

# The Applicability of Sensoryscape Dynamics Model to Attract and Retain Spectators on the Matchday: A Case Study of VK Jug Dubrovnik AO

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***The Applicability of Sensoryscape Dynamics Model to Attract and Retain  
Spectators on the Matchday: A Case Study of VK Jug Dubrovnik AO***

SENIOR PROJECT RESEARCH PAPER (CAST-HSPT-490)

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## Abstract

Since its beginnings, sport and sports activities have been largely explored, most assuredly because of wide spectrum of benefits they provided to humankind. The sport industry has clearly changed in time, due to social and technological development, but it has not lost its primary aim: to satisfy the needs of different levels of society. Nowadays, more than two thousand years after the first Olympic games were held, sport has been primarily seen and researched as a global social phenomenon and as a platform for resolving numerous social issues and its impact on the society is without any doubt enormous. This paper explores the application of Sensoryscape Model in order to identify possible strategies to attract more spectators and enhance the experience of fans of 'VK Jug Dubrovnik AO' on matchdays. The data was collected using double-language questionnaire (English and Croatian) which was designed to analyze the level of satisfaction of the fans with the Sensoryscape senses, entertainment program, F&B products, and the quality of the water polo team roster. The results obtained show that in the areas researched even minor investments could lead to major improvement of the overall satisfaction of fans and suggested other potential areas of improvement for the club and for the city of Dubrovnik.

*Keywords:* Sensoryscape Dynamics, Sports Fans, Fans Satisfaction, Water Polo, 'VK Jug Dubrovnik AO'.

## **The Applicability of Sensoryscape Dynamics Model to Attract and Retain Spectators on the Matchday: A Case Study of VK Jug Dubrovnik AO**

### **The Roots of Sports**

According to one definition retrieved from Oxford Advanced Learner's Dictionary, sport can be defined as an activity which involves certain amount of physical exertion and skill, in which an individual or a team competes against another or others for entertainment. This activity is usually done in a special area, and according to certain, already defined rules.

Sports activities have been perceived as beneficial since the ancient history: the first Olympic games were held at Olympia in the Greek city-state Elis already in 776 B.C (History.com, 2009) and since then, they were held on every four years creating a tradition that extends more than two thousand years later. The games have been the symbol of a victory, dominant status, and an immense example of human force that every participant wanted to achieve, as well as a moment of pride to share with their countrymen. In human's history, the Olympic games have been recognized as a sport event with most spectators and participants and the Olympic flame has served as a symbol of a freedom, nobility, and an eternal glory of human's history of sports and physical development through centuries.

The modern Olympic games began in 1896, when a French nobleman, Baron de Coubertin, wanted to revive a system of competition in ancient Greek and Roman times in modern conditions. Richard Espy, in the preface of this book on *The Politics of the Olympic Games: With an Epilogue, 1976-1980* stated that modern games through physical exercise and competition provided to the world's youth an opportunity to "revive and instill" certain virtues such as fair play, and soundness of mind and body. The same author, however, recognizes that

the Olympic games in the modern era have been, unfortunately, more used not to promote peace, understanding and fair play, but rather to demonstrate national self-interest, sense of survival and pride (Espy, 1981). Nevertheless, the Olympic games have succeeded to demonstrate a long man's struggle to fight with his ideals the reality in which is bound to live.

### **Sport as a Social and Cultural Phenomenon**

Since its beginnings, sport and sports activities have been largely explored, most assuredly because of wide spectrum of benefits they provided to humankind. These benefits include the improvement of physical and motor skills through a constant movement of a body, such as: athleticism, pace, stamina, acceleration, strength, discipline, and physical flexibility.

The sport industry has clearly changed in time, due to social and technological development, but it has not lost its primary aim, and this is to satisfy the needs of different levels of society: individual, group, social, national, and international (Dadelo, 2020). Nowadays, more than two thousand years after the first Olympic games were held, sport has been primarily seen and researched as a global social phenomenon and as a platform for resolving numerous social issues (Milanović, Škegro, Čustonja, 2015). According to the same source, sports can be practiced by people of all age groups: from the youngest age (almost from the birth) until old age when peoples' movement and strength evidently decrease. It is reasonable to presume that any kind of sport can be a significant factor in a person's development & growth process or can encourage smoother adaptation to different cultural societies and overall strengthen mental health conditions. There are different shapes and levels that sport fluctuates between, in according to an individual's aspirations and abilities: from professional sports level that presents the main occupation of an athlete and provides a paycheck from a professional sports club/organization to the recreational sports level that serves as an engaging activity to keep

people healthy and in constant body movement. Furthermore, there is a type of academic sports standard that has a purpose of enabling young athletes to compete in scholar competitions, develop sports mindset and learn fair-play elements that will structure their personality for the future challenges in life.

According to Milanović et al. (2015) there are two more shapes of sports classification: amateur sport and sport for people with disabilities. Amateur sports are different from professional level as there a lower qualitative and conditional level from an athlete is demanded and the entrance barrier is on a lower scale; there are no requirements for an amateur athlete to live a strictly professional life, take into consideration nutritionist preferences, have the superior conditional supremacy or a unique set of skills. However, there are possibilities that amateur sportsmen will be paid a symbolic amount of money as a monthly salary, because of the effort put in the promotion of sports within society and attraction of masses to attend sports events. In addition, sports for people with disabilities aims to progress the recovery of mental and physical health of those who are in need. Even though this discipline is the base of Paralympic Games, the competitive result is not the main aim for most people who have physical and psychological issues and the main purpose of this kind of sports is to set up the comfortable sports environment that creates a system of inclusion with general social living and working environment.

