ABSTRACT
Scientific research in the field of sports management and its respective academic improvement has been pointed out and recognised by various authors as the path to follow for a better understanding of its importance in the global development of sport, as well as in the improvement of academic curricula and skills of sports managers. This study aims to analyse the scientific and academic production of three Portuguese public universities, being this the main source and origin of the knowledge generated over the last decades. Methodologically, we analysed 193 master dissertations successfully completed between 2008 and 2017 available in institutional scientific repositories, as well as in the national library. The results point to a growth of scientific knowledge in Portugal, validated by the considerable evolution in the number of completed works in distinct areas in sports management, mainly in the scope of planning and strategy, human resources and sociological aspects, which helps to reinforce its multidisciplinary and differentiating character. The data obtained allow us to expose a considerable part of the knowledge produced in Portugal, thus contributing to the strengthening of some areas and future research in sports management, given that it is crucial to aggregate the existing knowledge by enhancing new paths and future opportunities. We conclude that research in Portugal reflects the global growth of scientific knowledge and the increasing interest in sports management, both at qualitative and quantitative levels, while also following international concerns and trends.

Keywords: Sports management; Scientific research; Public universities; Scientific areas; Master’s dissertations.

Introduction

Scientific research in sport management has seen huge advances since it was recognized as an autonomous area of scientific knowledge in sport\(^1\)\(^-\)\(^3\). The number of studies developed has grown substantially around the world in recent decades\(^4\)\(^-\)\(^6\) and in Portugal we find a similar situation, revealing to be a clear positive indicator of the contribution of Portuguese universities in improving the understanding of this specific area.

Most of the basic scientific knowledge originates in the university context due to the specific mission of scientific production of universities, namely within the framework of studies that contribute to a better understanding and development of our environment, while studying
and applying this same knowledge\textsuperscript{7,8}. However, the production of new research has generated enormous volumes of work that in general has been little used, not taking advantage of the full potential of the knowledge produced.

For this reason, it is of vital importance to conduct studies that promote better knowledge management\textsuperscript{9,10}, updating not only the existing and explored knowledge, but mainly clearing the way for innovation and new opportunities that promote and enhance the importance of sports management in the sustainability of sports organizations\textsuperscript{11,12}. The academic interest in sports management has made it possible to obtain a vast knowledge on the most diverse contexts in different countries, and it is therefore necessary and pertinent to develop mapping studies, allowing researchers to get to know other realities, compare data, identify the state of the art on a given subject, among others\textsuperscript{13,68,69}. Universities themselves benefit from an optimization of the management of existing knowledge, being this an essential tool in scientific innovation, in the opening to new fields of scientific knowledge, as well as in the quality of the transfer of this knowledge\textsuperscript{14}.

Sport management, despite having a multidisciplinary action base, is complex and differs in the field of action in certain specific contexts\textsuperscript{15,16}. For this reason, the more we know about a certain context, the easier it will be to determine the needs inherent in academic innovation, as well as the critical points that must be studied, thus also improving the field of knowledge, the quality of academic training and the improvement of the skills of those who seek training in this area\textsuperscript{17,18}.

In this sense, and based on the adaptation of a research study developed in the context of the conclusion of a Master's program in sports management\textsuperscript{9}, this work starts from the need to better understand the studies developed in the context of sports management in Portugal, and at the same time aims to contribute to a better understanding of the scientific knowledge regarding the Master's dissertations in sports management of three public universities, in particular, the dissertations produced by the University of Lisbon (UL), University of Porto (UP) and University of Évora (UÉ).

Theoretical framework

European Higher Education Model

The agreement signed in 1999 between 29 European countries, in which Portugal was also a member, allowed for a paradigm shift in higher education, thus becoming known as the Bologna Process\textsuperscript{10}. This agreement was intended to achieve homogeneity among higher education institutions\textsuperscript{20}, both public and private, allowing not only students, but also higher education graduates and teachers to benefit from equal opportunities not only in the quality of education, but also to experience unhindered European mobility\textsuperscript{21}, through cooperation among higher education institutions from different European countries\textsuperscript{22}. The process now brings together 47 countries with the clear goal of cooperating with each other for a more inclusive and higher quality European higher education\textsuperscript{23}.

