



Shahid Bahonar
University of Kerman



Journal of New Studies in Sport Management

Online ISSN: 2717 - 4069

Homepage: <https://jnssm.uk.ac.ir>



Iranian Scientific
Association of
Sport Management

The Changing Landscape of Elite Lacrosse Talent: A 25-Year Study of NCAA Division I All-Americans

Nicholas Zoroya Ed.D.¹   | Rachelle Kuhn Ed.D.² 

1. Corresponding author, Assistant Professor of Sport Management, School of Business, Madonna University, USA.

Email: nzoroya@madonna.edu

2. Assistant Professor of Exercise Science, Rinker-Ross School of Health Sciences, Trine University, USA.

Email: kuhnr1@trine.edu

ARTICLE INFO

Article type:

Original article

Article history:

Received: 24 July, 2024

Received in revised form: 19

November, 2024

Accepted: 28 November, 2024

Published online: 8 December, 2024

Keywords:

Geographic distribution

Lacrosse talent

NCAA All-Americans

ABSTRACT

This study examines whether the geographic distribution of lacrosse talent, as indicated by NCAA Division I All-American awards, has shifted from traditional hotbed states Maryland and New York to other regions over the past 25 years. Data on NCAA Division I All-American lacrosse players from 2000 to 2024 were collected and divided into five periods: 2000-2004, 2005-2009, 2010-2014, 2015-2019, and 2020-2024. The number and percentage of award winners from each state were calculated, and the number of states represented each year was tracked. This was compared with the growth in high school lacrosse participation. Maryland and New York's dominance decreased from 75.0% of All-American winners in 2000-2004 to 39.1% in 2020-2024. Concurrently, high school lacrosse participation grew from 46,206 in 2002-2003 to 107,865 in 2021-2022. The number of states represented increased from 8 in 2002 to 16 in 2024, indicating broader talent distribution. The decreased dominance of Maryland and New York suggests a diversification of lacrosse talent, aligning with nationwide participation growth and more states producing All-American players. This diversification highlights the successful expansion of the sport, ensuring a more inclusive talent pool and reflecting the positive impact of increased access to lacrosse across the country. Lacrosse development programs and recruitment strategies should expand beyond traditional hotbeds to support emerging regions, fostering a more inclusive and diverse talent pool, and enhancing the sport's growth at all levels.

Introduction

Lacrosse, a sport with deep historical roots in Native American culture (Kennedy, 2021), has seen significant growth and transformation in the United States over the past few decades (Chrumka & Guettler, 2024). Traditionally, the sport has been dominated by players from the Northeast and Mid-

How to Cite: Zoroya, N., & Kuhn, R. (2024). The Changing Landscape of Elite Lacrosse Talent: A 25-Year Study of NCAA Division I All-Americans. *Journal of New Studies in Sport Management*, 5(4), 1253-1262. doi: 10.22103/jnssm.2024.23784.1320



© The Author(s).

Publisher: Shahid Bahonar University of Kerman

DOI: 10.22103/jnssm.2024.23784.1320



Atlantic regions, particularly Maryland and New York (Funnell, 2016). These areas, often referred to as lacrosse "hotbeds," (Coughlin, 2013), have been the primary sources of elite lacrosse talent, as evidenced by the disproportionate number of NCAA Division I All-American awards received by players from these states (USILA). However, recent trends suggest that lacrosse talent may be diversifying geographically, reflecting broader participation across the country (USA Lacrosse).

The growth of lacrosse at the high school level is a key factor driving this shift. According to the National Federation of High School Lacrosse, the number of high school students participating in boys' lacrosse increased from 46,206 in 2002-2003 to 107,865 in 2021-2022. These numbers only reflect state sanctioned lacrosse, and there are some states that unofficially participate in high school lacrosse. Similarly, US Lacrosse reports that the number of participants in boys' and girls' lacrosse grew from 253,931 in 2001 to 829,423 in 2018 (USA Lacrosse). This surge in participation highlights the expanding reach of the sport beyond its traditional strongholds.

