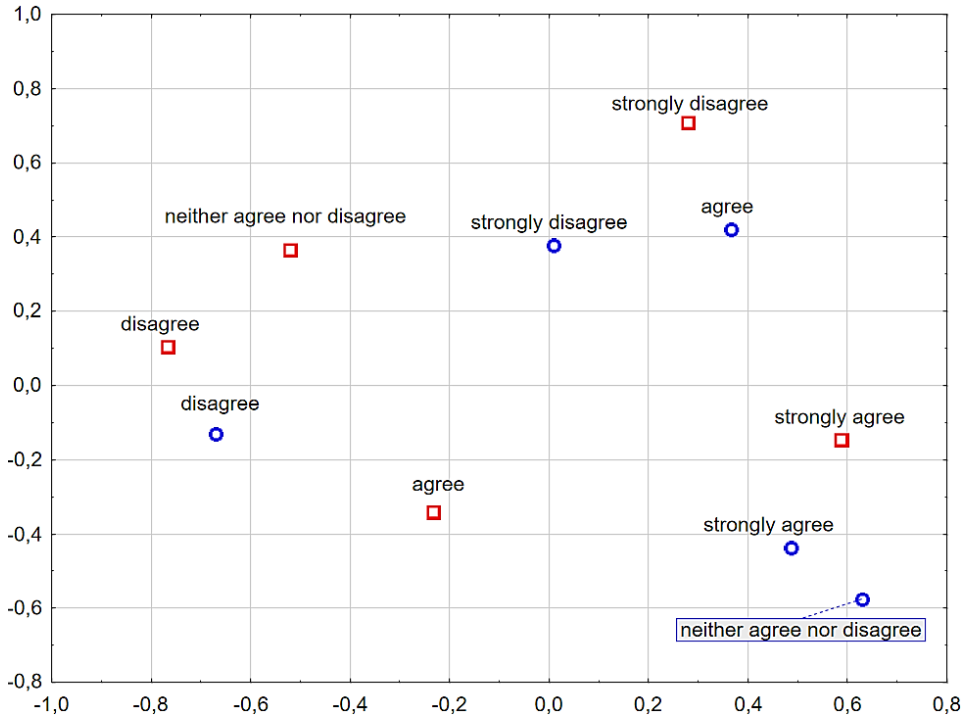

Fig. 2. Scatterplot of variables: being up-to-date with sports events (blue points) and regular engagement in sports activities (red points)

Source: own elaboration.

Based on Figure 2, it can be seen that people who are passively interested in sport, e.g. watching sports broadcasts, participate in sport regularly, whereas those who declared they were not up-to-date on sports-related topics generally did not participate in sport regularly. This suggests a strong influence of passive interest in sport as a crucial factor of a healthy lifestyle, namely regular physical activity.

To perform the classification tree clustering (CHAID), the respondents' answers were combined using "definitely no" and "probably no", and presented as a single "no." A similar procedure was performed

for the categories "definitely yes" and "probably yes." Furthermore, the minimum leaf size was set to 10, and the maximum number of terminal nodes was also set to 10. The classification tree was created in Statistica software. The predictors were the following variables: gender, attending sporting events as a fan, staying up-to-date with current sporting events, supporting a favourite team or athlete, and drawing inspiration from athletes' behaviour. The tree graph is presented in Figure 3.