The European higher education system consists of three study cycles\textsuperscript{24}: (a) Bachelor's degree (1st cycle of studies) which approves the undergraduate degree and has a normal duration of six to eight semesters; (b) Master's degree (2nd cycle of studies) which approves the degree of master and has a duration of between three and four semesters; c) Integrated Master's Degree (cycle of studies integrated between 1st and 2nd cycles) that approves the master's degree, with a direct follow up in the study area between cycles and has a normal duration of ten or twelve semesters; and, d) and, Doctoral Degree (3rd cycle) that approves the doctoral degree, existing the format without course with a duration of ten semesters and the format with course with a normal duration between six and eight semesters.
The European credit system (ECTS) is a measurement created to measure the total amount of full-time work, and a minimum of 60 credits has been defined for this evaluation. According to this system, the normal workload is between 1500 and 1800 hours per year, with each credit corresponding to an average of 25 to 30 hours of actual work. Based on this assumption, an academic semester corresponds to 30 credits and a trimester to 20 credits.

The Sport Management field: brief historical contextualization

In the historical context of sport management as an emerging and academic area, it should be noted that it first emerged in North America through the creation of the first regional association of sport management, called North American Society for Sport Management (NASSM) in 1985. Consisting of academics and researchers, its purpose was to promote, encourage and stimulate studies, research, academic publications, as well as professional development in the area of sport management. Later, in 1987, the association published what would become the first scientific journal on sport management, the Journal of Sport Management, thus launching the first steps towards scientific dissemination in this area and influencing the creation of others in different parts of the world.

The concept of sports management first emerged in North America (United States of America and Canada) through the need to professionalize growing sports leagues, with the aim of obtaining economic benefit, i.e., profiting from sports development. The evolution of the various sports, whether professional or in higher education (university sport leagues) continued to grow based on a sport/business perspective. The sports organizations (clubs and leagues) started to be managed professionally, creating a need for highly qualified professionals to enhance the phenomenon. It is in this context that the beginning of a link of mutual interest is created between the clubs which needed qualified professionals and the academics who sparked a growing interest in better understanding the phenomenon, which was rapidly taking hold, subsequently becoming the area of scientific knowledge known today as sports management.

The scientific development of sport management, mainly in the North America (United States of America and Canada), has advanced towards a better understanding of sport and sport organisations, especially from an economic point of view (growth potential, new business in sport, improvement and efficiency of sport organizations, marketing, among many other fields of knowledge). Its strong capacity for investment in science and development makes it a reference for what is developed in other countries.

Regarding the development of sport management in Europe, it emerged following the implementation of the European premise of a "Sport for All", which consisted in the promotion of public policies that promoted and developed the conditions of access with quality to sports and recreation for all citizens without exception, these being promoted by central governments and national substructures. This new paradigm gave rise to the accelerated evolution of the sport phenomenon at the most diverse levels, increased the demand and need for better skills to intervene in sport, giving rise to a vast area of intervention in the area of sports management that needed more and better knowledge.

In contrast to the "American model", based on a mercantilist perspective, the "European model" is in fact expressed, in essence, in a perspective of improving the general welfare of the population and the benefits inherent to their living conditions. This model had in its genesis the concept that the national political authorities themselves would develop national, regional and local public policies that would promote the access to sport for the entire population through the support to associations, the construction of sporting venues and facilities, support to high performance sport, the promotion of incentive programs for the practice of sport, among others. This was above all the premise that guided the development of sport for several decades, as well as scientific research in the field of sport management in a European perspective.
Consequently, the studies developed in Europe are essentially different, being more directed towards the understanding of the organizations, their actors and participants, the political organization (or lack of it!) in the creation and implementation of sport public policies, among many other topics which are also relevant\(^3\). What we have seen over the last few years is a growing interest in the economic side of sport, greatly influenced by the phenomenon of sporting events/sports performances and by the economic and social impacts of mega-events, as well as by the growth on a global scale of some sporting disciplines\(^3\).\(^3\)\(^5\)\(^3\).