Lacrosse's growing popularity has led to its inclusion as an officially sanctioned state championship sport for both boys and girls in 24 states, with recent additions including Ohio (2017), Illinois (2018), Utah (2021), Wisconsin (2024), and Tennessee (2025). Despite being officially sanctioned in only 24 states, high school lacrosse is played in almost every state in the country through varsity and club programs. Organizations like USA Lacrosse work to support high school athletes by collaborating with scholastic, community, and club programs nationwide, further promoting the sport's development (USA Lacrosse). "The number of women's lacrosse teams nearly doubled between 2003 and 2018, rising 97% from 256 to 505. Men's lacrosse experienced a 61% increase over the 15-year time period, fielding 380 teams by 2018." (Coughlin, 2020).

Understanding the shifts in the geographic distribution of lacrosse talent requires an examination of participation rates in each state. By analyzing boys' lacrosse participation rates, we can gain insights into how increased involvement in the sport has contributed to the rise of new talent hubs and the decline of traditional hotbeds. This perspective helps identify underlying trends and patterns that explain the broader geographic participation and the emergence of new regions as significant contributors to elite lacrosse talent. For instance, from 2000 to 2022 the number of boy's lacrosse participants in New York and Maryland has grown by 2.7% while the national participation rate has grown by 57% (NFHS).

Given these developments, it is essential to examine whether the geographic distribution of lacrosse talent has shifted from traditional hotbed states like Maryland and New York to other regions (Lei, 2018). This study seeks to address this question by analyzing the hometowns of NCAA Division I All-American lacrosse players over the past 25 years. Specifically, it aims to determine if new regions have emerged as significant contributors to elite lacrosse talent.

The necessity of this research lies in its potential to inform lacrosse development programs and college recruitment strategies. Understanding shifts in the geographic distribution of talent can help these programs adapt to changing trends, ensuring they effectively identify and nurture talent from a broader range of regions. This can lead to a more inclusive and diverse talent pool, ultimately benefiting the sport at all levels (Woolcock & Burke, 2013).

Research on the geographical distribution of talent highlights the importance of regional factors such as resource access, community backing, and local culture in fostering high-level skills and expertise (Bale, 2002). In *Sports Geography*, Bale examines how proximity to sports facilities, regional pride, and cultural identity contribute to developing local talent pools, particularly by motivating young athletes to participate and excel in specific sports. In sports and talent-intensive fields, certain regions emerge as talent hubs or hotspots due to the presence of specialized facilities, robust youth programs, and strong community support that drive early engagement and long-term commitment (Eitzen, 2016). Bale (2002) suggests that these hubs often develop because of dedicated regional investments in infrastructure and community involvement, which significantly boost participation rates and improve overall performance. Bale notes that athletes from rural or underserved regions frequently face limited access to advanced training and facilities, which may hinder their development and lead to disparities in talent distribution across regions. Examining the spatial distribution of talent, therefore, provides essential insights into how geography shapes skill development, revealing structural and environmental influences on regional inequalities (Bale, 2002).

Additionally, in *Research on the Relationship between Geographical Factors, Sports and Culture* (2018), Song and Zhang explore how geographic factors impact the development and distribution of sports talent through cultural influences. The authors examine how location-specific variables such as climate, topography, and sports culture affect sports participation patterns and performance. Arguing that regions with certain geographical characteristics increase distinct sports cultures, which in turn shape the types of sports that thrive locally. The study also discusses how infrastructure, access to sports facilities, and the prevalence of local sports traditions can either facilitate or restrict talent development within specific geographic areas.

This research underscores the role of geography not only in shaping sports preferences but also in influencing the availability of opportunities for young athletes, thereby impacting the regional distribution of sports talent.

In this study, data on NCAA Division I All-American lacrosse players from 2000 to 2024 were collected and analyzed. The data were categorized into five time periods: 2000-2004, 2005-2009, 2010-2014, 2015-2019, and 2020-2024. The number and percentage of award winners from each state were calculated for each period, and the number of states represented each year was tracked. This analysis was compared with the growth of high school lacrosse participation to identify trends and shifts in talent distribution.

The expansion of lacrosse into new regions can be attributed to several factors, including increased investment in youth development programs, the establishment of more collegiate teams, and enhanced media coverage that has popularized the sport nationwide (USA Lacrosse). Moreover, initiatives by organizations such as USA Lacrosse have played a pivotal role in promoting the sport in non-traditional areas by providing resources, training, and support to emerging programs. These efforts have not only increased participation but have also helped in nurturing talent in regions previously not known for lacrosse.

