MÁTÉ MOLNÁR

SPORT SEASONS THROUGH THE LENSES OF PROJECT MANAGEMENT – IDENTIFYING THE COMMON KEY CHARACTERISTICS OF SPORT SEASONS AND PROJECTS

SPORTSZEZONOK A PROJEKTMENEDZSMENT SZEMÜVEGÉN KERESZTÜL – A SPORTSZEZONOK ÉS -PROJEKTEK KÖZÖS FŐ JELLEMZŐINEK AZONOSÍTÁSA

There is a large amount of research on both successful project management and the management of professional sports organisations, but the relationship between these two phenomena remains to be analysed. Therefore, the aim of this article is to identify the similarities between sports seasons and projects by examining the characteristics of these two domains, as well as to lay the foundations for defining the potential management practices that can improve the efficiency of seasons using tools and techniques derived from project management. The results will be obtained through a narrative literature review of relevant books and articles on projects and sports seasons. The outcome of this research will contribute to a better understanding of how sport organisations can streamline their operations, optimise performance and ensure successful sport seasons by potentially implementing a project management approach.

Keywords: **project, project management, sport project, sport season, life cycle**

Számos kutatás született már mind a sikeres projektmenedzsmentről, mind a professzionális sportszervezetek vezetéséről, azonban a kettő kapcsolatát elemző kutatások száma alacsony. Ebből fakadóan a cikk célja, hogy e két terület jellemzőinek vizsgálatával azonosítsa a sportszezonok és a projektek, illetve azok menedzsmentje közötti hasonlóságokat, valamint megalapozzon olyan kutatásokat, melyek a lehetséges projektmenedzsmentből származó eszközök és technikák sportklubok menedzsmentjébe való átültetésével javíthatják az csapatok szezonban mutatott hatékonyságát. Az eredményeket a projektekről és a sportszezonokról szóló releváns könyvek és cikkek narratív szakirodalmi áttekintésével mutatja be a szerző. A kutatás eredménye hozzájárul annak jobb és szélesebb körű megértéséhez, hogy a sportszervezetek hogyan tudják racionalizálni működésüket, optimalizálni teljesítményüket és biztosítani a sikeres szereplést egy szezonban a projektmenedzsment-megközelítés lehetséges alkalmazásával.

Kulcsszavak: **projekt, projektmenedzsment, sportprojektek, sportszezon, életciklus**

Funding/Finanszírozás:
The author did not receive any grant or institutional support in relation with the preparation of the study.
A szerző a tanulmány elkészítésével összefüggésben nem részesült pályázati vagy intézményi támogatásban.

Author/Szerző:
Máté Molnár[a] (mate.molnar@uni-corvinus.hu) PhD student

[a]Corvinus University of Budapest (Budapesti Corvinus Egyetem) Hungary (Magyarország)

The article was received: 17. 01. 2024, revised: 29. 05. 2024, 04. 06. 2024 and 05. 06. 2024, accepted: 05. 06. 2024.
A cikk beérkezett: 2024. 01. 17-én, javítva: 2024. 05. 29-én, 2024. 06. 04-én és 2024. 06. 05-én, elfogadva: 2024. 06. 05-én.

While project management has been extensively researched across various industries including construction, engineering, and information technology (see e.g. Kerzner, 2022), the application of project management principles in managing professional sport clubs remains underexplored. Existing studies tend to focus on broader topics such as team performance (see e.g. Prapavessis, Carron & Spink, 1996), leadership (see e.g. Cotterill & Fransen, 2016), and organizational behavior within the realm of professional sports (see e.g. Wagstaff & Burton-Wylie, 2018). In the case of the connection of project management and sport, most research focuses on event organizations, large infrastructural investments, and health care and injuries, moreover, in the field of sport,

business or project management studies are commonly related to the development of players or humans in general, leadership and events (Lis & Tomanek, 2020).

However, a comprehensive examination of how project management concepts and methodologies can be effectively employed in sports clubs in terms of managing seasons is lacking.

The need for effective management of professional sport clubs in today's highly competitive landscape highlights the opportunity for the adoption of project management principles and methodologies (Ratten & Jones, 2020). The existing research gap surrounding the use of project management in this context sheds light on the lack of comprehensive studies addressing the unique challenges and strategies faced by sports clubs. Project management is often paired in research of practice with sport, however, this connection is mainly regarding sport event organization (Fotiadis, 2020) and infrastructural development (Francis, Webb, Desha, Rundle-Thiele & Caldera, 2023), but not paired or compared to managing seasons.

A research gap lies in the examination of performance metrics and factors that contribute to success in projects as well gain field and appreciation regarding professional team sports during seasons. Professional sport teams tend to use various metrics to evaluate individual and team performance, such as scoring statistics, player efficiency ratings, and win-loss records (Sarlis & Tjortjis 2020; Severini, 2020). In contrast, project success is often assessed using project completion rates, budget adherence, and client satisfaction metrics (Kerzner, 2022). Exploring the potential transferability of performance evaluation techniques and metrics between these two contexts could enhance project management approaches and possibly even sports performance analysis.

To lay down the foundation for the aforementioned study options, conducting research regarding the similarities of project and professional sport seasons is essential. Foremost, there is a need to establish a common understanding regarding these two management areas, which is based on the literature, since the number of research papers addressing the potential similarities, overlaps, and congruencies between these two management areas can be considered to be limited. Thus, there is a need to summarize the project management literature with special regard to those constraints which mean the fundamentals of projects (triple constraint, life cycle).

Project definitions and approaches

The definitions of projects have been evolving significantly over the past decades for numerous reasons. First, authors highlighted – based on Cleland (1994) – that projects were inevitable for achieving sustainable competitive advantage for firms, and this perceived importance should be reflected in the definitions as well (see e.g. Görög, 2013; Pinto, 2020). On the other hand, the complexity of projects and their surroundings environment have increased to a great extent (see e.g. Judgev & Müller, 2005) and enforced not only practitioners but also academics to analyze and understand them. In line with this, Bredillet (2007) emphasized that project management ought to get highlights to a greater extent as part of the academic discussion of business and management and at the same time the Project Management Institute (2021, from now on: PMI) drew attention to that projects have cost and time constraint, and Verzuh (2021) revealed that projects are carried out in the course of temporary organization managed by a specialized (project) manager. Görög (2013) also identified that projects have two immanent characteristics: uncertainty and interdependence. This is partly due to the unique and result-oriented nature of projects.

In accordance with these, Project Management Institute (2017, p. 4) defines a project as „a temporary endeavor undertaken to create a unique product, service, or result", while Görög's (2013, p. 9) description of the same phenomenon is the following: '... an activity which is a unique and complex task to an organization in which the duration and cost are limited, having a definite aim to create a certain result and carried out in the course of a project organization'. These approaches, together, with other relevant papers (Blaskovics et al., 2023; are intricately linked to the concept of the project triangle, also known as the Iron Triangle, where 'Time', 'Cost', and 'Scope' or 'Quality' are universally recognized as fundamental dimensions within project management literature (Kwak & Anbari, 2009; PMI, 2017). This triplet of constraints constitutes the primary criteria by which project performance and success are evaluated (Atkinson, 1999).

As articulated by Kerzner (2022), interdependent relationships exist among these constraints, whereby any alteration to one aspect necessitates concurrent adjustments in the others, leading to actions from the project team. For instance, a modification in project scope typically triggers changes in both time and cost parameters, resulting in potential schedule extensions and budgetary adjustments (Pollack, Helm, & Adler, 2018). Similarly, endeavors to reduce project costs often entail trade-offs in scope or necessitate extensions in project duration. By acknowledging and effectively managing these interdependencies, project stakeholders are empowered to make informed decisions and maintain project alignment with predefined objectives (Görög, 2013).

