

## Sport involvement analysis of Hungarian tennis players and tennis clubs

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### Abstract

Introduction: Strategies, which can promote leisure time activity, are continuously needed, and results of a complex analysis – demand and supply side evaluation of a sport product/activity– can be an input in this process. The article examines the sporting habits and motivation of a sample of Hungarian tennis players with a particular focus on involvement, as demand side. The article includes the markets' supply-side and examines the role and position of sport service providers (clubs) in terms of involvement. At the same time, all the results are connected to, and with the help of, the Psychological Continuum Model (PCM). Method: Questionnaire research was done in the case of athletes (multidimensional measurement of sport involvement), and in case of tennis clubs, and surveys were evaluated by the linear regression model, and the 'PCM staging protocol,' and mean values were used to get results. Results: The Athletes' questionnaire survey (n=348) shows that most tennis players ranked the Attraction first and then Attachment ahead of Allegiance and Awareness on the four-step PCM scale. The scores for three facets of involvement, namely Pleasure, Centrality, and Sign, indicate that athletes value Pleasure mainly; however, based on the regression model, a link between playing level and playing frequency and Centrality and Sign can be seen. Service providers', namely tennis clubs' (n=31) responses, highlight respondents' strengths and weaknesses in attracting and maintaining players. Discussion: Results show consistency between athletes' opinions and providers' perceptions of athletes in terms of the degree of involvement in their position in the PCM hierarchy. The results also show areas where the club system needs to improve to retain involved tennis players and increase their involvement through the PCM stages.

**Keywords:** sport participation, involvement facets, Psychological Continuum Model, sports marketing, motivation

### Introduction

It is so essential to study how people participate in the social world (Beaton et al., 2011), even more, when health-promoting activities are at the forefront of their choices (Grima et al., 2017). Studying participation in sports is a relevant topic for sports management research. Lis and Tomanek (2020, p. 1205) made a thematic mapping in case of sport management, and one of the results says *'that sport management is a very broad concept and there is a variety of topics which attract the attention of scholars cultivating this research field'*. Sport management is also significant for the social sciences; however, there is a limited representation of this type of research (Beaton et al., 2011), while studying sports and recreational activities became attractive in the 1990s (Harvitz & Dimanche, 1999; Funk et al., 2016). When examining the motivation of sport consumers (see literature review of Tokuyama et al., 2016) several studies emphasize the importance of considering the effects of sport involvement; in addition, note the broad application of involvement in leisure and sports tourism (Dimanche et al., 1991).

Shank and Beasley (1998, p. 437) emphasize that involvement may be an antecedent and a good predictor of sport-related behaviors. Involvement is about how the sport consumer is involved with a sport product or service and is *'often used to describe an individual's level of interest in sport and recreational activities'* (Funk et al., 2016, p. 206). Sport participants and spectators are the often referred to two groups of sport consumers (Tokuyama et al., 2016), while others (inter alia Funk et al., 2016; Bácsné et al., 2018) distinguish between active and passive sport consumers (based on activity level) and define different types of consumers. Based on Allport's work from 1945 and on a deep literature review, Beaton and co-authors (2011, p. 128) offer a conceptual definition of sport involvement, which *'is present when individuals evaluate their participation in a sport activity as a central component of their life that provides both hedonic and symbolic value.'* Chiu and co-authors (2019, p. 1407), based on literature review, make it simply that the *'[s]port involvement is defined as the love of and bond with sports.'* Funk and co-authors (2016) interpret the concept as an (1) attitudinal outcome and a (2) psychological factor and emphasize that situational (SI) and enduring (EI) involvement are two types to examine sport consumers by academic studies (Funk et al., 2004; Funk et al.,

2016). (For additional definitions, interpretations, and examples, inter alia Beaton et al. (2009); Beaton et al. (2011); Brown et al. (2016); Funk et al. (2016) can be referred.)

