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Perceptions of coaching success: an exploratory analysis of Czech coaches views on success

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Abstract

A philosophical framework for success in coaching is established, upon which the results of 571 coaches' views of success in coaching is consequently evaluated. The coaches are Czech nationals from seven sports, who coach all age groups from U8 to adult professional teams, with length of experience ranging from 1 to 26 years (mean 7.1). Success definitions were coded and categorized before being analyzed across sport, age group coached, experience and licensing level. Hallowell's success cycle is used as a standard of evaluation. Results were also assessed in terms of modern coaching philosophies. Overall, it was shown that the most common definition of success by coaches fell into the Sport Growth domain (31.7%), by which they primarily meant Player Development (20.6% of these coaches). The second most common domain for defining success was Performance (28.2%), primarily defined in terms of Winning (15.5%). Emotional Growth (21.1%) and Personal Growth (7.6%), though emphasized in modern coaching philosophies, were largely undervalued by Czech coaches. Enjoyment, a key element of success from Aristotle to Seligman, and essential to Hallowell's success cycle was evident in only a small number (5.6%) of the success definitions of coaches.

"When I was named head coach of the Chicago Bulls in 1989, my dream was not just to win championships, but to do it in a way that wove together my two greatest passions: basketball and spiritual exploration... From my years as a member of the championship New York Knicks, I'd already learned that winning is ephemeral …. In basketball – as in life – true joy comes from being fully present in each and every moment, not just when things are going your way. I knew that the only way to win consistently was to give everybody – from the stars to the number 12 player on the bench – a vital role on the team, and inspire them to be acutely aware of what was happening, even when the spotlight was on somebody else. More than anything, I wanted to build a team that would blend the individual talent with a heightened group consciousness. A team that could win big without becoming small in the process." Phil Jackson, winner of 11 NBA titles (Jackson & Delehanty, 2006, p. 16).

Success rarely comes instantly or overnight, it develops through trial and error, opportunity, personal drive, as a product of the environment. Furthermore, success is not an isolated factor in one's life, but the result of many different human interactions. However the earlier an individual can be placed on a path to success, or as Hallowell, (2002) describes, a repeating life success cycle, the more likely they are to achieve success in life. This cycle begins

with a contact in which the child becomes connected to one or more people, such as parents, relatives, teachers, neighbors, peers, and/or coaches. Once a strong relationship is in place, a sequence of play, practice, mastery, and recognition is formed. This produces a strengthened or new connection, thereby continuing the cycle.

Sport, and the coach's role, provides many such opportunities for success cycles. How a coach implements or influences an athlete's success cycle will depend on their coaching philosophy, coaching role, and views on success. To this end, in this article we examine coaches' views of success in coaching. In order to understand how a coach views success in coaching, we must first examine traditional views of success in life, the importance of a definition of success in a given coaching philosophy, consideration of other stakeholders in achieving success, and external notions (e.g., competitive level, age group, organizational goals) of coaching success.

Success in life

The desire to achieve success is characteristic of mankind from everlasting. A definition of success is shaped by individual beliefs as well as by culture and society, situating it at the worldview level of the psyche. Examining how success is defined in other spheres of life is helpful, as personal definitions of success tend to show remarkable congruence across the quadrants of our lives (Sheldon & Kasser, 1995, 2001). Additionally, how a person defines failure and their own competitive orientation will reflect their conception of success (Eisenbarth & Petlichkoff, 2012; Hassan et al., 2015). A person's definitions of success is related to concepts of achievement, attainment, victory, satisfaction, and happiness, relating to the wider concept of art of life, or meaning of concrete activities.

An individualistic approach may view success as the fact that one has achieved a desired goal, or an object for which one has strived; often stated as achieving wealth or fame, or reaching a high social position. Groups can speak about economic, commercial or electoral success. Though this is an expression of individual success, it is measured in relation to how the individual is perceived by others. Thus we can state from the outset that a significant part of success is its impact the individual's position relative to other people, or other groups of people.

Since antiquity people have tried to define the key to a successful life. The Teacher (Kohelet) in Ecclesiastes of the Old Testament chose a negative approach describing what success isn´t by labeling our so-called successes (wisdom, pleasures, advancement, richness, fame, etc) as meaningless. His conclusion of the matter: "Fear God and keep his commandments" (Ecc 12:13) locates success in the realm of obedience, respect and duty. This orientation was strengthened during the period of Protestant ideology from the 16th century (Weber, 2013). The Protestants espoused virtues such as modesty, humility, industriousness, responsibility, perseverance, or diligence as keys to a successful life (Weber, 2013). This is significant in how success in sport is defined, as much of sport was codified under the influence of this Protestant work ethic (Goldbach & Geldbach, 1977; Overman, 2011; Watson & White, 2007).

Drawing again from antiquity, Aristotle's happiness (eudaimonia) denotes a special good kind of life aligning with our modern conception of a successful life. For Aristotle, happiness is made up of activities in which we use the best human capacities to their fullest potential (Aristotle, 2009, EN, I 10, 1099b 24). Happiness thus requires effort and is not coincidental. This Aristotelian view of significant effort in order to achieve maximum potential resonates with sport coaches. Coaches strive to help athletes find their maximum potential. The "Practice with Effort" mantra has been a view held by coaches for decades, however, the recent work of K. Anders Ericsson and colleagues has provided new insights into what has been labeled Deliberate Practice (Beek et al., 2003; Ericsson, 2003, 2007, 2020; Ericsson et al., 2008; Starkes & Ericsson, 2003; Williams & Ericsson, 2005).

In the 19th century, the concept of happiness was elaborated on by British philosophers, especially by Jeremy Bentham. His famous "fundamental axiom" declares: "It is the greatest happiness of the greatest number that is the measure of right and wrong" (Bentham, 1996, p. 46). We can extend this to our understanding of success, measuring the scope of success on the degree of its fulfilment of potential and influence on number of people. The quote by coaching legend Phil Jackson at the beginning of this study captures this collective element of true success.

In the 20th century, "success" became a widely discussed topic for psychology, sociology, philosophy of life, sport and the coaching arena. In psychology, Abraham Maslow did not directly address success, but it seems to be a necessary part of his concept of personal growth, especially in the fourth and fifth level of his pyramid of needs. Maslow also inspired Martin Seligman, known as the founder of Positive Psychology. Seligman integrated success into wider concepts of happiness (Seligman, 2004), well-being (Seligman, 2004, 2006), and flourishing (Seligman, 2012). The place of success (described as accomplishment) is clearly visible in his PERMA model of wellbeing where PERMA is an acronym of five core elements:

P – Positive Emotion
E – Engagement

R – Relationships

M – Meaning

A – Accomplishments

To summarize Seligman´s thoughts concerning accomplishment (he uses achievement as a synonym elsewhere), we see that having goals and ambition in life can convey a sense of satisfaction when those goals are finally met. Yet the last of Seligman´s findings shows the ambivalent face of success where a choice of incorrect means can lead to erosion of the balanced model of PERMA as a whole. The disruption of relationships can be especially dangerous here. Seligman and his concept of Positive Psychology have been applied extensively to sport psychology in order to achieve greater sport success, whether measured as performance (Czikszentmihalyi, 1990; Swann et al., 2012), engagement (DeFreese & Smith, 2013; Hodge et al., 2009; Martin, 2008), or character development (Gould & Carson, 2008; Park, 2004) .

Coaching philosophy

Developing a coaching philosophy is often considered part and parcel to coaching education (Cassidy et al., 2008; Ehrmann et al., 2011; Kidman et al., 2001; Martens, 2012; C. Nash, 2014; Thompson, 2010). The coach's philosophy is the foundation upon which he or she coaches, knowingly or not (Grecic et al., 2013; Grecic & Grundy, 2016). Establishing a coaching philosophy often includes defining success. Parsh (2007) lays out an eight-step approach to developing a coaching philosophy. The fifth step in his approach is answering the question "How do you define success?" (Parsh, 2007, p. 56). Defining success in the context of coaching can be problematic, as coaches are most often considered successful in association with successful performers and records of wins/losses or championships (Cross & Lyle, 1999). Thus we see the influence of society and culture on defining success for the coach. The International Council for Coaching Excellence conducted a research project entitled "Serial Winning Coaches" in which they chose 14 coaches from ten nations whom they deemed successful. They were categorized as such because they had "repeatedly and over a sustained period of time, coached teams and athletes to gold medals at the highest level of competition such as the Olympic Games, the World Championships, or major professional leagues" (Mallett & Lara-Bercial, 2016, p. 294).

Cross and Lyle (1999) state that success in coaching should relate to how the coaching "process is managed and whether this leads to realization of potential performance" while also considering the specific environment and resources available (p. 51). Environment here might include age of athletes being coached, level of other competition, competition system, among other factors. While resources are often thought of in a material context, one must also factor the immaterial resources available to the coach, such as experience and knowledge gained from coaching education.

Relationship of stakeholders

Just as success has a collective component, coaching at every level has a strong relational component. The effectiveness of the coach-athlete relationship is directly connected to the coach's philosophy and ability to create a positive learning environment (Denison & Avner, 2011; Smoll et al., 1993; Solstad et al., 2018). It is important that the coaching philosophy is in alignment with the developmental level and motivations of the athlete. Cronin and Allen (2015) reported that a positive coaching climate supports an athlete's self-esteem, positive attitude and general life satisfaction. These factors, along with personal and emotional growth, should be the primary drivers of a coach's philosophy during the athlete's developmental years. How a coach views success in relation to the athlete's developmental level, the mission of the organization, and the competition level will be reflected in the coach's behavior and practice environment. Gilbert and Trudel (2004), through a case study approach with six model youth sport coaches, identified age and competition level as boundary components, while discipline, fun, personal growth were internal role frame components, and winning guided their coaching approach. It is also important to note the role and importance that the parent-coach relationship, and the parent-athlete relationship, can play on the performance of both the coach and the athlete. At each level coaches, athletes, parents, clubs and organizations are all stakeholders whom both benefit from, and control the achievement of success.

Therefore, successful coaching must take relationship into account. Applying the Hallowell model, the coach-athlete connection is developed when the athlete experiences enjoyment and play, which then creates the basis to engage in Deliberate Practice, leading to competence and mastery, and completing the success cycle by being recognized for their growth. However, it is important to note that the "play" element in sport at the youth level is what Berry and colleagues called "deliberate play" (Berry et al., 2008). Visek et al. (2015) through the development of Fun Integration Theory, stated that "...organized youth sport is coordinated with the objective of optimizing

positive, fun movement experiences through structured skill development and competitive play within Practices and Games" (p. 431). When athletes and coaches both have positive participation experiences, the possibility of successful and sustained coaching, and athlete participation increases. Thus, when there is a positive environment and athletes are fully engaged and committed, the path to coaching success is in sight (Vella et al., 2013). Even though winning is considered an aspect of success, and positive coaching is more likely to lead to winning, the primary ethos for a successful coach, especially at the youth levels, should be development first, winning second.

Current views of coaching success

In the coaching realm, John Wooden's definition of success is often quoted: "Success is peace of mind that is the direct result of self-satisfaction in knowing you did your best to become the best that you are capable of becoming" (Wooden & Jamison, 2005, p. 33). Wooden's definition eliminates other stakeholders in defining success personally, but his Pyramid of Success elaborated on skills and activities which would make his athletes successful individually and in relation to other team members (see http://www.coachwooden.com/pyramid-of-success). This famous basketball coach was able to articulate a coherent coaching philosophy and contextualize it for subsequent use in a holistic coaching practice. We will not elaborate on Wooden's pyramid here, but will point out that while his pyramid is built on skill development, moral growth, emotional growth (including enjoyment and cooperation), at the top lies the reward: competitive greatness. To reach the top of the pyramid means one is ready to perform at your best each day, which is not unlike Aristotle's previously discussed definition of happiness.

Wooden's elements are a mix of personal qualities such as virtues, skills, (positive) emotions, and social values (friendship, team spirit). In the end though, Wooden maintains that true success comes to an individual through the self-satisfaction in knowing that he or she gave everything to become the very best of his or her capabilities. Thus, like Phil Jackson, for Wooden it is evident that transcendence into the social and spiritual dimension is required for success. The Wooden journey to success is not applicable only to sports but also to life. He tracks orientation in both performance and personal growth of players. Wooden's performance and personal growth success orientation has been more recently adapted by others such as: Double-Goal Coaching by the Positive Coaching Alliance (Thompson, 2010); Three Dimensional Coaching delineating body, mind and heart, in a Maslow-like pyramid, by the 3D Institute (Duke & Bonham, 2014); Erhman's application of Transformational Leadership to coaching (Ehrmann et al., 2011), and What Drives Winning's emphasis on person over player (Ledbetter, 2015).

The notion of success is flexible and relative. Success can be either the smallest improvement during the process of skill acquisition for an individual, or a disciplined application of skill with results of global importance. We can distinguish "size" of success on a scale: "single peak performance," the state when achievement of some type of mastery is sustainable for a certain time period, building to "sustainable greatness," an assessment based on historical records.

The collective, competitive feature of success is heightened when we consider sport at the team/club/organization, national, or global levels. Here the consequences of successful (defined in terms of achievement) activities are most commonly measured. Within this coaching context the means to success can divided into categories of intensity, duration, proximity, productivity, purity (success for one can be failure for the other; optimal is win-win), and extent (how many people are influenced). Each of these categories measure success from individual and collective worldviews, effects on other stakeholders, and the meaning placed on the activity of sport.

Defining success in life and in sport is an elusive process. Yet each coach enters the season with some view of what success will mean this year. These definitions are espoused in press conferences at the elite level, repeated over and over to developing players until they embrace this view of success as their own, and stated to parents at the start of the youth sport season. A good coach will enter each practice with a notion of what success will look like for that particular day. In defining success, the coach is affected by their worldview, their definition of sport, their knowledge and experience. In any collective endeavor it would be foolhardy to try to define success without taking into account the skills, desires and motivations of the others whose cooperation will be necessary in order to achieve success. It becomes clear that stakeholders in defining success for a coach are not only the players he/she has to work with, but also team management, other teams, and even the other significant relationships of the players being coached. Each of these factors should play into the coach's definition of success. Regardless of the degree of forethought, or lack thereof, that has gone into defining success, when the final whistle blows on the game and the season, the coach will evaluate based on some criteria whether or not he/she was successful.

In this study, following the recommendation of Parsh (2007), we have asked coaches to define success in coaching, then evaluated these definitions in light of a review of the literature, and the social constructs of the environment.

Methods

Participants

Researchers surveyed 571 coaches from seven team sports with 532 valid responses, representing a total of 474 teams within 288 Czech clubs. All participants were attending coaching licensure courses sponsored by their respective federations, and completed surveys between sessions. Survey participation was voluntary and was not compensated. The coaches were predominately males (n = 468) coaching male teams (n = 458). The sports females (n = 64) coached included basketball (n = 23), floorball (13), baseball (12), handball (11), and other (n = 5). Coaches averaged 34.7 years of age (SD = 9.6), with an average of 7.1 years' experience (SD = 6.7).

There was little variance between sports for average age of coach, however, in terms of experience coaching, basketball coaches had a mean of 10.5 (SD = 9.13), soccer coaches had 8.3 years' experience (SD = 6.13), while all other sports coaches had from 5.8 to 6.2 years' experience. Table 1 below represents distribution by sport, age coached, level of licensure, and experience.

Table 1. Demographic Distribution of Coaches by Sport, Age Coached, License Level and Experience

	N	Age coached				License level				Experience			
		to U8	U9–U14	U15–U19	U20+	A	B	C	D	1–4 years	5–9 years	10–15 years	16+ years
Floorball	119	5	52	42	20	1	17	58	43	63	27	23	6
Ice Hockey	100	15	46	24	15	7	22	71	0	57	26	11	6
Soccer	86	6	22	30	28	51	29	6	0	24	33	16	13
Basketball	85	4	35	36	10	20	25	33	7	30	20	14	21
Hockeyball	53	4	22	12	15	0	13	38	2	31	10	9	3
Baseball	48	10	23	6	9	1	13	16	18	30	9	3	6
Handball	41	0	21	9	11	0	24	17	0	21	13	5	2
Totals	532	44	221	159	108	80	143	239	70	256	138	81	57

Materials

Participants completed an anonymous six-question written survey on values-oriented coaching. The results presented in this article represent the first question of the survey: *What do you consider to be success as a coach?* The construction of the survey, along with results from other questions, have been reported in Crossan, Bednar, Baghurst and Komarc (2021).

Procedure

Surveys were conducted voluntarily at breaks of sport federation coaching licensing seminars. Participants completed the survey in the Czech language, then results were coded into categories based on the literature review and the natural groupings which occurred within the results. Categories are given below with explanations. Interrater reliability was achieved by two researchers categorizing success definitions, comparing their results after 80 (68.4% interrater reliability); re-categorizing and comparing final results (91.3% interrater reliability); then individual discrepancies were discussed until consensus was achieved. As a qualitative study simple descriptive statistics (mean and SD) were only conducted on the demographic data. Pearson's R correlations were also conducted on the demographic data in order to explore potential explanations for the variance in success definitions by sport, license level, experience and level coached.

Results

The responses of 240 coaches were related to two categories such that we received 772 responses from 532 coaches for further interpretation:

Table 2. Success definitions overall

Success Categories			Success sub-categories			
	N	Percent	N	Percent category	Percent total	
Performance	218	28.2%	28	12.8%	3.6%	Individual Player Success
			70	32.1%	9.1%	Team Goal Fulfillment
			120	55.1%	15.5%	Winning
Sport Growth	245	31.7%	159	64.9%	20.6%	Player Development
			86	35.1%	11.1%	Player Engagement
Personal Growth	59	7.6%	38	64.4%	4.9%	Develop People
			21	35.6%	2.7%	Develop Morals
Emotional Growth	163	21.1%	43	26.4%	5.6%	Enjoyment
			120	73.6%	15.5%	Satisfaction/ Deeper Experience
Coach Oriented	87	11.3%	75	86.2%	9.7%	Coach Satisfied
			12	13.8%	1.6%	Coach Recognized

Notes: N = 772

We began by examining the responses of all coaches as one set. It was immediately evident that the definitions encompassing Sport Growth (31.7%) and Performance (28.2%) were the most dominant. Specifically, the sub-categories of Player Development (20.6%), followed by Winning and Satisfaction/Deeper Experience (both 15.5%) were most often used when Czech coaches attempted to define success in coaching. This sub-category of Satisfaction/Deeper Experience carried the category of Emotional Growth (21.1%) into the third position, even though the sub-category of Enjoyment (5.6%) was undervalued by coaches. It should be noted that of the 237 coaches whose success definitions fell into two categories, a full 48.5% of them included Player Development as part of their definition. Most often Player Development was paired with Satisfaction/Deeper Experience (n = 26) or Winning (n = 20). The other most common sub-category of multiple definition coaches was Enjoyment (n = 32, 13.5% of the paired success definitions); however only in two of these cases did the coach pair Enjoyment with a definition from the Performance category. Nineteen coaches paired Enjoyment with Sport Growth.

The category of Personal Growth (7.6%), with its sub-categories of defining success as a means of Developing People (4.9%) or Developing Morals (2.7%), was the least common means of defining success. Based on the findings in this study, this category of Personal Growth is the least affected by sport, age coached, license level, experience, or level coached.

Performance, Sport Growth and Emotional Growth were the clear top three means of defining success amongst all the sports, the results showed minimal variance. The only sport where another category of success entered the top three was football where 16.4% of coaches chose Coach Oriented definitions of success. The fast-growing sport of floorball saw 40.7% of coaches classify success in Sport Growth categories with almost equal percentages choosing Player Development and Player Engagement. Baseball, the sport least integrated in Czech culture relative to the others studied, had the highest percentage of coaches include the sub-category of Enjoyment (10.3%), and the lowest percentage of coaches choosing Winning (10.3%).

The percentage of coaches who defined success in terms of Performance increased as the age of the players coached increased (from 17.2% to 44.1%), while those defining success within the category of Emotional Growth decreased as players grew older (from 31.3% to 11.8%). Within sports, this increasing emphasis on Performance as age group coached increased was most noticeable in the three sports with the most culturally visible professional leagues: Football (20.0%, 34.3%, 26.1%, 48.8%), Ice Hockey (13.0%, 22.4%, 28.6%, 31.8%), and Basketball (16.7%, 27.9%, 46.0%, 63.6%). In terms of Winning, it was evident that this was most important for coaches coaching players over 20 years of age (24.3%); these coaches were also most concerned with Team Goal Fulfillment (17.8%). These coaches of players over 20 years of age were also the most concerned with their own satisfaction (13.8%). While Player Development was the third highest ranked sub-category (17.1%) of success for U20+ coaches, they were still the least concerned with Player Development compared to other age group coaches. Compared to other age group coaches, the U20+ coaches were also the least likely to define success as

Table 3. Success by Age Coached

		Age Group Coached			
		to U8	U9–U14	U15–U19	U20+
	N responses	64	318	238	152
Performance	Total	17.2% (n = 11)	22.3% (n = 71)	29.0% (n = 69)	44.1% (n = 67)
	Individual Player Success	0%	3.8% (n = 12)	5.5% (n = 13)	2.0% (n = 3)
	Team Goal Fulfillment	4.7% (n = 3)	6.0% (n = 19)	8.8% (n = 21)	17.8% (n = 27)
	Winning	12.5% (n = 8)	12.6% (n = 40)	14.7% (n = 35)	24.3% (n = 37)
Sport Growth	Total	31.3% (n = 20)	34.3% (n = 109)	33.2% (n = 79)	24.3% (n = 37)
	Player Development	25.0% (n = 16)	20.1% (n = 64)	22.3% (n = 53)	17.1% (n = 26)
	Player Engagement	6.3% (n = 4)	14.2% (n = 45)	10.9% (n = 26)	7.2% (n = 11)
Personal Growth	Total	7.8% (n = 5)	8.2% (n = 26)	8.8% (n = 21)	4.6% (n = 7)
	Develop People	4.7% (n = 3)	4.4% (n = 14)	7.1% (n = 17)	2.6% (n = 4)
	Develop Morals	3.1% (n = 2)	3.8% (n = 12)	1.7% (n = 4)	2.0% (n = 3)
Emotional Growth	Total	31.3% (n = 20)	27.0% (n = 86)	16.4% (n = 39)	11.8% (n = 18)
	Enjoyment	7.8% (n = 5)	8.2% (n = 26)	3.4% (n = 8)	2.6% (n = 4)
	Satisfaction/Deeper Experience	23.4% (n = 15)	18.9% (n = 60)	13.0% (n = 31)	9.2% (n = 14)
Coach Oriented	Total	12.5% (n = 8)	8.2% (n = 26)	12.6% (n = 30)	15.1% (n = 23)
	Coach Satisfied	10.9% (n = 7)	6.6% (n = 21)	10.9% (n = 26)	13.8% (n = 21)
	Coach Recognized	1.6% (n = 1)	1.6% (n = 5)	1.7% (n = 4)	1.3% (n = 2)

Notes: Percentages and totals are based on responses. Percentages are by columns.

Emotional Growth (11.8%), including both sub-categories Enjoyment (2.6%), and Satisfaction/Deeper Experience (9.2%).

At the other end of the age group coaches, the U8 and below coaches were the most likely to define success as Emotional Growth (31.1%), which was defined most often with the sub-category of Satisfaction/Deeper Experience (23.4%). The U8 and below coaches were also the most likely to define success as Player Development (25.0%), which also decreased as players advanced in age.

Before discussing license level, experience and level coached, it should be stated that while overall correlations within the dataset as a whole were not strong, the strongest correlations were found in the demographic data between years coached and license level (.525, $p < 0.01$), license level and sport (.415, $p < 0.01$), year's coached and age (.390, $p < 0.01$). Age coached was correlated with level coached (.332, $p < 0.05$), license level (.323, $p < 0.05$), and experience (.225, $p < 0.05$). In terms of license level and sport, as is evident from Table 1, football and basketball coaches surveyed had higher levels of licensing, while the newer sports of floorball and baseball had lower levels of licensing. It was observed that as license level, coaching experience and level coached went up, the more likely coaches were to define success in terms of Performance, and the less likely they are to define it in terms of Emotional Growth or Sport Growth. In the Czech sport system, consistent with much of Europe, there exist different levels of competition within each sport and each age group. Each team is divided by age group within a club and has the possibility to move up or fall down using a promotion and relegation system. Consequently, success is often defined for the coach by their club in terms of Performance as moving up a level or not falling down a level.