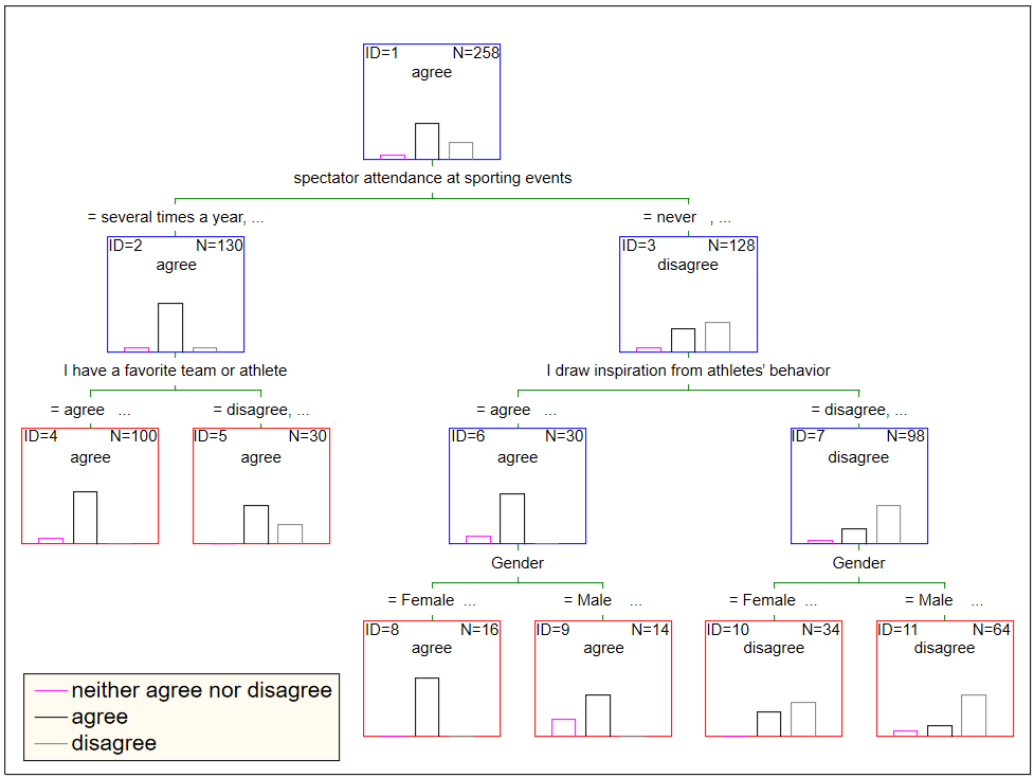

Fig. 3. Classification tree for the dependent variable: regular engagement in sports activities

Source: own elaboration.

It can be seen that six terminal nodes have emerged. The classification can be considered quite good, as most of the terminal nodes (especially the fourth and eighth) are dominated by one of the response categories. Based on the tree (Figure 3), it can be concluded that those who regularly participate in sport were most likely to have a team or player they support, draw inspiration from the behaviour of athletes, and attend sports events several times a year.

In addition to the previously mentioned watching sports broadcasts, participation in sporting events as a fan is a manifestation of interest in sport. The contingency table for the characteristics of participation in sporting events and regular participation in sports activities is provided in Table 4.

Table 4. Contingency table for variables: attendance at sports events and regular engagement in sports activities

Attendance at sports events/Regular engagement in sports activities	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
Never	26	26	10	28	32	122
Several times a year	46	50	10	10	0	116
At least once a month	10	4	0	0	10	14
At least once a week	0	0	0	0	6	6
Total	82	80	20	38	38	258

Source: own elaboration.

The value of χ^2 was 99.3, which at a significance level of α = 0.05 and twelve degrees of freedom required the rejection of the hypothesis of independence of the studied variables; the total inertia was λ = 0.385. The first principal inertia was 0.322 (83.8% of the total inertia), while the second principal inertia was 0.046 (12.1% of the total inertia), therefore it can be concluded that the two-dimensional space allowed for the retention of 95.9% of the information. The scatter plot is presented in Figure 4.

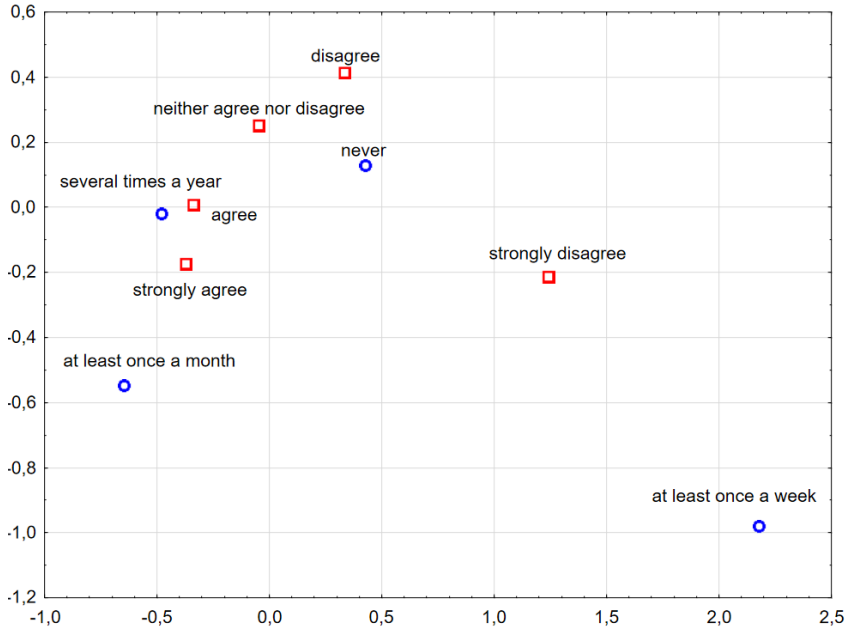

Fig. 4. Scatter plot of variables: attendance at sports events and engagement in sports activities

Source: own elaboration.

