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Analisis Bibliometrik: Tren Penelitian *Positive Youth Development* Melalui Olahraga

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Abstrak

Penelitian ini bertujuan untuk memahami tren publikasi terkait *Positive Youth Development Through Sport* menggunakan analisis bibliometrik. Sebanyak 117 artikel yang diterbitkan antara tahun 2014 hingga 2024 diperoleh dari basis data *Scopus* menggunakan kata kunci *"Positive Youth Development"* DAN *"Sport"*. Perangkat lunak *VOSviewer* digunakan untuk memvisualisasikan keterkaitan kata kunci serta klaster penelitian. Hasil analisis menunjukkan tren publikasi yang berfluktuasi, dengan puncaknya terjadi pada tahun 2022. Amerika Serikat menjadi negara dengan kontribusi publikasi tertinggi, sementara artikel yang paling banyak disitasi dipublikasikan dalam *International Review of Sport and Exercise Psychology* dengan jumlah 395 sitasi. Analisis klaster mengidentifikasi lima topik utama yang erat kaitannya dengan PYD, yakni perkembangan remaja, perkembangan psikologis, kesejahteraan fisik, perkembangan anak, dan keterampilan hidup (*life skills*). Temuan ini mencerminkan pergeseran fokus penelitian dari sekadar partisipasi olahraga menuju pemahaman yang lebih mendalam tentang peran olahraga dalam meningkatkan berbagai aspek perkembangan pemuda. Studi ini memberikan gambaran komprehensif mengenai lanskap penelitian PYD melalui olahraga serta menekankan pentingnya integrasi topik-topik terkait dalam penelitian mendatang guna merespons tantangan perkembangan pemuda secara lebih efektif.

Kata Kunci: *Positive Youth Development, sport, bibliometric analysis*

Bibliometric Analysis Of Research Trends In Positive Youth Development Through Sport

Abstract

This research aims to understand publication trends related to Positive Youth Development Through Sport using bibliometric analysis. A total of 117 articles published between 2014 and 2024 were obtained from the Scopus database using the keywords "Positive Youth Development" AND "Sport." VOSviewer software was used to visualize keyword co-occurrence networks and research clusters. The analysis reveals fluctuating publication trends, with a notable peak in 2022. The United States emerged as the leading contributor in terms of publication output, while the most cited article appeared in the International Review of Sport and Exercise Psychology *with 395 citations. Cluster analysis identified five key topics closely related to PYD, including adolescent development, psychological development, physical well-being, child development, and life skills. These findings reflect a shift in research from general sport participation to a deeper focus on the role of sport in enhancing various aspects of youth development. This study provides a comprehensive*

overview of the research landscape on PYD through sport and highlights the importance of integrating related topics in future research to address emerging issues in youth development more effectively.

***Keywords**: Positive Youth Development, sport, bibliometric analysis*

INTRODUCTION

In recent decades, sports have increasingly been recognized as a potential means to support Positive Youth Development (PYD). The concept of PYD itself has emerged as a paradigm that emphasizes the strengths, potential, and capabilities of youth, rather than merely viewing them as "problems to be solved" (Lerner et al., 2005). This paradigm shifts the focus from a deficit-based approach centered on preventing risky behaviors to a more holistic, strengths-based approach aimed at fostering competence, confidence, character, caring, and connection in young people (Nicholas L. Holt Kacey C. Neely & Tamminen, 2017). By emphasizing these positive outcomes, PYD promotes a more empowering and optimistic view of youth development, highlighting the potential for sports to serve as a valuable context for achieving these developmental goals.

Sports, with their unique characteristics such as voluntary participation, developmentally appropriate challenges, and opportunities to develop skills in an enjoyable context, have become a fertile ground for the application of Positive Youth Development (PYD) principles (Larson, 2000). These attributes make sports an ideal setting for fostering growth and development in young people. Well-designed sports programs can offer a supportive environment where adolescents can learn and practice various life skills. These include goal setting, which helps youth plan and achieve personal objectives; emotional management, which teaches them to handle stress and regulate their emotions; teamwork, which promotes cooperation and collective effort; leadership, which builds the capacity to guide and influence others; and problem-solving, which enhances their ability to tackle challenges effectively (Gould & Carson, 2008).

Furthermore, sports involvement can facilitate forming a positive identity, providing adolescents with a sense of self and purpose. It can enhance self-esteem by giving them confidence in their abilities and achievements. Additionally, sports participation can expand their social networks, allowing them to build relationships and connect with peers, mentors, and community members, which can be crucial for their social development and support system (Coakley, 2011). These combined benefits underscore the potential of sports as a powerful context for implementing PYD principles and achieving positive developmental outcomes.

