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Use of sports principles in the workplace to improve worker development and performance.

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Master in Management

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Resumo

Esta tese de mestrado examina a integração de princípios e práticas desportivas no contexto empresarial, com o objetivo de avaliar a sua influência no desenvolvimento e desempenho dos colaboradores. O desporto está enraizado em vários sectores da sociedade moderna, com uma crescente atenção académica sobre a sua intersecção com as práticas de gestão. Esta investigação baseia-se na hipótese de que os princípios desportivos podem conduzir à otimização da gestão dos recursos humanos (RH), melhorando os processos de desenvolvimento e desempenho dos trabalhadores. Embora grande parte da literatura atual forneça principalmente uma visão teórica, este estudo aborda a necessidade de aplicabilidade prática através da realização de entrevistas com indivíduos que possuem experiência tanto no desporto como na gestão. Ao comparar os resultados das entrevistas com pesquisas anteriores, o estudo identifica os princípios derivados do desporto mais impactantes para a gestão, oferecendo um caminho prático para a adaptação destes princípios para melhorar vários aspetos que impactam a performance dos trabalhadores. Esta tese contribui para o desenvolvimento do capital humano das empresas, fazendo a ponte entre duas áreas com o mesmo foco na performance, mas com abordagens diferentes.

Palavras-chave: Princípios desportivos, desenvolvimento de atletas, desenvolvimento de trabalhadores, gestão de recursos humanos, gestão da performance.

JEL Classification System: J24, M10

ABSTRACT

This master's thesis systematically examines the integration of sports principles and practices within corporate settings to assess their influence on employee development and performance. Sports are embedded in various sectors of modern society, with increasing scholarly attention on their intersection with management practices. This research is based in the hypothesis that sports principles applied in organizations can lead to the optimization of human resources (HR) management, enhancing processes for worker growth and performance. While much of the current literature provides primarily theoretical and vague insights, this study addresses the need for practical applicability. Interviews were conducted with former athletes who work in diverse sectors, and comparisons were drawn between the approach to athlete development in sports, and the approach to worker development in organizations. By comparing interview results with prior research, the study identifies the most impactful sports-derived principles for HR, offering practical insights that HR managers can adapt to improve individual performance, team performance, and lastly organizational outcomes. This thesis provides a grounded perspective on human resources enhancement, bridging theory about several topics common to sports and management, and supporting management literature in search of more effective performance management principles.

Key Words: Sports transferability, athlete development, employee development, human resource management, performance management.

JEL Classification System: J24, M10

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INTRODUCTION

Consistent performance outcomes are essential for a company to remain sustainable. Intense competition is unavoidable in today's rapidly transforming business environment. Organizations demand higher levels of performance from their members to overcome uncertainties caused by high competition and a globalized market. And consequently, there is a persistent search for performance improvement to leverage organizational outcomes (Loehr and Schwartz, 2001). Organizations rely on practices and principles that, when implemented, have a long-term impact on the firm's performance that ensures sustainability. The role of managers is exactly to create a culture, reflected on those practices and principles, that enables performance and development to flourish (Saridakis et al., 2017; Siraj & Hågen, 2023).

The relationship between this topic and sports lies exactly in the focus that sports have on performance-enhancing and the development of athletes. Considering that this is a matter of constant importance for companies, the transferability of sports principles to business management is yet under-explored and promising. Because development and performance are core concepts in sports and business, these are the variables focused in greater detail in this dissertation.

Contextualization

In the beginning of this century, there has been more research that addresses sports-related themes in management. Many of those themes were quite unfamiliar in the past and the association of sports and management was far from being comprehended (Kartz, 2001). The relationship between sports and business was sometimes established through popular figures in the sports world. An example of that was successful coaches such as Pat Riley, Rick Pitino, Lou Holtz, Pat Summitt, Tommy Lasorda, and Mike Ditka being invited to address managers and leaders of large corporations such as General Motors, IBM, AT&T, and Ford. The implied expectation is that the principles of success that these famous coaches used to be successful in sports would be applicable and transferable to the world of business (Weinberg & McDermott, 2002). Another example of this is the book *The Business Playbook: Leadership Lessons From the World of Sports* by Brandon Steiner (2002), which has a similar approach to associating leadership in both fields. Also, sports teams are another example in which the success in sports is in some way applicable to management. Many successful sports teams are taken as examples for teams within organizations (Kartz, 2001).

By interviewing leaders from the world of sports and business, there were also results that pointed out for the association of both areas. Interviewers asked the different leaders what are the key factors that create organizational effectiveness in the areas of leadership, group cohesion and

communication. The results revealed more similarities than differences, with most sports and business leaders in agreement on the factors relating to organizational success (Weinberg & McDermott, 2002).

However, many think that the link between sport and business remains vague and ideal, with few practical expressions (Costa et al., 2023). This project – Skills by Sports 4 Med – bridges the two worlds with scientific research and consolidates this link, but also gives a practical expression to this link by implementing its program. It consists of an European project in which sports is used to develop skills useful for the labor market and increase the employability of individuals. Different social groups such as youth, migrants, or unemployed people in the Mediterranean region have a chance to experience sports practice to develop skills for the labor market. This is achieved by providing opportunities for those social groups to participate in sports and raising awareness in sports coaches of their role in promoting the development of such skills needed in the labor market. This is a project developed together with the ISCTE university and an example of practical expressions in the sports and business relationship.

Research concerning this relationship has been present for a long time. In the early 2000's a new concept emerged: the Corporate Athlete. Loehr and Schwartz (2001), the creators of this concept, stated that performance (any type of performance regardless of context) depends on several factors, such as physical capacity, emotional capacity, mental capacity, and spiritual capacity. For someone to perform to their full potential, one must have all these factors stable. Also, the ideal performance state depends, alike sports, on supportive or secondary competencies, among them endurance, strength, flexibility, self-control, and focus. Increasing capacity at all levels allows athletes and executives to use their talents and skills to the fullest and to sustain high performance over time – a condition called the Ideal Performance State (Loehr & Schwartz, 2001).

Due to some similarities between contexts in companies and sports, management research frequently uses sports to study team dynamics, leadership, and other matters relevant to management. (Fonti & Ross & Aversa, 2023).

“Sports contexts are increasingly used in management research to test and develop theory and explore managerially relevant phenomena. This growth in publications is likely driven by a series of advantages that sports data offers to management researchers” (Fonti & Ross & Aversa, 2023).

Sports are becoming more professionalized, and statistics and data are a key part of sports. This enables researchers and executives to draw comparisons with companies' workplaces. The way management is taking advantage of and learning from sports comes to prove that there are practical insights from sports that are applicable to management. (Fonti & Ross & Aversa, 2023).

The rigor and professionalism in the development of professional and Olympic athletes is another aspect benefiting the use of sports contexts for management research. Researchers are able to study their process of development in great detail and to explain the psychological traits of successful athletes. According to Gould et al., (2002), by analyzing the Olympic athletes' characteristics, they identified some traits that are more frequent in athletes than in general individuals. Some of these characteristics are developed through sports, and others are personal characteristics that help athletes reach elite levels. Other studies point out that these characteristics (frequent in elite athletes) are relatively common to successful managers and executives (Weinberg & McDermott, 2002). The fact that individuals who played sports have such specific characteristics is often reported as beneficial to companies (Costa et al., 2023), and a question may arise as to how sports influence those workers to develop such characteristics. Despite the existence of a lot of research about these competencies and individual characteristics, less is known about how these skills are cultivated and developed (Gould et al., 2002). This is still to be further analyzed and from there, practical applications of sports principles in organizations can be developed. If the development of certain traits and skills happens so effectively in sports contexts, paths must be found to extend the development of those traits in a company's workplace.

Most organizations' executives agree that learning and talent development is a concept that has become essential and a priority to organizational success (Kim and McLean 2012). Talent development in sports is dependent on several factors other than training per se. In youth sports, psychological aspects such as resilience, and external factors such as family, play an essential role when developing athletes (Burgess & Naughton 2010). The same applies to worker development. Research shows that the motivation and predisposition of employees to training programs are fundamental to the development of their skills (Kim & McLean, 2012).

The context of sports is a good example of how performance and talent development depend not only on skills but also on secondary competencies (such as resilience and creativity) (Costa et al., 2023). The growing use of sports examples about performance (as mentioned before, either with athletes or teams) leads to thinking that the development of such secondary competencies (many enumerated in the S4Med project) can be achieved by increasing the similarities between the workplace and a sports context.

Despite the general benefits of practicing a sport, the practice of sports is not in itself an infallible way of life skill development. The development of life skills through sports depends greatly on how coaches create environments that develop such skills in youth (Camiré et al., 2012). The fact that coaches manipulate and constrain environmental conditions aiming to develop these skills points to the fact that other domains can also manipulate their environments in a way that it resembles a sports context and is prone to developing life skills. These skills

include relational skills, cognitive skills, personal skills, and functional skills (Camiré et al., 2012; Costa et al., 2023).

Sports competencies				Sports practices and principles		
<i>Functional /physical</i>	<i>Personal</i>	<i>Relational</i>	<i>Cognitive</i>	<i>Techniques</i>	<i>Relational</i>	<i>Cognitive/ contextual</i>
Ponctuality and assiduity	Resilience	Communica- tion skills	Analytical capability	Competition simulation	Communica- tion stimulation	Adapting to new external contexts and to the psychological state of athletes
Individual motor competences	Empathy	Group/team skills	Emotional control	Precision and memory games	Respecting norms	
Specific techniques to the sport	Tolerance	Responsabili- ty and commitment		Pressure testing	Means to overcome problems	
Methodology and objectives consciency	Respect, confidence			Technical accuracy	Fostering autonomy	
	Love for the sport			Planning oriented to objectives	Guided learning/ decision- making	

Figure 1. General sports competencies, practices and principles (Source: data collected from Costa et al., 2023; Self-made)

The competencies described in the table above summarize the findings by Costa et al. (2023) in the Skills by Sports4MED project. These are a set of competencies developed through sports and the practices and principles found in sports contexts, also described in the table. Coaching sessions in sports teams could lead new management literature to pursue innovative ways of developing competencies,

Besides the individual performance of athletes, team performance is also susceptible to a lot of complex factors that determine their success. The way athletes are organized, objectives are established, and a set of other factors are what compose the collective performance. The same happens when managing the human capital of a firm. On one hand, there are the individuals and the different aspects that impact the individual performance, and on the other, there is the group of individuals that produce a result for the firm by the sum of individual performances and the synergies created when working together. Besides the aspects that benefit team performance, there are also team performance constraints. These are equally relevant to understanding performance and will be discussed ahead so that there is a clear conscience on how to mitigate them.

If we scope performance the same way in sports as in business, performance management in sports can provide useful insights for performance management in a corporate environment.

As a note for this dissertation, a caution must be present when interpreting this type of content. There are frequent misconceptions about sports-related research. One of the misconceptions for this dissertation might be to consider sports management a model for business management. By a few particularities, sports management distinguishes itself from business management. For instance, sports management is, at least in the majority of youth clubs, made in non-profit organizations. Therefore, the management tools for business management, such as the Balance Scorecard, do not apply to this type of management. This dissertation will not take sports management examples and insights, but instead take insights from the sporting activity itself.

Another delusion could be that the readers tend to consider the physical aspects of sports as one of the key transferable benefits sports can provide to organizations. Even though that analysis is also very pertinent and important, this dissertation will not focus on any sports-related benefits other than practices and principles transferable to the management sphere. This does not include the physical well-being of workers.

Investigation problem

Sports practices aim for the development of players and the improvement of overall team performance. It is evident that performance and development are very commonly used words for sports and business. The two variables analyzed in greater detail in the current dissertation - performance and development – are considered by many researchers highly correlated. In general, a state of incremental performance corresponds to development or learning. This correlation indicates that one variable cannot be comprehended without the other. With that being said, some sports training principles, as shown by literature (Spurk & Hofer & Kauffeld, 2021), are compatible and share some aspects with management models.

