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EXAMINATION OF THE DIETARY SUPPLEMENT MARKET AND CONSUMER BEHAVIOR IN HUNGARY: A COMPARISON OF GENERATIONS AND ATHLETE GROUPS

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Abstract
The primary aim of this article is to provide a comprehensive examination of the sports nutrition supplements market, with particular attention to Hungarian consumer habits and to compare four major companies that are dominant in Hungary.
The demand for sports nutrition supplements has significantly increased in recent years, which is closely linked to the growing interest in a healthy lifestyle and regular physical activity. As demand has expanded, more companies have entered the market, which has intensified competition and broadened an already diverse range of products.
Prominent players in the domestic market include BioTechUSA, Scitec Nutrition, MyProtein and Nutriversum, whose marketing activities have significant impact on consumer decisions. In my analysis, I examine consumer behavior across different age groups, employment statuses, and income levels, with a focus on how these groups relate to the sports supplements market and their use of such products.
As part of my primary research, I conducted a questionnaire-based survey to explore purchasing habits and consumer preferences. The results of my study may contribute to a better understanding of the characteristics of the Hungarian sports nutrition supplements market.

1 Introduction

The global popularity of recreational sports is increasing rapidly, which is closely linked to the growing health consciousness of the population [1] [2] [3]. Numerous studies confirm that the regular practice of recreational sports significantly reduces the risk of developing lifestyle diseases, such as cardiovascular problems or obesity [4] [5]. Accordingly, the social and health role of sports is continually strengthening reflected in the increasing demand for sports-related services and products.

A healthy lifestyle, regular physical activity, and adequate nutrition are key factors for a full and balanced life [6] [7] [8] [9] [10] [11] [12]. In modern societies, increasing attention is being paid to health maintenance, as people consciously strive not only to maintain their physical condition but also their mental well-being [13] [14] [15] [16] [17] [18] [19] [20] [21] [22].

Regular physical avtivity, conscious nutrition, and an active lifestyle rich in movement are thus gaining increasing importance in daily life [23] [24] [25] [26]. Sports not only support health

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preservation but also have significant positive effects on travel, leisure activities, and social relationships. Through all these factors, sports contribute to the establishment of physical and mental harmony and the comprehensive improvement of the quality of life [27] [28] [29] [30] [31] [32].

Global trends place an increasing emphasis on a healthy lifestyle, to which the consumption of dietary supplements is closely related [33] [34]. Sports have become not only a physical activity but also a dynamically developing sector of the economy: the demand for sporting goods, sporting events, and dietary supplements is growing worldwide, often exceeding the annual economic growth of individual countries [35] [36] [37]. Investments in sports have proven long-term effectiveness; for example, after World War II, those countries that won Olympic medals had previously provided significant financial support for sports [38].

The market for dietary supplements might initially seem relevant only to athletes; however, the analysis of consumer habits shows that these products reach a wider audience. Dietary supplements include not only proteins, creatines, and performance enhancers but also vitamins, making the growth of the industry relevant to all age groups [39] [40].

Consumer behavior is influenced by numerous factors, including cultural, social, personal, and psychological elements. At the cultural level, different countries and groups follow varying norms, values, and attitudes that determine the acceptance of products and consumption preferences [41]. Social factors, such as education, lifestyle, and wealth, also influence product choice, while personal factors, such as age, gender, life cycle, and occupation, also play a significant role [42]. Psychological factors, including motivation, perception, and learning, strongly influence people's consumer behavior; according to Maslow's hierarchy of needs, achieving higher-level needs motivates buyers [43].

The purpose of the present research is to provide a comprehensive overview of four major dietary supplement companies in Hungary—BioTechUSA, Scitec Nutrition, MyProtein, and Nutriversum—using the 4P marketing mix model (product, price, place, promotion). The study will pay particular attention to the differences between generations, as well as the consumption habits of professional and amateur athletes, through the analysis of their marketing and product strategies [44] [45].

