COACHING SPORTS ACHIEVEMENT AT THE SPORTS COMMITTEE INDONESIAN NATIONAL COMMITTEE (KONI) WEST SUMATRA: A CIPPO-BASED PROGRAM EVALUATION

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Abstract

This study aims to assess the effectiveness of achievement sports training programs at KONI West Sumatra, especially in terms of using CIPPO-based data. The evaluation was carried out to find out from the Context capital, about the data entry of West Sumatra KONI athletes, especially the CIPPO-based data field. This research includes Descriptive research. The approach used in this research is a Phenomenological Qualitative Approach. Phenomenological said because following the research objectives, namely describing social events, fiber can reveal actual events. Information was collected through observation, interviews, documentation, and questionnaires to evaluate the development of KONI West Sumatra. Data analysis was carried out using validity and CIPPO tests. The results of the study found a lack of an effective and efficient athlete data collection system for PON. The conclusion of this research is that with an integrated, secure, and easily accessible system, KONI West Sumatra can improve athlete data management, monitor performance progress in real time, and make data-based decisions to achieve the best results in preparation for PON. This finding has great significance and needs to be considered because it provides valuable information regarding the development of achievement sports. Therefore, an in-depth analysis of existing programs is required.

Keywords: Evaluation, Development Program, Sports Achievement, KONI, West Sumatera.

INTRODUCTION

Sports coaching is a very important factor in advancing and improving sports achievements (Nakahara et al., 2021; Ruiz & Hanin, 2011; Sari et al., 2023). Achievement sports coaching is aimed at the advancement of all sports that have their respective achievement coaching programs at both regional and national levels (DeMartini & Kao, 2023; Kurniawan et al., 2024; Milan & Jurowski, 2024; Pasqualini et al., 2024). A planned achievement coaching system can improve the quality of athletes to achieve achievement. In Indonesia, the sports achievement coaching system uses talent scouting and talent development (Sarıkaya et al., 2024).

The role of achievement coaching must be programmed optimally, to organize the course of coaching in accordance with the program that has been compiled in the athlete achievement coaching system (Indika et al., 2023; Sari et al., 2023). In general, achievement sports are sports activities that are carried out and managed professionally with the aim of obtaining optimal achievements in sports, from regional, national to international levels (Ball & Bennett, 2024; Tian & Shao, 2024). Achieving sports achievements must continue to practice and be disciplined in running the training program provided by the coach.

To achieve an achievement that wants to be achieved there must also be support from the parties concerned in the development of sports achievements. Not only that, to achieve these goals, in Indonesia there is a national sports organization that has the authority to coordinate and foster any and all sports achievement activities (Komaini et al., 2022; Nast et al., 2024).

The Indonesian National Sports Committee (KONI) is the only forum that coordinates and fosters sports achievements in Indonesia is required to be able to carry out its duties properly and have effective management management. So that it becomes an independent organization in achieving the expected goals. The success of an organization including KONI will never be achieved without planning, organizing, directing work and with a supervision of the implementation of work (Damrah et al., 2023; Mualif et al., 2023).

These conditions are part of the implementation of management. Each region in Indonesia has a function to help make policies in the field of management of coaching, and the development of sports achievements at the national and regional levels. The success of sports coaching and development is also determined by the quality of the organization that manages sports(Sari, Kurniawan, Selviani, et al., 2024; Sari, Kurniawan, Vicente, et al., 2024).

KONI West Sumatra is a sports authority institution in West Sumatra Province that functions as a forum that accommodates all athletes in the West Sumatra region so that they can be further fostered. Currently, developments in the world of sports have increased very rapidly, especially in the field of information (Ilham et al., 2024; Macniven et al., 2020; Sari et al., 2023).

Over time, technology and athletes become an inseparable unity from the world of sports, without the support of developing technology, athlete data will be slightly hampered which causes athlete coaching to not run effectively. Closely related to the increasing competition in sports achievements both nationally and internationally (Rahayu et al., 2024; Rustiadi, 2016).

Based on researcher observations, data collection of athletes at the Indonesian National Sports Committee (KONI) West Sumatra still uses traditionally and does not use technology-based applications so that there are often difficulties in the data search process. That good achievements arise from good and professional governance by synergizing information technology into it, for that it is important to make changes in the processing of athlete data in order to get good governance and be effective and efficient.

This is closely related to the competition to improve sports achievements at both the national and international levels. Evaluation basically has an important role in the process of determining future steps for the better. This is because evaluation is an argument in the sense that it lays down a series of premises that push towards various evaluative conclusions. The premises of evaluative argumentation consist partly of evidence, beliefs and interpretations in explicitly value-laden contexts.

There are several types of evaluations, so this research uses one of the Context, Input, Process, Product, Outcome (CIPPO) evaluation models. This CIPPO program evaluation is a modification made by Gilber Sax from the CIPP (Context, Input, Process, and Product) model program evaluation developed by Stufflebeam.