The central investigation question is the impact of sports training principles on worker development and performance. This dissertation analyzes sports from a business perspective and asks “What is sports doing to develop skills and improve performance? What can business managers learn from the way athletes’ performance is managed in sports training?”.

Objectives

The general goal for this dissertation is to increase the concrete relationship between sports and business, and hopefully provide insights for its practical implementation. One example of that relation is the Skills by Sports4Med project. It consisted in creating mechanisms and raising awareness of the role of sports in skill development. This project had positive impacts in the

countries that took part in it, and the bond between sports and business had a practical expression. The target of the project was coaches and coaching staff, and the training course proposed in the project was directed to them. On the other hand, the current dissertation is directed to managers and more specifically Human Resources managers. Therefore, one of the underlying objectives is to present practical application insights for this area of research. This means that, for the ones who read it, this research and its conclusions intend to foster critical thinking about the management model of organizations and how they can absorb some guidance from sports principles, specifically targeting worker development and performance management.

To achieve that, the intermediate objectives are:

- (1) Analyze the linking points of business and sports at several levels and domains.
- (2) Highlight correlations between management theory and sports training theory, and to understand how athletes' development programs and worker development programs are correlated.
- (3) Be able to specify which set of principles and practices are more applicable to business contexts and which practices and principles are already common between the two.
- (4) Comprehend how companies can adapt their environment to implement sports principles and benefit from it.
- (5) To comprehend, with the data collected from the interviews, how managers already view this theme and how they apply sports principles in their environment.

LITERATURE REVIEW

Skill development and individual performance

Macnamara et al. (2016) questioned themselves about what makes some people more skilled in complex domains than other people. The answer to this question was discussed throughout their study. The skill level of a person in a certain domain was believed to be highly correlated with the amount of deliberate practice that person has accumulated, meaning that different people have different performances in a domain mainly because of how much they practice. Most people would say that the whole sports training narrative lies on this premise: the skill of someone in sport is dictated in great measure by the amount of accumulated practice.

However the findings released on this topic suggest that deliberated practice only accounts, on average, for 18% of the variance in sports performance (Macnamara et al., 2016). Even though it is significant, most people assume this percentage would be higher. The percentage of variance in performance explained by deliberate practice is lower than the other factors combined. Therefore, there are many factors contributing to the performance and skill level of someone. These results are a compelling argument for the importance of deliberate practice for performance but at the same time for the importance of other factors that impact performance.

If human capital is so important for organizational outcomes (Siraj & Hågen, 2023), and human capital includes the skillset of a workforce, to improve the human capital of a company is a key goal of managers. Therefore, should companies be focused on implementing more deliberate training that targets the skills to be developed by workers? And can a regular day of work be considered as training? Or are training sessions and courses the only way to increase human capital in the company?

One of the factors impacting a firm's human capital is recruitment and selection, and the implications they have on the organization's outcomes. The common view of many HR managers in selection processes is that the best predictor for future performance is past performance. Despite its validity, this view is quite unsettling and short-term oriented. Therefore, the selection of new workers is an HR management topic of extreme importance, but not always homogeneous and undisputed in its approaches (Wang et al., 2020). The parallel of this process in sports corresponds to talent identification. Talent identification in sports has a different approach to selection than many organizations do. The logic of sports talent identification and development starts with assembling resources to facilitate the development of the "talented". Therefore, one essential determinant of worker potential must be the capacity to develop if provided with appropriate developmental experiences and support (Abbott et al., 2005). Talent identification is, in its nature, exclusive and not inclusive. Therefore, it is more common in the later stages of the development

of athletes, since it is not framed in the “sports for all” philosophy of most youth sports clubs (Badau et al., 2013; Burgess & Naughton, 2010). Nevertheless, sports have a long-term view when recruiting and identifying talent, whether in elite sports or at beginner levels.

Another aspect that is not related to deliberate practice, but still relevant to the development of human capital is the adjustment of the individual to the context where he/she is inserted. The person-job fit can have a great impact on individual performance and also on the efficacy of human capital. The adjustment of individuals to a certain role is a topic relevant to sports and that, in many cases, can be a determinant to the success of athletes (Burgess & Naughton, 2010). For example, in sports, there are many examples of athletes who made nonlinear transitions from one performance plateau to another sport. These are situations in which the performance of an athlete changes dramatically from one moment to the next. This sudden development is preceded by a perturbation of a stable state, sometimes by a change in the sport played or a different mental approach. As examples, we have professional athletes who were stuck in mediocre performance, but a mental change (motivation or confidence-driven) boosted their performance. Or athletes who played a youth sport for years and became professionals in another sport. (Abbott et al., 2005). These situations are an interesting phenomena that HR management should consider, analyze, and apply in practice. Some of the practices that could incite these turnarounds in individual performance are job rotativity, team rotativity or a change in leadership approach. Job rotativity is somehow an important practice not only for the development of workers and human capital in organizations but also as a means of understanding which tasks and role would a worker be more efficient in. This leads to another important concept: Person-job fit.

Person-job fit is also a key aspect of individual performance. It corresponds to matching the right talent to the right job, acknowledging talent competencies that are required to perform a certain job (Zhu et al., 2018). Person-job fit is crucial, but at the same time is often neglected from the human capital topic (Boon et al., 2011). From the approach that sports have on athletes' adjustment to roles, there are some takeaways that can be useful to managers. This performance construct is a key aspect of sports training, as coaches have the task of understanding the athletes' characteristics and assigning them a role on the team. Having players play the right position according to their characteristics and preferences is an important task of coaching, and a task often done based on data analytics that reflect individual tendencies and characteristics (Burgess & Naughton, 2010). The competencies of an athlete are measured by statistics, and analyzed to ensure the athlete is in the right position.

Therefore, the way coaches assess competencies and find the right fit for each athlete could be applied to how managers evaluate employees and match them with a job. This raises the importance of a well-designed job description, which is an HM management responsibility, that

allows managers to understand the competencies required by a job (Boon et al., 2011). Besides the importance of job description on the person-job fit, the individual competencies component is still not as developed in business management. Sports have evolved into a data-driven reality, where individual statistics are a core part of performance management (Fonti et al., 2023). If so, management leaders can take the approach of sports to the person-job fit topic. That requires a better understanding of individual characteristics and more accurate statistics for employees' competencies, impact, etc.

Apart from talent identification, talent development is also a topic of interest for both business management and sports. One of the differences seen in terms of talent development is that in sports talent development has a high degree of periodization. Planning in high-performance sports has been shown to be a rather complex task that involves the practice activity design, the sequencing of practice session content, and the contextual factors influencing practice (Kinnerk et al., 2023). Planning in team sports exists on two levels (Farrow & Robertson, 2017; Lyle, 2010; Otte, Millar, & Klatt, 2019). At a broader level, there is long-term planning which considers the periodization of the team's season or the athlete's season; at a micro level, planning in team sports is primarily focused on individual session planning (Lyle, 2010). The athlete's long-term planning is not for a season but rather extends to all of the sports life of a person. That long-term planning comprehends multiple stages in the athletes' development. Several models of athlete development could be referred. Some are three-stage development programs (initiation stage, maturity stage, mastery stage, proposed by Bloom (1985) and firstly applied with US athletes), or four-stage development programs (like the FTEM framework: foundations, talent, elite, mastery, by Tranckle & Cushion, (2006)), and there are others with even more stages.

This degree of periodization is normally not found in the HR management progression planning for the workers of an organization, and the continuous learning that many refer to does not have a long-term staged framework. When it has, it is normally a structured progression, that is the same for every employee and does not take into account individual characteristics, preferences or the actual evolution of the worker supported by data (Wang et al., 2020). The supportive role played by HR managers, by providing training and a development pathway, is essential for the engagement and motivation of the employees (Van Beurden et al., 2020). That long-term pathway of progression in organizations could use a more individual and personalized approach. The lack of such planning can have negative effects in individual performance and development in the long term, harming the firms' outcomes. The obstacle for the application of this sports principle in organizations may be that the turnover rate of a company does not allow workers to complete a full long-term progression plan. Another obstacle is that in sports, athletes develop at their own pace according to individual characteristics and abilities. In a corporate

environment, the pressure for short-term results and performance may jeopardize the healthy and timed development of employees (Armstrong & Landers, 2018; Wang et al., 2020).

When analyzing a macro-level planning (not referent to individuals but to teams or to the organization), more similarities pop up. For instance, both sports and business management planning have a big focus on the alignment of practices with the mission of the organization. In business, projects or tasks are designed to be aligned with the general mission and long-term planning. In sports, the same happens: practice sessions are aligned with the team's philosophy and long-term goals. The closing of the planning timetable happens with an assessment of the performance, normally using KPIs and an internal evaluation. These are common factors that are perceived and made in similar ways both in sports and business. (Kinnerk et al., 2023; Weinberg & McDermott, 2002).

Training of athletes and employees

As shown in the previous chapter, there are many favors accounting for skills development and individual performance. Deliberate practice is not fully responsible for the development and performance of athletes. That can be positive for the transferability of the sports approach to development and performance in the workplace. When looking at the % of time spent on deliberate practice vs competition time (sports) and the % of time spent on training vs working (organizations), the discrepancy is huge (Katz & Koenig, 2001). Therefore, given the difficulty for companies to have a substantial amount of time dedicated specifically to training, in-work experience, and game-based learning are great tools for organizations to use for the development of workers. This means that, despite the difficulty of companies in spending substantial time on specific training, there are other aspects impacting performance and development equally relevant and transferable from sports to organizations.

Normally, a worker has more training time when getting hired. The onboarding process is mandatorily a stage when a worker requires more orientation and to develop specific technical skills to perform the job (Boon et al., 2011). When comparing overall sports realities to companies, we can notice that there is a much higher percentage of practicing before performance, whereas in companies the workflow is overwhelming and does not allow for a greater amount of time spent in training. Therefore, managers have the challenge of converting the daily tasks a worker performs into a practice environment and using them as guided learning experiences that ensure a healthy development. That transition includes a constant learning perception by workers, goal-oriented work, high feedback and analytics, long-term planned, multi-disciplinary teams, and highly correlated and inter-related work (Armstrong & Landers, 2018). This chapter can provide clues on how to make that change, based on sports training.

Traditional coaching approaches to sports training assume that technique must be mastered before the game situations. Even though this was predominant in the literature in the past, recent literature shows that this might lead to a disconnection between the technical and the tactical aspects of the game.

The Game Based Approach (GBA), proposed by Light (2004) is an alternative way of trying to avoid this constraint on coaching and practicing. The primordial study that relates somehow to GBAs was when Bunker and Thorpe (1982) proposed the Teaching Games for Understanding (TGfU) Model, intending to help physical education teachers to develop students' game appreciation and tactical awareness, ultimately leading to improved game performance. The main idea is contextualizing the technical teaching into game-like situations, often with restriction and

oriented to develop one specific skill. The environment in a practice with this approach becomes more like a real-game situation and is intended to improve decision-making and skill execution, ultimately developing athletes and improving overall performance (Kinnerk et al., 2018).

Game-based approaches (GBAs) have emerged as pronounced pedagogical approaches to the coaching of team-based sports. GBAs contextualize learning within game-related practice activities and put emphasis on questioning to stimulate reflection and interaction (Light & Mooney, 2014). Many cultural iterations of game-based instructional models (e.g., Game Sense, Teaching Games for Understanding, tactical-decision learning models) have been developed. Notwithstanding the many forms of GBAs, Light (2013) suggests that all GBAs share four abiding features: (i) the design and manipulation of games, (ii) the use of questioning, (iii) the provision of opportunities for dialogue, and (iv) building a supportive sociomoral environment.