Based on Atkinson (1999), managing these triple constraints is crucial for project management, as balancing and prioritizing these factors are required to ensure the project's success. Meredith & Zwiakel (2020) pointed out, that managing to meet the criteria of time, cost, and scope have gotten better, but changes and adjustments to the constraints still must be carefully assessed and evaluated to identify the potential impact of other factors.

Fundamental elements, triple constraints of projects

Based on the definition of a project by PMI (2021), Görög (2013) and Verzuh (2021) projects share the attribute of being temporary endeavors. In parallel with this, one of the three dimensions of the aforementioned Iron Triangle,

'Time' is one of the critical and closely monitored constraints in project management, and Hazar (2014) and Oburu (2020) refer to multiple time-based factors as durations and deadlines of achieving tasks and milestones, but ultimately to the overall time frame in which the project must be completed (Babu & Suresh, 1996). Time constraint is influenced by numerous factors such as the client's requirements, deadlines (Chin & Hamid, 2015) goals of the parent organization, market demands, legal obligations or corporate guidelines, delivery times, and other critical in-project or cross-project dependencies (Martens & Vanhoucke, 2020; Thesing, Feldmann & Burchardt, 2021).

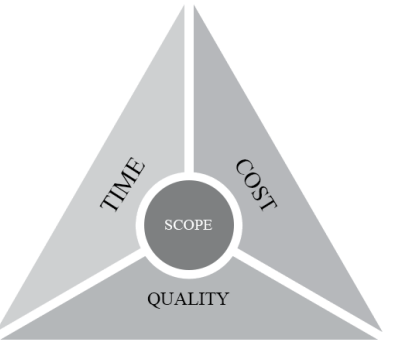
Numerous researchers (see e.g. Cooke-Davies, 2002; Martens & Vanhoucke, 2019) emphasize the need for proper planning, preparing, scheduling, and monitoring during the life cycle of a project. These activities involve responsibilities like aligning tasks based on logical connections, estimating durations, managing resource needs, and establishing realistic deadlines for every block and phase. (PMI, 2021; Ribeiro, Amaral & Barros, 2021). Also, in order to manage project time in an effective way, project managers are required to identify and mitigate potential time-connected uncertainties and risks (Strelicz, 2016). Raykar and Ghadge (2016) found that risks such as scope changes, resource problems, or unexpected external events like weather conditions must be detected and monitored, so late completion can be avoided.

Venkataraman & Pinto (2023) emphasized that cost constraint is also a key feature of the project, and effective cost management both on the project and company level is a crucial aspect of project management, which involves planning and monitoring throughout the life cycle of the project. This was reinforced by numerous authors (see e.g. Berényi & Deutsch, 2022; Varga & Csiszárik-Kocsir, 2016), while PMI (2017; 2021) revealed that one of the key tasks of managers is to estimate and allocate costs to different tasks, track and control individual and overall expenses and ensure that the project stays within the approved limitations of the budget. Verzuh (2021) also added that evaluating cost performance enables the project managers to identify weaknesses in project implementation and also helps them to identify potential cost-saving opportunities during completion.

The third and final constraint of the project triangle is the scope. According to Shenhar and Dvir (1996), these are specific objectives, deliverables – such as products and services – of the project, and requirements of the project result in case of system development projects. PMI (2017) highlighted that a proper scope management could increase the understanding of the given project by its stakeholders, and the project team stay focused on the objectives and avoid unnecessary activities. Görög (2013) underlines that the proper definition of project scope can increase the potential for project success, and any unplanned or unprepared deviations (for example scope creep) can increase the chance for failure. Both Ajmal, Khan, & Al-Yafei (2020) and Urbinati, Landoni, Cococcioni & De Giudici (2020) pointed out, stakeholders have a key role in scope management, therefore project managers must understand their expectations regarding the project and ensure that the results are also aligned with their needs (Figure 1).

Figure 1

Project management triangle of constraints



Source: own compilation based on Gido, Clements & Baker (2018, p. 14)

Project Life Cycle

Project life cycle is a concept that covers the full duration of the project. It can be divided into separate phases, each phase contributing to the project completion with its own logically related processes, tasks, and deliverables, and required project manager approach (PMI, 2017). Individual attributes can be assigned to every phase such as name, number, duration, and other specifics based on what managers and project members can follow along the processes with the logic of completion. Blaskovics (2014) highlighted that three general phases that appear in each model are planning, implementation, and closing. At the same time, numerous authors (Cleland, 1994; PMI, 2017; PMI, 2021; Verzuh, 2021) provided a framework for defining concepts of the life cycle and the phases of which it consists. Most of them agreed upon projects should go through the following phases:

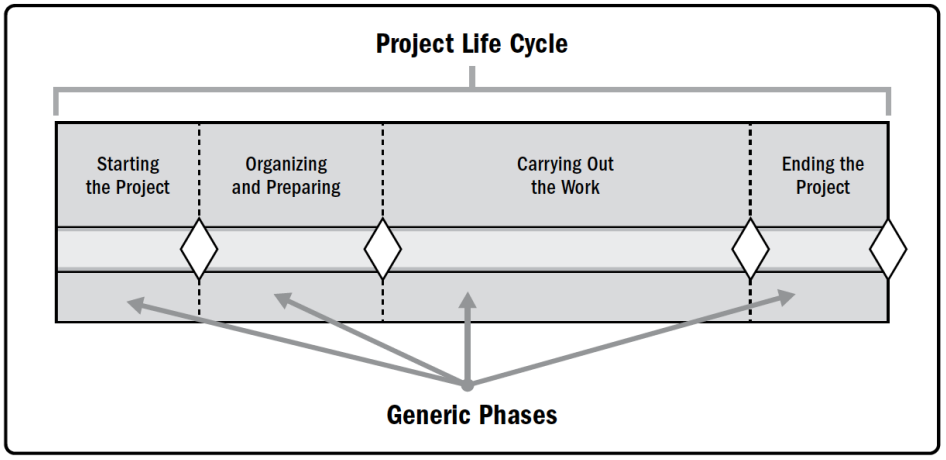
- Initiation or conceptualization: in this process, the most important constraints and the goal will be defined (for example milestones, deliverables, risks and expectations in general, budget).
- Planning: where the detailed plans will be prepared which will be the base for completing the project result, the project process, or define those internal processes that support the aforementioned two factors (like cost or time plan, or the communication strategy).
- Implementation: where the project result and the associated deliverables are created, and the progress or the project results are created.
- Closing: where the project result is taken over by the customer, and the internal resources will be integrated back into the organization.

Görög (2013) highlighted that finding the most appropriate external contributors could bear of extreme importance, thus he identified awarding as a separate phase. PMI (2017), and Verzuh (2021), argued for separating

the implementation and control since the responsible for the given phase can be different. Labuschagne and Brent (2005) considered product lifecycles instead of project life cycles and argued for adding pre-project and post-project phases. PMI (2017) in accordance with Goleman & Boyazits (2002) revealed that each phase should focus on the project team management also, since they contribute to the project success to a great extent (Figure 2).

Figure 2

Generic Depiction of a Project Life Cycle



Source: PMI (2017, p. 548)

Research Methodology

The literature on both sports and projects can be considered to be abundant, however, a lack can be identified in terms of matching these two together on club level, i.e. considering sport seasons as projects. Thus, the research aim of this paper is to delve into the intricate relationship between managing professional sport seasons and project management to provide a comprehensive analysis of the similarities these areas have. As a result of this, the following research questions are formulated:

- What are the similarities between a project and a sport season?
- What are the similarities between managing projects and managing sport seasons?