Along with the growing interest in the potential of sports as a context for PYD, the volume of research in this field has also expanded rapidly. Studies have been conducted to explore various aspects of PYD through sports, ranging from developing theoretical models and program evaluations to investigating mechanisms and processes underlying positive developmental outcomes (Nicholas L. Holt Kacey C. Neely & Tamminen, 2017). However, while this significant growth in the literature indicates the vitality of the research field, it also presents challenges in comprehensively understanding the research landscape, identifying key trends, and recognizing existing knowledge gaps.

In this context, bibliometric analysis emerges as a valuable tool. This method enables the systematic mapping of the intellectual structure of a research field by analyzing publication, citation, and collaboration patterns (Zupic & Čater, 2015)). By analyzing these patterns, bibliometric analysis allows us to uncover the trajectory of conceptual developments within the field, shedding light on how ideas and theories have evolved over time. Through bibliometric analysis, we can gain insights into conceptual evolution,

identify seminal works and influential researchers, and visualize the knowledge network within the domain of PYD through sports. Therefore, this study aims to review the development of research on PYD through sports over the past ten years (2014-2024) using the VOSviewer software mapping tool. This research is hoped to provide a starting point for identifying research themes, particularly those related to ongoing and future studies.

METHOD

This section will provide an overview of the research techniques employed, encompassing multiple stages of the research process, which can be visually represented through diagrams or graphs. This study utilizes bibliometric tools for visualization and analysis. Bibliometric analysis, as a quantitative methodology, employs evaluative and descriptive techniques to depict patterns and attributes of publications. Techniques related to bibliometric visualization are used to illustrate the composition and organization of the intended study domain (Garfield, 2009; Gutiérrez-Salcedo et al., 2018; Jiang et al., 2019) The research sample consists of 117 publications sourced from the Scopus database, identified based on specified keywords "positive youth development" and "sport." Selected papers for analysis were published between 2014 and 2024. These publications are the focus of analysis using the VOSviewer tool, which employs visualization displays such as network and overlay. Indicators include three primary metrics: publication quantity, citation frequency, and strength of connections observed among the presented objects.

The current investigation utilizes VOSviewer software to analyze, visualize, and evaluate information related to collected publications. This encompasses various aspects, including author bibliographic coupling, countries, institutions, journals, and author keyword occurrences (Orduna-Malea & Costas, 2021; Oyewola & Dada, 2022; Sovacool et al., 2022; van Eck & Waltman, 2017). VOSviewer is a software tool used for generating network visualizations and conducting analyses related to advancements in specific domains using commonly used terminology (Guleria & Bains, 2021; Huang et al., 2022). It facilitates the visualization of complex relationships among scholarly publications, authors, institutions, and keywords. Researchers utilize VOSviewer to map out and analyze these networks, uncovering patterns of collaboration, citation flows, and thematic clusters.The programs mentioned above are widely employed in bibliometric analysis, as evidenced by their popularity and recognized benefits (Shah et al., 2019; van Eck & Waltman, 2010).

As described by (Dewi et al., 2021), bibliometric research consists of five distinct stages. The first stage involves identifying relevant keywords, with a specific emphasis on PYD in the context of sports. The second stage requires refining the initial search results, retaining only articles aligned with the specified keywords. To achieve this, researchers utilize the Scopus database. The third stage involves manual selection processes, where the VOSviewer application is employed to narrow down the dataset to desired parameters. The fourth stage involves compiling statistical figures, categorizing data according to specific topic descriptions, such as visualizing bibliographic couplings of countries, institutions, journals, publications, and authors. The fifth stage, data analysis through narrative interpretation, necessitates providing explanations of research findings derived from the selection and visualization outcomes using the VOSviewer application. This tool facilitates data representation as maps of variables associated with keywords, promising further development.

