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ORIGINAL RESEARCH

Comparing the career longevity of basketball players across three continents: A preliminary exploratory study

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Abstract

The objective of this research is to compare the career longevity of basketball players on three continents through a preliminary exploratory study. The method consisted of a preliminary exploratory study, in which some sources were consulted for the retrospective collection of data about the careers of basketball players. The sources consulted were: Wikipedia, official and unofficial biographies, websites and a Google Forms questionnaire was also created and distributed to some groups on a social network (Facebook®) so that former players could voluntarily respond. The total sample consisted of 96 basketball players of both sexes, from three different continents, namely: South America (Brazil, Argentina, Chile, Uruguay, n= 38), North America (United States of America - USA , Mexico, Canada, n= 31) and Europe (Portugal, Spain, Italy, n= 27), that practiced the modality until 2019. In the results, the retirement age and career time of the studied basketball players differ according to the analyzed gender and continent. When comparing the three continents, male basketball players tend to have higher average values than female basketball players in terms of career length. At retirement age, this trend is repeated in South America and Europe, except in North America, where female players have higher average values compared to male players. Psychological and physical aspects directly influence career longevity in basketball. A balance in the players' overall health status could bring positive benefits that would impact their career longevity. Coaches must pay attention to factors that can shorten or prolong the career longevity of basketball players.

Keywords. Camping, orienteering, outdoor adventure, PE course, self-concept.

Introduction

Basketball is a complex team sport modality of territorial invasion, with unpredictable and highly dynamic characteristics (Maricone et al., 2016). Basketball players are required to have high demands on physical condition to withstand intense training loads and long competitive seasons (Jukić et al., 2005; Fox et al., 2018).

During their sports career in basketball, athletes face a series of challenges to maintain their optimized performance and maximize their survival time in professional leagues (Petersen et al., 2011; Fynn & Sonnenschein, 2012; Vretaros, 2021).

Every athlete has their beginning, middle and end of their sports career. The final period of his career is where his retirement takes place. At this point, the concept of career longevity would be the number of years the athlete practiced his sport until he retired permanently (Petersen et al., 2011; Vretaros, 2021).

The trajectory from the beginning of the career until the athletes' retirement goes through a long-term planning. This planning consists of the following consecutive phases: 1)- recreational sport,

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2)- learning about training, 3)- initial training, 4)- training for competition, 5)- training for victory, and 6)- sport retirement (Groothuis & Hill, 2004). Although these phases are consecutive in theory, what is evidenced in practice are timely transitions between each step, aiming to accelerate this process and, with that, to specialize the athletes even earlier in order to obtain immediate performance (Maricone et al., 2016; Martin et al., 2021).

In this process, if the athlete is talented and persists in the journey, he can enter the universe of professional sport (Vretaros, 2021). Professional sport brings prestige, media attention, and financial advantages to outstanding athletes (Agresta et al., 2008).

However, retirement emerges when the athlete begins to reflect on the end of his career. At this critical moment, there are two real possibilities for transitioning towards retirement: remotely or approximate. Remote retirement is when the athlete reflects on a period of their life when this will occur. On the other hand, approximate retirement sets a specific date for the decisive moment (Selingardi, 2013).

In this regard, an athlete's career longevity is an important metric to measure their talent, reputation and productivity. It can be speculated that competitive basketball players who have a longer career length have managed to maintain their high level of performance over a cumulative number of playing opportunities (Petersen et al., 2011). According to Groothuis & Hill (2004) owners prefer to keep in their teams those players who are more productive.

Therefore, the objective of this research is to compare the career longevity of basketball players across three continents through a preliminary exploratory study.

Methods

This research is characterized as a preliminary exploratory study. With this objective, some sources were consulted for the retrospective collection of data about the basketball players' careers. The sources consulted were: Wikipedia, official and unofficial biographies, web sites, and a Google Forms questionnaire was also created and distributed to some groups on a social network (Facebook®) so that former players could voluntarily respond. Comparative cross-analysis was performed between the data collected from these various sources to avoid unreliable information and to eliminate outstanding doubts. The anonymity of the identity of the athletes in question was maintained, as only two main variables were examined: the length of career and retirement age of the basketball players.

