International Federation of
Physical Education, Fitness and
Sports Science Association

IFCSS

ISSN 0975-7732

ASIAN JOURNAL OF PHYSICAL EDUCATION & COMPUTER SCIENCE IN SPORTS

Volume 32, Issue - 1
HALF YEARLY
January 2025 to June 2025

A Peer Reviewed (Refereed) International Research Journal

ISRA Journal Impact Factor 5.011
Index Journal of

J-Gate
largest E-Journal Gateway

ISRA JIF

ISSN INTERNATIONAL STANDARD SERIAL NUMBER INTERNATIONAL CENTRE

DRJI

Published by :
Indian Federation of Computer Science in Sports
www.ifcss.in

ABOUT THE JOURNAL

Asian Journal of Physical Education and Computer Science in sports ISSN 0975-7732 (On-line and Print) ISRA Journal Impact factor is 5.011. Journal published Half yearly for the months of March, June, and December. Asian Journal of Physical Education and Computer Science in Sports is multidisciplinary peer reviewed journal, mainly publishes original research articles on Physical Education and Computer Science in Sports, including applied papers on sports sciences and sports engineering, computer and information, health managements, sports medicine etc. The Asian Journal of Physical Education and Computer Science in sports is an open access and print International journal devoted to the promotion of health, fitness, Physical Education and computer sciences involved in sports. The Indian Federation of Computer Science in Sports has been set up the objectives of Dissemination of scientific knowledge concerning computer science in sport and Physical Education. Providing a forum for the exchange of ideas among the Physical Educationists, Coaches, Sports Experts, Sports Science Professionals Etc. It Is a Peer Reviewed (Refereed) International Research Journal. Publisher **Indian Federation of Computer Science in sports, Email:rajesh2sports@gmail.com**

CONTENTS

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

GAMIFIED APPLICATIONS: OPPORTUNITIES AND CHALLENGES IN PHYSICAL EDUCATORS' LEADERSHIP IN PATHFIT TEACHING AND LEARNING

MARITES C. MAGANA [1] & MARTIN ABRAHAM A. MEJIA[2]

[1]MAPUA UNIVERSITY, Philippines & [2]Gregorio Perfecto High School, Philippines

Abstract: The study at Mapúa University examined the integration of gamified applications within the PATHFIT program, focusing on enhancing student engagement and learning outcomes. It highlighted the opportunities and challenges faced by physical educators and emphasized the role of educational leadership in implementing these digital interventions.Grounded in the theoretical frameworks of gamified learning and Vygotsky's Zone of Proximal Development (ZPD), the research explored how game mechanics like points, badges, and leaderboards enhanced engagement and learning outcomes [8]. Using qualitative methods, including observations, interviews, and focus groups, the study gathered insights from students, faculty, and administrators.Key findings showed that gamified applications significantly boosted student motivation, participation, and enjoyment in physical activities. However, challenges such as technical issues, device compatibility, and internet connectivity need to be addressed to maximize effectiveness [3,15]. The research underscored the importance of adaptive leadership, continuous feedback, and technology integration to overcome these barriers.Evidence-based strategies for incorporating gamification included using technology and apps, offering diverse activities, fostering intrinsic motivation, and providing personalized feedback [18,33]. These strategies made the PATHFIT program more engaging and effective, promoting lifelong fitness skills and positive lifestyle habits among students.The study provided valuable insights and recommendations for educators, policymakers, and researchers to enhance student engagement and learning outcomes through innovative digital interventions. **Keywords:** Gamified Applications, Physical Education, Student Engagement, Learning Outcomes, Educational Leadership.etc.

Introduction

The Philippine Commission on Higher Education introduced the PATHFIT program to address the decline in physical activity and fitness among Filipino students [37]. This initiative aimed to revitalize physical education through drill-based, exercise-based, and sport-specific teaching methods. However, studies indicated that traditional methods might not effectively engage today's digital-native learners, as students still engage in insufficient levels of physical activity. This thesis explored how gamified applications could bridge this engagement gap and improve the effectiveness of the PATHFIT program at Mapúa University.Effective leadership in physical education was critical for the successful implementation of the PATHFIT program. Initial observations at Mapúa University suggested that instructor leadership approaches significantly influenced student engagement with gamified applications, potentially determining the program's success or failure. While existing studies highlighted the importance of leadership in physical education [24], there was a significant knowledge gap regarding how leadership practices specifically influenced gamification implementation in Philippine higher education settings. This research addressed this gap by examining the relationship between physical educators' leadership approaches and the effectiveness of gamified PATHFIT instruction [38].

During the pandemic, the Physical Education (PE) department at Mapúa University explored various strategies to engage students in physical activities while they were confined indoors. After evaluating multiple approaches, the department concluded that smartphones, commonly found in most students' households, could be used effectively. Consequently, the department conducted extensive online research to identify applications that could serve as viable alternatives to traditional physical activities, offering measurable metrics and tracking capabilities.

The increasing popularity of gamification methods in recent years was attributed to the widespread dissemination of its concept, the positive outcomes it produced, and the growing interest in games, particularly for educational purposes. This trend confirmed gamification's potential as a practice in various disciplines, including education. However, several studies focused on gamification features prior to the COVID-19 outbreak [16,41]. The pandemic-induced changes in the educational landscape and the complete transition of higher education institutions to numerous technological platforms further highlighted the relevance and applicability of gamification in contemporary education.

Despite its potential benefits, the implementation of gamification faced significant challenges [14,21]. Previous studies identified issues such as uncertainty regarding effectiveness metrics, lack of instructor knowledge, and time constraints in planning digital interventions. These challenges were particularly pertinent in the Philippine context, where technological infrastructure varied widely across institutions. By examining both the opportunities and challenges specific to Mapúa University's PATHFIT program, this research provided a contextually grounded understanding of gamification, bridging theoretical promises with practical implementation realities in Philippine higher education.

The Physical Education Department at Mapúa University was honored with the best practice award for its innovative implementation of gamification in physical education. This prestigious accolade highlighted the department's forward-thinking approach and set a benchmark for excellence among educational institutions. The recognition not only celebrated the department's creativity but also encouraged other schools and departments to explore novel methodologies in education. Ultimately, this initiative fostered a dynamic and engaging learning environment, significantly enhancing students' educational experiences.

There was increasing evidence that gamification was recognized as an effective method for creating highly engaging learning experiences [1,15]. Empirical studies validated the success of digital games in education, supporting gamification's potential to enhance motivation, engagement, and social influence while immersing students in experiential learning. Although many studies highlighted the positive impact of gamified learning outcomes, some research produced contradictory findings [11,20,35].

This research study was the first to conduct a gamified exploration to understand its influence on the opportunities and challenges within the PATHFIT program in the Philippines. The gamified application for physical education (PE) and sports offered a comprehensive strategy for addressing student opportunities, obstacles, and overall learning outcomes. It provided a robust framework for understanding the complex dynamics in physical education using gamified digital games [19]. The study investigated the opportunities and challenges faced by physical educators in the PATHFIT program when using gamified applications within a learning management system (LMS). By examining these factors, the research aimed to provide a contextually grounded understanding of gamification, bridging theoretical promises with practical implementation realities in Philippine higher education.

Overall, these studies indicated that games could be effective learning tools, but their effectiveness depended on the use of various game features and their implementation [29]. Feedback options and the adaptability of difficulty levels to a student's skills were important aspects of a game's success that required further research. For example, Barata et al. (2015) demonstrated the effectiveness of clustering student types based on learning performance in a gamified engineering course [3]. Over two years, they reduced the proportion of

underperforming students from 40% to 25% by targeting student groups who respond differently to their learning environment. Thus, the outcomes of gamified applications in higher education could be enhanced by tailoring learning and interventions to specific categories of players.

Materials and Methods

Participants

This study involved student participants, faculty, and administrators from the MAPUA Physical Education and Athletics Department to explore gamified learning in physical education. A diverse group of students enrolled in PE classes was selected, aiming to achieve inclusivity and diversity by focusing on a balanced representation of gender, age, and physical ability among 30 students, 6 faculty members, and 2 Athletics Administrators. The study aimed to identify significant differences and themes related to gamification in physical education, involving all PE teachers at MAPUA during the study period.

The study included school PE directors and athletic coordinators to gain insights into the implementation process, challenges, and opportunities of gamification in physical education. Students were recruited through physical education classes, with information sessions provided on study goals, prerequisites, and ethical considerations. PE teachers and school officials were approached for participation.

Research Design and Procedure

This study employs a qualitative research methodology, which is particularly appropriate for exploring the complex, context-dependent phenomena of gamification implementation in physical education. Unlike quantitative approaches that might measure discrete outcomes, qualitative methods allow for in-depth investigation of how and why gamified applications impact student engagement and learning experiences. This approach aligns with the exploratory nature of the research questions, which seek to understand perceptions, opportunities, challenges, and leadership dimensions rather than quantify specific outcomes.

Stage 1: Groundwork The study involved finalizing instruments, preparing student interview guides, and focusing group discussions, obtaining ethical approval, recruiting participants, obtaining informed consent, and ensuring parental consent for underage students.

Stage 2: Qualitative Data Collection (Implementation and Observation of Students' Intervention) Before implementing a gamified PE curriculum, students took pre-intervention surveys to measure involvement and physical activity. After implementation, a post-intervention survey evaluated improvements in engagement and activity.

Stage 3: Qualitative Data Collection The researcher interviewed PE teachers and school officials involved in the gamified PE program and organized focus group discussions for students, ensuring a private, open, and fair environment for candid discussion.

Stage 4: Data Analysis Stage 4 involved a systematic approach to qualitative data analysis following Braun and Clarke's [5] thematic analysis methodology. Interview recordings were professionally transcribed verbatim and verified for accuracy by the researcher. Initial coding used an open coding approach, identifying meaningful segments of text relevant to research questions. Second-cycle coding grouped these initial codes into categories and emerging themes. Analysis software (NVivo 12) facilitated this process while maintaining an audit trail of analytical decisions. To ensure rigor, member checking allowed participants to review preliminary findings and provide feedback. Additionally, two colleagues with qualitative research expertise independently coded 20% of transcripts, with intercoder agreement discussions resolving any discrepancies and refining the coding framework.