Two ways of sport involvement's measurement are mentioned in the literature. (1) A unidimensional measurement offers simple and efficient valuation, as examples cited by Funk et al. (2016), Brown, Smith & Assaker (2016), and Shank & Beasley (1998). (2) Multidimensional measurement is more complex (Funk et al., 2016) than the unidimensional, but useful and valuable because consumers can be segmented into appropriate facets (Beaton et al., 2009; Funk et al., 2016). The number and categories of facets vary from one method to another, so there is an evolutionary process in the measurement of involvement (see the literature summary by Brown et al., 2016). The model with three facets, (1) centrality, as importance; (2) pleasure, as a hedonic value and (3) sign, as a symbolic value (see Beaton et al., 2009 and 2011; Funk et al., 2016) is an example for a multidimensional measurement. Beaton and co-authors (2009 and 2011) offer a solution for measuring the three facets of sport involvement with items and link this involvement model to each level of the Psychological Continuum Model (PCM), with the aim of placing consumers at this stage-based model of engagement.

The PCM is a four-level model, with the Awareness stage at the lowest level. This is followed by the Attraction stage, then the Attachment stage, and finally, the Allegiance stage. Each stage has an input side (called Antecedents) and an output side (Outcomes). The input side factors include the results/outputs of the previous stage, and this is how the hierarchical structure of the levels is interpreted. (Funk & James, 2001; Funk et al., 2016) The PCM allows us to answer the question of how a person relates to a sport object and how this relationship changes over time (Funk et al., 2016). The application of the PCM is possible within the topic of sport or recreation, as the authors note that the focus of the object can be a sports team, player, league, event, or activity (Funk et al., 2016). In other words, it is also suitable for expressing participation in sport, and thus commitment to active sport participation. However, the PCM model can be linked to the sport marketing side, as Funk et al. (2016) define sport marketing-related goals, activities, and tools for each level of PCM. At the Awareness stage, the marketing activities aim to make the consumer aware of the sport product or service, thus helping the consumer to know about the sport and to move more easily towards the Attraction stage. In the case of Attraction, positioning is the goal, which can attract new consumers, establish new types of relationships with existing ones, and reduce attrition of existing consumers. In the case of Attachment, the focus is on personalization, where sport products are offered more personally for consumers, while in the case of Allegiance, the focus is on making customers into allies (agents) who become committed to promoting the product and expanding their customer base. (Funk et al., 2016, pp. 181-184)

Within the sport of tennis, a number of international studies have been published, mainly focusing on the motivational factors of athletes (a thorough summary of motivational research in tennis is provided by Crespo and Reid (2007)). Beyond tennis motivation research<sup>1</sup>, it is worth turning attention to tennis participation and tennis-focused involvement. Casper, Gray & Stellino (2007) conducted research among tennis players aged 19-84, using the Sport Commitment Model (developed by Scanlan et al. (1993)) and its extended version to test and extend the model on recreational athletes. Grima and co-authors (2017) used a thorough literature review to present different aspects of participation in the sport of tennis. Tokuyama and co-authors (2016) examine the relationship between the motivation of two groups of sport consumers, specifically sport participants and sport spectators, through such complex analysis; in addition, the Sport Involvement Analysis (developed by Shank and Beasley, 1998) was modified to be applicable to tennis (Tokuyama et al., 2016). Casper and Andrew (2008) investigated sport commitment among recreational tennis players and university tennis players. In their work, they defined five determinants of sport commitment: sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities (Casper & Andrew, 2008, p. 203). Eskiler (2019) conducted a Leisure Participants Segmentation study using three involvement facets, namely hedonic value, centrality, and symbolic value to segment participants. A similar assessment can be mentioned in the study of Alexandris (2013), who examined the involvement in the case of 200 recreational tennis players (members of a private club), taking into account demographic and psychographic characteristics. He measured involvement in four dimensions: attraction, centrality, self-expression, and social bonding (referred to the work of Kyle et al. (2004, 2007)) and used a cluster analysis with the help of multidimensional involvement facets and defined two clusters: high and low involvement ones, which differ significantly in all involvement facets. In the Hungarian context, Szatmári, Fritz, and Makszimtyuk (2012) studied amateur tennis players in the light of recreation in a small sample, while Kovács and colleagues (2015) studied sport consumption habits among Hungarian residents. Out of their sample (n=1200, 332 active athletes), 111 respondents identified tennis (more than one sport could be identified) as an active sport (i.e., 9.3% of respondents, 33.4% of active athletes).