Based on the graph, it can be seen that students who attend sports events at least once a month or several times a year as spectators report regular participation in sport, whereas those who do not attend sports events do not participate in sports regularly. This suggests that passive interest in sport, in this case expressed through participation (as a spectator) in matches, races, meetings, etc., has a significantly positive impact on appropriate daily life habits understood as physical activity.

5. Discussion and Conclusions

For the purposes of this study, lifestyle was reduced to a few basic determinants, such as regular exercise, adequate sleep, BMI monitoring, and proper nutrition. Passive interest in sport was defined as, among other things, attending sports events as a fan, watching sports broadcasts on television, and reading sports-related articles.

It should be reiterated that due to the non-representative nature of the sample (resulting from the selection method), the obtained findings pertain solely to the studied group and cannot be generalised to the entire student population.

Using the chi-squared test of independence, correspondence analysis, and CHAID classification trees, it was possible to verify the impact of passive interest in sports on students' lifestyles. By using these methods the study's goal of answering the research questions was achieved. It was demonstrated that there is a correlation between general interest in sports and gender, but its strength is relatively weak, which may suggest that, contrary to stereotypes, a similar percentage of women and men are interested in sport. It was also found that the most important factors influencing active interest in sport include watching sports broadcasts and attending sports events as a fan. It was shown that

people attending sports events and watching sports broadcasts are more likely to participate in sport themselves than those passively uninterested. It should also be noted that the popularity of sport (manifested, among other things, by attending sports events as fans) has a beneficial impact on lifestyle. This calls into question the hypothesis posed in the introduction, and thus it is worth emphasising that the growing popularity of sport and the promotion of a healthy lifestyle are accompanied by good eating habits and a desire for physical activity. This is particularly encouraging as it concerns students and young people in general. It is hoped that they will continue these good habits in the years to come.

A possible area of further research is to further explore the issues addressed in this study as determinants of a healthy lifestyle, such as nutrition, exercise, and adequate sleep. This is particularly important because individual respondents may have different interpretations of what constitutes healthy food. Another possible extension of the conducted analysis is the use of other research methods, which would be possible by modifying the questionnaire to provide metric data. It is also important to consider the negative habits that may accompany watching sports broadcasts, whether on television or online, at the stadium, in the arena, etc. Consuming fast food and drinking alcohol are common phenomena associated with this activity, making it also an interesting area of research that requires further exploration. It would then be possible to indicate that, in addition to the positive effects of sports participation demonstrated in this study, certain negative habits related to nutrition and the use of stimulants also occur.

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Analiza wpływu biernego zainteresowania sportem na tryb życia studentów

Streszczenie

Cel: Celem badania było określenie wpływu biernego zainteresowania sportem na styl życia studentów. Szczególną uwagę poświęcono analizie relacji między konsumpcją treści sportowych a nawykami zdrowotnymi i postawami wobec aktywności fizycznej.

Metodyka: Do zebrania danych wykorzystano autorski kwestionariusz ankiety, który został udostępniony 258 studentom. Analiza danych została przeprowadzona z zastosowaniem testu niezależności chi-kwadrat, analizy korespondencji oraz drzew klasyfikacyjnych.

Wyniki: Wykazano, że zainteresowanie sportem wpływa na prozdrowotny tryb życia studentów, m.in. poprzez inspirację do aktywności fizycznej. Oglądanie transmisji sportowych oraz uczestniczenie w wydarzeniach sportowych w charakterze kibica okazały się istotnymi determinantami zdrowego

trybu życia. Stwierdzono również statystycznie istotny, choć słaby, związek między płcią a poziomem zainteresowania sportem.

Implikacje i rekomendacje: Wyniki sugerują potrzebę promowania pozytywnych wzorców zachowań sportowców, które mogą motywować młode osoby do zdrowszego stylu życia. Wskazane jest również rozwijanie działań edukacyjnych i medialnych, które zachęcają do aktywności fizycznej, zwłaszcza wśród osób młodych.

Oryginalność/wartość: Praca dostarcza nowych danych empirycznych dotyczących wpływu biernego uczestnictwa w kulturze sportowej na codzienne wybory zdrowotne młodych dorosłych. Badanie uzupełnia lukę w literaturze dotyczącej społecznych aspektów konsumpcji sportu i jego oddziaływania na styl życia.

Słowa kluczowe: sport, analiza korespondencji, test niezależności chi-kwadrat, drzewa klasyfikacyjne, zdrowy tryb życia