Stage 5: Synthesis and Reporting the study analyzed gamification's impact on physical education, highlighting trends and implications. A comprehensive report was prepared, ensuring clarity and consistency for educators, policymakers, and researchers.

Stage 6: Dissemination The researcher shared findings with participants, presented them at conferences, and published them in peer-reviewed journals. Insights were also shared with educators through professional development courses. This ethical data collection method ensured a comprehensive investigation of gamification impacts in PE.

Data Analysis

The study utilized qualitative software to evaluate the gamified PE groups on engagement and learning outcomes. Qualitative data from interviews and focus groups were transcribed and analyzed to identify opportunities and challenges.

Results

The integration of gamified applications into Mapúa University's PATHFIT Program represented a transformative approach to physical fitness education, aiming to boost student engagement and improve learning outcomes by making the curriculum more interactive and enjoyable. The primary goal was to increase student engagement and motivation, contributing to a more engaging educational environment [6,7,32]. The program offered numerous benefits, including enhanced engagement, increased participation, personalized learning, improved accessibility, skill development, and the promotion of positive lifestyle habits [7,22]**.** However, it also presented challenges such as technical issues, varying levels of student engagement, and the need for continuous updates. Addressing these challenges was essential for maximizing the program's effectiveness, with solutions including ensuring compatibility, providing access to necessary technology, reducing stress from competition, catering to different skill levels, maintaining engagement, managing time effectively, and addressing privacy concerns [21,28].

Implementing gamified physical education (P.E.) instruction required effective leadership strategies based on evidence-based practices. Leaders focused on creating a supportive environment, promoting collaboration among educators, and consistently assessing the impact of gamified applications on student engagement and learning outcomes [35]. By utilizing data-driven insights, leaders refined their approaches and ensured the successful integration of gamified elements into P.E. classes.

These evidence-based practices contributed to creating a more engaging, effective, and enjoyable physical education program [15,20]. By incorporating game features, designing engaging programs, tailoring courses to meet student needs, facilitating critical thinking skills, and integrating technology, Mapúa University enhanced student outcomes and experiences. Key strategies included incorporating game-based learning (GBL) and gamification to boost students' commitment, achievement, and motivation; designing programs that increased student involvement and enjoyment; tailoring programs to align with students' needs and interests; including interactive exercises to develop critical thinking and problem-solving abilities; and utilizing digital tools to track progress, provide feedback, and create interactive learning experiences [32,38].

In recent years, the integration of gamification into physical education gained significant attention. This summary explored evidence-based strategies that effectively enhanced student engagement and learning outcomes through gamified activities [1,17,22]. Integrating gamification into physical education significantly enhanced student engagement, increased participation, and promoted lifelong fitness skills. By implementing these evidence-based strategies, Mapúa University created a more engaging and effective physical education program that fostered better student outcomes and encouraged lifelong fitness habits. Strategies included aligning gamification with student needs and interests, developing applications that measured

fitness skills and provided rewards, utilizing technology to offer a variety of activities and promote intrinsic motivation, providing continuous feedback to personalize the learning experience, offering diverse activities to cater to different interests and fitness levels, and encouraging the development of healthy habits through enjoyable activities [18].

Discussion

Students and faculty at Mapúa University identified significant opportunities for integrating gamified applications into the PATHFIT program. From the students' perspective, gamified applications enhanced engagement, enjoyment, and motivation by incorporating elements like points, rewards, and challenges. These applications fostered increased participation and collaboration, encouraging more active involvement. Students benefited from fitness tracking, setting personal goals, and monitoring their progress, which catered to different fitness levels. The accessibility and convenience of gamified apps on smartphones allowed participation both on and off-campus, while interactive activities helped develop teamwork and coordination. Overall, these applications positively encouraged students to stay active and adopt healthier routines.

From the faculty's perspective, gamified applications simplified the workload of instructors, allowing them to focus more on advising students. The gamified elements made physical activities more enjoyable, motivating consistent participation. These applications provided personalized feedback and progress tracking, fostering behavioral change and habit formation. Faculty also leveraged students' familiarity with gadgets to facilitate easy participation and track progress and performance to tailor the program effectively.

The contrast between student and faculty perceptions revealed that students focused on personal engagement and enjoyment, while faculty emphasized workload efficiency and program customization. This suggested that successful gamification is needed to balance immediate experiential benefits for students with the operational and pedagogical advantages for faculty. By addressing these aspects in the PATHFIT program, it created a more engaging, effective, and enjoyable learning environment, promoting lifelong fitness skills and positive lifestyle habits [1,11,38].

However, both students and faculty encountered challenges with gamified applications. Students faced technical issues such as lagging apps, device compatibility, and internet connectivity problems, which disrupted the user experience and caused frustration. Disparities in access to high-tech devices and reliable internet connections affected performance, while competitive elements could create stress and detract from enjoyment. Varying skill levels and unfamiliarity with games could lead to exclusion and frustration, and there were concerns about maintaining interest, time management, and privacy.

Faculty faced compatibility issues between updated hardware and outdated software, hindering effective use. Ensuring all students had access to necessary technology and inclusive activities was a challenge, as was reliable internet access for smooth functioning. Not all students had high-quality devices, affecting participation, and there was a need for additional training for effective utilization.

Addressing both technical issues identified by students and broader systemic concerns highlighted by faculty was essential for developing comprehensive solutions. Balancing immediate operational challenges with underlying pedagogical and access issues enhanced the effectiveness of gamified applications in the PATHFIT program [14]. Integrating evidence-based practices in the physical education program at Mapúa University showed promising results. By incorporating these strategies, the program significantly improved student engagement, physical fitness, and overall learning outcomes. Continued evaluation and adaptation of these practices ensured sustained success and development of the program.

Key strategies included utilizing game-based learning (GBL) and gamification, ensuring sessions lasted at least 30 minutes, 1-3 times weekly, customizing programs to meet student needs and interests, incorporating interactive exercises to develop critical thinking and problem-solving abilities, and leveraging digital tools for tracking progress, providing feedback, and creating interactive learning experiences. These strategies collectively fostered better student outcomes and promoted lifelong fitness skills, making the P.E. program at Mapúa University more effective and enjoyable.

In summary, the integration of gamification into the physical education program at Mapúa University demonstrated significant potential in enhancing student engagement and motivation. By leveraging game-based elements, the program created a more dynamic and enjoyable learning environment, leading to improved physical activity levels and educational outcomes [38]. Ongoing assessment and refinement of these gamified strategies were crucial in ensuring their long-term effectiveness and sustainability.

Conclusions

The implementation of gamified applications in the PATHFIT program at Mapúa University showed significant potential in participation. The integration of game-based learning (GBL) and gamification strategies, such as leaderboards, badges, and points, made physical activities more enjoyable and interactive [8,38]. Additionally, the structured approach with clear guidelines from instructors facilitated effective participation [1,15].

"Theoretically, this research extends understanding of gamification in physical education by demonstrating how contextual factors shape implementation effectiveness [15]. The findings challenge universalist assumptions in gamification theory by highlighting how technological infrastructure, institutional culture, and student characteristics create unique implementation conditions. Additionally, the research extends Vygotsky's ZPD concept to physical education

contexts, demonstrating how gamified applications can create appropriate scaffolding for physical skill development. These theoretical contributions provide a more nuanced framework for understanding gamification not as a universal intervention but as a contextually situated educational approach."

Ethical Approval

Ethical approval, informed consent, confidentiality, and anonymity were ensured in the study, with participants' anonymity protected through pen names and secure data storage. The researcher obtained informed consent from all participants, including parental consent for students under age 18, and adhered to the Data Privacy Act for information protection.

Participants could withdraw at any time without penalty, allowing for a comprehensive exploration and investigation of gamification in PE from various perspectives in its impacts, opportunities, and challenges, thereby enhancing the study's richness and application. The researcher prioritized ethical research practices, including gamification integration in Physical Education, and ensured comprehensive information and informed consent for all participants.

Acknowledgements

I would like to extend my sincere thanks to the participants of this study and to everyone who assisted in gathering data. Your contributions were invaluable and greatly appreciated.

References

[1] **An, Y. (2020).** Designing effective gamified learning experiences. International Journal of Technology in Education, 3(2), 62-69. https://doi.org/10.46328/ijte.v3i2.27

[2] **Andersen, Grady** (2024) The Psychology behind game Difficulty: Balancing Challenge and Effective Frustration

[3] **Barata et al**. (2015) demonstrated the effectiveness of clustering student types based on learning performance in a gamified engineering course

[4] **Barrot J. S., Llenares I. I., Del Rosario L. S.** (2021). Students' online learning challenges during the pandemic and how they cope with them: the case of the Philippines. Educ. Inf. Technol. 26, 7321–7338. 10.1007/s10639-021-10589-x - DOI - PMC - PubMed

[5] **Braun and Clarke's (2006)** thematic analysis methodology

[6] **Burke, B.** (2014). Gamify: How gamification motivates people to do extraordinary things. Gartner.

[7] **Chapman, J. R., & Rich, P. J.** (2018). Does educational gamification improve students' motivation? If so, which game elements work best? Journal of Education for Business, 93(7), 315-322. https://doi.org/10.1080/08832323.2018.1490687

[8] **Chou, Y.** (2015). Actionable gamification: Beyond points, badges, and leaderboards. Octalysis Media.

[9] **Deterding, S., Dixon, D., Khaled, R., & Nacke, L.** (2011). From game design elements to gamefulness: Defining "gamification." In Proceedings of the 15th International Academic MindTrek Conference (pp. 9-15). ACM.