The aim of this article is to examine the sporting habits and involvement of a sample of *Hungarian tennis players as active sport participants (I)*. Tennis has a positive effect on health, which has proved inter alia by Jackson et al. (2020) and Dombrowski (2021); and nowadays (thanks to the effects of pandemic) it is so important to motivate people to be active (in general, not just in case of tennis), as it was concluded in the work of Rátonyi et al. (2021) and Harangi-Rákos et al. (2022). Studies, dealing with (generally) sport facilities,

<sup>1</sup> Some examples of measuring/evaluating/analyzing motivation in the case of tennis inter alia Juchem et al., 2007; Alexandris, 2013; Alvarez & Laborda, 2017.

players, consumer market (inter alia Bácsné Bába et al. (2021), Balogh & Bácsné Bába (2021), Balogh & Bácsné Bába (2020)) and with coaches in case of tennis (inter alia Crespo et al. (2021)), can support decision makers in a supply side. Especially if a strategic management tool is used, as Crespo Dualde (2022) introduced the usability of Balanced Scorecard (BSC) in case of tennis clubs (see also Crespo et al. (2022)). Therefore, a further aim is to involve the supply side of the market in the analysis and to examine the role and position of *sport service providers, specifically tennis clubs*, in terms of sport involvement (II). Linking the results of the two sides is also a goal of this present article, which can promote leisure time activity strategies, as previous research (Bácsné et al., 2020) emphasised, that in case of Hungarians there is need to improve and develop options for physical activities in leisure-time sports.

## Material And Methods

### Methods

(I) As a multidimensional measurement of involvement (see Beaton et al., 2009 and 2011; Funk et al., 2016), we measured the three facets (Pleasure, Sign, Centrality) with 3-3 items (based Beaton et al., 2011, however, focused on tennis, translated to Hungarian) on a 7 points Likert scale. Summarized values of facets (total score numbers) were evaluated (descriptive statistics), and a linear regression model linked total scores of facets and demographic characteristics (age, gender, level, summer playing frequency), with the help of RStudio. In case of multiple regression 'lm\_robust' function was used which is Ordinary Least Squares with Robust Standard Errors. This formula fits a linear model, provides a variety of options for robust standard errors, and conducts coefficient tests (RStudio).

Later, the 'PCM staging protocol' (Beaton et al., 2009 and 2011; Funk et al., 2016) was followed to make a relation between involvement and stages of PCM. Beaton, Funk, and Alexandris (2009) defined a staging mechanism with three main components: (1) Measure the facets of involvement; (2) Create a ranked involvement profile; (3) Apply the staging algorithm. (1) They used 4-4 items in case of involvement facets (12 items totally), and (2) based on mean values (categorized to low, medium, or high), they (3) linked the results to different stages of PCM, using 27 unique profiles. Later in the survey of Beaton et al. (2011), *'each facet was measured with three items on a seven-point Likert scale ranging from strongly agree to strongly disagree to enable reliability testing.'* They measured the correlation between facets and followed the above-mentioned staging mechanism. Also, a survey with nine items was done – however, in case of spectators – by Funk et al. (2016), and they called the whole process 'PCM staging protocol'.

(II) Questionnaire research was done with the aim of exploring what supply-side actors (Hungarian tennis service providers) are doing and what tools they are using to meet athletes' expectations and to promote athletes' involvement. A set of questions was developed (Annex 1) based on the work of Funk et al. (2016), firstly, to measure the availability of tools that are used by service providers at each PCM stage to promote involvement; secondly, to measure the rank of athletes in the PCM, based on the opinion of service providers. Namely, we asked service providers to rate (from 1 to 7) how true different statements are for the athletes who belong to them. Statements based on the example of golf from Funk et al. (2016) (we specified it to tennis) and show a connection with stages of PCM: 'I know (about) tennis' is the Awareness, 'I like tennis' is Attraction, 'I am a tennis player' is Attachment, and finally, 'I live for tennis' is the Allegiance. RStudio was used to evaluate the answers of service providers too.