These were proposed to overcome the obsolete pedagogy of teaching games to learners and, instead, teaching learners games (Jarrett & Harvey, 2016). The difference in emphasis is very significant. Teaching learners games is a term used to describe the pedagogy aiming to further develop the decision-making of athletes. As an example, teaching games for understanding (one of the GBA models) typically begins with a simple game or activity that progressively becomes more complex. This sense of progression ensures that learning is gradual and ends up with the actual competition, which makes the learning more contextualized and easier to apply.

The development of athletes has a clear long-term focus. Therefore, it is determinant that athletes learn to be learners, learn to make decisions, and adapt to their context (in this case, games). This approach to athlete development underscores and corroborates the belief that long-term development can only be achieved if decision-making and adaptability is present. By comparison, it would be fair to assume that worker development should look for ways to develop cognitive capabilities rather than just technical capabilities. These cognitive capabilities can be developed through planning more GBAs type of training inside the firm's training.

If a GBA approach is implemented in the company, this will allow not only the company to increase its human capital, but also for workers to improve their general skills and value. When a worker is doing the same technical and repetitive task for many years in the same company, neither its skill value is increasing, nor is its capacity to add value to another company, because the only skill acquired is a very specific task that may only be useful in the current company. This situation often leads to situations where the workers with more longevity in the company will likely face difficulties when transferring to another company. The game-based learning is a field gaining recent attention in the schooling area. Teachers from multiple age groups report that game-based learning has improved learning and is generally correlated with higher levels of engagement and motivation (Byusa et al., 2017). Implementing GBA in the workplace may be an

interesting strategy for HR managers aiming to increase engagement and motivation. Especially nowadays, where a more creative and more adaptable mindset is needed in companies. If technical and very repetitive jobs are being replaced by computerized and automatized systems, this trend will lead to jobs that require learners and managers, more than “doers”.

While this model of training is well-diffused and acknowledged in the sports world, researchers noted that coaches new to GBA pedagogy encountered difficulties in planning and designing “good” games. Thomas et al. (2013) observed initial difficulties for coaches in developing game-related content in practice sessions. However, with more experience and greater time spent in planning, this improved. These challenges are not surprising considering that coaches tend to rely on their own routines and traditions, as well as the observation of other coaches for the development of their ideas (Trudel & Gilbert, 2006; Williams & Hodges, 2005). The same difficulties might be felt by managers when trying to transfer these concepts to the workplace.

Another alternative to traditional training in sports is constraints-led training. This model is also based on the assumption that performance corresponds to the interaction between the environment and the individual, and the way of learning should be based on constraints environments, shaped to make the athlete take tactical and technical actions (Clark et al., 2019). A meta-analysis of the constraints-led training model revealed that several studies show a positive relation between this model and tactical skills and game performance. The improvement of technical skills in this type of training was, in most studies, not very different from more traditional training approaches (Clark et al., 2019). This model may be compared to the GBA models, in the sense that they are both in rupture with traditional training models and reinforce the importance of contextualizing and the decision-making component on the technical and tactical skill of athletes. This is another model that could help increase the skills of a workforce, by creating training environments with limited decisions.

Gamification of management

In the past, sports were primarily viewed just as activities for the well-being of the body. Through time they became continuously more “gamified”, meaning that they became more regulated, analyzed, measured, and competitive (Heere, 2018). The term “Sportification” is yet quite unknown and relates to this process. Sportification can have two different meanings: either (a) view, organize, or regulate a non-sport activity in such a way that it resembles a sport and allows a fair, pleasurable, and safe environment for individuals to compete and cooperate, and compare their performances to each other, and future and past performances; or (b) add a sport component to an existing activity in order to make it more attractive to its audiences (Heere,

2018). This is a process that happens in many domains of our society, for instance, music, business, fashion, or entertainment.

We can also correlate the term “Gamification” to this process of assimilating an activity into a sport. Gamification is a term that has gained a big popularity in recent years. Employee training programs are already commonly applying this concept. As examples of companies that have implemented gamification in their management processes, these stand out: European Central Bank uses gamification for training on financial indicators; LiveOps Call Center applies gamification to teach general business practices; Deloitte has a gamified leadership training program; L’Oréal uses games as part of the recruitment process. Other companies such as CISCO, IBM, and XEXOX are also using gamification in their training programs, with great results regarding engagement, motivation, and progression (Dubey, 2017; Larson, 2019).

No matter what the term used is, there are some companies that already have in place a work environment that resembles some sports and game principles. Some of the key HR management domains and responsibilities - Attraction, Onboarding, Learning & Development & Training, Active Engagement, Engaging, Retaining, Recognition, Motivation – are currently known to be able to support some type of gamification technique (Vardarlier, 2021). This vast list of management aspects illustrates the framework in which some sports principles can have an impact.

One aspect of sports that also impacts performance is competition. One of the characteristics of changing labor markets, career systems, and organizations is precisely a high level of competition (Connelly et al., 2014). The tournament theory is a theory that describes reward systems based on relative ranking instead of absolute performance. An example of it regarding HR management is how most promotion contests happen inside companies – the X best get promoted. This theory and the overall belief that competition may foster the output of workers (and athletes) reaffirms the benefits of creating a gamified environment, with metrics, rankings, etc. This theory divides researchers, as many consider the downsides of competition heavier than the benefits (Connelly et al., 2014; Spurk et al., 2021).

The implementation of a gamified environment is a challenge that more than 50% of the time fails to achieve the proposed goals, in result of bad design. Despite the difficulty of implementing, it in practice, there are considerable benefits from this approach to management (Larson, 2019).

Leadership in sports and in business

Leadership is a well researched topic, as the leadership process impacts the success of economic, political, and organizational systems in our society (Badau et al., 2013). Leadership in sports is no different. It is an important factor that impacts success for teams and is one of the key subjects of study (Mach et al., 2022). This emerges from the need to have someone that guides a team, through the right approach (leadership style) to achieve a common goal. In this chapter, we will analyze how leadership is conducted in sports environments and compare it to how leadership is conducted in a corporate environment.

In the same way, leadership is relevant in the corporate environment and there is extensive research about the impact of leadership in organizational performance. To start this chapter, it is essential to comprehend what englobes leadership. Many times, there is confusion in the definition of leaders and managers. Are they distinct roles? Do they overlap? Should a manager (or a coach) always be a leader?

There is considerable correlation in what both do. Often, leaders manage, and managers lead. The extent of this much depends on the level and function of the manager or leader. There are several perspectives on how these two roles coexist. Normally, managers have a formal position of management, while leaders can sometimes be informal leaders. There are many more things to management other than planning, directing, controlling, and supervising subordinates. However, the manager's effectiveness depends, to a considerable degree, on getting work done through others and networks of others (Simonet & Tett, 2013). This divergence or even unclarity of roles of management and leadership is also summarized by Nienaber (2010), who gather a vast amount of literature to compare the two concepts. There was a major overlap in the tasks of management and leadership, even though there were some tasks which were management tasks and not leadership tasks. Regardless of whether one is considered to be a leader or a manager, others depend on that individual to demonstrate initiative, set goals and timelines, be trustworthy and responsible, integrate and share information, and be willing and able to make good decisions. Such overlap brings the two functions essentially into the same room (Simonet & Tett, 2013; Nienader, 2010).

Task orientation is normally associated with management, while person orientation is more in the leadership sphere. Although this is the case, the research by Simonet & Tett (2013) closed this gap and presented data supporting that managers tend to score high in person orientation and the opposite is also true. So there is a tendency that calls for integration of content. To simplify this, in this dissertation we will scope the content to leadership and assume management as a inherent component of leadership.

Despite a lot of management literature being occupied on debating the differences between the two areas and the characteristics and roles of each one, in sports this is not the case. In sports training, the majority of amateur coaches fill in the two roles in a natural way.

Leadership style (and other leadership matters) has been related with performance outcomes for decades. Researchers, using resource-based view, continuously try to identify the most suitable style for boosting performance (Grabara et al., 2020). Transformational leadership style has been identified as one of the most suitable styles for enhanced performance in most situations. Of course, there is a contextual aspect to what leadership style is most suitable. Transformational leadership is a behavior-based approach to achieve excellence and performance beyond expectations (firstly conceptualized by Bass and Avolio, 1995). The transformational leader corresponds to a person who acts as a role model and promotes employees to achieve excellence and continuous improvement, in the pursuit of the organizational vision. Past literature provides evidence of the fact that transformational leaders have a positive impact on job performance (Anwar and Ahmad, 2012. Cited in Imran et al., 2020).

This style of leadership distinguishes itself from others by an inspirational and motivational approach. For example, transactional leadership focuses more on extrinsic motivation. Despite the fact that transformational leadership is considered the most suitable and impactful style of leadership, it is still an ambiguous topic of research. Some researchers defend a balance between some leadership styles to achieve optimal performance, since sometimes the mere transformational approach does not fit every worker's expectations and characteristics (Akdere & Egan, 2020).

Leadership in sports is exerted in a team where interactions are constant and where the feedback and leadership presence are essential to the teams' success. Transformational leadership has been shown to be the most effective in a sports context. One of the key areas where this type of leadership is most helpful is on team cohesion (Mach et al., 2022).

From the start we can identify some differences between the leadership exerted by coaches and by team leaders.

Transformational leadership through leader learning and performance support behaviors are linked to a supportive human resources development culture that, in turn, has a positive impact on employee-job satisfaction (Akdere & Egan, 2020).

Even though this association of leadership styles in sports and companies may appear obvious and overlapping, the fact that companies have a lot of restrictions and conflicts of interests may not be forgotten. When comparing a transactional leader to a transformational leader, it is fair to say that it is easier to be a transformational leader in sports than in most organizations. This is

because in organizations motivation is often based on extrinsic rewards, which aligns with transactional leadership. In all non-professional sports, there are no relevant extrinsic rewards, giving more weight to the role of an inspiring, role model and influential leader.

There is no recipe for a successful manager in an organization, but there are some guidelines to be followed: besides the specialization and knowledge required for the job, competencies in the fields adjacent to the science of leadership are described in detail and overlap in sports and business (Weinberg & McDermott, 2002). According to the sports framework of leadership, a leader must know: how to act, so that his/her subordinates would listen to him/her; how to reconcile organization goals with personnel goals and aspirations; how to manage time at its best so as to obtain the most profitable results. (Badau et al., 2013).

By communicating a sense of meaning, a clear and attractive vision, stimulating athlete initiatives and creativity, providing relevant expectations and feedback, listening and caring about the individual needs of the athletes, coaches may enhance athletes' sport experience and well-being (Stenling & Tafvelin, 2014).

Employee morale and productivity might suffer because of imprecise expectations, inconsistent feedback, and insufficient recognition and reward if a performance management system is not in place (Siraj & Hågen, 2023). Feedback has been shown to relate positively with performance. This is one of the areas where sports is arguably ahead in terms of performance management and development. (Luthans et al., 2008. Cited in Siraj & Hågen, 2023)

Motivation, engagement and commitment

Affective commitment is defined as an emotional attachment and involvement in the organization, making individuals remain with the organization because they want to and not because they have to (Miao et al., 2013). The concept of affective commitment is dependent on the construct of person-organization fit, which refers to the alignment of the organization's mission, vision, and practices with an individual (Zhu et al., 2018). This is one of the challenges of HR management. Making employees affectively committed to the organization is many times referred to as an implicit contract, where one feels attached to the organization on an emotional level, more than just on a legal and contractual level. Literature shows a positive relationship between high-performance working systems (HPWS) and affective commitment (Francisco & Diogo, 2019). Whereas in sports, the same process of affective commitment takes place. In youth sports or amateur sports, affective commitment and engagement are at plain sight, because there are no financial compensations, and despite that athletes show high levels of engagement on their tasks, practice sessions, team dynamics, and principles. All of this while dealing with the adversity of losing, injuries, and others (Newman, 2020).

