AGE AS AN INDICATOR OF SPORTS SUCCESS

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Abstract: *This paper examines the relationship between age and sports success, exploring whether age can serve as a reliable indicator of an athlete's performance and achievements in various sports disciplines. The findings and insights presented in this paper can be beneficial to several groups, including sports coaches, talent scouts, sports psychologists, and researchers in the field of sports science. By understanding the role of age in sports success, these professionals can make informed decisions regarding talent identification, athlete development, and performance optimization. The paper initially reviews existing literature on the topic, analyzing studies that have explored the relationship between age and sports performance. It discusses both physiological and psychological factors that can influence an athlete's success at different stages of their career. Additionally, it examines the impact of age-related changes, such as declining physical abilities and increased injury risks, on an athlete's performance and longevity in sports. To improve this paper, several changes can be implemented. First, expanding the number of references and citations will enhance the paper's credibility and provide a broader perspective on the topic. By incorporating studies from different researchers and sources, the paper can present a comprehensive analysis of age as an indicator of sports success. Additionally, the paper can benefit from including more empirical research, moving beyond a review paper to incorporate original studies and data analysis. This would strengthen the paper's argument and contribute to the existing body of knowledge in the field. For other authors writing on the same topic, it is recommended to focus on the following areas for improvement. Firstly, ensuring a thorough review of the literature, covering relevant studies and research papers, will enhance the depth and breadth of the paper. Secondly, conducting original research or including empirical studies will contribute to the scientific understanding of age and sports success. This can involve collecting data from different sports disciplines, analyzing performance metrics, and evaluating the impact of age-related factors on athlete outcomes. So, this paper investigates the relationship between age and sports success, providing insights that can assist various stakeholders in the sports industry.*
Keywords: *sports success, chronological age, biological age, athlete.*

INTRODUCTION

Sports is a highly competitive field where athletes strive to achieve excellence and reach the pinnacle of success in their respective sports. Many factors play a crucial role in determining an athlete's success, such as physical fitness, mental toughness, skill level, and training regimen (Allen & Hopkins, 2015). One of the most discussed and debated factors in recent times is age, and whether it is a determining factor for sports success. Age has long been considered a crucial indicator of athletic performance and a factor that can influence an athlete's ability to compete at a high level (Lorenzo-Calvo et al., 2021). In this context, the relationship between age and sports success has become an intriguing subject of research and discussion among sports stakeholders, experts, and academics.

Age has a significant impact on an athlete's physical capabilities (Suzic Lazic et al., 2017). Athletes differ by age in morphology, as well as in motor and functional abilities (Peña-González et al., 2018). As athletes age, their physical capabilities decline, making it harder for them to perform at their best. This decline is due to various factors, including a decrease in muscle mass, a decrease in bone density, and a decrease in aerobic capacity (Hennis et al., 2022). However, it is essential to note that the rate of decline varies from person to person, and some athletes may maintain their physical capabilities for longer than others.

This paper aims to explore the literature that analyzes the role of age as an indicator of sports success, the challenges associated with competing at different age levels, and the potential factors that can affect an athlete's performance as they age.

SPORT SUCCESS

Sport success can be defined as the achievement of specific goals or objectives in the context of athletic competition (Gould & Maynard, 2009). Research has shown that there are many factors that contribute to sport success, including physical and mental abilities, training, motivation, and social support. Genetic factors may affect athletic ability and add to sport success (Tucker et al., 2014). Despite of that, it is also proven that discrimination between successful and unsuccessful athletes in personality trait factors are common (Rowley et al., 1995). According to a study, athletes were more likely to succeed in their sport if they had greater levels of self-efficacy and confidence (Kim & Eom, 2019). Additionally, a review indicates that a number of variables, such as genetics, training, nutrition, and psychological elements like motivation and goal-setting, can have an impact on a person's success in sports (Stanley, 2017).

AGE AS INDICATOR

Age is an important factor in sports success, as it can impact an athlete's physical abilities, skill development, and overall performance. Athletes who start training and competing at a young age may have a developmental advantage, as their bodies are still growing and adapting to the demands of their sport (Bompa & Buzzichelli, 2015). However, age can also be a limiting factor in sports, as physical decline and injury risk increase with age. Additionally, older athletes may have accumulated experience and strategic knowledge that can compensate for any physical decline (J. Baker & Horton, 2004). The optimal age for achieving peak athletic performance varies depending on the sport. For instance, studies suggest that endurance athletes tend to peak later in life, with the average age for marathon runners being around 30 years old (Knechtle et al., 2012). On the other hand, team sport athletes tend to peak earlier, with the average age for professional soccer players being around 27 years old (Casal et al., 2017).