Discussion

In this section we will examine our results in light of the previous literature on success in life and success in coaching. After a few overarching observations, we will examine the individual success categories. Finally, we will examine a few limitations to this study and recommendations for further research.

The categories Czech coaches used to define success closely parallel Seligman's PERMA model and often resonate with Hallowell's success cycle. However, their definitions of success in coaching lack the balance Seligman proposed and might be more apply expressed as AEPRM which places Achievement and Engagement before Positive emotion.

As stated at the outset, philosophy contributes to behavior. Behavior resulting from Deliberate Practice leads to achievement, enjoyment and engagement. The process by which coaches learn and embrace deliberate practice, thereby developing performers, is dependent on their knowledge, worldview and experience (Nash et al., 2008). Czech coaches who had more knowledge (via coaching licensing) and experience, correlated with higher age groups and levels coached. However, in contrast to the "Serial Winning Coaches" reported on by Mallett and Lara-Bercial (2016), our coaches with experience and knowledge had some of the lowest emphasis on Personal and Emotional Growth when defining success.

Sport growth

With 31.7% of all coaches defining success in terms of Sport Growth, and the highest ranked sub-category of Player Development (20.6%), this is clearly the top priority of Czech coaches. Here Aristotle's notion of happiness coming from activities which use the best human capacities to their fullest human potential can be seen in the sub-category of Player Development, reported as "permanent improvement in skill level", and "maximizing player potential." The second sub-category of Player engagement (11.11%) is in line with Seligman's notion of Engagement from his PERMA model of well-being. This Player Engagement was most evidenced in the two fastest growing sports from our sample, Floorball (19.1%) and Baseball (16.2%). These two sports also ranked the highest in Emotional Growth, the sub-category of Enjoyment (7.5% & 10.3%). This may explain why these sports where the fastest growing in our sample.

Performance

Closely behind Sport Growth was the success category of Performance (28.2%), with the sub-category of Winning (15.5). This emphasis on winning, particularly in the two youngest youth age group categories, is disconcerting. Team Goal Fulfillment (9.1% of coaches) is closely related to Bentham's axiom that the greatest happiness of the greatest number of people is the measuring stick. This requires perhaps the greatest cooperation among stakeholders, and was most evident in coaches of the oldest age group (17.8%). Winning coupled with Player Development was the second most prominent combination used by coaches who chose more than one category to define success. While it was expected that an emphasis on performance would increase as athletes grow older (from 17.2% at to U8, to 44.1% at 20+), this increase is largely a result of the increasing emphasis on Team Goal Fulfillment, not on Winning (which remains relatively constant between 12.5% to 14.7% until increasing to 24.3% for U20+).

Emotional growth

While categories of Emotional Growth come through strongly in the modern philosophies of coaching espoused by such people and organization as Wooden, the Positive Coaching Alliance, 3Dimentional Coaching and Erhman (Duke & Bonham, 2014; Ehrmann et al., 2011; Thompson, 2010; Wooden & Jamison, 2005), only 21.1% of Czech coaches appear to give the emotional dimension priority in defining success. The majority of these coaches were from the youngest age groups coached (to U8 31.3%, and U9–U14 27.0%). The most surprising finding of this research was the lack of emphasis on Enjoyment (only 5.6% overall, and only 8.2% of coaches coaching youth). Of the 15.5% of coaches who used Satisfaction/ Deeper Experience to define success, 26% of them coupled this with Player Development, which again exemplifies Hallowell's success cycle. Nineteen coaches who defined success in terms of Sport Growth combined their definitions with Enjoyment, which expresses success in a manner similar to the theory of Flow (Czikszentmihalyi, 1990) and Fun Integration Theory (Visek et al., 2015). However, defining success in terms of Emotional Growth declined as age coached increased (31.3% down to 11.8%), with both sub-categories Enjoyment, and Satisfaction/ Deeper Experience also consistently declining with age.

Coach oriented

While the category of Coach Oriented was relatively low overall (11.3%), it was highest among the primary sport of football coaches (16.4%), this element was felt by the researchers as they coded the results to underlie many of the other success definitions given, especially in the sub-categories of Winning, Player Development, and Player Engagement.

Personal growth

Similar to Emotional Growth, Personal Growth is well represented in the literature of modern coaching philosophies (Ehrmann et al., 2011; Thompson, 2010; Wooden & Jamison, 2005), as well as in the origins of sport development from the historical codifications of many sport traditions which were significantly influenced by the Protestant work ethic (Goldbach & Geldbach, 1977; Watson & White, 2007). That said, the Czech coaches surveyed showed very little relationship to success in sport and equivalence with Personal Growth (only 7.6% of coaches). We speculate that the system of sport development during the Communist period of 1948-1989, where international success in sport was used as a means of validating the means of governance, is the primary cause of this deficit. The lack of religious engagement in terms of personal worldviews (according to the most recent 2011 census, only 14% of Czechs expressed any religious affiliation (Czech Statistical Office, 2011), and 66% express no belief in God (Pew Research Center, 2017)) could also be a factor in the low expression of success in coaching as a developer of character. The fact that Personal Growth was underemphasized, particularly in the developmental years (only 7.8% and 8.2% in the first two age categories), makes it difficult for coaches to create a positive coaching climate as defined by Cronin and Allen (2015). This could result in significant effects on athlete retention, a success factor often measured by sport federations and individual clubs.

Limitations

While 45% of coaches gave multiple definitions of success, only one overarching definition was requested in the survey. This methodology reveals the primary expression of success of coaches, but does not leave as much opportunity for full expressions of coaching philosophy such as those expressed by Wooden and others.

Recommendations

This research represents only a starting point in the examination of coaches' expressions of success. Further research should be carried out in other contexts to illuminate cultural differences perhaps arising from the varied systems of sport development around the world. Further, an examination of coaching success definitions and their relation to other measurable results in terms of performance (win/loss records), sport growth (player retention, skill progression), Personal and Emotional Growth (moral development, expressions of enjoyment), across age groups and competition levels, could prove valuable in advancing deliberation among coaches on the meaning of success in coaching. For the purposes of sport growth, player development and engagement in physical activity, it would be helpful to examine the views on success in sport of other stakeholders, primarily athletes and parents, to see if coaches are meeting the demands of athletes. Finally, while this research revealed some level of differentiation in views of coaching success between those coaching primary sports in the culture, those with significance to national identity, and those more on the fringe of the society, further research in this area could be helpful in abating the current win at all costs philosophy too often evident in top sport.

Conclusion

Nash et. al. (2008) warned that an absence of clarity in defining success for the coach makes it difficult to develop a framework for coaching that moves athletes from one level to the next. Sport Growth, primarily defined as Player Development is the clear top priority of Czech coaches. In terms of Performance, Winning and Team Goal Fulfillment increased with age coached and competition level. Even though age and competition levels are important factors, an increased emphasis on performance does not need to be the only criteria for coaching success. Coaching is a social activity and thus relationships between all stakeholders are important in defining and achieving success. Personal Growth, even though well represented in recent coaching philosophy as a primary means to success, was the most under-represented by coaches in this study. The most concerning finding of this research was the lack of emphasis on Enjoyment (only 5.6% of coaches), which has been a key element of success from Aristotle to Seligman, and essential to Hallowell's success cycle.

Ethics approval and informed consent
Prior to data collection, permissions and approval were acquired from all relevant individuals and organizations. The surveys were anonymous and completion was voluntary.

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The effect of hopelessness on violence tendency: Turkish football fans

Authors' contribution:

A) conception and design of the study
B) acquisition of data
C) analysis and interpretation of data
D) manuscript preparation
E) obtaining funding

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Abstract

This study aimed to analyze the relationship between the hopelessness and violence tendency of football fans and to investigate the differences between these variables and various demographic variables. The research group was formed by 398 male volunteer football fans who watched the Elazigspor (Sports Toto 1st League) matches in the 2018-2019 season in Turkey. In addition to demographic variables in the study, the Violent Trend Scale and Beck Hopelessness Scale were used. The SPSS program was used to analyze the data. Independent sample t-test, one-way ANOVA, pearson correlation, and linear regression analysis were used in the analysis of the data. In the findings of the research, it was determined that there was a moderate positive relationship between the variable of hopelessness and the tendency toward violence. It was determined that there was a statistically significant difference in the tendency toward violence according to the variables of fans going to away games, the duration of watching matches at the stadium, and with whom fans watched the matches. As a result, as the level of fans' hopelessness increased, it was observed that there was an increase in violent tendencies. In addition, those who went to watch away matches, those who watched matches at the stadium for a long period of time, and those who went to watch matches with friends were found to have high levels of violent tendencies.

Keywords: Football, fan, hopelessness, violence tendency

Introduction

It is known that fans have an important place in football, a sport that is very popular in modern times. Fans can sometimes display psychologically negative emotions while watching football. Hopelessness and tendency to violence, which are among these negative emotional states, have important roles on football supporters.

Hopelessness is generally thought to originate in the lack of hope an individual has about life. Looking at the difference between hope and hopelessness, hope can be expressed as a situation that will exist in the future or where the individual wants to see themselves in the future and hopelessness can be expressed as the negativities they experience when their expectations for the future are not fulfilled. When the literature is examined, it is seen that there are different definitions of hope and hopelessness. According to the definition of the Turkish Language Association, hope expresses a situation that is expected, while hopelessness is expressed as despair and pessimism about an event about to occur (URL-1). According to the definition of the American Psychological Association, hopelessness

is a subjective emotional state in which the individual thinks they have no freedom of choice or their options are limited (Abramson et al., 1989). Horney (1993) defines hopelessness as a reaction to situations that are considered a failure that is out of proportion to the actual dimensions of the event. In contrast, Panzarella et al. (2006) define hopelessness as an individual defining themselves with negative features, having negative expectations about the future, and seeing negative life events as unchanging. Despite these definitions, hopelessness can be expressed as a negative cognitive assessment in which life events are perceived negatively, although it includes a person's lack of well-being, reluctance, and aimlessness. When these situations persist, many different emotional states arise, such establishing unhealthy relationships, misrepresenting oneself, feeling misunderstood, and meeting one's own desires and needs by harming others through violence (Gençoğlu et al., 2014).

The World Health Organization (WHO) has defined violence as injury, death, or physical harm to another person or a certain community or group. The underlying causes of violence are reported as alcohol and substance abuse, chronic diseases, infectious diseases such as AIDS, and mental distress (WHO, 2020). When groups of fans and their behaviors are examined, it can be observed that many of them actually have mental problems. As a matter of fact, Özmaden (2005) stated in his study that fans regard their football areas as places where they can satisfy their violent motives, not as places where the game is to be enjoyed. When the literature is examined, it is seen that there are different definitions of violence. Ayan (2006) evaluates the meaning of violence as all kinds of material and spiritual negativity towards the physical and spiritual integrity of another person. Gençoğlu et al. (2014) define violence as different developmental disorders. Özgür et al. (2011) define violence as one of the social problems of people in developed and developing countries in the 21st century. Zahn et al. (2004) define violence as the use of force to dominate others. From a sociological perspective, violence is defined as the transformation of anger into the behavioral dimension as a result of adverse situations such as tolerance of violence in society, violence being seen as a problem-solving method, inadequate family education, the influence of the media, gender roles, socio-economic problems, migration, and globalization (Bilge, 2006; Baltaş, 2000; Kızmaz, 2006; Yönet et al., 2016). According to the report published by the WHO in 2014, more than 1.3 million people die every year as a result of violent situations (WHO, 2014). While violence is sometimes a tool for a specific purpose, it may also be a series of actions that occur randomly and do not have a purpose beyond satisfying the perpetrator (Göldağ, 2015). One of these action areas is football. This sport, which is currently gaining importance, developing, and spreading, has also affected large communities (Yıldırım, 2017). For fans, who are the indispensable audience of football, football is seen as an exciting part of life. However, it also has different meanings beyond being a game and a hobby (Bilir & Sangün, 2014).

In recent years, tribunes have become a problem area, and there have been undesirable changes in the behavior of fans (Özmaden, 2005). From time to time, fans see their expectations and hopes in their private lives as places where their motivation for violence can be satisfied (Özmaden, 2005; Çağlayan & Fişekçioğlu, 2004). When we look at history, fans who attended the horse car races held during the ancient Roman period were known to be divided into two groups: "Blues" and "Greens" (Frosdick & Marsh, 2013). However, football, which stands in a very different place from the sporting activities of ancient times, has become a phenomenon that reflects the basic characteristics of modern society, including massification, differentiation, organization, professionalization, industrialization, commercialization, politicization, and scientization (Spaaij, 2007; Amman, 2008). In this context, the purpose of this study is to examine the relationship between the tendencies towards hopelessness and violence among football fans and to examine the differences between these variables and various demographic variables. For this purpose, answers were sought for the following questions:

1. Is there a difference between the age of the fans, the situation of going to away games, the duration of time matches are watched at the stadium, with whom matches are watched, and the variables of hopelessness and violence tendency?
2. Is there a relationship between the hopelessness of fans and the tendency towards violence?
3. Does the level of fans' hopelessness have an impact on the tendency towards violence?

Method

Research model

In this study, the general screening model, one of the quantitative research methods, was used (Karasar, 2012).

Participants

The research group was formed by 398 male volunteer football fans who watched the Elazigspor matches in the 2018-2019 season (Sports Toto 1st League) in Turkey.

Data collection

Violence Tendency Scale: This scale was developed for a study performed by Göka, Bayat, and Türkçapar in 1995 on behalf of the Ministry of National Education and in the study of the Prime Ministry Family Research Institution on "Violence in the Family and in the Social Space" (1998) in order to measure the violent tendencies of children 7-14 years old. The basic structure was re-patterned and the validity of the content was not changed (Republic of Turkey, Prime Ministry Family Research Institution, 1998). The scale, which is a 4-point scale (1 = Not Suitable, 4 = Very Suitable), consists of 20 items and one dimension. In the evaluations made according to the total scores, a score of 1-20 points is "very low," and a score of 21-40 points is "low;" a score of 41-60 points shows "excess," and a score of 61-80 points indicates "too much." The Cronbach alpha reliability coefficient calculated to test the reliability of the scale was found to be 0.76. In the current study, this coefficient was found to be 0.72.

Beck Hopelessness Scale: This scale was performed by Beck et al. (1974) and adapted to Turkish by Seber (1991). It is a 20-item self-assessment scale that aims to determine an individual's level of pessimism for the future. While the "'yes" option scored 0 points in 11 items of the scale, 9 "no" option scored 1. The cutoff scores of the scale according to the different levels of hopelessness were as follows: 0-3 was the lowest (or hopeful) level of hopelessness; 4-8 was the low level of hopelessness (mild); the level of hopelessness at 9-14 was moderate; and the level of hopelessness at 15-20 was high (intensive). The Cronbach alpha reliability coefficient calculated to test the reliability of the scale was found to be 0.86. In the current study, this coefficient was found to be 0.77.

Data analysis

The SPSS 24 (Statistical Package for Social Science) program was used to analyze the data obtained in the research. The Skewness and Kurtosis values were checked to determine whether the data showed a normal distribution. These values were checked and evaluated between -1 and +1 (Mertler & Vannatta, 2005). As a result of this evaluation, it was seen that the data showed normal distribution. Accordingly, an independent samples t-test, one-way ANOVA, pearson correlation, and linear regression analysis were applied to the statistical analysis.

Results

In this section, the relationship between the variables of hopelessness and violence tendency of football fans participating in the research, effect-based analysis, and a detailed breakdown of the differences between various demographic variables are given in the tables.

Table 1. One-way ANOVA results of hopelessness and violence tendency according to the age variable of individuals

Variable	Age	n	$\bar{x}$	SD	F	p	Source of the difference
Hopelessness	[A]18–21	102	5.95	3.50			
	[B]22–25	96	6.55	3.66	2.782	.041*	A–D
	[C]26–29	93	7.09	3.97			
	[D]30 and above	107	7.43	4.47			
Violence tendency	[A]18–21	102	41.92	6.37			
	[B]22–25	96	39.84	7.06	1.481	.219	-
	[C]26–29	93	40.87	7.69			
	[D]30 and above	107	40.73	6.78			

*p < .05

When Table 1 was examined, it was determined that there was a statistically significant difference between the age variable of the groups participating in the research and the variable of hopelessness. This difference was found to be between those aged 18–21 and those aged 30 and above.

Table 2. Hopelessness and violence tendency results according to individuals going to away games t-test results

Variables	The situation of going to away matches	n	$\bar{x}$	SD	t	p
Hopelessness	Yes	288	6.78	4.05	.155	.877
	No	110	6.71	3.70		
Violence tendency	Yes	288	41.41	6.95	2.602	.010*
	No	110	39.39	6.90		

*p < .05

When Table 2 was analyzed, it was observed that there was a statistically significant difference between the variables of the participating fans going to away games and violence tendency.

Table 3. One-way ANOVA results of individuals' hopelessness and violence tendency according to the duration of watching the matches at the stadium

Variables	Duration of watching the matches at the stadium	n	$\bar{x}$	SD	F	p	Source of difference
Hopelessness	[A]1–4 years	73	6.19	3.60	1.366	.253	–
	[B]5–9 years	125	6.57	4.13			
	[C]10–14 years	106	7.34	3.77			
	[D]15 years and above	94	6.80	4.15			
Violence tendency	[A]1–4 years	73	38.88	5.71	3.134	.026*	A–D
	[B]5–9 years	125	40.88	6.90			
	[C]10–14 years	106	41.02	7.00			
	[D]15 years and above	94	42.17	7.70			

*p < .05

When Table 3 was examined, it was found that there was a statistically significant difference between the match watching time variable and violence tendency among the fans who participated in the research. It was determined that this difference was between those who went to watch the matches for 1–4 years at the stadium and those who watched the matches for 15 years or more at the stadium.

Table 4. One-way ANOVA results of hopelessness and violence tendency according to the variable of with whom fans go to the matches at the stadium

Variable	Match watching status	n	$\bar{x}$	SD	F	p	Source of differences
Hopelessness	[A]Alone	183	7.31	4.02	3.834	.022*	A–C
	[B]With family	96	6.60	4.05			
	[C]With friends	119	6.04	3.68			
Violence tendency	[A]Alone	183	39.88	6.37	3.386	.035*	A–C
	[B]With family	96	41.52	7.36			
	[C]With friends	119	41.82	7.43			

*p < .05

When Table 4 was analyzed, a statistically significant difference was found between the variable of who participated in the research to watch the matches and violence tendency and hopelessness. It was observed that this difference was at both the level of hopelessness and violence tendency between those who went alone to watch matches and those who went with their friends.

Table 5. Pearson correlation analysis between hopelessness and violence tendency

Variables		Hopelessness	Violence tendency
Hopelessness	r	1	
	p		
Violence tendency	r	.502**	1
	p	.000	

n = 398; **p < .01

When the results of the Pearson correlation analysis was examined, it was determined that there was a moderately significant positive relationship between hopelessness and violence tendency (p < .01).

When the linear regression analysis was examined, it was found that the level of hopelessness predicted the variable of violence tendency at the rate of 25% ($_{adj.}R^2 = .251$). In other words, it was determined that the freedom perceived in free time affects the happiness variable in a statistically significant manner ($\beta = .502$; p < .01).

Table 6. The effect of hopelessness on violence tendency

Dependent variable: violence tendency

Variables	B	Standard error	β	t	p
(Constant)	32.724	.765		42.749	.000
Hopelessness	.968	.084	.502	11.566	.000

$R^2 = .252$; $_{adj.}R^2 = .251$; F = 133.764; p < .01

Discussion and conclusion

As a result of the analysis conducted to determine the differences between the hopelessness and violence tendency variables and various demographic variables of football fans participating in the research, it was seen that there was a statistically significant difference in the hopelessness levels of the fans according to their ages and with whom they watched the matches. In addition, it was determined that there was a statistically significant difference in the tendency to use violence according to the variables of fans going to away matches, the duration of match watching at the stadium, and with whom fans went to watch the matches. It is thought that desperation levels increase with age because those with a greater tendency towards violence were those who went to away games and watched games at the stadium for many years. This increase in violent tendencies could have something to do with increased team loyalty over time. In the case of loyalty, since any negative situation for the team will affect the individual negatively, the individual can feel despair and have a tendency to use violence when their team loses. Branscombe and Wann (1991) investigated the relationship between team identification and positive and negative emotions, reporting that high team identification positively affects positive emotions such as happiness, joy, satisfaction, and life satisfaction, while low team identification positively affects negative emotions such as unhappiness, regret, worthlessness, resentment, and hopelessness. Yüksel et al. (1998) stated that fans sometimes satisfy their expectations and hopes in their private lives with the success of a team or club. According to Zielinski and Bajorek (2013), the specific character of different behaviors in a sport audience can allow us to divide football match viewers into two categories. One of these categories consists of regular viewers (football fans and consumers) who take part in a show and enjoy it without causing any problems. The other consists of football fans who identify themselves with their club and can function as ultras, supporters, and pseudo-fans who highlight victory in a provocative and noisy way.

When the correlation analysis results of the fans' hopelessness and violence tendency variables were examined, it was determined that there was a moderate positive relationship between fans' violence tendency and their hopelessness levels. Accordingly, it can be said that as fans' levels of despair increase, the level of violence education increases. In the regression analysis regarding the hopelessness variable and the trend of violence, it was found that

the hopelessness variable could explain the violence trend by approximately 25%. The remaining 75% is thought to be affected by the educational situation, family relations, problems in economic and social life, lack of sports culture related to passive participation, insufficient stadiums that cannot meet safety standards, ineffective security measures, club managers who cannot accommodate the interests of the fans, and the media. The psychological commitment of fans to their teams and identification with their teams can lead to violence and aggression in football (Konter, 2006), even if they are happy with the team they support. When they lose, they feel anger, sadness, hopelessness, and depression. Dekaristos (2016) stated in his work with football fans that some fans wanted to attack the police who were at the stadium when their team lost. The sadness of a team's defeat is felt deeper than the sense of victory (Forsyth, 2010). Along with hopelessness, feelings of worthlessness, helplessness, unhappiness, indecision, failure to act, and lack of motivation, feelings of guilt can also arise (Dilbaz & Seber, 1993). The pessimistic approach and feelings of failure that emerge with hopelessness (Tümkaya, 2005) may lead to heightened levels of violence and aggression among fans. Kula (2008) reported that as hopelessness increases, aggression also increases. In addition, Pulur et al. (2004) stated that the most important source of violence in football is the contradiction of "good team-bad result." This increases the individual's symbols of self-definition and the conflict within themselves. The researchers emphasized that the pressure will increase as a result of the growth of this contradiction, and the individual will turn to various undertakings (violence, aggression, bad cheer, etc.) to resolve this contradiction. As a result, as the level of fans' despair increased, there was also an increase in the tendency to use violence. In addition, it was determined that those who went to watch away games, those who watched the matches at the stadium, and who went to matches with their friends had high tendencies towards violence.

Limitations and recommendations

This study was limited to 398 male Elazigspor fans who came to watch the matches during the 2018-2019 season. In line with the results of the study, it is recommended that the relevant supporter associations and football clubs organize and implement projects that will reduce the violence tendency of fans and contribute to their psychological positivity. In addition, the economic level of the fans participating in this study has not been examined, and economic problems are among the causes of despair and violence (Shihadeh & Steffensmeier, 1994; Umlauf et al., 2015). Differences in regions should also be considered in such studies. Cultural differences are among the factors that determine the level of violence and hopelessness of fans and athletes. When the related literature is examined, there are studies supporting this view. For instance, as Carnibella et al. (1996) conclude, "Different historical, social, political and cultural traditions have affected the nature and scale of football related violence in different European countries."