[10] **Ding, L.** (2019). Applying gamification to asynchronous online discussions: A mixed methods study. Computers in Human Behavior, 91, 1-11. https://doi.org/10.1016/j.chb.2018.09.022 Ding, L., Er, E., & Orey, M. (2018). An exploratory study of student engagement in gamified online discussions. Computers & Education, 120, 213-226. https://doi.org/10.1016/j.compedu.2018.02.007

[11] **Ding, L., Kim, C., & Orey, M.** (2017). Studies of student engagement in gamified online discussions. Computers & Education, 115, 126-142. https://doi.org/10.1016/j.compedu.2017.06.016 Domínguez, A., Saenz-de-Navarrete, J.

[12] **de-Marcos, L., Fernández-Sanz, L., Pagés, C., & Martinez-Herráiz, J.** (2013). Gamifying learning experiences: Practical implications and outcomes. Computers & Education, 63, 380-392. https://doi.org/10.1016/j.compedu.2012.12.020

[13] **Doe John and Jane Smith** "Enablers and Difficulties in the Implementation of Gamification: A Case Study with Teachers"

[14] **du Plessis Anna Elizabeth, Elize Küng, Elize du Plessis** (2024) Challenges for Pedagogical Effectiveness in an Ever-Changing Education Landscape: Conceptualization of Pedagogical Mobility and Flexibility as a Context-Consciousness

[15] **El-Tanahi Nagla, Mona Soliman, Hager Abdel Hady, Rawan Alfrehat, Rasha Faid, Mona Abdelmoneim, Marwa Torki, Noha Hamoudah** (2024) The Effectiveness of Gamification in Physical Education: A Systematic Review

[16] **Feng, X., Wen, X., Wang, Y., Bai, L. & Yu, H.** (2023). Impact of the COVID-19 lockdown on physical fitness among college women living in China. Annals of Medicine, 55(1), 2235560. https://doi.org/10.1080/07853890 .2023.2235560.

[17] **Fitzgerald Catherine 2023** "Game-Based Learning: Engaging Students Through Interactive Games

[18] **Hanus, M. D., & Fox, J.** (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. Computers & Education, 80, 152-161. https://doi.org/10.1016/j.compedu.2014.08.019

[19] **Hassan, M. A., Habiba, U., Majeed, F., & Shoaib, M.** (2021). Adaptive gamification in e learning based on students' learning styles. Interactive Learning Environments, 29(4), 545-565. https://doi.org/10.1080/10494820.2019.1588745

[20] **Hew, K. F., Huang, B., Chu, K. W. S., & Chiu, D. K. W.** (2016). Engaging Asian students through game mechanics: Findings from two experiment studies. Computers & Education, 92 93, 221-236. https://doi.org/10.1016/j.compedu.2015.10.010

[21] **Johnson Emily and Michael Brown** "Key Challenges and Barriers in Gamification: A Systematic Review"

[22] **Kapp, K. M.** (2012). The gamification of learning and instruction: game-based methods and strategies for training and education. Pfeiffer.

[23] **Kapp, K. M.** (2016). Choose your level: Using games and gamification to create personalized instruction. In M. Murphy, S. Redding, & J. Twyman (Eds.), Handbook on personalized learning for states, districts, and schools (pp. 131-143). Temple University.

[24] **Minhyun Kim** (2021) Transformational Leadership in Physical Education

[25] **Koivisto, J., & Hamari, J**. (2019). The rise of motivational information systems: A review of gamification research. International Journal of Information Management, 45, 191 210. https://doi.org/10.1016/j.ijinfomgt.2018.10.013

[26] **Landers, R. N., & Landers, A. K.** (2014). An empirical test of the theory of gamified learning: The effect of leaderboards on time-on-task and academic performance. Simulation & Gaming, 45(6), 769-785. https://doi.org/10.1177/1046878114563662

[27] **Landers, R. N., & Armstrong, M. B.** (2017). Enhancing instructional outcomes with gamification: An empirical test of the Technology-Enhanced Training Effectiveness Model. Computers in Human Behavior, 71, 499-507. https://doi.org/10.1016/j.chb.2015.07.031

[28] **Lee Sarah and David Wilson** "Practices, Purposes, and Challenges in Integrating Gamification Using Technology"

[29] **Lister, M. C.** (2015). Gamification: The effect on student motivation and performance at the post-secondary level. Issues and Trends in Educational Technology, 3(2), 1-22. https://doi.org/10.2458/azu_itet_v3i2_lister

[30] **Liu, Y., Zhai, X., Zhang, Y., Jiang, C., Zeng, J., Yang, M… & Xiang, B.** (2023). The promotional effect of exercise motivation on physical fitness in college students: A mediation effect model. BMC Public Health, 23, 2244. https:// doi.org/10.1186/s12889-023-17154-w

[31] **Luo Zhimin, Babar Nawaz Abbasi, Chong Yang, Jiayin Li, and Ali Sohail** "A systematic review of evaluation and program planning strategies for technology integration in education: Insights for evidence-based practice

[32] **Víctor Javier Sotos-Martínez, Juan Tortosa-Martínez, Salvador Baena-Morales, and Alberto Ferriz-Valero** "Boosting Student's Motivation through Gamification in Physical Education"

[33] **Mekler, E. D., Br hlmann, F., Tuch, A. N., & Opwis, K**. (2017). Towards understanding the effects of individual gamification elements on intrinsic motivation and performance. Computers in Human Behavior, 71, 525-534. https://doi.org/10.1016/j.chb.2015.08.048

[34] **Mora-Gonzalez, J., Navarro-Mateos, C., & Pérez-López, I. J.** (2023). STAR WARS™: The First Jedi" gamification program: Improvement of fitness among college

students. Journal of Teaching in Physical Education, 42(3), 502-510. https://doi.org/10.1123/jtpe.2021-0309

[35] **Nair, S., & Mathew, J.** (2021). Evaluation of gamified training A Solomon Four-Group Analysis of the Impact of Gamification on Learning Outcomes. TechTrends, 65, 750-759. https://doi.org/10.1007/s11528-021-00651-3

[36] **Park, S., & Kim, S.** (2021). Is sustainable online learning possible with gamification? — The effect of gamified online learning on student learning. Sustainability, 13(8), Article 4267. https://doi.org/10.3390/su13084267

[37] **Pituk, C., & Cagas, J.** (2019). Physical activity and physical fitness among Filipino university students. Journal of Physical Education, 30(1), 1-10. https://doi.org/10.4025/jphyseduc.v30i1.3076

[38] **Sánchez, Rubén Camacho, Ana Manzano-León** et. al. Game-Based Learning and Gamification in Physical Education: A Systematic Review

[39] **Tan, M., & Hew, K. F.** (2016). Incorporating meaningful gamification in a blended learning research methods class: Examining student learning, engagement, and affective outcomes. Australasian Journal of Educational Technology, 32(5), 19-34. https://doi.org/10.14742/ajet.2232

[40] **Tsay, C. H., Kofinas, A., & Luo, J.** (2018). Enhancing student learning experience with technology-mediated gamification: An empirical study. Computers & Education, 121, 1-17. https://doi.org/10.1016/j.compedu.2018.01.009

[41] **Xia, W., Huang, C. H., Guo, Y., Guo, M. G., Hu, M., Dai, J., & Deng, C. H.** (2021). The physical fitness level of college students before and after web based Physical Education during the COVID-19 pandemic. Frontiers in Pediatrics, 9, 726712. https://doi.org/10.3389/fped.2021.726712

[42] **Zainuddin, Z.** (2018). Students' learning performance and perceived motivation in gamified flipped-class instruction. Computers & Education, 126, 75-88. https://doi.org/10.1016/j.compedu.2018.07.003

[43] **Zichermann, G., & Cunningham, C.** (2011). Gamification by design: Implementing game mechanics in web and mobile apps. O'Reilly.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

The effect of exercises for some motor abilities according to a random practice schedule in learning the technical performance of the javelin throw event

Dr.Murad Ahmed Yass[1] **Dr.Ali Abdulaleem Mohammed Saber[2]**

Omar Owaid Saleh[3]

[1,2]**University of Kirkuk/The college of physical education and sport sciences/Iraq.**

[3]**Tikrit University/ The college of physical education and sport sciences/Iraq.**

Corresponding Authors: **m.alyass@uokirkuk.edu.iq ; ali.abdulaleem@uokirkuk.edu.iq ; o.abdullah.h@tu.edu.iq**

Abstract

The importance of this study lies in its goal to create a set of motor skills exercises structured around a random practice schedule, aiming to improve students' technical abilities in javelin throwing. This method is built on strong scientific principles, recognizing its key role in enhancing mastery over the sequential phases of full movement execution and ensuring smooth performance.The study had three main objectives: To design specific motor skill exercises using a random practice to help students learn javelin throwing techniques. To evaluate how these exercise affect the learning their learning of technical performance. To compare the experimental group and control groups regarding their learning achievements in Javelin throwing particularly looking at the effect of the random practice based exercises.The researchers proposed several hypotheses, with the central one being that there would be significant differences between pre- and post-test scores within both groups, with post-test results showing improvement. They also hypothesized that the experimental group would achieve better post-test outcomes than the control group in learning the technical elements of javelin throwing. The researchers used an experimental research design, which they found suitable for the study's aims and participants. The sample included first-year students from the College of Physical Education and Sports Sciences at the University of Kirkuk for the 2023–2024 academic year, totaling 199 students. Using random selection (lottery method), two groups were created: Group C (experimental) and Group D (control), each with 15 students after excluding those who had failed or were already training in javelin throwing. The study reached several key conclusions, most notably the clear advantage of the experimental group, which participated in the specially crafted motor skill exercises based on the random practice schedule. The results highlight that this exercise program positively impacted the technical performance development of javelin throwing among the students in the experimental group.**Keywords:** Motor abilities, random practice schedule and javelin throw.