In addition, some scientific databases such as Google Scholar, PubMed, and Scielo were consulted to collect articles in Portuguese, English and/or Spanish that discussed the topic of sports career longevity and basketball career longevity. The criteria for selection of references involved reading the article title, article summary and, when interesting, the complete reading of the article. After screening, a total of 15 articles that discussed career longevity in sports and career longevity in basketball were included. In addition, two graduation course conclusion works in the area of physical education and psychology, and a master's thesis in the field of psychology were included.

Participants

The total research sample consisted of 96 basketball players of both genders, from three different continents, namely: South America (Brazil, Argentina, Chile, Uruguay, n=38), North America (United States of the America - USA, Mexico, Canada, n=31) and Europe (Portugal, Spain, Italy, n=27) that practiced the modality until 2019.

Statistical Analysis

The approach used for data analysis consisted of using descriptive statistics using mean and standard deviation values.

Results

Figure 01 shows the results of career length and retirement age among basketball players in South America. In the results, it can be seen that the average retirement age of male players in Argentina (41.2±1.7 years) was higher than in other countries for both sexes. Regarding career length, male Chilean basketball players (30.7±2.0 years) had higher values when compared to players from other countries and gender.

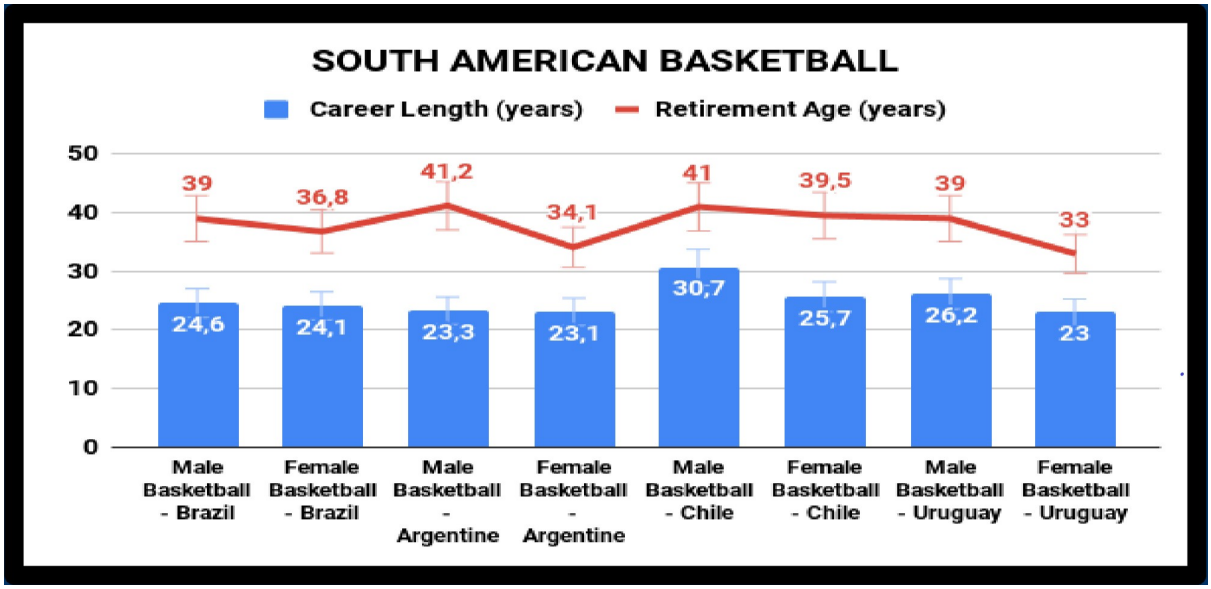

Figure 1. Career length and retirement age in South American basketball players

Figure 02 shows the results of career length and retirement age among North American basketball players. In the results, the highlight is for male players from the USA who presented values higher than those of other countries in the variables of career duration (25.8±2.4 years) and retirement age (38.8±2.7 years) in both sexes.