Additionally, the influence of successful professional leagues, such as Major League Lacrosse (MLL) and the Premier Lacrosse League (PLL), has contributed to the sport's growth. These leagues have provided role models and inspired young athletes across the country to take up lacrosse. The visibility and success of these leagues have showcased lacrosse as an exciting and viable sport, further driving its popularity (Greenberg, 2024).

The primary purpose of this article is to investigate whether the geographic distribution of lacrosse talent, as indicated by NCAA Division I All-American awards, has diversified over the past 25 years. The hypothesis is that while Maryland and New York will remain significant contributors, their dominance will have decreased, reflecting a broader geographic distribution of talent. The findings of this study are expected to provide valuable insights for lacrosse development programs and recruitment strategies, highlighting the need to expand focus beyond traditional hotbed regions (Knuepling & Broekel, 2020; Rossing et.al, 2018).

By examining these trends, this research aims to contribute to the broader understanding of how lacrosse talent is evolving in the United States, offering implications for the future development of the sport (Chirazi, 2019).

Methodology

This study employs a longitudinal analysis of the geographic distribution of NCAA Division I All-American lacrosse players from 2000 to 2024. Data were collected retrospectively from publicly available databases, including NCAA records and lacrosse organization websites. The participants of this study are NCAA Division I All-American lacrosse players from 2000 to 2024. The data set includes players from the first, second, and third All-America team, but excludes players that we're honorable mention. The first, second, and third All-America teams represent a higher and more consistent level of recognition and achievement. Including only these players ensures that the data reflects those who have achieved a certain standard of excellence, providing a clearer picture of elite talent distribution. Honorable mentions can be more subjective and numerous, potentially diluting the data. By focusing on the top three teams, the analysis maintains a higher level of data integrity and comparability over time. The purpose of the study is to track the geographic distribution of the most

elite lacrosse talent. The top three teams are more indicative of this elite level, whereas honorable mentions may include a broader range of skill levels.

The data includes the players' hometowns, providing a comprehensive view of the geographic origins of elite lacrosse talent over a 25-year period. Data were obtained from the official each player's collegiate athletic department website and the USILA, which provided lists of All-American award winners and their respective hometowns. This information was categorized into five time periods: 2000-2004, 2005-2009, 2010-2014, 2015-2019, and 2020-2024. The geographic distribution of All-American players was analyzed by calculating the number and percentage of award winners from each state for each time-period. Statistical analyses included calculating proportional changes over time to identify trends. To investigate the relationships between NFHS participation and Non-Hotbed (NHB) percentage, as well as the number of states and NFHS participation, Pearson correlation analysis was employed. This statistical technique was selected due to its efficacy in quantifying the strength and direction of linear associations between continuous variables.

Additionally, the number of states represented each year was tracked to assess the diversification of talent sources. As this study utilized publicly available data, individual consent was not required. No personal identifiers beyond hometowns were used, ensuring the privacy of the participants. This methodology provides a robust framework for understanding trends in lacrosse talent's geographic distribution, offering valuable insights for the sport's development.

Results

Upon review, this study presents detailed findings on the geographic distribution of NCAA Division I All-American lacrosse players from 2000 to 2024. The analysis shows a significant decrease in the dominance of Maryland and New York, with their combined share of All-American award winners dropping from 75.0% in 2000-2004 to 39.1% in 2020-2024. Concurrently, there has been a notable increase in the number of states represented, expanding from 9 states in 2000 to 16 states in 2024.

The data was categorized into five time periods: 2000-2004, 2005-2009, 2010-2014, 2015-2019, and 2020-2024. For each period, the number and percentage of award winners from each state were calculated.

The geographical distribution analysis revealed between 2000 and 2004, Maryland and New York had 129 of 172 All-American awardees, which accounted for 75.0% of the total award winners. From 2005 to 2009, Maryland and New York had 111 of 181 All-American awardees, which represented 61.3%. showing a decrease of 13.7% compared to the previous period. In the period from 2010 to 2014, Maryland and New York had 96 out of 207 All-American awardees, or 46.4%. This indicates a further decline of 14.9% from the previous period (2005-2009). From 2015 to 2019, Maryland and New York had 127 out of 260 All-American awardees, which made up 48.9%, reflecting an increase of 2.5% from the 2010-2014 period. Maryland and New York All-Americans contribution further decreased between 2020 and 2024 to 77 out of 197 All-American awardees, which constitutes 39.1% of the total award winners. Which is a decrease of 9.8% from the 2015-2019 period.