According to Naumenko (2018), sports as a socio-cultural phenomenon has started to actively grow in the symbiosis with mass media in the second half of twentieth century, following the political trends and subsequently becoming an important political asset between the relations of World's leading countries. The major sports competitions like Olympic games, World championships and European championships had received a significant value and importance

from the fans, as mass media devoted more space for sports achievements, sports heroes, and sports villains. According to the same source, sports competitions have been a reflection of the universal culture expressed through changing forms, such as: one person against another, one team against another one, a man against forces of nature, a man against himself etc. In addition, different competition modes required specific game conditions and set of rules in order to determine the winner of a game, so new artificial venues stepped in as a new trend in the industry. After the end of World War II, football as a sport was gifted with an expansion of investments in football stadiums that were expressed as the state of art creations by the most prominent architects of that time, and that period was marked as a ‘golden age’ of the development of football infrastructure all over the globe. The consequence of investments in the sports infrastructure could be recognized almost immediately as fans were more attracted to follow sports, create social groups that support their favorite team (on local, national, and global level) and accept sports as an important component of a social culture (Naumenko, 2018).

One of the most important breakthroughs from Naumenko’s research paper were the creative functions of sport as a social phenomenon and the main advantages that sports can provide to communities from a function of universal culture creator. The most noticeable functions of sport that were identified in this research are the following: a) socially oriented programs of personal development supported by sporting achievements and interpreted as the advantages of a healthy lifestyle, b) an extended number of meaningful and socially valuable options for the population of a society to spend free time in an entertaining and productive point of view, c) a distraction of the population of a certain society from real life problems, functioning as a natural booster of personal physiological performances, and the mean of stabilization of public

life, d) a promoter of a country's strengthening image and prestige in international sports competitions.

However, the research shows that growing influence of sports as a global cultural phenomenon is sometimes negatively used by politics and separated interests of different parties, that want to misuse the engaging power of sports influence and promote personal interests through the same.

### **Sports Industry and Marketing**

Sport industry can clearly be seen as a specific market in which people, activities, businesses, and various organizations are involved in producing, facilitating, promoting, and organizing various activities, experiences or business enterprises focused on sport (Dadelo, 2020). According to the same author, in this type of market, all the business or products that are offered to the buyers are always sport related, whether these are specific goods, services, people, places, or ideas. The importance of sport industry is enormous: sport and sport industry have a great impact on all the parts of the social life of the society, but they also strongly influence country economy, people ethical values and lifestyles. According to Redner (2004), sport and sport industry have become a major social factor, since they help people overcome bad habits and the influence of "cheap culture" products. According to another researcher, sport has also become a powerful political tool, since it helps increase the sense of national pride and patriotism, and the unity of the country, at the same time motivating its leadership and increasing social responsibility of citizens (Seippel et al., 2018).

The need to organize and promote sport activities connects the sport industry closely to marketing and entertainment. Specific characteristics of this industry have therefore made necessary to also create a specific type of marketing named Sport & Entertainment Marketing, which is a subdivision of marketing, but it simultaneously focuses on both: the promotion of



sports, (sport) events, games, music, and films as well as on the promotion of other products and services that relate to sport and entertainment.

Based on the definition of Shilbury et al. (1998), sport marketing can be defined as a correlation of social and managerial processes where a sport manager manages to find a mean between sporting organization's goals and the needs of consumers through the exchange of products and values between each other. The value that a sports organization provides to sports fans is expressed through the sport products' goods and services. The sport products can be thus divided in two categories: *Core product* (The match, event, and competition) and *Product extensions* (Hospitality, merchandising, image, rights) and the challenge for management of a club is to promote all of them in the best possible way (Buhler et al., 2006).

On the other hand, companies from other industries, that aim to promote non-sports or sports related products through sports events, have a two main types of strategies: a) *Advertising* by using general sports space on the event and b) *Sponsorship* by using associations with specific sporting organizations for a multiple of objectives. The targeted audience of non-sports companies are mainly spectators and sports consumers (Buhler et al., 2006).

## **Sports Tourism**

The first symbiosis between sports and tourism dates back in 1971 when ICSSPE (International Council for Sport Science and Physical Education) held the official seminars and congressional activities on this topic (Radicchi, 2013). Hall (1992) provided a definition of sports tourism: "Travel for non-commercial reason to participate or observe sporting activities away from the home range.". The definition suggests that the main component of a sports tourism is a sports competition or practice of a certain kind of sport(s) away from the homeland, for at least twenty-four hours. The secondary activities and entertaining environment are supportive factors that can influence a potential traveler's decision to visit a place of competition. Yet, the

main requirement that determines the attraction of a certain destination is the level of the quality of a competition. For example, the most prestigious competitions in the World are the Olympic games, FIFA World Cup, and Formula 1 caravan. Because of the importance of mentioned competitions, travelers are willing to visit destinations of different climate conditions and standard of living, learn more about destination's cultural differences, explore the beauties and architecture of that place etc. Even though the definition of Hall (1992) divides the sports tourism travel from commercial type of travel, the contemporary trends correlate sports tourism and customer consumption of entertaining supplies like shopping centers, local attractions and similar.

According to Nogawa et al. (1996) the primary purposes of sports tourists are to participate in a sports event actively or passively. The active participants are considered individuals or groups that are competing in the sports event, while passive participants are visitors that want to enjoy the game and the playfulness of the essence of sport disciplines. The passive participants experience 'spectatorship' effect, which aims to make fans of an event to enjoy the uncertainty of a result, playfulness of the game and supportive entertaining factors that has a purpose of emphasizing the general atmosphere and fan satisfaction at the sports venue.