Evaluation of achievement coaching using the CIPPO model is considered capable of evaluating thoroughly. In addition, the CIPPO model was chosen because it includes summative evaluation or is carried out after the program is completed and this evaluation model is very comprehensive when compared to other evaluation models. Thus, the evaluation of the achievement sports coaching program is very important and can be used by organizational administrators, coaches, and athletes to maximize coaching in the regions and nationally.

METHODS

The approach used in this research is a qualitative phenomenological approach. This research data collection will be carried out through observation or direct observation of the object of analysis to explore relevant and important aspects as the basis for analysis and interpretation to be carried out.

This field observation aims to explore the possibility of information missing from the interview guidelines and seeks to enrich the observation dimension of the existing analysis phenomenon. Data analysis in this study is the process of systematically searching and compiling data obtained from interviews, observations, and documentation so that it can be understood and the findings can be informed.

Data analysis is carried out by organizing data, breaking it down into defined units, synthesizing, compiling it into patterns, choosing which ones are important and will be studied, and making conclusions. Researchers made instrument grids for components and sub-components using the CIPPO model. Making a grid can produce construction validation according to the concept in Table 1 below.

Table 1: CIPPO Model Research Instrument Grid

Component	Indicator sub-component evaluated	Data Source	Data collection technique	Data Analysis
Context	West Sumatra KONI policy in data collection of athlete data	Management of the Indonesian National Sports Committee of West Sumatra	1. Observation 2. Interview 3. Documentation	Description
Input	Inputting athlete data by KONI West Sumatra	Management of the Indonesian National Sports Committee of West Sumatra	1. Observation 2. Interview 3. Documentation	Description
Process	Work process in collecting athlete data	Management of the Indonesian National Sports Committee of West Sumatra	1. Observation 2. Interview 3. Documentation	Description
Product	Qualifications in athlete data collection	Management of the Indonesian National Sports Committee of West Sumatra	1. Observation 2. Interview 3. Documentation	Description
Outcome	Impact and benefits for sports coaching achievement KONI West Sumatra	Management of the Indonesian National Sports Committee of West Sumatra	1. Observation 2. Interview 3. Documentation	Description

The data that has been summarized and categorized is used as a consideration to answer the research questions posed as in Figure 1 below.
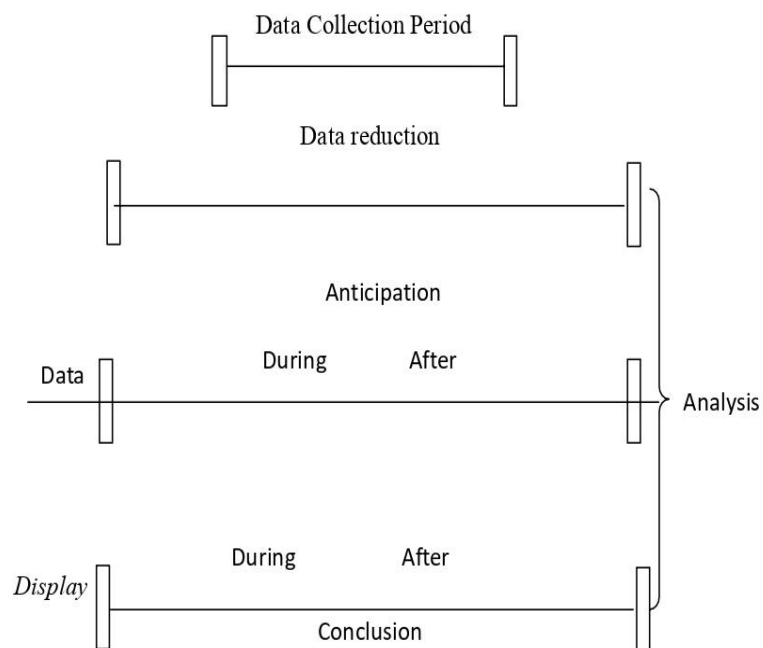
Figure 1: Components in Source Data Analysis

RESULT

In the context evaluation, it discusses the policies given to the management of the data field that have not run efficiently and the lack of advanced technology systems or trends to support the data collection system. The input evaluation, it discusses the input of the availability of information technology and computer infrastructure to support the data collection system. Input evaluation regarding the availability of information technology and computer infrastructure to support the data collection system involves several important steps and aspects that need to be considered. The effectiveness of the athlete data collection process, including registration procedures, data maintenance, and updating athlete information. The results of observations, direct interviews, and documentation with KONI West Sumatra administrators. The effectiveness of athlete data collection process runs less effectively with the existing system, although there are still shortcomings, especially in terms of technology and data integration, data field administrators will try to use makeshift technology, but technological infrastructure needs to be improved. In this study, product evaluation includes aspects of the completeness and accuracy of the database of registered athletes. The information statement of the West Sumatra KONI data field manager said that although there is already a fairly good system, there are still many obstacles in ensuring that all data is always updated on time, it is necessary to improve the technology infrastructure to facilitate data management. Output evaluation is to show the output results of program implementation, and how much the program benefits a coach in carrying out the learning and assessment process in the field. Outcome evaluation is a material improvement for future programs, thus this outcome evaluation is classified as a performance evaluation procedure that can be used in evaluation methods. The implementation of this recommendation will assist KONI West Sumatra in utilizing information technology to support the athlete data collection system effectively and efficiently towards PON. With an integrated, secure, and easily accessible system, KONI West Sumatra can improve athlete data management,

monitor performance progress in real time, and make data-based decisions to achieve the best results in preparation for PON.

