



From podium to leadership: Examining the influence of demographics, peak Olympic achievement, and career tenure on athlete leadership

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ABSTRACT

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This study examines how demographic and performance-related factors influence perceived leadership traits among Olympians, contributing to an understanding of leadership identity shaped by elite sport experience. Responses from 242 Olympians representing 67 countries and 44 Olympic sports were analyzed using the Leadership Trait Questionnaire (LTQ) to assess self-reported leadership characteristics. The study focused on gender, age, highest Olympic placement, and number of Olympic participations. Results show that all four variables significantly affect leadership self-perception, with gender and achievement level showing particularly notable differences. These findings suggest that leadership development in elite athletes is influenced not only by competitive success but also by broader experiential and demographic factors. The study offers a cross-national perspective on athlete leadership, revealing diverse leadership profiles within the Olympic community. Practical implications include the integration of leadership training into athlete development and career transition programs, emphasizing the transferable value of Olympic experience beyond sport. By identifying key influences on leadership self-perception, the research supports a more holistic approach to athlete identity and post-sport career readiness. The study provides a foundation for future research on leadership development in sport and its relevance to broader professional contexts.

Contribution/Originality: This research is original in its scope and focus on Olympians' self-perceived leadership traits. It links athletic achievement and demographic factors to leadership identity. The study uniquely applies to the LTQ of 243 Olympians across 67 nations and 44 sports, revealing how elite sports experience influences leadership development and post-career transitions.

1. INTRODUCTION

Leaders are individuals who use their unique skills, values, and vision to inspire others and drive success. They act as change agents, adapting to internal and external challenges to guide their teams effectively. Recognized for doing what is right, leaders model ethical behavior and set the standard for others through their actions (Hughes, Ginnett, & Curphy, 2015). Ultimately, leadership is about motivating and shaping mindsets to achieve shared goals (Gould, Voelker, & Griffes, 2013). Leadership is a critical component in sports, influencing team dynamics, performance, and overall success. Research has consistently demonstrated that athletes cultivate robust leadership skills through their engagement in sports, which subsequently proves advantageous in their post-athletic careers (Gould, Dieffenbach, & Moffett, 2002). These skills encompass attributes such as strategic thinking, team management, and motivational capabilities, which are enhanced through the competitive and collaborative nature of sports. The nature of the sport in which athletes participate also meaningfully influences their development

(Kozlowski, Mak, & Chao, 2016; Sarkar & Fletcher, 2013). Individual sports tend to cultivate self-reliance and personal accountability, whereas team sports prioritize collaboration and interpersonal communication. The level of achievement attained by the athlete can impact their leadership efficacy; elite athletes who have reached the pinnacle of their sport often exhibit heightened confidence and resilience, traits that are essential for effective leadership (Jin, Kim, Love, Jin, & Zhao, 2022; Sarkar & Fletcher, 2013). Lastly, individual factors such as age, gender, and the frequency of Olympic Games participation significantly impact the development and expression of leadership competencies among athletes (Gill, 2017; Zaharia, 2021).

Olympians represent an exceptional group of elite athletes who have achieved their goal of representing their country in the most significant global athletic competition, the Olympic Games. The prestige of the Olympic Games dates to Ancient Greece, and the event was revived in modern times by Pierre de Coubertin in 1896. This revival has allowed qualified athletes from around the world to compete for the honor of becoming Olympians and striving for an Olympic medal. Given that the Olympic Games are held every two years, alternating between Summer and Winter editions, the qualification process remains highly competitive (IOC.org). The unique personal characteristics of elite athletes enable them to possess special mental toughness and coping skills, building their confidence to overcome various obstacles and achieve their objectives, comparable to successful leaders. Athletic identity is prevalent in the lives of elite athletes and is directly related to the sport they practice, showing a strong correlation with successful athletic performance (Grove, Fish, & Eklund, 2004). This identity evolves based on life experiences, and as athletes retire or fail to make the team, their clearly defined athletic identities diminish (Cosh, Crabb, & LeCouteur, 2013). The designation of Olympian, achieved through exceptional dedication and sacrifice, serves as a lifelong identifier for athletes. This prestigious title significantly influences their career transition experiences, shaping their professional trajectories and opportunities. The transition from competitive sports to post-athletic life presents significant challenges for Olympic athletes, despite their exceptional traits and determination. Olympic athletes often face difficulties when transitioning from their athletic careers to post-athletic life. These challenges include identity loss, lack of purpose, and difficulties in finding new career paths (Stambulova, Alfermann, Statler, & Côté, 2009; Wylleman, Reints, & De Knop, 2013). The intense focus and dedication required for Olympic-level competition can leave athletes unprepared for life beyond sports, leading to psychological distress and adjustment issues (Lavalée & Robinson, 2007).