2 Method

The primary method chosen for this research was an online questionnaire survey. The questionnaire was shared in social media groups, and athletes were also asked to complete it. Respondents answered 20 questions, including those focusing on demographic data, consumption habits, and sports activity. I used the IBM SPSS software for the statistical analysis of the database. First, I performed basic descriptive statistics to get an overview of the main characteristics. The chi-square test was applied to examine the differences between genders, which allowed me to see the relationships between genders and various variables. I also created histograms using SPSS to illustrate the relevant Likert-scale questions and the given answers.

A total of 241 responses were received for the questionnaire, which I processed. The gender distribution was as follows: 50.2% of the respondents were male (n=121) and 49.8% were female (n=120). The questionnaire was completed in the highest proportion by the 18–25 age group (90%), followed by the 46–64 age group with 4.6%. The 26–35 (2.5%), 36–45 (2.1%), and 65+ (0.8%) age groups were present in negligible percentages. The distribution of labor market status reflected this demographic, with 61% of respondents being students and 28.2% being students who also work alongside their studies. This was also connected to the monthly net income, with earnings below HUF 150,000 being dominant (48.5%).

3 Results

The sports activity habits are illustrated in four categories, the distribution of which is clearly visible on the pie chart (Figure 1.):

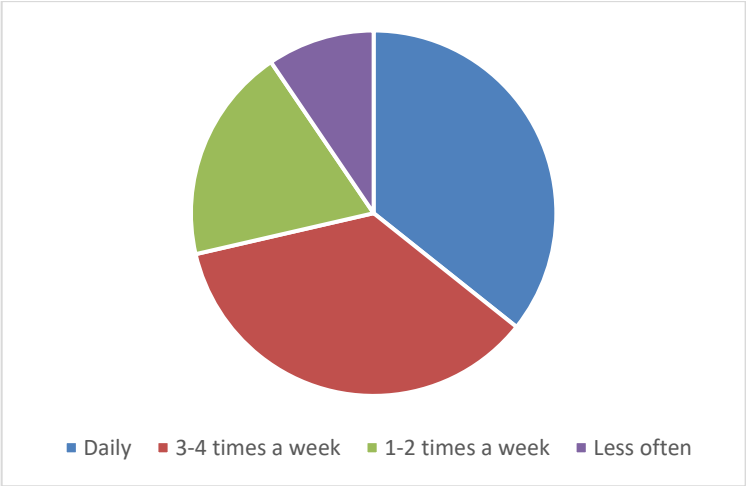

Figure 1. Distribution of sports activity habits
Source: Own data collection and editing

Examining the frequency of sports activity among the questionnaire respondents, I determined that a significant portion of them engage in regular physical activity, which is a very positive result. A total of 35.7% (n=86) exercise daily, and another 35.7% (n=86) engage in sports 3–4 times a week. 19.1% (n=46) of the respondents engage in physical activity 1–2 times a week, while only 9.6% (n=23) do so less frequently.

Based on the question focused on the type of sports activity, it was revealed that the largest percentage of participants in the survey engage in ball games (35.3%). Following the most popular category, strength training/fitness sports were in second place with 27.4%. Endurance sports finished almost tied for third place with 26.6%. Only 4.1% selected combat sports. From this, we can conclude that people tend to seek out and prefer team-based sports. However, this popularity may also stem from easier accessibility and the entertaining nature of the sport. Individual, technical, and combat sports are not popular choices.

