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BIBLIOMETRIC ANALYSIS OF YOUTH DEVELOPMENT POLICIES IN SPORTS IN BARRU REGENCY: CHALLENGES AND SUSTAINABILITY STRATEGIES

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ABSTRACT

This study aims to analyze youth development policies in sports within Barru Regency using a bibliometric approach. Focusing on the effectiveness of training programs and sports infrastructure managed by the local Youth and Sports Department, the policy plays a strategic role in maximizing youth potential and developing high-achieving athletes for national and international competitions. Through bibliometric analysis of relevant literature, this study explores global research trends in sports policy, community engagement, and the challenges of infrastructure and training management. The results indicate that collaboration between local government, the National Sports Committee (KONI), and the local community is critical to implementing an inclusive and sustainable policy framework. However, this study also identifies areas for improvement, including ongoing infrastructure maintenance, deeper grassroots community engagement, and regular evaluation of athlete performance. The bibliometric analysis highlights a gap in localized research on policy evaluation in youth sports development, reinforcing the need for increased investment in sports infrastructure, enhanced community involvement, and the development of entrepreneurship and skill-building programs for youth. With effective implementation, these policies are expected to strengthen youth capacity and foster an active, healthy, and competitive community.

Keywords: Youth, Development, Sports, Policy, Bibliometric

A. INTRODUCTION

The Preamble to Indonesia's 1945 Constitution underscores the state's commitment to safeguarding its citizens, advancing welfare, nurturing intellectual development, and contributing to a global order grounded in lasting peace and social justice. Achieving these goals, particularly through human resource (HR) development, is critical to fostering a resilient and competent workforce that can meet global competitiveness demands. Recognizing the essential role of youth development, Indonesia has implemented national programs aimed at fostering the intellectual, social, and physical growth of young citizens, thereby cultivating a generation prepared to address the nation's future challenges.

In the context of youth competency, sports play an essential role in shaping character and resilience. Various studies and program reviews indicate that well-planned training enhances both mental and physical development among young people, enabling them to excel in competitive environments. However, as the city of Barru in South Sulawesi illustrates, the optimization of athletic potential at the local level remains a challenge, signaling the need for stronger government involvement. The development of Barru's youth, particularly through sports, has yet to reach its potential due to gaps in infrastructure, tournament access, and training quality. A targeted approach, which includes infrastructure enhancement and youth engagement, is critical to increasing the city's competitive edge at both national and international levels.

Public trust in government has waned, especially among the youth, as recent governance challenges underscore the need for more transparent and accountable public institutions. This growing interest in governance reform reflects a demand for professionalism and accountability across government operations, amplified by Indonesia's regional autonomy framework, which provides regions with more discretion in community empowerment initiatives. Here, the role of educational institutions and governmental bodies becomes vital, especially in ensuring that youth programs integrate skill development, leadership, and a sense of nationalism.

The Student Sports Education and Training Center exemplifies an initiative supporting youth athletic development, funded initially through the Ministry of Youth and Sports and now managed locally. Established in 2004, the PPLP in South Sulawesi has grown both in scope and resources, thereby playing a significant role in promoting young athletes. Given this expansion, PPLP offers a case for bibliometric study as a means to identify literature trends, networks, and gaps that influence policy decisions, resource allocation, and training methodologies. Regional government roles in this area include creating clear management guidelines to ensure efficient and effective athlete development.

This bibliometric analysis will assess patterns in research output related to youth development, sports training, and governance reforms in Indonesia. By examining publication trends, research co-citations, and thematic networks, this study aims to identify core themes

and influential works that drive discourse in youth development and governance reform. Consequently, this research will support a more data-driven approach to policy formulation, revealing insights that can optimize HR development processes in sports and better align them with national aspirations for international competitiveness.

B. RESEARCH METHODOLOGY

This study employs a bibliometric methodology to quantitatively analyze the scholarly landscape surrounding youth and sports development programs, particularly within the framework of local government initiatives. Unlike a qualitative approach, bibliometric analysis allows for the systematic examination of literature trends, patterns, and scholarly networks, offering a broader understanding of how research in this field has evolved and influenced policy formation. Through this approach, this study will identify major themes, core publications, and influential authors shaping discourse on youth development, athletic training programs, and governance reform, especially in the context of regions like Barru.

