

UNDERSTANDING THE SPORTS INDUSTRY THROUGH THE LENS OF PHYSICAL EDUCATION STUDENTS: A WORD CLOUD ANALYSIS APPROACH

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Abstract

In today's era, physical education and sports science students play a significant role as the future builders of the sports industry in various fields and contribute to its development. Understanding their attitudes towards the growth of the sports industry, predicting future trends, and evaluating the possible effects of these trends is of great importance. This research was conducted with the aim of investigating and analyzing the attitudes of physical education students towards the sports industry. The method of this research is textual data analysis using word cloud analysis. Undergraduate physical education students answered

question about the basic and important features of the sports industry from their point of view. In the word cloud analysis, 46 distinct words were identified, with the top five being equipment, entertainment, money, trade, and education. The results of this research show that physical education students consider the sports industry as a multidimensional and comprehensive entity that goes beyond mere physical activities and includes economic, social, and cultural dimensions. They emphasize the importance of advertising and branding, strengthening social connections through sports, and creating job and business opportunities. These findings indicate that educational and research programs at universities should pay special attention to these dimensions in order to prepare students to face the challenges and opportunities in this industry.

Keywords: *Recreation; Sports Development; Sports Industry; Sports Sector Growth; Student Perspectives; Word Cloud Analysis.*

INTRODUCTION

Physical education students' attitudes toward the sports industry encompass various dimensions and reflect the widespread impact of this industry on society. A university is an institution that helps optimize industry by producing new ideas, knowledge, and solutions. In a way, university and industry are recognized as the main pillars of the development of any country, and a strong and solid connection between the two will lead to achieving sustainable development (Shariati Feizabadi et al., 2023). In recent years, sport has been recognized as an essential element for maintaining a healthier, more balanced, and higher quality life, and it is now

widely accepted that sports activities, along with cultural ones, psychologically prepare individuals for daily life, with its global spread influenced by the socio-economic conditions of societies (Ekmekçi et al., 2013). Sport is a field where various functions and impacts are manifested, and as part of socio-economic achievements, the sports industry must adapt to new living and business conditions, while increased investment in areas like athletes, equipment, and facilities will help it deliver a more efficient final product to the market (Savić et al., 2018). Sports as one of the key elements in promoting physical and mental health, improving the quality of life, and social and economic development of societies plays a significant role and with its multidimensional effects, it helps to expand social solidarity and cultural progress.

In recent years, sport has become crucial for promoting a healthier and more balanced life, and is widely recognized for its role, alongside cultural activities, in psychologically preparing individuals for daily life, and its global popularity varies based on a society's socio-economic conditions (Orunbayev, 2023). The growth and changes in the structure of the sports industry have led to a transformation in the marketing methods and channels for sports goods and services, allowing the industry to quickly adapt to new technological conditions and provide products and services with faster access and more diverse experiences (Yurtsizoglu & Golmohammadi, 2024). Sport, which attracts large groups of

consumers, has been used as a marketing tool and has become commercialized under the influence of the growing consumer society. The sports industry involves producing or providing sports products for consumers or sports organizations, as well as forming or managing an existing sports organization or part of it. (Mullin et al., 2014). Along with its health-giving and cultural role, sports has found a special place in contemporary societies as an effective tool in marketing and economic development, and the evolution of the sports industry structure has turned it into a dynamic platform for providing diverse and technology-based products and services.

Along with sports industries and sporting events, there are many related businesses that provide employment opportunities to the general public (Hazra & Biswas, 2016). A positive and constructive attitude towards business can be seen as a valuable opportunity to design, develop, and expand programs and activities related to self-employment and entrepreneurship among students (Gül et al., 2023). However, it is challenging for students to find a good job in the sports industry after graduation without having at least one internship experience (Lu, 2021). For this reason, students try to gain multiple internship experiences throughout their studies to gain a competitive edge over their classmates. (Eagleman & McNary, 2010). Physical education students generally need well-structured and detailed plans to develop their skills and address the challenges and issues they face (Gül et al., 2023). The sports industry and

related businesses create numerous job opportunities, but students' success in entering this field requires gaining practical experience through internships, which play a key role in enhancing their skills and increasing their competitiveness.