Chronological age

Chronological age is a straightforward measure of an individual's age, calculated in years from the date of their birth (Kotter-Grühn et al., 2016). It is commonly used as a basic indicator of an athlete's potential for success in sports, as younger athletes are sometimes thought to be developing more quickly than their older rivals. However, chronological age does not always accurately reflect an athlete's physical, cognitive, or emotional development, which can vary greatly from person to person (Keadle et al., 2019). Additionally, the impact of chronological age on sports success can vary depending on the specific sport in question, as different sports require different physical and mental attributes that may develop at different rates (Vaeyens et al., 2008). Therefore, while chronological age is a useful starting point in assessing an athlete's potential for success in sports, it should not be the only factor considered. Other factors such as training, experience, and motor abilities must also be taken into consideration.

Biological age

Biological age is a concept that takes into account an individual's physical and physiological health and function, which may be different from their chronological age. Biological age can be influenced by a range of factors, including genetics, lifestyle choices, and environmental factors (Belsky et al., 2015). Biological age, which can represent an athlete's physical condition and resiliency among other things, can be a key determinant of their likelihood of success in sports (Figueiredo et al., 2011). For example, an athlete with a younger biological age may have a higher level of physical fitness and be less prone to injuries compared to an athlete with an older biological age. Because it can give a more accurate image of an athlete's physical skills and limitations, biological age can be a beneficial complement to chronological age when determining if they have the ability to succeed in sports.

GENDER DIFFERENCES

Gender differences are an important factor to consider when evaluating the impact of age on sports success. On average, males tend to have greater muscle mass and strength than females, which can provide a physical advantage in certain sports that require power and speed. However, females tend to have greater flexibility and endurance, which can be beneficial in sports that require agility and stamina (Giovagnoli, 2021). Additionally, the onset and tempo of puberty can differ between males and females, which can affect their athletic performance and potential (Wing et al., 2020). It can be difficult to compare male and female athletic performance and to create fair and equal competition criteria as a result of these disparities. Research has shown that there is a „sweet spot" age range for peak performance in vari-

ous sports for both male and female athletes. For example, a study found that in track and field, peak performance was reached between the ages of 26 and 27 for males and between the ages of 24 and 26 for females. In swimming, the peak age range for male athletes was found to be between 20 and 27, while for female athletes it was between 18 and 24 (A. B. Baker & Tang, 2010). As a result, it's critical to encourage gender parity in sports participation and performance evaluation as well as to consider gender-specific aspects when evaluating the effect of age on sports success.

POSITIVE AND NEGATIVE ASPECTS OF AGE FOR SPORTS SUCCESS

Age can be both a positive and negative aspect for sports success (Güllich & Emrich, 2014). On the positive side, younger athletes often have a higher level of energy, faster recovery time, and more flexibility (Makaruk et al., 2022). This makes them more adaptable to new techniques, and better able to push themselves during training sessions (Johnston et al., 2018). Additionally, younger athletes are often fearless and confident, which allows them to take more risks in competitions (Piepiora & Piepiora, 2021). As a result, they can often achieve impressive results in their respective sports, especially in those that require a high level of physical ability and endurance. On the other hand, older athletes tend to have more experience and knowledge of their sport, which can be advantageous. They have developed a better understanding of their own strengths and weaknesses, and know how to optimize their training and performance accordingly ("Relationship between Training Load and Match Running Performance in Men's Soccer," 2021). They are also less prone to injuries, as they have developed greater control over their bodies and movements (Lambert & Evans, 2002). Athletes who are older frequently exhibit greater levels of discipline and commitment, which enables them to sustain their level of physical and mental fitness for longer (Deck et al., 2021). Age, though, can sometimes be a barrier to athletic performance. Younger athletes may have a considerable disadvantage due to their inexperience, particularly in sports that demand a high level of strategic thinking and decision-making (Silva et al., 2020). In addition, younger athletes may struggle to maintain focus and motivation over longer periods, which can hinder their progress. However, older athletes may discover that as they become older, their physical capabilities start to deteriorate, making it more challenging for them to compete at the greatest level (Domingos et al., 2021). They can also have a hard time keeping up with younger rivals who are faster and more energetic. All in all, age is both a positive and negative aspect of sports success. While younger athletes often have more energy and flexibility, older athletes have greater experience and knowledge.

CONCLUSION

In conclusion, age can be both a positive and negative indicator of sports success. Younger athletes often have higher levels of energy, faster recovery time, and more flexibility, which make them more adaptable to new techniques and better able to push themselves during training sessions. They may also be more fearless and confident, allowing them to take more risks in competitions. However, younger athletes may also have a disadvantage due to their inexperience, particularly in sports that demand a high level of strategic thinking and decision-making. On the other hand, older athletes often have a higher level of discipline and dedication, which allows them to maintain their physical and mental fitness for longer periods. They may have more experience and knowledge of the game, allowing them to make better decisions and strategize more effectively. However, older athletes may also find that their physical abilities begin to decline with age, making it more difficult to compete at the highest level, particularly in sports that require a high level of energy and speed. Therefore, it's important to consider both the positive and negative aspects of age when assessing an athlete's potential for success in a particular sport.

Finally, expanding the length of the paper will allow for a more comprehensive exploration of the topic, providing a detailed analysis of different perspectives and addressing potential counterarguments. By incorporating additional references and empirical research, authors can enhance the paper's quality and scientific rigor.

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