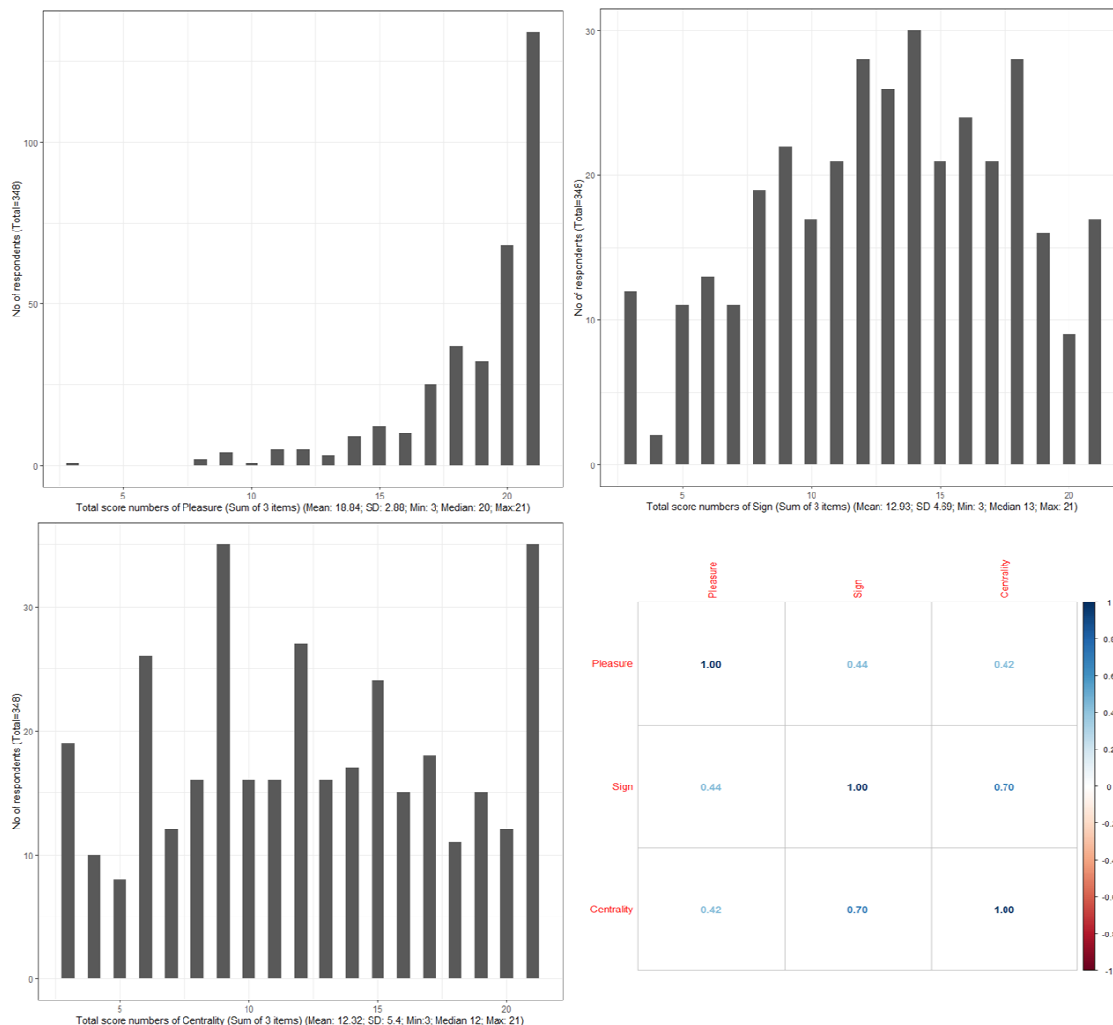
### Participants

(I) The research looked at tennis players nationwide, using an online survey, which was administered from March till July 2021, with a voluntary completion option. The Hungarian Tennis Association sent the link to access the online survey site to members; in addition, other tennis associations were asked to promote this research, and follow-up contacts were made during this period too. A total of 348 usable surveys were evaluated, where 78.44% are male, and 21.55% are female. The mean age of the sample is 46.33 (sd=15.34, median=46, min=10, max=81). The summer playing frequencies are: 50.57% play 3 or more times a week, 41.66% 1-2 times a week, 6.32% a few times a month and 1.43% play few times in every 6 months. Level of play was measured by participation in competitions: 28.73% participated in competitions ranked by the Hungarian Tennis Association, 27.58% are amateurs, occasional competitors, while 22.7% are amateurs, but regular competitors, 16.95% had no competitions and 4.02% participated in international competitions.