Various aspects of an athlete's life contribute to their confidence, with physical and mental preparation alongside competition accomplishments identified as the main sources (Hays, Maynard, Thomas, & Bawden, 2007). Olympic athletes possess unique types of self-confidence that allow them to perform at optimal levels and overcome obstacles in their pursuit of athletic excellence. Gender differences exist in how men and women perceive their leadership abilities, which can be attributed to societal perceptions of successful male and female leaders possessing distinct leadership characteristics. Men predominantly rate themselves as better leaders than women, attributing their success to internal factors such as abilities and traits, while women consider external factors like opportunities and support (Huszczo & Endres, 2017).

2. LITERATURE REVIEW

The personal characteristics of successful leaders have been extensively studied, particularly in business leaders. Various leadership styles state that "it's unequivocally clear that leaders are not like other people," highlighting six major leadership traits: intelligence, self-confidence, determination, integrity, motivation, and sociability (Hughes et al., 2015; Kirkpatrick & Locke, 1991; Northouse, 2016). Social intelligence, alongside general intelligence, is a major component of leadership traits, allowing individuals to select the best responses in various situations and social environments (Zaccaro, Kemp, & Bader, 2004).

Successful Olympic athletes exhibit a distinct set of psychological and performance-related traits that differentiate them from other competitors. While the physical and mental capabilities of Olympic athletes have been

extensively studied, recent research continues to highlight the unique psychological traits that contribute to their success. The "iceberg profile" (Morgan, 1979) has been instrumental in illustrating the positive mental attributes of elite performers, particularly in identifying overtraining. Core traits such as focused attention, effective use of imagery, and unwavering commitment to excellence have been consistently linked to successful performance (T. Orlick & Partington, 1986; Terry Orlick & Partington, 1988). Furthermore, these athletes are better prepared to manage unforeseen challenges, maintain emotional regulation, and demonstrate superior technical preparation (Robazza, Bortoli, & Nougier, 1998). Recent research supports these findings, emphasizing the role of psychological skills training, mindfulness, and positive psychology interventions in enhancing mental well-being and performance among elite athletes (Wang, Schweickle, Arnold, & Vella, 2025; Watson, 2024).

Research on Olympic athletes has primarily focused on their exceptional physical and mental abilities, with recent attention shifting towards their career transitions (Barriopedro, López de Subijana, & Muniesa, 2018; Oulevey, Tsutsui, & Kohtake, 2018; Vilanova & Puig, 2016). The leadership skills of Olympic athletes have not received similar attention, primarily due to the challenges associated with surveying retired Olympic athletes. Recognizing this gap, two researchers, both former Olympic athletes, have undertaken this study, drawing from their personal experiences with the difficulties of transitioning from elite athletic careers to post-sport life. This study seeks to investigate the relationship between the Olympians' leadership scores and their highest athletic accomplishments, as measured by the number of times Olympians participated in either the Summer or Winter Olympic Games. This study aims to identify and quantify the perceived leadership skills of Olympic athletes, to empower them during and after their athletic careers. As many athletes face significant challenges when transitioning to new professional paths, understanding their leadership capabilities can highlight areas for growth, boost their marketability, and showcase their value to potential employers. In the sections that follow, this paper will explore the specific leadership traits common among Olympic athletes, outline the methods used to measure these traits, and discuss how these skills can be leveraged across diverse career fields beyond sports.

3. METHODOLOGICAL APPROACH

To measure leadership individualities, various general and specific leadership measuring tools have been developed and validated, such as the 360-degree leadership assessment, which offers developmental feedback and drives individuals to create positive change (Brett & Atwater, 2001), and the Leadership Trait Questionnaire (LTQ), developed by leadership theorist Northouse (2016). In this study, the Leadership Trait Questionnaire (LTQ) was employed to assess leadership development among Olympic athletes. The LTQ evaluates fourteen fundamental leadership traits and quantifies participants' self-perceived leadership by measuring their self-assessments against these core attributes. The LTQ has been widely applied across various professional domains. Its validity as a reliable instrument for assessing leadership traits has been substantiated through its application in diverse contexts, including the evaluation of leadership competencies in medical education (Ginzburg et al., 2018) among Six Sigma Green and Black Belt professionals (Chamblee, 2010) in the assessment of leadership capabilities in medical students and junior doctors (Ng et al., 2022) and in business (Bester, 2024).