Conflicts of interest
No potential conflict of interest was reported by the authors.

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A needs assessment study on refugees' inclusion through physical education and sport. Are we ready for this challenge?

Authors' contribution:
A) conception and design of the study
B) acquisition of data
C) analysis and interpretation of data
D) manuscript preparation
E) obtaining funding

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Abstract

In recent years, European countries have become hosting destinations for thousands of people who have been forced to leave their home countries. Greece is one of the main European hosting countries of refugees, especially children. Thus, the pupil population is gradually changing and the need for intercultural education is increasing. Physical education (PE) and sports have been recorded as suitable contexts for this process. However, there are still many challenges present in these contexts. The following study attempts to present the perceptions of PE teachers, coaches, and academics on the inclusion of refugees in PE and sports. Fifteen PE teachers/coaches and academics involved in the field of intercultural education participated in the study. A phenomenological approach was followed through semi-structured interviews. The method of thematic analysis was chosen to analyze the data. While all the participants considered PE and sports to be the most suitable contexts for the inclusion of refugees, they emphasized certain barriers to be overcome: the lack of training for PE teachers and coaches, prejudices of the parents of both natives and refugees, and refugees' socioeconomic status and gender issues. Participants also shared their ideas for an adequate training program to improve PE teachers' and coaches' attitudes and promote their knowledge and skills regarding the inclusion of refugees. The participants underlined the need for intercultural education and well-structured training programs to properly manage culturally diverse environments.

Keywords: Intercultural education, physical education, sports, inclusion of refugees

Introduction

Over the past few decades, many countries across the glove have faced challenges related to global mobility. More than one million people arrived in European countries (e.g., Greece, Spain, and Italy) from the Mediterranean Sea (UNHCR, 2015). Due to its extensive land and coastal borders, Greece has become the main entry point (Cheliotis, 2013) for 850,000 refugees and migrants (UNHCR, 2015). More specifically, in 2015 and 2018 more than 60% and 90% of the immigrants or refugees who arrived in Greece were Muslims from Syria, Afghanistan, and Iraq (IOM, 2018). Interestingly, 25% of these people were children (UNHCR, 2015).

Unlike other richer European countries, for most of the 19th and 20th centuries Greece was a country whose citizens moved abroad as economic migrants. Only very recently has the country been transformed into a host country

for refugees and/or immigrants. The most recent waves of refugees and/or immigrants also coincided with the Greek financial crisis (2009–2020). Consequently, Greece has lacked of the experience, facilities, and resources to support the inclusion of immigrants and refugees (Parthenis & Markou, 2015). This support is necessary, especially for refugees who have experienced traumatic events and are fleeing conflict zones by moving to Europe. Thus, new social challenges and emerging educational needs have been created (Neftci & Cetrez, 2017). Based on the findings of Huddleston, Niessen, and Tjaden (2013), the education of refugees and their acquisition of competence in the language of the host country, as well as the elimination of discrimination and racial behavior, play a pivotal role in their effective inclusion. A scientific committee has been established by the Greek Ministry of Education to include refugees in the Greek educational system. Many refugee camps have been created all over the country, and both teachers and NGOs have been invited by the Ministry of Education to act as the connecting link between the camps and schools (Nagy, 2018). Over a limited amount of time, Greece has attempted to adopt the appropriate legislation and strategies to promote the inclusion of refugees and/or immigrants (Parthenis & Markou, 2015). According to UNICEF (2020), approximately 42,500 refugee and immigrant children are estimated to live in Greece. For the years 2019 and 2020, approximately 13,000 and 8,000 of them, respectively, were enrolled in formal education (Greek Council for Refugees, 2020). Arguably, the inclusion of refugee and/or immigrant children in formal education and social life is a challenge (Nagy, 2018) due to their cultural diversity and individual differences in skills, experiences, and backgrounds (Cerna, 2019). In addition to being a challenging process, inclusion also requires interculturally educated professionals (Grimminger, 2008).

Theoretical framework

The term "inclusion" has recently been introduced in a similar context as "integration" and "assimilation." It refers to the process by which pupils fit into an educational environment and also takes into consideration the conditions of this environment (e.g., the efforts that are made by the authorities; Kipouropoulou, 2019). Nowadays, "intercultural education" depicts the most appropriate response to the challenges of globalization. It refers to encouraging the interaction of people from different cultural backgrounds not only by eliminating fear and prejudices towards the "others," but also seeing this condition as an opportunity for learning and communication. This kind of education does not demand people to abandon their cultural identity and adopt the beliefs and values of other cultures. Rather, it encourages them to focus on their common characteristics instead of their differences (Portera, 2008). It is also a pedagogical perspective that includes goals, content, teaching methods, materials, and assessment in order to promote universal values (e.g., justice, freedom, and equality in schools and in society; Banks, 2002).

The ability of teachers to effectively deliver a course based on intercultural education requires the design, implementation, and evaluation of this process (Grimminger, 2008). These abilities drive intercultural competence, which refers to the attitudes, knowledge, and skills that physical education (PE) teachers and coaches should have in order to effectively interact with their pupils (Barrett, Byram, Lazar, Mompoint-Gaillard, & Phillipou, 2014). This kind of competence enables educators to interact, cooperate, and experience intercultural contact through the perspective of personal development (Portera, 2008). Additionally, children may cultivate their intercultural competence only if their educators encourage them to understand and value cultural diversity (Barrett et al., 2014). Consequently, this process leads to inclusive pedagogy (Florian & Hawkings, 2011), which promotes equal opportunities for all children in the society.

PE and sports as contexts of interest

According to the International Charter of PE, Physical Activity and Sport, participation in these fields is a fundamental right for all and should play an inclusive role in the daily routine of youth and children (UNESCO, 2015). More specifically, physical activity plays a vital role in the inclusion of refugees (Ley & Barrio, 2019), both in the context of school (Culp, 2013) and in sport clubs (Whitley, Coble, & Jewell, 2016). Even though PE and sports are considered important contexts for social inclusion, mutual understanding, and respect of cultural diversity (Azzarito & Solomon, 2005; Culp, 2013), only limited studies have been conducted in these areas (Amara et al., 2005; Ley & Barrio, 2019). Some sport educators seem to recognize the importance of intercultural education and their own role in its delivery (Columna, Foley, & Lytle, 2010). However, several barriers to its implementation have been recorded in the literature (Dagkas, Benn, & Jawad, 2011; Agergaard, Cour, & Gregersen, 2015).

The increasing number of refugee/immigrant pupils, many of them being unaccompanied and psychologically traumatized children (Sirin, & Sirin, 2015), has made the promotion of interaction between different cultures through physical activity an urgent need in many Western countries (Bennet, 2003) and also in Greece (UNHCR, 2015). This research does not intend to fit the incoming population into categories of "refugees" or "immigrants," as these

distinctions are temporary and depend on the manipulations of the authorities (Crawley & Skleparis, 2018). The purpose of the current study is to shed light on how stakeholders (PE teachers, coaches, and researchers of sport psychology and education) perceive the extent to which PE and sports can facilitate the inclusion of refugees, the role of intercultural education in this inclusion, and the authorities' contribution to this endeavor.

Cultural diversity in PE

PE represents a distinctive area within schools focusing on the development of physical skills and social relationships among peers (Hills, 2007). It has been recorded as a tool that opens new horizons to pupils' cultural diversity and acts as a facilitator in the settlement of young refugees (Doherty & Taylor, 2007) by promoting equal and active participation and mutual acceptance (Azzarito & Solomon, 2005). PE curricula include physical and sport activities characterized by global rules and terminology, which break down cultural barriers and minimize the importance of linguistic communication (Amara et al., 2005; Ito, Nogawa, Kitamura, & Walker, 2010). The greatest advantage of PE over other school courses is that its practical and communicative character eliminates cultural differences as neither speaking nor reading are actually needed for participation (Rosenberg, Fejgin, & Talmor, 2003). However, contradictory results have been identified regarding the significance of language in the inclusion of refugees in this course (Doherty & Taylor, 2007; Dundar, 2019).

The development of pupils' interpersonal skills (e.g., communication and cooperation; Kaylene & Rosone, 2015) is strengthened by a teaching style that encourages a task-oriented climate (Kouli & Papaioannou, 2009) and the adoption of an inclusive approach among PE teachers (Derri, Kellis, Vernadakis, Albanidis, & Kioumourtzoglou, 2014). On the other hand, an overemphasis on competition and social comparison in PE might not facilitate the inclusion of refugees since this reinforces prejudices (Gugutzer, 2008) and creates tension among participants (Krouwel, Boostra, Duyvendak, & Veldboer, 2006). PE teachers have also reported that limited resources, a lack of training (Chepyator-Thomson, You, & Russell, 2000; Flory & McCaughtry, 2011; Grimminger, 2011), and a lack of confidence in their intercultural competence (Gasparini & Cometti, 2010) diminish their effectiveness with regard to the inclusion of refugees. Furthermore, dress codes, mixed-gender groups (Dagkas & Benn, 2006), physical contact issues (Caldeborg, 2020), and parental influence (Dagkas, Benn, & Jawad, 2011) have been recorded as factors that impact the participation of female Muslim refugees in PE. However, researchers (Dagkas et al., 2011) have argued that the adoption of tolerance, flexible teaching approaches, and the involvement of pupils in decision-making could facilitate Muslim girls' participation in PE.

Authorities should undertake actions and provide resources that promote refugees' access to formal education (Bourgonje, 2010), including PE. Therefore, on-site training related to refugee inclusion should be provided for PE teachers so that they may better cope with the diversity of their pupils (Bourgonje, 2010). PE teachers' intercultural competence could be reinforced through their participation in courses/programs that promote intercultural knowledge and skills (Grimminger-Seidensticker & Möhwald, 2016). Additionally, the aforementioned programs could encourage in-service teachers to change their attitudes and practices, adopt intercultural education in practice (Azzarito & Solomon, 2005), and recognize the relational aspect of cultural diversity in PE (Leseth & Engelsrud, 2019).

Cultural diversity in sports

The participation of youth in sports is mainly a personal choice (Eitzen & Sage, 2003) and has been positively associated with social behavior, well-being (Bradley, Keane, & Crawford, 2013; Super, Hermens, Verkooijen, & Koelen, 2018), and the inclusion of refugees (Spaaij, 2015). Since sports speak a language without words (Schinke, Stambulova, Lidor, Papaioannou, & Ryba, 2016; Stone, 2018), they can positively contribute to the inclusion of vulnerable populations (e.g., refugees, asylum seekers, immigrants; Doherty & Taylor, 2007; Whitley, Coble, & Jewell, 2016), racial equality (Green & Hardman, 2000), and understanding and respect of cultural diversity (Culp, 2013; Rosenberg, Fejgin, & Talmor, 2003). Although sports have been described as "well-suited arenas" for promoting social interaction among culturally diverse individuals (Putnam, 2000), young refugees continue to represent a relatively marginalized population in this context (Jae-Pil & Lyras, 2013) for a variety of reasons. Refugees' socioeconomic background (Walseth, 2007; Agergaard, Cour, & Gregersen, 2015), natives' prejudices towards refugees (Kunz & Hanvey, 2000), unfamiliarity with the sport context of the host country (Forde, Lee, Mills, & Frisby, 2015), and the rules that natives adopt in sports (Kunz & Hanvey, 2000) have often been recorded as barriers to the inclusion of refugees in sports.

Furthermore, it has been recorded that sports that prioritize competition may exacerbate ethnic tensions and trigger cultural differences (Krouwel, Boostra, Duyvendak, & Veldboer, 2006). Coaches who create an empowering

motivational climate foster children's entertainment and social interaction, effectively promote the inclusion of refugees (Doidge, Keech, & Sandri, 2020), and show empathy and altruism to host populations (Morela, Hatzigeorgiadis, Theodorakis, Goudas, & Elbe, 2020). However, coaches in many countries have reported that they lack the training, strategies, and appropriate teaching materials to effectively promote the inclusion of refugees (Gasparini & Cometti, 2010; Forde, Lee, Mills, & Frisby, 2015).

Research questions

This study attempts to answer a crucial question: "What needs to be done or what is worth doing for PE and sports to meet the requirements of intercultural education?" We focused on investigating the perceptions of professionals (e.g., PE teachers, coaches, and academics) concerning the following questions:
1. Is the PE context suitable for promoting intercultural education? If so, why?
2. Are sports suitable contexts for promoting intercultural education? If so, why?
3. Which factors facilitate or impede the inclusion of refugees in the context of PE and sports?
4. Do the authorities support PE teachers and coaches with the inclusion of refugees? What additional actions need to be taken in this regard?

Methodology

The participants in this study were 15 individuals (11 males and 4 females). Eight of them were PE teachers in primary ($n = 6$) and secondary ($n = 2$) schools, and their teaching experience varied between 15 and 25 years. Seven participants were academics and researchers dealing with intercultural education in PE and sports. Their level of experience in this field varied between 2 and 30 years. The PE teachers were randomly recruited from a list of schools attended by refugee children in Central Greece. The academics were intentionally recruited from two universities (Central and North Greece) due to their involvement in projects regarding the inclusion of minorities. All participants had prior coaching experience in one or more sports, and six of them (all PE teachers) were still working as coaches in sport clubs when the interviews took place. The researchers do not seek to separate the participants into groups (PE teachers, coaches, and academics), but rather to highlight the views of professionals involved in the field of organized physical activity (PE and sports) about the phenomenon under investigation. Consequently, the interviews were based on phenomenological narratives in which participants' perspectives of the inclusion of refugees were elicited. Data collection was conducted after receiving approval from the University Institutional Research Ethics Committee. Participants were fully informed of the nature of the study; their participation was voluntary, and written consent was obtained from all participants. Data collection was conducted through face-to-face interviews ($n = 13$) and over Skype ($n = 2$). Skype was used when participants were located far from the researchers, and interpersonal contact was activated remotely in these instances (Sparkes & Smith, 2014). The interviews were conducted from October to November 2018 and ranged from 20 to 45 minutes long. They were recorded using a voice recorder instrument and were then transcribed by the first author.

Interview design

In order to fulfill the goals of the present study, a semi-structured interview guide was developed that contained a series of predetermined questions. The content of the questionnaire was identical for the PE teachers/coaches and academics, and adjustments were made as needed depending on the interviewee's characteristics. Both open-ended and closed-ended questions were included so that participants could freely provide all the information they desired (Turner, 2010). Additionally, open-ended questions were used with the intention of exploring interviewees' perspectives related to their knowledge and experiences in this specific field (Patton, 2002). A short thread of descriptive questions (e.g., years of teaching/research experience with refugees, sport background) was included in the semi-structured interview guide. Individuals were encouraged to share their stories so that their perspectives could be explored and the dimensions of the subject under investigation could be understood (Creswell, 2013). Their anonymity and confidentiality were also declared (Kvale, 1996). Participants' names were replaced by pseudonyms, and correlating acronyms were used ("AR" for the academic researchers, "PET" for the PE teachers, and "PET-C" for the PE teachers/coaches). For example, Agamemnon (AR), Pagona (PET), and Ariadni (PET-C).

The semi-structured interview guide consisted of questions related to participants' perceptions of (a) the inclusion of refugees in PE (e.g., "Which factors do you think act as facilitators of the inclusion of refugees in PE?"), (b) the inclusion of refugees in sports (e.g., "Which factors do you think act as barriers to refugees' inclusion in

sports?"), and (c) the authorities' support for the inclusion of refugees (e.g., "Do you think that teachers and/or co-aches have the appropriate knowledge and skills to facilitate the inclusion of refugees?" and "Have they received training on intercultural education?").

Data analysis

A qualitative approach using phenomenology was adopted (Sokolowski, 2000) to investigate the lived experiences of professionals (PE teachers, coaches, and academics) regarding the inclusion of refugees in PE and sports in Greece. By employing a qualitative approach, it was possible to include an array of strategies that guaranteed a well-structured study. However, these strategies are not a panacea. Rather, they are helpful for presenting participants' perspectives on a specific subject matter ethically and respectfully (Sparkes & Smith, 2009). The current study was framed within a relativist ontological framework (Sparkes & Smith, 2009), and the adopted methods reflect participants' experiences and the researchers' subsequent interpretations (Lincoln, Lynham, & Guba, 2011).

Hence, the researchers developed the "generating themes" exploring the information related to the research questions (Braun & Clarke, 2019). More specifically, a total of 122 single-spaced pages of interview transcripts were created by the first author. Then, the first and third author engaged in a collaborative process to produce a thematic analysis of the interview transcripts. According to the guidelines of Braun and Clarke (2012), the present study's coding and analysis combined inductive (Thomas, 2006) and deductive approaches. As the first step, the authors re-read the transcripts to become familiar with them and develop independent parallel coding. Then, they temporarily coded the data and generated interpretative labels as initial categories. The coding data were reviewed by the two authors and merged into a compared and overlapped set. When the overlap between categories was low, they conducted further analysis and engaged in discussion to reach a mutual agreement for the creation of potential themes. The potential themes were reviewed in relation to the coding data and the entire data set to ensure they made sense as parts of the broader narrative. After examining the data, all the authors engaged in a retrospective process for the development of the themes. Through discussion and by taking into consideration the specific characteristics of each potential theme, they reached a consensual agreement about the most appropriate themes capturing the essence of the data (Braun & Clarke, 2006). The themes were thoroughly examined, formally named, and singularly focused. In this phase, quotes were deductively selected from the participants' interviews, and the authors attempted to extract and present the most representative and vivid quotes in relation to the research questions and the literature. The final report emerged from the integrated writing and analysis process with the intention of creating a coherent narrative.

Data trustworthiness

The trustworthiness of the present study's data was established through (a) well-established research methods; (b) the background, qualifications, and experience of the interviewers; (c) tactics to ensure interviewees answered honestly (Shenton, 2004); (d) the second and fourth author acting in a critical way during the finalization of the themes' development and the selection of the quotes, encouraging dialogue and critical reflection (Sparkes & Smith, 2009); and (e) "information power" (Malterud, Siersma, & Guassora, 2016; Braun & Clarke, 2019).

Similarly, the external reliability of the study was ensured by having the interviews take place (a) in offices or school classrooms so interviewees could feel comfortable, (b) after arranging an appointment with each interviewee and collecting data during formal discussions (LeCompte & Goetz, 1982), and (c) giving participants the option to withdraw from the interview at any time (Cohen, Manion, & Morrison, 2007).

Results

The participants' reports revealed that they shared several common perceptions of the inclusion of refugees as well as some differing perceptions. Five major themes were generated from the thematic analysis of the data: (1) vehicles for intercultural education in PE and sports; (2) key obstacles to the inclusion of refugees in PE and sports; (3) sport clubs: two sides of the same coin; (4) the absence of the authorities; and (5) hints for training programs.

Vehicles for intercultural education in PE and sports

The responses of the participants indicated that PE and sports can promote intercultural education. More specifically, Aristotelis, Maximos, Themistoklis, Evgenia, Neftonas, Ourania, George, Manolis, Gerasimos, Achilleas, Agamemnon, and Nestoras argued that "the nature and structure of PE and sports encourage social interaction

among peers, regardless of their cultural identity," as was highlighted by George (AR). Additionally, Neftonas (PET-C) stated that "…there is, in fact, a connection between intercultural education, PE, and sports because pupils feel free to express themselves through rhythmic activities… body language, and motion… to get familiar with cultural diversity… and have fun."

Moreover, Themistoklis, Maximos, Evgenia, Agamemnon, Nestoras, Gerasimos, and Manolis stressed the universal character of the rules governing most sports as an advantage in both contexts, eliminating the difficulties that may arise from speaking different languages. More specifically, Nestoras (AR) claimed that "…children participate more easily in PE or sports, the rules are clear and universally common, allowing children to feel part of a team without needing verbal communication or numerous analyses and explanations." Similarly, Evgenia (PET) claimed, "…rules are the same, balls are the same and that makes it easier for PE and sports to include refugee pupils… There is also the advantage of language, where you need to say nothing but the basics, in order to communicate with others..."

Furthermore, some of the participants (Pagona, Ariadni, and Aris) stated that PE and sports can easily adapt activities from various cultural contexts in order to facilitate the inclusion of refugees. More specifically, Pagona (PET) stated, "The introduction of games, sports, or activities that come from refugees' backgrounds and/or modifications of games and activities that combine elements from diverse cultural backgrounds may help Greek children become more tolerant of and familiar with their diverse peers."

Interestingly, some of the respondents (Themistoklis, Aris, Evgenia, Neftonas, and Agamemnon) argued that well-structured lessons can promote the inclusion of refugees more effectively as, according to Agamemnon (AR), "…games and activities may help pupils to have a specific role, promoting their teamwork and helping both PE teachers and coaches to create a context that urges participants' mutual respect and reflection on their behaviors …" In conclusion, the respondents argued that respect, responsibility, and cooperation could be developed through PE and sports regardless of the individual's cultural background, naturally promoting the goals of intercultural education.

Key obstacles to the inclusion of refugees in PE and sports

Although the interviewees reported that PE and sports could effectively promote the inclusion of refugees, there are several barriers that impede this process. The vast majority of the respondents (Aristotelis, Maximos, Ariadni, Aris, Evgenia, Agamemnon, Nestoras, Achilleas, and George) argued that "…there is no official training on intercultural education... the effectiveness of lessons depends enormously on their [teachers'] initiation to learn information relevant to the inclusion of refugees," as Evgenia (PET) pointed out. Additionally, Agamemnon (AR) highlighted that "neither PE teachers nor coaches have received any particular training in this area."

Alternatively, some of the participants (Maximos, Aristotelis, Ariadni, and Manolis) highlighted that PE has a weak influence on pupils' perceptions due to the limited amount of time allocated to PE. As Manolis (AR) stressed, "…Arguably two hours [per week] have a limited effect on the inclusion of refugees..." Some of the interviewees (Aristotelis, Themistoklis, Maximos, Aris, Gerasimos, Agamemnon, and George) reported the involvement of refugees' parents as another barrier to the inclusion of refugees in both PE and sports. For example, Maximos (PET-C) stated, "Parents are the main problem and not children. A lot of parents have prejudices, and they insist on limiting their children's interaction with native children." Some of the participants (Aristotelis, Themistoklis, Maximos, Aris, and Agamemnon) also mentioned that this is a result of the parents perceiving Greece as a temporary residence and thus not choosing to integrate into Greek society. For example, Aristotelis (PET-C) highlighted that "Some of the refugees' parents are trying to leave the country, so they do not really care about their children's inclusion in the educational system. Therefore, this decision has an impact on their children's intention to get involved in PE and sport as well."

Two of the participants (Maximos and Achilleas) highlighted the prejudices of pupils with Greek parents as a barrier to the inclusion of refugees. Achilleas (AR) stated the following:

Parents display huge resistance, and that resistance is conveyed to their children... for example, when you often introduce native pupils to foreign ones, with their parents being absent, native children are likely to be friendly... on the contrary when their parents are present, these children are not friendly anymore… I assume that their parents influence their behavior.

Furthermore, one of the participants also focused on teachers' and coaches' attitudes towards diversity, which affect the behavior of their pupils. Achilleas (AR) argued that "Many times, even teachers or coaches treat people of different cultural backgrounds with suspicion. As a result, their attitudes have an impact on their teaching style and also on pupils' behavior."

Additionally, some of the participants (Aris, Ariadni, Neftonas, and George) mentioned that even if linguistic communication is not necessary, it is useful for approaching refugees and promoting their inclusion both in PE and in sports. More specifically, Ariadni (PET-C) reported, "the lack of a common language is an issue… we make efforts to approach refugee pupils, to talk to them... but we cannot communicate."