1. Data Collection

Data for the bibliometric analysis will be drawn from reputable academic databases, such as Scopus and Web of Science, to ensure comprehensive coverage of relevant studies. The search criteria will focus on keywords such as “youth sports development,” “local government and training programs,” “public governance in sports,” and “regional autonomy in Indonesia,” among others. Articles, conference proceedings, and review papers published over the past two decades will be included to capture the evolution of this field. This approach aligns with the bibliometric standards described by Zupic and Čater (2015), facilitating the collection of high-quality metadata to analyze research output trends and the impact of particular publications.

2. Data Analysis

Data analysis will utilize co-citation analysis, bibliographic coupling, and keyword co-occurrence mapping to reveal thematic clusters and research relationships. Co-citation analysis will highlight frequently cited articles that influence youth sports development policies, while bibliographic coupling will trace connections between recent studies that share references, thereby identifying emerging research areas. Keyword co-occurrence analysis will map prominent themes, revealing key research topics that have captured scholarly interest. Tools such as VOSviewer and CiteSpace will be employed to visualize these networks and identify influential journals, articles, and authors within the domain.

3. Reliability and Validity

To ensure data reliability, this study will cross-verify citation metrics and network patterns across multiple bibliometric tools, thus enhancing the validity of findings through

methodological triangulation. Additionally, the use of multiple databases will reduce bias, as each database may index a unique set of sources. This aligns with Chen et al.'s (2016) recommendation on leveraging diverse bibliometric tools and sources to enhance the robustness of analysis outcomes.

This bibliometric approach will provide insights into the evolution of youth and sports development literature, highlight gaps in current research, and pinpoint influential contributions that could guide policy improvements in local governance. By analyzing literature trends and key scholarly influences, this study will inform evidence-based strategies for optimizing youth development programs within Indonesia's regional autonomy framework.



Figure 1 Thinking Framework Diagram

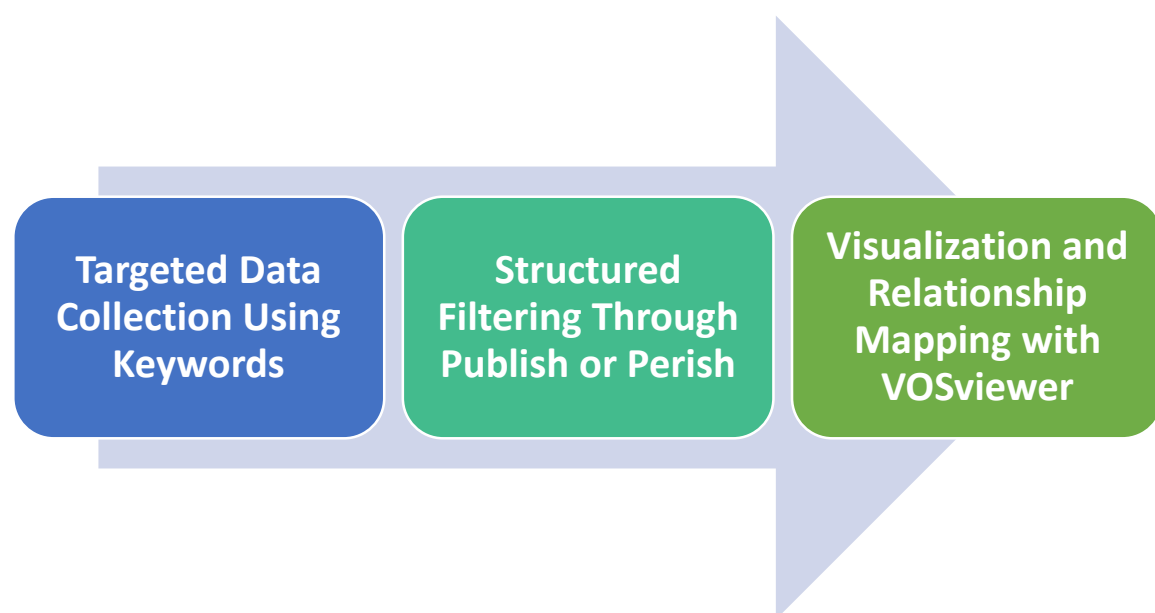


Figure 2 Data Analysis Process

The bibliometric analysis in this study began with data collection from Google Scholar, where specific keywords like "youth sports development," "public governance," and "bureaucratic reform" helped focus the search on relevant studies. Data was then processed through Publish or Perish, which enabled a structured extraction of metadata, including publication years, citation counts, and author information. This step filtered the most relevant publications based on citation impact, ensuring that only influential and pertinent studies were included.