Goal orientation theory states that individuals hold personal beliefs about intelligence, thinking of it as either incremental (learning orientation) or stable (performance orientation). Such beliefs create a mental framework from which individuals adopt either avoidance or mastery strategies toward performance and goal achievement.

Specifically regarding learning orientation, authors such as Belschak and Den Hartog (2010) and Button et al. (1996) suggest that learning-oriented individuals are intrinsically motivated to engage in highly challenging tasks from which they can learn and become more knowledgeable. The authors also propose that learning-oriented individuals are usually more likely to invest more resources (i.e., cognitive, emotional, and behavioral) on tasks and problem-solving and that they also develop a more positive attitude toward change and novel situations. As an example, workers who have a high adaptation capacity tend to have a bigger learning orientation than workers who do not have adaptation skills. (Marques-Quinteiro & Curral, 2012). Research on this topic has concluded that goal orientation and learning orientation is positively correlated with proactive and adaptive work role performance. This means that the more learning-oriented a worker is, the more likely he is to: a) show a proactive approach to its work and go “the extra mile”, predict future risks and opportunities; b) Be adaptive to the changing context of its work, and show characteristics such as innovation and entrepreneurship (Marques-Quinteiro & Curral, 2012).

One of the aspects identifiable in sports environments is the high goal orientation and learning orientation both by coaches and players. This is relevant to understanding the development of certain skills in sports and the profile that former athletes tend to have when working for

corporations. Goal orientation and learning orientation are characteristics described in the literature as crucial characteristics for individual performance, and therefore common to sports and the workplace.

These characteristics are progressively more important in today's business environment. Proactive behaviors are a key component of effective behavior in dynamic environments where co-workers and organizations need to anticipate change, and must proactively respond to it in order to be effective. Individuals (co-workers, managers, CEOs) are not only expected to be proactive and to anticipate change situations but they are also expected to identify opportunities and make the most of them for the benefit of the team or organization. Organizations may benefit from fostering self-leadership in their workforce. One of the options is to recruit people with such characteristics, but these competencies can be developed in the company. Through certain practices and training programs, organizations can increase the ability of their workforce to perform proactively which may be a key component for organizational success in uncertain and interdependent contexts.

One related topic to goal orientation is goal setting. A popular framework that is present in objective setting in any area is the SMART model. The SMART objectives correspond to specific, measurable, achievable, relevant, and time-based. These elements that characterize a correct establishment of objectives are essential for the engagement, motivation, and guidance of employees. Sports is an environment where the establishment of objectives is crucial to the success of teams (Milner et al., 2020). In general, an adequate set of objectives is important in any type of sector or organization, as it is described as one of the crucial skills that managers/leaders must possess (Farooq Malik et al., 2021).

One of the key aspects of the coaching process is to evaluate your players so they understand which is the path for their development and how can they improve. It is very important that these evaluations are not mere grades, but constructive feedback. The evaluation of employees by managers should provide enough information for the workers to understand how to develop. Another key aspect is that performance appraisal should consider the individual roles and characteristics of individuals. As good principles in sports, respecting the individuality of individuals is one of them. Also, performance is evaluated with honesty, openness, and face-to-face, which makes athletes more motivated to improve (Clancy et al., 2016). Most times this is not a reality in organizations and is one of the reasons for the lack of engagement and low performance of employees (Wang et al., 2020).

Sports psychology is an area from which some insights can be taken into management-related literature. Motivation, commitment, and engagement are topics well discussed by sports psychology and that can have a transferability to management. In sports contexts, commitment

and engagement can be fostered in a different range of ways, many of which are not extrinsic compensations (as it happens in organizations). The processes of commitment, engagement, and motivation in sports happen through the following aspects: transformational leadership (Arthur et al., 2017), adequate objectives establishment and pursuit (Lee, 2019) (reflected in other sub-practices such as evaluation, rewards, feedback and guidance, engaging practices such as gamification (Larson, 2020), clear path for improvement and development (Burgess & Naughton, 2010). These aspects are described by researchers in the area of sports but can be considered for management literature.

Team structures

Through the many theories that have been suggested over the years to comprehend team success, there is a distinction to be made. There are two types of theories: compositional theories, which focus on the personal attributes of the team members; and structural theories, which focus on the pattern of interactions between them (Tröster et al., 2014). Both play a crucial role in aiming for maximum team success and achieving full potential. There has been an increasing interest in studying the structural component of teams. This is due to the fact that globalization creates a more diverse and more adequate workforce for the specific task. The second type of theories may be interesting to compare with sports theories targeting team structures. Therefore, this segment is dedicated to analyzing how team structures in sports teams can correlate to team structures in companies and how that can impact performance.

There is some ambiguity on whether team diversity tends to achieve greater results. Some studies argue that it does, and others report that it creates a greater number of interpersonal conflicts and lower levels of coordination and results overall (Tröster et al., 2014). This aspect is present in sports, as sports teams tend to have diversity in players and it is reported as positive in developing skills and achieving success (Thiel & Mayer, 2009). Therefore, it is unclear if the diversity in teams in the workplace would have the same positive results as in sports. Another aspect of team structures is the interdependence of work, the interconnectivity of the members in a team, and dense social networks in the workplace. The article by Troster et al. (2009) correlated the interdependency in organizations with diversity and found that more interdependent workplaces benefit from more diversity. Support and shared knowledge are important factors if jobs are more deeply interconnected, which is a factor contributing to the development of workers. The cooperation and cohesion of a team is fostered in this way, leading to the increase of human capital in the organization. This context of interdependent work is present in team sports and should be considered when implementing a sports-like philosophy in organizations (Callow et al., 2009).

The image of a sports team mirrors a lot of this interdependency and dense social network concepts. In a sports team, the role of each individual is (or must be) highly conditioned by the role and behavior of other individuals on the same team. This is a characteristic inherent in sports in general and not only a principle but something taken for a fact in sports contexts. It has been shown that the structure of emergent workflow networks in teams helps shape team performance (Tröster et al., 2014). Optimal performance has been achieved at moderate levels of network centralization: When centralization was low, teams may have lacked the necessary coordination for effective performance (which highlights the importance of leadership that is responsible for ensuring coordination); when it was too high, team performance decreased, explained by the fact

that central nodes become overworked and because the peripheral nodes resented the disproportionate influence that central nodes had over how work was accomplished, becoming less motivated because of their involvement and empowerment (Tröster et al., 2014). Managers must be clever to find ways to create such dense networks that enhance the benefits stated above and avoid isolated jobs inside an organization. However, this study also points out that the effects of network structure on team performance are likely to vary depending on the tasks that teams must accomplish.

Besides the impact of the organization of jobs and teams in a company, another important factor is the value of resources of a company. Researchers have consecutively shown a positive relationship between strategic resources and organizational performance, reinforcing their importance to sustain a competitive advantage (Crook et al., 2008). According to the VRIO framework, to consider a resource as strategic, it has to fill in the following conditions: be valuable (V), be rare (R), be hard to imitate (I), and the organization (O) must be structured to fully capture the value of these resources. The organizational aspect is at times neglected, and sports has shown many times that the tangible resources do not always lead to success. Resources are very important, but one of the learnings taken from sports is exactly this: the arrangement of the resources is as determinant as the value of the resources themselves (Kim & McLean, 2012). Meaning, in a sports language, that you can have the best players but still not win the championship.

The VRIO framework, and in general resources-based frameworks, have been shown to be a useful decision-making tool, reliable to predict future performance and for managers to decide the firm's strategic direction (Bresser & Powalla, 2012).

High-performance management and implementation

Management literature has a vast spectrum of literature. Literature can vary depending on the context, themes approached, etc. Given this wide range of literature, for the purpose of this dissertation, the High-Performance Working Systems (HPWS) framework is a solid base to build on. Not only does it have a holistic perspective of the management practices of a company, which allows it to cover a lot of topics, but also, as described ahead, there are some similarities between HPWS and sports literature. According to Becker and Huselid (1998), high-performance working systems are a management concept that refers to a set of practices and policies a company implements that are designed to improve engagement, autonomy, and skill development, and that way achieve sustainable competitive advantage and long-term organizational success (AKTAŞ, 2023). These sets of practices are meant to improve employee development (competencies), attitudes, motivation, and involvement. The systems are believed to have positive effects on performance, well-being, and overall sustainability. The four fundamental principles of HPWS are Shared Information, Knowledge Development, Performance-Reward Linkage, and Egalitarianism (Preuss, 2003). These principles divide into smaller principles and action guidelines. Each of these four fundamental principles of HPWS is unified by HRM processes, procedures and governance frameworks.

As early as 1995, academics such as Macduffie, Kling, and others have recognized the key role of HPWS in organizational performance and competitiveness (AKTAŞ, 2023). These studies and others proved empirically the beneficial effects of the implementation of HPWS practices. Despite that, there are some challenges to be faced in the implementation and long-term sustainability of HPWS (Jewell et al., 2022).

HPWS are implemented because of the premise that they improve firm performance. Despite this being generally true, researchers often point out that it is not universally beneficial. The context and characteristics of the company must be considered.

The main factors that can contribute to a good implementation and sustainability of HPWS are: the involvement of employees in designing this system; employee empowerment, which translates to a high degree of autonomy and control over their work; flat, decentralized and flexible organizational structure, with shared decision-making; alignment of HR practices with the organization's strategic goals (Para-González et al. 2019; Jeong and Choi, 2016).

If an organization meets the parameters for a beneficial implementation of an HPWS, the reasons for the reluctance to implement this system may be: (1) Managers not believing it actually works in practice; managers believe in it, but don't implement it; managers are unable to implement it successfully. This summary hides a lot of smaller reasons for why each company has not implemented this, such as: short-term orientation, which is incompatible with a

redesigning process; reluctance to share power and authority, therefore not engaging in participative management; the belief that the lack of competitiveness of the company is a result of employees' not performing effectively, and the solution is replacing them instead of a redesigning processes (Jewell et al., 2022). Also, it is important to notice that most companies that implement HPWS are in the manufacturing processes. Even though HPWS applies to many more business sectors, this tendency may lead managers to assume that such practices do not apply to their non-manufacturing process.

The relevance of the implementation and sustainability of HPWS for this dissertation is its similarities to the principles of a sports team. The challenges faced by managers when implementing an HPWS will expectably be similar to the implementation of some sports-related principles. The relevance of the reasons mentioned above is to understand what challenges could appear when trying to implement sports-related principles. For a company to change its approach, many challenges must be overcome, and these are some of them.

Why should we implement a sports team-like methodology instead of an HPWS methodology, with appropriate management approaches and practices well applicable and with no need for transferability and "translation" into management terms? Since the sustainability of HPWS is more likely when principles coincident with sports are implemented, is it fair to assume that the implementation of HPWS and the implementation of sports principles is linked.

The sustainability of HPWS is affected by the organizational culture and leadership. It has been shown by researchers that organizations with a strong culture of innovation, continuous improvement, and employee involvement are more likely to sustain HPWS over time (Al-Ajlouni, 2021. Cited in Aktaş, 2023). These trademarks in a company's culture are coincident with sports culture, mainly in the continuous improvement and in the involvement aspect. Continuous improvement is a characteristic sports athletes tend to acquire since competition in sports contexts has been shown to impact that specific parameter. Regarding employee involvement, it is also pertinent to highlight the relation that this aspect has with sports. In team sports, the involvement of all players of a team is crucial for its success. The outcome of the team depends on the collective effort made by players, and therefore the individual responsibility of each is very high. The accountability each player has makes up for a high-involvement environment (Robertson et al., 2016).