RESULTS AND DISCUSSION

Trend Publication PYD through Sport

The initial stage of implementing bibliometric analysis integrates the VOSviewer application, a data visualization tool, to represent the quantity and interdependency networks of documents originating from various entities, including country affiliations, institutions, journal publications, contributors, and keyword co-occurrence frequencies. In the preliminary phase, the Scopus repository encompasses 460 articles correlated with the field of PYD and sports. Following the delimitation of the investigation scope to the specific topics of "PYD" and "sport," the authors identified a total of 117 manuscripts within the Scopus database. The articulated findings are comprehensively illustrated in the following table:

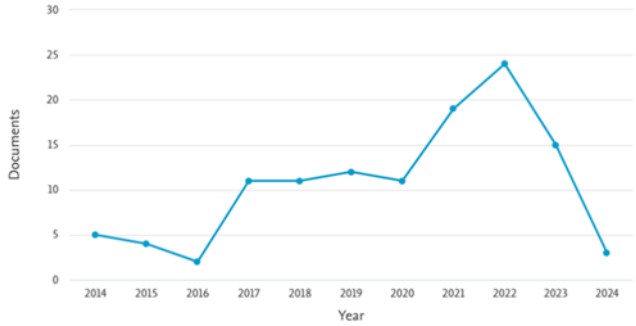

Figure 1. Level of development of research on PYD through sport.

The graph depicted above provides a detailed illustration of the publication dynamics observed over the span from 2014 to 2024, highlighting notable fluctuations in research output within the specified field. Initially, during the years 2014 to 2016, there was a relatively modest number of publications, indicating a period of lower research activity or perhaps a slower uptake of interest in the subject matter. However, the landscape shifted significantly in 2017, marked by a dramatic increase in the number of publications. This surge continued into subsequent years, leading to a period of stability from 2017 to 2020, where research output maintained a relatively consistent level.

The years 2020 to 2022 stand out prominently in the graph, showing a remarkable and rapid escalation in publication numbers, reaching a peak in 2022 with nearly 25 documents published. This peak suggests a heightened level of academic interest, funding availability, or emerging research trends that captured substantial attention within the field of study. Conversely, the trend post-2022 reveals a sharp decline in publication numbers. The data or projections for 2024 indicate a notable drop, suggesting a potential shift in research priorities or external factors influencing the research landscape. Such declines could be influenced by various factors, including changes in funding patterns, shifts in academic focus, or broader societal and global events that impact research agendas. It is important to note that while the data for 2024 may be preliminary or incomplete, the observed pattern of decreasing publications warrants further investigation. Understanding the underlying factors driving these trends is crucial for researchers and policymakers alike to adapt strategies and investments effectively to promote continued research advancement in the field.

Document Citation

Table 1 presents a ranking of the top ten articles based on their citation counts, highlighting the impact and influence of scholarly work within the field. Among these, the article titled "A grounded theory of positive youth development through sport based on results from a qualitative meta-study," which was published in 2016, stands out with the

highest number of citations, totaling 395. The significant citation count indicates that this particular article has been widely recognized and referenced by other researchers in the field. Its prominence suggests that the study has made a substantial contribution to the understanding of positive youth development through sport, likely by presenting a comprehensive qualitative meta-analysis that has resonated with scholars and practitioners alike.

Table 1. 10 Articles With The Highest Number Of Citations.

Author/Year	Title	Doi	Total Citation
(Holt et al., 2017)	A grounded theory of positive youth development through sport based on results from a qualitative meta-study	https://doi.org/10.1080/1750984X.2016.1180704	395
(Turnnidge et al., 2014)	Positive Youth Development From Sport to Life: Explicit or Implicit Transfer?	https://doi.org/10.1080/00336297.2013.867275	164
(Hermens et al., 2017)	A Systematic Review of Life Skill Development Through Sports Programs Serving Socially Vulnerable Youth	https://doi.org/10.1080/02701367.2017.1355527	105
(Cronin & Allen, 2017)	Development and initial validation of the Life Skills Scale for Sport	https://doi.org/10.1080/02701367.2017.1355527	94
(Mahoney et al., 2014)	Mental Toughness in Sport: Motivational Antecedents and Associations With Performance and Psychological Health	https://doi.org/10.1080/02701367.2017.1355527	86
(Bruner et al., 2014)	Group Cohesion and Positive Youth Development in Team Sport Athletes	https://doi.org/10.1037/spy0000017	63
(Cronin & Allen, 2018)	Examining the relationships among the coaching climate, life skills development and well-being in sport	https://doi.org/10.1177/1747954118787949	57
(Ka et al., 2017)	A Sports-Based Youth Development Program, Teen Mental Health, and Physical Fitness: An RCT	https://doi.org/10.1542/peds.2017-1543	49
(Ettekal & Agans, 2020)	Positive Youth Development Through Leisure: Confronting the COVID-19 Pandemic	https://doi.org/10.5195/jyd.2020.962	49
(Cronin & Allen, 2015)	Developmental Experiences and Well-Being in Sport: The Importance of the Coaching Climate	https://doi.org/10.1123/tsp.2014-0045	45