By conducting exploration and examination of recent, relevant literature, studies, and empirical evidence, this research intends to shed light on the possibilities and limitations of comparing season to project and their management approach.

In order to define projects and to investigate the possible similarities sport seasons have with projects, a narrative literature review has been conducted with the goal of studying of researching the studies of academics and researchers of the given topic. Such literature review will be conducted by predetermined parameters, therefore following the same logic the research is transparent and reproducible.

Since the literature on the common intersection of sport and project is lacking (except for the infrastructural projects which are out of the scope of the paper), the author followed an extrapolation approach based on the narrative review. Three potential steps could have been followed, which are as follows (Ferrari, 2015; Juntunen & Lehenkari, 2019):

- Option 1: Considering the literature on sport seasons as the base for the comparison and extrapolating the most important elements of this to the projects.
- Option 2: Considering the literature on projects as the base for comparison and extrapolating the most important elements of this to sport seasons.
- Option 3: Analyzing both the literature on sport season and projects, and finding the common elements based on case studies or other primary data collection techniques.

The author adopted the second option since the aim of the paper is to reveal whether a sport season can be considered as a project, and not the other way round, so the characteristics of the projects should be conducted on sport season level. At the same time, the literature that analyzes sport seasons from project perspective is limited, thus, a case study or another primary data collecting technique could only be applied only together with one of the first two options, and this exceeds both the word count limit of the journal and the scope of the paper. In order to achieve the aforementioned aim, the research had two phases. The first phase encapsulated the literature review on projects, and the second phase contained the narrative research and the comparison of the two phenomena.

Thus, in the literature review, the cornerstone elements of project management were examined in a detailed manner which could serve as a solid basis for finding the direct relationship between sport and project. This encompassed the following:

- Project definitions,
- Triple constraint (time, cost, scope),
- Project life cycle.

Approach towards the narrative research and data gathering

To synthesize the many existing definitions and characteristics of projects, the literature to review was narrowed down to handbooks and guides published in the last 20 years. This can be done due to these international and national publications contain the conclusions and definitions of the most important or most popular papers in

the discipline, including those areas that were highlighted before. Based on the popularity and widespreadness (c.f. Blaskovics, 2014), the following handbooks were selected:

- Gido, J., Clements, J. & Baker, R. (2018). Successful Project Management,
- Görög, M. (2013). Projektvezetés a szervezetekben,
- Pinto, J. K. (2020): Project Management – Achieving Competitive Advantage,
- Project Management Institute. (2017). A Guide to the Project Management Body of Knowledge (PMBOK®) – 6th edition,
- Project Management Institute. (2021). A Guide to the Project Management Body of Knowledge (PMBOK®) – 7th edition.

These papers served as a base for comparing the conclusions of the narrative research to the main characteristics of the project.

To review the broad literature on sport management and other articles related to the topic of handling problems throughout a sport season, a narrative literature review was conducted. To start the general overview of sport season characteristics 20 articles were reviewed from SCOPUS, which consisted of the 10 most cited articles all-time and 10 most cited articles between 2021 and 2024 for the keyword "sport season".

The detailed review was conducted in the database of Google Scholar. The keyword for searchings are encapsulated in Table 1.

Table 1

Keywords for research in Google Scholar regarding sport season characteristics

Research Area	Search phrase
Project triangle – Sport season	Sport season cost Sport season cost management Sport season time Sport season time management Sport season schedule Sport season goal Sport season goal setting
Project life cycle – Sport season	Sport season initiation Sport season planning Sport season execution Sport season completion
Project stakeholder management – Sport season stakeholders	Sport season stakeholder Sport season stakeholder management

Source: own compilation

In case of these searches, the author has leaned on the algorithm of the database to list the 5 most relevant articles based on the number of citations and readings, and the criterion for inclusion was to be written in English, should satisfy every scientific criterion (containing literature review, if there is empirical data collection, it should be planned, the paper should have been peer-reviewed), and paper from the field of health and medicine were excluded in this case, therefore 61 articles were reviewed from the searches in the database of Google Scholar and 44 articles contributed to the analysis of this paper, 17 were excluded due to lack of contribution.

Limitations

The research has several crucial limitations, which the author wants to improve in the future. First, the number of papers could be increased, and a topic could have been investigated in a deeper manner. At the same time, in order to find congruency between a sport season and a project, other topics should have also been analyzed, such as the similarities of organizations utilizing project and working in a season-based sport field. Furthermore, the role of sport managers and project managers should also be researched – preferably by means of a primary research – in a comprehensive comparison to see if their roles, responsibilities, and competencies could be matched or developed built on their similarities.

Additionally, a detailed semantic analysis of the definition of sport seasons should be conducted or adapted, to further deepen the understanding of the phenomenon.

Results and discussion

The presence of the triple constraint in sport seasons

In accordance with the aim of the paper identifying the similarities between sport seasons and projects, the common characteristics of the hard constraints should be analyzed. As PMI (2017) highlighted, the most important hard constraints are the elements of the project triangle, which can also be considered as the fundamental success criterion. This criterion encompasses the time (deadline), cost (budget), and scope (the decomposition of organizational goals on project level). Based on the narrative literature review, from 10 out of the 20 papers – found in SCOPUS – at least one or more constraints could be identified, and highlighted sport seasons should also consider these features. Additionally, the Google Scholar searches contributed 9 articles, from which the goal constraint could be deducted, and another 5 articles mentioned directly or indirectly the importance and effects of costs and the appropriate cost planning. Moreover, 4 papers highlighted that scheduling could be important not just on season, but interseason level as well (in accordance with the scheduling of the activities).

Looking for the key characteristics of sport seasons which can be related to the constraints of time, cost and goal, the first feature that can be derived from the literature is the importance of the time parameter. Numerous authors highlighted that there is a fixed duration for the season with a defined start and end date and within that time, teams must plan and execute their training sessions, perform at games, and participate in other related activities (Coppalle et al., 2019; Guild, Lininger & Warren, 2020; Knapik, Bauman, Jones, Harris & Vaughan, 1991; Pinto 2020; PMI, 2017).

Time management plays a crucial role in ensuring that all tasks are completed within the allocated time frame in a manner that supports a sport team's goals (Robertson & Joyce, 2018). The lack of appropriate time management can lead to rushed preparation, player fatigue, and potentially lower performance levels. Also, according to Vlahoyiannis et al. (2021) successful teams, carefully plan their schedules, allowing for sufficient rest periods and they schedule in structured practice sessions in between games to improve performance throughout the season. Moreover, goals are extremely time-bound, as their result – wins and other achievements – can not be transferred to the next season, new goals will be set (Jeong, Healy & McEwan, 2023) and personal contracts of members of the organization might expire (Borghesi, 2009), therefore the season deadline can be considered as a hard project deadline.

Another key element of professional sport seasons – as of the project management triangle – is finance, including different costs and incomes. In professional sports, financial management is pivotal, as teams must consider various expenses such as player salaries, travel costs, marketing, and equipment. From these costs, player salaries can be connected directly to the season (see e.g. NBPA,2023; NFLPA, 2020), and others could be managed as operational costs. Just like project teams, sport clubs also operate with a limited budget and must make strategic decisions to balance their expenditures while still remaining competitive. In some cases, these expenses are regulated by the parent organization or league. For example, in case of the National Basketball Association – North American professional basketball organization – or other US major sport leagues (Keefer, 2021) by applying the principles of cost management, teams can make informed choices on where to invest their resources and where to cut back. Based on the works of Késenne (2006) and Garcia-del-Barrio & Szymanski (2009) a team might decide to invest heavily in acquiring a player for a key role or they might opt for cost-effective salary distribution and lesser goals.