Furthermore, leadership is also essential to HPWS's long-term viability as it offers support to cultivate a good organizational culture, and encourages employee involvement (Sun and Mamman, 2022. Cited in Aktaş, 2023). The importance of leadership to job performance was analyzed by Imran et al. (2020) using the HPWS model as a base. The assumption was that, to

achieve optimal performance, leaders have the task of making workers engage in a high-performance culture and consequent practices.

There is another management model that is worth considering in the sports/management relationship: the resource-based view (RBV). A comparison between the RBV and HPWS can be drawn. The RBV emphasizes the resources of a company as their main source of competitive advantage. These resources should be heterogeneous and immobile for the company to achieve a long-lasting competitive advantage. Considering the nature of the different resources a company might have (physical capital resources, human capital resources, organizational resources), the resources that HPWS is targeting are mainly human capital resources and organizational resources. The practices aiming to improve worker involvement and responsibility originate a more skilled and competent workforce, ready to tackle more diverse challenges and problems in an agile mean (leading to an increment in the human capital of the company). The practices that target strategy (transforming the processes to be more agile, for example) are related to the organizational resources of the company, and these are the most important according to the HPWS model (Francisco & Diogo, 2019). The same conclusion was reached when analyzing the impact of strategic resources in the previous chapter.

Practical examples

One of the objectives of the interviews was to comprehend the practical expression that sports principles and practices could have, or already have, in the management world.

Therefore, in the search for practical examples about the research topic, the following companies were identified as companies that have implemented practices according to sports principles. Some of them even have a rooted philosophy directly associated with sports. In some cases, as described ahead, the managers of the company have a past sports experience that impacts their leadership and management style.

These are of course big companies, with worldwide recognition. This makes it easier to find information about their organizational culture, policies and practices. However, there are smaller companies that could also be included in these examples. Actually, smaller companies are more likely to sustain more agile management approaches, which becomes easier to implement and sustain sports like principles and practices (note, the implementation and sustainability of HPWS depend greatly on principles based on organizational adaptability and agility).

Google (Alphabet Inc.) is one of the interesting companies to look at. This is due to their focus on data-driven performance and feedback. Data analytics is on the core of Google actions, and its used to improve employee performance. This is related to the way sports teams utilize performance metrics to their advantage. One practical example that illustrates this is their “Project Oxygen”, in which they identify key behaviors of successful management through data drive analysis (much like analyzing the stats of athletes). Another emphasis of the company is on regular performance feedback. This mirrors sports coaching, where coaches constantly provide insights for athletes to improve. Lastly, they also have a very strong collaborative culture, incentivizing teamwork and innovation, and trying to make the most of synergies between workers.

The Nerdery is a Tech Development consultancy firm that also has a culture of collaboration and teamwork. By working in small teams, they can have agile methodologies. Also, those small teams manage workload in a cyclic way, just like a sports team periodizes their training. They have periods of high intensity that alternate with more chilled periods. This is relatively common in the consultancy sector and is very similar to the fluctuations of load in sports training. Another aspect of The Nerdery is the encouragement of healthy competition between teams. That is achieved using gamification, in order to make it more interactive and appealing.

Salesforce is a software company known for its focus on leadership development and coaching. The CEO Marc Benioff emphasizes a culture of mentorship. The role of the managers is to coach employees to achieve their best performance. This is similar to how sports coaches focus on unlocking an athlete’s potential. The company also has a strong drive on setting ambitious goals, making them very clear and present, and driving employees to meet them through structured performance reviews and feedback systems.

Zappos, a shoe and clothing retailer, fosters an open-feedback culture and encourages adaptability. Besides that, one interesting practice is that employees can also opt into different roles or teams. This helps meet the expectations of workers and increase their level of satisfaction and motivation. This practice is much like cross-training in athletes and the openness to listening to the athletes’ expectations and desires.

Bainbridge Health, which is an healthcare technology company, also has an interesting practice that relates to how sports teams work: the cross-functional teams are managed like sports rosters, where specialists from different areas come together to solve specific problems. Another practice present in sports is the daily "huddles" and iterative goal-setting that the teams do. This way they ensure the alignment of short-term and long-term objectives and their clarity. This originates a continuous reflection on how to improve performance and an atmosphere of constant learning and adaptation.

VaynerMedia is a digital marketing company. The CEO, Gary Vaynerchuk, often compares VaynerMedia's management style to that of a professional sports team. The company's characteristics include high-intensity work, agility, and adaptability. Their operations are team-based, and employees are coached by managers to continuously improve their skill sets. The company promotes a culture where leaders serve as coaches rather than bosses.

Like these, there are many more organizations that could be named and that have interesting practices resembling sports principles. These companies incorporate elements such as teamwork and collaboration, healthy competition, mentoring and continuous improvement, adaptation and resilience, goal-orientation and sense of purpose, which are fundamental principles in sport. The philosophies implemented in these companies aim to create an organizational culture that favors high performance and collective success, and that vision coincides with how elite sports teams function. Besides the principles and practices mentioned in these examples, other sports principles present in this dissertation could also be included.

METHODOLOGY

The literature regarding the relationship between sports and management is still scarce. From the research made in several academic databases and academic journals, it is concluded that the association between the two areas is rarely addressed and has few practical expressions. It was possible to link several areas of sports and management, but it was very theoretical and almost always by bridging articles specific to one of the areas. Despite the extensive research, the articles providing the integration of sports concepts in the workplace were also rare. Therefore, the application of an empiric approach is relevant to make the crossing of these two areas.

The empiric segment of this dissertation allows a greater understanding of the current real application of sports principles in companies across different sectors in Portugal. This segment of the thesis is based on a qualitative study through semi-structured interviews. This method will enable a wider data collection and overall comprehension on the topic. The semi-structured interviews, comparatively to the structured interviews, enabled the interviewees to express themselves with more freedom. This choice was made because it was preferable to have a wider range of information according to each interviewee's perspective and context, which may be considerably different. The reason for this type of methodology is that this topic of research is quite exploratory. The lack of specific literature and well-defined variables used in past studies about this theme makes this approach more suitable.

The interviews were conducted to workers of different sectors that are former athletes of a team sport in Portugal. The sample of interviews is 11 and the interviewees were formally contacted and sent a document with the aim of the study, the structure of the interview and a consensus questionnaire about data protection. The sample was selected by convenience, as the contacts were gathered by random search and inviting known ones. All of the interviews were conducted online, through Google Meets, and the average duration of each interview was 37 minutes. The sample had individuals from 27 to 62 years of age, and there were 4 women and 7 men. There are 7 different team sports played by the former athletes interviewed (football, basketball, handball, rugby, futsal, roller hockey, volleyball). The information about the sample is described in the appendixes.

These interviews aimed to provide insights about how people perceive this theme, if sports have some impact on their current jobs, if they can draw comparisons of some areas of sports with business and management, and how managers may apply sports principles in their workplace.

The variables that were deeply analyzed in the interviews were worker development and performance management. From vast research, it is believed that there are no other scientifically proven scripts that are suitable for the objectives of this dissertation, therefore the script was self-

made. It was based on the contents debated in the literature review and used a similar planning of interviews about identical matters.

The interview script can be found in the appendices. It is divided into two main sections. The first section is intended to analyze the impact that sports have had on each individual. The second section aims to find the applicability of sports principles in the workplace through the perspective of former athletes.

The data collected in the interviews was coded and analyzed with the help of the MAXQDA software. The transcription of the interviews' audio was automatically generated by an AI powered software and further corrected and double-checked by hand.

The coding system (described in detail in the annexes) was modified during the coding process, according to the topics explored in each interview. For that reason, there is not any code that does not have a coded segment. Every code corresponds to some topic referred to, at least, in one interview. The coding process consisted in reading the interviews' transcript one first time and associating a code to each topic, sentence or paragraph. Then, there was a second reading of the transcript to check for uncoded segments, codes that were out of place or needed to be updated. At last, there was the organization of the coding system, where the codes were revised. The visual and analytical tools of MAXQDA were used to analyze the data.

Creative coding - Sports related codes

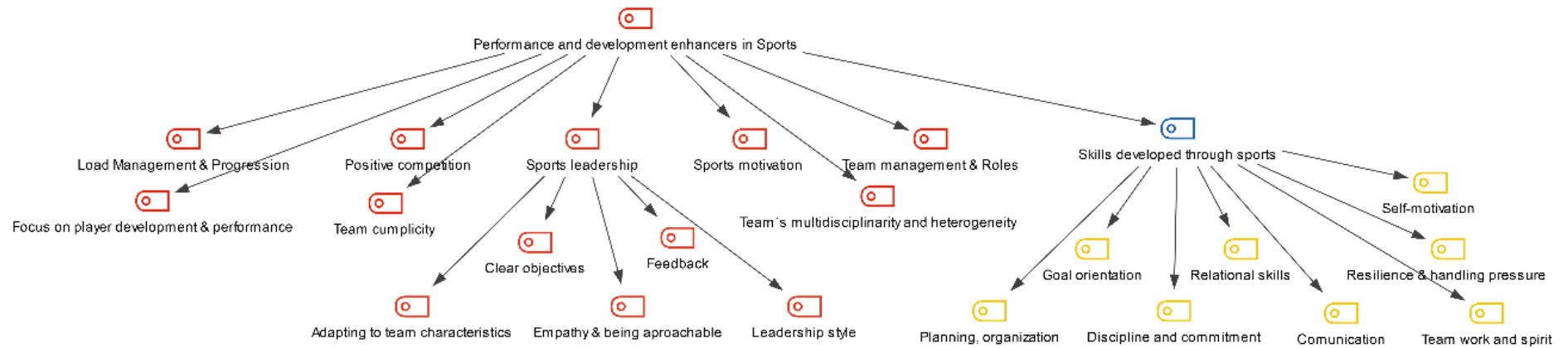


Figure 2. Creative coding of sports related themes. (Source: Self-made with MAXQDA2022 software analysis)

Creative coding - Management flaws



Figure 3. Creative coding of management flaws themes ((Source: Self-made with MAXQDA2022 software analysis)

Creative Coading - Positive: work structure and principles

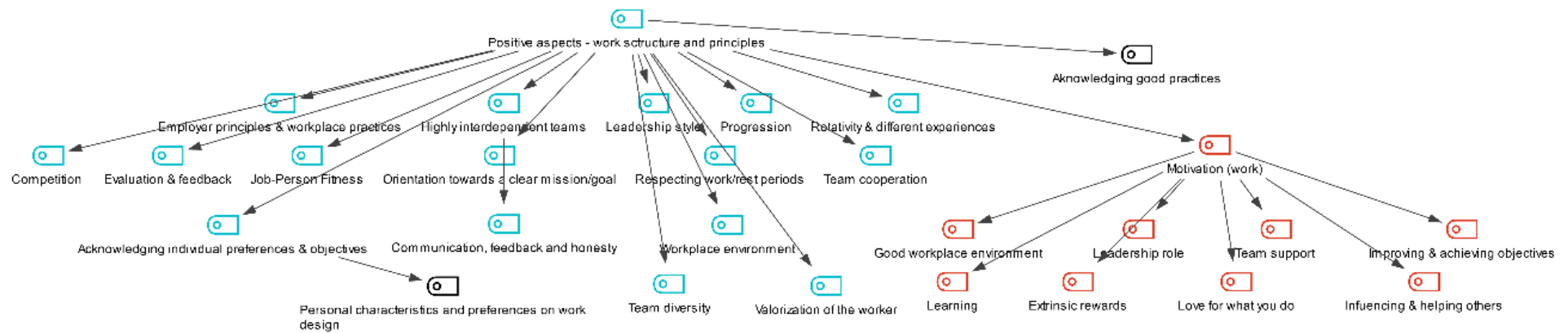


Figure 4. Creative coding of Positive work structures and principles (Source: Self-made with MAXQDA2022 software analysis)

These graphics are a visual illustration of the code system emerging from the interviews. Note that this representation does not englobe all the codes used to process the data analysis. The codes that do not show up in the graphics above do not have subcodes. These codes are independent and served only as an orientation, and were not considered for the data analysis (for example, the code “Good quotes”, that englobed all of the quotes that were, for any subjective reason, considered interesting; or the code “incomprehensive sentence”). The list of codes can be found in the appendices.