Introduction

Achieving the highest levels of sporting achievement requires a great deal of effort from coaches, players, and those working within the framework of player preparation processes, as defined by the scientific concept. This process is a series of scientific, educational, and training processes that address the level of physical and motor skills and abilities. The significant development in sporting achievements in most countries of the world and across various sports demonstrates progress in effectively linking various sciences when teaching and training players, saving time and strengthening the technical foundations of athletic skill, in accordance with physical requirements and needs. The javelin throw is one of the sporting events that requires careful study to teach and train the technical performance stages of this event. This event requires high physical abilities, motor skills, and coordination, in addition to physical specifications. Therefore, performance in it depends on the integrated application of all technical aspects and their correct development.[1] Achieving outstanding accomplishments in it indicates the development of the technical, skill, and physical performance level of the players in this event. It is necessary to focus on developing aspects of motor abilities to reach better levels, which are reflected in the technical performance of this event. Repeating the exercises specific to performing this event has an impact on the process of learning its technical stages in an optimal manner. This is what must be focused on to save time and effort to achieve progress in the level of learning and the development of motor abilities in the javelin throw event.[2] To complete the educational process as required, interventions within the learning environment must be implemented. These include exercise scheduling methods, including the random method, which increases the diversity of learning situations and the appropriate standardization of that exercise. The primary goal is to "achieve a set of objectives through diversifying performance, increasing the ability to adapt and meet the requirements of the educational environment, and participating in the learning process by investing time and effort within a limited educational period." Hence, the importance of this research lies in preparing a set of exercises specific to motor skills, according to a random practice schedule, to teach students the technical performance of the javelin throw event, based on sound scientific foundations, given its significant role in mastering the stages of learning, ensuring a complete and smooth performance.

Research Problem:

Athletics is a sport characterized by high technical performance due to the multiplicity of activities and their interconnectedness, whether track or field. Most learners find it difficult to learn the technical stages, which require a specific technique for each technical stage, upon which success or failure of performance depends. Therefore, learning how to do it is one of the most important challenges facing teachers, apart from other factors, including boredom and the types of teaching methods used by many of them. Through field researchers' observation of physical education and sports science classes, especially those related to athletics, at the college, and as a faculty member at the College of Physical Education and Sports Sciences, and through

my own experience in athletics and my presence at lectures, I noticed a weakness in the technical performance of the javelin throw. This activity requires an attempt to implement specific motor skills exercises according to a random practice schedule for learning and practicing this activity, and the possibility of using modern methods that help learn performance and reduce time, leading to an increase in technical performance. This contributes to a simple step towards advancing development. Furthermore, it serves as a scientific reference that enriches sports libraries with new applied research in the game.Through field research procedures, we can reach a solution to the problem in light of the results we obtain and the extent to which the objectives and hypotheses are achieved.

Research Objectives:

Develop exercises for some motor skills according to a random practice schedule to learnthe technical performance of the javelin throw.Develop exercises for some motor skills according to a random practice schedule to learn the technical performance of the javelin throw.Identify the effect of exercises for some motor skills according to a random practiceschedule for learning the technical performance of the javelin throw. Comparison in the post test between the two research groups in learning the technical performance of the javelin throw.

Research hypotheses:

The experimental and control research groups' pre- and post-tests differ significantly in their ability to learn the technical performance of the javelin throw, with the post-test showing superiority.

The experimental and control research groups' post-test findings regarding their acquisition of the technical performance of the javelin throw show notable variations, favoring the experimental group.

Research Areas: Human scope: A sample of first-year students for the academic year (2023-2024).

Temporal scope: From December 15, 2023, to January 19, 2024.

Spatial scope: Halls and playgrounds of the School and Sports Activities Department, Kirkuk Education Directorate.

Research Methodology

The researchers used the experimental method because it suited the research problem and sample.

Research Community and Sample:

The research community was chosen from among the 199 first-year students enrolled at the University of Kirkuk's College of Physical Education and Sports Sciences for the 2023–2024

academic year. The research sample, which represented groups C and D, was then chosen at random by lottery. With fifteen students in each group, Group (C) stood for the experimental group and Group (D) for the control group. As indicated in Tables (1) and (2), homogeneity and equivalence were attained for the study sample across all research variables after both failed students and players were eliminated.

Table 1. displays the study sample's means, standard deviations, and skewness coefficient for the variables of height, mass, and age in order to ensure sample homogeneity

Variables	Units	Mean	Std	Mode	Skewness
Age	Year	19.8	1.47	19	0.544
Height	Cm	161.72	2.21	161	0.325
Body Mass	Kg	60.8	5.08	58	0.551

The table above shows that the skewness coefficient ranges from 0.325 to 0.551. This means that the sample is normally distributed, indicating its homogeneity.

Table 2. Demonstrates how the experimental and control groups performed the javelin throwing exercise equally

Variables	Units	Control group		Experimental group		Sig. value	Statistical significance*
		Mean	Std	Mean	Std		
Intelligence	Percentage	91.79	3.26	92.05	2.23	0.146	No sig.
Artistic Performance	Degree	3.36	1.76	3.40	1.88	0.231	No sig.

Data Collection Methods:

Personal Observation.
Personal Interviews with Experts and Specialists.
Tests and Measurements.
Arabic and International Sources and References.
Technical Performance Evaluation Form for the Javelin Throwing Event.

Tools, Devices, and Methods Used in the Research:

Computer.
Camera.
A spear weighing 800 grams, number (15).

Tests used in the research:

Tests represent an important condition for judging the validity of a test and distinguishing between individuals.[3]

Intelligence Test (Raven's Progressive Matrices Test)[4] .1

The researchers used the Raven's Progressive Matrices Test, which consists of (60) dilemmas divided into five levels, each level divided into 12 shapes. The degree of difficulty increases from one level to the next, and it is suitable for most ages. The time spent on this test was no less than an hour, and it was conducted in a quiet place (a classroom). The test was conducted on Sunday, October 29, 2023, according to the test instructions.

Motor Ability Tests:[5] .2

After reviewing the sources on motor abilities specific to javelin throwing, the researchers prepared questionnaires to survey the opinions of experts and specialists regarding their selection of motor abilities specific to javelin throwing.

Table 3. Shows the relative importance of nominating the most important motor abilities specific to javelin throwing effectiveness

S	Type of power	Relative importance	Acceptable and excluded ability
1	Agility	46%	X
2	Flexibility	73%	⁄
3	Balance	86%	⁄
4	Coordination	93%	⁄
5	Precision	53%	X

A: Forward trunk flexion from standing.[6]

- Purpose of the test: To measure the flexibility of the hip and thigh joints.
- Equipment used:
  - A ruler scale approximately (20 cm) long, divided by lines into units, each unit equaling (1 cm). It is preferable that the boundaries of this scale be 10 cm.
  - A suitable bench that can bear the test subject's weight without causing any vibration.
- Procedures: The ruler is attached to the edge of the bench, with the middle of the scale above the edge of the bench and the other half below the edge. Note that the graduation point is (zero) and is level with the edge of the bench, with the edge of the steps located in the upper half being negative and the other located in the lower half being positive, Figure (1).

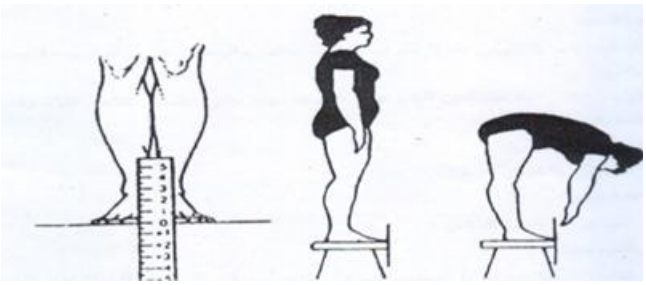


Figure 1. Shows the flexibility test

Performance Description:

The examinee assumes a standing position on the edge of the bench, with the feet touching the sides of the scale. The examinee bends the torso forwards and downwards, positioning it in front of the scale. From this position, the examinee attempts to bend the torso as forcefully and slowly as possible, ensuring that the fingers are level and moving downwards parallel to the scale.

Recording: To the closest 0.50 cm, the examinee's middle finger's reach is measured. If the distance is below the box's surface, it is recorded as positive; if it is above, it is recorded as negative.

B - Modified Bass Dynamic Balance Test[7]

- The test's objective is to assess a person's capacity for precise jumping and balance both during and after movement.
- Necessary equipment includes a stopwatch, a measuring tape, and eleven floor-mounted, 2.54-cm markers.
- Performance description: The test subject starts off standing on his right foot and then uses his left foot to jump to the first mark while attempting to stay steady for as long as possible—five seconds. He then uses his right foot to jump to the second mark, switching the landing foot from one mark to the next and depending on the foot's instep each time. He makes sure that his foot is over the mark so that it can be seen from any angle.
- Recording: The test subject is given ten points for each jump attempt, five of which are when he jumps properly, provided that he jumps on the ball of the foot so that he covers the mark on the ground. The other five points are recorded for the test subject for every second in which he is able to hold his ground after landing. Thus, the total score for the test becomes 100 points, Figure (2).

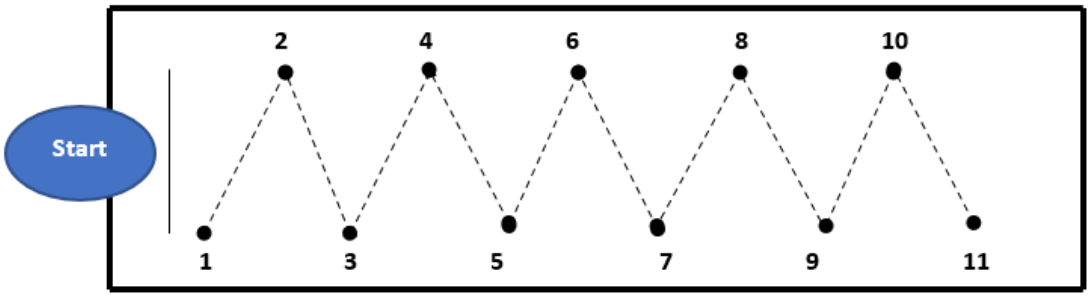


Figure 2. Shows the modified bass test

C- Numbered Circles Test [8]**:**

- Purpose of the test: To measure leg and eye coordination.
- Needed tools: A stopwatch. Draw eight circles on the floor, each with a diameter of (60) cm.
- Performance description: The exam taker is positioned within (1). They leap with both feet together to circle (2), circle (3), circle (4), and circle (8) when they hear the start signal. This is carried out as quickly as possible.
- Recording: The time taken for the test subject to move across the eight circles is recorded.