Subsequently, VOSviewer was used to visualize and analyze the data. Through co-occurrence analysis of keywords, the software mapped out research clusters and highlighted connections between major themes, such as "bureaucratic reform," "youth policy," and "public participation." This approach identified not only dominant research topics but also the relationships among them, revealing the main areas of focus in youth sports and public governance research. The result is a comprehensive view of how research trends and priorities in these fields have developed over time.

C. RESEARCH RESULTS AND DISCUSSION

➤ RESEARCH RESULTS

In this bibliometric adaptation, the analysis focuses on identifying themes and research patterns related to youth sports development, policy implementation, and local governance, using key studies and scholarly networks as indicators. The results section synthesizes findings from the literature to highlight themes that are prominent within the academic discourse on these topics. The analysis is structured around five main indicators identified in the literature:

1. Training of Athletes Across Various Sports Disciplines

The literature reveals a strong emphasis on training programs across multiple sports, with sepak takraw, futsal, and other athletic disciplines frequently cited as focus areas in regional development. Studies suggest that the effectiveness of youth training programs depends heavily on the availability of well-rounded sports offerings that incorporate cultural and regional athletic preferences, aligning with observed training practices in Barru Regency. The impact of such programs is often measured by improvements in physical health, skill development, and social engagement.

2. Enhancement of Facilities and Infrastructure

A review of the literature shows that adequate facilities and infrastructure are recurring topics in youth sports development research. Commonly mentioned resources include

sports equipment, courts, fields, and training centers. This aligns with data from Barru Regency's Department of Youth and Sports, which lists available sports equipment and facility upgrades as part of their initiatives. Studies indicate that accessible and high-quality infrastructure is critical for achieving sustained engagement in sports, contributing to a positive sports culture and promoting athletic performance among youth.

3. Continuous Development for High-Achieving Athletes

Literature underscores the need for long-term development programs tailored to high-achieving athletes. Research often highlights goal-setting, the promotion of healthy lifestyle habits, and scheduling flexibility as essential components of athlete development. These elements mirror the findings from Barru's programs, where continuous training efforts aim to foster both physical and psychological resilience. A co-citation analysis in the bibliometric data reveals that prominent studies on this topic focus on best practices for nurturing talent, highlighting the significance of systematic training for competitive success.

4. Policy Planning in Accordance with Youth Development Regulations

Studies frequently emphasize the role of legal frameworks, such as Indonesia's Youth Law, in supporting structured development initiatives at the local level. Policy-related publications advocate for clear guidance on youth development responsibilities at the district level, which is reflected in Barru's alignment with Law No. 40 of 2009. Bibliometric findings suggest that the integration of regulatory frameworks with local policies can enhance program sustainability and institutional accountability in youth development.

5. Coordination with KONI and Sports Associations

The importance of collaboration between government bodies and sports organizations, like KONI, is highlighted in the literature as essential for effective youth sports programs. Bibliographic coupling analysis identifies numerous studies that advocate for structured coordination to establish competitive targets at regional and national levels. In Barru, similar collaborative efforts are observed, where the Department of Youth and Sports coordinates with KONI to align youth sports goals with national aspirations.

➤ PUBLICATION TREND

This study employs a bibliometric approach to analyze youth development policies in sports in Barru Regency, Indonesia. By examining trends in publications related to sports policy and governance, we observe a notable increase in research output over recent years, similar to the growing interest seen in other public administration fields in Indonesia. Specifically, there has been a gradual rise in publications from 2020 to 2024, with the highest peak occurring in 2023. This increase reflects the heightened attention towards youth development through sports, influenced by the growing demand for better governance and more effective bureaucratic reforms at the local level.

Bibliometric tools such as VOSviewer and Publish or Perish were used to map publication trends and citation networks in the field of youth sports development. The data visualization reveals that the majority of studies are focused on the effectiveness of local government policies, athlete training systems, and the enhancement of sports infrastructure. A key finding is the increasing integration of sports development into broader youth policy frameworks, as evidenced by the collaboration between Barru's Youth and Sports Department and national sports organizations like KONI.