A few of the participants (Neftonas, Ariadni, and Aris) also revealed the lack of proper facilities and equipment as a barrier. For example, Neftonas (PET-C) emphasized, "... the lack of facilities to meet refugee pupils' needs. For example, both in our school and in the sport club there are no locker rooms, and native children come to school or the sport club already wearing their sportswear. However, this is not possible for Muslim girls since they need to wear their special sportswear…"

Sport clubs: Two sides of the same coin

Focusing specifically on sport clubs, most of the participants (Aristotelis, Maximos, Pagona, Ariadni, Themistoklis, Aris, Evgenia, and Ourania) stated that sports facilitate the inclusion of refugee children. Their main argument is that children are guided towards a well-structured sport context that fosters interaction with their peers. Sharing is also a common goal that requires teamwork, regardless of cultural background. More specifically, Themistoklis (PET-C) stated, "Every child has the opportunity to choose the sport they like and therefore enjoy it and actively participate while sharing common goals. Thus, children can smoothly be socialized and included into society." Ourania (AR) also added that "Sports are organized contexts, and as a result, they can provide a specific direction suitable for every child, also supporting the inclusion of refugees."

Some of the participants (Neftonas, Manolis, Gerasimos, Achilleas, Agamemnon, Nestoras, and George) mentioned specific barriers that impede the inclusion of refugees in sports. For example, Achilleas (AR) underlined the competitive quality of sports, identifying that it "may lead to tensions and disagreements between opposing team members … This creates a negative mood for the team's members, especially when there are individuals from diverse cultural backgrounds." Furthermore, Neftonas (PET-C) revealed that "...the participation of refugees in sports is not that common, mainly due to financial reasons or transportation problems, both of which make it even more difficult for them to join such settings." Additionally, George (AR) stated the following:

Refugees coming from a cultural context that differs from the Western cultural context may find it difficult to interact within the context of sports. For example, Muslim refugees are likely to be reluctant, and they might feel awkward due to gender issues or dress codes. Thus, they come up with excuses or do not participate, and this situation automatically marginalizes them... and makes them adopt a negative attitude towards the others, affecting the others' attitudes as well...

Some of the participants (Neftonas, Manolis, Gerasimos, and George) also highlighted that sports may help the inclusion of refugees "only in the case that coaches have received the appropriate training to promote mutual interaction, understanding, and support between refugee and native athletes… then the insecurity that foreign pupils may initially feel will be eliminated," as Manolis (AR) pointed out.

The absence of the authorities

The majority of the participants (Aristotelis, Maximos, Ariadni, Evgenia, Aris, Nestoras, Achilleas, George, Agamemnon, Gerasimos, and Manolis) argued that the state did not provide any on-site training, educational materials, or supporting facilities. More interestingly, Nestoras (AR) stated, "…if I could describe the situation using one phrase that would be authorities' unpreparedness to cope with this challenge... no one could put the blame on teachers or coaches... they could not anticipate that one day they would have to face this emergency situation [a large influx of refugee pupils]." Additionally, Aristotelis (PET-C) stressed that "the state does not organize free seminars or workshops related to the inclusion of refugees... we are trying to cope with their needs based on our knowledge, but this is not enough ... we also need in-service education in order to develop the skills to help these children." Similarly, Maximos (PET-C) stated the following:

I have not received any training to cope with refugees' diversity. For example, I tried to shake hands with refugees, and I noticed that they were reluctant to respond to my gesture. So, I searched online how to deal with this situation. I read about their customs and religious issues to adjust my behavior, but this is not enough. This was the result of my own initiative and not an organized state effort… that is how I... managed last school year...

Interestingly, some of the participants (Maximos, Evgenia, Ariadni, Nestoras, Achilleas, and George) stressed that all educators within the school should be trained to be able to cope with pupils' cultural diversity and facilitate the inclusion of refugees. For example, Ariadni (PET-C) stated, "...it is of high importance for every teacher to re-

ceive on-site training on intercultural education because we have not attended any course during our undergraduate studies, not even a well-organized seminar. Thus, it is difficult for educators to support the inclusion of refugees."

Although some of the participants (Pagona, Themistoklis, Neftonas, and Ourania) argued that, in the words of Themistoklis (PET-C), "Schools in the given circumstances have supported the inclusion of refugees as well as possible...," Themistoklis (PET-C) also pointed out that "...the years of experience of PE teachers and their knowledge in the pedagogical context helped them to cope with this unexpected situation." Furthermore, Ourania (AR) articulated that PE teachers have open access to knowledge for intercultural education, and it actually depends on their professionalism. More specifically, she stressed the following:

...I believe they [PE teachers and coaches] have it [the necessary educaional level] ... after all, there is a variety of books related to intercultural games... there is so much material available... if someone wants to discover the knowledge then they can just read the books.

Hints for training programs

Participants' perceptions of a well-structured intercultural training program are categorized as promoting *attitudes* such as "knowledge of ways to eliminate stereotypes," as Evgenia (PET) highlighted, *knowledge* about "different cultural customs and various games from different cultures," as Agamemnon (AR) pointed out, and *skills*, referring to "methods or strategies for approaching and including refugee children from a psychological aspect," as Ariadni (PET) mentioned. Gerasimos (AR) also focused on the "…urgent need of training in religious issues such as body contact or nutrition issues that might affect refugees' participation in PE and sports."

The expectations of the aforementioned interviewees are summarized in the following suggestion. An educational system that takes into consideration pupils' heterogeneity, minority diversity, religious diversity, gender relations, and sports culture may facilitate the inclusion of refugees. Additionally, the interviewees proposed that an educational program focused on the aforementioned characteristics should be developed and delivered to every educator and professional working in the context of sport.

Discussion and conclusions

This study attempted to provide a basis for understanding the implementation of intercultural education and the inclusion of refugees in both PE and sports in Greece. The findings revealed that the vast majority of participants perceived PE and sports as important settings for implementing intercultural education and promoting the inclusion of refugees for a variety of reasons. More specifically, they suggested that the context and curriculum goals of PE promote children's social interaction. Furthermore, they suggested that children can familiarize themselves with refugees' backgrounds through games and sport activities and practice teamwork skills and mutual respect in the process. These findings are aligned with previous studies that have implied the very nature of PE eliminates cultural differences and promotes equal opportunities for all pupils (Azzarito & Solomon, 2005; Kaylene & Rosone, 2015). Similarly, participants of the present study reported that sport clubs support the inclusion of refugees, fostering children's communication, satisfaction, and mutual respect through social interaction. These reports are in line with recent studies (Hatzigeorgiadis, Morela, Elbe, Kouli, & Sanchez, 2013; Ito et al., 2010; Doidge et al., 2020; Morela et al., 2020). Finally, the emerging results of the present study highlight that both PE and sports can promote mutual interaction (Rosenberg, Fejgin, & Talmor, 2003; Amara et al., 2005) and have a positive impact on the inclusion of refugees depending on teachers'/coaches' delivery style (Kouli & Papaioannou, 2009; Morela et al., 2020) and training (Columna, Foley, & Lytle, 2010).

Additionally, participants stressed that PE and sports share common characteristics (e.g., games and activities supported by universal rules), and thus linguistic communication is not necessarily needed in these contexts. Previous studies have had similar findings (Amara et al., 2005; Ito, Nogawa, Kitamura, & Walker, 2010; Scinke et al., 2016). Participants also argued that PE teachers and coaches can adapt games and activities from refugees' backgrounds to facilitate communication and interaction between refugees and native pupils. A similar conclusion stems from previous reports that the sports context provides coaches with the opportunity to easily adapt cross-cultural activities that may facilitate pupils' familiarization and interaction with their teammates (Amara et al., 2005) and create an enjoyable and welcoming environment (Doidge et al., 2020).

On the other hand, the findings of the present study are similar to those of Olliff (2008), implying that although sports can "provide universal language," the lack of communication between PE teachers/coaches and refugee children may act as a barrier to their inclusion (Doherty & Taylor, 2007; Dundar, 2019). Additionally, as in a previous

study (Dagkas et al., 2011), several participants of the present study highlighted parents' prejudices as a barrier to refugees' participation in PE and sports. It was also reported that the lack of equipment and the limited time allocated for PE are factors that could make the inclusion of refugees in PE ineffective; this is also supported by the literature (Flory & McCaughtry, 2011). Furthermore, some of the participants questioned refugees' ability to access sports facilities due to socioeconomic factors. This issue has also been underlined by other researchers (Walseth, 2007; Flory & McCaughtry, 2011; Agergaard et al., 2015) arguing that the socioeconomic status of refugees is a significant factor that acts as a barrier to their participation in physical activities. Finally, similarly to another study (Dagkas & Benn, 2006), participants of this study reported that gender issues such as dress codes, mixed-gender activities, and physical contact issues (Caldeborg, 2020) may impede refugees' participation in sports.

However, some of the participants asserted that sports are not the ideal context for promoting the inclusion of refugees due to the competitive nature of these activities. This perspective echoes the findings of previous studies (Walseth, 2006; Spaaij, 2015) suggesting that sports may lead refugees to become competitive and even increase ethnic tensions (Krouwel, Boostra, Duyvendak, & Veldboer, 2006). Additionally, Amara et al. (2005) questioned the effectiveness of competitive sports for the inclusion of refugees due to the rules of sports and coaches' lack of awareness of refugees' needs. Interestingly, only one of the participants of the present study reported that teachers' prejudices may influence the inclusion of refugees. However, the fact that all the other participants did not report the prejudices of teachers or coaches may imply the need for more in-depth self-awareness. It also highlights the importance of the development of specific programs for the intercultural preparation of these professionals (Columna et al., 2010). Such programs could increase both the awareness and the improvement of their attitudes towards diversity (Banks, Suárez-Orozco, & Ben-Peretz, 2016). Participants of the present study also argued that their lack of training (Chepyator-Thomson et al., 2000; Flory & McCaughtry, 2011; Grimminger, 2011; Gasparini & Cometti, 2010) and professional development of intercultural competence (Forde, Lee, Mills, & Frisby, 2015) influenced their ability to cope with refugees' cultural diversity.

The participants' suggestion for the inclusion of intercultural education both in undergraduate studies and in the training of in-service PE teachers is in line with the implications of a previous study (Young, 2010). More interestingly, participants of the present study suggested that the training program include knowledge related to critical awareness, skill development, and strategies for building competence, which is in line with past literature (Chepyator-Thomson et al., 2000; Wyant, Tsuda, & Yeats, 2020), as is their suggestion that various games and activities from around the world could be effective tools for the development of intercultural competence (Puente-Maxera et al., 2020). An on-site training program with these features could help PE teachers and coaches improve their ability to promote the inclusion of refugees (Derri et al., 2014) and also increase their self-efficacy as professionals (Hermans, 2002). Finally, such a program could be very useful in an educational system where the implementation of intercultural education relies on teachers' initiative and skills (Gropas & Triantafyllidou, 2011).

Although the general sense captured from the data of the present study was that participants have accepted no official training on intercultural education, they are seeking organized training programs including methods and strategies for the development of the appropriate attitudes, knowledge, and skills to facilitate their role in the inclusion of refugees. Thus, training in intercultural education and also curricula changes are necessary for the elimination of stereotypical behaviors. These changes would also lead to a more inclusive pedagogy through a collective endeavor including every aspect of society. This is still missing not only from PE curriculum, but also from several Greek educational programs and curricula, according to the participants of the study.

Ethics approval and informed consent
The study was approved by the University Institutional Research Ethics Committee. Informed consent was obtained from all subjects involved in the study.

Competing interests
There is no conflict of interest in this study.

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Learning to teach and play futsal using digital tablets: What knowledge do sports science students mobilize?

Authors' contribution:

A) conception and design of the study
B) acquisition of data
C) analysis and interpretation of data
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Abstract

There is little research on the knowledge mobilized by sports science students when they learn to play a sport by learning to teach it. This study focuses on the benefits of using digital tablets to foster this learning during a university teaching module in futsal with students in the second year of a sports science bachelor's degree. We compare the knowledge mobilized by these students during self-confrontation interviews (based on video recordings of the sessions), game situations, reciprocal coaching and debates of ideas. We then identify the nature of this knowledge and the strategies for its mobilization in context using a framework mainly based on didactics in physical education (Amade-Escot, 2006; Armour, 2011) and on pedagogical content knowledge studies (Shulman, 1986). The students were divided into two experimental conditions following the same pedagogical curriculum. The students in condition 1 used digital tablets to film themselves, tag videos and discuss the recordings. The students in condition 2 did not use tablets. The interviews were conducted twice during the teaching module: first during period 1 (beginning of the module) and then during period 2 (end of the module). The results show that students in condition 1 were more likely to mobilize shared knowledge, make decisions through cooperation and even devolve the construction of tactical reasoning and knowledge by their peers following the didactic approach of the faculty teacher as early as period 1. This promoted access to the construction and meaning of teaching and learning content. These results are discussed in light of the current challenges within educational systems and of the joint development of interactional skills for learning to cooperate and even to teach.

Keywords: Student education, sport pedagogy, digital technologies, team sports teaching, cooperative learning

Introduction

Most university curricula in sports science integrate practical modules into student teacher (ST) education, which is led by faculty teachers (e.g., Deenihan, Young, & McPhail, 2011). By combining the varied experiences of players, participants (Kinchin et al., 2005) and teachers with those of their classmates (Collier, 1998), practical team sports modules facilitate the understanding of the game, teamwork and tactics (Carlson, 1995). Through long modules and multiple co-observations, according to Oslin et al. (2001), STs construct effective links between their

pedagogical content knowledge (PCK; Shulman, 1986) and their subject matter knowledge (SMK) based on their experience as players, students and teachers (Rollnick & Mavhunga, 2016).

However, few studies focus on the specific links between SMK and PCK constructed through this combination of roles.

This study deals with the mobilization of these two types of knowledge by students in the second year of a sports science bachelor's degree who will go on to become sports teachers or coaches. We refer to them as student teachers/coaches (STCs). We focus on how these STCs learn to play futsal and teach it to their classmates with or without the use of digital tablets.

The use of digital tablets as a tool is becoming more and more widespread in sports science teaching modules, but the didactic implications of this pedagogical use at universities still requires analysis. The rise of new technologies for education directly affects the training of teachers, increasingly transforming their role into that of "knowledge facilitators" (European Parliamentary Research Service, 2020).

Furthermore, as is shown in the literature review by Moore, Bullough, Goldsmith, and Edmonson (2014), futsal, a sport that is rarely practiced or studied compared to other team sports such as football, is nevertheless often used as a "tool for developing technical and tactical behaviors in young footballers" (p. 113). Its educational integration into vocational training in higher education institutions is advocated by Storchevoy et al. (2013) due to its ability to develop attentional, emotional and initiative control skills.

These findings are supported by other studies (e.g., Moreira et al., 2013; Gomes et al., 2008) on the appropriateness of using futsal to improve tactical and team decision-making skills in a very physically (Castagna et al., 2009) and emotionally (Geisler & Kerr, 2007) intense sport where players have to think quickly to make good judgements. Studies by Polidoro et al. (2013) and Travassos et al. (2012) show in this respect that regular video autoscopy of players has a positive impact on the stabilization of techniques and tactical patterns. In addition, players' choices of spatial distribution patterns depend on the interactional behaviors they construct (Fonseca et al., 2012). This leads us to question the role of discussions between STCs in their tactical choices, using tablets for this purpose.

That is why the STCs from the experimental group (condition 1 – see *Materials and methods*) were invited to use tablets to film one another playing the sport and then discuss the sequences, with the aim of improving futsal playing, learning and teaching.

This study focuses on the content knowledge mobilized by the STCs in the two conditions (with a tablet vs. without a tablet). We therefore consider the knowledge mobilized to learn, teach and play futsal, integrating didactic experiences, challenges and effects (Sensevy, 2014). This study will address the following questions relating to the tablet as a mediating tool furthering a didactic project developed within the teams of STCs: How does it contribute to this development? What is its impact on the roles taken on by STCs and the knowledge mobilized? What is its impact on interactions within groups of STCs? How is it integrated into the teaching module?

Literature review and theoretical framework

Use of digital tablets for STC education in team sports

Debates of ideas and reciprocal coaching are often set up in team sport teaching in order to help students develop knowledge of objectives and content (Wallhead & Dyson, 2016). However, there is little research on how preservice teachers use the combination of practical and teaching situations to collaboratively learn how to teach (Stran & Curtner-Smith, 2010). The study by Deenihan, Young, and McPhail (2011) focuses on preservice physical education teacher education during long sport education curricula. They emphasize STCs' need for many opportunities to observe each other as teachers during practical lessons in order to effectively develop PCK and SMK.

Using self-video feedback, it is easier to identify the knowledge mobilized (Rollnick et al., 2008) to teach in context (Kagan, 1992). Self-video feedback can serve STCs' pedagogical and didactic training objectives provided that they are guided effectively on the relevant elements to be observed. This condition is well documented in the literature on preservice teachers (Fuller & Manning, 1973). The effectiveness of self-video feedback depends on its ability to show preservice teachers the effects of teaching on student behavior (Sargent, 2018). It also depends on the ability of this type of device to link these effects to the specifics of the subject being taught and to what teachers know about adapting pedagogical content to transform students' behavior (Carter, 1990).

Using specifically designed video analysis software, users can adapt their analysis to the practices taught, highlighting relevant elements to be observed by "tagging" the video stream (Koekoek et al., 2018). The ergonomics of analysis software thus offer new affordances in the learning environment thanks to digital technologies, allowing for more complex pedagogical reasoning (Webb & Cox, 2004). It is therefore useful for faculty teachers to train

STCs in the pedagogical and didactic potential of such tools. Koehler and Mishra (2009) characterize the knowledge that allows the contextualized use of this potential as technological pedagogical content knowledge (TPACK).

In the present study, the curriculum requires students to alternate roles regularly (player, observer, teacher/coach) while using such tools. Structuring the interdependence of these roles is key to success and enables users to build the necessary content in order to adopt them fully (Wallhead & Dyson, 2016). The aim here is to promote cooperative learning through these different roles within the same team, investigating problems at different times (debates of ideas, reciprocal coaching, etc.).

Reduced game situations (with fewer players than in a full team; Gréhaigne et al., 2005) aim to highlight tactical and organizational problems, which can be useful for matches. This is in line with the findings of the small-sided futsal game experiments conducted by Almeida, Ferreira, and Volossovitch (2013) and by Frencken et al. (2013), which show that these kinds of situations develop the speed and efficiency of (mainly offensive) interactions and actions. This reinforces the constraints of individual and collective tactical and organizational problem-solving, which are typical in futsal and which require quick decision-making (e.g., Moreira et al., 2013; Gomes et al., 2008).

These choices can be discussed during debates of ideas. The "sense of the game" (what it takes to understand the right decisions for action; Gréhaigne et al., 2005) is then built by recognizing tactical configurations and similar decisions between reduced game situations and matches (Hastie & Curtner-Smith, 2006), which is facilitated by the use of the tablet. Sharing common meanings and knowledge then connects the meaning of situations and the meaning of others as providers and seekers of help (Gillies & Ashman, 1996). The sense of cooperation in game play is thus closely linked to how it is taught and learned (Wallhead & Dyson, 2016). Decisions and pedagogical and didactic knowledge are therefore co-constructed and connected within the collaborative learning situations.

This connection is a strong argument in favor of problem-solving situations fostering the identification and experimentation of strategic teaching and learning choices using tablets. We are interested here in situations devolving the regulation of these choices into joint action (Sensevy, 2014). This type of situation reinforces the willingness to try new teaching strategies (Guskey, 1988). In turn, this stimulates the development of SMK and PCK by encouraging STCs to re-examine their knowledge from multiple perspectives and possible decisions (Nespor, 1987), both individually and collectively. In collective learning situations, this development of joint attention (Eilan et al., 2005) to the object of others' attention (Sensevy, 2014) is promoted by the time for collective dialogue between situations (Gréhaigne et al., 2005). This raises awareness of the different components of PCK, which expands the understanding of them (Stein & Wang, 1988).

Complementarity of STCs' knowledge using a digital tablet

The PCK framework (Shulman, 1986) was developed with teacher training in mind. It is essentially the question of identifying the knowledge constructed about pedagogical content in order to teach it. As this knowledge is highly contextualized (Rowan et al., 2001), access to it is facilitated by the use of self-video feedback (Rollnick et al., 2008). The PCKnowing framework (Cochran et al., 1993) considers the construction of PCK in a dynamic integration of the different knowledge objects necessary for this construction (Ingersoll, Lux, & Jenkins, 2014).

According to Magnusson et al. (1999), this integration involves making choices in order to reconstruct the understanding of one's own knowledge and that of others in order to adapt to new situations. This justifies our interest in this reconstruction of knowledge through individual and collective reflection in and on action (Schön, 1983, 1987). This is a strong argument in favor of alternating periods of action and collective reflection in situations that encourage joint inquiry of the problems to be solved. This argument was notably put forward by Gréhaigne et al. (2005) in team sports didactics. However, little research links the study of PCKs and the analysis of didactic interactions within teaching-learning collectives (Cross, 2010).

In the tradition of didactic analysis in physical education (e.g., Amade-Escot, 2006; Armour, 2011), the inquiry about the conditions for the acquisition and transmission of disciplinary knowledge holds an important place.

Teaching content is determined based on this inquiry. This content is designed to guide students to discover and actively appropriate the means to succeed (Brousseau, 1997). This discovery can be facilitated thanks to the tablets' "tagging" function (Koekoek et al., 2018). The PCK is then updated to include knowledge about the cues identified through the students' investigation of the issues at hand and the solutions that make it possible to solve them. This principle of devolution of the problems to be solved here at the heart of reduced game situations is typical of the didactic contract (Brousseau, 1997). This contract shapes teachers' and students' mutual expectations and strategies. Thus, students' learning strategies are based on their investigation of teacher guidance strategies with regard to the disciplinary specificity of acquisition, and vice versa. Sensevy (2014) discussed the complementary practical epistemologies of teachers and students as theories of practice mobilizing knowledge to learn and teach. This

complementarity is at the heart of a teaching module based on the ability of the STC to transpose this knowledge into the alternating roles of teacher and student.

Although this alternation is common in teaching modules in sports science at universities, the development and articulation of SMK and PCK among student teachers in this type of module is rarely studied (Deenihan, Young, & McPhail, 2011). The need to both learn together to play and to teach others how to play redefines the classic teacher and student positions that STCs can take within the didactic system (Brousseau, 1997). Joint inquiry on knowledge for participation and teaching should lead to further investigation of the content necessary to articulate these two dimensions within the framework of both didactic and epistemic cooperation (Joffredo-Lebrun et al., 2018).

The aim of this study is to investigate the links between SMK and PCK for STCs. We were interested in the knowledge emanating from the simultaneous discovery of futsal learning content (through the role of the learner), pedagogical content facilitating this learning (through the role of STC) and conditions facilitating the learning of this pedagogical content (through the role of the faculty teacher).

The exact nature of this knowledge has rarely been explored in the literature. This knowledge also concerns the use of a technological tool (digital tablet) to foster acquisition of this content. The TPACKing framework uses TPACK as a starting point for analyzing the way teachers construct knowledge (Olofson, Swallow, & Neumann, 2016). The authors explain that it allows researchers to consider the knowledge of the pedagogical content involved in the specific use of this digital tool in order to teach and learn. The aim here is to identify the specific content of this knowledge and its direct link with PCK and SMK.

Hypotheses

It was expected that the "tagging" function of the digital tablet could foster the construction of links between the teaching–learning content to be discovered and the relevant elements to be observed: "tagged" spaces, positions and movements (Koekoek et al., 2018).

We therefore hypothesized that in condition 1, the STCs' content knowledge would move more quickly than in condition 2 towards the analysis of actions and interactions, integrating SMK, PCK and TPACK.

The use of the tablet would facilitate these interactions in the successive activities: cooperative practice (reduced game situations and matches), reciprocal teaching and visualization of the game (debates of ideas and interviews).

This digital tool would foster collective agreements on knowledge, decisions and strategies concerning the game and didactic choices.

Following the conclusions of Deenihan, Young and McPhail (2011), coaching would be led primarily by the STCs most experienced in team sports practice and teaching, who would transpose this experience to teach their classmates.