3- Technical performance test for the javelin throw:

The student holds the javelin and carries it at the beginning of the approach run. The researchers filmed the technical performance of the research sample on Monday, December 11, 2023, by installing the camera on a fixed stand 20.5 m from the approach run and at a height of 1.30 m. The distance between the camera and the middle of the track was 10 m, as the camera is 10 m from the throwing area. Each participant was given three attempts, and the best attempt was considered for evaluation. 3-5 Educational Program for the Javelin Throwing Activity:

Before starting the curriculum, the subject teacher conducted two introductory sessions on Tuesday and Thursday, December 12-14, 2023, at 10:30 a.m. each day. The activity was explained by the teacher, and the primary purpose was to provide each student with an idea of the performance through the technical stages. The researchers prepared a special form to select the best performance for each of the technical stages from the members of the two groups, using experts and specialists in the field of athletics. The educational program included (10) educational units over a period of five weeks, with two educational units per week. The duration of each educational unit was divided into three sections (preparatory, main, and final).

A - Preparatory Section: (25 minutes) will be given, including the introduction and warm-up.

B - Main Section: (60 minutes) will be given, including the educational and practical activities. The educational section will be divided into (15 minutes) and the practical section (45 minutes).

C - Final Section: (5 minutes)

Control Group The method used by the course instructor was used. The program included ten instructional units, two per week, for five weeks. It should be noted that the two research groups were similar in the preparatory section, the educational activity from the main section, and the final section of the lesson. The two groups differed in their method of implementing the practical activity from the main section of the lesson.

The experimental group was taught using motor skills exercises based on a random practice schedule to learn the technical performance of the javelin throw.

The course instructor explained the activity sequentially, dividing it according to the technical stages of the performance. This presentation was well-crafted and clear, helping the group understand the correct form of the activity and how to perform it.

Students were given motor skills exercises based on the random practice schedule. If they encounter any difficulties or questions during the implementation process, they can consult the course instructor for clarification and resolution. Upon completion of the educational unit, assessment tests are conducted on the tasks or assignments completed during the lesson. This is another educational method that informs each student of the level they have achieved and provides them with experiences that enable them to learn the characteristics, concepts, and principles related to the skill to be learned. It also helps them to discover the strengths and weaknesses in their performance.

Exploratory Experiment:

The researchers conducted an exploratory experiment on December 6, 2023, on a sample of (10) students outside the research sample. The experiment was conducted to verify the test performance, the validity of the camera placement distance and height for recording the javelin throw performance, the method of explaining the event, and the research method used by the support team.

Pretests:

The researchers, assisted by the support team, conducted pretests on the research sample at the college stadium on December 15, 2023, at (10) a.m. The researchers filmed the performance using a video camera.

Main Experiment:

After conducting the pre-tests on the research sample, the main components of the research experiment were applied, including motor skills exercises specific to the javelin throw. This was based on modern scientific sources and references in motor learning, according to a random practice schedule and in accordance with the opinions of the track and field specialists, as well as the researchers' experience, as track and field specialists. These exercises were applied in the main part of the educational unit. The number of these educational units was (10) units

distributed over (5) weeks, at a rate of (2) educational units per week. The program was applied to the research sample from 12/19/2023 until Thursday, 1/18/2024.

Post-tests:

After completing the educational curriculum, the researchers conducted a post-test on the research sample (experimental and control) on January 23, 2023, at the College of Physical Education and Sports Sciences stadium at the University of Kirkuk. The researchers ensured the same conditions for the test in terms of time, location, and the same support team (for both the pre- and post-tests), as well as tools and equipment to ensure that variables were as consistent as possible.

The researchers photographed the research sample, positioning the camera at the same distance and height so that the filming occurred simultaneously during the technical stages of the activity. The performance lasted 90 minutes, with the assistance of the subject teacher and under the supervision of the researchers. The results were validated under the same conditions and procedures as the pre-tests.

Statistical Methods:

The researchers used the Statistical Package for Social Sciences based on the SPSS program.

Results and discussions

- Presentation and Analysis of the Results of the Pre- and Post-Tests for Technical Performance in the Javelin Throwing Activity for the Experimental and Control Groups

Table 4. displays the means, standard deviations, and significance values for the technical performance of the control and experimental groups in the javelin throwing activity between the pre- and post-tests

Variables	Groups	Pretest		Posttest		Sig. value *	Statistical significance
		Mean	Std	Mean	Std		
Technical performance of javelin throw	Experimental	4.3	0.8	7	1.12	0.000	Sig.
	Control	3.95	0.76	5.59	0.56	0.000	Sig.

*When the sig value is less than (0.05), this indicates the presence of significant differences.

From Table (4), the results are as follows:

At a degree of freedom of (38) and a significance level of (0.05), the experimental group's computed t-value for the efficacy of javelin throwing was 7.917, which is higher than its table value of (2.09). At a significance level of 0.05 and a degree of freedom of 19, the computed value for the control group was 2.80, which is higher than its table value of 2.09. This suggests that the pre-test and post-test differ significantly, favoring the post-test for both the experimental and control groups.

The use of motor skills exercises in accordance with the experimental group's random practice schedule and the subject teacher's approach in the control group clearly improved the technical performance of the javelin throwing effectiveness, as can be seen from the above.

The researchers attribute the development of the experimental group to the motor skills exercises, which were conducted according to random practice, which influenced the results of the javelin throwing activity. This indicates that a learning process occurred within the individual, leading to growth in their knowledge, skills, abilities, or interests. This learning process resulted in intentional or unintentional learning, whether intended by the teacher or the individual.[9]

The researchers believe that the goal of these educational programs is to learn and improve performance by following sound scientific principles when designing and formulating these programs, in a manner consistent with the available capabilities and potential for learning and enabling the learner to achieve a good level of performance in the intended activity.

The researchers attribute the development of the control group to the teacher's use of his own established method, which had a positive impact on the reception of the activities under study.

- Displaying and analyzing the results of the post-tests on the technical performance of the control and experimental groups in the javelin throw event.

Table 5. displays the estimated t-test, means, and standard deviations for the post-test results of the experimental and control groups in the javelin throw competition

Variables	Units	Experimental		Control		**Sig. value***	**Statistical significance**
		Mean	**Std**	**Mean**	**Std**		
Technical performance of javelin throw	Degree	7	1.12	4.59	0.56	0.000	Sig.

*The tabular value of (t) is (2.09) at a degree of freedom of (19) and below the significance level of (0.05).

In terms of the technical performance of the javelin throw event, the experimental and control groups' technical performance values (sig) reached 0.000, which is less than 0.05, suggesting that there are notable differences between the experimental and control groups' technical performance, favoring the experimental group.
By examining the results in Table (5), the post-tests for both groups showed better technical performance in the javelin throw than the pre-tests. This was due to the use of motor skills exercises based on a random practice schedule, which led to an improvement in the technical performance level of the experimental group.

The researchers attribute the positive results for the experimental group in the technical performance stages to the interconnectedness and mastery of each stage, as well as the presence of motor skills exercises chosen according to a random practice schedule, which led to an improvement in the technical performance level of the students in the javelin throw event. The researchers did not stop at this explanation. Rather, they found that the excellence and development of the individuals in this group were due to the specificity of the work in achieving the educational goal. The exercises, which focus on motor skills based on random practice, represent an advanced form of education and application. The idea behind this theory is that the educational process takes place in various phases arranged in progressive sequence. The first and second phases start with knowledge and comprehension of fundamental abilities, which may be successfully learnt by memory and practice.[10]

The researchers emphasize that these exercises contain a portion of the movement path of a sports competition, in which one or more muscles work (strength, time, path). The level achieved by the student through training depends on the acquired muscle strength and motor speed, enabling him to produce an explosive ability to launch the javelin at the maximum possible speed at the moment of throwing. Launch speed is of greater importance than the height of the launch point and the magnitude of the launch angle, which are important variables at the moment of throwing and have a significant impact on achievement. Based on this percentage, a number of exercises were given, resulting in improved technical performance. It was evident that the coordination variable exercises yielded results in the post-tests, as there was a significant improvement in learning performance in the tests, and the experimental group outperformed the control group. The researchers attribute the improvement in results to the eye-arm coordination exercises, as a result of the use of specific exercises, which were based on a random practice schedule. This focused on developing the working muscles when performing coordination exercises. Repeating the exercise at different times and intensities led to the development of motor synchronization between the eyes and the throwing arm, which led to a faster response through repeated performance by the students.[11] Demonstrated a close correlation with the degree of coordination between the muscles involved in the performance. This depends on the nervous system, which regulates internal coordination within the muscle itself, as well as coordination between the muscles involved in contraction. This includes coordination within the

muscle in the working units, the frequency and speed of nerve signals, and the temporal relationships between the actions of the motor units. The researchers believe that repeating the exercises according to a random practice schedule at different intensities leads to the development of coordination between the eyes and the throwing arm. The researchers believe that javelin throwing is a challenging activity to achieve high levels of performance in this specialized activity. Therefore, specialists in this field have designed various devices and tools to create appropriate educational conditions, including exercises for the motor skills specific to the activity, enhancing technical performance, and enhancing the level of digital achievement, which plays a significant role in the process of motor coordination.[12]