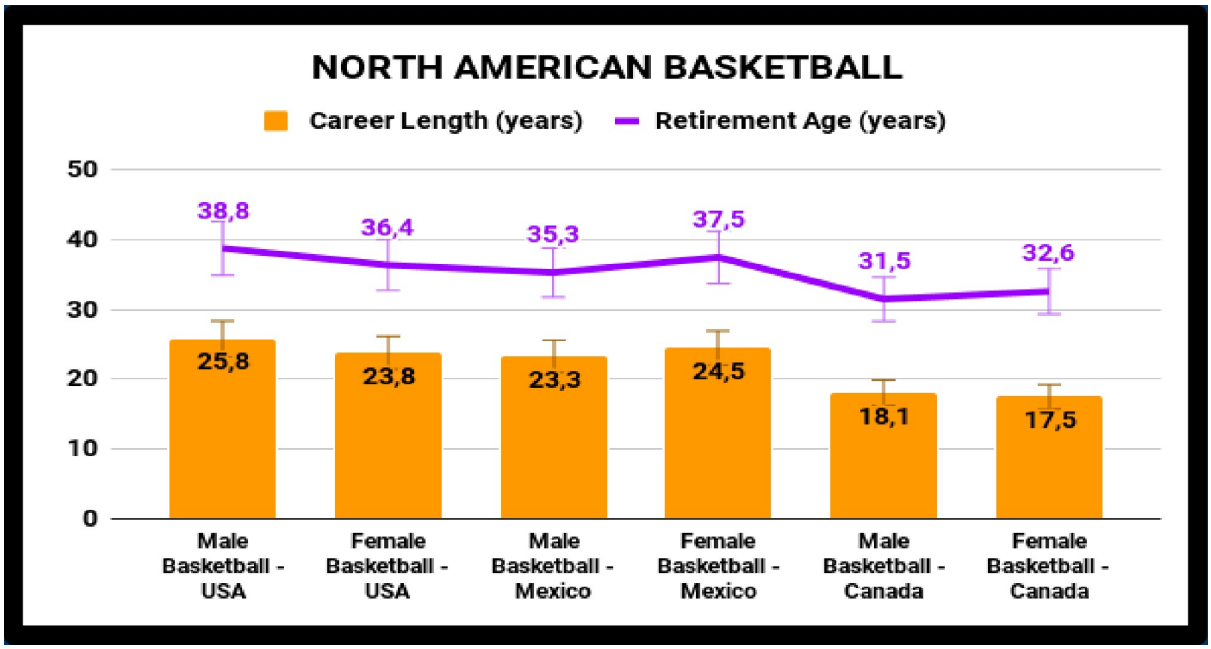

Figure 2. Career length and retirement age in North American basketball players.

Figure 03 shows the results of career length and retirement age among European basketball players. In the results, male Portuguese basketball players had higher values in career time (28.0±2.2) compared to other players from other countries in this continent, in both sexes. Regarding retirement age, we found that two countries had equal higher values: male players from Portugal (40.3±2.0 years old) and male players from Spain (40.3±4.3 years-old).