1) Related to the context evaluation standard is focused on the West Sumatra KONI policy in collecting athlete data. The aspects assessed are:

The policy of the data field management in inputting data on West Sumatra KONI athletes, including geographical, social, and economic support in data collection of West Sumatra KONI athletes is not good. Evaluation of the context of data collection of West Sumatra KONI athletes that can be collected from research based on observation, direct interviews, and visual documentation. West Sumatra KONI's policy on athlete data collection has not focused on accuracy, efficiency, and good use of information technology. In supporting athlete data collection, KONI West Sumatra has not used the Athlete Management Information System (SIMA) which allows the collection, storage, and analysis of athlete data digitally to facilitate faster and more efficient data access and management.

From the results of direct interviews with the management of the West Sumatra KONI data field, that the West Sumatra KONI policy in collecting and managing athlete data has a field that handles athlete data collection under the deputy field II and every year a decree is issued to observe the data. The policy given to the management of the data field is in accordance with the decree given, regarding the collection and management of West Sumatra KONI athlete data, but in the implementation of data entry it is not efficient, each of which uses a manual system, it can be seen from the absence of athlete demographic data. An evaluation is needed to ensure the data remains relevant and accurate. But there are several obstacles such as budget, manpower, and technology for data collection and management, there needs to be good coordination in data collection, because this process will involve collaboration between various parties and the use of information technology to ensure accurate data and can be used for effective decision making in the development of sports achievement in West Sumatra.

2) Evaluasi program pembinaan olahraga prestasi KONI Sumatera Barat pada bidang pendataan atlet dilihat secara *Input*

In this study, the Input evaluation, namely the input of athlete data by the management of the KONI West Sumatra data field based on observations, direct interviews and documentation during the research in the security of sensitive athlete data, there is no protection with a good security system to prevent unauthorized access, there needs to be a privacy policy to ensure that athletes' personal data is protected in accordance with applicable regulations. The West Sumatra KONI data field management needs to conduct a feasibility study to evaluate the needs and potential of the information technology system by asking IT and sports management experts to design a system that suits local needs, then work with software developers to create or customize existing systems, in order to reduce the time and effort required to manage data manually and data can be accessed anytime and anywhere by authorized parties.

It can be concluded that information about evaluating the effectiveness and efficiency of athlete data collection systems supported by information technology at KONI West Sumatra is not always publicly available. But in evaluating the data generated by the system to ensure accuracy and consistency can be by making updates to hardware and software to improve system performance and capacity,

then integrating the athlete data collection system with other systems used by KONI and related sports organizations to improve workflow and data accessibility. The following table 2 below explains aspects of the results of observation and documentation.

Table 2: Observation and Documentation Results

No	Aspect	Present	None
1	Organization Program	✓	
2	Name List of Management	✓	
3	Facilities List	✓	
4	Infrastructure List	✓	

Source: Questionnaires and Documentation of West Sumatra KONI Management

3) Evaluation of the West Sumatra KONI achievement sports coaching program in the field of athlete data collection seen in Process

Process evaluation includes aspects of athlete data management at KONI West Sumatra regarding the performance of the data field management. Performance in data management that can be collected by researchers based on observation, direct interviews, collection, maintenance management and documentation as long as the researcher joins the environment can be seen from interviews with KONI West Sumatra data field administrators.

In the process of inputting athlete data, the data field manager still uses manual methods, including recording achievements, changes in status, or other important information depending on the policies and practices applied by KONI West Sumatra and the type of sport competed by the athlete concerned. The obstacle in implementing the right integration strategy, KONI West Sumatra has not been able to connect well with other platforms used by related parties, so it does not support better coordination in sports development and athlete achievement.

From direct observation, documentation and interviews, it can be concluded that the security of athlete data during the process of collecting, maintaining and updating information at KONI West Sumatra cannot be guaranteed with clear security, because access to athlete data is limited only to personnel who have a need to access the information. Access rights will be granted according to the roles and responsibilities of each individual.

4) Evaluasi program pembinaan olahraga prestasi KONI Sumatera Barat bidang pendataan atlet dilihat secara *Product*

In this study, product evaluation includes aspects of the accuracy of the West Sumatra KONI athlete database. The results that can be collected by researchers based on observations, interviews, strengthened documentation as long as researchers join in collecting data on West Sumatra KONI athletes can be seen from the results revealed by the athlete data field manager, to determine the level of completeness of athlete data registered in the West Sumatra KONI database, it is necessary to use data validation in the database system, that each data entry must meet the completeness criteria. For example, in filling in certain fields such as full name, date of birth, athlete identification number, achievement history, and others have not been stored properly.