Participants in this study were recruited using a snowball sampling technique, a non-probability sampling method commonly employed in research involving hard-to-reach or specialized populations (Atkinson & Flint, 2001; Noy, 2008; Törnävä et al., 2025; Waters, 2014). Initial participants, the Olympic athletes known to the researchers through professional and academic networks, were invited to participate and subsequently asked to invite other eligible athletes within their networks. To facilitate participation, a QR code linking to the online survey was distributed via email and direct messaging platforms. This approach allowed for a broader reach while maintaining a degree of trust and credibility through personal connections. The use of snowball sampling was particularly appropriate given the elite and geographically dispersed nature of the target population. Data collection was conducted over four months, commencing immediately after obtaining approval from the Institutional Review

Board (IRB). This timeframe ensured compliance with ethical research standards and allowed sufficient opportunity for participant recruitment and response.

The researchers collected information from 242 Olympic athletes, male (n=135) and female (n=107), who represent 67 countries from around the world. The age groups represented were notably diverse, encompassing individuals from twenty years old to those over seventy years old (Figure 1).

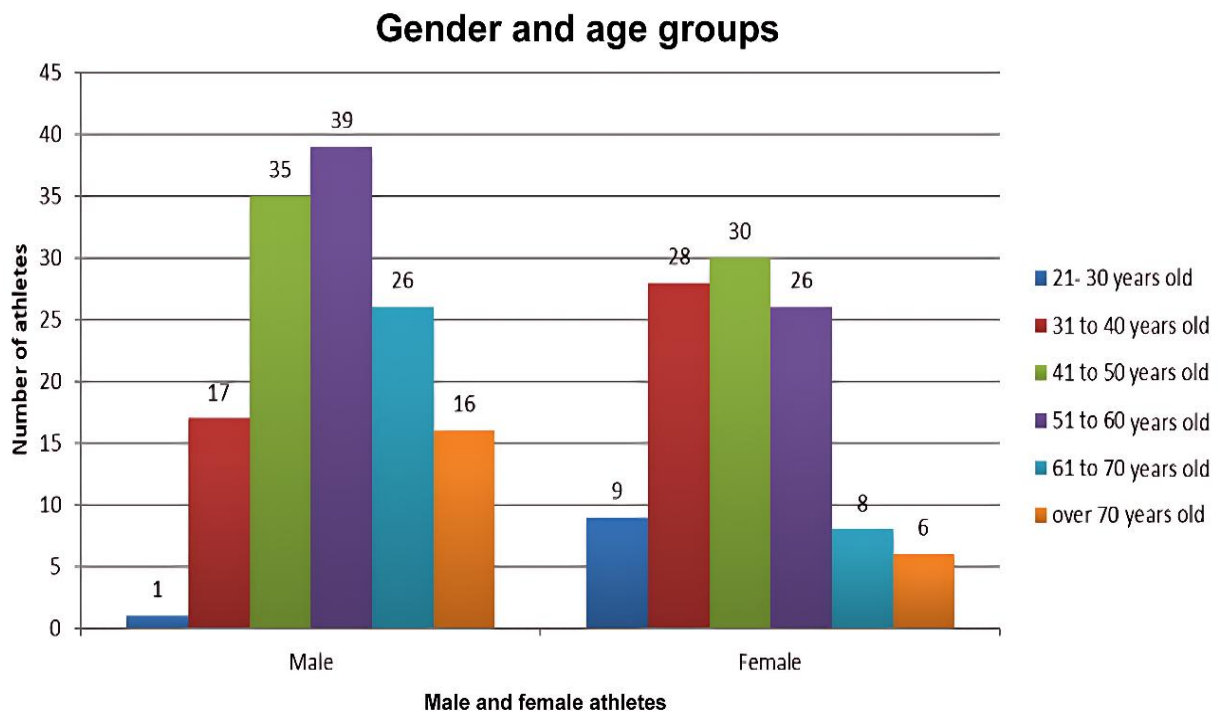


Figure 1. Gender and age groups are represented in the research.