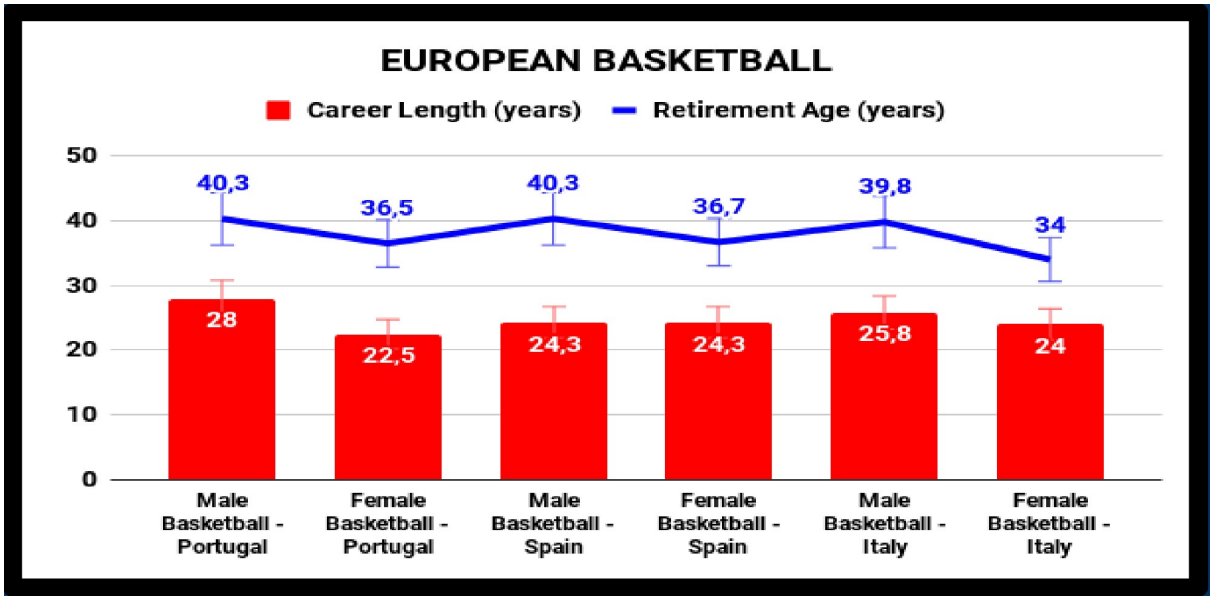

Figure 3. Career length and retirement age in European basketball players.

Figure 4 shows the results of career length and retirement age in the overall comparison between basketball players from the three continents. In South America, male basketball players have higher average values than female players both in career length (26.2±3.2 years versus 23.9±4.0 years) and retirement age (40.0±2.9 years versus 35.8±4.8 years). In the comparison between genders in North America, male players (22.4±4.1 years) had higher average values in career duration when compared to female players (21.9±4.8 years). In the retirement age variable, female players from North America have superior values when compared to male players (35.5±3.8 years versus 35.2±3.9 years). In the comparison between genders in Europe, male players have higher values (26.0±2.8 years) in relation to female players (23.6±3.4 years) in terms of career duration. In the retirement age variable, European male players showed higher values when compared to female players (40.1±3.0 years versus 35.7±1.9 years).