Table 1. Sports Activity Frequency by Gender

How often do you exercise/play sports?	Man	Woman	Total
1-2 times a week	17	29	46
	14.0%	24.2%	19.1%
3-4 times a week	44	42	86
	36.4%	35.0%	35.7%
Daily	56	30	86
	46.3%	25.0%	35.7%
Less frequently	4	19	23
	3.3%	15.8%	9.5%
Total	121	120	241
	50.2%	49.7%	100%

Source: Own data collection and editing

Based on the gender-specific analysis ($p<0.05$), it can be stated that men are more active, with significantly more of them exercising on a daily basis. Meanwhile, women are more likely to exercise 3–4 or 1–2 times a week. Less frequent sporting activity is more common among women, indicating that a smaller proportion of women engage in regular physical activity. I considered it important to highlight the prevailing type of sports activity by gender ($p<0.05$). For men, ball games are the most

popular (51.2%), followed by strength/fitness sports (27.3%), then endurance sports (13.2%), and finally combat sports (6.6%). For women, endurance sports dominate (40%), followed by strength/fitness sports (27.5%) and ball games (19.2%). Very few women chose combat sports (1.7%).

Table 2. Distribution of Sports Activity by Gender

How often do you exercise/play sports?	Man	Woman	Total
Endurance sport	13.2%	40.0%	26.6%
Strength sport	27.3%	27.5%	27.4%
Ball game	51.2%	19.2%	35.3%
Combat sport	6.6%	1.7%	4.1%
Total	50.2%	49.7%	100%

Source: Own data collection and editing

In connection with this, the participation in competitive and hobby sports was also shaped accordingly. Men are more present in competitive sports (41.3%), while women are more likely to engage in hobby sports (75%).

A significant difference was also found in the monthly net income of men and women ($p<0.05$). 60.8% of women chose a net income below HUF 150,000, while only 36.4% of men did. For men, the HUF 150,000–500,000 range is more dominant.

I also compared the more relevant questions and their answers based on the frequency of sports activity. The responses indicate that the frequency of exercise is closely correlated with labor market status. The most active group is students, who primarily engage in regular physical activity daily (67.4%) or 3–4 times a week (64.0%). The category "student, but also working" is also active, though they are present with a significantly lower percentage. They account for 27.9% of those who exercise daily and 29.1% of those who exercise 3–4 times a week. In contrast, the proportion of employed workers is much lower (3.5% daily, 4.7% 3–4 times a week) and they primarily appear among those who exercise less frequently. Overall, it can be stated that the less someone is tied down by work, the more often they play sports. It should also be mentioned that a relationship is demonstrable between the frequency of sports activity and monthly net income. Nearly half of those who exercise daily (48.8%) and 3–4 times a week (48.8%) do not have their own income, suggesting that a large portion of them are students. The proportion of those with an income between HUF 0–150,000 is also noteworthy in these groups (27.9% and 32.6%). However, the proportion of those with higher incomes (HUF 300,000–800,000 and above) primarily appears among those who exercise less often. For example, 33.3% of those who exercise 1–2 times a week earn HUF 300,000–500,000. Thus, the conclusion is that the majority of regular exercisers have low or no income, while those with higher incomes exercise less frequently.

Assessment of the four companies based on the (4P) marketing mix

Product

Most respondents regularly (37.8%) or occasionally (40.2%) consume dietary supplements. Vitamins are among the most popular products, used by 79.3% of those surveyed. This is followed by protein bars at 63.5%, and then protein powder at 53.1%. Creatine received 30.7%, while amino acids (17.8%) and energizing products (14.1%) are known by significantly fewer people. This suggests that many prioritize health preservation as essential. However, the high number of people familiar with proteins and protein bars may indicate the widespread popularity of a sporty lifestyle.

The quality aspect is extremely important for the respondents and is considered the most crucial factor in their decisions. On a 1–5 scale, the average score reached 4.55. Usefulness also received a similarly high score (average 63,5% mentions). Other factors, such as packaging or brand loyalty, are almost entirely unimportant to consumers.

These results can be correlated with the fact that participants consider better quality/cleaner ingredients (48.5%) to be the most important area for development, followed only then by cheaper prices (32.8%).