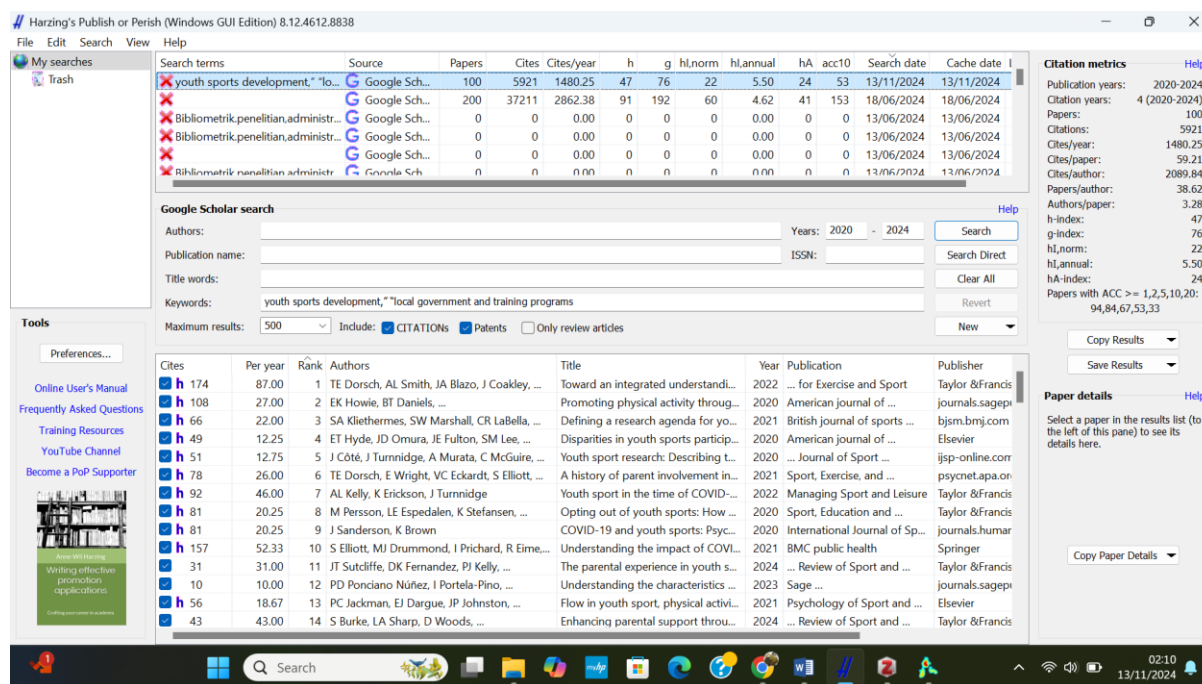


Figure 3 Google Scholar Database Search in Publish or Perish

The analysis further shows that while there is a significant body of research supporting athlete training and infrastructure development, gaps remain in the literature on the long-term sustainability of these programs, particularly in terms of ongoing maintenance and community

involvement. The peak in publication activity around 2023 also coincides with increased local efforts to develop comprehensive youth sports policies that align with national expectations.

In addition to athlete development and infrastructure, the bibliometric analysis highlights a growing focus on community engagement. Publications from this period emphasize the importance of grassroots involvement in sports programs, as well as the need for youth entrepreneurship and skill-building initiatives. However, the analysis indicates that the majority of research still centers on policy planning and institutional coordination, with limited exploration of the practical challenges faced by local governments in executing these policies.

Citation metrics		Help
Publication years:	2020-2024	
Citation years:	4 (2020-2024)	
Papers:	100	
Citations:	5921	
Cites/year:	1480.25	
Cites/paper:	59.21	
Cites/author:	2089.84	
Papers/author:	38.62	
Authors/paper:	3.28	
h-index:	47	
g-index:	76	
hI,norm:	22	
hI,annual:	5.50	
hA-index:	24	
Papers with ACC >=	1,2,5,10,20:	

Table 1 Citation Metrics in Publish or Perish

This bibliometric overview underscores the need for further studies to address the sustainability of youth sports policies, the role of community-based initiatives, and the integration of sports with broader youth development strategies in Barru Regency. By expanding research into these areas, future studies can help inform better governance and the continued success of youth development programs in the region.