Sports science students, as future experts of the sports industry, play an essential role in the development of this field. Examining their views and understanding of the key concepts of this industry can not only help to identify aspects affecting their life and career path, but also provides a valuable tool for predicting future trends and improving strategic planning in this field. The role of these students in various fields of the sports industry is considered as the basis for progress and innovation in this sector. In this regard, it is very important to understand their perceptions about the growth of the sports industry, predict future trends and evaluate the potential effects of these trends on the industry. In this study, the issues of globalization and the sports industry are discussed and the perceptions of sports science students regarding the growth of the sports industry are investigated. Using an innovative method such as word cloud analysis, how students understand key concepts in the sports industry is analyzed. The purpose of this research is to investigate and analyze the attitude and view of physical education students towards the sports industry. Considering the rapid changes in the field of sports science and the ever-increasing needs of this industry, this research identifies various aspects of the sports

industry and their relationship with the daily life of students. The main research question is how physical education students define the sports industry and which aspects of this industry are more important and prominent for them?

METHODOLOGY

Word clouds are a tool that displays qualitative data. In this tool, the size or orientation of words indicates their importance or frequency (Davies et al., 2021). The current research uses word cloud analysis in order to achieve a detailed and comprehensive analysis of students' answers to the research question. Word clouds are used as a simple and attractive way to visualize text by displaying frequent words in a summarized and visual format (Heimerl et al., 2014). It is a type of text visualization that is known for its aesthetic, social and analytical aspects (LE & Lauw, 2016). By displaying words based on their number of repetitions and importance, word clouds are considered a tool to understand the key features of a dataset. This method allows us to identify key words and phrases that appear frequently in students' responses and use them as key indicators in understanding students' attitudes and perceptions about the sports industry.

In this research, data was collected from 143 undergraduate students of Physical Education and Sports Sciences of Sivas Cumhuriyet University, including all academic orientations, in April 2024

through convenience sampling method. The sampling method plays an important role in enhancing the representativeness of the sample and the generalizability of research findings, with convenience sampling, as one of the non-probability methods, being based on the ease of access to participants from the target population (Golzar et al., 2022). Convenience sampling is popular because it is low-cost, saves time compared to other sampling methods, and is easy to implement (Stratton, 2021).

For this study, the opinions of physical education students have been used because these students study directly in fields related to the sports industry and are familiar with the challenges, opportunities and trends of this field. As future makers and professionals of this industry, their opinions and views can provide a more accurate and realistic picture of the conditions and needs of the sports industry and express the view that this range of students have towards the industry. This analysis can contribute to a deeper understanding of the needs, expectations and priorities of students in relation to the sports industry and lay the foundation for more effective planning for the development of this field.

In this research, students were asked to express their definition of the sports industry using a minimum of one word and a maximum of three words. This request was presented in the form of questions with single-word answers (maximum three words for each student). Answer forms were given to the students and after filling in the

demographic information, they wrote down their answers. After collecting the papers and entering all the information into an Excel file, a total of 457 words were recorded. In several steps, the words were filtered. In the first step, words that were not relevant to our study were removed, leaving 339 words. In the next step, words that appeared less than three times (only once or twice) were excluded to improve the quality and clarity of the word cloud. After removing these words, 316 words remained. Finally, this process led to the selection of keywords and repetitive words that represented the students' views and understanding of the sports industry for more detailed analysis and creating a word chart.

Finally, after categorizing these 316 words, a total of 46 distinct words with varying frequencies were identified, which can also be seen in the word cloud analysis. Among these, the top 5 words on the list were: equipment, recreation, money, trade, and education. In Table 1, the comprehensive process of collecting, filtering, and summarizing words is briefly explained.