Hinch (2001) recalls the theory of three dimensions of framework for sport tourism research that indicates three core dimensions: a) Sport Dimension, b) Spatial Dimension and c) Temporal Dimension. The Sport Dimension is structured of three components: rule structure (the rules of a game), physical competition (the quality of competitors) and playfulness (the uncertainty of a final score). Secondly, the Spatial Dimension contains following elements: location (sports venue as a main factor), regions (nature and its characteristics) and landscape (the attractiveness of a destination in overall). Finally, the Temporal Dimension expresses the importance of duration (the length of a visitor's stay at the sports tourism location), seasonality

(the effect of natural factors that influence the organization of sports tourism elements) and evolution (the developments of sports tourism products over time). All the mentioned dimensions effect the attractiveness of a certain sports tourism destination, and the higher the level of each component, the better the chances of attracting large numbers of sport tourists.

In addition to the core dimensions of sports tourism elements, the supportive characteristics of offerings for sports tourists are not less of the importance. As Gozalova et al. (2014) state, the sports infrastructure and facilities are of an immense importance for different aspects relevant to sport and society: the development of a sports destination, the packages of offers that can be presented to sport tourists and to the level of comfort that influences the satisfaction standard of a tourist. The most notable types of sports facilities that can boost the interest of potential visitors are sports museums, walls of fame, state-of-art venues (stadiums, arenas, domes...), sport theme parks, sport retail stores, sports accommodation. All the mentioned factors combined create a general sports destination image that needs to be promoted and served to the sports tourists.

### **Sensoryscape model: Social Interaction (SI) and Sense of Home (SoH)**

Green, C. et al. (2012) has presented in the research a new approach to a sports event experience which can be perceived through the dynamics of Sensoryscape elements. The idea behind this concept suggests that five senses (sight, sound, touch, smell, and taste) represent the key and critical points in the process of sports event consumer's creation of opinion about that event. The highlight is put on the five senses in the way that sports event organizer can strategically create a hyped atmosphere, in order to maximize the overall experience of an attendee and make that person become a fan of a certain sports team, and sport in general. For example, the beautiful architecture of a sports venue can make a person enjoy the view and satisfy the sense of sight. The next step should be that that person becomes a fan of that club, consistently buy

club merchandise, and regularly attend games, pay for the tickets, and create a revenue for a club. Secondly, a sports club can strategically invest in the most qualitative speakers and audio system on the stadium that will play fans' most important songs and produce an unforgettable atmosphere, so that fans' experience is on the highest level. The third sense is touch, so a sports club should invest in comfortable seats, heating on the venue, or create a huger aisle towards the seats. The senses of smell and taste can be levelled up by placing a food franchise on the venue, so that sports fans can consume enjoyable food and remember the venue as a place with great tastes and smells.

In addition, the same source emphasizes the importance of the freedom that a sports fan can witness on a sports venue, during a sports event. The Social interaction (SI) component presents the critical factor that persuades a sports admirer to visit a sports event in-person and pay for the ticket, instead of the option to stay at home and watch the game near television. The sense of belonging to a community produces beautiful feelings of security and enjoyment in an individual, and a sports venue will thus serve as an outlet for social interaction with the focus on freedom, expression of emotions and the feeling of uncertainty if the beloved team will win a game or not. The third component of the model focuses on the sense of home (SoH) element that makes fans feel a sports venue as their second home. The emotions and reception of positive signals from a sports community on a sports venue should make a sports fan to feel comfortable and get a feeling of belongingness to that place (Green et al., 2012).

The 'Figure 1' visually explains the three components structure and the end goal of the research, that is to raise fans' satisfaction and make them return to the sports venue in the future.

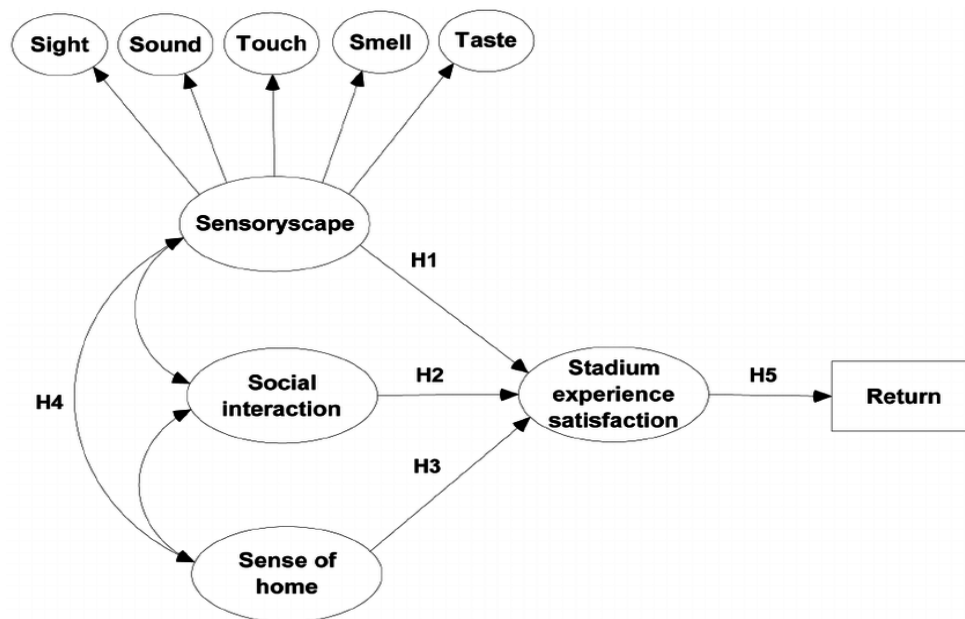


Figure 1, retrieved from *A New Approach to Stadium Experience: The Dynamics of the Sensoryscape, Social Interaction, and Sense of Home* (Green, C. et al., 2012)

## Method

### Purpose

The purpose of this research paper was to: a) determine and to define the main factors that have an impact on a fan's decision to participate in an in-person sport event organized on a matchday in the sport of Water Polo, in the case of Water Polo club 'Jug Dubrovnik AO', b) determine and define the main factors that have an impact on a fan's satisfaction level on a matchday of Water Polo club 'Jug Dubrovnik AO'. The main goal of the primary research was to measure the participants' level of satisfaction with a) 'Sensoryscape dynamics', b) social interaction and c) entertainment program on the sports venue of 'VK Jug Dubrovnik AO' and provide valuable information of what areas could be improved from the participants' perspective. The research measured peoples' satisfaction and familiarity with the organization and entertainment level on a matchday of 'VK Jug Dubrovnik AO'. The final aim of this research paper was to recognize the most critical factors that will make survey participants attend more games in the

future and raise level of satisfaction during the matchday of Water Polo club 'Jug Dubrovnik AO'.