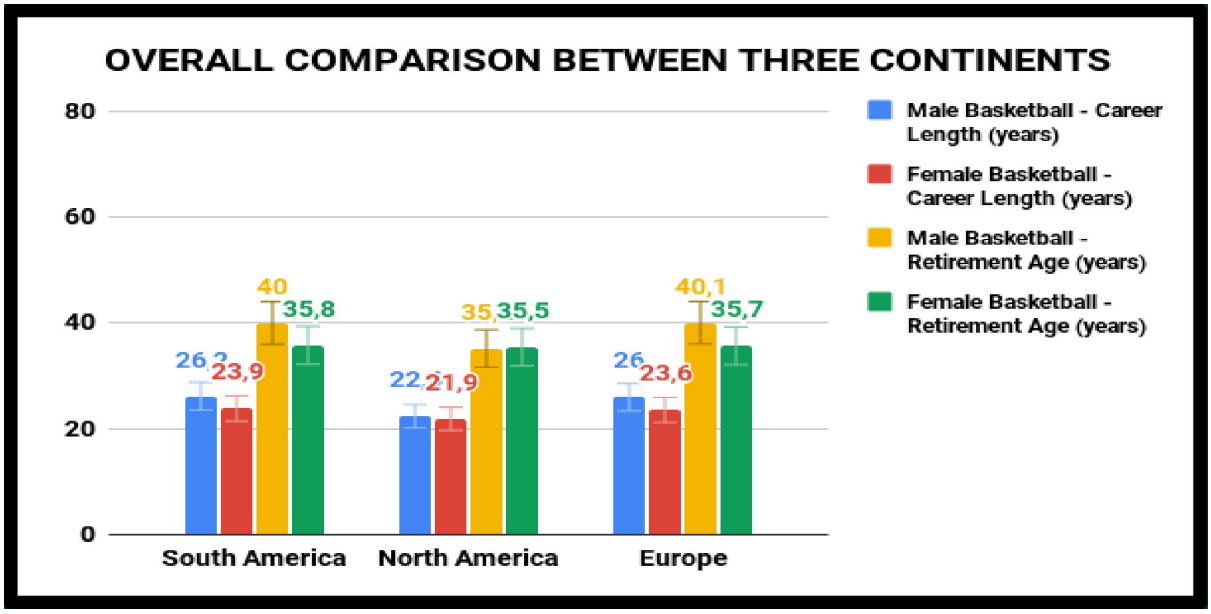

Figure 4. Overral comparison between three continents (South America, North America and Europe).

Discussion

It was possible to identify that the retirement age and career duration of the basketball players studied differ according to the analyzed gender and continent. When comparing the three continents, male basketball players tend to have higher average values than female players in terms of career duration. At retirement age, this trend is repeated for South America and Europe, except for North America where female players show higher average values compared to male players.

The mean chronological age at which basketball players of both sexes in our study retired was 37.9±3.9 years for South America (40.0±2.9 years for male players and 35.8±4.8 years for female players), 35.3±9.0 years for North America (35.2±3.9 years for male players and 35.5±3.8 years for female players), and 37.9±1.6 years for Europe (40.1±3.0 years for male players and 35.7±1.9 years for female players). These age groups are compatible with the age of gradual decline in work capacity to maintain performance in competitive sport (Ganse et al., 2018).

Other researches show different lengths of career. In Brazilian soccer and basketball athletes, mean values of retirement age of 34.3 years and career duration equivalent to 18.2 years were found (Agresta et al., 2008).

In competitive sport, a young athlete of 25 years of age is considered to be a veteran and an athlete of 35 years of age or older is considered to be old (Llontop, 2019). However, the ages mentioned in other professions are considered to be of high productivity. Typically, the chronological age for retirement in the public pension system ranges around 65 years (Selingardi, 2013), and the career duration in other professions is 30-35 years of services rendered (Vretaros, 2021).

In the NBA (National Basketball Association) there is a negative linear relationship between league survival and career time. The longer the career duration, the shorter will be the professional survival time (Fynn & Sonnenschein, 2012).

Several variables can directly or indirectly influence the career longevity of basketball players (Agresta et al., 2008; Bara Filho & Garcia, 2008; Selingardi, 2013; Wang et al., 2016; Jorge, 2018). It was found that the athlete's race (white or black) does not interfere with the total length of career in the NBA. However, players with awards, who play in more than one tactical position and who are tall, have the potential to extend their career longevity in the North American league (Fynn & Sonnenschein, 2012).

Regarding the reasons that can terminate a career, age has been the decisive factor (49.4%). Other factors would be changes in lifestyle (17.7%), health problems and injuries (31.7%), lack of career prospects (13.9%), decline in results (12.7%), psychological stress (11.4%), relationship family (7.6%), and relationship with the team (3.8%). Added to this, it was evidenced that 75.9% of athletes retired spontaneously (Agresta et al., 2008).

Some research has used mathematical models to interpret basketball career longevity (Groothuis & Hill, 2004; Petersen et al., 2011; Fynn & Sonnenschein, 2012; Miguel et al., 2019). However, the mathematical approach is a reductionist model to understand a complex phenomenon such as sports career longevity.