Both summer and winter Olympic participants were asked to measure their perceived leadership, with thirty-three summer sports and eleven winter Olympic sports represented. This population of Olympic athletes is distinctive, with approximately 10,000 athletes participating in the Summer Games every four years, compared to roughly 2,800 athletes competing in the Winter Games. A further dimension of the population analysis entailed assessing the number of Olympic Games in which participants had competed. Most of the athletes surveyed (n=161) participated in one Olympic Game, forty-nine in two Games, twenty-three in three Games, while nine of the surveyed athletes participated in four Olympic Games. This statistic was further analyzed, highlighting that out of 161 athletes who participated in one Olympic Game, ninety were male and seventy-one were female, competing in 145 summer Games and sixteen winter Games. The athletes who participated in two Olympics were twenty-eight males and twenty-one females, competing in forty-four summer sports and five winter sports. The twenty-three Olympians who competed in three Olympic Games were ten male and thirteen female, with seventeen summer sports and six winter sports being represented. The remarkable accomplishment of competing in four Olympics was achieved by five male and four female athletes who competed in six summer and three winter sports. Figure 2 displays the number of Olympic participations categorized by gender.

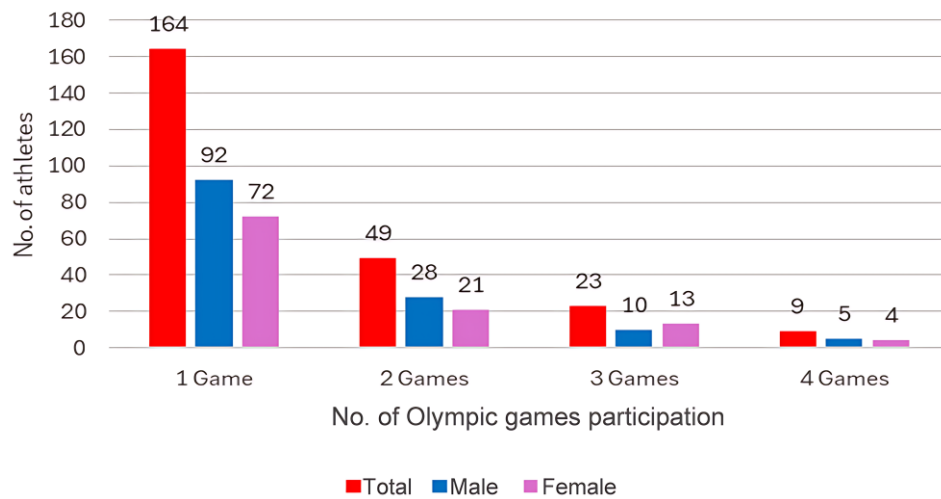


Figure 2. Number of Olympic participations by gender.

3.1. The Leadership Trait Questionnaire (LTQ)

As the LTQ quantifies participants' self-rated leadership based on perceived leadership qualities, the survey asked Olympic athletes to place themselves in the role of a leader and answer 14 leadership questions using a Likert scale of 1-5. The Likert scale was devised to measure 'attitude' in a scientifically accepted and validated manner³⁹. Each Olympian responded to fourteen leadership-related items. The cumulative score, derived from these responses, yielded a maximum attainable value of seventy points within the survey instrument. Individual scores ranged from one to seventy points, with the most common scores being sixty-six points ($n=23$), followed by seventy points ($n=16$), and sixty-two points ($n=16$). The researchers calculated the average score by gender, finding that male athletes had an average score of 55.8, while female athletes had an average score of 61.4. A Pearson correlation of 0.171 was obtained between gender and LTQ scores. The correlation coefficient between gender and average LTQ score is 0.171. This indicates a positive but weak correlation between the two variables. In other words, as the number of males or females increases, the average LTQ tends to increase slightly as well. The significance level for the correlation between gender and average LTQ score is 0.007. Since this value is less than 0.01, the correlation is considered statistically significant at the 0.01 level. This means there is strong evidence to suggest that the correlation observed is not due to random chance. Table 1 illustrates the correlation between gender and the average Leadership Trait Questionnaire (LTQ) score.

Table 1. Correlation between gender and average LTQ score.

	Nr. surveyed	Average LTQ score
Male	135	55.8
Female	107	61.4
Total	242	
Pearson correlation: 0.171		
Significance (2-tailed): 0.007		

The researchers also examined correlations between age groups and average LTQ scores. The highest average LTQ score was obtained by the youngest age group (twenty-one to thirty years old), followed by the forty-one to fifty age group with 60.3, and closely followed by the oldest age group (over seventy years old) with an average LTQ score of sixty. The Pearson correlation analysis reveals that the relationship between the average LTQ score and the age groups is very weak and negative, with a coefficient of -0.049. Additionally, the significance value for the correlation between the average LTQ score and the age groups is 0.450, which is well above the common threshold of 0.05, indicating that this correlation is not statistically significant. Table 2 illustrates the correlation between age groups and average Leadership Trait Questionnaire (LTQ) scores.