## Participants

The survey was distributed to one hundred (100) people in total, divided in three different target groups.

The first target group were the management and professional players of Water Polo club 'Jug Dubrovnik AO'. There were twenty survey participants (20 male participants), ranging in age from 18 to 53 years ( $M=25.9$ ,  $SD=9.85$ ) that participated in the study. This focus group was selected by the author of this paper because of the specific position of players and management in the club since they present a valid insight from the club about this topic. They spend most of the time on sports venues (more precisely swimming pools) and their opinions could show their level of enjoyment while performing in such an atmosphere like it is in the sports venue where VK Jug play games called *Gruž*. A member from the management of the club was directly contacted and asked to approach the players and the colleagues of the club. All the survey participants from this target group are evidently, fans and supporters of 'VK Jug Dubrovnik AO'.

The second target group were spectators on the Water Polo Champions League game between 'VK Jug Dubrovnik AO' and 'WC Steaua Bucharest' held on April 2, 2022, in Gruž, Dubrovnik. The total of thirty-five participants (25 men, 10 women) filled in the survey, ranging in age between 16 and 75 years ( $M=34.1$ ,  $SD=17.6$ ). This focus group was selected because of the relevance of participants that in-person came to attend the game and enjoy the sport event. This group of participants was the most important for the research paper, since those people paid for the ticket and made revenue for the club. Additionally, their opinion was the most relevant to the research, as well as their current level of

satisfaction with the organization and level of entertainment on a matchday. The questionnaires were collected in person during the game, and the spectators were asked to fill in the survey during a break. According to the data collected, twenty-seven participants (77%) were supporters of 'VK Jug Dubrovnik AO' and eight participants (23%) were supporters of other clubs.

The third target group were the students of 'RIT Croatia' university in Dubrovnik Croatia. Every year level (Freshman, Sophomore, Junior, Senior) students were included in the pool of participants, while the survey was distributed in an online format through 'Google Sheets' platform. The total of forty-five people took a part in the online survey (23 men, 22 women), ranging in age between 18 and 34 years ( $M=22.4$ ,  $SD=3.21$ ). This group was selected because of the diverse demographic preferences such as age and gender, and different affirmations toward sports events attending habits. The majority of participants in this group did not attend regularly or at all the matches of 'VK Jug Dubrovnik AO'. Twenty-seven participants (60%) were supporters of 'VK Jug Dubrovnik AO' and eighteen participants (40%) supported other clubs.

The following table provides data about this subgroup (Table 1)

Subgroup	# Of Participants	Average Age	Male Participants (%)	Female Participants (%)	'VK Jug' Supporters (%)
(I)	20	25.9	100%	0%	100%
(II)	35	34.1	71%	29%	77%
(III)	45	22.4	51%	49%	60%

*Table 1*

## Instrument

The instrument used as a method for this research paper was created in the questionnaire/survey format, that contained twenty-three questions placed in five different forms. The forms of questions used were a) The Likert satisfaction level scale, b) open-ended questions, c) questions with circling answers option, d) Yes/No answer to questions and e) Demographics type of questions.

- a) The first form of questions placed in the survey was presented through the statements and Likert satisfaction level response scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Sample statement from the first group of questions was presented in the following manner:

“I am satisfied with what I can see during the matchday on the swimming pool.”

- 1) Strongly Disagree
- 2) Disagree
- 3) Not sure
- 4) Agree
- 5) Strongly Agree

- b) The second group of questions placed in the survey were open-ended type, as the survey participant could have a freedom in expressing the opinion. Sample question of this kind was presented in the following manner:

“I will attend more games in Gruž in-person if: \_\_\_\_\_”

- c) The third group of questions placed in the survey were circling answers type, so that survey participant could circle the preferable answer and choose the right option which



is the best in accordance with his/her opinion. Sample question of this kind was presented in the following manner:

“What kind of food and beverage products would you like to be in service on the Matchday of ‘VK Jug Dubrovnik AO?’”

- a) Non-fizzy drinks
- b) Fizzy drinks
- c) Water
- d) Alcohol
- e) Pizza
- f) Hamburger
- g) Sandwich
- h) Popcorn
- i) Chips
- j) Others
- k) Nothing”

- d) The fourth group of questions placed in the survey were ‘Yes/No answers’, so that a participant could directly express the preferable choice. Sample question of this kind was presented in the following manner:

“I am satisfied with the quality of the match ticket that I buy on a Matchday of ‘VK Jug Dubrovnik AO’.”

- Yes/No”

- e) The fifth group of questions placed in the survey were Demographic types of questions. Sample question of this kind was presented in the following manner:

“Gender: Male/Female”

In order to increase the number of correspondents, the survey was conducted both on paper (55%) and electronically (45%), through the Google Sheets form.

The main source of the final project's survey questions was the research paper of Green, C. et al. (2012): '*A New Approach to Stadium Experience: The Dynamics of the Sensoryscape, Social Interaction, and Sense of Home.*' that focused on the model of Sensoryscape dynamics' five elements (sight, sound, touch, smell, taste) as the main criteria for sports participant's level of satisfaction on a matchday.