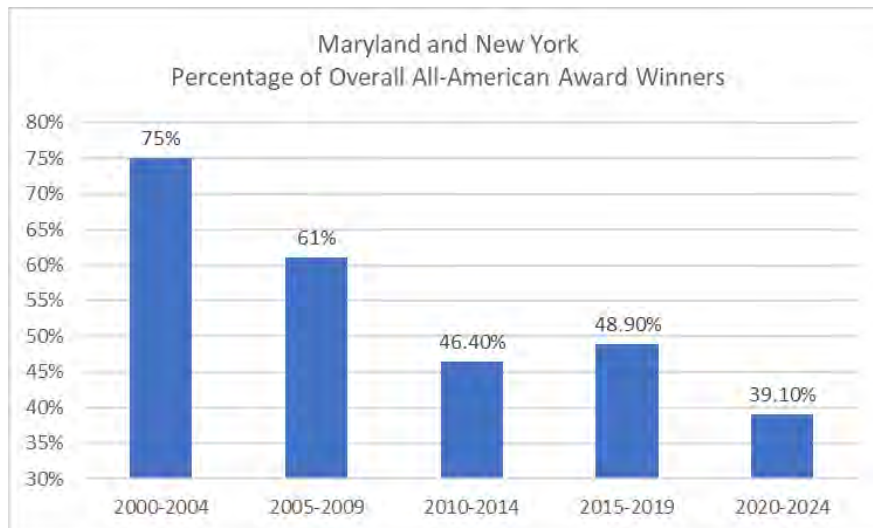


Figure 1. Hot Bed States, Maryland and New York, percentage of overall All-American award winners.

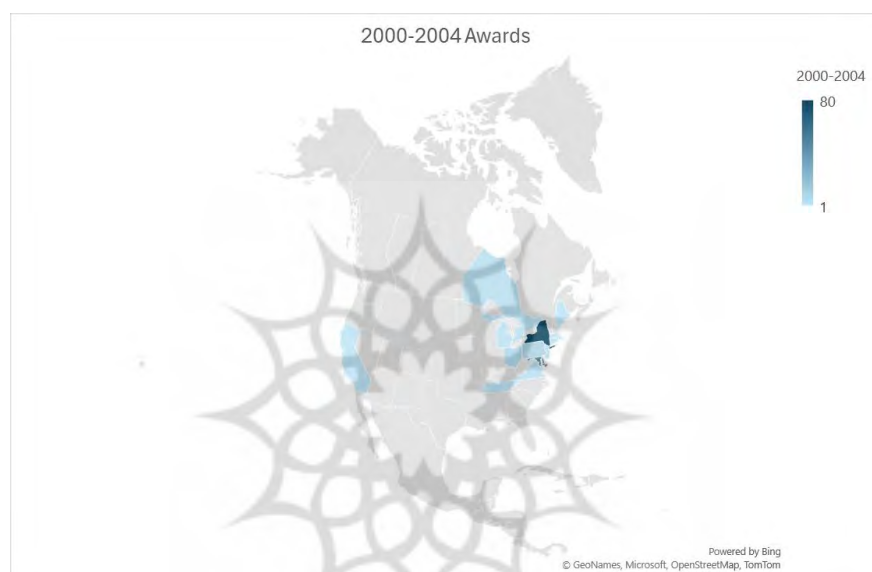


Figure 2. The geographical distribution of NCAA Division I All-American lacrosse players from 2000-2004.

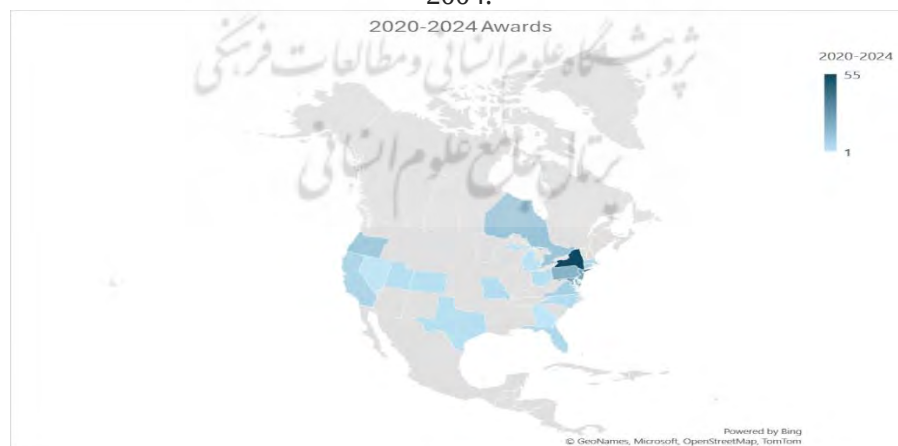


Figure 3. The geographical distribution of NCAA Division I All-American lacrosse players from 2020-2024.