Table 1: Steps of processing and analyzing keywords in defining the sports industry from the perspective of physical education students

Stage	Description	Words Remaining
Data Collection	Students provided 1-3 word definitions of the sports industry.	457
Step 1: Filtering	Removed irrelevant words.	339

Step 2: Refining	Excluded words with fewer than 3 occurrences.	316
Final Categorization	Categorized words.	remaining 46 distinct words to enter into word cloud

A total of 46 specific words were identified and noted based on the students' responses and the frequency of repetition of those words. These words represent the students' collective understanding of the sports industry.

The website wordclouds.com has been used to display these keywords as word clouds. In this image, the size of each word is determined based on its repetition in the text; In such a way that the words with more repetition are shown in bigger form and the words with less repetition are shown in smaller form (Golmohammadi et al., 2025). Also, EndNoteTM20 software was used to manage and cite sources so that the required references can be placed in the text in a suitable way and researchers can gain a deeper understanding of the research topic. These tools help researchers to present research results in a coherent and understandable way and facilitate access to the required resources.

RESULTS

The data obtained from the samples of this study, which consisted of undergraduate students in the Sports Science Faculty at Sivas Cumhuriyet University in Turkey, show that 64.34% of them are

male students and 35.66% are female students. The largest age group falls between 20 and 21 years, comprising 37.06% of the total. Additionally, 25.87% of the students are in the 18 to 19 age range, 26.57% are between 22 and 23 years old, and 10.49% are over 24 years old. This data reflects a mix of students of different ages and genders. This diversity of age and gender in the samples not only shows the breadth of different experiences and perspectives, but also provides the possibility of better analysis of attitudinal and cognitive differences between different student groups. In this way, we can achieve a better understanding of the effects of different factors such as age and gender on the attitudes and understanding of students towards the sports industry.

Figure 1 is a word cloud representing the most frequently mentioned terms that reflect the definitions of physical education students regarding the sports industry:



Table 2. Most frequently mentioned words in this study

N	Word	W	N	word	W	N	Word	W
o		F*	o		F	o		F*
1	equipment	20	1	competiti	6	3	communicat	3
			6	on		1	ion	
2	recreation	18	1	facility	6	3	doping	3
			7			2		

3	money	17	1	health	6	3	fans	3
			8			3		
4	trade	17	1	developm	5	3	footwear	3
			9	ent		4		
5	education	16	2	organizati	5	3	managemen	3
			0	on		5	t	
6	fitness	16	2	program	5	3	marketing	3
			1			6		
7	advertisem	14	2	sport-club	5	3	match	3
	ent		2			7		
8	football	13	2	brand	4	3	nutrition	3
			3			8		
9	specific-	13	2	business	4	3	official	3
	sport		4			9		
1	hall	12	2	consumer	4	4	profession	3
0			5			0		
11	service	12	2	field	4	4	shop	3
			6			1		
1	production	9	2	law	4	4	sports-	3
2			7			2	uniform	
1	media	8	2	physical-	4	4	stadium	3
3			8	activity		3		
1	merchandi	7	2	suppleme	4	4	technology	3
4	se		9	nt		4		
1	sponsor	7	3	athlete	3	4	tournament	3
5			0			5	uniform	

*WF= Word Frequency	4	uniform	3
	6		

The most frequently mentioned words in the study (table 2), ranked from 1st to 11th, were: *equipment* with 20 mentions, *recreation* with 18 mentions, *money* with 17 mentions, *trade* with 17 mentions, *education* with 16 mentions, *fitness* with 16 mentions, *advertisement* with 14 mentions, *football* with 13 mentions, *specific-sport* with 13 mentions, *hall* with 12 mentions, and *service* with 12 mentions. The remaining words all had between 9 and 3 mentions. These words reflect the diverse components perceived as integral to the sports industry by the students. These findings show that students perceive different and diverse components as key elements of the sports industry. From equipment and facilities to financial issues, business, education and advertising are all among the topics that are frequently addressed. This variety of topics shows the importance of combining different factors for the progress and dynamism of this industry. On the other hand, referring to specific sports and sports spaces such as halls also emphasizes the importance of physical infrastructure in the development of sports. These results can be used as a basis for strategic planning in the sports industry.