The evolution of sports management in Europe, its study and understanding through scientific research seems to be moving towards the economic model of sport\(^3\)\(^5\)\(^3\), i.e., politically, the concept of "Sport for All" reigns, but what we see in the activity of sports organizations is a greater elitism of sport and a greater increase in professionalization with a view to obtaining profits, while at the same time, national public investment decreases in most European countries, especially as far as the Portuguese reality is concerned\(^3\).\(^9\).

Overall, and despite having emerged just over 50 years ago\(^40\), sport management is still considered a relatively recent area of scientific knowledge\(^41\). It originates mainly from the evolution of global sport\(^42\), but also from the interest of researchers in understanding the whole phenomenon associated with its growth, which involves several possible dimensions of analysis\(^43\)\(^44\), enhancing new paradigms, indicating new fields of intervention and opportunities, promoting the character of innovation in some sectors\(^27\) and thus increasing the demand that now exists in the management of sport\(^4\)\(^44\).

**Sports Management in Portugal**

Following the implementation of the European ideal of a "Sport for All", Portugal started a phase of high public investment\(^45\) in the improvement and creation of several structures and sports equipment, as well as in sports programs which would align with that premise\(^46\), thus giving rise to a growing opportunity for the development of sports management\(^47\) and of duly qualified human resources which would allow a differentiated vision when applying and managing the public policies in sports\(^48\).

NASSM was pioneer in its purpose of developing sport management, appearing in 1993 the definition of the basic criteria that would serve for the creation of advanced studies in sport management in universities, thus configuring those that would be the guidelines for the development and qualified academic training in sport management at the level of bachelor's degrees, master's degrees and doctorates\(^27\)\(^49\). In this sense, and in line with what was already happening in Europe, the first higher education programs on this subject started to appear in Portugal within the scope of studies in sports science\(^35\), having been the UL to initiate this step during the 1980s and later as an individualized study area with the creation of the undergraduate degree in sports management, master's and doctorate\(^50\).

Portugal has evolved a lot and is today better prepared to train people able to successfully face the demand that is managing sport in modern society\(^40\)\(^52\). Sports management training is now more diverse and specialized, conducive to the reality that sports organizations face and there is a need to adapt to an increasingly diverse phenomenon\(^53\)\(^54\).

The discussion around the professional competencies to act in the field of sports management, as well as in other areas of knowledge, is marked by a diversity of opinions, leading to a lack of consensus\(^55\)\(^56\). Several authors\(^27\)\(^57\)\(^58\) refer that the development and recognition of sport management and its professionals reveals a need for more studies, research and scientific publications on sport management, as well as the need for a greater connection between academia and sport organizations\(^47\)\(^59\).

The typical areas of intervention of professionals with advanced training in the area of sport are now different and more comprehensive in their area of activity\(^28\) and there is a wide area of intervention in public and private sports organizations, being possible for a manager to
perform different functions and at different levels of responsibility\textsuperscript{58}. However, in some contexts, there are still few people involved in sports management without adequate and differentiating training\textsuperscript{60}. Making resources profitable and managing sport clearly demonstrates the need for managers to have the appropriate basic training, properly consolidated in the area of sports management, as well as the ability and competence to intervene in sport\textsuperscript{27,61-64}.

Public universities in Portugal have made an effort to adapt to the constant needs of sport management, adjusting and improving their scientific curricula at a time when it is increasingly complex to define the best or most efficient profile of competencies of a sport manager with accuracy\textsuperscript{28}.

The scientific research produced has followed what are the European and global trends, in order to improve the understanding about the sport phenomenon and the direct benefits of sport management in the sustainable evolution of sport, as well as the importance of organizations incorporate more and more highly qualified and differentiating professionals with higher education in sport management\textsuperscript{62-64}.

**Methods**

**Sample**

Considering the purpose of the research to analyze and identify the scientific production of master's dissertations in sport management in the three public universities in Portugal between 2008 and 2017, a total of 219 documents were identified. From the total number of dissertations produced in this specific period, it was possible to analyze 193 (88.0\%), corresponding to 107 from UL, 68 from UP and 18 from UÉ.