Table 2. Correlation between age groups and average LTQ scores.

Age groups	Nr. surveyed	Average LTQ score
21-30	9	62.5
31-40	44	57.9
41-50	65	60.3
51-60	66	55.8
61-70	33	57.7
Over 70	22	60
Total	242	
Pearson correlation: -0.049		
Significance (2-tailed): 0.450		

3.2. Correlation Between Leadership Scores and Athletic Achievement

This research addresses an existing gap in scholarly literature by examining the correlation between leadership scores obtained by Olympians and the number of Olympic Games they have participated in. The level of achievement in sports can influence an athlete's leadership abilities. Athletes who have reached higher levels of success may have developed stronger leadership skills due to their experience in high-pressure situations and their roles within their teams. This research explores how the highest placement achieved at the Olympic Games correlates with leadership scores. The results of this survey also examined correlations between the number of Olympic Games participated in and average LTQ scores. The highest average LTQ score of 61.01 was obtained by athletes who competed in three Olympic Games, followed by those with one participation who obtained an average score of 58.74, two Games with a score of 56.97, and athletes with the most participation at the Olympic Games scored the lowest with an average score of 55.77. The Pearson correlation analysis reveals that the relationship between the number of Olympic Games participation and the average LTQ score is extremely weak and negative, with a coefficient of -0.001. Additionally, the significance value for the correlation between the number of Olympic Games participation and the average LTQ score is 0.983, which is well above the common threshold of 0.05, indicating that this correlation is not statistically significant. [Table 3](#) illustrates the correlation between the number of Olympic Games participations and the average Leadership Trait Questionnaire (LTQ) scores.

Table 3. Correlation between the number of Olympic games participated in and the average LTQ score.

Nr. participation at the Olympic Games	Nr. surveyed	Average LTQ score
1	161	58.74
2	49	56.97
3	23	61.01
4	9	55.77
Pearson correlation: -0.001		
Significance (2-tailed): 0.983		

4. DISCUSSION

This study investigates the complex challenges encountered by Olympic athletes during their transition from elite sport to post-athletic life. This period is frequently characterized by identity disruption, psychological distress, and uncertainty regarding future career trajectories ([McArdle, Moore, & Lyons, 2014](#)). By analyzing the relationship between leadership scores and variables such as gender, age, and the number of Olympic Games participated in, the research provides nuanced insights into the diverse experiences of Olympians and the factors influencing their leadership development.

The analysis explored the relationship between gender and average LTQ scores. The results indicated a statistically significant positive correlation (Pearson correlation = 0.171, $p = 0.007$), with female athletes (average LTQ score = 61.4) scoring higher than their male counterparts (average LTQ score = 55.8). This suggests that

gender may play a meaningful role in shaping leadership traits among Olympians, warranting further investigation into the underlying social, cultural, and psychological factors contributing to these differences.

Additionally, the study examined the correlation between age groups and average LTQ scores. Although some variation in scores was observed across age categories, ranging from 62.5 in the 21–30 age group to 55.8 in the 51–60 group the overall correlation was weak and statistically non-significant (Pearson correlation = -0.049 , $p = 0.450$). These findings suggest that age alone does not serve as a reliable predictor of leadership traits among retired Olympians, further emphasizing the multifactorial nature of leadership development.

A key component of the analysis involved examining the correlation between the number of Olympic Games participations and average LTQ scores. The data revealed no statistically significant relationship between these variables (Pearson correlation = -0.001 , $p = 0.983$), suggesting that the frequency of Olympic participation does not predict higher or lower leadership scores. This finding underscores the importance of considering other demographic and experiential factors when evaluating leadership potential among elite athletes, such as gender, age, type of sport (individual or team), highest athletic achievement, and country of origin. Concluding that multiple Olympic participations increase leadership expertise would therefore be inaccurate.

Previous research has demonstrated that athletes who cultivate leadership competencies during their sporting careers are better equipped to manage the psychological and social demands associated with retirement (McArdle et al., 2014). The present findings reinforce the critical role of leadership in facilitating a successful transition from sport to subsequent professional endeavors. Retired Olympians who can leverage their leadership strengths are more likely to navigate identity shifts, overcome transitional challenges, and seize new career opportunities. This study underscores the value of leadership development in supporting athletes' transitions to post-sport careers and recommends targeted support programs to foster long-term success and well-being.