DISCUSSION

Based on the results of word cloud analysis, in this section, the words that are repeated more than 10 times in the students' answers are

discussed as key indicators in defining the sports industry. In the following, these characteristics are analyzed to gain a more accurate understanding of the attitude of physical education students towards the sports industry. Given the rapid changes in sports science, it is important to know students' aspirations to better tailor educational programs. Also, understanding their future expectations can help identify and meet the new needs of the sports industry (Turhan & Canpolat, 2023). The recurring themes identified in the keyword analysis reflect students' perceptions of the sports industry and the multiple aspects of their engagement with the field. By examining these key indicators, we can identify the values and priorities that shape their understanding of the sports industry. This information will help educators and stakeholders design appropriate training programs for the next generation of sports professionals and help bridge the gap between academic training and the practical realities of industry. In this way, students will be prepared to manage the challenges of this field and participate in its development. Therefore, the successful movement of university graduates towards professionalization in today's dynamic industry requires an effective convergence between university education and industry to develop practical skills necessary for various occupations (Lu, 2021).

The connection between the sports industry and universities is a new topic that has received little attention, while the progress of any society depends on the growth of universities and its service and

manufacturing industries (Shariati Feizabadi et al., 2023). Examining the results shows that the analysis of keywords and characteristics related to the sports industry not only reveals the attitude of physical education students, but also helps to identify the values and priorities that shape their understanding of this industry. These findings emphasize that the design of educational programs in accordance with the future needs and expectations of students plays an essential role in cultivating practical skills and abilities required for various jobs in this field.

The rapid development of the social economy will lead to the growth of the sports industry and subsequently affect the sports economy (Li et al., 2022). Sports have become a big part of the entertainment industry and compete for money that fans spend (Gillentine et al., 2009). The fast changes in customer demands and growing expectations for product performance push sports equipment makers to constantly create new and improved products to stay competitive (Meier et al., 2019). Today, the sports industry is known for its new technologies, especially in the production of sports equipment and supplies, and these technologies play a significant role in its growth and development (Savić et al., 2018). Sports also act as an independent tool for advertising, aiming to create a deep understanding of the brand. Businesses shape brand values through advertising, and sports events convey these values to consumers, meaning that in today's world, every person encounters hundreds of

advertising messages in their daily environment (Yurtsızoğlu & Golmohammadi, 2023). Additionally, football, as one of the most popular sports industries in the world, has garnered significant attention not only because of its universality and influence on national identities but also due to the high revenue it generates from match-day sources, broadcasting, and merchandising (Şener & Karapolatgil, 2015). Furthermore, sports and fitness have become one of the important and key industries in the contemporary world (Oakley & Rhys, 2008). The reality shows that today's global social developments have caused a change in the values and goals of sports, transforming them from simple physical activities into an integral part of modern life. Changes in sports content have led to increased relevance to the creative process and greater engagement with creative domains (Peng et al., 2024). This research examines and defines the sports industry from the point of view of physical education students and shows that this industry, as a wide and dynamic field, is affected by social and economic developments.

The results of this study show the different aspects that physical education students connect to the sports industry and provide valuable insights into their views. The frequent mention of terms such as equipment, recreation, money, and trade reflects the multifaceted nature of this industry. Equipment, as one of the fundamental elements, not only facilitates participation in sports but also contributes to the broader economic aspects of the industry. The

emphasis on recreation indicates a growing recognition of the role of entertainment and wellness in the sports sector, highlighting the shift towards promoting physical activity as a vital component of a healthy lifestyle. The prominence of economic terms such as money and business also underscores the importance of financial sustainability and commercial viability in the sports landscape. Examining sports such as soccer and fitness or other specific sports, represents important areas of the sports industry and clearly demonstrates the attitudes of a wide range of physical education students. As a global sport, soccer is not only a cultural phenomenon and a symbol of competition and social participation, but its economic impact through sponsorships and income from events proves its special importance in the sports industry. Rather, as a growing sector related to health and wellness, fitness is most closely associated with the sports industry and emphasizes individual development and fostering community spirit through various programs and initiatives. In this way, students clearly understand the importance of these sports in the structure and economy of the sports industry and pay special attention to their role in promoting physical activities and promoting an active lifestyle. Concepts such as education, advertising, sports halls, and services are other key elements of students' understanding of the sports industry. Education plays an important role in the training of expert staff and the transfer of knowledge and skills in this industry, which indicates its