Categorization of the sample

In order to analyze the data of the interviews in further detail, 3 new variables were created in the sample of interviewees. These variables characterize the sample with more information and relevant description of the context in which one works and the context in which they practice sports. These 3 variables have grades from A to C, and the criteria by which they were marked are explained ahead. The variables are the following:

- Level of competitiveness of sports reality
- Leadership level in the current workplace
- Level of competitiveness of the company

Level of competitiveness:

This variable is particularly relevant to understanding what was the reality that each individual encountered in their sports career. Characterizing this variable is acknowledging that the sports phenomenon is so complex, with different sports, different rules, and contexts, that in order to study it, one must describe those terms. For example, athletes that had professional careers have a unique perspective of sports activity that an amateur athlete does not, and the opposite is also true.

The criteria of this variable have to be adjusted for each sport. For example, rugby is a sport where the national team has a lot of non-professional athletes, while there are a lot of professional football players playing in the 2nd and 3rd divisions. This creates a limitation on the criteria applied. Nevertheless, these were the parameters:

- (A) Competed internationally; or played professionally.
- (B) Competed in a high level in Portugal (1st division; or more than 10 hours of practice a week).
- (C) Played at an amateur level.

Leadership and responsibility level in the company

This variable concerns the relative position of a worker in a company. The perspective of a worker without leadership roles is different to the perspective of a person who leads a big team or who represents the employer. This distinction may be relevant when we analyze the type of commentaries that each individual made about their workplace and even the improvements suggested. As for the performance sphere, a leader may have a broader perception of how performance is and could be managed. As an employee, one will presumably have a perception of the good and bad practices implemented and the relative impact they have on performance. The parameters are:

- (A) Leader of a team larger than 5 people; or has a high degree of responsibility and decision-making in the job.
- (B) Leader of a team of up to 5 people.
- (C) Not in leadership roles.

Competitiveness of the employer

The characteristics of the company a worker is inserted are very relevant for what is being studied. Some interviewees reported that their organization was not aligned to search for improvement and greater performance. The reasons for this may be related to the nature of the work/area itself, or sometimes to the leadership and management of the company. On the other hand, some of the interviewees stated that the companies that they are working for are highly competitive, goal-oriented, and constantly looking to improve processes. These companies integrate a lot of the theoretical framework of high-performance working systems.

- (A) Reported that the company is highly focused on being competitive, high-intensity and high workflow, searching for continuous improvement, and motivated by results
- (B) Reported that the company has a mild focus on achieving better results and goals
- (C) The area of work is not very competitive itself; or the environment has few practices to monitor and improve performance.

(these parameters are somehow subjective; therefore, the categorization was made by comparison between the several interviewees, by defining a minimum of two individuals in each parameter)

The categorization and the sample information can be found in a table in the appendixes.

DISCUSSION OF RESULTS

Results considering the variables

	Employer's competitiveness and goal orientation = A	Employer's competitiveness and goal orientation = B	Employer's competitiveness and goal orientation = C	Total
Management flaws	15	34	23	72
Positive aspects - work structure and principles	48	41	14	103
Performance and development enhancers in Sports	27	45	19	91
Skills developed through sports	24	48	21	93
Motivation (work)	13	17	17	47
N = Documentos/Oradores	3 (27,3%)	5 (45,5%)	3 (27,3%)	11 (100%)

Figure 5. Scores by Employer competitiveness and goal orientation (Source: Self-made with MAXQDA2022 software analysis)

	Leadership and responsibility level = A	Leadership and responsibility level = B	Leadership and responsibility level = C	Total
Management flaws	26	6	40	72
Positive aspects - work structure and principles	64	21	18	103
Performance and development enhancers in Sports	45	4	42	91
Skills developed through sports	42	21	30	93
Motivation (work)	23	4	20	47
N = Documentos/Oradores	5 (45,5%)	2 (18,2%)	4 (36,4%)	11 (100%)

Figure 6. Scores by Leadership and responsibility level (Source: Self-made with MAXQDA2022 software analysis)

	Level of sports participation = A	Level of sports participation = B	Level of sports participation = C	Total
Management flaws	37	24	11	72
Positive aspects - work structure and principles	50	17	36	103
Performance and development enhancers in Sports	28	27	36	91
Skills developed through sports	45	22	26	93
Motivation (work)	19	19	9	47
N = Documentos/Oradores	5 (45,5%)	3 (27,3%)	3 (27,3%)	11 (100%)

Figure 7. Scores by Level of Sports Participation (Source: Self-made with MAXQDA2022 software analysis)

For the analysis based on the variables, the coding groups were gathered all together. This is because the small sample size would not provide valid results based on few coded segments. From the answers on the interviews, there are 3 correlations that stand out:

The group of individuals working for a reportedly competitive and goal-oriented employer (score = A) had, in average, 16 coded segments as positive aspects of work structure and principles, while the individuals who scored B or C in employer scored 8.2 and 4.7, respectively.

The interviewees graded as A in level of competitiveness of employer had substantially distinct perceptions of their workplace than the individuals graded C in this variable. It was easier for the first group to draw parallels from their current workplace to sports, while the individuals working in a less competitive environment had less comparisons and connections made. This aligns with the literature, in the sense that there are similarities between sports and HPWS, which is a model of goal-oriented principles and creates very competitive organizations.

These two results can be explained by the sample of individuals. Because interviewees are all former athletes, their perception is possibly biased by their sports background. The personal characteristics and preferences, and the desire for a high-intensity, competitive workplace may arise from the past experience in sports.

Conclusions about performance and development in this parameter must be interpreted with caution, as the answers are mere perceptions, and no quantitative data was collected to support the allegations of the interviewees.

Regarding leadership and responsibility level in the professional occupation, the number of coded segments in “Management flaws” was substantially bigger for the individuals with lower leadership and responsibility than in the group with a high degree of leadership and responsibility.

This goes according to the literature supporting HPWS. Workers with more involvement and empowerment, in this case, the group with higher responsibility and leadership, tend to be more satisfied. So, the principles of involvement, autonomy and empowerment worked in favor of greater worker performance, as workers feel more motivated and can help shape the management aspects that they find less positive.

The level of sports participation did not have any significant correlation with any coded segments. This can mean that independently of the level of sports participation athletes will have the same perceptions on the transferability of sports principles and practices to the workplace. While this was the case, the sports each interviewee played are distinct and their impact on the person is also distinct. Not to mention a lot of other variables that can have an impact, such as the club where the sport was played (that can have different philosophies), the type of coaches each individual faced, and others.

General Discussion

In general, the work context of everyone is very complex and hard to compare. The integration of sports principles in the workplace can be seen in practice in most cases, and individuals with a higher degree of responsibility and decision-making admitted taking a sports-like approach to some of the topics covered in the interviews.

“I think one of the most important aspects for your thesis is this: the sport is always present in our lives. Specially when a person is used to a high competition sports.” (translated from interviewee 4)

“Yes, very much. I cannot dissociate my past sports experience and learnings from my personal and professional reality. They are intimately connected.” (translated from interviewee 1)

Nevertheless, the answers to the interviews indicate that individuals who work in dynamic and autonomous teams in their jobs find it easier to compare sports-related concepts with their work (also reflected in the analysis of the variables).

The interviewees that do not have a work context with a big emphasis on results, mentioned the free-rider problem. This was discussed in the literature review, and it is a performance setback for many of the interviewees. The lack of interconnection, supervision and feedback is a result of a work design that prioritizes individual work and was reported as a setback for performance improvements.

On the other hand, all of the interviewees have had sports contexts where the principles were the opposite and therefore related their development and performance to team cohesion, leadership presence, and feedback. When facing a different reality in their jobs, the former athletes unanimously found themselves complaining or disapproving some aspects of the work structure.

Individuals had a clear understanding of the impact of HR practices on performance. Researchers have pointed out that HR practices are the center of performance management, and this was reflected by interviewees, who could indicate good performance-management practices and suggest improvements.

Skills development through sports

In the interview, one of the asked domains was the skill development aspect. The skills stated by the interviews were summarized into these: Goal Orientation; Planning & Organization; Relational Skills; Resilience & Handling pressure; Communication; Teamwork; Discipline and Commitment; Self-motivation and Self-efficacy. In general, the skills mentioned in the interviews

are parallel to the ones found in the literature. For example, they are aligned with the results in the Skills by Sports4Med project (Costa et al., 2023).

*“Sports has helped me on that: to be strong and resilient, and to overcome certain obstacles.”
(translated from interviewee 6)*

“Also the communication. We are pushed to communicate a lot. And I apply that on a daily basis and on my job. (...) You are used to that and then it is easier to integrate a team or a group.”(translated from interviewee 8)

Teamwork is the first one. Nowadays, I can almost tell who are the people who have practiced any sports and who don't. Obviously, some people never practiced any sports and have those skills, and the opposite. (...) Besides that, there is also the aspect of commitment and handling pressure.”(translated from interviewee 9)

The competencies that registered the highest frequency were “Resilience & Handling pressure” (21), followed by “Relational Skills” (13). Perhaps because of how the question was made, most interviewees focused on personal and relational skills more than cognitive skills.

One of the competencies referred as fundamental for the development of workers was the ability to receive feedback and criticism in a positive way, which was also mentioned as a skill developed through sports.

*“Maybe because of our culture, but saying “You are doing this wrong” is very badly comprehended. It is a feedback which is not easily received by employees, and it is a shame.”
(translated from interviewee 7)*

“(...) about what I learned with sports, which characteristics, that I apply in my current job. Well, I think dealing with criticism and feedback in a good and constructive way. And, again, we have to be opened to change and to improve for us and for the collective goals.” (translated from interviewee 9)

Most of the interviewees could make parallels from the skills developed through sports and specific work situations where they are useful and applied. This highlights the transferability of skills developed through sports to the workplace and goes accordingly to the literature, that also emphasizes this transferability. It also reveals the capability of sports principles and practices to develop human capital, by the development of personal and interpersonal skills.

Some of the interviewees have high hierarchical status in their company, and some have decision power over recruitment processes. One of the interviewees admitted having a bias when recruiting people because of the expectation that people who performed a team sport were more

likely to have an experience similar to the reality of a company, therefore dealing with difficult situations with more ease and accruing useful skills.

“I was smart at the time. I recruited people who had already competed in sports. My developers, all of them had played some sports at a high level. The culture of the company was created through that, it was already aligned. I only needed the softs skills, because the rest you can learn afterward and see where you can fit. The same thing in sports: if I am a coach, I will get to know you, what you like to do, and I will adapt you to a certain position. It is the same logic. (translated from interviewee 7)

Coaches, managers and leadership

Despite the possible differences in the roles that a coach and a manager have, both take a leadership role over a team. This parallelism was presented by the literature review and some articles reinforce the parallels of coaches and managers (Loehr & Schwartz, 2001; Weinberg & McDermott, 2002). The questions in the interview incited this, and the interviewees could also make associations on this regard.

The processes of informal leadership were not deeply explored in the interviews. Therefore, managers and coaches are reported as leaders. The overlap of management and leadership is present in every interview. This goes according to the literature that supports an organic and natural overlapping of roles (Simonet & Tett, 2013).

In the sports sphere, interviewees always referred to the coach with very defined leadership characteristics, as well as management skills. A coach must be a manager (task-oriented, having decision-making skills) but at the same time, is a leader (person-oriented) (Milner et al., 2020). Despite the two roles, there were more references to the person-orientation in coaches of the interviewed former athletes. This predominance of person-orientation may result from the sports philosophy of putting the athletes at the center of the coaching process. By doing that, coaches are induced to think about every coaching area, such as planning, contextual matters, resources, and others, as a means to an end (the “end” being the athlete).