Thanks to this experience, these STCs would quickly decipher the faculty teacher's strategies and clues using the tablet. They would then use it to organize inquiry-based co-teaching in their team.

Materials and methods

Participants and context

Two groups (n = 48 [24 + 24]) of STCs were randomly assigned to the two conditions, balancing only for experience and level of practice in team sports and university results. The teaching module consisted of 12 futsal lessons lasting 1.5 hours each, all with the same pedagogical framework (reduced game situations, debates of ideas and matches). Some of the students had extensive experience playing football outside university. We refer to them as "experienced football players." The other students did more individual sports (such as gymnastics or athletics).

The faculty team chose futsal because it is not widely played by students outside university. The students discovered the specifics of this sport during the module, including its rules and teaching particularities, especially compared to football, which they were more familiar with. The faculty teacher was a football specialist (former player and high-level coach) and had taught futsal at the university for about 15 years. The lessons followed a weekly program common to both groups, but only the faculty teacher and the STCs in the first group (condition 1) used the tablets. No tablets were used for the second group (condition 2). The STCs were divided into teams as follows: 4x (5 players + 1 substitute). The role of the substitute was only used in match situations. During a match, each player took turns as the substitute. The teams, which were of a similar level, remained the same and competed in each lesson. The faculty teacher brought together some or all of the 24 STCs to give instructions or suggest common rules of play several times during each lesson.

Data collection

The lessons were recorded using two types of cameras equipped with microphones. The first camera was fixed. It used a wide-angle lens to film all the spaces used in the lesson (the pitch and discussion areas). The other cameras were mobile. They followed the teams as closely as possible in order to capture the interactions between the STCs and the faculty teacher.

We also conducted interviews with the faculty teacher and each of the STCs. The first interview was a semi-directive pre-module or "pre-unit" interview (Verscheure & Amade-Escot, 2007) with the faculty teacher. Prior to the lessons, he was asked about his teaching objectives, expectations and didactic intentions. The questions concerned the knowledge and content targeted at different moments during the module, his pedagogical approach and his teaching methods and tools. We also asked him for his teaching materials (written resources and curriculum for both himself and the STCs). A "post-module" interview (Verscheure & Amade-Escot, 2007) conducted after the final lesson provided access to the faculty teacher's pedagogical and didactic assessment. During this interview, he was asked about the discrepancy between what he expected (initial teaching plan) and what was actually taught and learned. For this final interview, the faculty teacher was shown video sequences of teams from each of the two groups of STCs.

These videos were taken at two different times during the module: period 1, which was after the first half of the module (7th lesson out of 12), and period 2, which was at the end of the module (final matches and situations, lesson 12). The video sequences showed the evolution of STCs' acquisitions (content, game skills, didactic interactions, etc.) according to those initially targeted by the faculty teacher. They also showed the faculty teacher regulations that led to these developments.

To access the knowledge mobilized by the STCs during the lessons, we conducted individual self-confrontation interviews during the two periods identified above. That is, we conducted two interviews for each STC in both groups (n = 96 interviews [2 × 24 + 2 × 24]). We showed students wide-angle videos taken from the same video sequences as those shown to the teacher, as well as videos of other situations (reduced game situations, debates of ideas, reciprocal coaching) filmed during the same lessons. We questioned them on their thoughts, concerns, feelings, perceptions, decisions and intentions and then went on to questions about the technical, tactical, strategic and didactic dimensions of these decisions and intentions. For teaching and participation-related content, we also asked STCs about the basis for their choices and decisions in relation to the use of the digital tablet (for STCs in condition 1). They were asked to discuss this content in terms of game strategies and configurations as highlighted by the video sequences.

Data processing and analysis

Data was collected in the form of both videos and the transcriptions of verbal exchanges during lessons and interviews. This text was organized in table form. These tables specify the speaker and the context: interview or lesson; match or reduced game situations / debates of ideas / reciprocal coaching; period (1 or 2); condition (1 or 2); the player's position(s) within the team; STC team number; and experience with playing football.

We analyzed the discourse according to these parameters using the lexicometric tools in Alceste® software (Reinert, 2015). Thanks to a factorial correspondence analysis of the different words and associated speech classes, the words, classes and parameters entered in the software were identified as "modalities." Using top-down hierarchical classification (Reinert, 1993), we were able to assign a name to each of the lexical fields associated with the different discourse classes. The main words and associated parameters (listed below) could then be located within these classes. The classes are represented as shapes on the graph (Figure 1). In addition, thanks to the classification by networks within the classes, the software provides access to the associations between the terms making up the statements. Alceste® also offers the possibility to focus on the enunciative context of these terms at both sentence and paragraph levels.

Thanks to these areas of focus and synoptic representations, it is possible to clearly identify what the speakers focus on first (the discourse objects) and how they focus on those objects (through the expressions and turns of phrase used) according to the different contexts and moments. This offers a starting point for qualitative analyses of discursive strategies in situ. The enunciation strategies can therefore be interpreted as perlocutionary strategies (Austin, 1962). They are defined by the author as speech acts that have an effect on the listener, leading to someone acting in a certain way or making someone see something in the way the speaker intended.

Our complementary qualitative analyses (see below) considered these discursive strategies, including those involved during the lessons and in the comments addressed to the interviewer. We then analyzed the didactic specificity of discursive strategies during the module. This analysis concerns the mobilization of knowledge for practice,
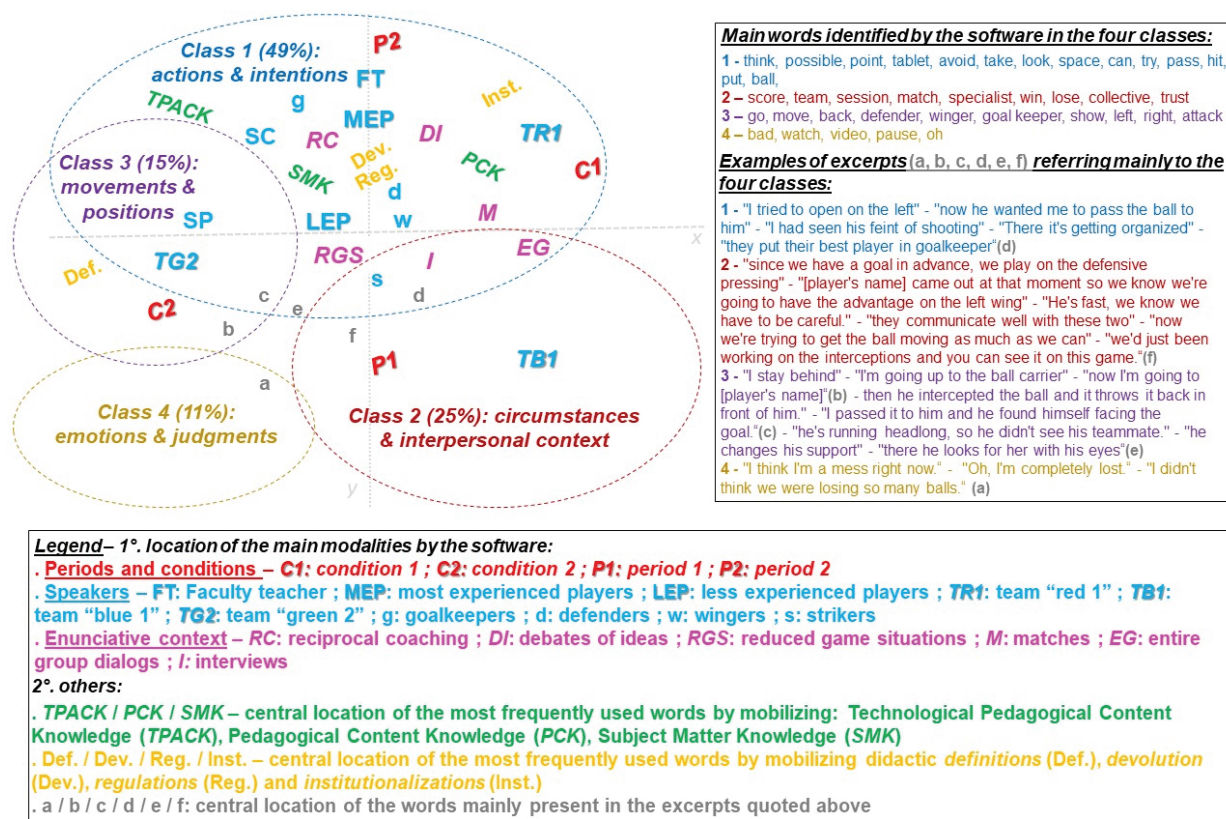
Figure 1. Factorial network adapted from the factorial correspondence analysis of the full textual data set

Source: own study.

teaching and learning. The methodological tools used for this analysis are those traditionally used in the didactic tradition of physical education analysis (Amade-Escot, 2006).

Interviews and videos were used to identify the didactic strategies and contextualize their use. The analysis of didactic strategies then focused on language interactions and, in particular, on the teaching utterances collected at the corresponding sentence level within the following categories: questions, explanations and justifications, pointing out actions and spaces, requests to act, judgments of actions made, observations and proposing alternatives. These categories are based on those proposed by Brière-Guenoun and Musard (2019) in order to then interpret the structure of STs' teaching action in didactic interactions. These interpretations use the quadruplet method of defining, devolving, regulating and institutionalizing to structure the didactic action (Sensevy et al., 2005).

Using this categorization method, it is possible to identify how the faculty teacher and the STCs define what needs to be done to engage the STCs in situations (devolution), regulate their activity and commitment and, finally, officially recognize the targeted knowledge and content (institutionalization). This interpretive method enables us to show how SMK, PCK and TPACK are mobilized within the teaching–learning process. These categories of didactic knowledge and actions are therefore located on the diagram in Figure 1.

Results

In this section, we present the lexicometric results and the results of the didactic analysis of the interactions between the STCs. Finally, we analyze the impact of the teaching project and faculty teacher regulations on these interactions.

Mobilized knowledge: Contributions of the lexicometric analysis

The factorial correspondence analysis applied to the full textual data set (transcribed speech) divides four categories of discourse into two axes of dialectical tension, named after the top-down hierarchical classification. The horizontal axis (x), represents the tension between "local and observable" (on the left) and "general and conceptual"

(on the right). On the vertical axis (y), "judgments in context" (at the bottom) are opposed to "intentional logic of actions" (at the top).

The top-down hierarchical classification (excerpt in Figure 2) also names and characterizes the classes according to the contents of the text that the software associates with them. The most common terms in each class are shown in Figure 1.

Figure 2 shows an excerpt from the top-down hierarchical classification. This excerpt allows us to illustrate the lexical links or "bridges" (Reinert, 1993) between the classes articulated within the text.

Class 4, "emotions and judgments," is more present in condition 2 and in period 1. It displays the negative emotions and judgements expressed during the reactions of the STC when they see themselves on video (Excerpt a, Figure 1) or when they play. Located at the bottom left of the factorial correspondence analysis, it includes judgments about game and player qualities (adjectives, adverbs), interjections and interpellations (imperative verbs) during lessons and while
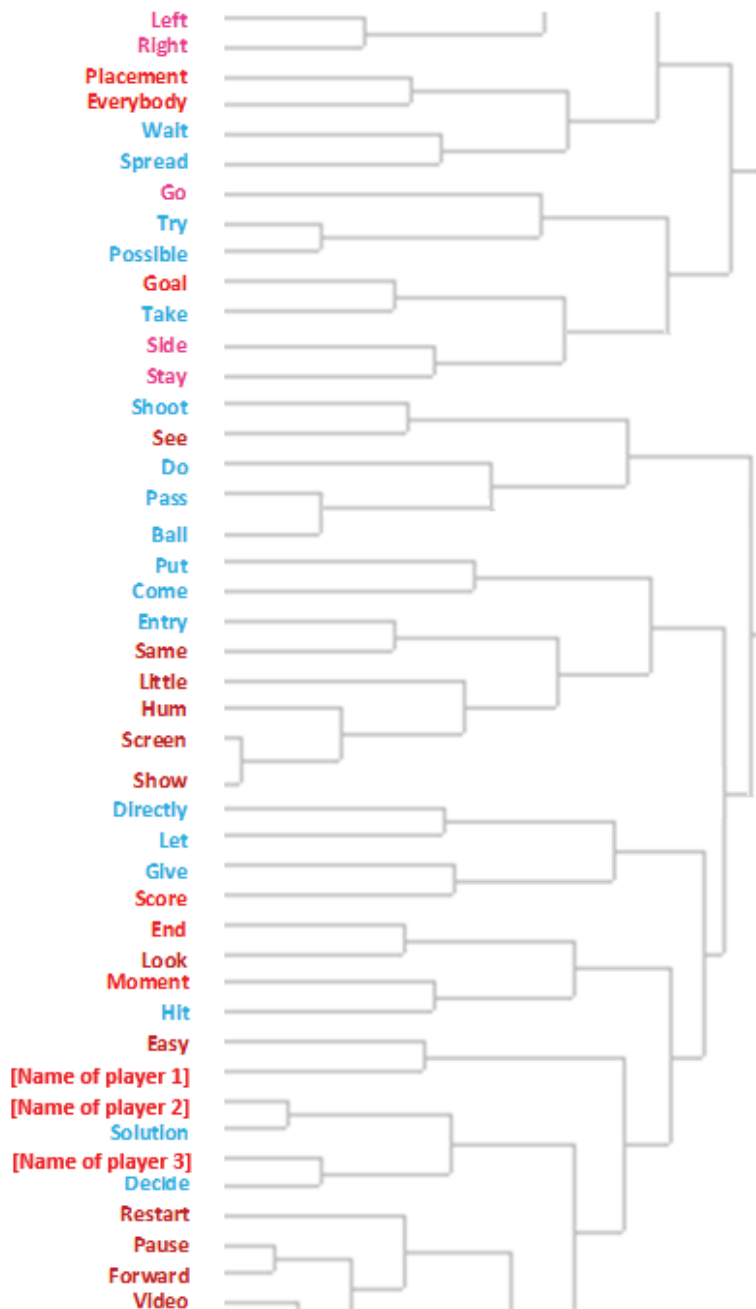

Figure 2. Extract from the top-down hierarchical classification applied to the total textual data set

Source: own study.

watching the videos. Class 2, located at the bottom right of the factorial correspondence analysis, essentially contains common nouns. Mostly occurring during the interviews, in condition 2 and at time 1, this class expresses the "circumstances and interpersonal context" of actions during play (such as a moment in the training module, score, match, balance of power; see Excerpt f, Figure 1). Both appraised (class 4) and contextualized (class 2), these actions refer more to "movements and positions" (class 3) in condition 1 and period 2. Class 3 thus features analysis of observed actions during play and corresponding player activities, which is more prevalent among experienced football players during reciprocal coaching with the use of tablets (Excerpts b, c and e, Figure 1). Analysis is more strategic and intentional in the typical comments in class 1 ("actions and intentions"; see Excerpt d, Figure 1). The prevalence of analysis increases at the end of the module, especially during the debates of ideas. Analysis occurs primarily in the comments by the faculty teacher and by the experienced football players, and more broadly in condition 1.

Comments by players on the same team tend to converge around the same coordinate (x, y) on the factorial correspondence analysis from period 1 to period 2, confirming the hypothesis of the construction of a team culture (e.g., team "blue[condition] 1" in class 2 and team "red[condition] 1" in class 1; see Figure 1). This case, and those of the other teams in condition 1, confirms the hypothesis of the impact of tablets on STCs agreeing on choices, making decisions (mainly in debates of ideas and reciprocal coaching) and analyzing (mainly in debates of ideas and self-confrontation interviews). The convergences observed from one period to the next are at the top right of the diagram (factorial correspondence analysis, Figure 1). This trend reflects a conceptualization of the practice of futsal and the conditions for its effectiveness. This fosters the mobilization and articulation of content to learn to teach (PCK), play (SMK) and use the tablet for educational purposes (TPACK). The classification (top-down hierarchical classification) thus helps to identify how, over the course of the module, the lexical bridges between classes reflect this ability to conceptualize content. The extract from Figure 2 includes words whose identification makes it possible to see how, from one period to another, the STCs manage to rely on the observation of team players and overcome the judgments and emotions felt at the time (class 4) while analyzing the context of the situation (e.g., "placement" conditions – class 2). This contextualization is used to access the meaning of actions and movements (class 3). This meaning is enriched by linking actions, decisions, intentions and associated game configurations (class 1). The STC can then envisage possible and desirable developments in the activity and game; for example, according to specific futsal principles (SMK). The conditions of these evolutions are at the heart of the PCK (e.g., how to teach a rule) and TPACK (e.g., how to get people to see a configuration in certain a way).

Analysis of interactions and teaching strategies

Interactions between STCs

The table below is based on the categories used to analyze the didactic dimensions of the comments made during these interactions.

Table 1. Categorization of didactic strategies in interactions.

	Condition 1		Condition 2	
	Period 1	Period 2	Period 1	Period 2
Questions asked (1)	+	++	–	+
Explanations and justifications (2)	+	–	–	+
Pointing out actions and spaces (3)	+	++	–	+
Requests to act (4)	+	–	+	++
Judgments on actions made (5)	++	+	+	++
Making observations (6)	+	++	–	+
Proposing alternatives (7)	+	++	–	+

Source: own study.

This table shows categories ranging from highly present (++) to rarely present (-) in the comments of the STCs, mainly driven by the experienced football players. Those in condition 1 questioned their teammates (1) more than those in condition 2 and used the tablet to point out actions and spaces (3) in order to help construct observations

(6) and suggest new alternatives of actions based on those initially proposed (7). In condition 2, the STCs were less inclined to encourage these proposals. From one period to another and in contrast to condition 1, they were more committed to normative judgements (5) by justifying (2) their requests to act (4). In summary, from one period to the next, each group moved towards different pedagogical strategies during co-teaching: inquiry of teammates (condition 1) versus directivist pedagogy (condition 2).

During the lessons, almost all the experienced football players took on the role of coach and captain of their team. Their comments mobilized the most PCK and TPACK (especially during self-confrontation interviews; e.g., "They have to go back to the center of the pitch faster after passing behind the opponent's back" or "I'm showing the game corridor"). They engaged in tutoring relationships with their teammates. These teammates often described their play with reference to their team's tactical and strategic choices (e.g., "We chose to keep the game as far away as possible" and "Now we can see that we don't hesitate to switch," from the SCT interviews). Their comments were more about their tactical learning (in relation to SMK) than about didactic interactions and learning to teach futsal.

During the self-confrontation interviews, the experienced football players described their teaching strategies using the tablet (condition 1). The tablet was used during the module to designate (period 1) and then to introduce (period 2) the expected configurations, solutions and game actions. Finally, the experienced football players regulated the use of the tablets by their teammates, especially during the debates of ideas. They sought to orient their reasoning and proposals by guiding them and questioning them on their choices and analyses using words such as "Don't you think we could try to...?" and "What do you think of the use of this space?" or "What's the problem here?" as well as "What would you advise, [name of the player]?" Experienced football players thus regulated the learning and teaching process of non-experienced football players. The faculty teacher also used these strategies, especially in condition 1, to clarify his expectations and then deliver clues to help discover useful elements for playing, learning and teaching. That said, this strategic transformation happened more quickly for the faculty teacher than for the experienced football players.

In condition 1 matches, after a few lessons, the experienced football players played the role of defender or goalkeeper to observe and direct the game from a "diamond" game tactical organization: one goalkeeper, one defender, two wingers and one attacker. They then used a lot of deictics (e.g., "here" and "there") and imperative verbs (e.g., "Look!" and "Go!") while coaching and took charge to foster tactical regulation and debates of ideas consisting of numerous exchanges. Didactic needs (observing to facilitate teaching) therefore had an impact on the organization of the game and on interactions. On the other hand, in condition 2, the majority of teams chose a "square" organization (one goalkeeper, two defenders and two forwards). They chose the "diamond" organization later in the module. Regulations and exchanges (reciprocal coaching, debates of ideas) were less common than in condition 1 and remained shorter, more general and allusive. They were based on the faculty teacher's comments, sometimes regardless of the problems actually encountered while playing.

Teaching project, analysis and regulations of the faculty teacher; impact on content studied and taught by the STCs

The faculty teacher aimed to adapt training curriculum designed by the French Football Federation (FFF) on a series of themes (conservation, progress and transition) structured one lesson after another. The situations described in the curriculum (reduced game situations, for the most part) included diagrams of the positions and movements of the players and the ball on the pitch (and the equipment), objectives, instructions (rules to be respected), performance criteria (what to do) and possible variables (complexification, simplification).

In the first lessons, the STCs had to achieve what the faculty teacher asked of them by presenting each situation. The faculty teacher then questioned them later in the module about the main problem this situation posed and how to solve it. This usually involved identifying the requirements and constraints that are typical in a game configuration. The objective was to make the right decisions for the team to progress. During the first two lessons, the debates of ideas were short, with the faculty teacher providing solutions quickly. He described this pedagogy as directivist (post-module interview).

Then, during the third lesson, he offered different alternatives for STCs to discuss. From the eighth lesson onwards, it was the STCs who had to identify problems, alternatives and optimal solutions. Exchanges between STCs then developed around how to best "open" effective game spaces when attacking and how to "close" them in defense (STCs, debates of ideas, lesson 9). These were the main subjects of SMK teaching addressed by the faculty teacher. The STCs then discussed ways to "recover the ball as soon as possible" "after the goalkeeper's throw-ins" (id.) in order to give themselves time to optimize the space, which is specific to futsal compared to football. Another distinction (the absence of the offside rule) meant that the STCs took an interest in managing the space in the width

of the pitch as the ball progressed in order to "go behind the defense" (a common comment from the STCs and the faculty teacher in interviews).

This space management was not explicitly addressed in the faculty teacher's lessons, but he identified progress at this level (post-module interview), particularly for the STCs in condition 1. The faculty teacher identified the "increased capacity" of the STCs in this group to "switch their roles in the game if necessary." He said that the tablet had allowed them to "focus more on the spaces and game configurations than on their initial roles as players." He also noted that the tablet "facilitates the overall vision of the game" thanks to the "tagging" software (Dartfish®), which the STCs quickly learned to use by observing how the faculty teacher used it in the first lesson.

The faculty teacher (post-module interview) noted the transition from a "game of individual counter-attacks" (tendency in period 1) to a "game of passes and collective exploitation of the spaces and opportunities" (tendency in period 2) offered and created in teams equipped with tablets who thus accessed the overall vision of the game more easily. The technological use of the tablet thus facilitated access to tactical and strategic knowledge at the heart of the SMK involved in this team sport. STCs were therefore able to invest this knowledge in constructing PCK, especially during the debates of ideas.

Discussion and conclusions

This study aimed to investigate how the knowledge to learn to play and teach futsal was mobilized during a teaching module at a university. The results demonstrated that this mobilization depended on the roles (player, coach and teacher) and that it was impacted by the strategies for using the digital tablet in collaborative situations. The faculty teacher began by using the tablet to explicitly show and name what needed to be done according to highlighted configurations by "tagging" "relevant events" (Koekoek et al., 2018, p. 13).

Later in the module, it was up to the students to recognize these events and configurations according to the clues tagged by the faculty teacher. Then, they chose the videos themselves, which they could tag to decide what was important to see, do and know by identifying and selecting teaching and learning content. The acquisition of a better game sense (Launder & Piltz, 2013) through working independently with the tablet (Koekoek et al., 2018) does not only concern the collective practice of sport. The results suggest that this acquisition is a lever for the acquisition of a broader didactic game (Sensevy, 2014) facilitated by the tablet (condition 1). The sense of the didactic game refers to the ways of interacting to foster the appropriation of content useful for learning to play and learning to teach. Thus, the principle of devolution (Brousseau, 1997) is illustrated here by the ability of the faculty teacher, and then the experienced football players, to facilitate the STCs' investigations without depriving them of their investigative activity by giving them useful clues. This could explain the didactic reticence (Sensevy, 2014) to offer prior solutions to the problems posed by learning situations and/or identified using tablets. This reticence was noted after a few lessons with the faculty teacher and then among experienced football players.