Furthermore, several states have significantly increased their contributions to the pool of NCAA Division I All-American lacrosse players, closing the gap with New York and Maryland. Pennsylvania, New Jersey, and Virginia have shown notable increases in All-American awardees. Pennsylvania produced 97 All-Americans, accounting for 9.54% of the total awards, reflecting its growing prominence in the lacrosse landscape. Similarly, New Jersey contributed 92 All-Americans

(9.05%), and Virginia had 28 awardees (2.75%). From 2000-2004 these three states only accounted for 10.4% compared to 24.3% from 2020-2024.

Parallel to these shifts, high school lacrosse participation saw substantial growth. According to the National Federation of State High School Associations (NFHS), the number of high school boys participating in lacrosse increased from 35,266 in 2000-2001 to 111,108 in 2021-2022. This growth in participation correlates with the broader geographic distribution of All-American players.

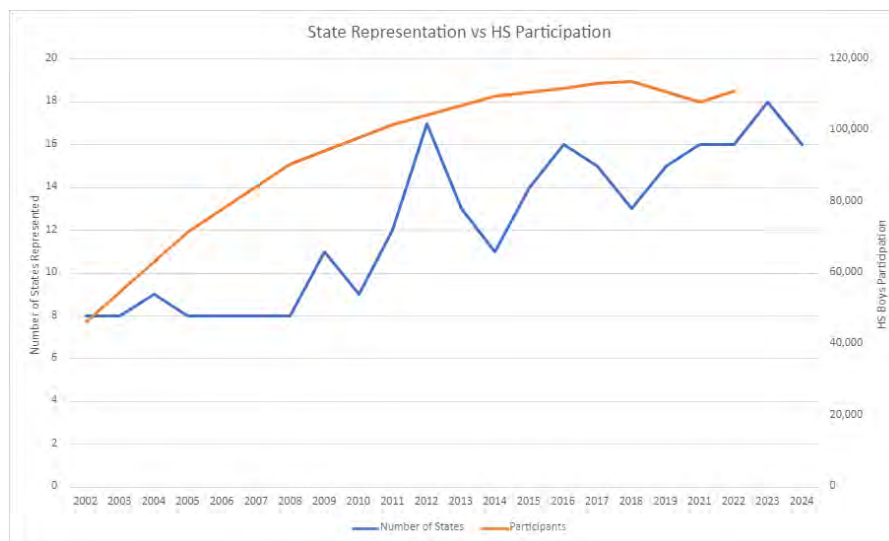


Figure 4. Number of states represented for All-American award winners compared to the number of National Federation of State High School Association (NFHS) schools participating in lacrosse.

The number of states represented in the All-American list has increased over time, indicating a diversification of talent sources:

Table 1. All-American Award Winners

Year	Total Awards	Hot Bed State %	Non-Hot Bed State %	Number of States Represented
2000	37	75.7	24.3	9
2001	34	76.5	23.5	8
2002	33	75.8	24.2	8
2003	34	73.5	26.5	8
2004	34	73.5	26.5	9
2005	35	60	40.0	8
2006	39	56.4	43.6	8
2007	35	68.6	31.4	8
2008	35	65.7	34.3	8
2009	37	56.8	43.2	11
2010	37	54.1	45.9	9
2011	41	56.1	43.9	12
2012	43	32.6	67.4	17
2013	41	43.9	56.1	13
2014	45	46.7	53.3	11
2015	50	54	46.0	14
2016	56	51.8	48.2	16
2017	52	42.3	57.7	15

2018	49	44.9	55.1	13
2019	53	50.9	49.1	15
2020				
2021	48	33.3	66.7	16
2022	48	39.6	60.4	16
2023	52	40.4	59.6	18
2024	49	42.9	57.1	16

This increase in the number of states suggests that more regions are developing strong lacrosse programs capable of producing elite players.