The leadership styles found by the interviewees in their jobs were quite diverse. The individuals with higher degree of leadership comprehensibly did not target leadership flaws in their leadership style. The other part of the individuals (leadership and responsibility level = B or C) often appointed flaws to the leadership, reinforcing the idea of “Lack of feedback and leadership presence” (8 mentions), “Bad Leadership approach” (7), and referring the impact that this has on the individual performances and team performances in the organization.

The leadership style in these cases can be considered a transactional leadership style (the leaders view workers as resources, as expenses and not seeing them as the core of organizational performance), or an autocratic leadership style (with lack of participation and input of team members). This confirms the literature, by reinforcing the impact of leadership style and approaches on organizational performance, and also the impact of feedback and communication on the performance and well-being of workers (Stenling & Tafvelin, 2014).

In contrast, sports leadership configures itself much more like transformational leadership. This is because sports contexts are more inclined to the individual development of athletes and all the aspects impacting it. Given the lack of extrinsic incentives in most sports contexts (for example, the lack of a salary in non-professional sports), that creates a much more affective and motivational environment.

“And the coaches managed to pour into me the desire to keep improving, and that allowed me to be motivated and have an evolution in sports.” (translated from interviewee 10)

“A good coach is exactly that: projects in the athletes a long-term vision, a vision of achievement, and is interested in the athletes as persons more than just athletes, which is something absolutely fundamental nowadays.” (translated from interviewee 3)

Implementation of sports concepts and principles

By having a sports experience, all the interviewees stated at least one perceived management flaw that was overcome by a sports principle in their sports participation. As examples, let's take the following:

The answers to the interviews revealed dissatisfaction with communication, leadership presence and feedback. At the same time, the interviewees who reported this problem in their companies had stated that the constant feedback and monitoring by teammates and coaches was decisive for their development and performance in sports. Given this, an association between the reality found in sports and the benefits it could have if transferred to the workplace arises. A greater leadership presence could determine an improvement in performance and development, according to interviewees. Only two of the interviewees could say that the feedback and communication in the respective company were adequate to potentialize the performance of workers and ensure continuous improvement and development.

“Unfortunately that for me is a topic... I have been in companies that yes, we had 360° feedback and good evaluation systems, which I consider very important.” (translated from interviewee 4)

Performance appraisal systems were perceived insufficiently and negatively by 6 of the interviewees. The major factor that contributed to this perception was the lack of individuality when evaluating workers. Former athletes expected the evaluation system to consider the employees' individual characteristics, roles, and expectations.

“In sports, the focus is the performance. The idea is to make your athletes perform better, and utilize all the strategies that go on that direction. Therefore, it is not useful to grade or rank (athletes). We are not gonna give them 15 or 16 grades. What is meant to happen is a constructive evaluation, to try to improve their performance.” (translated from interviewee 3)

One of the sport's principles approached by the interviewees was individuality. Meaning, the comprehension of the individual as unique, with unique characteristics that must be considered when planning the role and progression of the worker. This is an aspect that must have a concrete implementation in the company's practices. As an example, one of the interviewees stated that his company does a meeting where the individual objectives (performance indicators) are established, according to the worker's interests. Despite the theoretical importance of individuality in the HR management literature, the interviews revealed that some employers do not take this into consideration. The failure on the implementation of this principle was most of the times due to the individual objectives not taking into account individual expectations and desires of progression.

“(in the company) there were certain people who had work overload, and others who could easily have more tasks assigned. And they were ready and had time for that, you see? That has to do with the management and leadership, and monitoring what each person is doing and could be doing. That presence and monitoring did not exist.” (translated from interviewee 11)

“When you treat everyone in the same way, mediocrity wins.” (translated from interviewee 3)

Goal orientation and objectives

One negative aspect described in management practices in the interviews was the lack of clarity of objectives and mission. This flaw in management in the current workplace of the interviewees was only mentioned by 4 of them. On the other hand, every individual who spoke about this matter agreed with team objectives and collective goals as a means to enhance the benefits of teamwork and prevent an unhealthy environment. This was often reinforced by stating that in sports, the team's objectives are equally relevant. Therefore, this aspect was fundamental to the perception of the workplace as a sports team: the notion of a clear common objective for the team. A common shared objective that includes the whole team is the same reality and focus. This may happen whether by having a good definition of a mission or by having a general

objective for the company. Also as described in the literature review, one of the pillars of the implementation of high-performance working systems is establishing a mission and vision for the organization. This mission is then translated to team or department objectives. This holistic perspective of the general goal of a team is fundamental.

“If it is not well explained (the objectives) and if the employees do not know what is the path that they could do if they perform well, employees end up lost, not knowing what will happen and losing motivation. Why will someone make a big effort to improve if they don't know where they will end up? (translated from interviewee 10)

One conclusion that is taken from the interviews is that the common goal of a team prevents it from any type of negative competition. In sports, where the tasks each player performs are highly interdependent, and common goals are achieved through cooperation. As it was described by 3 interviewees and explained in a very simple way, when cooperation is required to achieve a goal, it is harder for one individual to spoil another's work without sinking together. This phenomenon is observed in organizations with a continuous learning culture, where individual performance is fostered by wanting to be continuously better, instead of being better than others. The focus on helping the company or the team prevents bad competition and negative work environments.

“There was, there was... (competition) And it was healthy. Because the company was so competitive by itself and the pressure was put on results and outcomes that employees did not have time to think... If I did not help the guy next to me, I was going down with him. The project would not work well and it would not be a good delivery.” (translated from interviewee 1)

Work design

Even though it was not unanimous, most of the interviewees referred to multidisciplinary teams as a positive aspect of achieving optimal performance. One interesting topic to be further analyzed is the relationship of subcontracting and team chemistry. This was not directly addressed in the interviews, but some of the interviewees mentioned the importance of having a vast spectrum of competencies and skills working as a team. Cross-functional teams are a common reality in sports, as coaches, medical staff, physical trainers, and athletes (playing different roles on the team) all have an organic and close relationship where they share knowledge and have the same common goal. Subcontracting may interfere with the feeling of cohesion inside a team, even if the worker/company contracted worked side by side. Therefore, the type of contract might be important for the feeling of unity and belonging in a team. The two principal takeaways mentioned are: (1) learning is easier and more fun with a multi-skilled team, and by working with

different departments/sectors, workers expand their knowledge and acquire new skills while getting a sense of belonging and a common mission. (2) Interdependent work makes multicultural teams have better performances. This was analyzed and described in the literature (Tröster et al., 2014), and supported by the interviewees.

É indispensável. Eu não trabalho diretamente com o pessoal do IT, mas qualquer coisa é para estar à distância de uma chamada e dizer “olha, agora estamos aqui, está o antivírus a pedir para atualizar. Uma ajuda”. 10

Sim, eu acho que essa multidisciplinaridade é muito importante. É fundamental. Lá está. Mas também depende um bocadinho, tal como as equipas, depende um bocadinho daquilo que é o nível de competição. Se tivermos uma divisão, se calhar precisamos dessas funções todas da equipa técnica. Se tivermos uma equipa de formação, já não precisamos. 5

In the sports context, diversity was mentioned as a way to develop skills, learn to deal with others, and increase performance because of the complementarity of differences. In the workplace, the same happened, and a greater interdependency ensured that everyone's skills were potentialized. While these two takeaways point to a positive impact of diversity, it was always paired with the challenge it creates for team cohesion. Interviewees were conscientious of the role that sports played in dealing with diversity in a positive way.

“The most important thing, and I feel it very often, is the complementarity of people. (...) In organizations is the same: the individual characteristics are important in their own way. I mean, the different functions and fitting them, and building teams with the pieces that really fit, and not with the same piece repeated. In my case, that improved the cohesion of my teams and I could learn a lot from that.” (translated from interviewee 1)

“The experience I had in publicity was amazing. I found a lot of similarities from when I was an athlete. Because we were all interdependent. If the work was not done by the several members of the team, it got lost.” (translated from interviewee 5)

The experimentation and rotativity aspect of work design was also addressed by some interviewees. As seen in the literature review, the specialization of an athlete is an important principle in sports. The comprehension of one's characteristics in sports, such as in the working environment, leads to the assignment of that individual to a specific task where he/she can have a better fit (job/person fit or athlete role). Even though this is key to the performance of individuals (and therefore team performance), studies have shown that in sports, having athletes practicing skills that are outside of their role on the team can have a positive impact on their performance. However, the answers in the interviews were inconclusive regarding this topic. Some interviewees affirmed that wider experimentation and rotativity would be positive for the performance and

development of workers, because of the acquisition of new skills, and because it can boost motivation. Nevertheless, others had reinforced the importance of each worker being assigned to a specific role, and developing the skills strictly needed to perform that specific task. This is one of the questions that remain doubtful: if some degree of experimentation and rotativity is beneficial to the individual performance of workers as it is to athletes.

“And again, the athletes must be more versatile. They have to know how to play more than one position or have more than one skill. And the evolution of athletes makes that aspect even more important.” (translated from interviewee 5)

In the literature, it was intended to find which organizational contexts are more similar to sports. In that sense, one of the questions asked in the interviews was “Is there any sector or department that you feel is more similar to a sports context? And why?”

The answers to this question were very in line with the conclusions taken from the literature review. The answers were: marketing department, sales department, restaurants, startups, and agile methodology. When justifying the answers, there were common elements. The sectors or departments named by the interviewees all included at least one of these elements: high-pressure, high competition, demanding and rapid decision-making, cooperation and communication is indispensable. These factors are associated to sports and also confirm the association made in the literature of sports and HPWS.

“Everything that has to do with sales. Or everything that has to do with people, managing people, people that have their own personal objectives and goals, and that are competitive. A salesperson normally is someone who has to adapt, to innovate. Many times faces failures and cannot reach the objective and has to be resilient. And also because it is a job in which teamwork and communication is so important.” (translated from interviewee 4)

“I am in a startup environment, normally an agile methodology that incorporates a collaborative approach. You are on a team, you have team objectives and individual objectives. And a normal day is managed just like a team practice routine. Then you do the evaluation after the competition – the game analysis. You evaluate the department and the individual performance. Finally, you call the players and tell them “You could improve on this and that”. Therefore I think start-ups are very aligned with the sports methodology.” (translated from interviewee 7)

Motivation, engagement and commitment

One of the topics with the most predominance in the interviews was motivation. The way interviewees referred to motivation aligns with the literature on this topic, and the literature on engagement and commitment. Motivation was one of the aspects mentioned as strongly impactful

for development and performance. First of all, the references to extrinsic motivation were short and few. Not because they are not important (they are - individuals work for monetary compensation), but because they are inefficient in making a worker engaged and trying to develop and achieve a better performance (Fragoso et al., 2022). There are other ways of motivating workers and getting them more committed and engaged in the organization's goals. The interviewees were decisive in the motivation topics, revealing in most cases a high conscience of the motivation drives and improvements to be made (or already implemented) in their workplace.

“What I felt about that company was... my motivation was to help my colleagues, definitely. Help with the small details. But there is missing a person responsible for motivating the employees. As I was saying, a leader with that role.” (translated from interviewee 8)

As findings taken from this dissertation, we can affirm that the interviewees could effortlessly correlate the motivational aspects of their past sports experiences and the motivational aspects in the workplace. Some of them refer to the importance of SMART objectives, and leadership. Interviewees spoke about motivation for a number of reasons and in several topics. The main takeaway taken from the motivation topic was the following: the main responsible for motivation, engagement and satisfaction of workers was leadership, and also how the work was designed.