**Procedures**

The data collection process consisted of an extensive consultation in the libraries and scientific repositories of each university, using terminology such as "sport management" and "sport management", but also "master in sport management" and "master in sport management". Most of these documents are available in open access, yet some documents were blocked, and the institutions had to be contacted directly.

In order to assess the exact number of dissertations produced by each university, we contacted the departments of sport, as well as the academic services and libraries of the respective universities to make sure that we reached all the available dissertations within the spectrum defined by the research. In this sense, we made a request to the three universities, which was answered confirming the number of dissertations, the respective authors, title and year in which the research was presented. An analysis of the National Library of Portugal website was also carried out in order to ensure that no dissertation was excluded.

**Data analysis**

In analyzing the dissertations, the following components were fundamentally considered: a) analysis of the title, keywords, abstract, and table of contents; b) reading the study questions and objectives; and c) analysis of the methodology.

Regarding the method of analysis, we examined the dissertations from eight distinct variables: a) distribution of research by university and year; b) gender of the authors/supervisors; c) number of supervisors per dissertation; d) keywords; e) areas of intervention (the areas of intervention were selected after consulting the various course units that make up the respective master's degrees in sport management and after extensive reflection and crossing of the different themes, we selected the most comprehensive themes, making a list with nine different areas and distributing the dissertations in order to understand the areas investigated); f) relationship between the year and the investigated area; g) data collection.
technique (questionnaires, interviews, documental collection, among others); and, h) analysis of the bibliographical references (number, nationality, year).

With regard to the treatment of the information collected in the documentary research, we resorted essentially to descriptive statistics, registering and interpreting the data through the statistical analysis program SPSS version 24.0. (Statistical Package for the Social Sciences).

Results

Dissertations by universities and year of publication

According to the data collected, we can see that the distribution in relation to the total number of dissertations (n=193) between 2008-2017 is quite distinct (Table 1).

UL, with about 107 dissertations, represents 55.4% of the works carried out, while UP accounts for 68 works carried out, corresponding to 35.3% in total. UÉ represents 9.3% of the data, corresponding to 18 dissertations.

Regarding the volume of works carried out annually, the data show that the year 2013 presented the highest volume, representing 16.6% with 32 investigations, followed by the year 2015 with 31 dissertations, representing 16.1% of the total dissertations carried out. The years 2008 and 2009 showed the lowest values, counting 2 and 9 dissertations respectively, representing 1.0% and 4.7% of the total sample.

Table 1. Number of "completed" dissertations by university

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Total completed Dissertations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UÉ</td>
<td>18 (9.3%)</td>
</tr>
<tr>
<td>UL</td>
<td>107 (55.4%)</td>
</tr>
<tr>
<td>UP</td>
<td>68 (35.3%)</td>
</tr>
<tr>
<td>Total per year of conclusion</td>
<td>193 (100.0%)</td>
</tr>
</tbody>
</table>

Source: Authors

Dissertations by authors and advisors

The analysis of the 193 completed dissertations also allowed us to identify (Table 2) that the majority of the authors are men (a total of 125), corresponding to 64.8%, while the remaining 68 are women (35.2%). The gender difference is more visible between UÉ and UL, since UP presents a balance between authors of both genders.

In what concerns the gender of the supervisors, we verify an identical scenario, since in a global view, and considering the totality of the concluded works, the male elements represent close to 70.0% (69.0%) of the total of supervisors covered by the study, while the female elements represent 31.0%. The 193 dissertations were supervised by a total number of 42 supervisors who are repeated between works, some more regularly than others.