## Results

The total number of respondents to the survey were 100 (N=100).

The respondents were divided in 3 subgroups, that counted:

- The players and management of 'VK Jug Dubrovnik AO': 20 respondents (n=20).
- The attendees of the Champions League game in Gruž on the date 02.04.2022: 35 respondents (n=35).
- The online survey respondents at 'RIT Croatia' university: 45 respondents (n=45).

The subgroup 'The players and management of VK Jug Dubrovnik AO' for the purposes of convenience will be further on referred to in the paper with the symbol (I), the subgroup 'The attendees of a Champions League game in Gruž on the date April 2, 2022' will be mentioned with the symbol (II) and the subgroup 'The online survey respondents at RIT Croatia university' will be mentioned with the symbol (III) in the remaining text of the section.

Overall, the subgroup (I) was structured in the ratio of 100% male respondents compared to the females. The average age of the subgroup was 25.9 years.

The subgroup (II) was structured in the ratio of 71% male respondents compared to the 29% of females. The average age of the subgroup was 34.1 years.

The subgroup (III) was structured in the ratio of 51% of male respondents, compared to the 49% of females. The average age of the subgroup was 22.48 years.

### **Subgroup (I)**

Overall, the respondents agreed that the sight at the sports venue during a matchday was on a satisfying level ( $M=3.45$ ,  $SD=0.82$ ). They were slightly dissatisfied with the sound quality and the soundtrack list ( $M=2.80$ ,  $SD=0.76$ ). The spatial component and the comfort level of seats were rated as just above the average ( $M=3.25$ ,  $SD=0.68$ ). The fourth sense of smell had the same overall grade as the first component of sight, as respondents slightly agreed about the satisfaction level ( $M=3.45$ ,  $SD=0.60$ ). Finally, the respondents expressed dissatisfaction with F&B services at the venue ( $M=2.4$ ,  $SD=0.82$ ).

Overall, the results show that respondents were slightly dissatisfied with the entertaining program during a matchday ( $M=2.95$ ,  $SD=0.88$ ). The 80% stated that they were satisfied with the social interaction level and agreed that they felt like a part of the sports society of 'VK Jug Dubrovnik AO'. On the opposite, 20% disagreed with the statement. Furthermore, 100% of respondents stated that they perceived the sports venue of 'VK Jug Dubrovnik AO' as their second home. The 60% of respondents agreed that there was a need for more club symbols at the venue, while 40% disagreed with the statement.

Among the listed options for additional entertainment, the most common answers were 'Mascot' (55%) and 'Special effect lasers' (45%). On the opposite, the least common options circled were 'Nothing' (0%), and 'Free gifts for the fans' (20%).

Among the listed options for F&B items to be sold at the sports venue during a matchday, the most common answers were 'Water' (80%) and 'Soft drinks' (70%). On the other side, the least common options circled were 'Nothing' (10%), 'Hamburger' (15%) and 'Pizza' (15%). The most common answer to the open-ended question: "I will attend more games if..." was the following one: "If there was better program of entertainment during a matchday."

### **Subgroup (II)**

Overall, the respondents of this subgroup almost agreed that the sight at the sports venue during a matchday was on a satisfying level ( $M=3.85$ ,  $SD=0.91$ ). They were slightly satisfied with the sound quality and the soundtrack list, while the response range was wide ( $M=3.42$ ,  $SD=1.00$ ). The spatial component and the comfort level of seats were rated as just below the average, with wider standard deviation ( $M=2.97$ ,  $SD=1.02$ ). The fourth sense of smell was above the average, as respondents slightly agreed about the satisfaction level ( $M=3.20$ ,  $SD=0.90$ ). Finally, the respondents expressed strong dissatisfaction with F&B services at the venue ( $M=1.74$ ,  $SD=0.78$ ).

Overall, the respondents were not sure about the level of satisfaction with the entertaining program during a matchday, since the spectrum of answers widely fluctuated ( $M=3.02$ ,  $SD=1.2$ ). The 65% stated that they were satisfied with the social interaction level and agreed that they felt like a part of the sports society of 'VK Jug Dubrovnik AO'. On the opposite, 35% disagreed with the statement. Furthermore, 65% of respondents stated that they perceived the sports venue of 'VK Jug Dubrovnik AO' as their second home, while 35% disagreed with the statement. The 82% of respondents agreed that there was a need for more club symbols at the venue, while 18% disagreed with the statement.

Among the listed options for additional entertainment, the most common answers were 'Mascot' (62%), 'Free gifts for the fans' (45%) and 'Kiss Cam' (45%). On the other hand, the sections with lowest results were 'Nothing' (8%), and 'Interview with the coach' (20%).

Among the listed options for F&B items to be sold at the sports venue during a matchday, the most common answers were 'Soft drinks' (51%), 'Popcorn' (45%) and 'Water' (42%). On the opposite, the sections with lowest results were 'Nothing' (11%) and 'Alcohol' (22%).

The most common answer to the open-ended question: "I will attend more games if..." were the following ones: "If there was better program of entertainment during a matchday.", "If there was a better atmosphere on a matchday.", and "If there were free gifts for the fans."

### **Subgroup (III)**

Overall, the respondents were either neutral or not sure that the sight at the sports venue during a matchday was on a satisfying level, while the standard deviation was very wide ( $M=3.02$ ,  $SD=1.27$ ). They were neutral/not sure about the sound quality and the soundtrack list, while the response range was wide ( $M=3.08$ ,  $SD=1.01$ ). The spatial component and the comfort level of seats were rated as slightly positive ( $M=3.51$ ,  $SD=0.96$ ). The fourth sense of smell was above the average, as respondents slightly agreed about the satisfaction level ( $M=3.26$ ,  $SD=0.91$ ). Finally, the respondents expressed dissatisfaction with F&B services at the venue, while the response range was wide ( $M=2.35$ ,  $SD=1.09$ ).