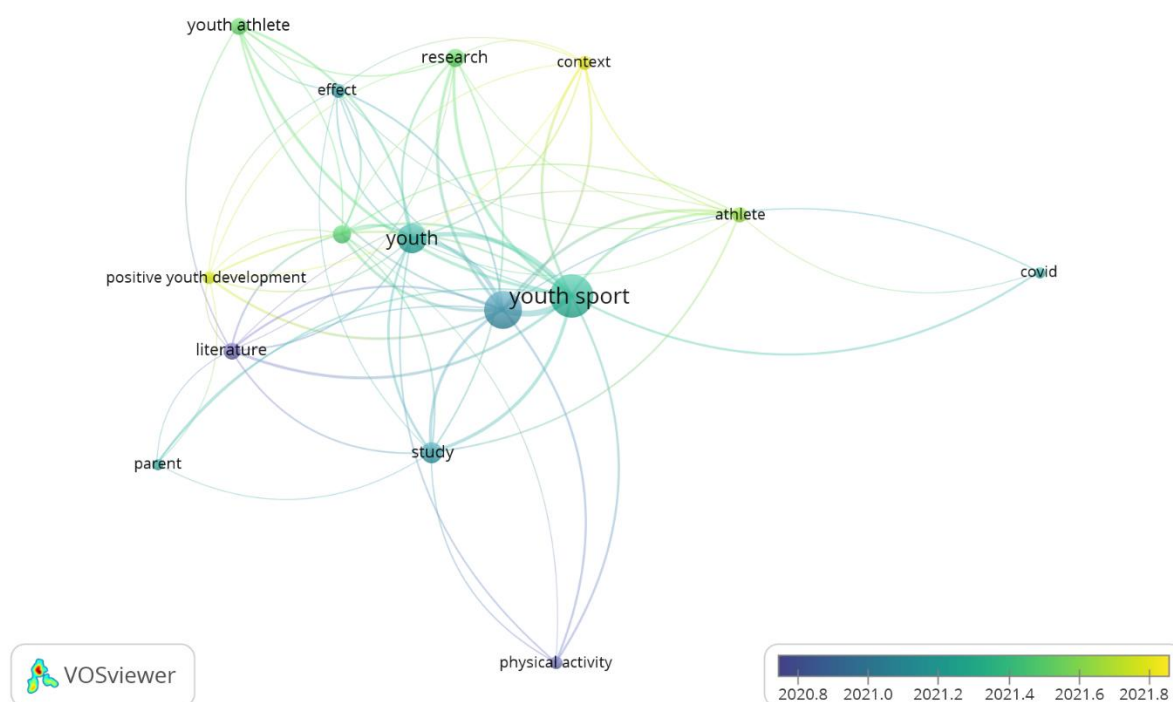


Figure 4 Overlay visualization results

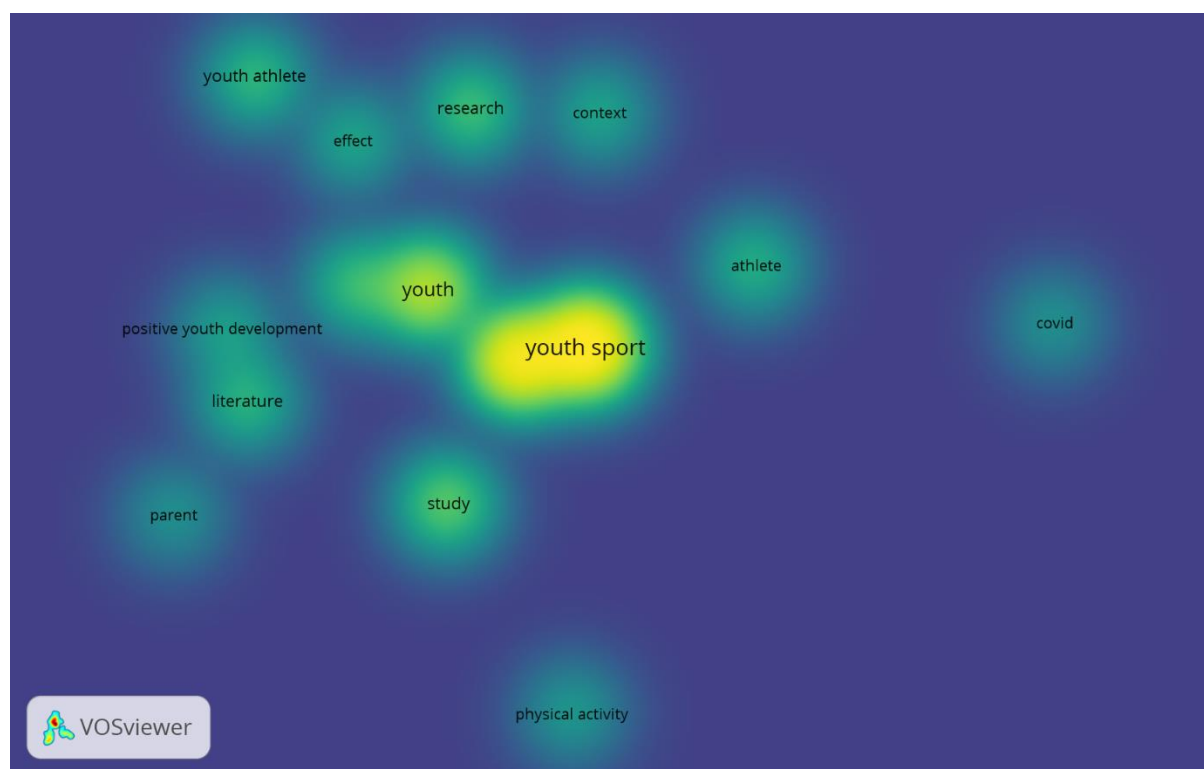


Figure 5 Density visualization

Selected	Term	Occurrences	Relevance
☒	covid	5	4.22
☒	youth sport	71	1.54
☒	parent	5	1.26
☒	youth athlete	12	1.06
☒	effect	8	0.94
☒	sport	56	0.92
☒	physical activity	6	0.78
☒	context	8	0.78
☒	systematic review	13	0.60
☒	positive youth development	7	0.57
☒	literature	11	0.55
☒	athlete	10	0.52
☒	research	14	0.46
☒	youth	33	0.41
☒	study	18	0.39

Table 2 Verification of selected terms

The bibliometric analysis of publications related to youth development through sports in Barru Regency reveals several key trends that align with broader global discussions on governance, policy implementation, and community engagement. Similar to the rise in publications on bureaucratic reform, governance, and digital transformation in the broader field of public administration, research on youth sports development has also gained significant traction, particularly after 2020. This surge in academic interest reflects the growing recognition of sports as a critical aspect of youth development and public policy.

A dominant theme in the publications analyzed for this study is the coordination between local governments, national organizations like KONI, and community stakeholders. Similar to research on public participation in governance, studies in the field of youth sports emphasize the role of local communities in supporting and managing sports programs. Publications from the last few years highlight the importance of community-based sports initiatives that allow for greater engagement and ensure that the benefits of youth sports programs reach all segments of the population, particularly those in rural areas.

Research also reveals a growing interest in innovation within sports policy and governance. This trend mirrors the global push towards digital governance and e-sports, with increasing attention being paid to the role of technology in enhancing athlete training, monitoring progress, and improving sports facilities. Furthermore, as in public administration research, the challenge of ensuring sustainable and transparent sports management at the local level is a key concern.

In summary, the bibliometric analysis shows that while the primary focus of research in Barru Regency has been on improving sports infrastructure, athlete development, and policy implementation, there is a clear overlap with global trends in governance, public participation, and innovation in service delivery. Tools like VOSviewer and Publish or Perish have been

instrumental in identifying these publication patterns, offering deeper insights into the evolving landscape of youth sports development in Barru and beyond. As with bureaucratic reform, the continued adaptation of youth sports policies to meet emerging challenges—such as the digital transformation of governance and increasing community involvement—remains a crucial area for future research.

➤ DISCUSSION

The bibliometric analysis reveals a systematic approach to youth sports development, indicating that the Department of Youth and Sports in Barru Regency has implemented practices in line with broader academic findings. The primary goal of these policies is to support youth development through sports by improving health, fitness, and competitive capabilities, addressing the challenges posed by globalization and competitiveness.