The balance variable also played an important role in the post-tests through the use of its special exercises, and here was one of the reasons that led to the superiority of the experimental group over the control group. The researchers also attribute the development in the results of the technical performance test to the motor connection in completing and finishing the throwing process, and that the motor transfer must be characterized by fluidity of movement. This fluidity of movement will not be achieved unless the thrower has the element of balance during the performance and the complete motor sequence of throwing the javelin. Therefore, the researchers paid attention to this. Also, the performance specifications of the thrower in the javelin throwing event must be characterized by accuracy in performing the movements. The student reaches this level as a result of continuous training, which subsequently leads to the development of the sensory devices, which in turn are linked to achieving the desired balance in technical performance.[13] The extent to which a person maintains his vertical position in the Earth's gravitational field is of great importance in our lives, as the initial position for most types of movements is considered a vertical position on the ground, but a single part of the movement includes parts of balance within it. Therefore, correct and accurate performance, even relatively, of simple movements cannot be It develops and improves without a specific level of development of the balance system. It is well known that sports increasingly require balance functions. The individual's ability to determine his or her position in space and its relationship to time, speed, and accuracy in performing difficult movements under stressful conditions and the instability or height of the balance base is achieved as a result of the development and growth of sensory systems, which play a role in the process of balance and achieving the technical performance of the event [14]. As we must show from the presentation and analysis of the results of the exercises that were employed according to the flexibility variable, through which there are significant differences between the post-tests, we note a noticeable development in the technical performance of the javelin throwing event and the superiority of the experimental group over the control group. The researchers attribute the development in the technical performance results to flexibility exercises according to the random practice schedule and their use by the research sample members for the experimental group and its superiority over the control group. These exercises were performed in different positions and directions, from standing to sitting, which facilitated the students' rapid acquisition and mastery of each technical stage of the event's performance. This is consistent with what Bastawisi Ahmed (1998) indicated, that flexibility is

related to both Physical abilities and basic motor skills are closely related, as they represent the foundation for good performance (technique). Therefore, the level of performance depends on the extent of enjoyment of a good range of motion in the body's joints, especially those motor activities and skills whose progress is largely dependent on performance.[15]

Conclusions:

1. There is a clear advantage for the experimental group, which used specific exercises for some motor abilities according to the random practice schedule and the performance of the javelin throw event.
2. The exercises for motor abilities demonstrated their role in learning technical performance among the research sample of the experimental group.
3. The exercises used in the curriculum prepared according to the random practice schedule had a positive impact on developing the technical performance of javelin throwers among students in the experimental group.
4. The exercises for some motor abilities had a clear impact on the results of technical performance, which was based on the random method in the technical performance of the javelin throw event.

Recommendations:

1. Emphasize the importance of motor skill exercises in learning technical performance to improve the range of paths for students' technical stages in the javelin throw event.
2. Emphasize the use of motor skill exercises according to a random practice schedule to learn technical performance in the javelin throw when developing students' abilities, and then work to develop them to achieve achievement.
3. Conduct similar research and studies on other educational levels, activities, skills, and games.

References

1. Dhafer Hashim Al-Kazemi: The Interactive Teaching Method and Its Impact on Learning and Development Through Organizational Options in the Tennis Teaching Environment, PhD Thesis, College of Physical Education, University of Baghdad, 2002.
2. Ali Khoman: Motor Anticipation and Its Relationship to Some Mental Abilities and Physical Qualities of Handball Goalkeepers in Blocking a (7)-Meter Throw, Unpublished Master's Thesis, College of Physical Education, University of Al-Qadisiyah, 2007.
3. Ali Salloum Jawad Al-Hakim: Tests, Measurements, and Statistics in the Sports Field, Al-Tayf Press, Baghdad, 2004.
4. Tawfiq Ahmad Mar'i, Muhammad Mahmoud Al-Hiliya: General Teaching Methods, 1st ed., Dar Al-Masirah for Publishing, Distribution, and Printing, 2002.
5. Lamia Hassan Al-Diwan: Effective Methods in Teaching Physical Education, Dar Al-Kutub and Al-Watha'iq, Baghdad, 2009.

.6 Qasim Hassan Hussein: Foundations of Sports Training, 1st ed., Jordan, Dar Al-Fikr for Printing and Publishing, 1998.
.7 Saleh Shafi Al-Aidhi: Sports Training: Ideas and Applications, 1st ed., Baghdad, Dar Al-Arab, 2011.
.8 Bastawisi Ahmed: Foundations and Theories of Movement, Nasr City, Dar Al-Fikr Al-Arabi, 1996.
.9 Majed, S. S. (2022). The effectiveness of the six thinking hats strategy in testing the cognitive achievement of basic handball skills. SPORT TK - EuroAmericana de Ciencias del Deporte, 2020. https://revistas.um.es/sportk/article/view/522031
.10 Hussein, A., Majed, S., & Hasan, U. (2023). The effect of employing the knowledge economy using the problem-solving strategy on the learning of basic tennis skills. SPORT TK-Revista EuroAmericana de Ciencias del Deporte, 12, 3. https://doi.org/10.6018/sportk.545921
.11 Thomas, M. (2012). The effect of different movement exercises on cognitive and motor abilities. *Advances in Physical Education*, *2*(04), 172.
.12 Rinne, M. B., Miilunpalo, S. I., & Heinonen, A. O. (2007). Evaluation of required motor abilities in commonly practiced exercise modes and potential training effects among adults. *Journal of Physical Activity and Health*, *4*(2), 203-214.
.13 Ignatova, D. (2020). Importance of motor skills in order to increase the overall physical capacity of children. *International Scientific Journal: Smart Innovations in Recreational, Wellness Industry and Niche Tourism*, *2*(1-2), 40-44.
.14 Alesi, M., Battaglia, G., Roccella, M., Testa, D., Palma, A., & Pepi, A. (2014). Improvement of gross motor and cognitive abilities by an exercise training program: three case reports. *Neuropsychiatric disease and treatment*, 479-485.
.15 Mashkoor, N. B., & Hameed, N. H. (2022). Effect of physical-kinesthetic intelligence exercises on developing motor abilities and basic skills of basketball in female students. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 11-11.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

The Mind's Blueprint: Harnessing Mental Imagery To Achieve Targeted Goals, Strategies, Challenges, Implementation, And Utilization Of Selected National Coaches In The Philippines

Martin Abraham A. Mejia,
Mapua University & Gregorio Perfecto High School, Philippines

Abstract

This study explored the implementation and utilization of mental imagery among selected national coaches in the Philippines, focusing on its impact on athletes' performance, emotional regulation, and mental toughness. Employing a mixed-methods convergent design, qualitative data were gathered through in-depth interviews with ten national coaches, while quantitative data were collected from fifty coaches via structured surveys. Thematic analysis revealed two core qualitative themes: mental imagery as a comprehensive performance enhancement tool and as a mechanism for emotional regulation and mental resilience. Coaches employed structured models such as PETTLEP and FIT, emphasizing multisensory rehearsal, scenario simulation, and personalized mental scripts. Quantitative results confirmed high levels of implementation across key dimensions—visualization (M=3.96), vividness and detail (M=3.92), and mental rehearsal (M=3.95). Regression analysis showed that vividness and detail significantly influenced relaxation, mental toughness, and scenario planning ($p<0.05$). A strong correlation was found between implementation and utilization levels. The study concludes that structured, consistent mental imagery practices significantly enhance athletes' psychological and physical readiness. A proposed framework integrating SMART goals, scenario planning, and recovery strategies offers a practical guide for optimizing mental imagery in sports coaching. These findings support institutionalizing mental imagery in athletic training programs for holistic athlete development.

Introduction

Mental imagery is a widely recognized psychological technique in sports, enabling athletes to mentally simulate performance scenarios to enhance focus, confidence, and execution. It is particularly effective when integrated with structured models such as PETTLEP, which align imagery with real-life performance conditions. Despite global evidence supporting mental imagery's role in improving motor skills, emotional regulation, and competitive readiness, its structured application among national coaches in the Philippines remains underexplored. Understanding how Filipino coaches implement and utilize mental imagery can bridge this gap and inform culturally relevant coaching strategies.

Statement of the Problem

This study investigates how selected national coaches in the Philippines implement and utilize mental imagery in their training programs. It aims to identify their targeted goals, strategies, and challenges, and to determine the relationship between the level of implementation and the extent of utilization of mental imagery techniques. This study aimed to explore and uncover the targeted goals, strategies, and challenges experienced in the implementation and utilization of mental imagery in sports training, particularly from the perspectives of selected national coaches in the Philippines. It sought to determine how mental imagery is applied in coaching practices and how it contributes to athletes' performance, emotional regulation, and mental toughness.

Review of Related Studies

Previous research has consistently demonstrated the effectiveness of mental imagery in enhancing athletic performance, motivation, and emotional regulation. Simonsmeier et al. (2020) conducted a meta-analysis confirming that imagery interventions significantly improve motor performance and affective outcomes across various sports. Similarly, Cumming and Williams (2013) emphasized that structured mental imagery, particularly when guided by models like PETTLEP, enhances skill acquisition and psychological readiness.

Studies by Abraham et al. (2019) and Lakhiani (2018) highlighted the role of multisensory visualization in improving athletes' confidence, focus, and resilience. These findings align with the Symbolic Learning Theory, which posits that mental imagery creates a cognitive blueprint for action. Moreover, motivational imagery has been shown to increase self-efficacy and goal commitment, especially when integrated with SMART goal frameworks.

Despite these global insights, limited research has explored the contextual application of mental imagery among Filipino coaches. This study addresses that gap by examining how national coaches in the Philippines implement and utilize mental imagery, revealing both its benefits and the cognitive, emotional, and cultural challenges that influence its effectiveness.

Methods

This study employed a mixed-methods convergent design to explore the implementation and utilization of mental imagery among selected national coaches in the Philippines. Qualitative data were collected through semi-structured interviews with ten purposively selected national coaches, while quantitative data were gathered from fifty coaches using a validated survey instrument based on a 4-point Likert scale.The qualitative component focused on identifying themes related to targeted goals, strategies, and challenges in mental imagery practice. Thematic analysis was conducted using coding and categorization techniques. For the quantitative component, descriptive statistics, Pearson correlation, and multiple linear regression were used to assess the level of implementation and the extent of utilization of mental imagery strategies.The PETTLEP model and SMART goal framework guided the development of the instruments. Ethical standards were strictly followed, including informed consent, confidentiality, and voluntary participation. Data triangulation ensured the credibility and validity of findings.