This principle is only possible once students have previously acquired a common grammar of actions and language (Wittgenstein, 1953/2001), resulting in a more explicit first phase of teaching (see above). The didactic skills of students were therefore acquired as they understood first the nature of the clues on which to base effective action as players and then the reasoning behind providing such clues in ways which devolve and regulate problem construction and resolution related to learning and teaching among their classmates. Thus, in condition 1, the PCK was constructed from the SMK in connection with the TPACK: devolution concerned the use of the tablet for didactic purposes, which ultimately allowed inexperienced football players to use it to teach. Devolution seemed to be acquired over time through mimicry and experimentation with didactic strategies, from the faculty teacher to experienced football players and then from experienced football players to inexperienced football players. This shows that access to PCK and TPACK first requires thorough knowledge of the contents at stake in the SMK.

The tablet had an impact on the construction of knowledge mobilized in learning and teaching activities thanks to the way it allowed these activities to be staged. It enhanced the visibility of play and of didactic intentions to improve learning and teaching. The collaborative practice curricula for students in sports science (e.g., learning together to teach by learning to play; Deenihan, Young, & McPhail, 2011) therefore directly benefit from being designed in a way that organizes the visibility of didactic objects and intentions. In this sense, we recommend that the stages of appropriation of digital tools be integrated within the practical modules of sports science at universities in order to structure their use. The main limitation of this study and a limitation for the application of this recommendation is that it did not deepen the link between the acquisition of playing and teaching skills. Future work should therefore include an analysis of the evolution of the motor and perceptual-decisional activity of the STCs. This would allow us to understand the

connection between the different strategies and comments more fully. This would help design the steps of a curriculum integrating digital uses according to the specificity of the content and skills targeted over time (Tricot & Sweller, 2014), including digital teaching skills. According to the recommendations of the Council of Europe (2019), educational projects should encourage the use of digital technology rather than being driven by the technology itself. The stakes are high in the context of university and school education policies considering the current educational needs of a world where the joint development of digital, social and professional skills is increasingly challenging.

Some of our results question the conditions of this joint development. Indeed, the devolution of the identification of knowledge to be taught and knowledge that is useful for teaching did not lead the faculty teacher to organize in-depth group discussions on the content of these kinds of knowledge and how they should be articulated in order to improve teaching. Without denying the interest of the freedom of choice left to the STCs concerning the strategies and objects taught, we recommend that the strategies of knowledge devolution be more explicitly worked on as a training object in the sports science curricula. Their tacit integration within the PCK of STCs through imitation of the faculty teacher seems insufficient to us. This study also showed that without the use of the tablet, the devolution strategies of the faculty teacher were made less visible to STCs, who in turn identified fewer knowledge objects to be devolved (condition 2). This reduced the opportunities for all STCs to think about their teaching strategies by integrating the conditions of their classmates' investigation of the problems posed by the situation. We note that the development of joint attention (Eilan et al., 2005) requires paying attention to the object of others' attention (Sensevy, 2014). Debates of ideas foster access to these objects. They could offer an opportunity to make the teaching strategies and choices more explicit to all the STCs. Studying video extracts of debates of ideas linked to game episodes as a whole group would allow the faculty teacher to organize a shared reflection on the effective conditions for devolution and regulation of learning according to the needs and requirements of the STCs. It would be a sort of joint anthropological investigation into the construction of each STC's practical and educational expertise, in line with Ingold's (2017) idea that anthropology and education are both ways of studying and living with others.

In this way, it would be possible to avoid the disparities in knowledge and skills between the teams observed in this study, such as strategic choices and role distribution patterns whose ineffectiveness the STCs found difficult to identify (especially in condition 2). The challenge is to ensure that students can build and experience an effective practice, teaching and learning project together. At a time of increasing individualization of training courses in schools and universities, this recommendation seems to us to be essential for the construction of a shared culture.

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Enhancing active living and physical exercise through environmentally friendly policies in urban areas

Authors' contribution:

A) conception and design of the study
B) acquisition of data
C) analysis and interpretation of data
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Abstract

Active living offers a substantial contribution to the mental and physical health of individuals, as well as to community wellbeing and social cohesion. Outdoor and green environments offer additional benefits and determine people's involvement in physical exercise. Environmental policies put in place by local governments affect citizens' adoption of active living and physical exercise. The aim of the present study was to investigate the relationship between citizens' levels of exercise participation in urban open spaces and the provision of exercise-friendly policies by the local authorities. Three hundred and seventy citizens participated in the present study who took part in walking, bicycling, or jogging/running during their leisure time in urban open spaces and outdoors. Research participants completed the Godin Leisure-Time Exercise Questionnaire (GLTEQ; Shephard, 1997) and Environmentally Friendly Exercise Policy Questionnaire (Kontogianni, 2015), which consisted of three scales: "policy to enhance exercise," "environmentally friendly exercise facilities," and "intention to change personal habits." Participants were divided into three different subgroups according to their time exercise scores: high, middle, and low. The results showed the statistically significant differences between time exercise scores and environmentally friendly exercise policy scales. Citizens with higher exercise time participation expressed significantly higher levels on the environmentally friendly exercise policy scales. Citizens' physical exercise time in urban open spaces and outdoors seemed to affect the creation of corresponding preferences, beliefs, and intentions towards environmentally friendly policies. City leaders, essential decision-makers, and stakeholders are expected to provide an enabling environment, legitimacy, and leadership that fosters the development and implementation of policies that support physical activity and green active living within urban spaces.

Keywords: Leisure, outdoor recreation, health, wellbeing, green public facilities

Introduction

Physical inactivity has been a problem in recent years as a significant number of citizens are at risk for non-communicable diseases such as hypertension, diabetes, and obesity. Globally, 23% of adults and 81% of adolescents (aged 11–17 years old) do not meet the WHO global recommendations on physical activity for health. Inactivity varies within and between countries and can be as high as 80% in some adult subpopulations (World Health Organization, 2020). In addition, physical inactivity affects psychological impairment, resulting in depression

and anxiety (Mayo Clinic Staff, 2017). The promotion of physical exercise has been a subject of multiple action plans by various governments in different urban areas globally. Saito et al. (2018) conducted research among 3,000 community-based adults (aged ≥ 20 years old), and Cheung, Talley, McMahon, Schorr, and Wyman (2020) investigated 434 participants with a mean age of 65 years. Both posited that most adults do not meet the health-related guidelines for physical activity, which leads to inactivity being considered as a central global problem. There is an urgent need to conceptualize participation in physical activity on a population basis since intervening in small groups or on the individual level brings about minimal change to the community. Environmental policy and interventions promise to promote physical activity since they are fundamentally designed to influence large groups, even entire populations, according to Panter, Guell, Prins, and Ogilvie (2017). Mengesha, Roba, Ayele, and Beyene (2019) believe that the rhetoric used to promote exercise and a healthy lifestyle has for a long time endorsed the value of the policy and environmental interventions in that direction. Several interventions thus far have been introduced to promote physical activity in urban areas (Camhi et al., 2019). Most of these responses focus on specific activities (e.g., cycling and walking) as well as diverse contexts such as parks, fields, forests, squares, streets, and urban open spaces. Furthermore, most of these interventions address health concerns by tackling barriers in the existing physical and social systems that are responsible for generating and sustaining inactivity to promote physical exercise. Moreover, environmental approaches may include but are not limited to constructing cycling and walking routes and developing green spaces that are more adequate for active recreation. Most of these interventions are heterogeneous in their context, delivery, and content. Thus, they are implemented by different practitioners and policymakers within the urban environment. Despite the efforts made thus far, the problem of inactivity among urban citizens still remains.

Research has shown that people prefer to exercise outdoors as they find it to be more enjoyable, it gives them greater satisfaction, and it promotes their intention to continue exercising in the future (Wagner, Keusch, Yan, & Clarke, 2019). Contact with the natural environment and interaction with other humans seems to play a key role in these feelings. Environmental pollution seems to act as a barrier to participating in exercise outdoors (such as running, cycling, and walking), especially in urban places (Madureira, Brancher, Costa, Pinho, & Teixeira, 2019). Environmental pollution, especially air pollution, impacts outdoor exercise and causes many health problems (Hu, Zhu, Xu, Lyu, Imm, & Yang, 2017).

The present research came from a broader reflection on facilitating citizens' participation in physical exercise in a healthier and greener urban space. In order to improve the conditions for citizens' participation in activities in an urban area, it is important to take into account their needs and wishes. This research analyzes the needs of physically active citizens in urban open green spaces according to their physical activity in order to provide information and green policies to maximize their quality of life.

More specifically, this research paper evaluates the need for environmental and policy interventions while examining the relationship between physical exercise among citizens and the enactment of environmentally friendly policies. The present study attempts to collect data from citizens who exercise during their leisure time in urban open spaces and parks to create a convenient environment for exercise through green policies. The potential result could be the development of a sustainable public policy to enhance active living, reduce the proportion of inactive citizens, and facilitate exercise.

Literature review

For the first time in history, there are more citizens residing in urban areas than rural settlements (Johnson & Shifferd, 2016; Tan et al., 2017). Johnson and Shifferd (2016) note that urban areas provide more benefits in the areas of access to social, educational, and health services, cultural resources, and a lively community. However, Zhang, Cao, and Ramaswami (2016) list several urban centers that are associated with compromised opportunities. Moreover, social and physical environments largely determine the state of individual health. As such, the subject of urban and public health becomes one that arouses concerns from different professionals affiliated with catering to the wellness of populations. Most importantly, urban health encompasses wide-ranging issues, from food quality to substance abuse, violent crime, social cohesiveness, and mental health.

Physical activity is a crucial aspect in any strategy aiming to address the concerns and predicaments associated with obesity and sedentary living among both adults and children in urban centers. Active living is known to offer a substantial contribution to the mental and physical wellbeing of individuals, as well as to community wellbeing and social cohesion. Moreover, opportunities for physical exercise are not only limited to organized recreation and sporting activities, but actually exist everywhere: in leisure, health, and educational establishments, in diverse neighborhoods, and where people work and live. Adequate spaces for physical exercise in cities

include parks, recreation areas, sports centers, roads, urban forest paths, artificial lakes, playgrounds, and other spaces. These urban ground spaces that are not roofed by an architectural structure are defined as urban open spaces (Stanley, Stark, Johnston, & Smith, 2013). The kinds of physical activities practiced in these areas include but are not limited to jogging, bicycling, running, walking, and individual or group sports such as football, volleyball, golf, and tennis.

Benefits of physical exercise and a green exercise environment

Hopkins, Gibbons, and King (2018) note that physical exercise aids in controlling individual body weight. Moholdt, Lavie, and Nauman (2018) highlight that physical activities reduce the risk of contracting high blood pressure and other heart diseases such as heart attack and coronary artery disease. In addition, physical activities help the body manage high levels of insulin and blood sugar, lowering the risk of contracting type 2 diabetes and metabolic syndrome. Moreover, physical exercise reduces withdrawal symptoms and cravings for cigarettes. In urban environments, physical activities reduce the risk of cancer. Finally, physical exercise improves sleeping patterns by helping people in urban environments fall asleep within the shortest possible time and stay asleep for longer.

Furthermore, physical exercise offers several psychological benefits. For example, physical activities improve the mental mood and health of people in urban areas, helping them deal with depression and anxiety (Aguiñaga et al., 2018). Physical exercise also reduces the stress levels of participants, leading to higher levels of happiness and increased self-confidence and self-esteem. Additionally, physical exercise improves individual judgment, learning, and thinking skills, sharpening them as one ages. In this case, Schüller and Demetriou (2018) prove that physical exercise boosts intelligence and strengthens individual memory. Overall, there is no shortage of benefits tied to physical activity for citizens in urban spaces.

These studies support the argument that physical activity improves both physiological and psychological wellbeing, but different environments also play an important role in health. Outdoor, environmentally friendly areas motivate and facilitate physical activity (Zafeiroudi, 2020; Zafeiroudi & Hatzigeorgiadis, 2014b). Additional health benefits, revitalization, and further engagement in an active lifestyle occurs when exercise is performed in outdoor and green environments (Bamberg, Hitchings, & Latham, 2018; Gladwell, Brown, Wood, Sandercock, & Barton, 2013). The combination of physical exercise and exposure to healthy green environments could be used to combat inactivity and disease.

Rapid urbanization has changed city surfaces and caused many problems in the natural environment, resulting in the reduction of green spaces (Li, Zheng, Wang, Liang, Xie, Guo, Li, & Yu, 2019; Zhou & Wang, 2011). Many local governments have realized the important role of physical exercise and green space in urban facilities and have adopted a series of policies to introduce green elements into urban areas. Environmentally friendly policies seem to be essential for guiding sustainable physical exercise, active lifestyles, and green development (Kontogianni, Zafeiroudi, & Kouthouris, 2020; Kontogianni, Kouthouris, & Zafeiroudi, 2014).

Environmental policies and physical exercise in urban areas

The way cities are designed provides access to the surrounding citizens within urban spaces. Sallis et al. (2016) highlight that such a design can be a great hindrance or encouragement to active living and physical exercise. Several barriers exist within the social environment in which people live, play, and work. Most importantly, people suffering from chronic diseases and obesity are socially disadvantaged, and most endure the unforgiving consequences of poverty. As such, it becomes imperative to address the contributions and needs of all citizens in their daily lives through general and specific policies to promote active living and physical activity.

Kostrzewska (2017) believes that local governments have shown tremendous support in promoting physical activity through their influence on the built environment and other mechanisms. In this case, local governments, particularly in cities across the globe, have introduced several decisions on the design and planning of street locations, layouts, and land use policies, which include specifications for allowable street widths and sidewalks. A survey included data on 6,919 adults from Angers (France), Bonn (Germany), Bratislava (Slovakia), Budapest (Hungary), Ferreira do Alentejo (Portugal), Forlì (Italy), Geneva (Switzerland), and Vilnius (Lithuania) who were contacted by researchers (Ellaway, Macintyre, & Bonnefoy, 2005). The results showed that more greenery and less litter in residential environments were associated with increased participation in physical exercise and better health. The United States of America, the United Kingdom, Australia, and Europe have adopted and promoted green policies in cities to encourage physical exercise outdoors such as active transportation, planting trees and flowers in city squares, and providing access to forests, rivers, and lakes on the periphery of cities (Edwards & Tsouros, 2006).

Local governments own and are charged with maintaining neighborhood playgrounds and parks (Livy & Klaiber, 2016). Furthermore, they also operate and are expected to sustain different sporting and recreational facilities. Chen, Jiao, Xu, Gao, and Bischak (2018) posit that multiple cities are working together with school districts in promoting bicycling and walking through school programs and other initiatives. More extensive efforts that aid in improving traffic laws and enforce traffic safety encourage children to play, cycle, and walk. Such programs enable school-going children to take advantage of the appropriately shaped environment to engage in physical exercise. In addition, the general policies, action plans, and strategies of local governments aim to encourage physical activity in urban spaces, decrease the prevalence of sedentary lifestyles, and raise awareness of the need for and importance of active living and physical activity (Pawlikowska-Piechotkaanna & Sawicka, 2013).

For each of the identified general goals and policies, there are different action plans provided for implementation. For example, to encourage physical activity, local governments in the USA, Canada, and some European countries encourage bicycling and walking for recreation and transportation by improving the built environment (Winters, Buehler, & Götschi, 2017). In this case, local governments are collaborating with developers and school districts to create new learning institutions in locations close to residential areas and far from roads that are heavily trafficked. Futhermore, Panter, Heinen, Mackett, and Ogilvie (2016) note that the number of destinations within bicycling and walking distance are being increased. Moreover, there are numerous plans to build and maintain well-connected networks of paths and off-street trails for bicyclists and pedestrians.

Other local governments are working on expanding trail and path networks. Still others are adopting community policing strategies geared towards improving the security and safety of streets, especially for neighborhoods prone to high rates of criminal activity. In addition, policies are in place to foster routine physical activity by instituting various regulatory policies that mandate a minimum space for playing, duration of play, and physical equipment for childcare programs. Different workplace practices and policies are also being instituted to foster exercise breaks and other physical activities.

Several policies are being instituted to decrease sedentary lifestyles as well. For example, Kabisch and Kraemer (2020) note that local governments are adopting action steps and regulatory policies to enhance exercise for vulnerable groups. Furthermore, various measures have been implemented by local, state, and national governments to raise awareness of the need for and importance of increasing and advancing active living and physical activities within the urban environment. Moreover, social media marketing strategies and campaigns have been adopted to emphasize the benefits of physical activity to the masses. Media campaigns using promotional materials, the internet, radio, television, and print media have been instrumental in promoting the adoption of exercise. In addition, different counter-advertisements are in place against sedentary living to reach out to children and adults.

Overall, environmental policies put in place by local governments significantly affect the adoption of active living and physical exercise among citizens. As local governments continue to cooperate with and involve other stakeholders, more opportunities are available for citizens to participate in physical activity. Moreover, the natural, social, and built environment determines individuals' involvement in physical exercise.

As the concern about active exercise is becoming increasingly significant in the sustainable society, individuals are moving towards more environmentally friendly policies and exercise facilities. Limited research has been undertaken to understand citizens' perception of environmentally friendly attitudes and behavior, and little is known about the relationships between exercise and environmental policy. Considering the lack of research, the present study aims to investigate citizens' preferences for a positive, environmentally friendly exercise policy in the context of urban open spaces. Specifically, the research hypothesis of the study questions whether citizens who are more involved in physical exercise in urban open spaces express higher desires for exercise-friendly policies and an ecological approach to the management of recreational facilities through their intention to change their personal habits.

Method

Participants and procedure

Four hundred and fifty questionnaires were distributed in urban open municipal recreational spaces and parks. Three hundred and seventy were returned, for a response rate of 85.6%. Participants completed the questionnaires using a pencil and paper in the presence of the researchers. Participants exercised frequently by walking, bicycling, or jogging/running in outdoor urban areas such as sidewalks, cycle roads, municipal parks, and forests. The demographic characteristics of the sample are presented in Table 1.

Table 1. Demographic data of the sample

Exercise activity	Marital status	Age subgroups	Educational level
Running: 79 (21.4%)	Single: 202 (54.6%)	1st group (18–28): 107 (28.9%)	Primary education: 118 (31.9%)
Bicycling: 126 (34.1%)	Married: 168 (45.4%)	2nd group (29–38): 128 (34.6%)	Secondary education: 162 (43.8%)
Walking: 165 (44.6%)		3rd group (39<): 135 (36.5%)	University graduates: 90 (24.3%)

Research instruments

Exercise Time Participation Questionnaire

Exercise time participation was self-reported using the Godin Leisure-Time Exercise Questionnaire (GLTEQ; Godin & Shephard, 1997). Participants were asked to indicate how many times on average during a typical 7-day period (a week) they engaged in specific kinds of physical activity (e.g., strenuous: running/jogging; moderate: cycling/fast walking; light: walking) for more than 15 min during their free time in urban open spaces and outdoors. Weekly frequencies of vigorous, moderate, and light activities were multiplied by nine, five, and three METS (units of metabolic equivalence), respectively. The total weekly leisure activity was calculated by summing the products of the separate components: weekly leisure activity score = (9 × Strenuous) + (5 × Moderate) + (3 × Light).

Environmentally Friendly Exercise Policy Questionnaire

Environmentally friendly exercise policy indicates a dynamic policy to cover citizens' preferences and needs in the area of convenient participation in physical exercise in urban open spaces and outdoors. The questionnaire was expressed by the following three scales:

i) The first scale, called "policy to enhance exercise," expressed citizens' expectations for a positive and active living policy in urban areas by local authorities. This scale aimed to assess citizens' preferences toward the development of a public policy that would enhance their exercise participation in outdoor and urban open spaces such as sidewalks, parks, and squares. The scale consisted of five items (e.g., "The promotion of a policy that will encourage citizens to do exercise in open spaces and outdoors is very important."). Two items were negatively worded (e.g., "Under the current economic crisis, I believe that spending money for active leisure infrastructure and creating opportunities for open space and outdoor exercise is not useful to citizens."). Answers were given on a 7-point Likert scale (from 1 = very strongly disagree to 7 = very strongly agree).

ii) The second scale, called "environmentally friendly exercise facilities," encouraged local authorities to use an eco-management approach in the construction of sports or recreational facilities. The scale consisted of five items (e.g., "The public should use alternative energy sources in urban sports areas such as wind or solar."). Answers were given on a 7-point Likert scale (from 1 = very strongly disagree to 7 = very strongly agree).

iii) The third scale, called "intention to change personal habits," expressed citizens' willingness to change their daily habits and adopt more green behaviors. The scale consisted of five items (e.g., "I am willing to 'confine my comfort' or 'change personal everyday habits.'"). Answers were given on a 5-point Likert scale (from 1 = strongly disagree to 5 = strongly agree). The three scales were tested successfully (Kontogianni, 2015).

Results

Exercise time participation

Participants were separated into three groups according to their exercise score achievements. The first group consisted of 72 individuals (19.5%) who accumulated 9–23 units (METs) per week and were classified as low-rate exercisers. The second group consisted of 72 individuals (19.5%) who accumulated 24–53 units (METs) per week and were classified as middle-rate exercisers. Finally, the third group consisted of 226 (61%) individuals who accumulated 54–119 units (METs) per week and were classified as high-rate exercisers.

Descriptive statistics and correlations

According to the three "environmentally friendly exercise policy" scales, participants reported the highest score for "policy to enhance exercise" (M = 6.01, SD = .93) and relatively high scores for "environmentally friendly exercise facilities" (M = 5.18, SD = 1.04) and "intention to change personal habits" (M = 4.36, SD = .69; Table 2).

Table 2. Descriptive statistics

Scales	N-items	Min	Max	M	SD	Coefficient α
Policy	5	1	7	6.01	0.93	.84
Facility	5	1	7	5.18	1.04	.92
Intention	5	1	5	4.36	0.69	.94

A bivariate Pearson's correlation analysis tested the relationships between the three "environmentally friendly exercise policy" scales. The results indicated strong relationships between all the scales. "Policy to enhance exercise" showed the highest correlation with "environmentally friendly exercise facilities" (r = .578, p < .01), followed by "intention to change personal habits" (r = .516, p < .01). The remaining correlations between "policy to enhance exercise" and "intention to change personal habits" were also significant (r = .458, p < .01).

Differences between exercise time and "environmentally friendly exercise policy"

An analysis of variance was conducted to test for differences between the "environmentally friendly exercise policy" scales as the three dependent variables and exercise time (low, middle, high) as the independent variable. The analysis revealed significant effects for "policy" ($F_{(2,367)}$ = 5.01, p < .01), "facilities" ($F_{(2,367)}$ = 4.21, p < .01), and "intention" ($F_{(2,367)}$ = 9.93, p < .001). Post-hoc analysis (Sheaffe's) revealed that the high exercise time subgroup scored significantly higher than the middle and low exercise time subgroups in all scales. The ANOVA scores are presented in Table 3.

Table 3. Analysis of "Environmentally Friendly Exercise Policy" scales and exercise time

Exercise Time	Policy	Facilities	Intention
	M (±SD)	M (±SD)	M (±SD)
1st group (low)	5.84 (±1.25)	4.15 (±0.89)	4.63 (±1.10)
2nd group (middle)	6.17 (±0.81)	4.39 (±0.58)	5.25 (±0.91)
3rd group (high)	6.24 (±0.84)	4.42 (±0.65)	5.30 (±1.01)
	F = 5.01, p < .01	F = 4.21, p < .01	F = 9.93, p < .001
	1–3*	1–3*	1–2/3**

Note. *p < .05, **p < .01

Discussion

The results of the present study highlight an important issue concerning the quality of life and wellbeing of citizens in urban places. For citizens to live sustainably in urban places, there must be a serious reduction in environmental pollution and conditions that cause inactivity as well as a promotion of conditions that encourage health-promoting actions. Improving the conditions for a healthy environment and strengthening the construction of leisure and sports facilities remains central to the mission of public administrations. Any new strategy could have a greater chance of success and better results if it takes into account the suggestions and wishes of citizens.