5. IMPLICATIONS AND PRACTICAL APPLICATIONS

The implications of this research extend well beyond the immediate transition period following athletic retirement, offering long-term benefits for Olympians as they navigate their post-competitive careers. By gaining insight into their leadership strengths, former athletes can identify areas for both personal and professional development, thereby enhancing their employability and overall value in the labor market. Tailored leadership development workshops can be designed to address the unique challenges faced by retired Olympians, including identity loss, a diminished sense of purpose, and difficulties in establishing new career trajectories. These workshops may incorporate practical exercises and real-world scenarios to facilitate the application of leadership competencies across diverse professional contexts. Such experiential learning approaches can significantly enhance participants' confidence and readiness to assume new roles. Furthermore, structured networking opportunities embedded within these programs can connect Olympians with industry professionals and mentors, providing critical guidance and support during their career transitions. This research also underscores the importance of lifelong learning and adaptability for retired athletes. Staying informed about emerging trends and developments in their fields of interest enables Olympians to remain competitive and relevant in evolving job markets. Accordingly, workshop content can include modules on professional development, encouraging continued education, certification programs, and skill enhancement initiatives. Overall, this study contributes both theoretically and practically to the literature on athlete career transitions and leadership development. It expands our understanding of how elite athletes can leverage their unique experiences and traits to succeed beyond sport and offers a framework for designing targeted interventions that support sustainable post-athletic career growth.

6. LIMITATIONS

While this study offers valuable insights into the relationship between Olympic experience and perceived leadership traits, several limitations must be acknowledged to contextualize the findings and guide future research.

First, the study employed a cross-sectional design, capturing data at a single point in time. This approach limits the ability to assess how leadership traits evolve throughout an athlete's career and into retirement. Longitudinal data would be more effective in tracking the development and transformation of leadership competencies across different life stages. The study did not differentiate between athletes from individual versus team sports. This distinction is important, as leadership roles and dynamics can vary significantly between these contexts. Team sport athletes may have more opportunities to develop interpersonal leadership skills, while individual sport athletes may focus more on self-leadership and autonomy. Lastly, the absence of longitudinal tracking prevents an understanding of how leadership traits may change over time, particularly during key transitional phases such as retirement or career reinvention. Long-term studies would be instrumental in identifying patterns of growth, decline, or transformation in leadership competencies.

7. CONCLUSION AND FUTURE DIRECTIONS

This study provides a foundational examination of the relationship between Olympic experience and leadership development, highlighting how factors such as gender, age, highest Olympic placement, and elite athletic participation may influence perceived leadership skills. Notably, the findings address a significant gap in the literature by exploring how Olympic athletes perceive their own leadership capabilities, an area that has been largely overlooked despite the widespread recognition of athletes as leaders and role models within their respective fields. While athletes are often celebrated for inspiring excellence and demonstrating leadership through performance, this study emphasizes the importance of understanding their self-perceptions. These findings highlight the need to consider a broader range of demographic and experiential variables, such as sport type (individual vs. team), highest achievement level, and country of origin, when evaluating leadership potential. By identifying both strengths and areas for growth, Olympic athletes can be empowered through well-designed, evidence-based programs to enhance their leadership competencies. Such initiatives can foster greater confidence and facilitate smoother transitions into post-athletic careers, ultimately contributing to long-term personal and professional success. Future research should build upon this foundation by employing longitudinal designs to capture the evolution of leadership traits over time. Tracking athletes throughout their competitive careers and into retirement would provide valuable insights into how leadership competencies are cultivated, sustained, or transformed across different life stages. Additionally, cross-cultural investigations are essential to enrich the current understanding of leadership development and career transitions. Exploring how athletes from diverse cultural backgrounds experience these processes will help identify both culturally specific influences and universal patterns. In an increasingly interconnected world, such a global perspective is vital for developing inclusive and effective support systems. Ultimately, this study lays the groundwork for advancing a more comprehensive and nuanced understanding of how Olympic experiences contribute to leadership development. These efforts will not only enhance academic knowledge but also inform the creation of targeted leadership training and transition support programs for elite athletes worldwide.

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Institutional Review Board Statement: This study was approved by the Institutional Review Board of the University of Alabama in Huntsville, USA, under protocol number (EE202325), dated (26 April 2023). Informed verbal consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

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