Cluster Resulting PYD through Sport topic area using VOSviewer

The minimum number of connections between terms in VOSviewer is set at two terms (Fitria et al., 2021). The mapping conducted using the keywords PYD and Sports resulted in 5 clusters. Each of these clusters varies in the number of items, type of items, and color of the cluster. Within each cluster formed in the circles, each circle has a different size. The size of the circle is determined by its frequency of occurrence (Mulyawati & Ramadhan, 2021). Larger circles indicate more frequent use of the keywords, while smaller circles indicate less frequent use. The five clusters obtained from the results of the VOSviewer mapping with the keyword PYD through sport area as follows:

1. Cluster 1, marked in red, has 24 items (see Figure 2). The 24 items are adolescent, child, controlled study, cross-sectional studies, cross-sectional study, female, health, health status, male, mental health, outcomes assessment, procedures, physical well-being, psychology, questionnaire, salutogenesis, school, socially vulnerable youth, sport, sports, survey and questionnaire, transfer, young adult, young population.

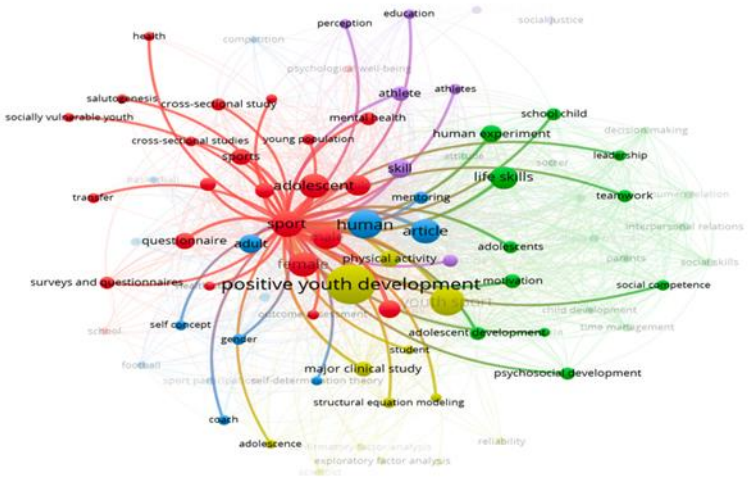

Figure 2. Network visualization in cluster 1.

2. Cluster 2 which is marked in green, has 22 items (see Figure 3); the 22 items are adolescent development, adolescent, attitude, child development, child-parent relation, climate, decision making, human experiment, human relation, interpersonal relation, leadership, life skill, motivation, multiple regression, parents, psychological development, school child, soccer, social competence, social skills, teamwork, time management.

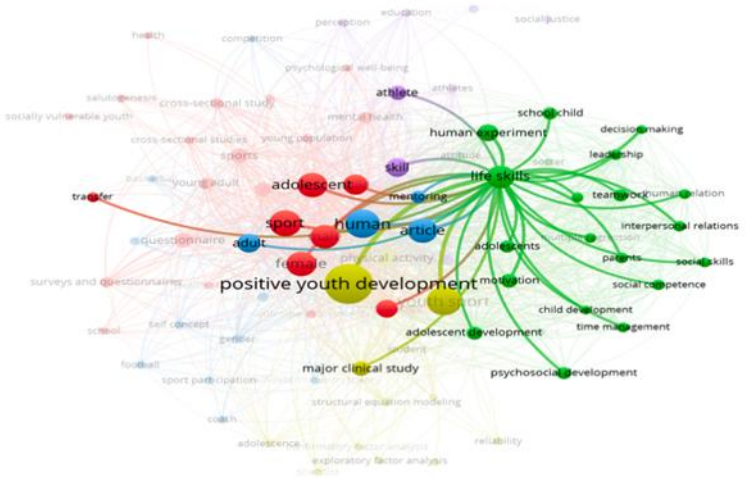

Figure 3. Network visualization in cluster 2.

3. Cluster 3, marked in dark blue, has 14 items (see Figure 4): adult, article, basketball, coach, competition, football, gender, human, learning, mentoring, program evaluation, self-concept, self-determination theory, and sports participation.