Materials

This study utilized a mixed-methods convergent design to explore the implementation and utilization of mental imagery among selected national coaches in the Philippines. This approach allowed for the simultaneous collection and integration of both qualitative and quantitative data to provide a comprehensive understanding of the phenomenon (Creswell & Plano Clark, 2018).

Participants

The participants included ten (10) national coaches selected purposively for the qualitative phase and fifty (50) national coaches chosen through stratified random sampling for the quantitative phase. All participants were at least 18 years old and had experience coaching at national or international levels. The purposive sampling ensured that the qualitative informants had rich, relevant experiences, while the stratified sampling in the quantitative phase ensured representation across various sports disciplines (Patton, 2015; Hair et al., 2010).

Research Instruments

Two primary instruments were developed and validated for this study. The first was a semi-structured interview guide designed to elicit in-depth narratives about the coaches' experiences, strategies, and challenges in using mental imagery. The second was a survey questionnaire using a 4-point Likert scale to measure the level of implementation and extent of utilization of mental imagery across six domains: visualization, vividness and detail, mental rehearsal, goal-oriented imagery, motivational imagery, and emotional regulation. The instruments underwent expert validation and reliability testing, with internal consistency confirmed using Cronbach's alpha (Taber, 2018).

Data Collection Procedure

Data collection was conducted in two phases. For the qualitative phase, interviews were conducted either face-to-face or via online platforms such as Zoom and Google Meet. These interviews were audio-recorded, transcribed, and analyzed thematically. For the quantitative phase, the survey was distributed both electronically and in print. All participants provided informed consent, and ethical protocols were strictly followed, including confidentiality and voluntary participation (APA, 2020).

Data Analysis

Qualitative data were analyzed using thematic analysis, identifying recurring patterns and themes from the interview transcripts (Braun & Clarke, 2006). Quantitative data were processed using descriptive statistics (mean, standard deviation) and inferential statistics, including Pearson correlation and multiple linear regression, to examine relationships between implementation and utilization of mental imagery. Data analysis was conducted using SPSS and JAMOVI software.To ensure validity and depth, triangulation was employed, integrating qualitative insights with quantitative findings to corroborate results and enhance the study's credibility (Denzin & Lincoln, 1994).

Results and Discussion

The study employed a mixed-methods convergent design to examine the implementation and utilization of mental imagery among national coaches in the Philippines. Qualitative data from interviews with ten national coaches revealed two major themes: (1) mental imagery as a comprehensive performance enhancement tool, and (2) its role in emotional regulation and mental toughness. Coaches reported using structured models such as PETTLEP and FIT to guide athletes in multisensory visualization, scenario simulation, and emotional engagement.

Quantitative findings revealed high levels of implementation across key dimensions: visualization ($M = 3.96$), vividness and detail ($M = 3.92$), and mental rehearsal ($M = 3.95$). Regression analysis showed that vividness and detail significantly influenced relaxation, mental toughness, and scenario planning ($p < 0.05$). A strong positive correlation was found between the level of implementation and the extent of utilization of mental imagery strategies.

The findings affirm that mental imagery is a vital component of psychological skills training in sports. The high implementation scores suggest that national coaches recognize its value in enhancing focus, confidence, and performance. The significant impact of vividness and detail on psychological outcomes supports previous literature emphasizing the importance of sensory-rich imagery (Cumming & Williams, 2013).

Qualitative insights further highlight the strategic use of mental imagery in preparing athletes for high-pressure scenarios and emotional challenges. Coaches emphasized the need for personalized, consistent practice and integration with physical training. These results underscore the importance of institutionalizing mental imagery in coaching programs to support holistic athlete development.

Key Findings

This study explored how selected national coaches in the Philippines implement and utilize mental imagery in their training programs. The findings revealed that mental imagery is widely recognized by coaches as a powerful tool for enhancing athletic performance, emotional regulation, and mental toughness. Coaches reported using structured models such as PETTLEP and FIT to guide athletes through multisensory visualization, scenario simulation, and emotional engagement. These practices were found to help athletes mentally rehearse their performance, build confidence, and prepare for high-pressure situations.

Quantitative results supported these insights, showing high levels of implementation across all measured dimensions. Visualization, vividness and detail, and mental rehearsal all received high mean scores, indicating that these techniques are consistently applied in training. Furthermore, regression analysis revealed that vividness and detail significantly influenced athletes' ability to relax, maintain mental toughness, and plan for competitive scenarios.

Challenges were also identified, particularly in maintaining athletes' focus, overcoming skepticism, and ensuring consistent practice. Despite these barriers, a strong positive correlation was found between the level of implementation and the extent of utilization of mental imagery strategies. Overall, the study confirmed that mental imagery, when applied consistently and strategically, plays a vital role in holistic athlete development and performance optimization.

Conclusion and Recommendation

This study concludes that mental imagery is a vital psychological tool that significantly enhances athletic performance, emotional regulation, and mental toughness among national coaches and their athletes in the Philippines. Through both qualitative narratives and quantitative data, it was evident that structured mental imagery—especially when guided by models like PETTLEP and FIT—helps athletes visualize success, manage stress, and prepare for high-pressure scenarios. Coaches who consistently implement vivid, multisensory, and goal-oriented imagery techniques reported improvements in their athletes' focus, confidence, and resilience. However, the study also revealed challenges, such as athletes' difficulty maintaining focus, skepticism about the effectiveness of mental imagery, and inconsistent practice. These barriers highlight the need for more structured, personalized, and supported mental training programs.

In light of these findings, it is recommended that coaches integrate mental imagery into their regular training routines, supported by clear goals and consistent practice. Sports organizations and educational institutions should institutionalize mental skills training, including mental imagery, as part of coaching certification and athlete development programs. Furthermore, future researchers are encouraged to explore the long-term effects of mental imagery across different sports and competitive levels, and to develop culturally responsive frameworks that support its broader application in Philippine sports.

Ethical Considerations

This study was conducted in accordance with the ethical guidelines of the American Psychological Association (APA, 2020). All participants were fully informed about the research purpose and procedures and provided written consent prior to participation. Confidentiality and anonymity were strictly maintained, and participation was entirely voluntary, with the right to withdraw at any time. The study ensured no harm to participants and was carried out with respect, integrity, and cultural sensitivity throughout the data collection and analysis process.

References

Abraham, A., et al. (2019). Dynamic neuro-cognitive imagery (DNI™) improves developpé performance, kinematics, and mental imagery ability in university-level dance students. Frontiers in Psychology, 10, 382. https://doi.org/10.3389/fpsyg.2019.00382

Cumming, J., & Williams, S. E. (2013). The role of imagery in performance. In S. Murphy (Ed.), The Oxford handbook of sport and performance psychology (pp. 213–232). Oxford University Press.

Lakhiani, V. (2018). The Buddha and the badass: The secret spiritual art of succeeding at work. Rodale Books.

Simonsmeier, B. A., Andronie, M., Buecker, S., & Frank, C. (2020). The effects of imagery interventions in sports: A meta-analysis. International Review of Sport and Exercise Psychology, 14(1), 186–207. https://doi.org/10.1080/1750984X.2020.1780627

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Leverage Of Positive Coaching And Sports Performance Outcomes Among Mindanao Association Of Tertiary School Athletes

Gil Vicent M. Ebardo.
. University of the Visayas – Main Campus, Cebu City
ebardovincent@gmail.com
Cresencio Mejarito.
University of the Visayas – Main Campus, Cebu City
cresenciomejarito@gmail.com .

Abstract.
This research investigates how positive coaching strategies affect athlete self-efficacy and sports performance in individual athletics who participated in the MASTS 24 competition. It assesses the contest's effect on the participants' levels of the above-mentioned psychological constructs. It also looks at the respondents' descriptive characteristics and certain potentially influential relationships among the positive coaching strategies, self-efficacy levels, and athletic performance outcomes. Findings indicate that coaches exhibit a "Very Good" level of positive coaching. Coaches excel in the following aspects of positive coaching: Motivation and Team Building, and Personal Development and Well-being. However, the survey did identify some areas needing improvement: Self-assessment and Improvement, and Continued Education and Training. A "Very High" level of self-efficacy was demonstrated by the athletes, with the General Sports Efficacy ranking highest, guaranteeing confidence in skill acquisition and competition readiness. Maintaining energy levels, however, was a problem that led to the necessity of targeted endurance training. Distribution of athletic performance showed that 48.7% of athletes fell into the "Low" performance category (non-finalists), 30.7% were "Moderate" performers (non-medalists), and only 20.6% were "High" performers (medalists), which suggests that we have some resources and some preparedness problems. The analyses of correlation unveiled a positive substantial relationship between coaching of the positive kind and self-efficacy of the athlete. In technical terms, $r = .385$, $p < .000$. That means 14.82% of the time, when an athlete is more self-assured, it's due to the coach being a positive one. However, no significant relationships were found between self-efficacy and athletic performance ($r = .114$, $p = .110$) and between positive coaching and athletic performance ($r = .103$, $p = .148$). These findings highlight the complexity of factors influencing sports success, indicating that while coaching enhances self-efficacy, it does not directly translate to improved athletic performance

without complementary interventions in physical training, technical skills, and environmental conditions. The study determines that enviable coaching boosts self-efficacy considerably but that it must be tied into more global training schemes if we want to reap measurable results in performance. To address the performance gaps faced by many coaches and athletes, the study recommends improved, individualized coaching, data-driven feedback for realistic progress tracking, a more positive training environment, and the integration of well-designed performance systems.K**eywords:** Positive coaching, sports self-efficacy, athlete's performance etc.