Table 3. Important developments

What do you consider to be the most important development in the sports supplement market?	Frequency	Percent
Lower prices	79	32,8%
Better quality	117	48,5%
Easier accessibility	20	8,3%
New flavors	18	7.5%
Better communication	7	2.9%
Total	241	100%

Source: Own data collection and editing

Unsurprisingly, BioTechUSA proved to be the most popular among the analyzed brands, which is supported by its average score of 3.94 on the 1–5 scale. MyProtein and Scitec Nutrition are also relatively well-known (3.53 and 3.03), but Nutriversum reached a category indicating it is relatively unknown (2.31). This can be attributed to the fact that it is a Hungarian company that launched recently, in 2014. The reliability scale was shaped accordingly, with BioTechUSA, MyProtein, and Scitec Nutrition appearing almost equally reliable (3.95; 3.69, and 3.4).

The research confirmed that the consumption of dietary supplements in Hungary is significant: 37.8% of respondents consume supplements regularly, while 40.2% consume them occasionally. A study examining an Italian adult population also confirmed the high rate of supplement use (49%) in the surveyed population, and that sports activity and higher education positively correlated with use [46]. A European study reports that the use of dietary supplements among adults varied between 5–50% across countries, being highest in Finland and Denmark (over 50%) and lowest in Italy (5%), and its use strongly depended on gender, education, and lifestyle [47].

My research confirmed that the most popular product categories among young people are vitamins (79.3%), protein bars (63.5%), protein powder (53.1%), creatine (30.7%), amino acids (17.8%), and energizers (14.1%). This suggests that consumers primarily prioritize health preservation; although the high proportion of protein and protein bar consumption also indicates the widespread nature of a sporty lifestyle. Other European studies showed similar tendencies; for example, in Papatesta et al.'s (2023) study, while supplement use varied significantly by country, vitamins and proteins were the most frequently consumed categories. A survey conducted among Portuguese gym members found that 43.8% of the sporty population use supplements, with the most common being proteins (80.1%), multivitamins/minerals (38.3%), and protein bars (37.3%), which supports the finding that the consumption of protein-containing supplements is prominent among athletes [48].

My research confirmed that quality plays a decisive role in product selection (average of 4.55 on the 1–5 scale), while packaging or brand loyalty matters less. Among the desired improvements, "better quality/cleaner ingredients" (48.5%) ranks first, followed by "cheaper prices" (32.8%). Among the brands, BioTechUSA leads with an average of 3.94, while MyProtein and Scitec Nutrition are also well-known (3.53 and 3.03), and Nutriversum has lower recognition (2.31), likely because it is relatively new to the market (2014 Hungarian launch). In terms of reliability, BioTechUSA (3.95), MyProtein (3.69), and Scitec (3.4) are positioned better. International research has shown that the product choice of dietary supplement consumers is significantly influenced by product quality, clean

ingredients, certifications, and reliability, both among 25–45-year-old women [49] and according to the latest studies examining athletes and general consumers [50].
The results confirm the trend that consumers, especially health-conscious and sports-oriented groups increasingly value the quality and ingredients of products in the dietary supplement market. However, price and accessibility continue to appear as areas for development.

Price

The results of the survey showed that the largest part of consumers spends a maximum of HUF 5,000 (33.6%) on nutritional supplements, while 26.1% indicated a slightly higher value, between HUF 5,000–10,000. This makes up a total of 59.7% of the entire sample, which indicates that the vast majority spend a moderate amount on these products. 20.7% spend nothing at all on dietary supplements, which represents approximately 1/5 of the respondents. The proportion of those spending over HUF 10,000 was 19.5% in total, which is slightly less than the proportion of non-spenders.

Most respondents (43.2%) consider the products offered by BioTechUSA to have the best value for money. This is not surprising, as the company has built strong trust and reputation in Hungary. MyProtein ranks second (33.6%), as this company also has a wide range of products and has become increasingly reliable in recent years. The other two brands target a narrower segment, as is supported from the results. Scitec Nutrition (15.4%) and Nutriversum (7.9%) are prevalent to a much lesser extent.