A recurring theme in the literature is the need for robust sports infrastructure to support youth engagement in various disciplines. Research highlights that well-maintained facilities are essential for creating a conducive environment where athletes can effectively train and compete. Findings from Barru align with this view, as facility improvements are cited as essential to support regional sports growth.

The emphasis on sustained training and early talent identification resonates with bibliometric studies, which demonstrate that effective youth sports programs often rely on a structured pipeline for identifying and nurturing young athletes. Research suggests that targeted training can maximize potential and contribute to athletes' long-term achievements, a strategy mirrored in Barru's continuous development initiatives for young athletes. Finally, the literature supports strategic planning and stakeholder collaboration as critical for effective sports policy implementation. Coordination with entities like KONI ensures that local sports programs are aligned with national targets and resources are allocated efficiently. The academic discourse indicates that these partnerships can strengthen accountability and support youth and sports development goals at all levels, enhancing the regional impact of sports policies.

Through this bibliometric approach, the study offers a comprehensive view of youth sports development, illustrating the interconnectedness of policy, training, infrastructure, and collaboration in shaping competitive youth athletes within a framework of effective governance. The findings provide a foundation for policy recommendations that can be supported by empirical research, allowing Barru Regency to refine and enhance its youth sports initiatives to align with national and international standards.

D.CONCLUSION AND RECOMMENDATIONS

1. Conclusion

The bibliometric analysis reveals that youth development policies in Barru Regency align closely with broader findings in sports development literature. By emphasizing structured athlete development, enhancing sports infrastructure, and maintaining consistent training programs, Barru Regency's Department of Youth and Sports has made progress in fostering a physically and mentally resilient youth population. These efforts not only support athletic performance but also contribute to building a community with high health standards and competitive spirit. Collaboration with organizations like KONI has further strengthened the impact of these initiatives, mirroring successful models of regional sports policy implementation documented in the literature.

Despite these advancements, bibliometric trends highlight several areas for potential enhancement. The literature emphasizes that sustainable sports programs require ongoing investment in facilities, ensuring they meet rising demand and adapt to diverse sports. Community engagement is another critical factor for program success; empowering community involvement at the grassroots level can extend the reach of sports initiatives and ensure equitable access to their benefits. Regular evaluation of athlete development and training efficacy is also essential, allowing for iterative improvements and alignment with evolving sports practices.

2. Recommendations

a) **Ongoing Infrastructure Investment and Maintenance**

To sustain and expand the benefits of current sports infrastructure, it is recommended that Barru Regency continues investing in the maintenance and expansion of sports facilities. Literature on successful sports development underscores the need for adaptive, well-maintained infrastructure to accommodate a growing and diverse participant base, ensuring that facilities remain safe and accessible.

b) **Strengthening Community Engagement and Inclusivity**

Expanding community involvement at the grassroots level can increase accessibility and promote a culture of sports engagement across different population segments. Collaborating with local communities, schools, and neighborhood organizations could lead to more inclusive sports programs. This aligns with studies that show the positive impact of community-based sports initiatives on social cohesion and health outcomes.

c) **Implementing Regular Monitoring and Evaluation Systems**

Establishing a structured framework for monitoring and evaluating athlete performance and training effectiveness is crucial. Periodic assessments, informed by the latest in sports science research, can help adjust training methodologies, ensuring continued relevance and efficacy. A bibliometric-based approach could support this by identifying cutting-edge research and practices for benchmarking.

d) Promoting Youth Entrepreneurship and Skill Development through Sports

Broadening the focus of sports programs to include entrepreneurial skills and life skills training, such as teamwork and leadership, can address larger social challenges like youth unemployment and poverty. Studies highlight the value of sports-based entrepreneurship programs for fostering self-reliance and community impact among young people.

e) Enhancing Talent Identification and Coach Development

A more structured approach to identifying young talent, combined with the development of local coaches, could strengthen the athletic capabilities of Barru Regency. Studies indicate that a sustainable athlete pipeline relies on effective early talent identification and professional training for coaches. Supporting the education and certification of local coaches would create a foundation for long-term sports development, equipping Barru with athletes ready for national and international competition.

This bibliometric-guided approach provides a comprehensive, research-backed foundation for refining youth development policies. Implementing these recommendations can enhance Barru Regency's capacity to foster a skilled, competitive, and socially engaged youth population, aligning with both regional aspirations and broader trends in youth and sports development.

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