importance in the sustainable development of this sector. Advertising as an effective tool for attracting audiences and increasing revenues has a special place in expanding the market and promoting sports. Also, halls and services have a significant impact on the quality of sports activities as necessary infrastructure and support to provide a suitable sports experience. These concepts well reflect the pivotal role of education, commercialization, and physical infrastructure in the growth and dynamism of the sports industry. The results of this research show that physical education students have a comprehensive understanding of the various dimensions of the sports industry and are aware of the role of various factors such as equipment, recreation, economy and education in the development of this industry. These findings emphasize the importance of providing suitable infrastructure, training of specialized human resources, and using new advertising tools for the growth and dynamism of this field. Also, students' special attention to popular sports and health and fitness-related sectors shows their awareness of contemporary needs and changing trends in this industry. This recognition can provide a suitable platform for formulating educational and implementation strategies in order to strengthen students' practical skills and enable their active participation in the future of the sports industry.

RESEARCH LIMITATIONS

This research focused on undergraduate students studying physical education who are engaged in academic settings. Because of this, the results may not apply to other groups, such as non-students or those in different fields of study. These groups might have different views and experiences related to the sports industry that could affect how they see it. Looking at the characteristics of the sports industry based on physical education students' opinions might be influenced by their personal experiences and feelings. This could introduce bias into the results and affect the reliability of the findings. For example, students' views may be shaped by their positive or negative experiences during their studies or sports participation, leading to different interpretations of what the sports industry involves. Moreover, some important aspects of the industry might not have been captured in this study. Therefore, using a variety of data collection and analysis methods could help identify these aspects more thoroughly and accurately. For instance, conducting in-depth interviews with professional athletes, coaches, academics, and industry experts could provide a better understanding of their views and experiences. This approach would allow for more generalizable findings and a clearer understanding of the current state and needs of the sports industry. Due to the limitations of this research, the findings may not be able to represent all perspectives and dimensions of the sports industry, especially those that exist among

different groups such as non-students or sports industry professionals. This issue shows the importance of using more comprehensive approaches and using diverse samples in future researches. Examining the views of experts, professional athletes and coaches can provide a deeper understanding of the real needs and challenges of this industry. By adopting such an approach, it is possible to achieve results that are not only more comprehensive and valid, but also can be a more effective guide for improving development policies and programs in the sports industry.

CONCLUSION

The results of this research show that physical education students consider the sports industry as a multidimensional and comprehensive set that goes beyond just physical activities. This view clearly indicates that the sports industry in their mentality includes different dimensions, each of which is somehow related to their daily life and personal experiences. Among these dimensions, we can mention sports products, equipment, advertising, sports, leisure time, as well as business and trade. These students believe that the sports industry not only helps meet the physical and health needs of people, but also acts as an economic platform that can create many job and business opportunities. In particular, paying attention to advertising and branding in sports has a special

importance in establishing a relationship with the audience and can play an effective role in attracting capital and increasing income. In addition, physical education students pay attention to the social and cultural effects of the sports industry. Sports, as a group and social activity, can strengthen social connections and create a collective identity among people. These different dimensions of the sports industry show that this field can be used as an effective tool in improving the quality of life as well as the economic development of society. As a result, in order to make the best possible use of the capacities of the sports industry, it is necessary that educational and research programs in universities and physical training institutions pay special attention to these aspects and prepare students to face the challenges and opportunities in this industry. This approach can lead to the stable and balanced growth of the sports industry and the improvement of students' knowledge and skills in this field.

Conflict of Interest:

The authors report no conflicts of interest in this work.

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