Place

Based on the responses to the question, "Have you ever bought a dietary supplement here?" it was revealed that 67.2% of respondents had previously made a purchase at a BioTechUSA store, which is the highest proportion among the examined locations. The second most popular place was the supermarket (45.6%). The following four locations enjoyed almost similar popularity: MyProtein (39.8%), pharmacy (39.4%), Scitec Nutrition (34.4%), and drugstore (32.8%). Nutriversum finished at the bottom of the list, with only 13.3%.

Promotion

Based on the question focused on the brands' communication, most respondents (49.4%) consider BioTechUSA's communication to be the most relatable to them, suggesting that the brand's style and marketing are the most appealing to consumers and the one they can identify with best.

MyProtein (31.5%) finished in second place, representing a significant proportion, as we have seen in the other questions. However, Scitec Nutrition (14.5%) and Nutriversum (4.6%) are not as closely aligned with many respondents.
Furthermore, it was revealed that 49.8% of respondents are barely or not at all influenced by athletes or influencers. 33.2% are moderately influenced, which means that sponsorships do not have a great effect on them either. The group that is genuinely influenced amounts to only 17%. These results indicate that buyers consciously try not to be influenced by their purchasing decisions.

4 Conclusion

The examination of the dietary supplement market reveals that the consumption of these products is widespread in Hungary, and is no longer limited only to competitive athletes, but has become increasingly common among the general people as well. The importance of health maintenance and an active lifestyle show a growing trend [1] [2] [9] [10], which is supported by the fact that vitamins, as well as protein bars and protein powders, are the most frequently consumed products. During the research, I paid particular attention to the differences between genders and to sports activity habits. Men show a higher level of physical activity, and a greater proportion of them become competitive athletes.

Furthermore, the labor market status showed a correlation with income, indicating that the most active group consists of students, who typically have low or no income. In contrast, the higher-income segment exercises less frequently, potentially due to the limited availability of leisure time.

In line with the continuously changing societal characteristics, consumer habits are also shifting, which every company must monitor to maintain its competitiveness in the market. Among the companies examined, BioTechUSA received the most favorable assessment across all aspects. This brand is the best-known and most reliable among consumers. MyProtein and Scitec Nutrition performed similarly in the mid-range across a significant portion of the responses, while Nutriversum—as a relatively young market player—lagged in recognition.

Based on consumer perception, the key to the future success of these brands lies in maintaining a balance between high quality and affordable prices, thereby ensuring favorable value for money.