Finally, it was also possible to establish the number of supervisors per work and to a large extent we found that most dissertations had only one supervisor (90.7%), followed by two supervisors (8.8%) and only one work had three supervisors (0.5%). We can verify that in UL and UP it is a regular practice evidenced by the data obtained, whereas in UÉ there is a predominance for the use of two advisors per work developed.
Table 2. Number of dissertations by "authors and advisors"

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Authors/Institution (N= 193)</th>
<th>Advisers/Institution (N= 42)</th>
<th>Nº Supervisors/Dissertation (N=193)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (%)</td>
<td>F(%)</td>
<td>M (%)</td>
</tr>
<tr>
<td>UÉ</td>
<td>16</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>UL</td>
<td>72</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>UP</td>
<td>37</td>
<td>31</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>125  (64,8%)</td>
<td>68  (35,2%)</td>
<td>29  (60,0%)</td>
</tr>
</tbody>
</table>

Source: Authors

Dissertations by keywords

Regarding the formulation and identification of the most used keywords, we used a software (wordclouds.com) in order to obtain a word cloud that represented the most common keywords (Figure 1).

The most used keywords by UÉ researchers were "management", "sports" and "events", while "gyms", "fitness", "planning", and "entrepreneurship" were mentioned less frequently. Regarding UL, the most used keywords were "sport", "management" and "soccer", while "scorecard", "degree", "sports" and "brand" were mentioned less frequently. UP shows some similarities in referring more frequently to keywords such as "management", "sport", "sports", "soccer" and "marketing".

Overall, the words that appear in the investigations most frequently are "sport", "management", "sport", "sports" and "soccer".

Figure 1. Distribution of “keywords by university – UÉ, UL e UP”
Source: Authors

Dissertations by area and year of intervention

To better understand the lines of research in the scientific area of sport management, it became essential to group the dissertations by theme or research area according to nine different areas.

In Table 3 we can see that "planning and strategy", "human resources management" and "sociological aspects of sport" are the most researched areas, corresponding to 20.2%, 19.7% and 13.0% respectively. From the opposite perspective we found "management and organization of sporting events" and "quality" as the least researched areas, corresponding to 4.7% and 5.2%.
### Table 3. Distribution of the “Areas of interest investigated in the dissertations”

<table>
<thead>
<tr>
<th>Areas of scientific research</th>
<th>Frequency (n=)</th>
<th>Percentage (%)</th>
<th>Total cumulative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and strategy</td>
<td>39</td>
<td>20.2%</td>
<td>20.2%</td>
</tr>
<tr>
<td>Human resources management</td>
<td>38</td>
<td>19.7%</td>
<td>39.9%</td>
</tr>
<tr>
<td>Sociological aspects of sport</td>
<td>25</td>
<td>13.0%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Sports Marketing</td>
<td>21</td>
<td>10.9%</td>
<td>63.8%</td>
</tr>
<tr>
<td>Organizational development</td>
<td>19</td>
<td>9.8%</td>
<td>73.6%</td>
</tr>
<tr>
<td>Sporting venues and facilities</td>
<td>17</td>
<td>8.8%</td>
<td>82.4%</td>
</tr>
<tr>
<td>Financial management and sports economy</td>
<td>15</td>
<td>7.8%</td>
<td>90.2%</td>
</tr>
<tr>
<td>Quality</td>
<td>10</td>
<td>5.2%</td>
<td>95.4%</td>
</tr>
<tr>
<td>Management and organization of sporting events</td>
<td>9</td>
<td>4.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>193</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors

In relation to the most covered themes by institution, it was possible to verify that the UÉ produced most research in the field of "planning and strategy" and with less occurrence the areas of "management and organization of events" and "financial management and sports economics". UL presents "human resources management", "sociological aspects of sport" and "marketing in sport" as the most researched areas, while "sport venues and facilities" and "management and organization of sport events" are the least explored themes. In relation to UP, we found that the most researched areas have been "planning and strategy" and "human resources management", while the least researched have been "quality" and "financial management and sports economics". The theme on "organizational development" was more recurrent in 2012 and 2016, with fewer studies in 2014 and 2015. Regarding the topic "planning and strategy", most studies were carried out in 2010, 2013 and 2014, with 2008 and 2011 representing the period with fewer investigations. As for "sports venues and facilities", 2010 was the period with the most studies, and it was less explored in 2011 and 2012. The "marketing in sport" showed a peak of interest in 2013, 2014 and 2016, being roughly an area that has been little developed. As for "management and organization of sporting events", we found that 2013 was the year of greatest development, while in 2009, 2010, 2012 and 2015 there was a decrease, with no papers appearing in 2008, 2012, 2014 and 2017.