The quality of athlete data collected is a key factor in the success of sports coaching programs. This includes three main aspects of completeness, accuracy, and liveliness of information. It can be seen from the data that has been inputted for data collection of PON XXI athletes in 2024 which still uses manual methods, but field administrators have recapitulated athlete data from the beginning before selection for coaching until participating in Platprov which will be held by KONI West Sumatra, even though it has not used information technology that applies strict access control and authorization to the database. And the data entry is only authorized parties who can access and change athlete data, so that the data remains relevant.

DISCUSSION

Athlete data collection at KONI West Sumatra is an important part of the process with the aim of identifying, monitoring and developing potential athletes in various sports. However, with the limitations of sophisticated information systems, this process faces several challenges that require a strategic and innovative approach. The lack of technological trends in athlete data management, seen when entering data on athletes who will compete in the PON XXI Qualification Round in 2024, which results in less effective in entering the data, this is closely related to the sustainable and sustainable development of KONI West Sumatera's sports achievements.

In the context evaluation, it discusses the West Sumatra KONI policy in the process of entering athlete data. In the context evaluation, it discusses the policies given to the data field management have not run efficiently, and the lack of a sophisticated technology system or trend to support the athlete data entry process system. KONI West Sumatra is still inputting manually, resulting in a slow process of inputting data that takes longer than the digital method. Each data entry must be done individually, which reduces work efficiency. This manual process often causes delays in updating data and is prone to errors such as typos, duplication of data, or missing data. This can result in inaccurate information (Liddelow et al., 2024; Oulevey et al., 2024; Srivastava et al., 2024). And to verify data manually is more difficult and takes a long time. KONI West Sumatra should provide training to improve skills in using digital technology for integrated data collection that allows real-time data updates and easy access for all sports administrators. With accurate athlete data collection, it is possible to objectively evaluate athletes' performance, understand their strengths and weaknesses, and create more effective training programs (Indika et al., 2023; Sari et al., 2023). With the right data, identification of an athlete's talent and potential can be done early, allowing development programs to be tailored to each athlete's needs. Furthermore, accurate data helps in long-term planning and strategy development for competitions and allows monitoring of athlete development over time, so that adjustments to training programs and short- and long-term goals can be made (Xiao et al., 2024; Yang et al., 2024).

In the input evaluation, it discusses the input of the availability of information technology and computer infrastructure to support the athlete data collection process system. Input evaluation regarding the availability of information technology and computer infrastructure to support the athlete data collection process system involves several important steps and aspects that need to be considered. Based on the results of observation data strengthened by interviews related to the eligibility or qualifications of data field administrators, it can be concluded that the availability of information

technology and infrastructure in inputting athlete data still uses a manual system, including using free sites on Google (Hsu et al., 2024; Marttinen et al., 2022). Data uploaded to free site services are not protected with an adequate level of security. There are many risks of data leakage or unauthorized access in privacy and security settings that are not properly managed (Damrah et al., 2023; Lau & Mukherjee, 2023; Raquel et al., 2017).

Sensitive information about athletes, such as medical and personal data, requires extra protection to meet data privacy regulations. Free services often have limitations in terms of features and storage capacity. For more complex needs, such as in-depth data analysis or storage of large amounts of data, free services may not be adequate (Mason & Hardwicke, 2024; Qi et al., 2024). The use of unprotected free sites for athlete data collection may also pose a variety of adverse risks, ranging from data breaches to decreased trust. KONI West Sumatra should collaborate and partner with educational institutions or universities that have study programs related to information technology to get technical assistance and skilled human resources (Tanguilig et al., 2024; Wilcock et al., 2021).

As well as Private Parties by seeking partnership opportunities with technology companies or technology service providers to obtain technical support and advanced software solutions. Without renewal, this will continue to hinder the development of the achievements of West Sumatra KONI athletes..

Evaluation of the athlete data collection process, including registration procedures, data maintenance, and updating athlete information. The results of observations and interviews with West Sumatra KONI administrators, the evaluation of the athlete data collection process runs less effectively with the existing system, although there are still shortcomings, especially in terms of technology and data integration. Data administrators will try to use makeshift technology, but technology infrastructure needs to be improved. In the registration process KONI West Sumatra announced the athlete registration period through the media, including the official website and direct communication to sports branches. Athletes fill out a registration form that includes personal information, contact data, and details of their sport. The form can be accessed and completed online through the website or manually through the relevant sports office.

Athletes must collect and submit supporting documents such as identity, recent photos, health certificates, and proof of sporting achievements in order to verify the athlete's identity and eligibility to register. It can be seen when collecting and managing data on athletes who will compete in PON XXI in 2024, currently the data field only relies on several free programs, limitations in the budget need to be overcome as soon as possible, for the development of sports coaching achievements KONI West Sumatra. It can be concluded that the effectiveness of the athlete data collection process at KONI West Sumatra is not good and needs improvement. With improvements in staff training, better technology, and more efficient procedures, the process can run more smoothly and support the development of athlete achievement in West Sumatra.