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References

[1] Kinczel, A., Bába, É. B., Molnár, A., Müller, A., & Laoues-Czimbalmos, N. (2021). A magyar fiatal felnőttek sportolási szokásai és a sport motivációjuk alakulása. Acta Carolus Robertus, 11(1), 27-39.
[2] Gődény N., Biró M., Lenténé Puskás A., Lente L., & Müller A. (2018). A fogyasztói szokások és trendek változásának vizsgálata a fitnesz területén. In: Balogh, L. (szerk.) Fókuszban az egészség. Debrecen, Magyarország: Debreceni Egyetem Sporttudományi Koordinációs Intézet, pp. 9-18. , 10 p.
[3] Molnár, E. (2012) Supervision in social work : experiences as a college supervisor of social worker training. Economica Szolnok 5 (2) pp. 29-35
[4] Gabnai, Z., Müller, A., Bács, Z., & Bácsné Bába, É. (2019). A fizikai inaktivitás nemzetgazdasági terhei= The economic burden of physical inactivity at national level. EGÉSZSÉGFEJLESZTÉS, 60(1), 20-30.
[5] Bácsné Bába, É., Müller, A. É., & Molnár, A. (2021). Az egészségünket meghatározó tényezők bemutatása egy lehetséges egészségmodell segítségével. Gradus Vol 8, No 1 (2021) 90-102. https://doi.org/10.47833/2021.1.ART.006
[6] World Health Organization. (2020). Global status report on physical activity 2020. WHO.
[7] Kővári-Tóth, T., Müller, A., & Kővári, Z. (2024). ANALYSIS OF THE TURNOVER OF HUNGARIAN SPAS. Geo Journal of Tourism and Geosites, 56(4), 1454-1460.
[8] Müller, A., Melinda, B., Hidvégi, P., Váczi, P., Plachy, J., Juhász, I., ... & Seres, J. (2013). Fitnesz trendek a rekreációban. Acta Universitatis: Sectio Sport-Acta Universitatis de Carolo Eszterházy Nominatae, 40, 25-34.
[9] Müller, A., Melinda, B. Í. R. Ó., Bodolai, M., Hidvégi, P., Váczi, P., Dávid, L. D., & Szántó, Á. (2017). A 2016-os fitnesztrendek helye és szerepe a rekreációban. Acta Universitatis: Sectio Sport-Acta Universitatis de Carolo Eszterházy Nominatae, 44, 91-102.
[10] Müller, A., Bácsné Bába, É., Gabnai, Z., Pfau, C., & Pető, K. (2019). A fitnesztrendek és új típusú mozgásformák társadalmi és gazdasági aspektusai. Acta Carolus Robertus, 9(2), 109-122.
[11] Hőnyi Dorottya, Kinczel Antonia, Molnár Anikó, Szabó Katalin, Maklári Gergely, Müller Anetta (2021a): Szabadidő eltöltési szokások vizsgálata a fiatalalok körében. In: Balogh, László (szerk.) Versenysport és szabadidősport. Debrecen, Magyarország : Debreceni Egyetem Sporttudományi Koordinációs Intézet (2021) 178 p. pp. 127-137. , 11 p.
[12] Kinczel, A., Laoues, N., & Müller, A. (2020). A fiatalok szabadidősporttal, sportmotivációjával kapcsolatos kutatások tapasztalataiból. Acta Carolus Robertus, 10(2), 97-116.
[13] Kovács, K., Moravecz, M., Nagy, Zs., Rábai, D., Szabó, D. (2020): The institutional effect on leisure time and competitive sports at higher education colleges and universities in the Carpathian Basin. Baltic Journal Of Health and Physical Activity 12: Special issue 1 pp. 46-59., 14 p. (2020)
[14] Kinczel, A. (2020). A stressz és a szabadidősport jelenléte a mai emberek életében. International Journal of Engineering and Management Sciences , 5 (1), 74-86. https://doi.org/10.21791/IJEMS.2020.1.7
[15] Kinczel, A., Maklári, G., & Müller, A. (2020). Recreational Activities and Motivation Among Young People. Geosport for Society, 12(1), 53-65. https://doi.org/10.30892/gss.1206-059
[16] Bíró, M., Müller, A., Lenténé Puskás, A., Márton Pucsok, M. J., Mórik, K., Czeglédi H. O. (2020): The role of swimming in preserving health. Slovak Journal Of Sport Science 7: 2 pp. 30-40., 11 p. (2020) DOI: https://doi.org/10.24040/sjss.2022.8.2.27-38
[17] Hőnyi, D., Kinczel, A., Váczi, P., & Müller, A. (2021b). Fiatalok rekreációs tevékenységeinek vizsgálata. Különleges Bánásmód-Interdiszciplináris folyóirat, 7(2), 105-110.
[18] Pálinkás, R., Kinczel, A., Váczi, P., Molnár, A., & Müller, A. (2022a). Recreational activities among students aged 14-18. Geosport for Society, 16(1), 1-11. https://doi.org/10.30892/gss.1601-079