Overall, the respondents were not sure in the level of satisfaction with the entertaining program during a matchday, while the spectrum of answers widely fluctuated ( $M=3.08$ ,  $SD=1.06$ ). The 60% stated that they were satisfied with the social interaction level and agreed that they felt like a part of the sports society of 'VK Jug Dubrovnik AO'. On the opposite, 40% disagreed with the statement. Furthermore, 22% of respondents stated that they perceived the sports venue of 'VK Jug Dubrovnik AO' as their second home, while 78% disagreed with the

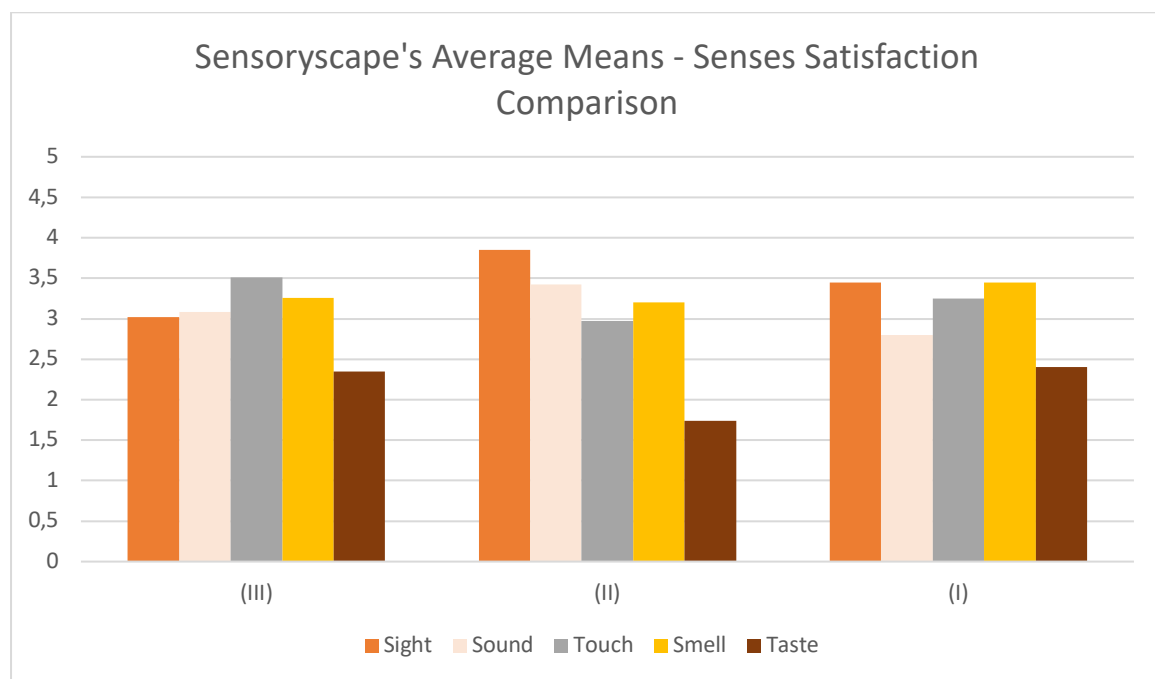
statement. The 84% of respondents agreed that there was a need for more club symbols at the venue, while 16% disagreed with the statement.

Among the listed options for additional entertainment, the most common answers were ‘Free gifts for the fans’ (60%), ‘Kiss Cam’ (51%) and ‘Special laser effects’ (48%). On the opposite, the least common options circled were ‘Interview with the coach’ (2%) and ‘Nothing, the current program is great’ (4%).

Among the listed options for F&B items to be sold at the sports venue during a matchday, the most common answers were ‘Soft drinks’ (71%), ‘Popcorn’ (62%%) and ‘Sandwich’ (60%). On the opposite, the least common options circled were ‘Nothing’ (2%) and ‘Alcohol’ (26%).

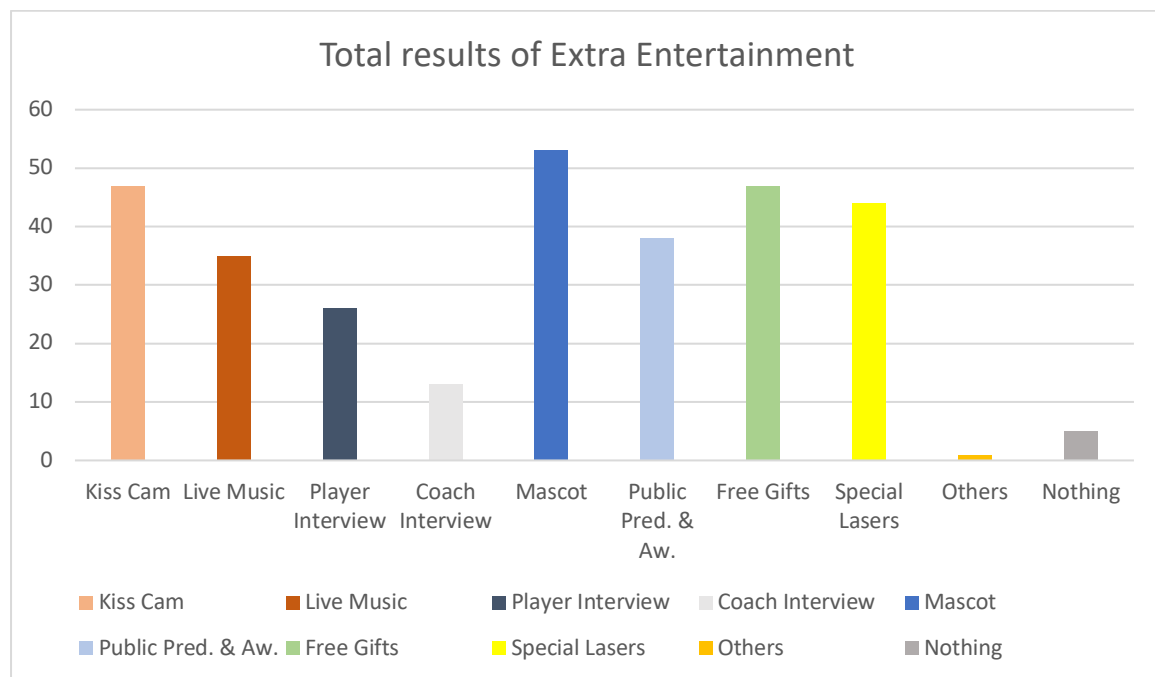
The most common answer to the open-ended question: “I will attend more games if...” were the following ones: “If a matchday was better promoted.”, “If there was a better atmosphere on a matchday.”, and “If a matchday was better advertised.”, ‘If the entertainment program was on a higher level.’.