The average number of All-American awards per state over the entire period (2000-2024) was calculated. Maryland and New York consistently had the highest average number of awardees, while states like Alberta and British Columbia had the lowest.

Mean Number of Awards:

- Maryland: 7.44
- New York: 14.16

Standard Deviation:

- Maryland: 2.95
- New York: 6.13

Pearson correlation was computed to assess the relationship between NFHS participation and NHB percentage. The Pearson correlation coefficient (r) for the relationship between NFHS participation and the NHB percentage was $r=0.845$, indicating a positive correlation. This substantial r -value suggests that higher levels of NFHS participation are strongly associated with a greater representation of NHB percentage.

Additionally, the correlation between the number of states represented and NFHS participation was examined. The Pearson correlation coefficient (r) for this relationship was $r=0.78$, indicating a strong positive correlation as well. This suggests that an increase in the number of states is associated with higher levels of NFHS participation.

These findings demonstrate substantial positive associations between NFHS participation and NHB percentage, as well as between the number of states represented in the All-America awards and NFHS participation. The strong r -values highlight the significant influence these variables have on each other.

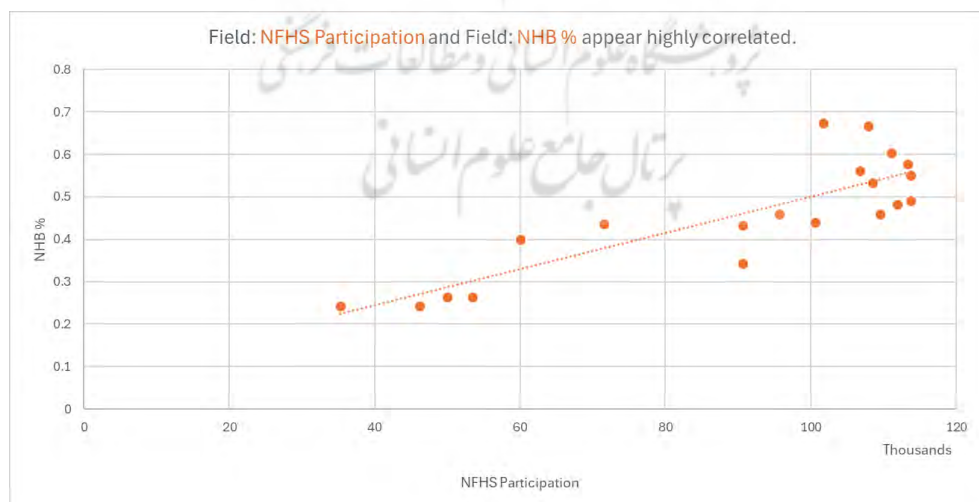


Figure 5. Pearson Correlation for the relationship between NFHS participation and NHB percentage.

Ultimately, the results of this study indicate that the geographic distribution of NCAA Division I All-American lacrosse players has become more diverse over the past 25 years. The decreasing dominance of traditional hotbed states Maryland and New York, coupled with the increasing number

of states represented, reflects the successful expansion and development of lacrosse across the United States.

Discussion and Conclusion

The findings of this study indicate significant shifts in the geographic distribution of lacrosse talent in the United States over the past 25 years. Historically, Maryland and New York have been dominant sources of NCAA Division I All-American lacrosse players, reflecting their status as traditional hotbeds of the sport. However, the data show a decreasing dominance of these states, with their combined contribution to All-American awards dropping from 75.0% in 2000-2004 to 39.1% in 2020-2024. This shift suggests a broader, more inclusive distribution of lacrosse talent across the country.

Several factors may have contributed to this geographic diversification. The substantial growth in high school lacrosse participation is a primary driver. According to the National Federation of State High School Associations (NFHS), the number of high school boys participating in lacrosse grew from 46,206 in 2002-2003 to 107,865 in 2021-2022. This increase is mirrored by the rising number of states represented in the All-American lists, which expanded from 8 states in 2002 to 16 states in 2024. This trend indicates that more states are developing strong lacrosse programs capable of producing elite talent.

The efforts of organizations like USA Lacrosse have been instrumental in promoting the sport beyond its traditional strongholds. By providing resources, training, and support to emerging programs, these organizations have helped nurture talent in regions previously not known for lacrosse. Additionally, the inclusion of lacrosse as an officially sanctioned state championship sport in more states has likely played a role in this geographic shift. States such as Ohio, Illinois, Utah, Wisconsin, and Tennessee have recently added lacrosse to their championship lineups, reflecting and contributing to the sport's growing popularity. Further, there are several other states participating in lacrosse as a non-sanctioned sport.