(II) 31 service providers completed the questionnaire of suppliers (with a voluntary completion option): more than half of the respondents filled in as president (54.83%) (12.9% as manager, 9.6% as vice-president/executive member, 9.6% as division manager, 6.45% as managing director, 3.2% as sports director, 3.2% as self-employed); more than half of them (51.61%) has own pitches; and more than half (51.61%) identified amateurs as the main target group of the club (35.48% identified children and only 12.9% the competitors (from age 14)). Respondents reported a total of 1,476 Hungarian Tennis Association-certified players and a total of 2,818 who belong to the clubs or are regular players and participate in events. In addition, a total of 99 coaches. These details show that the sample includes organizations as sport/service providers with certified competitors but also with a particular focus on amateur athletes.

**Results**

(I) In the case of multidimensional measurement of sport involvement of athletes, summarized values (total score) of each facet (see Figure 1) show that Pleasure stands out among the three facets: the high value of the median (20) (compared to the median value of the other two facets (13 and 12)) suggests that the vast majority of respondents rated (totally) Pleasure highly. The distribution of summarized values for each facet shows that the case of Pleasure is different from the case of Sign and Centrality. The correlation matrix shows that there is no significant correlation between the Pleasure and the other two facets, while the Sign and Centrality facets are correlated.



**Figure 1: Distribution of total scores of each facet: Pleasure, Sign, and Centrality; Correlation between facets**

**Own work (with a help of RStudio)**

It was worth examining how the different distributional facets are related to demographic factors. The relationship was examined by a multiple, linear regression model, between age, gender, playing level, frequency of playing (summer period), and each facet. Results in a model with all 4 mentioned variables show that in case of Sign there is a link with Level ( $p < 0.05$ ;  $\beta = 1.4070$ ) and Playing Frequency ( $p < 0.05$ ;  $\beta = 1.1828$ ); and in case of Centrality also there is a link with Level ( $p < 0.05$ ;  $\beta = 1.2229$ ) and Playing Frequency ( $p < 0.05$ ;  $\beta = 3.2884$ ). In summary, although the results are not significant, there is a link between playing level and frequency and facet of Centrality and Sign, however this is not the case for variables of age and gender. It is interesting that for Pleasure, we cannot even make such a finding for level and frequency, and neither gender and age (we can say that in case of Pleasure has a link only with Playing Frequency ( $p < 0.01$ ;  $\beta = 0.5634$ )).

Following the recommendations of referred 'PCM staging protocol', the next results are obtained: the majority of the respondents ( $n = 348$ ) belong to the Attraction stage (37.92%), while a close percentage belong to the Attachment stage (34.77%). The third one is the Allegiance stage (21.55%), and the last one is the Awareness (5.75%).

(II) Several findings can be highlighted from the supply-side survey. Figure 2 summarises the availability of PCM-related marketing tools for respondents. Between tools that are connected to the Awareness stage and help to position in the case of involvement, oral recommendations are emphasized; 90% of respondents indicated that

people are talking about the club's activity at a local level. Among the activities related to the Attraction stage, the self-image is noteworthy, and the online brochure is emphasized. The number of respondents who sell their own promotional products and those who have printed promotional material is negligible. The Attraction stage is also characterized by the existence of infrastructure, but here the picture is very mixed. The results present that most clubs have their own clubhouse, while most do not have a canteen/meal facility or a gym. In the case of Attachment, personalization appears as the main objective. The most emphatic response to this theme is that most of the clubs have a manager and personalized services, but less mentioned that they have organized player meetings. This stage is also characterized by the question of having their own team; 71% of respondents have. In the case of Allegiance, it is notable that most of the respondents take into account the ideas/perceptions of their customers when shaping their vision, and the majority of them have priority customers who are seen as almost allies. To summarise, in terms of the number of devices, the Awareness stage has the highest number of devices, followed by Attachment. Allegiance is the third, and finally, compared to all of these, the Attraction stage has the lowest number of devices. Statements (introduced and referred in Methods) were used to measure the rank of athletes in the PCM based on the opinion of service providers. Checking the mean values of each statement, we can see that the statement 'I like tennis' has the highest mean score (6.29), which is connected to Attraction, while 'I know (about) tennis', so the Awareness is ranked second (mean value is 5.322). 'I am a tennis player', which is the Attachment stage, is ranked third (mean is 4.516), and 'I live for tennis', Allegiance is ranked fourth, last (with a mean of 3.806). In summary, based on the opinions of sport providers, players/athletes are mainly at the Attraction stage, and many are at the Awareness stage; Attachment is less pronounced, and Allegiance is low.