There are determinant stressors that can influence the athlete's career longevity. The history of injuries, psychological pressure (coach, media, fans and internal), decline in fitness (trainability adaptation window), genetic aspects, low career prospects and lack of social interaction with the family contribute to the athlete suffer wear throughout their sporting life and reflect on the decision to retire (Brandão et al., 2000; Agresta et al., 2008; Bara Filho & Garcia, 2008; Wang et al., 2016; Ganse et al., 2018; Llontop, 2019; Martin et al., 2021; Vretaros, 2021).

Retirement has implications for the physical and psychological aspects of athletes. These changes depend on how the athlete sees the construction of personal identity (Selingardi, 2013; Agresta et al., 2016).

From a psychological point of view, retirement is a sensitive period. Apparently, retired athletes take an average of nine months to recover mentally, facing at this stage some positive and negative feelings, such as: fear, tension, sadness, depression, relief, joy and new discoveries (Brandão et al., 2000; Selingardi, 2013; Agresta et al., 2016; Llontop, 2019).

In terms of physical condition, it is not recommended to completely stop training after retirement, as the risk of detraining is high. Detraining is a regression process in physical fitness

(morphological, physiological and functional aspects) acquired over long years of training (Selingardi,2013). Reports indicate that retired athletes gained in body weight in the retirement phase, as well as reduced their physical activity routine (Agresta et al., 2008).

Being physically fit is a valuable asset for basketball players who want to continue competing at older ages, showing good performance capacity. A more rigorous attention to physical fitness is important, as elite sport is an uncontrollable and unpredictable environment that can generate a series of organic stressors that affect the locomotor system of athletes. Therefore, the monitoring and control of workloads, nutrition, sleep, recovery and mindfulness should be a routine practice for the staff in teams (Calleja-González et al., 2021; Vretaros, 2021).

A typical example of the importance of physical condition in basketball career longevity is in the NBA Draft. The athletes with the best physical, psychological and motor conditions are selected in the NBA draft. The literature reports that players selected in the first five positions have a longer career longevity (~14.0 years) when compared to players in the later choices (Miguel et al., 2019). In addition, Čabarkapa et al. (2020) showed that high levels of maximum strength and power in the lower limbs of collegiate basketball players provide a greater career opportunity to play in professional divisions.

Another factor related to physical fitness that can negatively interfere with career longevity in basketball would be the history of injuries. NBA rookie players have been shown to have a high incidence of injuries and illnesses compared to veteran players. This is due to the maturation of these young players and the real difficulty of supporting the intense workloads that are imposed on the body. These players injured in their rookie season have a significant reduction in the total length of their league career (Martin et al., 2021).

Career longevity is a complex and multifactorial phenomenon that encompasses the psychological and physical aspects of basketball players. Therefore, maintaining a balance in the athlete's global health status could be a determining factor for his career longevity in competitive basketball.

Our research has some limitations. The sample size is not significantly representative for a more in-depth analysis of the three continents. Furthermore, research with similar characteristics on the subject in basketball players is scarce for comparative purposes. Also, the statistical treatment was limited to calculating the mean and standard deviation. Future additional investigations on the topic of career longevity are needed for a better understanding of this phenomenon in basketball.

Conclusion

Professional basketball players aim to maximize their career longevity to succeed in competitive leagues. In this comparative research between basketball players from South America, North America and Europe, it was found that there are differences in the average values of career duration and retirement age according to the analyzed gender and continent.

The career length of male players is longer than that of female players on three continents. At retirement age there are some discrepancies. In South America and Europe, male players had higher average values. However, in North America, female players have shown to have higher values when compared to male players.

Psychological and physical aspects directly influence career longevity in basketball. Thus, it would be necessary to maintain a balance in the players' global health status in order to obtain positive benefits that impact their career longevity.

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Declaration of Interest

The author reports that there is no conflict of interest in the study.

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