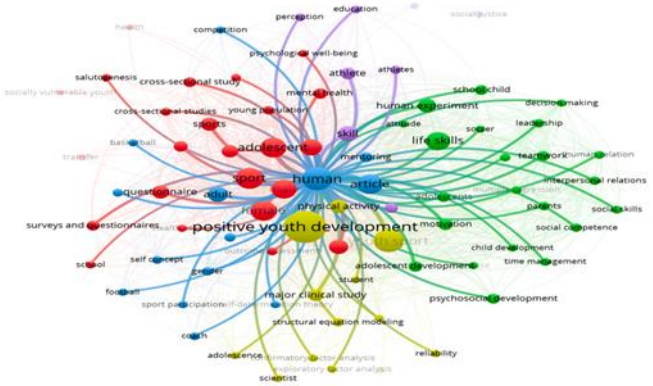

Figure 4. Network visualization in cluster 3.

4. Cluster 4, marked in yellow, has 13 items (see Figure 5). The items are adolescent, confirmatory factor analysis, exercise, exploratory factor analysis, major clinical study, physical activity, PYD, reliability, scientist, self-esteem, structural equation modeling, student, and youth sport.

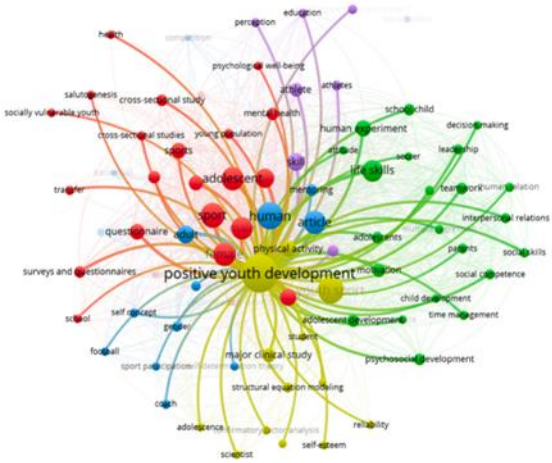

Figure 5. Network visualization in cluster 4.

5. Cluster 5, which is marked in purple has 8 items (see Figure 6), the 2 items are athlete, athletes, clinical article, education, perception, skill, social justice, teaching personal and social responsibility model.

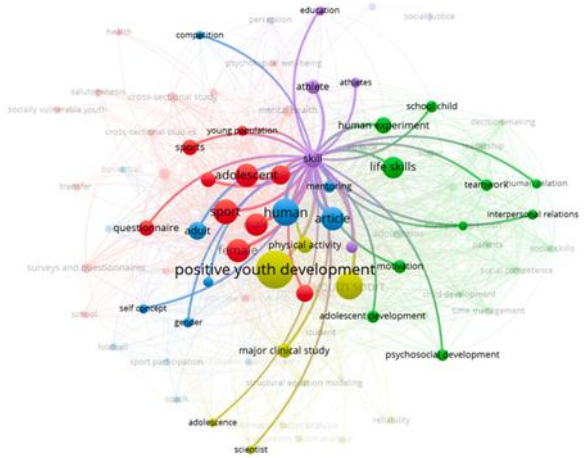

Figure 6. Network visualization in cluster 5

Visualization PYD through sport Topic Area Using VOSviewer

Figure 7 illustrates the relationships between concepts using a network visualization approach. In this visual representation, connections between terms are depicted by lines or edges that connect nodes representing specific terms or keywords. In the context of bibliometric analysis, particularly with tools like VOSviewer, these visualizations are valuable for understanding how different terms or keywords co-occur in scholarly publications. The size of each node (or circle) in the visualization typically corresponds to the frequency of occurrence or usage of that particular term. Therefore, larger nodes indicate higher frequency or more extensive usage of the associated term in the analyzed publications.

For instance, in Figure 7, the term "Positive Youth Development" is depicted by a larger circle compared to other terms. This indicates that "Positive Youth Development" is the most frequently used or prominently discussed concept within the field of youth

development related to sports. Researchers and scholars have extensively utilized this term to explore various aspects of how sports contribute to positive youth development. Such visual representations not only provide a snapshot of the relationships between concepts but also highlight the prominence of specific terms or themes within a research field. They help researchers identify key concepts, trends, and clusters of related topics, thereby guiding further exploration and analysis in academic research.