Research on "human resource management" is an extremely well documented area, especially in 2015, with a small decrease in 2011. The interest in the area of "quality" has been of little relevance, with more studies occurring in 2015, however, we verified an absence of studies in five of the nine years covered by our analysis. The "sociological aspects of sport" were more developed in 2010 and 2012, being less researched in 2008, 2013, 2014 and 2017. Finally, the area of "financial management and sport economics" shows a higher number of studies in 2013 and 2015, while no research was produced in this area in 2008 and 2017.

**Dissertations by data collection technique**

Regarding the type of technique for data collection (Figure 2), it was possible to see that most papers used the questionnaire survey format (36.3%). In contrast, the least recurrent technique was the bibliographic collection.

The most commonly used data collection technique at UL and UÉ were questionnaires, while UP resorted more frequently to the mixed technique. Regarding the least recurrent techniques, we found that at UL and UP the least used technique was literature collection, while at UÉ the techniques used were literature collection and direct or documentary collection.
Dissertations according to the bibliographical references used

With regard to the average number of references used in the completed dissertations (Table 4), we can see that there are mainly three ranges, i.e., less than 40, between 40-80 and 80-120 references.

Table 4. Distribution of the “Number and origin of the bibliographical references used”

<table>
<thead>
<tr>
<th>Universities</th>
<th>No. of references used</th>
<th>Origin (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;40</td>
<td>40-80</td>
</tr>
<tr>
<td>UL</td>
<td>29</td>
<td>47</td>
</tr>
<tr>
<td>UP</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>UE</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: Authors

The dissertations completed by UÉ showed most frequently the use of 40 to 80 references per study, as did UL, the latter showing slightly different overall values. Finally, UP exceeds these values with a range between 80 and 120 references used.

Most of the studies used scientific documents produced between 2000 and 2009, an indicator verified at the three universities. In some cases, references from the 1980s and earlier were used. On the other hand, we verified a considerable use of references after 2010.

Regarding the origin of the bibliographic sources by institution, there is an approximation between the use of international references (58,0%) and national references (42,0%) by the UÉ, which is a positive indicator of the Portuguese research panorama in this area. In relation to the origin of the references used by UL and UP, it is possible to verify a greater use of international references, 66,0% and 67,0% respectively, in contrast to the use of national references (34,0% and 33,0% respectively). The compared data shows a visible balance at UÉ with regard to the origin of the references used, while the last two institutions show a considerable distance in terms of the use of national references in the completed work, with an approximate ratio of only 1/3 (one third) of the total references used.

Conclusions

The research aimed to explore and analyze the scientific production in the area of sports management in the three public universities in Portugal, in an attempt to promote greater knowledge about the work developed in the last decade. The volume of information associated with the field of research in sports management, especially in Portugal, makes it critical to gather information on the knowledge produced and which themes are the most in-depth, while also making it imperative to identify new areas, existing gaps and future opportunities.
The literature review has shown that in Portugal, considering the data and documents available from various sources, little has been produced in this respect. As previously mentioned, sports management is well established as an academic area in Portugal, however, little is known in an aggregated way about the dimension and diversity of existing information that needs to be refined. It was only possible to identify one study\textsuperscript{61} carried out at the University of Porto which tried to identify some characteristics of the existing knowledge produced by the institution itself.

This is a real gap, and there is a need to seek more information in the various quadrants of higher education (public and private), in order to better frame not only the effective knowledge in the area of sports management, but also to position the research developed in Portugal with the work carried out by the international community dedicated to the study of this area.

Based on the results, it is possible to verify that despite the three universities presenting different levels of scientific production over the last decade, they all contributed to the progress and understanding of sport management in the most varied areas and contexts. The discrepancy regarding the number of dissertations, especially at UÉ, is mainly due to the disproportionate number of enrolments annually compared to UL and UP and to the fact that it is a more recent course.