A feedback system that allows system users (staff, coaches, athletes) to provide suggestions and criticism for continuous improvement (Murofushi et al., 2024; Zhang et al., 2024). As well as adjusting procedures based on feedback and evaluation

results, adjusting procedures and systems to ensure that the data collection process is always relevant and effective (English et al., 2022; Tinoco et al., 2023).

Product evaluation in this study, covering aspects of the completeness and accuracy of the database of registered athletes. The information statement of the West Sumatra KONI data field manager, said that even though there is already a fairly good system, there are still many obstacles in ensuring that all data is always updated on time, it needs improvement in technology infrastructure to facilitate data management (Bruder et al., 2020; Kovács et al., 2024).

The completeness and accuracy of the database of registered athletes is very important to ensure quality and reliable data. With the right evaluation methodology and continuous improvement actions, KONI West Sumatra can improve the efficiency and effectiveness of athlete data collection, which in turn will support the development and coaching of athletes more optimally.

A lack of staff trained in the use of information technology and data management can hinder the process of timely data updates and a lack of coordination between the various parties responsible for data collection and updates can lead to delays and inconsistencies in the data. A statement from the West Sumatra KONI data manager said the athlete data collection process was not going well, while data completeness was a priority, where every registered athlete must include valid supporting documents. Data accuracy is also a major focus for administrators, by conducting thorough verification and periodic audits.

Outcome evaluation is an improvement for future programs, thus, outcome evaluation is classified as a performance evaluation procedure that can be used in evaluation methods (Li & Wang, 2024; Yang et al., 2024). Collect feedback from the various stakeholders involved in the selection process, including athletes, coaches and administrative staff.

Create a detailed mapping of the athlete selection process to understand each stage and activity involved. And use tools such as flowcharts to map the process and identify critical points in the process that affect performance. Collecting more accurate and complete athlete data can be done by finding important information such as biodata, medical history, achievement records, and training statistics are updated regularly and can be accessed easily (Bang et al., 2024; Lin & Cahigas, 2024; Middleton et al., 2020).

KONI West Sumatra needs to carry out athlete selection in the athlete achievement coaching program by determining the number and type of athletes needed which will be used as a guide in the selection process. By setting selection criteria based on achievement standards, potential, age, physical condition, and psychological aspects (Bar-Eli et al., 2024; Date et al., 2024; Turnbull et al., 2024).

Seen from the selection of athlete selection, as well as sports personnel in the athlete achievement coaching program, then the overall training programs between long-term, medium-term and short-term programs with the aim of determining the number and types of athletes to be selected for the coaching program. Announcements regarding athlete selection are disseminated through social media, KONI's official website, newspapers, and direct communication to sports clubs and reach out to potential prospective athletes and inform them about the schedule, location, and selection requirements.

CONCLUSION

This study concludes that the implementation of the Solok City FORKI athlete achievement coaching program in terms of the context component has not been effective, KONI West Sumatra has not provided a good enough policy. The input component is quite effective, where a computerized athlete data collection system has been implemented, but it is not evenly and consistently distributed. The process component is less effective, where the athlete data collection process, including registration procedures, data maintenance, and athlete information updates, the athlete registration procedure in West Sumatra has generally been implemented, but still manually. This causes the process to be slow and prone to administrative errors. The product component is less effective, where the completeness and accuracy of the database of registered athletes is still incomplete, a lot of data has not been entered because the registration process is still manual. The outcome component is less effective, where overall, to achieve a more significant increase in the participation and quality of athletes from West Sumatra, a comprehensive strategy is needed that includes increased financial support, infrastructure development, and more intensive and structured training.

References

1) Ball, J., & Bennett, G. (2024). Bridging the gap: Connecting sport marketing theory and practice via an experiential sponsorship activation learning assignment. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *34*, 100475. https://doi.org/https://doi.org/10.1016/j.jhlste.2023.100475

2) Bang, H., Chang, M., & Kim, S. (2024). Team and individual sport participation, school belonging, and gender differences in adolescent depression. *Children and Youth Services Review*, *159*, 107517. https://doi.org/https://doi.org/10.1016/j.childyouth.2024.107517

3) Bar-Eli, M., Lidor, R., Lath, F., & Schorer, J. (2024). The feudal glove of talent-selection decisions in sport –Strengthening the link between subjective and objective assessments. *Asian Journal of Sport and Exercise Psychology*, *4*(1), 1–6. https://doi.org/https://doi.org/10.1016/j.ajsep.2023.09.003

4) Bruder, A. M., Crossley, K. M., Mosler, A. B., Patterson, B., Haberfield, M., & Donaldson, A. (2020). Co-creation of a sport-specific anterior cruciate ligament injury risk reduction program for women: A concept mapping approach. *Journal of Science and Medicine in Sport*, *23*(4), 353–360. https://doi.org/https://doi.org/10.1016/j.jsams.2019.10.019

5) Damrah, D., Ihsan, N., Muharel, A., Komaini, A., Rifki, M. S., Sepriadi, S., & Ilham, I. (2023). A Measuring Tool for Kick Speed with Dynamic Targets: A Digital-Based Instrument Designed for Pencak Silat Learning. *Annals of Applied Sport Science*, *11*(4). https://doi.org/10.61186/aassjournal.1216