Although time is a stricter constraint and is easier to realize as such, cost is more difficult to manage, because of multi-year deals for players and coaches, which obviously exceed the limits of the season. However, based on the Collective Agreements of NBPA (2023) and NFLPA (2020), the best examples are provided by North American major sport leagues, revealing the cost constraint of managing a professional sport team during a season. Each of these associations has their collective agreements with their clubs and players, which includes the yearly salary cap determined for the upcoming seasons, where the salary cap is accounted for the total amount of money a sport franchise can spend as payroll for the marked season. Considering that these parent organizations of sport franchises are the project owners, this is a similar budget limiting mechanism, which is faced by project teams during implementation (PMI, 2017).

Also, a sport season has a predefined scope as projects, since sport seasons are paired with a team's goal achievement. Like any project, a sport season involves setting clear goals and objectives. Kingston & Wilson (2009) revealed that sport clubs share the aspect of having such objectives for their season – and their sub-blocks such as games or deliverables. Whether it is collecting wins, delivering a championship, or completing a project and delivering a service, defining specific goals and breaking them down motivate the individuals involved (Kingston & Hardy, 1997). As Durdubas, Martin & Koruc (2019) noted, these targets can range from winning a certain number of games to significant strategic milestones such as reaching the playoffs or championship games to personal development or injury rehabilitation of player (Croft, Paulson, Stokowski, Berri & Mondello, 2023; Knapik et al., 1991). However, the finite duration of the season means the team must effectively plan and execute their strategies to achieve these goals within the given timeframe. Time becomes a key factor in determining the team's success and adds pressure to deliver results. (Weinberg & Butt, 2014; Senécal, Loughead & Bloom, 2008).

Comprehensive planning is essential to achieve any of these goals, to outline strategies and tactics that dictate the steps necessary for success. These goals provide focus and direction, enabling teams to align their efforts with the desired outcomes and achieve better cohesion (Sarkar & Page, 2022). Careful preparation, planning, and strategic thinking are required to realize the outcome determined by owners and different stakeholders. Setting realistic, measurable, and achievable targets is quite challenging and not trivial (Healy, Tincknell-Smith & Ntoumanis, 2018). As Gillham & Weiler (2013) put it, different techniques are applied by practitioners to support reaching the goals of their temporary cooperation and goals of players as individuals to align efforts and make team performance optimal for their objectives (Ward & Carnes, 2002).

Project life cycle in sport seasons

The literature review aimed to highlight the similarities between the project life cycle and sport season schedules. According to PMI (2017), a project's life cycle has four stages: initiation, planning, execution, and closing. Each of these stages includes specific tasks and processes, but there are also two important responsibilities that must be managed throughout the entire life cycle: risk management and stakeholder management. Scheduling problems, milestones, and task management responsibilities for a sport season were deductible from 7 articles out of the 20 results in the SCOPUS search. From the extended search with life cycle-specific keywords, an additional 4 articles further supported the similarities between the two phenomena.

Before the sport season begins, teams initiate the team goals during the off-season (see e.g. Salvador, Suay, González-Bono & Serrano, 2003; Pires & Ugrinowitsch, 2021) and pre-season based on team values and start the preparation with planning, recruiting, and goal setting for the latter phases of the season with a similar manner to project initiation before a kickoff. As Font et al. (2021) implied, like any well-organized project (Görög, 2013; Pinto, 2020), a sport season requires careful scheduling,

and planning of tasks ahead of execution. They plan the way they will practice, and how individuals will perform specific activities. The game plans are formulated by coaches before the season, and these plans are reiterated during competition as well as an agile implementation (Gilbert & Trudel, 2001).

After the preliminary stages, sport teams start the season and compete game by game with scheduling in practices and other related activities to optimize performance. In parallel, project teams carry out tasks to progress with the project plan towards delivery.

During a season – as during projects (Görög, 2013) – teams carry out tasks in order to succeed. Each sport team has a specific number of fixtures (see e.g. Pires & Ugrinowitsch, 2021), typically spread out over several weeks or months, and in between teams' schedules other, additional activities (Pankow, McHugh, Mosewich & Holt,, 2021; Gilbert & Trudel, 2001). These tasks are scheduled and are repetitive building blocks of the season completion (Gilbert & Trudel, 2001; Pankow et al., 2021). Coaches formulate plans for practices and games, which suit the team's competencies and let them develop their performance (Reinboth & Duda, 2006), which is in parallel with project managers having plans to carry out tasks and processes in order to finish their project with success (Görög, 2013). Sport seasons require constant monitoring and evaluation to recognize progress (Torres-Ronda, Bealand, Whitehead, Sweeting & Clubb, 2022) and with the development of technology, even more opportunities are given to the managers (Li, Wang & Li, 2021). Coaches observe their players' performance, provide feedback, and make necessary adjustments to increase efficiency (Kinnerk et al., 2023), managers track milestones, analyze metrics, identify risks, and adopt corrective measures to ensure project success. Managers of teams bear other skills of leadership to make their players perform at their best and their teams succeed (Chu et al., 2021).

Managing the team and the stakeholders

As a result of this, there is a need for a review of how team and stakeholder management appear in sport seasons.

As projects being the strategic building blocks of business organizations (Görög, 2013; PMI, 2017), seasons are the fundamental way sport teams carry out their main activity – providing experience and generating revenue (Li et al.,2021; Ratten & Jones, 2020) –, therefore stakeholders can be connected not only to the organization but their activities as well. Both Görög (2013) and PMI (2017) highlighted that stakeholder management and team management are considered to be constant and play crucial role during all or almost all phases of the project life cycle – besides risk management.

Reviewing the articles for 'sport season' keyword the responsibility of managing a team and managers or coaches being leaders was deductible from 9 out of the 20 core articles. Augmenting the search for specific articles related to sport seasons and stakeholders provided 6 additional articles highlighting various stakeholders of sport clubs.

As a sport season is completed by players and staff, managing the team is a key element as it is of project completion as well (Hicks et al., 2023; Higham & Hinch, 2002). Similarly to projects (PMI, 2017), seasons are also complex endeavors where many things are factoring in the completion.

Professional sport teams consist of a diverse group of skilled players and a supporting staff each with unique strengths and responsibilities, assembled for competing and achieving team success. As the team competes through the season facing uncertainties such as injuries, physical, psychological, and other adversaries risking the achievement of goals of the year (see e.g. Pankow et al., 2021; Moore, Petrie & Slavin, 2022). These situations need careful consideration of team dynamics, ensuring the right combination of skills and capabilities to maximize performance, furthermore, resource allocation becomes crucial in these activities, as player assignment is the greatest cost, related to the season of professional teams.

Sport clubs compete in their field with their temporary teams assembled for the season, therefore professional clubs place a strong emphasis on teamwork and performance of theirs in order to compete at games and satisfy the needs of viewers, sponsors, and other stakeholders (Borland, 2006; Sullivan, 2004). In sports, athletes with different attributes and skill sets collaborate to achieve organizational and team objectives (Frick, Prinz & Winkelmann, 2003). The success of the group depends on how they utilize individual sets of skills and competencies, and how they cooperate as teammates, therefore the way they communicate, work together and ultimately, the way they are managed determines team performance (Frick & Simmons, 2008; Tian, Li, Li & Bodla, 2015).