The institutions showed similarities in the main areas investigated, with the most developed thematic areas being planning and strategy, human resources management, and sociological aspects of sport, and the least developed being event and quality management. The areas of study investigated follow international trends on the most researched domains in sport management\textsuperscript{4,54}, while also becoming relevant to the reality in Portugal.

The particular interest in some specific areas can be justified by the motivation and interest of each individual, professional perspectives and/or ambitions, development and improvement of previously acquired skills or even the opportunity to explore the specificity of a particular context. It seems to us, however, that there is a relevant problem regarding the employment market which is slow to absorb the number of professionals specialized in sports management\textsuperscript{64,66,67}. There is in fact a deficit of suitably qualified professionals and/or with knowledge and skills in sports management, especially in public organizations and which has seen little development in recent years\textsuperscript{64,66}.

The concentration of greater interest in these areas contributes to the deepening of knowledge of a certain context, but it diminishes the development and the opportunity to explore new paths or different perspectives on already explored topics. This centralization of knowledge does not allow for the broadening of the various areas of action of a sport manager, which would be the ideal scenario. There are areas which need further studies in order to enhance the role of sports managers, so that universities should enter into partnerships/agreements with organizations from the most diverse segments, thus giving the opportunity to conduct specific studies which directly contribute to the organizations, as well as to the researcher himself in the sense of becoming acquainted with a reality in which he is already involved or intends to become involved\textsuperscript{63}. For this reason, mapping existing knowledge thus becomes an essential tool to guide researchers.

Overall, we have seen a gradual increase in the number of dissertations and scientific knowledge in certain realities. Although there is not a constant evolution and there are periods of higher and lower rates of work, there has been an overall growth since 2008, which became more pronounced between 2011 and 2017.

The majority of authors and mentors belong to the male gender, while there was a strong female involvement and participation in both cases. We believe that this difference is mainly due to the fact that the faculty in the three institutions is composed mostly of male professors. However, we noticed that at UÉ and UL there is a greater imbalance compared to UP. It was
also possible to observe that both UL and UP chose preferably one supervisor for each dissertation, while UÉ presents predominantly two supervisors as the most recurrent practice, with the choice of the number of supervisors being mainly a policy and/or option of each institution. We believe that the choice of two advisors allows a more enriching global perspective for the research, however, it is not synonymous of higher or lower quality/relevance of the work done.

Regarding the remaining indicators, it was also possible to verify that the most used keywords were management, sports, marketing, events and soccer, while the least used were scorecard, graduation, planning and entrepreneurship. Most of the investigations opted for the use of questionnaires as the main data collection technique, soon followed by mixed collection. Most authors used between 40 and 120 references, with the number varying depending on the educational institution. Finally, most of the references used were of international origin, and the use of national bibliographic references was particularly higher at UÉ.

Considering the limited existing information, now improved after obtaining the results presented here, we support the opinion that the data points to a gradual evolution, not only in quantity, but also in quality in the research developed. The openings for specific courses in sports management are annually filled in their total number, which shows the interest in the area, but also its importance for the sustained development of sport. Higher education in Portugal has also aroused the interest of international students, which also serves as a reference to the work that has been carried out over recent years. This multicultural exchange of experiences between different cultures and views on sports management has also been an evolving indicator which, not having been addressed in this study, clearly points to the increase of international students and researchers contributing to the evolution of the field in Portugal.

This study thus allows to aggregate the knowledge about a considerable part of the scientific production on sport management carried out so far in Portugal, thus becoming indispensable for future researchers. The results allow us to know which areas have been studied the most and which would benefit from more knowledge, thus opening the opportunity to start investigations in scientific areas less explored, while the importance of sport management and its professionals is increasingly valued.

**Limitations and future research**

The opportunity and pertinence for this study was limited to the time constraints for the conclusion of the master's program, and therefore only the master's dissertations of three national public universities were analyzed. Despite the high representativeness due to the number of documents consulted, there are, however, several documents to which access was denied and it would be important to analyze these dissertations.

In the future, research that seeks to analyze indicators on existing research in sport management should also extend the collection of data from private universities, as well as analyze papers within doctoral theses and internship reports, further broadening the general spectrum of scientific production that enhance scientific knowledge in sport management.

**References**


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