The ‘Chart 1’(below) presents the comparison of 5 senses’ averages among subgroups.

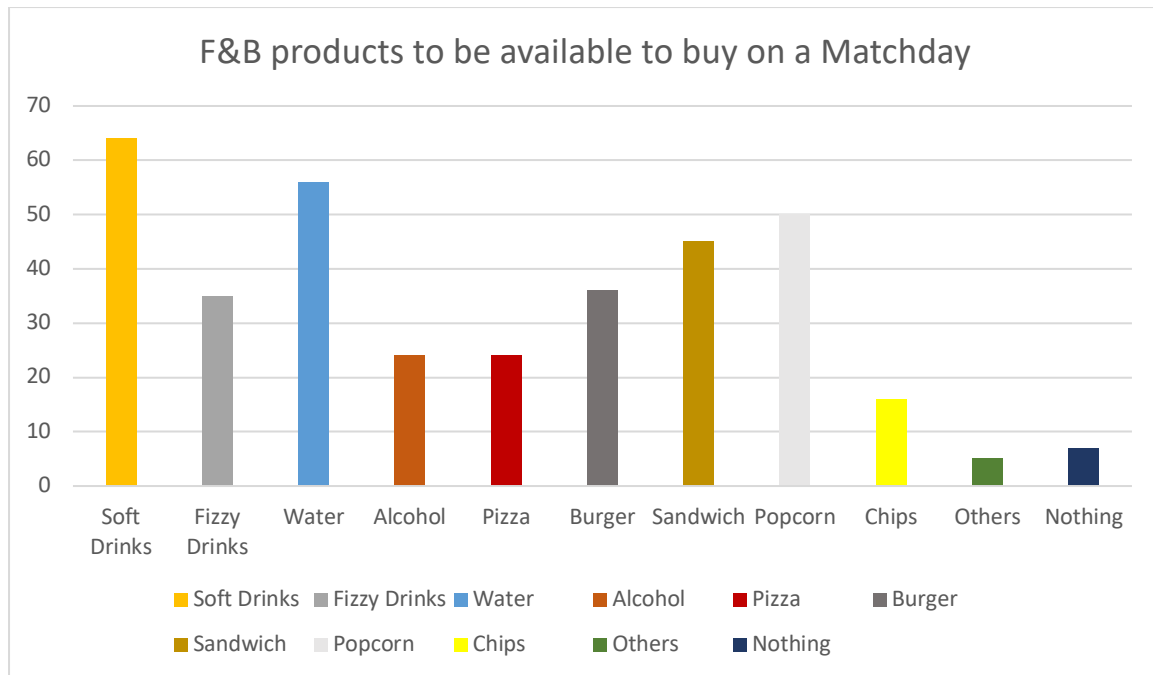


*Chart 1*

In overall, the sum of the circled entertainment options by all subgroups together presents the following order: the ‘Mascot’ had most votes (53), ‘Kiss Cam’ (47), ‘Free club symbols gifts’ (47), ‘Special effect lasers’ (44), ‘Public predictions & awards’ (38), ‘Live Band music performance’ (35), ‘Player Interview on a halftime’ (26), ‘Coach Interview on a halftime’ (13), ‘Nothing’ (5), ‘Others’ (1). The ‘Graph 1’ (below) visually presents the statistics.



The summary of Food and Beverage products, that fans would like to be able to buy during a matchday, is presented in the following order: the ‘Soft drinks’ (64), ‘Water’ (56), ‘Popcorn’ (50), ‘Sandwich’ (43), ‘Burger’ (36), ‘Fizzy drinks’ (35), ‘Pizza’ (24), ‘Alcohol’ (24), ‘Chips’ (16), ‘Nothing’ (7), ‘Others’ (5). The ‘Graph 2’ (below) visually presents the statistics.



*Graph 2*

## Discussion

The results indicate that the average level of satisfaction with the *organization and the atmosphere on the games of 'VK Jug AO'* has a mean of 3.52/5. This is the cumulative result of 100 survey participants, from three subgroups combined. The result can be interpreted in a way that survey participants are satisfied just above the average with the organizational component on a matchday. Based on the brand image of the club, the extensive fan base and the prominent history filled up with trophies and awards, I have an opinion that the minimum level of satisfaction must be solid and above the mean of 4/5. However, a matchday components correlate and depend on each other. This category will be graded better if the entertainment, food and beverage products and the level of comfort get upgraded.