The present research came from a broader reflection on how citizens can be motivated to participate in exercise through the greening of the outdoors. Recent researchers have suggested that greening urban areas correlates to increased physical activity and promotes wellbeing (Jin, Kwon, Yoo, Yim, & Han, 2021; Tan et al., 2021; Schipperijn, Bentsen, Troelsen, Toftager, & Stigsdotter, 2013). Other studies have focused on the investigation of health

benefits and physical exercise levels and comparing urban facilities through policy interventions focusing again on health benefits. A gap was found in the investigation of urban citizens' opinions about urban open spaces. In order to improve the conditions for citizen participation in activities in urban open spaces, it is important to take into account the needs and wishes of the citizens.

The desire of the citizens to configure urban open spaces for physical activity was recorded, sending a promising message to public authorities. The survey data was collected by citizens who dedicate a significant part of their free time during the week to supporting their health through exercise. The analysis of the data sends a clear message to improve the urban environment. This message highlights the conditions that citizens want to experience in this endeavor.

The questionnaires used in this study were the Godin Leisure-Time Exercise Questionnaire (GLTEQ; Godin & Shephard, 1997) and the Environmentally Friendly Exercise Policy Questionnaire (Kontogianni, Kouthouris, & Zafeiroudi, 2014). The GLTEQ was used as it classifies respondents into active and insufficiently active groups. It provides evidence about physical activity, environmental factors, and policies (Tuyckom, 2011). The existing studies have focused mainly on health and the availability and quality of urban open space and recreational facilities. Tuyckom (2011) also mentioned that the link between policy and physical activity levels requires further investigation. Some studies have focused on the associations between environmental and leisure time physical activities (Pyky, Neuvonen, Kangas, Ojala, Lanki, Borodulin, & Tyrvainen, 2019; Rech, Reis, Hino, & Hallal, 2014). The results of the present research confirmed the findings of the previous studies, showing the relationship between physical activity and environmental factors. In addition, the present research added value by showing physically active citizens' opinions about environmental change through policies and strategies. The Environmentally Friendly Exercise Policy Questionnaire consisted of the three following scales: "policy to enhance exercise," "environmentally friendly exercise facilities," and "intention to change personal habits." The items of the three scales were adopted to the new research concept as they were used in previous research (Kontogianni, Kouthouris, & Zafeiroudi, 2014) investigating the environmentally friendly behavior of participants in leisure and recreational activities.

According to the results, the main objective of the study was supported. As such, citizens who regularly exercise in urban spaces express significantly higher levels of environmental care through friendlier policies. When analyzing demographics, there were no differences in exercise participation between men and women, age groups, and different marital statuses. The type of physical activity that is preferred mostly by citizens in their free time is intense walking, followed by cycling and jogging/running. Walking is the most popular physical exercise as it does not require significant equipment, allows for fluctuations from low to high intensity, and can be done individually or with others. Walking does not cause injuries to participants and is recommended by doctors as an activity for prevention or rehabilitation.

The participants were divided into three distinct low, middle, and high groups according to their participation in the above forms of exercise, and there was an equal distribution of the population in each group. It is also important to note the internal consistency of the Environmentally Friendly Exercise Policy Questionnaire, as high correlations were found between all three scales, "policy to enhance exercise," "environmentally friendly exercise facilities," and "intention to change personal habits."

The most important result of the research, which confirmed the basic hypothesis, was the finding of significant differences between all exercise groups and the scores achieved in all three scales of the Environmentally Friendly Exercise Policy Questionnaire. These results helped the researchers argue in a more accurate way that differences between the exercise time groups corresponded to their needs and desires for environmentally friendly policies.

Inactivity is detrimental to the mental and physical health of citizens. Addressing this problem necessitates the introduction of policies that favor and promote physical activity. Thus, local governments have an imperative role in reducing the current trends of physical inactivity in cities and urban environments. Most importantly, approaches that have been adopted to change individual behavior show little to no success. As such, practices and policies that enable urban residents to be physically active have a higher likelihood of success when they modify the immediate social and physical environment.

Environmentally friendly exercise policy was the central issue of the study. In particular, the highest scores appeared with "policy to enhance exercise," followed by "environmentally friendly exercise facilities." Citizens know that mainly political power held by the government or the local authorities is required to change legislation or laws. Scores for the third scale, "intention to change personal habits," were also high, revealing the intention of the citizens to support environmentally friendly policies through their individual contribution. In addition, these positive correlations support the cohesiveness and validity of the "environmentally friendly exercise policy" variable as a central issue in the study.

Furthermore, according to the analysis of variance, statistically significant differences were found between time participation scores and the three "environmentally friendly exercise policy" scales. It is remarkable that the scores gradually decreased on all three scales. These results suggest that despite the exercise time participation of each group, the demand for a more environmentally friendly exercise policy remains high.

As such, in the long run, policy changes at the state, regional, and national levels seem to be imperative in encouraging increased active living and participation in physical activity by making these choices more comfortable. For example, when vehicular traffic speed is reduced and provisions are made for safer walking and cycling routes, there can be an advancement in the physical activity of city residents, which ultimately results in a reduction of and better prevention against non-communicable diseases (Andrade et al., 2018; Breda et al., 2018). Moreover, when land use is mixed within urban spaces, people are more likely to walk to schools, shops, workplaces, and other destinations. Each kilometer walked per day contributes to overall individual physical activity.

There are also various determinants of active living and physical activity in the urban environment. These individual determinants include but are not limited to disability and ability, motivation, attitudes, beliefs, skill level, age, and sex. According to the literature review, the key barriers that prevent citizens from engaging in meaningful exercise include the lack of or problems with accessing sporting and recreation facilities, pollution and transport emissions, fears concerning road safety and crime, and negative attitudes toward active transport and physical activity. As such, addressing these challenges is crucial to engaging more of the urban population in physical activity. For example, if citizens believe that cycling is a dangerous endeavor, they will not appreciate or participate in it. On the other hand, the underlying reasons behind citizens' active lifestyles and participation in physical activity are an expected array of benefits, enjoyment purposes, and self-efficacy.

Moreover, the urban social environment is inclusive of diverse dimensions that influence individual participation in physical activities, such as equity and socioeconomic status. Notably, the socioeconomic status of city residents is inversely related to their involvement in leisure activities (Biernat & Buchholtz, 2016; Sugiyama, Howard, Paquet, Coffee, Taylor, & Daniel, 2015). In this case, people from low-income homes and families have low leisure and discretionary time and inhibited access to facilities offering greener spaces and exercise. On the other hand, the cultural beliefs of urban people also influence their activity and determine which physical exercises they believe are considered appropriate for people from different groups, ages, and sexes (Hesketh, Lakshman, & van Sluijs, 2017).

Governments at national, regional, and local levels are challenged by the increasing frequency of sedentary lifestyles, obesity, and the prevalence of chronic ailments. Physical inactivity in urban spaces is the most significant contribution to these problems. Consequently, physical activity promises a multitude of benefits for the physical and mental wellbeing of urban residents. In addition, active living and outdoor physical activity are specifically crucial to the health advancement of young people and children (Zafeiroudi & Hatzigeorgiadis, 2014b). Moreover, active aging introduces a dramatic difference in older people's wellbeing. Furthermore, active living and physical exercise also contribute significantly to social cohesion and economic prosperity in cities. Consequently, taking part in physical activity increases diverse opportunities for cultural identity, networking, and socialization.

However, the promotion of active living and physical activity in urban environments requires the cooperation and involvement of all levels of governance, including local, regional, and national levels, with apparently clear commitments and roles for each level. In this case, local governments play a crucial role in creating urban spaces, opportunities, and environments for active living and physical activity. City leaders, other essential decision-makers, and stakeholders are expected to provide an enabling environment, legitimacy, and leadership that fosters the development and implementation of policies supporting physical activity and active living within urban spaces.

On the other hand, public institutions ought to promote more opportunities for exercise and active leisure participation for all citizens. Public policy could increase the environmental responsibility of society and, consequently, citizens' quality of life. The involvement of city residents in physical activity is significantly influenced by the natural and built environment in which they reside, personal factors (motivation, ability, age, and gender), and their social environment. As such, design elements within the city environment such as the location of public buildings, parks, and recreation facilities, the existing transport systems, land use, and street layout are known to either discourage or encourage physical activity. In this case, it is prudent to note that people are more active whenever they have easier access to critical destinations such as shops, workplaces, green spaces, and sport and recreational facilities.

On the other hand, disadvantaged members of the overall population and those with low income tend to be less active since they cannot access or afford facilities and programs that foster active living in urban spaces. In addition,

they are more likely to live in neighborhoods that are prone to more traffic safety and crime concerns. Thus, local plans and strategies should be enacted to promote physical activity for people of all genders and ages irrespective of their living and social circumstances in diverse urban spaces, paying particular attention to vulnerability, deprivation, and equity. Furthermore, it is imperative to create more opportunities for physical activity close to where people live. More activity-friendly, greener, and cleaner environments also need to be developed, and partnership-based models need to focus on promoting physical activity in diverse settings such as transport systems, healthcare and educational settings, various neighborhoods, and leisure and sport organizations.

In Europe, many car trips need to be replaced by cycling and walking. Bicycle and pedestrian travel can be increased through changes in local-level policies, traffic calming measures, and the development of urban infrastructure such as cycle paths, lanes, and tracks. Notably, more people will cycle and walk when it is convenient and there is a reduction in traffic speed and availability of safer infrastructure such as paths and cycle lanes. Overall, effective partnerships at local levels in different nations are critical to the successful implementation of policies that foster and advance physical exercise. Additionally, efforts to enable and encourage physical activity necessitate the cooperation of the sports, education, social services, public health, transport, housing, and urban planning sectors, as well as the voluntary and private sectors. Furthermore, healthcare is better positioned to take a supportive and leading role in promoting physical activity and reducing sedentary living for all urban residents and to pursue partnerships geared toward enhancing active living within the urban environment.

Conclusions

The modern way of life imposes rhythms and habits on citizens that move them away from a healthy way of living. Increased working hours and technology deter urban residents from participating in healthy activities such as active leisure time and exercise. As a result, there are high levels of inactivity and a very large percentage of people in urban centers have chronic diseases. These citizens are unable or even unwilling to follow a healthy active lifestyle, in most cases because of the absence of an adequate policy for the outdoor urban environment. These days, the effectiveness of outdoor active leisure or exercise in urban open spaces is globally accepted. It is also well known that the creation of conditions and facilities for active leisure, recreation, and exercise in urban open spaces is the duty of local, regional, or even national authorities through policies that satisfy the needs of residents.

The present study collected data from citizens who exercise during their leisure time in urban open spaces and parks in order to create a convenient environment for exercise through green policies. As citizens' concern about active exercise is becoming more and more significant in the sustainable society, individuals are moving towards more environmentally friendly policies and exercise facilities. It can be considered one more step in collecting more information on urban open spaces to increase physical activity in order to improve quality of life through an urban sustainability setting.

The most important finding of the study was the connectedness of leisure time for physical activities, sports, and exercise with citizens' desire for healthier and environmentally friendly urban open spaces and conditions. The citizens expressed their needs and desires for more comfortable, convenient, and safer exercise routes or active leisure activities in urban open spaces. It is remarkable that the high scores for the existence of an environmentally friendly policy to support exercise and recreation facilities were represented by a mosaic of very different types of citizens with different marital statuses and educational levels and from different age groups. The findings also uncovered citizens' intentions to support environmentally friendly policies through their individual contributions.

These findings pose a challenge to any municipality, region, or national government to react successfully and create an environmental policy that allows citizens to live an active and healthy everyday life. However, due to the small sample size analyzed, the present research results should only be generalized and compared to other regions or countries with caution. A comparative analysis of the needs of active citizens from different regions concerning urban open spaces for the achievement of greening objectives should be included in a future study.

It is imperative to note that citizens' physical exercise time in urban environments results in the creation of corresponding preferences and beliefs towards environmentally friendly policies. Overall, people are more likely to engage in active living when they have the support of co-workers, friends, family, and local governments. Physical environments also provide sustainable opportunities that foster social cohesion in regions, cities, and neighborhoods. As such, society can ensure the welfare of all members, avoid polarization, and minimize existing and future disparities.

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The UAE Tour, cycling stars, and Twitter: Tweeting as part of promoting the host country

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Abstract

Using the example of the 2019 inaugural UAE Tour, this study demonstrates how cycling stars indirectly promote countries hosting globally watched sporting events through their Twitter accounts. This study presents a qualitative and quantitative content analysis of the Twitter activity of selected cycling stars. However, this promotion is only a secondary result of their activity on social media; professional athletes use their Twitter accounts as a platform for self-presentation and to show their daily lives to fans. If the athletes are active on social media, it is almost impossible for them to avoid speaking about the host countries, indirectly evaluate them, and provide information about them to their followers. While sports celebrities' social media profiles are a limited space for the promotion of host countries, they can also help improve the image of the countries and present them in a positive light. Of course, political leaders use countless public or sports diplomacy tools to promote their countries abroad, and online platforms are not necessarily a key element in the promotion of their international image.

Key words: Sports diplomacy, UAE, cycling, Twitter

Introduction

According to public opinion, the phenomena of sport and politics should not be mixed. However, this demand or wish does not reflect reality, as mentioned by Barrie Houlihan (2014, p. 5) and Lincoln Allisson (1993, p. 5). Sport is very often used by politicians to fulfil political goals. In both democratic and undemocratic regime systems, politicians do not hesitate to use this connection. However, the aims and tools of using sport are different from case to case. Nonetheless, sport and sports success have the ability "[...] to bring with it international prestige, aid the building of national identity and engender a 'feel good' factor among the population" (Dennis & Grix, 2014, p. 1).

In the area of international relations, sport is seen as a useful soft power tool and therefore a tool for public diplomacy (Black & Peacock, 2013, p. 709; Murray, 2018, p. 113). It is also possible to speak about the existence of sports diplomacy as a specific subcategory of public diplomacy. Sports diplomacy is described as using "[...] sports people and sporting events to engage, inform, and create a favourable image amongst foreign publics and organizations to shape their perceptions in a way that is more conducive to achieving a government's foreign policy goals"

(Murray, 2012, p. 581). There are a few tools that can be used in sports diplomacy. However, hosting famous sporting events is probably the most influential among them (Zákravský, 2016, p. 26), especially hosting sports mega-events such as the Olympic Games and FIFA World Cups (Grix, 2018, p. 159). Unfortunately for the host countries, the majority of sporting events do not obtain a global audience. However, this does not mean that the host countries do not use these sporting events as a sports diplomacy tool (Black, 2008, p. 468).

One of the many sporting events that have taken place in the Middle East is the UAE Tour. In 2019, this road cycling race was established as a result of the merging of the Dubai Tour and the Abu Dhabi Tour. When the UAE Tour was established, Aref Hamad Al Awani (quoted in Passela, 2018), the General Secretary of Abu Dhabi Sports Council, spoke openly about the importance of the race in the context of introducing the United Arab Emirates at a global level: "The Abu Dhabi and Dubai Tours were both successful, now the UAE Tour is stronger to create a bigger impact all-round and provide the worldwide television audience to discover new areas and locations in the country." Nowadays, the UAE Tour is the only UCI World Tour race in the Middle East region. This is very important for the host country because the best cycling teams (with the most popular cyclists in their squads) participate in the competition. Thus, some of the most famous road cyclists compete on Emirati soil and can indirectly help promote the UAE,[1] which is not considered to be a free country by many, including the NGO Freedom House (2019).

The most famous cyclists could be described as heroes or stars; these two words "[...] are closely tied and are frequently used as synonyms" (Povedák, 2014, p. 7). Many historical cycling heroes are still remembered by fans, even though many fans did not witness their races in person. For instance, nearly every Italian cycling fan admires the well-known battles between Fausto Coppi and Gino Bartali. In Belgium, they hope a new champion such as Eddy Merckx will soon arise. The French search for the successors to the last French Tour de France winners Bernard Hinault, Lauren Fignon, and "the Eternal Second," Raymond Poulidor. There are also many cycling fans worldwide who speak about "the Fallen Angel," Lance Armstrong. However, greater fan attention is paid to contemporary cycling stars and celebrities. In the field of professional cycling competition, celebrities can be defined as "[...] the public identities that embody their sport in the general public media as well as being objects of aspiration and consumption to their fans" (Kiernan, 2018, p. 44). For example, cycling celebrities are typically winners of Grand Tours, three-week-long cycling races across France (Tour de France), Italy (Giro d'Italia), and Spain (Vuelta a España); the most famous one-day races called the Monuments; or the World Championships. They may also be sprinters, the fastest cyclists in the world.

In the past, journalists created the image of athletes (Holt & Mangan, 1996, p. 11) and described their incredible performance, awesome wins, or crushing losses; they influenced how athletes and sporting events were described (Pedersen, 2014, p. 104). Originally, many fans did not have the possibility to watch their favorite sports stars or communicate with them; they could only obtain a more or less detailed description of the competition published in dailies or magazines. Live broadcasting and television extension partly broke the monopoly of sports journalists as the image-makers of athletes. However, the majority of professional athletes, not only cyclists, currently use new media and social networking sites for their communication with the public. This allows them to present themselves in the way they want to be seen by fans. Therefore, "through social media, athletes promote and emphasize aspects of their identity that would be difficult to transmit using traditional media channels" (Sanderson, 2013, p. 419). Thus, their image does not depend only on newspapers and the qualities and moods of sports journalists; the athletes can construct or even reconstruct their own image. They have become producers of their self-presentations in cyberspace and in real life, as Erving Goffman (1956) describes in his great contribution to social science. In the end, it is possible to say that "new media have amplified fan–athletes interaction significantly and irrevocably" (Sanderson & Kassing, 2014, p. 247). In the 21st century, the images of athletes are highly influenced by their self-presentations via social media, where they try to prove their "[...] positive characteristics in an effort to engender favorable impressions [...]" (Lebel & Danylchuk, 2012, p. 466).

In the world of professional cycling, Twitter, a micro-blogging tool where users write and share 280-character messages called tweets, is probably the most popular new medium. According to the *Cycling News* website (2011), the cyclists "[...] show that social media can give the fans unprecedented access to the thoughts of professional riders." From 2011 to 2015, readers of *Cycling News* voted for the Twitter Personality. The popularity of Twitter among professional cyclists has been so high that some cycling teams have decided to implement an internal Twitter policy to control riders' activity on this platform. For example, in 2012, the Belgian squad Omega Pharma-QuickStep decided that their riders could not "[...] send Twitter messages out before an hour after the finish" (Cycling News, 2012). In sum, "many athletes and coaches use Twitter to directly reach fans and manage information" (Laucella, 2014, p. 96) as well as to communicate with the public.

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[1] For more information about political developments in the UAE, see Almezaini, 2012.

This article focuses on the fact that famous athletes are more or less indirectly exploited by the city and country hosting a sporting event to help fulfil its political goals. In the context of this study, the UAE Tour should not be perceived only as a sporting event, but also as a sporting event that has political implications and is used as an Emirati sports diplomacy tool to promote the UAE abroad. The cyclists participating in the UAE Tour were able to inform their fans and followers about their stay on Emirati soil via Twitter and, in this indirect way, refer to the existence of the UAE and its local landscape, nature, or people all without mentioning the internal problems of the Emirates. This means that cycling stars (or their media managers, who administrate cyclists' social media profiles), who are followed by many fans, can help promote and construct a more positive image for the country abroad. This is not done intentionally; it is rather a secondary output of their self-presentation on Twitter through tweets about their everyday life, not only their lives in the professional peloton. Using the example of the inaugural UAE Tour, this study aims to show how cycling stars can indirectly help promote the host country of a sporting event via their Twitter accounts.

To fulfil this aim, the study responds to the following questions:

1) Did the cycling stars tweet about the UAE Tour?

2) How did they refer to the host country of the UAE?

3) Were the tweets about the UAE Tour positive, neutral, or negative?

The following section briefly introduces a literature review of research on athletes using social media during sporting events. The questions mentioned above are introduced in detail in the subsequent part of the article, which focuses on methodology and explains the methodological process of this research. The main part of the article follows, which contains a content analysis of tweets and retweets of selected cycling stars published on their official Twitter accounts.

Athletes, social media, and politics: A literature review

An increasing percentage of the world's population is active on social media. As of January 2021, the most popular platforms are Facebook, with 2,740 million users; YouTube, with 2,291 million; Instagram, with 1,221 million; and Twitter, with 353 million (Statista, 2021). These numbers include professional athletes who use social media to communicate with each other or with fans (see e.g., Pegoraro, 2010; Sanderson & Kassing, 2014; Feder, 2020) for self-presentation (see e.g., Lebel & Danylchuk, 2012; Reichart Smith & Sanderson, 2015; Li et al., 2020) as well as for improving their personal brand (see e.g., Geurin, 2017; Su et al., 2020). Similarly, the vast majority of professional sports clubs and competitions or international sports federations use many social media platforms to communicate with the public and craft their image. The global popularity of social media in the world of professional sport has also led to scholarly interest and increased the number of scientific texts in recent years that deal with the use of social media in the sports industry. As pointed out by Samuel López-Carril et al. (2020), prestigious academic journals published 130 scholarly articles focused on social media and sports between 2010 and 2019; in the last four years of the examined period, at least 20 were published every year.

Some of these articles dealt with athletes using social media during sports competitions. For instance, Jeffrey W. Kassing and Jimmy Sanderson (2010) described how English-speaking cyclists use Twitter during the Giro d'Italia. Molly Hayes Sauder and Matthew Blaszka (2018) focused on the same social network but analyzed the activities of the U.S. Women's National Football Team players at the 2015 FIFA World Cup. Abuin-Penas et al. (2019) analyzed the activity of Spanish athletes on Instagram during the 2018 PyeongChang Olympic Games. Shohreh Sadeghi and Ho Keat Leng (2020) focused on the self-presentation of Iranian football players on Instagram during the 2018 World Cup, while Andrea N. Geurin and Erin L. McNary (2021) examined athletes' marketing activities on Instagram during the 2016 Summer Olympics.

Studies on the subject of athletes' use of social media in relation to the sporting event in which they participate are relatively common. Nonetheless, there is a research gap of studies focusing primarily on athletes' activities on online social networks during international competitions held in countries with undemocratic regimes. How do athletes reflect, if at all, on the fact that there is a democratic deficit in the host country? Is this a topic reflected in any way in their activity on social media? This study of the activities of selected cyclists during the inaugural 2019 UAE Tour seeks to answer precisely these questions.

Methodology: What, who, when, and how?

The following steps were taken in the content analysis to answer the research questions and fulfil the aim of the study: 1) defining the Twitter accounts to be analyzed; 2) identifying the research period; 3) collecting tweets and

retweets (reposts of tweets posted by another Twitter user); 4) and categorizing these tweets and retweets. The following paragraphs introduce the detailed manner in which the content analysis was conducted.

For the purpose of this research, twelve cyclists promoted by the official UAE Tour website were selected. The official UAE Tour website presented about twelve "big name riders" that were to participate in the tour and were expected to attract cycling fans' attention. This study involved "'[...] riders' extended biographies" describing the cyclists' most significant triumphs (The UAE Tour, 2019). All of the cyclists could be labelled as cycling stars; some of them are winners of the general classification at the Grand Tours, several Grand Tour stages, World Championships, Monuments, or local races such as the Dubai Tour and the Abu Dhabi Tour. For details about the twelve cyclists based on the information provided by the official website of the UAE Tour (2019), see Table 1.