[19] Pálinkás, R., Kinczel, A., Miklósi, I., Váczi, P., Laoues-Czimbalmos, N., & Müller, A. (2022b). Életmódra nevelés, egészségnevelés, környezetnevelés, mozgás. Acta Carolus Robertus, 12(1), 129-142. https://doi.org/10.33032/acr.2812
[20] Kinczel, A., & Müller, A. (2023). THE EMERGENCE OF LEISURE TRAVEL AS PRIMARY PREVENTIVE TOOLS IN EMPLOYEE HEALTH BEHAVIOR. GeoJournal of Tourism and Geosites, 47(2), 432–439. https://doi.org/10.30892/gtg.47209-1041
[21] Müller Anetta, Bába Éva Bácsné, Kinczel Antonia, Molnár Anikó, Eszter Judit Boda, Papp-Váry Árpád, Hrisztov Jordán Tütünkov: Recreational Factors Influencing the Choice of Destination of Hungarian Tourists in the Case of Bulgaria. SUSTAINABILITY 15 : 1 Paper: 151 , 18 p. (2023) https://doi.org/10.3390/su15010151
[22] Kovács Klára, Borbély Szilvia, Dobay Beáta, Halasi Szabolcs, Vajda Ildikó, Hideg Gabriella: Factors influencing the well-being of Central and Eastern European university teachers: the role of physical activity and the sources of stress and resources in the workplace. BMC PUBLIC HEALTH 25 : 1 Paper: 3001 , 12 p. (2025)
[23] Nábrádi Zsófia (2019): Motivation for physical activity and dietary supplement usage among Hungarian adults who engaged in sports. In: Nábrádi, András; Gál, Katalin (szerk.) 1st Partium International Conference on Management. Trends in 21st Century: Book of Abstracts. Oradea, Románia : Partium Press (2019) 86 p. pp. 35-36. , 2 p.
[24] Nábrádi Zsófia, Fehér András (2018): Az aktív sportfogyasztók attitűdjei és motivációi a futással kapcsolatos tömegsportrendezvények esetében. In: András, Krisztina (szerk.) II. SKEOF (Sportgazdaságtani Kutatók és Egyetemi Oktatók Fóruma) Konferencia: Sikertényezők a globális sportgazdaságban – Absztraktkötet. Budapest, Magyarország : Budapesti Corvinus Egyetem, Sportgazdaságtani Kutatóközpont (2018) 57 p. pp. 34-36. , 3 p.
[25] Nábrádi Zsófia, Szakály Zoltán (2021a): Egészségvédő élelmiszerek iránti attitűdök a táplálkozás és a fizikai aktivitás vonatkozásában. Élelmiszervizsgálati Közlemények 67 : 3 pp. 3507-3524. , 18 p. (2021) https://doi.org/10.52091/EVIK-2021/3-1-HUN
[26] Nábrádi Zsófia, Szakály Zoltán (2021b): Attitudes towards health foods in terms of diet and physical activity. ÉLELMISZERVIZSGÁLATI KÖZLEMÉNYEK 67 : 3 pp. 3525-3541. , 17 p. (2021) https://doi.org/10.52091/EVIK-2021/3-1-ENG
[27] Moravecz, M. (2019): Levels of Public and Higher Education in Health Promotion in the Light of Focus Group Studies. Geosport For Society 11: 2 pp. 76-85. , 10 p. (2019)
[28] Moravecz, M. (2022): Diákok sportja - hallgatók egészségtőkéje?: a mindennapos testnevelés jéghegy-modellje a hallgatói egészségtudatosság és eredményesség tükrében. Szeged, Magyarország: Belvedere Meridionale (2022) , 273 p. ISBN: 9786156060624
[29] Moravecz, M., Kovács, K. E., Kozma, B. (2024): Socialisation scenes in the health behaviour of teacher students at different levels of teacher training. Frontiers In Sports And Active Living 6 Paper: 1504214 (2024)
[30] Kinczel, A., Lengyel, A., Pálinkás, R., Bácsné Bába, E., & Müller, A. (2025). The influence of inside work and outside work well-being factors on actual and future destination choice. Geojournal of Tourism and Geosites, 58(1), 176–187. https://doi.org/10.30892/gtg.58115-1400