The processes of motivation and engagement in sports and in the workplace were seen as relatively similar by the interviewees. These results originate two hypotheses: (1) former athletes search for the same sources of satisfaction, engagement, and motivation in the workplace as in their past sports experience. The expectation becomes that the leadership is transformational and that the organization's culture is similar to a team sports culture. (2) The motivation processes in sports should be taken as examples of workplace motivation. This line of thinking sits upon the belief that motivation is a key aspect of individual performance, which is supported by the literature on this topic.

“For me, my biggest motivation is, of course after the objectives that are defined, is to like what you do. If I did not like my role, I would not be here, I would have to change my role. Also, having a good environment, a good team of people that I like... that is also a motivation.”
(translated from interviewee 11)

“On my job is the same (the same motivation as in sports). Actually, I am often criticized (and that also came from my sports context) for not wasting time on celebrations. And that is also important, of course.” (translated from interviewee 1)

The qualitative analysis made is based on the perceptions. The perceptions of former athletes on the impact of principles and practices in their performance and development. The variables of

performance and development are not quantifiable, and therefore it is hard to evaluate the degree of impact of such measures. However, there is one variable easier to assess: worker satisfaction. The answers to the questions in the interviews depicted a positive relation between work satisfaction with the application of the principles analyzed as sports principles, even though there is a biased view from former athletes, who have expectations and preferences shaped by their sporting experience.

In the study by Weinberg & McDermott (2002) (arguably the most similar study to this dissertation) sports leaders and business leaders were interviewed about their perceptions of organizational effectiveness and performance. The areas of interest for that type of study were the same from this dissertation and the comparison between the two studies is mainly coincident in its findings. The perception of business leaders and sports leaders regarding key aspects of performance is quite overlapping. Therefore, this dissertation responded to how the two areas of sports and management address performance and development in practice.

CONCLUSION

Major findings

This dissertation emphasizes the degree of transferability that some sports principles have to the management world. Sports training and management have a lot of parallels, particularly when it comes to enhancing performance and development.

Performance management and worker development are impacted by several diverse areas of management that are interdependent and correlated. Therefore, a successful strategy targeting these two variables has to have a global view of the organization that impacts all of the processes in the company. From these processes, the ones greatly analyzed in this dissertation were: the structure of teams and work design; the role of leadership; engagement, commitment, and motivation; training for worker development.

Interviewees were able to delineate transferable principles from sports to management. From the interviews, it was concluded that sports concepts and principles are applied in companies in different degrees, according to the characteristics of the company. Also, former athletes have expectations and preferences in a workplace that resembles a sports environment and includes sports principles. The principles of sports transferable to the workplace were mentioned either as missing in the organization's management or as good practices already implemented. Furthermore, it was shown that organizations with an agile and high-performance management approaches have more similarities and correlations with sports because both have factors such as: high involvement and autonomy of employees and teams; interdependent work and rapid communication; goal orientation, and objective setting.

The way these parallels can be useful is yet to be analyzed in greater detail. The impact of such transferability is yet to be comprehended and measured, as very little literature is conclusive and targeted to this specific matter.

Limitations

The limitations encountered in this dissertation are described below and should be comprehended for a better understanding of the dissertation itself and its findings. It is relevant to mention that the present dissertation is a very introductory and pioneer approach to the topic. This approach makes it harder to have a specific topic of research. Therefore, some limitations may arise from the broad, wide-ranging analysis that was taken.

One of the limitations in this dissertation is the fact that the sample of interviewees was not randomly selected. The selection was made by convenience, which means that the results may be slightly influenced by a skewed selection of individuals.

Another aspect related to the sample of interviewees is the diversity of backgrounds and sports played. While this aspect may be positive in some ways, the fact that a small sample is so diverse presents some challenges when extracting conclusions. The conclusions were, therefore, carefully drawn, considering this limitation. Furthermore, some variables were not considered to the study. As an example, the longevity of a worker in its company was not considered in the study. This variable can have an impact, for example, on the perception workers have of their company. Workers who recently moved from one employer to another can still be in adaptation processes, or not knowing the full reality of a company.

This dissertation was built upon interviews to former athletes and their perceptions on the principles transferable from sports to HR management. Not having a group of interviewees that were not athletes makes it impossible to draw comparisons. This control group could help provide more accurate and reliable findings, as the answers of former athletes could differ, or not, from the answers given by workers with no sporting experience.

Future studies.

The results stated above are all from a small sample of a qualitative study. These types of studies are relevant to create an introductory perspective of a topic that has not been deeply studied. The qualitative data analysis has its advantages, however, each topic approached in this research still needs a quantitative study with bigger samples to draw more accurate conclusions. The semi-structured interviews conducted allowed interviewees to expand the field of research and to express their feelings on what they find pertinent. Consequently, some topics that arose from the interviews were not deeply studied in the literature review and had to be analyzed after the interviews.

Another interesting approach to this topic would be to analyze it using case studies. This dissertation did not cover a lot of practical examples of companies that deliberately try to implement sports-like principles in their management philosophy. Future research can use such examples to describe the process that they go through to implement a sports like environment in the company. This will provide a more realistic and practical expression on the different segments discussed on this thesis. Some of the firms that can be used as an example are companies working in the sports industry or somehow related to sports. Regarding the case study approach, it is noted that some interviewees with higher degrees of responsibility, decision-making power and

leadership stated that they use a sports like approach to some practices that they are responsible for.

Future research could also try to summarize all the transferable principles from sports to management, and consequently develop a framework easier to understand and implement.

Researchers should also look to understand which business sectors could benefit the most if a sports-like management approach is taken. If one precise sector was analyzed, the needs of the employees could be more detailed. For instance, the healthcare sector, where the resilience construct is most relevant, can have precise practices in which the implementation is more beneficial. Or the sales sector, where communication skills are fundamental to a good performance.

Also, some topics that were not covered in this dissertation could also be interesting to analyze in future literature. As an example, load management principles in sports could provide good insights for load management in the workplace.

Finally, another interesting approach would be to analyze how would the business management tools impact the sports training. If transferable, management tools like the ones mentioned in this dissertation (VRIO, Balanced Scorecard, AMO model, Data analysis tools, etc) could be adjusted to sports and become useful frameworks for sports planning or performance management. This idea has been suggested (O'Boyle, 2015) and it is an interesting topic for future research.

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APPENDICES

Appendix A - Sample information and variables

	Sample and variables						
Interviewee	Gender	Age Group	Working Sector	Sport	Sports level	Leadership	Employer
1	M	54-65	Entrepreneurship/management	Basketball	C	A	A
2	M	45-54	Union sector and training	Football	A	B	C
3	M	54-65	Academic and training	Volleyball	B	C	C
4	M	45-54	Book editing / management	Rugby	B	A	B
5	F	45-54	Sports management	Volleyball	B	A	C
6	F	45-54	Nursing	Handball	A	C	B
7	M	45-54	Entrepreneurship/management	Futsal	C	A	A
8	F	25-34	Marketing / HR management	Roller Hockey	A	C	B
9	M	35-44	Marketing	Basketball	A	B	B
10	M	35-44	Banking / management	Basketball	A	A	A
11	F	25-34	Data analysis	Football	C	C	B

Figure 8. Sample information and categorization (Self-made)

Appendix B - Semi-structured interview script

Introduction

The aim of this segment is to characterize the sports participation of the interviewee, getting to know his/her experience in the sports world in their specific context.

- What is your connection to sports in general? Which sport did you play?
- Do you still have any connection to sports? If yes, how regularly and why?
- How was the volume of practices you had? What was the highest stage of your career?
- What did you enjoy the most when playing sports at that time?

Part 1

The aim of this section is to understand the impact of the sport on the person.

- In your sporting context, what factors do you think primarily affected your sports performance? (in terms of technical/tactical, physical, and mental aspects) What motivated you the most to improve?

- What aspects do you think may have compromised your development as an athlete? Looking back, how could your environment (coaches, club, competition models, training management, etc.) have optimized your development as a player?
- What skills do you feel you developed in sports that are still useful to you today?
- What practices in sports (and specifically in your context) do you think helped develop these skills? Through which principles were these skills developed?
- Comment on the role that your coaches, managers, and other sports stakeholders played in your evolution.

Part 2

This section aims to analyze to what extent sports concepts are applicable in the interviewee's business context, in which aspects this applicability is more prominent, and the impact of sports on the interviewee, considering their affiliation with a company.

- In your work context, what aspects motivate you the most to improve and achieve better results? And what aspects are essential for the development of your skills?
- Do you think there are external factors in your profession that impact your performance? In other words, factors you cannot control?
- The constant performance evaluation in sports and feedback from coaches are important aspects in athletes' development. How do you relate this to the development of workers in your company? Do you think that in your professional environment, your performance is evaluated and communicated adequately and sufficiently?
- How has the sport you played/are playing impacted your professional decisions, such as your current profession or area of work?
- Competition in sports is one of the main factors in athletes' development. In the professional environment, studies show that healthy competition is beneficial for improving results and developing workers. Do you consider that there is a healthy competitive environment within your company?
- Consider now some characteristics of the theory and methodology of sports training. Training frequency (reversibility), progressive increase in load, individuality, and specificity are concepts from the Theory and Methodology of Sports Training (TMST). (each one is explained). Do you think these principles apply in your company? Comment on the usefulness these could have when applied to worker training.
- What do you think are the biggest shortcomings in skills development and performance management of employees in your professional context?

Part 3: General Reflection

- In what aspects can you associate your work with the sporting reality you experienced?
- Can you identify any type of companies/sectors/departments that you think most resemble the reality of a sports team?
- If you were to compare your work team to your sports team, what aspects stand out as the most similar?
- If you had to suggest changes to your company that incorporated sports principles, what would they be? How could your work environment be assimilated to a sports context to improve results?

Appendix C - Codes table and frequency

1 Management flaws	0
1.1 Bad leadership	7
1.2 Communication & Guidance	4
1.3 Employee empowerment & openness to change	5
1.4 Evaluation process	7
1.4.1 Metrics do not adjust to the employee	3
1.5 Excessive competition between workers	3
1.6 High Hierarchy	1
1.7 Insufficient rewards	1
1.8 Lack of diversity of competences	2
1.9 Lack of leadership presence & insufficient feedback	8
1.10 Lack of progression	1
1.11 Low focus on worker development	5
1.12 Person Job Fit	3

1.13 Relational skills & teamwork	6
1.14 Unclear objectives & mission	4
1.15 Undervalue motivation & brand loyalty	2
1.16 Work overload	7
1.17 Work/life Balance	3
2 Positive aspects - work structure and principles	0
2.1 Acknowledging individual preferences & objectives	8
2.2 Competition	9
2.3 Employer principles & workplace practices	8
2.4 Evaluation & feedback	12
2.5 Highly interdependent teams	11
2.5.1 Communication, feedback, and honesty	7
2.6 Job-Person Fitness	7
2.7 Leadership style	2
2.8 Orientation toward a clear mission/goal	9
2.9 Progression	9
2.10 Respecting work/rest periods	6
2.11 Rotativity & different experiences	5
2.12 Team cooperation	1
2.13 Team diversity	7
2.14 Valorization of the worker	1
2.15 Workplace environment	1

3 Performance and development enhancers in Sports	2
3.1 Focus on player development & performance	7
3.2 Load Management & Progression	4
3.3 Positive competition	5
3.4 Sports leadership	9
3.4.1 Adapting to team characteristics	6
3.4.2 Clear objectives	6
3.4.3 Empathy & being approachable	4
3.4.4 Feedback	4
3.4.5 Leadership style	9
3.5 Sports motivation references	19
3.6 Team complicity	7
3.7 Team management & Roles	2
3.8 Team's multidisciplinary and heterogeneity	7
4 Skills developed through sports	0
4.1 Communication	10
4.2 Discipline and commitment	12
4.3 Goal orientation	11
4.4 Planning, organization	2
4.5 Relational skills	13
4.6 Resilience & handling pressure	21
4.7 Self-motivation	7