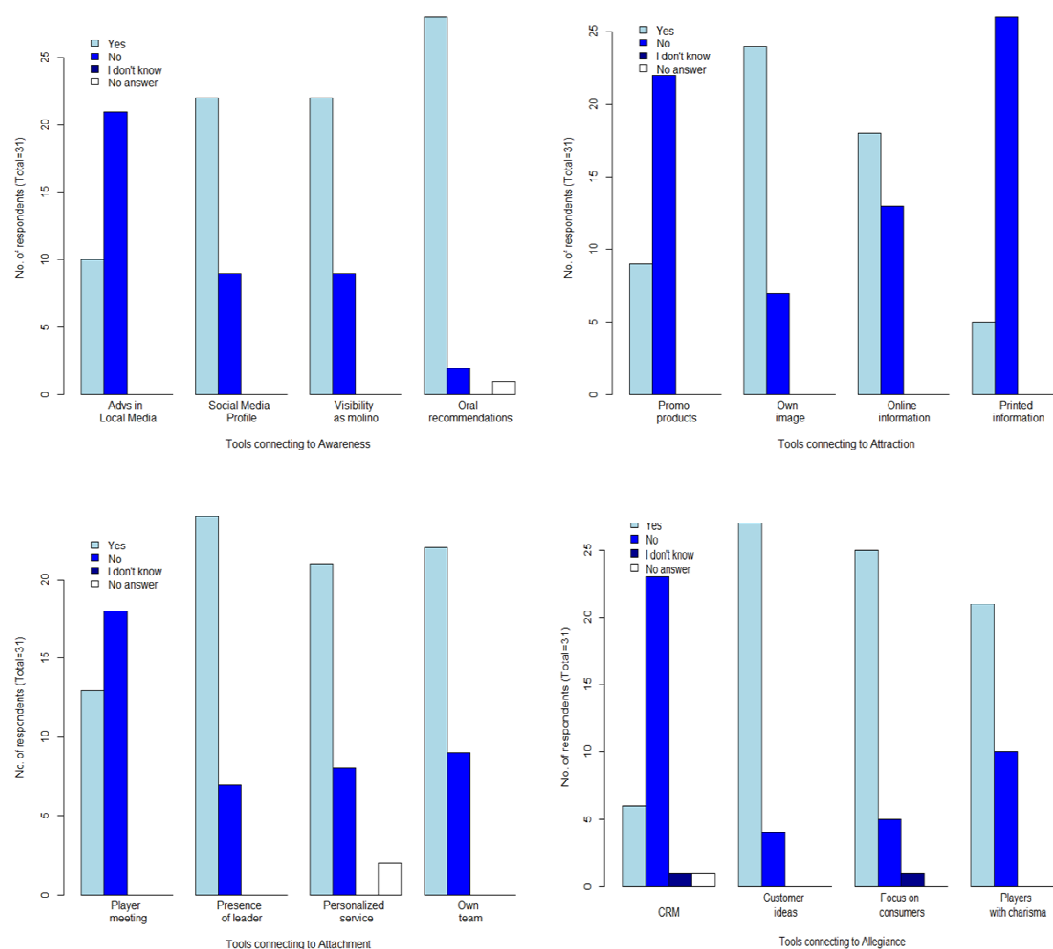


Figure 2: Existence of different marketing tools grouped according to stages of PCM (n=31) (source of tools is Funk et al. (2016))

Own work

Discussion

The results on the demand side clearly show that the Pleasure facet is the most important one for the respondents; in addition, there is no link between gender, age, level, and frequency of playing and Pleasure. This is in line with previous research findings: Juchem et al. (2007) used a motivational inventory and found that pleasure is what motivates (his research focused on young people) most to regularly practice tennis. The results

of Casper, Gray, and Stellino (2007) support this as well, as they list pleasure as a significant promoter of engagement in tennis. Although related to motivation, Alvarez & Laborda's (2017) results also put the pair of enjoyment and love at the top of the list in relation to tennis choice.