Leadership plays a pivotal role in the case of managing projects and running professional sport clubs, and as sports managers and coaches – sometimes being the same individual – bear this responsible role to lead and inspire their team to perform on the court (Ferkins, Skinner & Swanson., 2018). Considering this, the leader of a sport team establishes leadership structures and styles in order to guide members of their organization. As Lee & Chelladurai (2017) mentioned, the character of being a leader of a sport organization involves a broad set of skills such as acquiring the required players and personnel (Hill & Sotiriadou, 2016; Lath, Koopmann, Faber, Baker & Schorer, 2021), making critical decisions such as changes in the structure of the team (Collins & Collins, 2020), also motivating team members, resolving conflicts (Wachsmuth, Jowett & Harwood, 2020) and modifying the plans if vitally needed.

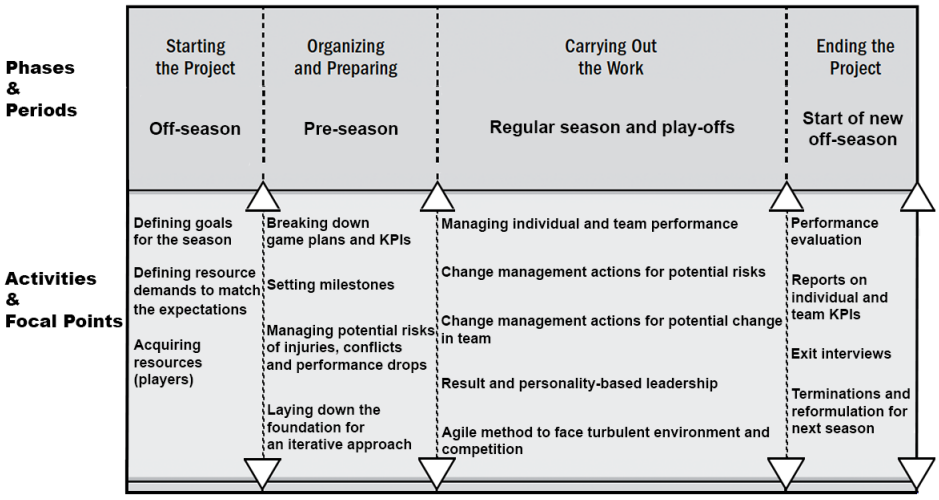
Sport teams end their collaboration by the end of the season with the evaluation of their achievements in a distinct way. Sport teams, if winning a championship or achieving team success in the predetermined way, bring collaborative success to their organization (Kreiner-Phillips & Orlick, 1993). After the competition, teams

are evaluated and terminated or reassembled for another season (Carron, Spink & Prapavessis, 1997).

For the successful completion of a sport season, team staff regularly monitor individual and team performance and also evaluate the metrics. Sport teams identify areas of improvement and assess the effectiveness of training and strategies, also analyze their performance to make adjustments, and implement changes swiftly (Font et al., 2021; Myer et al., 2015). Effective feedback and evaluation mechanisms become crucial for continuous improvement within the limited timeframe.

Figure 3

Focal points built on similarities between project and sport season life cycles



Source: own compilation based on PMI (2017, p. 548)

The Table 2 presents the characteristics of projects and sports seasons based on the reviewed literature focusing on the overlapping areas, as well as connects the characteristics with a common ground. Furthermore, it also includes how project management tools and techniques could be utilized for the management of sports seasons in case of similarities, in order to support successful performance.

Table 2

Implications based on similarities of constraints

Project Characterization	Sport Season Attributes	Project Management Implications
Time constraint	Predefined length	Task planning and scheduling methods Setting and monitoring milestones
Cost constraint	Salary caps	Loose cost control Cost register
Scope constraint	Club goals for the season	Goal definition Breaking down goals to tasks and KPIs

Source: own compilation

As there are numerous tasks to manage and complete throughout a sport season, applying task scheduling and planning methods could be transferred from project management to sport management, just like a milestone-setting approach, which would mark these events to different phases or episodes of the sport season. By applying these sport managers could improve the visibility and transparency of team progress regarding time and goals.

Cost is also a major constraint to manage. A wide range of different costs are involved in the operation of a sport club, however, sport managers mostly take care of personal finances, player salaries, and transfer fees. In varsity leagues or semi-professional sport leagues teams a loose cost control is a fitting option for project (sport season) management, but a more precise and accurate method for professional teams e.g. US major sport teams cost planning and visualizing methods such as a cost register or project-like budgeting need to be adopted. This not only provides the base for more advanced control mechanisms on cost level but also gives the opportunity for post-season planning.

Exercising a project management attitude in goal setting could serve the purpose of the team's success in the season. Visualizing and deploying KPIs to different sub-goals or deliverables of a season and breaking them down with a goal or work breakdown structure would help the player and staff understand, how goals can be achieved and what work should be executed in order to succeed.

Engaging in risk management of the season with a project management mindset and utilizing risk probability calculations and preventive methods could also have advantages for sport managers. A possible deployment might influence how practices of different members of the team roster should be executed, such as putting limitations on play time minutes or carrying out extra injury prevention activities such as conditioning.

In accordance with the aim of the paper, the congruencies between the project life cycle and the scheduling of sport seasons are also revealed based on the literature. The concept of project life cycle is based on the PMI's life cycle and the schedule of a season is based on the literature. At the same time, the potential focal point and management actions are also identified relying on the professional sources of project management (Figure 3).

Conclusions

There are numerous popular topics both in the literature of sport management and project management, however, their connection on club level is rarely researched. Based on this, the aim of this paper was to find congruency between these two areas. As the result of the narrative literature review, crucial overlaps between project and sport can be directly or indirectly identified among the attributes of sport seasons. The time constraints for completion, such as defined start and end of implementation, season fixtures being in parallel with project tasks or milestones, and also time planning and scheduling are common phenomena in the reviewed literature.

Not only time is predefined, but also goals of the season are determined, therefore just like in projects, the sport team and staff perform in order to achieve the required result, whether it is winning championships, developing players, or rehabilitating players. Leaders of the sport teams – coaches and managers – and of projects – project managers push their teams to give their best efforts and to help their teams carefully set up a plan or game plan. Besides planning, leadership is also the responsibility of the respectable leaders of teams.

During the execution of the team plans, cooperative and individual performance plays a great role in progress and overall success, and it can be monitored during seasons and also during projects to keep track of progress, look for an opportunity for development, or finish off tasks.

Not only timely manner, but also a cyclical order is realizable in sport seasons, which consist of initiation and preparation phases such as off-seasons and pre-seasons, phases for execution in regular seasons and postseasons, and just like projects for project-oriented organizations, sport seasons are the repetitive – and annual – building blocks of operation for sport teams. In between seasons, off-seasons exist, when teams and individuals evaluate past performance and based on their experience focus on preparation and planning.

Although some elements of project definition could not be identified among a seasons' attributes based on the reviewed literature, they share many key characteristics to build on. This provides an opportunity for future research to study additional similarities, for example, whether seasons have a cost constraint as projects have. Another option to continue this research is to study how sport organizations operate building on the assumption of this article that seasons can be identified as projects. Is it possible for sport clubs to adopt the processes of project-based or project-oriented organizations to increase their efficiencies? And if yes, then in what ways?

Based on the review and the similarities identified implications have been made, on how sport managers could use some project management techniques to handle the constraints and tasks during the course of a season. Such implications are that active risk management, performance, and schedule management could be useful for leaders of sport organizations.