6) Date, S., Munn, E., & Frey, G. C. (2024). Postural balance control interventions in autism spectrum disorder (ASD): A systematic review. *Gait & Posture*, *109*, 170–182. https://doi.org/https://doi.org/10.1016/j.gaitpost.2024.01.034

7) DeMartini, A. L., & Kao, P. H. (2023). Sport law in U.S. undergraduate sport management programs: What should we be teaching? *Journal of Hospitality, Leisure, Sport & Tourism Education*, *33*, 100455. https://doi.org/https://doi.org/10.1016/j.jhlste.2023.100455

8) English, M., Wallace, L., Evans, J., Diamond, S., & Caperchione, C. M. (2022). The impact of sport and physical activity programs on the mental health and social and emotional wellbeing of young Aboriginal and Torres Strait Islander Australians: A systematic review. *Preventive Medicine Reports*, *25*, 101676. https://doi.org/https://doi.org/10.1016/j.pmedr.2021.101676

9) Hsu, J., Ling, D. I., Schneider, B. L., Boyle, C., Janosky, J., Pearle, A. D., Kinderknecht, J., & Marx, R. G. (2024). Independent data collectors decrease bias in the measurement of adherence to anterior cruciate ligament injury prevention programs. *Journal of ISAKOS*. https://doi.org/https://doi.org/10.1016/j.jisako.2024.02.004

10) Ilham, I., Agus, A., Tomoliyus, T., Sugiyanto, F. X., Tirtawirya, D., Lumintuarso, R., Berhimpong Willner, M., Putra Alsyifa, R., Kurniawan, R., Septri, S., Effendi, R., Ayubi, N., Alben Suud Cahyo, A., Perdana Sukma, G., Rifki Sazeli, M., Ndayisenga, J., Sibomana, A., & Jean-Berchmans, B. (2024). Análisis comparativo del progreso de las adaptaciones en VO2máx, potencia de las piernas y agilidad entre estudiantes de ciencias del deporte masculinos y femeninos (Comparative Analysis of Adaptations Progress in VO2max, Leg Power, and Agility among Male. *Retos*, *57*(SE-Artículos de carácter científico: trabajos de investigaciones básicas y/o aplicadas), 245–257. https://doi.org/10.47197/retos.v57.107053

11) Indika, P. M., Kurniawan, R., Bahtra, R., & Yuniarti, E. (2023). The Effect of Administration of Honey on Maximal Physical Activity in Malondialdehyd (Mda) Levels of Male Mice (Mus musculus L.). *Proceedings of the 3rd International Conference on Biology, Science and Education (IcoBioSE 2021)*, 171–180. https://doi.org/10.2991/978-94-6463-166-1_25

12) Komaini, A., Syaputra, A., Syafrianto, D., Gusril, G., Syamsuar, S., & Ayubi, N. (2022). Beneficial effect of isometric device therapy in overcoming sprain injuries in the ankle due to sports using the arduino uno pro mini and load cell device design. *Retos: Nuevas Tendencias En Educación Física, Deporte y Recreación*, *45*, 219–223.

13) Kovács, K., Oláh, Á. J., & Pusztai, G. (2024). The role of parental involvement in academic and sports achievement. *Heliyon*, *10*(2), e24290. https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e24290

14) Kurniawan, R., Bafirman, B., Pranoto, N. W., Sari, A. P., Rahmadhanti, R., Ndayisenga, J., & Jimenez, J. V. G. (2024). Nutritional Supplements On Muscle Damage And Pain Intensity After Physical Activity: A Systematic Review. *Community Practitioner*, *21*(05), 2083–2097. https://doi.org/10.5281/zenodo.11544967

15) Lau, R. Y., & Mukherjee, S. (2023). Effectiveness of overuse injury prevention programs on upper extremity performance in overhead youth athletes: A systematic review. *Sports Medicine and Health Science*, *5*(2), 91–100. https://doi.org/https://doi.org/10.1016/j.smhs.2023.03.001

16) Li, Y., & Wang, T. (2024). Intelligent management process analysis and security performance evaluation of sports equipment based on information security. *Measurement: Sensors*, *33*, 101083. https://doi.org/https://doi.org/10.1016/j.measen.2024.101083

17) Liddelow, C., Schweickle, M. J., Sutcliffe, J. T., Swann, C., Keegan, R., Rice, S., Okely, A., & Vella, S. A. (2024). Defining the scope and content of mental health guidelines for community sport in Australia: A Delphi study. *Psychology of Sport and Exercise*, *70*, 102553. https://doi.org/https://doi.org/10.1016/j.psychsport.2023.102553

18) Lin, Y., & Cahigas, M. M. L. (2024). An Analysis of the Perspective Road Design Scheme Around Zhangzhou Olympic Sports Center. *Procedia Computer Science*, *234*, 1076–1086. https://doi.org/https://doi.org/10.1016/j.procs.2024.03.102