[31] Éva Bácsné Bába, Attila Lengyel, Christa Pfau, Anetta Müller, Éva Judit Bartha, Renátó Balogh, György Szabados, Zoltán Bács, Gergely Ráthonyi: Physical Activity: The Key to Life Satisfaction -Correlations Between Physical Activity, Sedentary Lifestyle, and Life Satisfaction Among Young Adults Before and After the COVID-19. FRONTIERS IN PUBLIC HEALTH 13 Paper: 1486785 , 11 p. (2025) https://doi.org/10.3389/fpubh.2025.1486785
[32] Borbély, Sz., Hideg, G., Kovács, K. (2025): Egyetemi oktatók jóllétét meghatározó tényezők – fókuszban a fizikai aktivitás. Magyar Sporttudományi Szemle 26 : 113(1) pp. 3-10. , 8 p. (2025)
[33] Skotnicka, M.; Karwowska, K.; Kłobukowski, F.; Wasilewska, E.; Małgorzewicz, S. Dietary Habits before and during the COVID-19 Epidemic in Selected European Countries. Nutrients 2021, 13, 1690
[34] Djaoudene, O., Romano, A., Bradai, Y. D., Zebiri, F., Ouchene, A., Yousfi, Y., Amrane Abider, M., Sahraoui Remini, Y., Madani, K. (2023). A global overview of dietary supplements: Regulation, market trends, usage during the COVID 19 pandemic, and health effects. Nutrients, 15(15), 3320. https://doi.org/10.3390/nu15153320
[35] Gratton, C., Liu, D., Ramchandani, G., & Wilson, D. (2012). The global economics of sport. Routledge.
[36] Wu, C. (2025). The impact of sports industry output on economic growth: evidence from China. Journal of the Knowledge Economy, 16(2), 8420-8440.
[37] Kharchenko, T. O., & Ziming, L. (2021). The Relationship between Sports Industry Development and Economic Growth in China. Accounting & Finance/Oblik i Finansi, (91).
[38] Green, M., & Houlihan, B. (2005). Elite sport development: Policy learning and political priorities. Routledge.
[39] Nábrádi, Z., Bánáti, D., & Szakály, Z. (2020). A study on consumer habits in the dietary supplements market. Applied Studies in Agribusiness and Commerce, 14(3-4), 5-12. https://doi.org/10.19041/APSTRACT/2020/3-4/1
[40] Hys, K. (2020). Identification of the reasons why individual consumers purchase dietary supplements. In Perspectives on Consumer Behaviour: Theoretical Aspects and Practical Applications (pp. 193-209). Cham: Springer International Publishing.
[41] Solomon, M. R. (2020). Consumer behavior: Buying, having, and being (13th ed.). Pearson.
[42] Kotler, P., & Keller, K. L. (2016). Marketing management (15th ed.). Pearson Education.
[43] Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370–396.
[44] Kotler, P., Armstrong, G., & Opresnik, M. O. (2019). Marketing: an introduction, 13th global ed. no. February, 669.
[45] Molnár, E. (2017) Korabeli magyar reklám és pszichológia. Alumni Kiadó, Szolnok
[46] Giammarioli, S., Boniglia, C., Carratu, B., Ciarrocchi, M., Chiarotti, F., Mosca, M., & Sanzini, E. (2013). Use of food supplements and determinants of usage in a sample Italian adult population. Public health nutrition, 16(10), 1768-1781.
[47] Papatesta, E. M., Kanellou, A., Peppa, E., & Trichopoulou, A. (2023). Is dietary (food) supplement intake reported in European National Nutrition Surveys?. Nutrients, 15(24), 5090.

[48] Ruano, J., & Teixeira, V. H. (2020). Prevalence of dietary supplement use by gym members in Portugal and associated factors. Journal of the International Society of Sports Nutrition, 17(1), 11.
[49] Miller, C. K., Russell, T., & Kissling, G. (2003). Decision-making patterns for dietary supplement purchases among women aged 25 to 45 years. Journal of the American Dietetic Association, 103(11), 1523-1526.
[50] Vimalkumar Patel: (2023): How to Choose Right Dietary Supplement Brand among all Available Options. Journal of Marketing & Supply Chain Management. 2023, Volume 2(1): 1-6. ISSN: 2754-6683