Table 1. Cycling Stars According to the UAE Tour

Cyclist	Nationality Cycling Team	According to the UAE Tour (2019), why is he a cycling star?
Alejandro Valverde	Spain Movistar Team	"Valverde [...] is one of the most successful riders in the peloton with over 100 pro wins ... includes four Liège-Bastogne-Liège (2006, 2008, 2015, 2017) victories, five at La Flèche Wallonne (2006, 2014–2017), one GC at the Vuelta a España ..., the UCI Road World."
Chris Froome	Great Britain Team Sky	"Froome is s the first rider after Bernard Hinault to win the Tour, La Vuelta and the Giro in a row (across 2017 and 2018). His palmares also includes six Tours de France, one Vuelta a España, and last year's Giro d'Italia. Froome is one of only six cyclists who have won all three Grand Tours."
Vincenzo Nibali	Italy Bahrain Merida	"Nibali [...] is one of the greatest ever all rounders, being one of only six cyclists to have won all three Grand Tours: the Vuelta a España in 2010, the Giro d'Italia in both 2013 and 2016 and the Tour de France in 2014."
Tom Dumoulin	Netherlands Team Sunweb	"In 2017 he became the first Dutch cyclist ever to win the Giro d'Italia and [...] both the World Individual Time Trial and the World Team Time Trial Championships. His palmares features stage wins in all three Grand Tours [...], and a silver medal at the Rio Olympic Games."
Rohan Dennis	Australia Bahrain Merida	Dennis is "[...] the best time trialist in the peloton."
Michał Kwiatkowski	Poland Team Sky	Kwiatkowski's "[...] achievements include the 2014 road World Championship, the 2017 Milano-Sanremo, two editions of the Strade Bianche, the 2015 Amstel Gold Race, and the General Classification at the 2018 Tirreno-Adriatico."
Elia Viviani	Italy Deceuninck – Quick Step	"Viviani [...] was 2018's most successful rider with 18 victories."
Fernando Gaviria	Columbia UAE Team Emirates	"Gaviria is one of the best sprinters in the peloton."
Marcel Kittel	Germany Team Katusha Alpecin	"Kittel's palmares includes 86 victories."
Alexander Kristoff	Norway UAE Team Emirates	"Kristoff [...] boasts major victories such as the 2014 Milano-Sanremo and the 2015 Tour of Flanders."
Mark Cavendish	Great Britain Dimension Data	"Cavendish has won 15 stages at the Giro d'Italia, a mighty 30 at the Tour de France, and three at the Vuelta a España [...] he became UCI Road World Champion, and boasts one-day-race successes such as Milano-Sanremo (2009)."
Caleb Ewan	Australia Lotto Soudal	"Ewan is a talented sprinter who claimed 11 professional victories in his first season."

Source: The UAE Tour, 2019.

Furthermore, all the selected cycling stars have official Twitter accounts, and they used them for their communication with the public. However, the number of followers influences the impact of the cyclists' tweets, and there is a significant difference between the most followed and the least followed professional cyclists inside this group. For details, see Table 2.

Table 2. Cyclists' Twitter Followers

Cyclist	Number of Twitter followers
Chris Froome	1,510,000
Mark Cavendish	1,410,000
Vincenzo Nibali	571,000
Alejandro Valverde	428,000
Marcel Kittel	245,000
Tom Dumoulin	188,000
Fernando Gaviria	131,000
Michał Kwiatkowski	124,000
Alexander Kristoff	50,000
Elia Viviani	49,000
Rohan Dennis	29,000
Caleb Ewan	19,000

Note: As of February 21, 2019, the number of Twitter followers is rounded to the nearest 1,000; Source: Own, based on the official Twitter accounts of the professional cyclists.

During the research period, tweets and retweets were collected from February 21 to March 5, 2019, three days before the official start of the inaugural UAE Tour and three days after the competition finished. The UAE Tour started on February 24, and after seven stages going through all seven Emirates, finished on March 2, 2019. The analysis focuses on the tweets and retweets published by twelve cyclists three days before and after the race in the UAE because the riders commented on their participation there and spoke about the race before, during, and after the competition. The aim of extending the research period in this way was to obtain a more complex reflection of the cyclists' activity on Twitter in the context of the UAE Tour.

In this research period, all tweets and retweets that were posted on the above-mentioned Twitter accounts were gathered. Then, the tweets and retweets were divided into two main categories: tweets and retweets mentioning the UAE Tour or the UAE, and the remaining tweets and retweets. In this case, cyclists were considered to have mentioned the UAE or the UAE Tour if they did one of many things. First, they could use words or phrases such as "the UAE," "the United Arab Emirates," "the UAE Tour," or "the Emirates" in their tweets or retweets. Accordingly, the analysis focuses on the words used in their posts on Twitter, which are limited to 280 characters.

Second, the study targeted the hashtags used by the cyclists. "Hashtags represent a way of indicating textually keywords or phrases especially worth indexing [... and] by using the # character to mark particular keywords, Twitter users communicate a desire to share particular keywords folksonomically" (Halavais, 2014, p. 36). Tim Highfield (2014) examined the use of the hashtag "#tdf" during the 2012 Tour de France and pointed out the global audience of the cycling race across France. In this case, it was supposed that hashtags such as "#UAE," "#UAETour," and "#Emirates" could be part of the examined tweets and retweets.

Third, the analysis worked with replies and mentions of other Twitter accounts. In tweets, users can mark other users with the "@" character and Twitter account name. The user is then notified that somebody has mentioned them, replied to their tweet, or just wants to ask them for something. In this study, it was expected that the selected professional cyclists would tag the official Twitter account of the UAE Tour, @uae_tour, and then their followers could see the UAE Tour Official Twitter account. By opening or following this account, followers could find information not only about the race, but also about the Emirati nation.

Fourth, attention was paid to the images and videos contained in the tweets and retweets. Images or short videos are often part of Twitter posts and "add a visual dimension" (Marwick & Boyd, 2011, p. 148) to tweets and retweets. Thus, tweets and retweets including images and videos can be more credible for Twitter users than tweets or retweets without them (Pittman & Reich, 2016, pp. 157–158). It was assumed that the cyclists would probably add images or videos referring to the UAE Tour or the UAE to their tweets. For instance, Jeffrey W. Kassing and Jimmy Sanderson (2010, p. 122) mentioned that during the Giro d'Italia in 2010, the professional cyclists often published photos related to the race on their Twitter accounts. In this regard, no differences were expected between the 2010 Giro d'Italia and the 2019 UAE Tour.

Fifth and finally, the use of emojis is a popular technique for communicating on social media. Emojis allow social media users, including Twitter users, "[...] to describe objects, situations and even feelings with small images, providing a visual and quick way to communicate" (Barbieri et al., 2016, p. 3967). They often contain small images

of faces, animals, food or drink, flags, or activities, and they are quite popular in microblogging and online written communication. It was presumed that the cyclists would mainly use the emoji of the UAE flag around the time of the UAE Tour.

The analysis worked only with the first category – the category of tweets and retweets mentioning the UAE in the manner described above. These tweets and retweets were sorted into three groups: positive, neutral, and negative. In this context, the content of positive tweets and retweets is connected to admiring the organizational skills, spectators, or routes of the host country. For example, the tweet from Mark Cavendish (2016) praising the Basque fans in the 2016 edition of the Tour de France is a typical tweet from this category. Neutral tweets and retweets only provide information about the cycling race, including, for example, information on results or stage details without any evaluation. In contrast, negative tweets and retweets are critical of the organizers or the lack of fans. For example, Dutch cyclist Bram Tankink (2016) was critical of the organizers of the 2016 Vuelta a España on his Twitter account due to the lack of safety for the cyclists in the final kilometers during Stage 5. Thus, the study is based on a content analysis using both a qualitative and quantitative research approach.

Twitter, cycling stars, and the UAE Tour: The analysis

In the research period, 57 tweets and 52 retweets were posted on the official Twitter accounts of the selected cyclists. The majority of the tweets – 41 tweets, or 71.9% of all tweets published by the analyzed Twitter users – mentioned the UAE or the UAE Tour in some way. The situation was somewhat different for retweets: 25 retweets referred to the UAE Tour, 48.1% of all retweets. For details, see Table 3.

Table 3. Number of Analyzed Tweets and Retweets

Cyclist	All tweets and retweets		Tweets and retweets mentioning the UAE or UAE Tour		% of tweets and retweets mentioning the UAE or UAE Tour/all tweets and retweets	
	Tweets	Retweets	Tweets	Retweets	% of tweets	% of retweets
Fernando Gaviria	18	11	18	10	100%	90.1%
Michał Kwiatkowski	6	1	6	1	100%	100%
Elia Viviani	11	32	4	9	36.4%	28.1%
Alejandro Valverde	3	3	3	1	100%	33.3%
Tom Dumoulin	4	1	3	1	75%	100%
Alexander Kristoff	4	0	3	0	75%	–
Vincenzo Nibali	2	1	2	1	100%	100%
Marcel Kittel	2	0	1	0	50%	–
Chris Froome	4	0	1	0	25%	–
Caleb Ewan	0	2	0	2	–	100%
Rohan Dennis	2	0	0	0	–	–
Mark Cavendish	1	1	0	0	–	–
Total	57	52	41	25	71.9%	48.1%

Source: Own, based on the official Twitter accounts of the professional cyclists.

Ten of the twelve analyzed Twitter users posted at least one tweet or retweet openly mentioning the UAE Tour. Only the Australian Rohan Dennis (2 tweets and 0 retweets in the research period) and Mark Cavendish, the winner of 30 Tour de France stages (1 tweet and 1 retweet), did not refer to the Emirati cycling race. Both finished the competition; however, their participation was quite unsuccessful, and cycling fans had most likely expected this lack of good results. A successful performance could be seen as a great reason to speak about participating in a race via social media. In previous years, Mark Cavendish, one of the most popular cyclists on Twitter, had been very competitive in races in the Middle East, where he won general classifications at the Tour of Qatar in 2013 and 2016, the Dubai Tour in 2015, and several individual stages as well. However, in the 2019 UAE Tour, he returned to racing after two seasons of health issues (O'Shea, 2019), and he was not able to compete with the best sprinters.

Caleb Ewan was the only professional rider who did not tweet at all. However, he retweeted two posts in the research period that were both connected to the UAE Tour through the hashtag "#UAETour" or image with the UAE Tour logo and @uae_tour after the Stage 4 victory of the Lotto–Soudal cyclist. The first retweet was originally published by Mar Sergeant (2019), the sports manager of Ewan's team, and the second was posted by Velon (2019), which is a group of professional cycling teams, including Ewan's team, that "would use innovation and technology to increase the value of the sport and create upside revenue to cycling teams" (Van Reeth, 2016, p. 79). Thus, 100% of Ewan's activity on Twitter was related to the UAE Tour; however, he had the lowest number of followers among the analyzed Twitter accounts and published only two retweets.

Chris Froome, the most successful cyclist on the Grand Tours in the second decade of the 21st century, should have been the brightest cycling star participating in the UAE Tour. The organizers used him to represent the 2019 UAE Tour to fans and journalists. It is clear that Froome (quoted in the UAE Tour, 2018) had only positive words to say about this event: "It should be a fantastic, well-rounded event with a team time trial and two uphill finishes. It should be some exciting racing and a nice, relaxed atmosphere, a good accommodation. It is a nice way to start the season, so I am looking forward to that in February." Unfortunately for the UAE, Froome did not actually come to the country due to changes in his training plan. However, he published this information on his Twitter with a sad face emoji and the UAE flag and mentioned @uae_tour, saying that he "[...] was really looking forward to the TTT & 2 uphill finishes" (Froome, 2019). This tweet was categorized as positive in this study because Froome showed positive emotions toward the UAE, although he did not visit in 2019. The British cyclist did not only inform his followers about changes in his race calendar, but also said he wanted to go to the Emirates. The phrase "looking forward to" is connected with positive expectations: in this instance, positive expectations for a stay in the UAE. This tweet was retweeted 81 times and obtained 1,081 likes (Froome, 2019).

The four cyclists that followed – Marcel Kittel, Vincenzo Nibali, Alexander Kristoff, and Tom Dumoulin – did not achieve personal victories at the UAE Tour. However, all of them wrote a few tweets or used retweets related to the competition. The majority of their tweets and every retweet published in the research period referred to the UAE Tour. Using @uae_tour or the "#UAETour" hashtag was a regular part of their tweets. No hashtag or reference to the official Twitter of the UAE Tour was used by Marcel Kittel. Nevertheless, he published two tweets, and one of them was connected to the UAE Tour. His tweet could be categorized as positive because he showed appreciation for the UAE when he said, "Great to be in the Emirates again. Always a good time" (Kittel, 2019); in other words, he suggested that the UAE is a great place to visit. Afterwards, three Twitter users decided to retweet Kittel's tweet, and it obtained 142 likes (Kittel, 2019). Alejandro Valverde, the incumbent road race world champion and another cyclist included in the study, won Stage 3. All of his tweets were connected to this stage. A commonality among them was the hashtag "#UAETour." In one tweet, the emoji of the Emirati flag was included (see Valverde, 2019).

Elia Viviani, the winner of Stage 5 at the UAE Tour, owns the most active Twitter account in the research period. He published 11 tweets and 32 retweets; however, only four tweets and nine retweets referred to the UAE Tour – 36.4% and 28.1% of all his tweets and retweets, respectively. The question thus arises as to why the tweets and retweets mentioning the UAE Tour are in the minority on Viviani's Twitter. When the inaugural UAE Tour took place, the 2019 UCI Track Cycling World Championships in Pruszków, Poland were simultaneously being held. Viviani is also a track cyclist, and he frequently mentioned the results of his compatriots and friends from the Italian national team in his tweets or retweets. On the question of Viviani's UAE Tour tweets and retweets, he regularly used the "#UAETour" hashtag (on one occasion, he used the "#UAETour2019" hashtag; Viviani, 2019a) and images or words such as "Dubai," "Abu Dhabi," and "Emirates." Once, he retweeted a message from the official UAE Tour account (UAE Tour Official, 2019). Viviani is the third cyclist who published a positive tweet connected to the UAE. In this tweet, he described the UAE Tour as "another beautiful week [...]" (Viviani, 2019b). Thus, Viviani said that he had spent a very nice week in the UAE; this message, written in Italian, praised the UAE and was retweeted 27 times and obtained 401 likes (Viviani, 2019b).

Michał Kwiatkowski, Team Sky cyclist and former world champion, posted six tweets and one retweet. All of them referred to his participation in the UAE Tour. Mentioning @uae_tour was an integral part of his tweets and the retweet, as were images. One of Kwiatkowski's tweets, the last that he published in the research period, could be categorized as positive. He praised the competition for a "good seven days of racing in @uae_tour" and used the thumbs up emoji (Kwiatkowski, 2019), suggesting that the UAE Tour was a great experience. This message was retweeted 25 times and obtained 499 likes (Kwiatkowski, 2019).

Fernando Gaviria is the last cycling star who was part of this research. In the 2019 UAE Tour, he was a leader of his new team, the UAE Team Emirates. This cycling team was established in 2017, and his "[...] challenge is to represent a whole Nation, the UAE, which are strongly interested in promoting cycling and in presenting as a top

level sports and cycling hub" (UAE Team Emirates, 2019a). To fulfil their goals, the team invested a significant amount of money in acquiring the services of the cycling stars to participate in the project, with top sprinter Gaviria being one of them. It was very important for the UAE Team Emirates to be successful on their home soil. In the inaugural UAE Tour and in Stage 2, Gaviria won the bunch sprint in Abu Dhabi. It is not a surprise that Gaviria's Twitter account was full of messages related to the UAE Tour and to the UAE. He posted 18 tweets and 11 retweets, and only one retweet was not connected to the UAE Tour – a retweet from the UAE Team Emirates official account when they welcomed a new sponsor (UAE Team Emirates, 2019b). Nearly all of the tweets and retweets mentioned @uae_tour, the "#UAETour" hashtag, and images referring to the Emirates. An emoji of the Emirati flag was an integral part of eight of his tweets or retweets. One of his retweets was categorized as positive; it was originally a tweet of the UAE Team Emirates that praised the way of the team presentation in Dubai (UAE Team Emirates, 2019c).

The cyclists referred to the UAE Tour and the UAE in their tweets and retweets in all the mentioned ways. Mentioning @uae_tour was the most popular one and was used 40 times in 66 tweets and retweets (60.6% of all tweets and retweets). Thirty tweets and retweets (45.5%) included images or short videos easily identifiable as referring to the UAE Tour or the UAE. Words related to the UAE were integral parts of the 29 tweets or retweets (43.9%), and the popular hashtag "#UAETour" emerged in 27 tweets and retweets (40.9%), while "#UAETour2019" was included in one. The emoji of the Emirati flag was used 10 times (15.2%): once by Chris Froome and Alejandro Valverde, and eight times by Fernando Gaviria. For details, see Table 4.

Table 4. How Cyclists Referred to the UAE Tour

Cyclist	Key words	#	@	Image/video	Emoji
Fernando Gaviria	+	+	+	+	+
Michał Kwiatkowski	+	–	+	+	–
Elia Viviani	+	+	+	+	–
Alejandro Valverde	–	+	–	+	+
Tom Dumoulin	+	+	+	+	–
Alexander Kristoff	+	+	–	–	–
Vincenzo Nibali	+	–	+	–	–
Marcel Kittel	+	–	–	–	–
Chris Froome	–	–	+	–	+
Caleb Ewan	–	+	+	+	–
Rohan Dennis	–	–	–	–	–
Mark Cavendish	–	–	–	–	–

Note: + means it was part of at least one (re)tweet; - means it was not part of any (re)tweets; Source: Own, based on the official Twitter accounts of the professional cyclists.

The vast majority of the analyzed tweets and retweets, 61 of 66, were neutral. They provided information about the UAE Tour, the results of the stages, or the personal feelings of the cyclists after the stages. They did not contain any evaluation of the Emirati cycling events. However, this was not the case for the final five posts that positively evaluated the UAE Tour. Chris Froome, Marcel Kittel, Elia Viviani, Michał Kwiatkowski, and Fernando Gaviria (via retweet) posted positive words about the sporting event. They all wrote that they enjoyed racing in the UAE, and Gaviria specifically applauded the team presentation in Dubai. Furthermore, there were no negative tweets or retweets describing the UAE as a hostile place for cycling.

Conclusion and discussion

In the final part of the study, it is essential to return to the research questions. The answers produced by the content analysis allow for broader conclusions to be made about sporting events hosted by undemocratic regimes, sports stars and social media, and sports diplomacy tools and cyberspace.

The first research question inquired as to whether the cycling stars tweeted about the UAE tour. Ten of the twelve analyzed Twitter accounts of the cycling stars posted tweets or retweets about the UAE Tour. The majority of their tweets and retweets were frequently connected to the UAE Tour and the host country. The only exception was the Twitter account of Elia Viviani; however, the reason for this difference was discussed above. Thus, when cycling stars participate in races and are active on their Twitter accounts (or on social media in general), it is likely that they will provide information about the race, which could help the host country catch fans' attention.

The second research question inquired how the cyclists referred to the UAE. On social media, there is a wide range of ways to refer to something, such as by using specific words or phrases, mentions, hashtags, emojis, images, or videos. All of these methods could be observed in the analyzed Twitter accounts. The most popular was mentioning @uae_tour. Adding images or videos and using words and phrases related to the UAE or the hashtag "#UAETour" were similarly popular. However, there are differences among the analyzed Twitter users due to the various ways in which the professional cyclists wanted to present themselves. Some of them used emojis, while others did not. Every Twitter account is different, and social media users tend to use different methods of self-presentation on these platforms.

The third research question inquired as to whether the tweets about the UAE Tour were positive, neutral, or negative. Most of the tweets and retweets referring to the UAE Tour were neutral, and their authors simply provided information about the sporting events rather than evaluating them. Five posts published on the analyzed Twitter accounts could be categorized as positive, and there were no negative tweets or retweets related to the Emirati cycling race. This is an important finding for the host country as negative opinions of sporting events, which could result for various reasons, are quite often spread further via other social media accounts or mass media, especially when many famous athletes write about them on their accounts. Eventually, this could have the effect of presenting the country in a negative light when the sporting event was actually intended to promote a positive image.

All of this does not mean that the cycling stars wanted to openly promote the UAE Tour and the UAE via their activity on Twitter. Social media are used as platforms on which users can present themselves and construct their image on their own. Twitter is quite popular among athletes, not only within professional cycling. In the era of the network society (Castells, 2010), sports fans want to know nearly everything about sports stars, and social media offer amazing tools for acquiring first-hand information. Many fans follow sports celebrities, and popular athletes are aware of fans' desire for information; they use social media and attempt to meet fans' expectations. For this reason, they are quite active users on these platforms.

Nonetheless, as long as they are not paid for their posts as part of a marketing activity, the promotion of the host country is not based on the calculation of sports stars. Rather, the athletes simply want to give their fans first-hand information about their daily lives. Obviously, professional cyclists compete all over the world. They write or speak about their experience and inevitably mention the host countries of events. Sometimes, undemocratic regimes host events. However, athletes often do not see this as a problem, nor do they speak about it openly. Thus, they can promote the undemocratic host country simply by tweeting or retweeting a message regarding only themselves or their own sporting activity. If a cyclist says that he enjoys the UAE Tour, it is definitely not the same thing as showing support for the undemocratic rule of the UAE. However, undemocratic regimes benefit from this situation just as democratic ones do, especially when a sports celebrity mentions the sporting event and evaluates it in a positive manner on social media, as was seen in the example of a few positive tweets analyzed in this study. Even this kind of information published on social media can spread at least a basic awareness of the host country. Suppose the cycling fans following their cycling hero on Twitter have no information about the UAE whatsoever. In this case, they can gain a basic perspective on this country from a positive message published on the occasion of the inaugural UAE Tour. As has been pointed out by Simon Anholt (2007, pp. 1–2), who has long focused on nation branding, most people do not and cannot have comprehensive knowledge of almost 200 countries. As a result, they judge most countries through stereotypes and partial information they acquire from more or less relevant sources. Even a banality, such as a positive message tweeted by a sports celebrity about a country, can provide fans with at least a piece of information about a country that is not given significant space in the mass media. Thus, the fan's idea of the country can be more or less shaped by this kind of message, even when this is not its primary purpose.

Evidently, a few positive tweets or retweets posted by sports stars do not have the power to improve the complex international image of a host country. Rather, these tweets are just a drop in the ocean; political representatives use countless public or sports diplomacy tools to promote their countries abroad. The social media accounts of sports celebrities are quite limited spaces for promoting host countries. Nevertheless, as the study indicates, the host countries can be seen in a positive light on these platforms, and this can help them construct a slightly more positive image. However, these platforms are not the main way they improve their international image.

It would be a completely different story if the sports stars used their social media accounts to speak openly against the social and political situation in a given country. In such a case, it would be possible to speak of digital activism on the part of the athletes, the aim of which is to change the current situation (see e.g., Marston, 2017; Schmidt et al., 2019; Ahmad & Thorpe, 2020). If sports stars openly express criticism of their country of origin, the country in which they live, or the country in which they attend a sporting competition, their objections will be discussed in the international environment. In this context, it is possible to mention the famous New York Rangers ice hockey player Artemi Panarin, who used his official Instagram account to show support for Alexei Navalny, the Russian opposition leader and one of the main critics of Putin's Russia. Panarin replied to a photo of Navalny and his family with the hashtag "#свободунавальному," which could be translated as "Freedom for Navalny" (Ketko, 2021). Navalny was poisoned in 2020 and survived the attack. However, after returning to Russia, he was arrested and sentenced to several years in prison. Although hockey fans may not be interested in Russian politics, Panarin's statement offers information about Russia's problems. Similarly, supporters following Lewis Hamilton on social media may be primarily interested in his life in the world of Formula 1. However, through his posts they also receive information about the Black Lives Matter movement, which Hamilton supports and which is having a worldwide impact (see e.g., Hamilton, 2021).

These openly critical social media messages can damage the image of the country at which they are aimed. At the same time, similar opinions are viewed as political statements, which the public often claim have no place in sport (see Allison, 1993, p. 5; Houlihan, 2014, p. 5). On the other hand, insignificant positive statements about the host country of an event are not typically perceived as political, even though they can help create a more favorable image of the country. As a result, they ultimately strengthen the country's soft power, which is often the goal of the host country's political leaders.

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