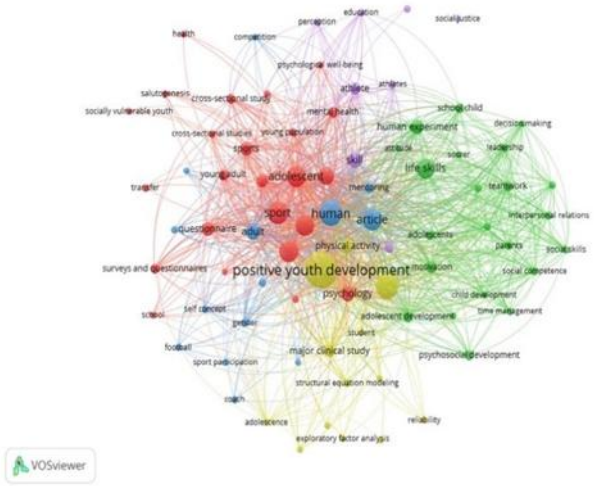

Figure 7. Network visualization of the emergence of shared keywords

Figure 8 illustrates an overlay visualization format. In this type of visualization, we can observe the distribution of research years associated with the keywords of interest. This bibliometric visualization, generated using VOSviewer, maps the landscape of research on Positive Youth Development (PYD) through sports with impressive complexity and richness. Centered around the concept of "positive youth development" as the central theme, this network reveals strong interconnections with "sport," "human," "adolescent," and "physical activity," indicating a research focus on utilizing physical activity and sports to support youth development.

The diversity of node colors reflects temporal evolution and thematic clustering, starting from methodological aspects and study populations (blue cluster, around 2019), moving towards emphasis on psychology and development (green cluster, 2019.5-2020), and then focusing on specific life skills and developmental outcomes (yellow cluster, 2020.5-2021). The variety of emerging concepts—from "health" and "education" to "social justice" and "leadership"—underscores the multidisciplinary nature of this field, while identified research methods such as "cross-sectional studies" and "structural equation modeling" provide insights into dominant methodological approaches.

Overall, this visualization not only highlights the complexity and depth of research on Positive Youth Development through sports but also depicts its evolution from mere studies on sports participation to comprehensive explorations of how sports can be optimized to foster psychological, social, and life skills development in youth. This underscores the significant potential of sports as a medium for shaping resilient, competent, and positively contributing younger generations in society.

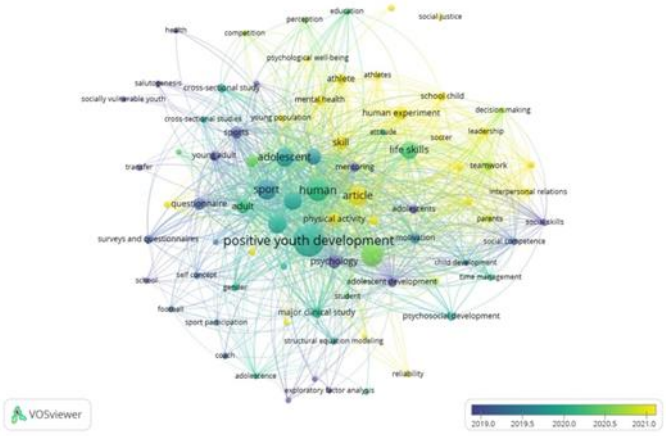

Figure 8. Overlay Visualization of the emergence of shared keywords based on the year of publication

CONCLUSION

The primary objective of this research is to employ bibliometric analysis to examine the body of research focused on Positive Youth Development (PYD) through sports. This analysis utilizes the VOSviewer software, which is instrumental in visualizing and mapping the intellectual structure of the field based on publication data. The process involved using a reference management tool to gather relevant research articles, identified through specific search criteria ("Positive Youth Development" AND "Sport"). From the search results, 117 articles were identified, all of which were open access and published between 2014 and 2024. The analysis revealed fluctuating trends in research output over the years, with a notable peak in publications observed in 2022.

Using VOSviewer, the study identified five distinct clusters within the research landscape of PYD through sports. These clusters represent thematic groupings of research articles, visualized through circles of varying sizes and colors. The term PYD is included in cluster 4. There are several terms related to PYD such as adolescent development, psychological development, physical well-being, child development and life skills. The size of each circle reflects the frequency of term usage within that cluster, providing insights into the prominence of specific research themes and topics over time.

The findings underscore the dynamic nature of research in PYD through sports, highlighting the evolution from initial studies on participation in sports to more comprehensive explorations of how sports can optimize psychological, social, and life skills development among youth. The study concludes by emphasizing the need for ongoing and updated research efforts that integrate various related terms to address current challenges and trends in the field effectively.

PROFIL SINGKAT

Syaipul Hari Baharuddin lahir di Tanjung Pura, Langkat pada tanggal 27 November 1995 merupakan lulusan jenjang Magister jurusan Pendidikan Olahraga di Universitas Pendidikan Indonesia pada tahun 2025.

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