The results suggest that the average level of satisfaction with *the entertainment activities on a matchday of 'VK Jug Dubrovnik AO'* has a mean of 3.01/5. This is the cumulative result of 100



survey participants, from three subgroups combined. The interpretation of this result indicates that survey participants have the average level of satisfaction with entertainment activities and program on a matchday. As the data from the '*Graph 1*' presents, the most wanted entertainment activities include: 'Mascot', 'Free gifts for fans', 'Kiss Cam' and 'Special effect lasers '. In my opinion, the club should satisfy fans and implement as many entertainment activities as possible. Even one innovation could be efficient and improve the level of satisfaction of fans, attract new ones and make them constantly return to watch the games of the club. Even though today's matchday of 'VK Jug Dubrovnik AO' could be potentially perceived as boring by some spectators, this is primarily true because of the lack of extra activities during the event. The main product that the club nowadays offers to the fans is the core game itself, and the quality of sport played by its players in the Water Polo stadium. It is clear that some innovations should be implemented to improve the entertainment program and raise the level of satisfaction of spectators.

The component of *Food and Beverage products to be available to buy at the venue on a matchday of 'VK Jug Dubrovnik AO'* indicates that the most wanted food and beverage products to buy on the swimming pool are: 'Soft drinks', 'Water' and 'Popcorn'. The results of the research show that this innovation would create a 'win-win' situation as the fans would be able to avoid hunger and thirstiness during the game, while the club would be able to generate an extra profit and invest other projects such as the acquisition of a new player, new promotional campaigns and similar.

As stated at the beginning of a paragraph, in the organization of a sport club or a sport event, there are many components that are correlated and they affect each other. In this research paper, the structure model of Sensoryscape dynamics suggests that the five critical points of fan satisfaction are five senses (sight, sound, touch, smell, taste) and they create a unit of satisfaction in a mind of a sports event attendant. The results of this research show that these

five critical points according to the Sensoryscape model dynamics are not satisfactory. In overall, 100 survey participants from three subgroups rated the senses satisfaction on a matchday in the following manner: Sight (3.44/5), Sound (3.10/5), Touch (3.22/5), Smell (3.30/5), Taste (2.16/5). The overall level of satisfaction of fans rarely exceeds the average. It is clear that the sense of taste is the least satisfactory element since there is no offer of any food or beverage during the match or sport event. The low average result in the sound component is perhaps the most surprising result of the survey since the quality of speakers at the venue is very good. Nevertheless, since there is no diversity in the soundtracks, fans can only hear repetitive short audio recording when the home team scores a goal.

Based on the results of subgroups (II) and (III) (N=80), the 41% of the survey respondents declared that they consider the Swimming Pool Gruž', which is the venue of 'VK Jug Dubrovnik AO', as their second home or that they feel comfortable intentions towards the facility. This is respectable percentage as the leading subgroup (I) was excluded because it is contained of players and club staff, who spend every day on the place and their feelings are seen as not relevant as the ones of fans. This result presents the loyalty of the fans and the relationship with the club, which apparently can also be improved by minor investments in the quality of the offer and some efforts to improve the overall service.

I found it surprising that 65% of survey respondents (N=100) are satisfied with the quality of a matchday ticket. The ticket is not representable, the quality is on the lowest level, and it has the same design for every game. For example, in football the match tickets are of a much higher quality, in color and the designs are breathtaking. The purpose of a match ticket is not just to pass the gate and enter a game zone, yet it is to save it as a souvenir and always remember that sports events are backed up with strong emotions.

The most interesting finding of this research is the results in the data section that shows that 68% of the survey participants (N=100) are satisfied with the social interaction with the club.

At the beginning of this research, I personally expected the lower percentage because of the low entertainment satisfaction level. Nevertheless, this result shows that VK Jug Dubrovnik AO has a strong and rich heritage in its town and that the support that the club receives from the fans cannot be easily shaken since it has already become a part of their social identity.

The last important research analysis is related to non-successful promotion of the club's games. Almost a third of participants stated their confusion with club's matchday promotions and marketing campaign. The promotions and marketing component therefore present the main topics for future research, as these elements can directly influence the boost in a matchday attendance numbers, create more significant engagement with fans and improve the general atmosphere during the matchday.

I believe that a future research and investigations should be based on similar types of surveys, with an enhanced focus on promotional and marketing campaigns. The reason for this lies in the fact that regular follow-ups with fans produce the best results that generates benefits to all parties involved. The fans' satisfaction level will be on the highest level, the atmosphere to play in will be the most interesting for the club's players and the club will generate more revenue from different selling sources (match tickets, F&B products, merchandise etc.)

Finally, in order to find other relevant data that could be beneficial to the club, detailed research of promotional activities, services and overall organization of a famous sport complex of 'DUNA Arena' in Budapest, Hungary is strongly recommended. This is the best in the world complex for all kinds of water sports, equipped with the most advanced technologies such as retractable bleachers, a giant TV screen, LED projectors, free wi-fi service, refreshment stands, boxes and many other advantages. Inside the complex, there can be found swimming pools, jacuzzi, sports museum, fitness center, professional gyms, buffets, VIP viewing areas, conference and event rooms, media studios, medical area, security area... The arena hosted major sports events such as LEN Champions League finals, Water Polo Super League

tournament, Artistic Swimming Championships, Short Course Swimming World Cup, European Water Polo Championships, and many other events. The investment in the arena brought a great benefit primarily to the city of Budapest, as sports tourists spent more nights in the city: from 2.3 days to 9.3 days during the European Water Polo championship in 2017, according to the information posted on official FINA pages. According to the same source, a 25% rise in the prices of hotels was acknowledged while more than 400,000 participants were registered to attend major events in this championship.

The research I have done so far has encouraged me to believe that Dubrovnik as a travel destination of immense cultural and historical heritage, also has an incredible potential to connect sports and hospitality, similar to the Hungarian model. In order to do so, it is clear that areas such as technology, services, promotion and overall quality of the sport complex in Gruž need to be adequately financially supported which will ultimately bring benefits not only to VK Jug Dubrovnik AO but will also improve the image of Dubrovnik and bring benefits to the overall local community.

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