There are some limitations of this research as the data for the literature review have been gathered only from the most cited articles of the keyphrases, and the articles touched on not only business focus but came from different fields such as Health Sciences, Sport Psychology or Medicine. Even so, the defining characteristics of sport seasons provided enough foundation to carry out this comparison.

References

Ajmal, M., Khan, M., & Al-Yafei, H. (2020). Exploring factors behind project scope creep – stakeholders' perspective. *International Journal of Managing Projects in Business, 13*(3), 483-504. https://doi.org/10.1108/IJMPB-10-2018-0228

Atkinson, R. (1999). Project management: cost, time, and quality, two best guesses and a phenomenon, its time to accept other success criteria. *International Journal of Project Management, 17*(6), 337-342. https://doi.org/10.1016/S0263-7863(98)00069-6

Babu A.J.G., & Suresh N. (1996). Project management with time, cost, and quality considerations. *European Journal of Operational Research, 88*(2), 320-327, https://doi.org/10.1016/0377 2217(94)00202-9

Berényi, L., & Deutsch, N. (2022). Vállalati sikertényezők fontosságának értékelése. In Karlovitz, J.T. (Eds.), *Az ember* és *a gazdaság egészséges* és *biztonságos környezetben* (pp. 9-18). International Research Institute.

Blaskovics, B. (2014) *Az ICT szektorban működő projektvezetők személyes jellemzőinek hatása a projektsiker alakulására* [Doktori értekezés]. Budapesti Corvinus Egyetem, Budapest. https://doi.org/10.14267/phd.2014082

Blaskovics, B., Szabó, L., Kádár, Z., Molnár, M., Tóth, N., & Tóth, J. (2023). Projektmenedzsment-érettség vizsgálata közszférában tevékenykedő szolgáltatásfókuszú vállalatok példája alapján. *Vezetéstudomány, 54*(4), 2-17. https://doi.org/10.14267/VEZTUD.2023.04.01

Borghesi, R. (2009). An examination of prediction market efficiency: NBA contracts on tradesports. *The Journal of Prediction Markets, 3*(2), 65-77. https://ssrn.com/abstract=2149601

Borland, J. (2006). The production of professional team sports. In W. Andreff & S. Szymanski (Eds.), *Handbook on the economics of sport* (pp. 22–26). Edward Elgar Publishing Ltd. https://doi.org/10.4337/9781847204073

Bredillet, C. (2007). From the Editor. *Project Management Journal, 38*(2), 3-4. https://doi.org/10.1177/875697280703800201

Carron, A.V., Spink, K.S., & Prapavessis , H. (1997). Team building and cohesiveness in the sport and exercise setting: Use of indirect interventions. *Journal of Applied Sport Psychology, 9*(1), 61-72, https://doi.org/10.1080/10413209708415384

Chin, L.S., & Hamid, A.R.A. (2015). The Practice of Time Management on Construction Project. *Procedia Engineering, 125*, 32-39. https://doi.org/10.1016/j.proeng.2015.11.006

Chu, T.L., Zhang, X., Lee, J., & Zhang, T. (2020). Perceived coach-created environment directly predicts high school athletes' physical activity during sport. *International Journal of Sports Science & Coaching, 16*(1), 70-80. https://doi.org/10.1177/1747954120959733

Cleland, D.I. (1994). *Project Management – Strategic Design and Implementation* (2nd edition). McGraw-Hill.

Collins, D., & Collins, L. (2020). Developing coaches' professional judgement and decision making: Using the "Big 5". *Journal of Sports Sciences, 39*(1), 115–119. https://doi.org/10.1080/02640414.2020.1809

Coppalle, S., Rave, G., Ben Abderrahman, A., Ali, A., Salhi, I., Zouita, S., & Zouhal, H. (2019). Relationship of pre-season training load with in-season biochemical markers, injuries and performance in professional soccer players. *Frontiers in Physiology, 10*, 426414. https://doi.org/10.3389/fphys.2019.00409

Cooke-Davies, T. (2002). The "real" success factors on projects. *International Journal of Project Management, 20*(3), 185-190. https://doi.org/10.1016/S0263-7863(01)00067-9

Cotterill, S.T., & Fransen, K. (2016). Athlete leadership in sport teams: Current understanding and future directions. *International Review of Sport and Exercise Psychology, 9*(1), 116-133. https://doi.org/10.1080/1750984X.2015.1124443

Croft, C., Paulson, C., Stokowski, S., Berri, D., & Mondello, M. (2023). The player makes the coach: Exploring player development among Division I basketball coaches. *International Journal of Sports Science & Coaching, 18*(3), 695-704. https://doi.org/10.1177/17479541221146384

Durdubas, D., Martin, L.J., & Koruc, Z. (2019). A Season-Long Goal-Setting Intervention for Elite Youth Basketball Teams. *Journal of Applied Sport Psychology, 32*(6), 529-545. https://doi.org/10.1080/10413200.2019.1593258

Ferkins, L., Kinner, J., & Swanson, S. (2018). Sport Leadership: A New Generation of Thinking. *Journal of Sport Management, 32*(2), 77-81. https://doi.org/10.1123/jsm.2018-0054

Ferrari, R. (2015). Writing narrative style literature reviews. *Medical Writing, 24*(4), 230–235. https://doi.org/10.1179/2047480615Z.000000000329

Font, R., Karcher, C., Reche, X., Carmona, G., Tremps, V., & Irurtia, A. (2021). Monitoring external load in elite male handball players depending on playing positions. *Biology of Sport, 38*(3), 475-481. https://doi.org/10.5114/biolsport.2021.101123

Fotiadis, A. (2020). Sports Management, Project Management, and Sports Event Management. In Fotiadis, A. & Vassiliadis, C. (Eds.), *Principles and Practices of Small-Scale Sport Event Management* (pp. 1-19). IGI Global.

Francis, A.E., Webb, M., Desha, C., Rundle-Thiele, S., & Caldera, S. (2023). Environmental sustainability in stadium design and construction: A systematic literature review. *Sustainability, 15*(8), 6896. https://doi.org/10.3390/su15086896

Frick, B., Prinz, J., & Winkelmann, K. (2003). Pay inequalities and team performance: Empirical evidence from the North American major leagues. *International Journal of Manpower, 24*(4), 472–488. https://doi.org/10.1108/01437720310485942

Frick, B., & Simmons, R. (2008). The impact of managerial quality on organizational performance: Evidence from German soccer. *Managerial and Decision Economics, 29*, 593 600. https://doi.org/10.1002/mde.1431

Garcia-del-Barrio, P. & Szymanski, S. (2009). Goal! Profit Maximization Versus Win Maximization in Soccer. *Review of Industrial Organization 34*, 45–68. https://doi.org/10.1007/s11151-009-9203-6

Gido, J., Clements, J., & Baker, R. (2018). *Successful Project Management*. Cengage Learning.

Gilbert, W.D., & Trudel, P. (2001). Learning to Coach through Experience: Reflection in Model Youth Sport Coaches. *Journal of Teaching in Physical Education, 21*(1), 16–34. https://doi.org/10.1123/jtpe.21.1.16

Gillham, A., & Weiler, D. (2013). Goal setting with a college soccer team: What went right, and less than-right. *Journal of Sport Psychology in Action, 4*(2), 97–108. https://doi.org/10.1080/21520704.2013.764560

Goleman, D., Boyatzis, R., & McKee, A. (2002). *The New Leaders*. Harvard Business School Press.

Görög, M. (2013). *Projektvezetés a szervezetekben*. Panem Könyvek – Taramix Könyvkiadó.