The influence of professional leagues, such as the now-defunct Major League Lacrosse (MLL) and the increasingly popular Premier Lacrosse League (PLL), has also contributed to the sport's expansion. These leagues have provided role models and increased the visibility of lacrosse, inspiring young athletes across the country to take up the sport. The success and media coverage of these leagues have showcased lacrosse as an exciting and viable athletic pursuit, further driving its growth.

The implications of these findings are significant for lacrosse development programs and college recruitment strategies. Understanding the changing landscape of talent distribution allows for more effective resource allocation and targeted development programs. Coaches and recruiters can expand their scouting efforts to include non-traditional regions, discovering and nurturing talent from a broader geographic area. This approach can enhance the inclusivity and competitiveness of the sport, providing opportunities for athletes from diverse backgrounds and regions.

Furthermore, the diversification of lacrosse talent has the potential to strengthen the overall development of the sport. By fostering a more geographically diverse talent pool, lacrosse can benefit from a wider range of playing styles, strategies, and experiences. This diversity can contribute to the evolution of the sport, making it more dynamic and exciting for players and fans alike.

Overall, this research contributes valuable insights into the evolving dynamics of lacrosse talent in the United States, emphasizing the importance of adapting development and recruitment practices to embrace this broader geographic distribution. This adaptation is crucial for the continued growth and success of lacrosse at all levels of play. The findings underscore the expanding reach of lacrosse across the country, driven by increased participation at the high school level and the concerted efforts of organizations like USA Lacrosse. The significant growth in high school lacrosse participation, with players increasing from 46,206 in 2002-2003 to 107,865 in 2021-2022, highlights this trend. Moreover, the inclusion of lacrosse as a sanctioned state championship sport in more states further supports this geographic diversification.

In conclusion, the geographic distribution of lacrosse talent has significantly diversified over the past 25 years. This trend reflects the successful efforts to promote and develop the sport nationwide, ensuring a more inclusive and competitive environment. The findings of this study underscore the

importance of adapting development and recruitment practices to embrace this broader distribution of talent, which is crucial for the continued growth and success of lacrosse at all levels.

Applications in Sport

The findings of this study have significant implications for coaches, trainers, recruiters, and administrators within the field of lacrosse. As the sport continues to grow and diversify geographically, understanding these trends is crucial for optimizing player development, recruitment strategies, and program planning.

Coaches and trainers can leverage this information to broaden their scouting and recruitment efforts. Traditionally, focus has been placed on the Northeast and Mid-Atlantic regions. However, the data indicate that talent is emerging from a wider range of states. By expanding their reach to include regions that have historically been underrepresented, coaches can discover untapped talent pools and build more competitive teams. This geographic diversification also suggests the need for training programs to be adaptable and inclusive, catering to athletes from diverse backgrounds and different levels of access to lacrosse resources.

Recruiters should take note of the decreasing dominance of Maryland and New York in producing All-American players. With talent spreading across the United States, it is essential to develop recruitment strategies that encompass a broader geographic area. This involves attending tournaments and showcases in non-traditional lacrosse regions and establishing relationships with high school and club coaches nationwide. Additionally, recruiters should utilize technology and social media to identify and connect with prospective players who may not be on the traditional recruitment radar.

For aspiring lacrosse players and their parents, these findings are encouraging as they highlight that opportunities for recognition and advancement in the sport are no longer confined to a few states. Athletes from emerging regions can be confident that their talent will be noticed, provided they participate in well-organized programs and compete in prominent tournaments. Parents should support their children in seeking high-quality coaching and competitive play opportunities, regardless of geographic location, and consider exposure to lacrosse programs in diverse areas.

Administrators and program planners can use these insights to advocate for the expansion of lacrosse programs in their regions. Understanding that lacrosse talent is no longer concentrated in a few traditional hotbeds can justify investments in facilities, coaching education, and youth development programs. Moreover, collaboration with local schools and community organizations can help establish strong feeder systems that nurture young talent from an early age. Administrators should also consider the benefits of hosting regional tournaments and clinics to boost local interest and participation in lacrosse.