19) Macniven, R., Foley, B. C., Owen, K. B., Evans, J. R., Bauman, A. E., & Reece, L. J. (2020). Physical activity and sport participation characteristics of Indigenous children registered in the Active Kids voucher program in New South Wales. *Journal of Science and Medicine in Sport*, *23*(12), 1178–1184. https://doi.org/https://doi.org/10.1016/j.jsams.2020.06.016

20) Marttinen, R., Wilson, K., Fisher, K., Beitzel, M., & Fredrick, R. N. (2022). Process evaluation and challenges in collecting data from an after-school sports and literacy program in a diverse, low-income community. *Evaluation and Program Planning*, *91*, 102052. https://doi.org/https://doi.org/10.1016/j.evalprogplan.2022.102052

21) Mason, J., & Hardwicke, J. (2024). Repositioning the value of sociology for students studying sport in post-92 higher education institutions. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *35*, 100500. https://doi.org/https://doi.org/10.1016/j.jhlste.2024.100500

22) Middleton, T. R. F., Petersen, B., Schinke, R. J., Kao, S. F., & Giffin, C. (2020). Community sport and physical activity programs as sites of integration: A meta-synthesis of qualitative research conducted with forced migrants. *Psychology of Sport and Exercise*, *51*, 101769. https://doi.org/https://doi.org/10.1016/j.psychsport.2020.101769

23) Milan, J., & Jurowski, K. (2024). Hazardous elements in plastic and rubber granules as infill material from sports facilities? Field Portable-XRF spectroscopy as 'white analytical technique' reveals hazardous elements in fall sports facilities in Rzeszów (Podkarpackie, Poland). *Science of The Total Environment*, *916*, 170280. https://doi.org/https://doi.org/10.1016/j.scitotenv.2024.170280

24) Mualif, A., Gusril, G., Syahrastani, S., & Bahtra, R. (2023). The Effect of Physical Fitness Learning Motivation and Learning Style on Physical Education Sports and Health Learning Outcomes. *Journal of Physical Education Health and Sport*, *10*(1).

25) Murofushi, Y., Kawata, Y., Nakamura, M., Yamaguchi, S., Sunamoto, S., Fukamachi, H., Aono, H., Kamihigashi, E., Takazawa, Y., Naito, H., & Hurst, P. (2024). Assessing the need to use sport supplements: The mediating role of sports supplement beliefs. *Performance Enhancement & Health*, *12*(1), 100269. https://doi.org/https://doi.org/10.1016/j.peh.2023.100269

26) Nakahara, S., Takasaki, M., Abe, S., Kakitani, C., Nishioka, S., Wakabayashi, H., & Maeda, K. (2021). Aggressive nutrition therapy in malnutrition and sarcopenia. *Nutrition*, *84*, 111109. https://doi.org/https://doi.org/10.1016/j.nut.2020.111109

27) Nast, T. P. J., Bakhtiar, S., Syafruddin, Afrian, H., Septri, Effendi, R., & Kurniawan, R. (2024). the Effect of Play Activities and Motivation on Children'S Basic Movement Skills: Factorial Experimental Design. *Community Practitioner*, *21*(5), 615–623. https://doi.org/10.5281/zenodo.11195365

28) Oulevey, M., Lavallee, D., Ojio, Y., & Kohtake, N. (2024). The design of a career transition psychological support program for retired Olympic athletes in Japan. *Asian Journal of Sport and Exercise Psychology*, *4*(1), 7–10. https://doi.org/https://doi.org/10.1016/j.ajsep.2024.01.001

29) Pasqualini, I., Rossi, L. A., Hurley, E. T., Turan, O., Tanoira, I., & Ranalletta, M. (2024). Shoulder Instability-Return to Sports After Injury (SIRSI) Scale Shows That Lack of Psychological Readiness Predicts Outcomes and Recurrence Following Surgical Stabilization. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*. https://doi.org/https://doi.org/10.1016/j.arthro.2024.04.030

30) Qi, Y., Sajadi, S. M., Baghaei, S., Rezaei, R., & Li, W. (2024). Digital technologies in sports: Opportunities, challenges, and strategies for safeguarding athlete wellbeing and competitive integrity in the digital era. *Technology in Society*, *77*, 102496. https://doi.org/https://doi.org/10.1016/j.techsoc.2024.102496

31) Rahayu, R., Sari, A. P., Kurniawan, R., Bafirman, B., Gusril, G., Ndayisenga, J., & Bangurambona, F. (2024). Evaluation of FORKI Athlete Achievement Coaching Program in Solok City: Cippo-Based Research. *Community Practitioner*, *21*(06), 751–764. https://doi.org/10.5281/zenodo.11634563

32) Raquel, G., Namba, E. L., Bonotto, D., Ribeiro Rosa, E. A., Trevilatto, P. C., Naval Machado, M. Â., Vianna-Lara, M. S., & Azevedo-Alanis, L. R. (2017). The use of a custom-made mouthguard stabilizes the electromyographic activity of the masticatory muscles among Karate-Dō athletes. *Journal of Bodywork and Movement Therapies*, *21*(1), 109–116. https://doi.org/https://doi.org/10.1016/j.jbmt.2016.05.007

33) Ruiz, M. C., & Hanin, Y. L. (2011). Perceived impact of anger on performance of skilled karate athletes. *Psychology of Sport and Exercise*, *12*(3), 242–249. https://doi.org/https://doi.org/10.1016/j.psychsport.2011.01.005

34) Rustiadi, T. (2016). Study of Social Capital of KONI Community in the Sports Development in Central Java Indonesia. *Journal of Sports Science*, *4*, 111–118.