Guild, P., Lininger, M.R., & Warren, M. (2020). The association between the single leg hop test and lower-extremity injuries in female athletes: a critically appraised topic. *Journal of Sport Rehabilitation, 30*(2), 320-326. https://doi.org/10.1123/jsr.2019-0391

Hazar, H.H. (2014). Time Management tools and techniques for project management. *Socio- economic Research Bulletin, 4*(55), 57-62. http://irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe?C21COM=2&I21DBN=UJRN&P21DBN=UJRN&IMAGE_FILE_DOWNLOAD=1&Image_file_name=PDF/Vsed_2014_4_12.pdf

Healy, L., Tincknell-Smith, A., & Ntoumanis, N. (2018). Goal setting in sport and performance. In L. Healy, A. Tincknell-Smith, & N. Ntoumanis (Eds.), *Oxford research encyclopedia of psychology*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190236557.013.152

Hicks, S.D., Onks, C., Kim, R.Y., Zhen, K.J., Loeffert, J., Loeffert, A.C, & Dretsch, M.N. (2023). Refinement of saliva microRNA biomarkers for sports-related concussion. *Journal of Sport and Health Science, 12*(3), 369-378. https://doi.org/10.1016/j.jshs.2021.08.003

Higham, J., & Hinch, T. (2002). Tourism, sport and seasons: the challenges and potential of overcoming seasonality in the sport and tourism sectors. *Tourism Management, 23*(2), 175–185. https://doi.org/10.1016/s0261-5177(01)00046-2

Hill, B., & Sotiriadou, P. (2016). Coach decision-making and the relative age effect on talent selection in football. *European Sport Management Quarterly, 16*(3), 292–315. https://doi.org/10.1080/16184742.2015.1131730

Jeong, Y.H., Healy, L.C., & McEwan, D. (2023). The application of goal setting theory to goal setting interventions in sport: A systematic review. *International Review of Sport and Exercise Psychology, 16*(1), 474-499. https://doi.org/10.1080/1750984X.2021.1901298

Judgev, K., & Müller, R. (2005). A Retrospective Look at Our Evolving Understanding of Project Success. *Project Management Journal, 36*(4), 19-31. https://doi.org/10.1177/875697280503600403

Juntunen, M., & Lehenkari, M. (2019). A narrative literature review process for an academic business research thesis. *Studies in Higher Education, 46*(2), 330–342. https://doi.org/10.1080/03075079.2019.1630813

Keefer, Q. (2021). Sunk costs in the NBA: the salary cap and free agents. *Empirical Economics, 61*, 3445-3478, https://doi.org/10.1007/s00181-020-01996-z

Kerzner, H. (2022). *Project management case studies*. John Wiley & Sons.

Késenne, S. (2006). The Win Maximization Model Reconsidered: Flexible Talent Supply and Efficiency Wages. *Journal of Sports Economics, 7*(4), 416-427. https://doi.org/10.1177/1527002505279347

Kingston, K.M., & Hardy, L. (1997). Effects of different types of goals on processes that support performance. *The Sport Psychologist, 11*(3), 277–293. https://doi.org/10.1123/tsp.11.3.277

Kingston, K.M., & Wilson, K.M. (2009). The application of goal setting in sport. In S. Mellalieu & S. Hanton (Eds.). *Advances in Applied Sport Psychology: A Review* (pp. 75–123). Routledge.

Kinnerk, P., Kearney, P.E., Harvey, S., & Lyons M. (2023) An investigation of high-performance team sport coaches' planning practices. *Sports Coaching Review, 12*(3), 253-280. https://doi.org/10.1080/21640629.2021.1990653

Knapik, J.J., Bauman, C.L., Jones, B.H., Harris, J.M., & Vaughan, L. (1991). Preseason strength and flexibility imbalances associated with athletic injuries in female collegiate athletes. *The American Journal of Sports Medicine, 19*(1), 76–81. https://doi.org/10.1177/036354659101900113

Kreiner-Phillips, K., & Orlick, T. (1993). Winning after winning: The psychology of ongoing excellence. *The Sport Psychologist, 7*(1), 31-48. https://doi.org/10.1123/tsp.7.1.31

Kwak, Y.H., & Anbari, F.T. (2009). Analyzing project management research: Perspectives from top management journals. *International Journal of Project Management, 27*(5), 435-446. https://doi.org/10.1016/j.ijproman.2008.08.004

Labuschagne, C., & Brent, A.C. (2005). Sustainable Project Life Cycle Management: the need to integrate life cycles in the manufacturing sector. *International Journal of Project Management, 23*(1), 159-168. https://doi.org/10.1016/j.ijproman.2004.06.003

Lath, F., Koopmann, T., Faber, I., Baker, J., & Schorer, J. (2021). Focusing on the coach's eye; towards a working model of coach decision-making in talent selection. *Psychology of Sport and Exercise, 56*, 102011. https://doi.org/10.1016/j.psychsport.2021.102011

Lee, Y.H., & Chelladurai, P. (2017). Emotional intelligence, emotional labor, coach burnout, job satisfaction, and turnover intention in sport leadership. *European Sport Management Quarterly, 18*(4), 393–412. https://doi.org/10.1080/16184742.2017.1406

Li, Y., Wang, L., & Li, F. (2021). A data-driven prediction approach for sports team performance and its application to National Basketball Association. *Omega, 98*, 102123. https://doi.org/10.1016/j.omega.2019.102123

Lis, A., & Tomanek, M. (2020). Sport management: Thematic mapping of the research field. *Journal of Physical Education and Sport, 20*, 1201-1208. https://doi.org/10.7752/jpes.2020.s2167

Martens, A., & Vanhoucke, M. (2019). The impact of applying effort to reduce activity variability on the project time and cost performance. *European Journal of Operational Research, 277*(2), 442-453. https://doi.org/10.1016/j.ejor.2019.03.020

Martens, A., & Vanhoucke, M. (2020). Integrating Corrective Actions in Project Time Forecasting Using Exponential Smoothing. *Journal of Management in Engineering, 36*(5), 04020044. https://doi.org/10.1061/(asce)me.1943-5479.0000806

Meredith, J.R., & Zwiakel, O. (2020). Achieving strategic benefits from project investments: Appoint a project owner. *Business Horizons 63*(1), 61-71. https://doi.org/10.1016/j.bushor.2019.09.007

Moore, E.W.G., Petrie, T.A., & Slavin, L.E. (2022). College Student-athletes' COVID-19 Worry and Psychological Distress Differed by Gender, Race, and Exposure to COVID-19–related Events. *Journal of Adolescent Health, 70*(4), 559-566. https://doi.org/10.1016/j.jadohealth.2021.12.022

Myer, G.D., Jayanthi, N., DiFiori, J.P., Faigenbaum, A.D., Kiefer, A.W., Logerstedt, D., & Micheli, L.J. (2015). Sports Specialization. Part II: Alternative Solutions to Early Sport Specialization in Youth Athletes. *Sports Health: A Multidisciplinary Approach, 8*(1), 65–73. https://doi.org/10.1177/1941738115614811

NBPA (National Basketball Player Association). (2023). *2023 NBA-NBPA Collective Bargaining Agreement*. https://www.nba.com/news/nba-collective-bargaining-agreement-signed

NFLPA (National Football League Player Association) (2020). Collective Bargaining Agreement.