Strategic planning should incorporate these trends to ensure that lacrosse programs are aligned with the evolving landscape of the sport. By recognizing and adapting to the shifting geographic distribution of talent, stakeholders can enhance the competitiveness and inclusivity of lacrosse. This proactive approach will not only improve the quality of play but also contribute to the overall growth and popularity of lacrosse across the United States.

In conclusion, the diversification of lacrosse talent presents a unique opportunity for all stakeholders within the sport. By embracing these changes and adjusting their strategies accordingly, coaches, trainers, recruiters, athletes, parents, and administrators can all contribute to the continued success and expansion of lacrosse nationwide.

Ethical Considerations

Compliance with ethical guidelines

We have maintained compliance with ethical guidelines: Ethical points have been observed.

Funding

No specific financial resources have been used.

Authors' contribution

We confirm that all authors have contributed to the design and implementation of this study.

Conflict of interest

There is no conflict of interest.

Acknowledgments

We would like to extend our heartfelt gratitude to our families for their unwavering support and encouragement throughout this research project. Your understanding, patience, and love have been invaluable in allowing us to dedicate the time and effort required to complete this study. Your belief in our work has been a constant source of motivation, and we are deeply appreciative of all the sacrifices you have made to help us achieve our goals. Thank you for being our pillars of strength.

References

- (NFHS), N. F. o. S. H. S. A. (2023). *HIGH SCHOOL ATHLETICS PARTICIPATION SURVEY*. Retrieved from https://www.nfhs.org/media/7212351/2022-23_participation_survey.pdf
- (USILA), U. S. I. L. A. Retrieved from <https://usila.org/sports/2015/10/21/History%20AA.aspx>
- Bale, J. (2002). *Sports geography*: Routledge.
- Chirazi, M. (2019). Comparative evolution of the phenomenon of geography of sports on national and global levels. *Geosport for Society*, 10(1), 7-14.
- Chrumka, A., Guettler, J. H., & Insights, I. (2024). Lacrosse in America—Trends, Injuries, Gender Differences, & Prevention. *Sports Medicine*.
- Coughlin, B. (2013). Coughlin: Analyzing 'Hotbeds' By the Numbers. Retrieved from <https://www.insidelacrosse.com/article/coughlin-analyzing-hotbeds-bythe-numbers/20953>
- Coughlin, B. (2020). Coughlin: Over Past Decade, Lacrosse Sees Growth in Programs and Growth in Budgets. Retrieved from https://www.insidelacrosse.com/article/coughlin-over-past-decade-lacrosse-sees-growth-in-programs-and-growth-in-budgets/56475#google_vignette
- Eitzen, D. S. (2016). *Fair and foul: Beyond the myths and paradoxes of sport*: Rowman & Littlefield.
- Funnell, S. W. (2016). *The History and Democratization of Men's Lacrosse*.
- Greenberg, D. (2024). ESPN Believes In Lacrosse's Future and Won't Stop Investing. Retrieved from <https://frontofficesports.com/espn-believes-in-lacrosses-future-and-wont-stop-investing/>
- Kennedy, L. (2021). The Native American Origins of Lacrosse. Retrieved from <https://www.history.com/news/lacrosse-origins-native-americans>
- Knuepling, L., & Broekel, T. (2022). Does relatedness drive the diversification of countries' success in sports? *European Sport Management Quarterly*, 22(2), 182-204.
- Lacrosse, U. About USA Lacrosse. Retrieved from <https://www.usalacrosse.com/about-usa-lacrosse>
- Lei, L. (2018). Study on Unbalanced Occurrence Mechanism of Talent Agglomeration in Sports Industry Cluster. *International Journal of New Developments in Engineering and Society*, 2(2).
- Minyong, S., & Yang, Z. (2017). Research on the Relationship between Geographical Factors, Sports and Culture. *Advances in Physical Education*, 8(01), 66-70.
- Rossing, N. N., Stentoft, D., Flattum, A., Côté, J., & Karbing, D. S. (2018). Influence of population size, density, and proximity to talent clubs on the likelihood of becoming elite youth athlete. *Scandinavian Journal of Medicine & Science in Sports*, 28(3), 1304-1313.
- Woolcock, G., & Burke, M. (2013). Measuring spatial variations in sports talent development: the approach, methods and measures of 'talent tracker'. *Australian Geographer*, 44(1), 23-39.