35) Sari, A. P., Kurniawan, R., Indika, P. M., Wulan, T. S., Syafrianto, D., & Sari, D. N. (2023). Exploring the impact of aerobic gymnastics on reducing blood: with hypertension medications vs without hypertension medications. *Journal of Physical Education and Sport*, *23*(12), 3253–3263. https://doi.org/10.7752/jpes.2023.12372

36) Sari, A. P., Kurniawan, R., Selviani, I., Okilanda, A., Bafirman, B., Rifki, M. S., Setiawan, E., Effendi, R., Putra, R. A., Pavlovic, R., & Jimenez, J. V. G. (2024). Terapia de ejercicio Maumere y dieta baja en sal en hipertensos: un esfuerzo para reducir la presión arterial (Maumere exercise therapy and low salt diet in hypertension sufferers: an effort to lower blood pressure): Maumere Exercise Therapy and Low Salt . *Retos*, *56*, 1016–1025. https://doi.org/10.47197/retos.v56.106718

37) Sari, A. P., Kurniawan, R., Vicente, J., Jimenez, G., Qori, A. M., Ndayisenga, J., Pavlovic, R., & Hendra, A. B. (2024). Therapeutic Doses Of Honey With Various Doses and Body Weight in an Effort to Increase Endurance. *Community Practitioner*, *21*(06), 206–221. https://doi.org/10.5281/zenodo.11503123

38) Sarıkaya, T. A., Secer, E., & Kaya, D. O. (2024). Effects of mid-season camp period loading on sports injury anxiety and physical performance of professional male soccer players. *Journal of Bodywork and Movement Therapies*, *40*, 249–255. https://doi.org/https://doi.org/10.1016/j.jbmt.2024.04.030

39) Srivastava, S., Chakraborty, C., & Sarkar, M. K. (2024). Leveraging machine learning and dimensionality reduction for sports and exercise sentiment analysis. *Measurement: Sensors*, *33*, 101182. https://doi.org/https://doi.org/10.1016/j.measen.2024.101182

40) Tanguilig, G., Meyers, J., Ierulli, V. K., Hiemstra, L., & Mulcahey, M. K. (2024). Women in leadership in orthopaedic sports medicine societies throughout the world. *Journal of ISAKOS*. https://doi.org/https://doi.org/10.1016/j.jisako.2024.02.009

41) Tian, Y., & Shao, X. (2024). Exploring resistance to change in Chinese children's sports schools: An analysis of multiple external and internal perspectives. *Heliyon*, *10*(1), e24270. https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e24270

42) Tinoco, A., Schneider, J., Haywood, S., & Matheson, E. L. (2023). "They are men, they will be looking even if you put on pants or a sweatshirt": Girl athletes' and coaches' experiences of body image in Mexico City sport settings. *Body Image*, *46*, 73–83. https://doi.org/https://doi.org/10.1016/j.bodyim.2023.05.002

43) Turnbull, M. R., Gallo, T. F., Carter, H. E., Drew, M., Toohey, L. A., & Waddington, G. (2024). Estimating the cost of sports injuries: A scoping review. *Journal of Science and Medicine in Sport*, *27*(5), 307–313. https://doi.org/https://doi.org/10.1016/j.jsams.2024.03.001

44) Wilcock, R., Smith, A., & Haycock, D. (2021). Designing community sports-based programmes for men with mental illness: A qualitative study of the Offload rugby league programme. *Mental Health and Physical Activity*, *20*, 100386. https://doi.org/https://doi.org/10.1016/j.mhpa.2021.100386

45) Xiao, R., Xu, P., Liang, X.-L., Zou, Z., Zhong, J.-G., Xiang, M.-Q., & Hou, X.-H. (2024). Effects of the special olympics unified sports soccer training program on executive function in adolescents with intellectual disabilities. *Journal of Exercise Science & Fitness*, *22*(2), 103–110. https://doi.org/https://doi.org/10.1016/j.jesf.2023.12.006

46) Yang, J., Meng, C., & Ling, L. (2024). Prediction and simulation of wearable sensor devices for sports injury prevention based on BP neural network. *Measurement: Sensors*, *33*, 101104. https://doi.org/https://doi.org/10.1016/j.measen.2024.101104

47) Zhang, Y., Pi, Y., Wang, Q., Long, X., Wan, S., Liu, P., & Liu, Y. (2024). Application of video behavior fast detection based on wearable motion sensor devices in sports training. *Measurement: Sensors*, *33*, 101096. https://doi.org/https://doi.org/10.1016/j.measen.2024.101096