Oburu, A.O. (2020). Effective project time management. *International Academic Journal of Information Sciences and Project Management, 3*(6), 47-55. https://www.iajournals.org/articles/iajispm_v3_i6_47_55.pdf

Pankow, K., McHugh, T.L.F., Mosewich, A.D., & Holt, N.L. (2021). Mental health protective factors among flourishing Canadian women university student-athletes. *Psychology of Sport and Exercise,* 52, 101847. https://doi.org/10.1016/j.psychsport.2020

Pinto, J.K. (2020). *Project Management – Achieving Competitive Advantage.* Pearson.

Pires, D.A., & Ugrinowitsch, H. (2021). Burnout and coping perceptions of volleyball players throughout an annual sport season. *Journal of Human Kinetics, 79*(1), 249-257. https://doi.org/10.2478/hukin-2021-0078

Pollack, J., Helm, J., & Adler, D. (2018). What is the Iron Triangle, and how has it changed? *International Journal of Managing Projects in Business, 11*(2), 527-547. https://doi.org/10.1108/IJMPB-09-2017-0107

Prapavessis, H., Carron, A.A., & Spink, K.S. (1996). Team building in sport. *International Journal of Sport Psychology, 27*, 269-285. https://www.researchgate.net/publication/286344440_Team_building_in_sport

Project Management Institute. (2017). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (6th ed.). PMI Publications.

Project Management Institute (2021). *A guide to the project management body of knowledge (PMBOK® Guide)* (7th ed.). PMI Publications.

Ratten, V., & Jones, P. (2020). New challenges in sport entrepreneurship for value creation. *International Entrepreneurship and Management Journal, 16*, 961-980. https://doi.org/10.1007/s11365-020-00664-z

Raykar, P., & Ghadge, A.N. (2016). Analyzing the Critical Factors Influencing the Time Overrun and Cost Overrun in Construction Project. *International Journal of Engineering Research, 5*(SP1), 21-25. https://doi.org/10.1007/978-981-33-6969-6_6

Reinboth, M., & Duda, J.L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise, 7*(3), 269–286. https://doi.org/10.1016/j.psychsport.2005

Ribeiro, A., Amaral, A., & Barros, T. (2021). Project Manager Competencies in the context of the Industry 4.0. *Procedia Computer Science, 181*, 803-810. https://doi.org/10.1016/j.procs.2021.01.233

Robertson, S., & Joyce, D. (2018). Evaluating strategic periodisation in team sport. Journal of sports sciences, 36(3), 279-285. https://doi.org/10.1080/02640414.2017.1300315

Salvador, A., Suay, F., González-Bono, E., & Serrano, M.A. (2003). Anticipatory cortisol, testosterone and psychological responses to judo competition in young men. *Psychoneuroendocrinology, 28*(3), 364–375. https://doi.org/10.1016/s0306-4530(02)00028-8

Sarkar, M., & Page, A.E. (2022). Developing Individual and Team Resilience in Elite Sport: Research to Practice. *Journal of Sport Psychology in Action, 13*(1), 40-53, https://doi.org/10.1080/21520704.2020.1861144

Sarlis, V., & Tjortjis, C. (2020). Sports analytics – Evaluation of basketball players and team performance. *Information Systems, 93*, 101562. https://doi.org/10.1016/j.is.2020.101562

Senécal, J., Loughead, T.M., & Bloom, G.A. (2008). A Season-Long Team-Building Intervention: Examining the Effect of Team Goal Setting on Cohesion. *Journal of Sport and Exercise Psychology, 30*(2), 186–199. https://doi.org/10.1123/jsep.30.2.186

Severini, T.A. (2020). *Analytic Methods in Sports: Using Mathematics and Statistics to Understand Data from Baseball, Football, Basketball, and Other Sports* (2nd ed.). Chapman and Hall/CRC. https://doi.org/10.1201/9780367252090

Shenhar, A.J., & Dvir, D. (1996). Toward a typological theory of project management. *Research Policy, 25*(4), 607-632. https://doi.org/10.1016/0048-7333(95)00877-2

Strelicz, A. (2016) A kockázatirányítás új dimenziói – a holisztikus FMEA. *Vezetéstudomány/Budapest Management Review, 47*(1), 18-30. https://doi.org/10.14267/VEZTUD.2016.01.02

Sullivan, M. (2004). Sport marketing. In J. Beech & S. Chadwick (Eds.), *The business of sport management* (pp. 128–153). Pearson Education. https://doi.org/10.1108/IJMPB-10-2018-0228

Thesing, T., Feldmann, C., & Burchardt, M. (2021). Agile versus waterfall project management: decision model for selecting the appropriate approach to a project. *Procedia Computer Science, 181*, 746-756. https://doi.org/10.1016/j.procs.2021.01.227

Tian, L., Li, Y., Li, P.P., & Bodla, A.A. (2015). Leader–member skill distance, team cooperation, and team performance: A cross-culture study in a context of sport teams. *International Journal of Intercultural Relations, 49*, 183-197. https://doi.org/10.1016/j.ijintrel.2015.10.005

Torres-Ronda, L., Beanland, E., Whitehead, S., Sweeting, A., & Clubb, J. (2022). Tracking Systems in Team Sports: A Narrative Review of Applications of the Data and Sport Specific Analysis. *Sports Medicine – Open, 8*(15),. https://doi.org/10.1186/s40798-022-00408-z

Urbinati, A., Landoni, P., Cococcioni, F., & De Giudici, L. (2020). Stakeholder management in open innovation projects: a multiple case study analysis. *European Journal of Innovation Management, 24*(5), 1595-1624. https://doi.org/10.1108/ejim-03-2020-0076

Varga, J., & Csiszárik-Kocsir, Á. (2015): A gazdasági proaktivizmus hiánya a hazai gazdaságban és a válságkezelésben. In Csiszárik-Kocsir, Á. (Ed.), *Vállalkozásfejlesztés a XXI. században V. tanulmánykötet* (pp. 409-438). Óbudai Egyetem, Keleti Károly Gazdasági Kar.

Venkataraman, R.R., & Pinto, J.K. (2023). *Cost and value management in projects*. John Wiley & Sons.

Verzuh, E. (2021): *The Fast Forward MBA in Project Management* (6th ed.). John Wiley & Sons.

Vlahoyiannis, A., Aphamis, G., Bogdanis, G.C., Sakkas, G.K., Andreou, E., & Giannaki, C.D. (2021). Deconstructing athletes' sleep: A systematic review of the influence of age, sex, athletic expertise, sport type, and season on sleep characteristics. *Journal of Sport and Health Science, 10*(4), 387-402. https://doi.org/10.1016/j.jshs.2020.03.006

Wachsmuth, S., Jowett, S., & Harwood, C.G. (2020). Third Party Interventions in Coach Athlete Conflict: Can Sport Psychology Practitioners offer the necessary Support? *Journal of Applied Sport Psychology, 34*(1), 178-203. https://doi.org/10.1080/10413200.2020.1723737

Wagstaff, C.R., & Burton-Wylie, S. (2018). Organizational culture in sport: A conceptual, definitional, and methodological review. *Sport & Exercise Psychology Review, 14*(1), 32-52. https://shop.bps.org.uk/publications/publications-by-subject/sport-exercise-psychology-review-vol-14-no-2-september-2018.html

Ward, P., & Carnes, M. (2002). Effects of posting self-set goals on collegiate football players' skill execution during practice and games. *Journal of Applied Behavior Analysis, 35*(1), 1–12. https://doi.org/10.1901/jaba.2002.35-1

Weinberg, R., & Butt, J. (2014). Goal-setting and sport performance: Research findings and practical applications. In Papioannou, A. & Hackfort, D. (Eds.), *Routledge Companion to Sport and Exercise Psychology* (pp. 343-355). Routledge.