Consumer research is important because it can predict consumer behavior; the results of the research can help service providers to develop consumer-oriented marketing strategies targeting adult tennis participants (Casper et al., 2007). The results of the athletes' side show that the respondents (n=348) belong mostly to the Attraction stage, but also a significant proportion of the Attachment stage. Supply-side respondents (n=31), the sports providers believe that their affiliated players belong mostly to the Attraction and Awareness stages. Both on the demand and supply side, the Attraction stage can be highlighted in relation to athletes. In the case of available marketing tools for each stage on the supply side, the Attraction stage, which is highlighted on the athlete side, does not dominate but is at the bottom of the list. Before outlining this situation, it is necessary to know the progression of athletes within the PCM. Funk et al. (2016) report on an Evaluation Process for the PCM, which is an internal process and gives the movement of athletes within the PCM. Progression within the PCM is facilitated by acquired knowledge and experience, but the authors break these influences into two groups. There are (1) the environmental inputs, which are external information and can be classified into two groups, (1.1) marketing and communication of the sport organization; and (1.2) socio-cultural influencers such as family, friends, media, TV, Facebook. Furthermore, there are (2) internal inputs, (2.1) psychological characteristics, which are intrinsic factors (motivation, constraints, attitude, personality), and (2.2) personal characteristics, which are socio-demographic characteristics (gender, age, education, ethnicity, family, etc.). (Funk et al., 2016, p. 175-176) In the case of the study, the marketing and communication impact of the sport organization is relevant, as clubs (supply side) have a direct influence on this environmental input and can influence the movement of athletes between PCM stages. The lack of tools in the Attraction stage, therefore, shows that although clubs can use tools in the Awareness stage to attract new entrants, they do not have sufficient and appropriate tools to help these people move on to the next stage of the PCM, to Attraction. This does not mean that athletes cannot progress further within the PCM – due to the lack of Attraction marketing tools – as progression is influenced by other factors, too (socio-cultural, internal inputs). This only shows the missed opportunity for some new entrants to move on from the Awareness stage to the Attraction stage, who could just be the ones who need the leverage to move to a higher level of involvement in tennis.

Improving marketing tools of the Attraction stage can strengthen the level of involvement of players entering clubs and can give them a clear path to the next stages of the PCM (Attachment, Allegiance), and can mitigate the drop-out cases. The lack of tools for the Attraction stage could also be a focus for policymakers, who could develop recommendations and support programs to reinforce this. However, it is important to note that tools of the Attachment stage are available to a significant extent, so respondents are prepared to facilitate the change and progression of athlete involvement between the Attraction and Attachment stages. (Attract people to join is also emphasised in the case study of Tsai (2018), who had implications for government and business too.)

The availability of Attachment tools is outpaced by the abundance of Awareness tools, so responding clubs are doing an outstanding job in attracting new entrants; they have the opportunity to attract new players. Tools of the Allegiance stage also should be highlighted (although third in the ranking, it is not far behind the first two). Namely, clubs can use these to promote the retention of athletes and the level of an alliance. The research presents limited results and focuses only on the issue of involvement. Further analyses could outline the relationships between motivation, barriers, and involvement rates.

## Conclusion

The aim of the underlying research was to investigate the sport motivation of the Hungarian tennis community, of which the topic of involvement, which is central to this article, was only a part. A further aim of the research was to look beyond the demand side, i.e., the athletes, to the supply side, i.e., sport clubs/providers, which was also a focus of this article. In the present article, we have linked athlete involvement (based on Beaton et al., 2011; Funk et al., 2016) and the situation assessment of clubs through the PCM model.

Our results showed that there is consistency between athletes' opinions and providers' perceptions of athletes in terms of the degree of involvement of athletes (their position in the PCM hierarchy). The results also show areas where the Hungarian club system needs to improve in order to retain involved players in tennis and increase their involvement through the PCM steps.

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## Conflict of interest

The authors state no conflict of interest. Disclosure statement: one of the authors was supported by the above-mentioned project as a scholarship. But no author has any financial interest or received any financial benefit from this research.

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