Introduction

In the world of athletics, coaching extends far beyond simply telling athletes what to do (and what not to do). A good coach knows how to cultivate the right—and often delicate—balance between giving their athletes the necessary tools to succeed and allowing those same athletes the freedom to forge their own identities within the cookie-cutter world of sports. As a sports psychologist, I am often asked what the right model of coaching is. And while I believe that there is no one correct way for all coaches to work, I do devote a fair amount of my time in the book to talking about the model that I think is most effective: the positive coaching model.

Strategies for positive coaching are grounded in the tenets of positive psychology. Positive psychology, which was introduced by Seligman and Csikszentmihalyi (2000) and has blossomed into quite a formidable field of study, emphasizes the importance of understanding and building the strengths and resilience of individuals. It values the expression of, and even the pursuit of, positive emotions (things like joy, gratitude, and hope); a state of engagement (being totally lost in what you are doing); and, of course, the importance of having and nurturing relationships (with family and friends) for our overall well-being and optimal performance.

If positive coaching were to be defined, it would be something along the lines of this: "The positive coach helps each athlete discover their strengths and their own individual reasons for playing, and even more, for living. This is done under an umbrella of a program in which the coach and athletes truly have each other's backs. This happens in an atmosphere of joy and hope, with lots of equally fraternal and sisterly high-fives and slaps on the backs for well-done performances. And on-a-mission for cultivating the world's next generation of citizens." The influence of affirmative coaching even stretches far beyond the sports field. Affirmative coaching in the sporting world enhances not only the athlete's belief in their capabilities but also serves as a crucial, positive determinant of athletic performance. Self-efficacy, or the belief that one can achieve the goals they have set for themselves, was identified by Bandura (1997) as a key determinant of performance. He suggested that individuals who believe in their capabilities are almost guaranteed to achieve what they set out to achieve. He also stated that self-efficacy might very well be the most potent influence on human performance that psychology has to offer. On a more connected note, a meta-analysis of Moritz, Feltz, Fahrbach, and Mack (2000) exposed that higher self-efficacy is correlated with better sports performance.

Likewise, positive coaching can significantly impact athlete performance, as research studies can attest. Smith and Smoll (2025) demonstrated that the kind of coaching that is mostly perceived as supportive and encouraging leads directly to better self-esteem, motivation, and performance in our nation's Olympic and other elite athletes. In the same way but from a different angle, Rosa and Hibbs (2024) showed that the kind of coaching that leads directly to autonomous motivation and a substantial amount of controlled success is the type that is very much related to positive performance outcomes.

The leverage of positive coaching in relation to sports efficacy and performance is supported by a few research studies- correlated by parts. As such, further research is needed to address this gap. This proposed study is a tri-correlational and predictive type of research that focuses on how positive coaching strategies influence sports efficacy and sports performance among the Mindanao Association of Tertiary Schools (MASTS) athletes. By examining the correlation and prediction among and between variables, the study seeks to provide insights into positive coaching enhances sports efficacy, sports efficacy improves sports performance, and most likely positive coaching optimizes sports performance outcomes - a conceptual model - that can foster a supportive and empowering environment for athletes in tertiary sports programs across Mindanao.

Methodology

This study used a descriptive-correlational and predictive research design. It involved athletes participating in individual athletic events held under the auspices of the Mindanao Association of State Tertiary Schools (MASTS) Meet. The events took place in Pagadian City from September 8 to 18, 2024, and included a variety of track and field competitions, such as these: Sprinting, Middle-distance and long-distance running, Jumping, and Throwing events. A total of 199 athletes from 19 school delegations would take part in the study. The researcher used complete enumeration or total sampling, which involved including all qualified and willing respondents, thereby minimizing sampling bias and enhancing the accuracy and representativeness of the results.

Data for the study were gathered using a standardized, self-rated questionnaire that consisted of four parts: demographic profile, positive coaching, sport self-efficacy, and sport performance. The demographic section gathered fundamental details including sex, delegation, event, and performance. The second part assessed favorable coaching methods with the Positive Coaching Strategies Scale-30 (PCSS-30)—which has subscales that appraise communication and feedback, motivation and team building, personal growth and well-being, and self-assessment and improvement. The third section evaluated sport self-efficacy with the Sport Self-Efficacy Scale-12 (SSS-12). This measure included items pertaining to a range of abilities necessary for successful performance in sport, such as physical skills, mental focus, and social skills, but also addressed more general constructs related to sport efficacy. The fourth part concentrated on athletic performance, drawing from the existing rankings of competitors in the MASTS, as tabulated by the tournament manager.

Data analysis involved the use of descriptive statistics, such as frequency, percentage, and means, to summarize the characteristics of the respondents and the levels of each variable. To examine the relationships among the variables, the Pearson correlation coefficient was used. Furthermore, the coefficient of determination (r^2) was computed to assess the predictive accuracy of positive coaching and sport self-efficacy in relation to sport performance. These analyses formed the basis for interpreting the findings and drawing conclusions in the succeeding chapters.

Findings And Discussion

This section presents the tabulated results of the study including their descriptive interpretations and discussions. Also, it reflects the analysis and researcher's interpretation of the different statistical data entries. All the information on every table is explained and supported with relevant theories, literatures and studies.

Coaches' Positive Coaching Status

Table 1 presents the assessment of a coach's Positive Coaching Status across four key components: Communication and Feedback, Motivation and Team Building, Personal Development and Well-being, and Self-Assessment and Improvement. Each component consists of various indicators that were rated on a scale, yielding mean scores that reflect the coach's positive coaching status in these areas and grand mean indicating the overall positive coaching status. Mean and status interpretation were used to analyze the data.

Table 1.

Coaches' Positive Coaching Status

Components/Indicators	Mean	Status Interpretation
Communication and Feedback		
Providing constructive feedback to athletes	4.24	Very Good
Using positive language	4.29	Very Good
Offering actionable advice	4.37	Very Good
Balancing criticism with praise	4.21	Good
Providing specific examples	4.34	Very Good
Effectiveness of reinforcing positive feedback	4.34	Very Good
Effectiveness in communication skills	4.43	Very Good
Components Mean	**4.32**	**Very Good**
Motivation and Team Building		
Setting clear goals	4.53	Very Good
Celebrating small victories	4.44	Very Good
Offering rewards	4.21	Good
Providing encouragement	4.45	Very Good
Creating positive team culture	4.45	Very Good
Effectiveness of motivating athletes	4.48	Very Good

Fostering a sense of camaraderie among athletes	4.48	Very Good
Success in creating positive team environment	4.55	Very Good
Components Mean	**4.45**	**Very Good**
Personal Development and Well-being		
Supporting athlete's personal development	4.39	Very Good
Giving importance on athlete's mental well-being	4.39	Very Good
Giving importance on athlete's emotional well-being	4.33	Very Good
Ensuring the mental well-being of athletes	4.43	Very Good
Ensuring the emotional well-being of athletes	4.38	Very Good
Components Mean	**4.38**	**Very Good**
Self-Assessment and Improvement		
Reflecting coaching strategies used	4.38	Very Good
Evaluating coaching strategies used	4.42	Very Good
Attending seminars and workshops	4.16	Good
Reading books and articles	4.07	Good
Seeking athletes feedbacks	4.32	Very Good
Seeking peers feedbacks	4.24	Very Good
Participating online courses	3.88	Good
Improving skills in general	4.37	Very Good
Adjusting coaching methods based on feedbacks	4.27	Very Good
Developing coaching methods based on new info	4.34	Very Good
Components Mean	**4.24**	**Very Good**
Grand Mean	**4.34**	**Very Good**

Note: *N=199; Status Interpretation: 0.98-1.78 Very Poor; 1.79-2.59 Poor; 2.60-3.40 Fair; 3.41-4.21 Good; 4.22-5.02 Very Good*

The data reflected in Table 1 reveals that coaches exhibit a consistently "Very Good" positive coaching status across the four components: Communication and Feedback, Motivation and Team Building, Personal Development and Well-being, and Self-Assessment and Improvement, as indicated by the overall grand mean of 4.34. The highest-rated component is Motivation and Team Building (mean = 4.45), reflecting the coaches' exceptional ability to foster camaraderie, set clear goals, and create a positive team culture. This finding aligns with Deci and Ryan's (1985) Self-Determination Theory, which emphasizes the importance of intrinsic motivation and creating supportive environments to enhance performance and satisfaction. Similarly, the very good ratings in Personal Development and Well-being (mean = 4.38) highlight coaches' focus on athletes' mental and emotional well-being, reinforcing the importance of holistic coaching approaches, as advocated by Jones et al. (2004), who stress the need for addressing athletes' psychological and social dimensions alongside their physical performance. However, the component Self-Assessment and Improvement received a relatively lower mean of 4.24, with the lowest scores in activities such as participating in online courses

(mean = 3.88) and reading books and articles (mean = 4.07). This suggests that while coaches excel in practical application, there may be gaps in continuing education and self-directed learning, potentially hindering their adaptability to new coaching methodologies. Reflecting on these findings, programs designed to enhance professional development among coaches could focus on encouraging participation in formal learning opportunities and peer feedback mechanisms. Overall, the results underscore the critical role of positive coaching practices in fostering athlete growth and team success while highlighting areas for further enhancement to sustain a culture of continuous improvement.

Level of the Athletes' Sport Self-Efficacy

Table 2 presents an analysis of athletes' sport self-efficacy across various components, with a focus on physical skills and abilities, mental skills and focus, team and social skills, and general sports efficacy. Mean and level Interpretation are utilized to analyze and interpret the data.

Table 2.

Level of the Athletes' Sport Self-Efficacy

Components/Indicators	**Mean**	**Level Interpretation**
Physical Skills and Abilities		
Confidence in my physical strength/endurance/stamina	4.26	Very High
Maintain high level of energy during competition	4.18	High
Confidence to execute technical skills in my event	4.33	Very High
Components Mean	***4.26***	***Very High***
Mental Skills and Focus		
Stay focused and concentrate during competition.	4.31	Very High
Confidence to remain calm/composed under pressure	4.24	Very High
Overcome setbacks and continue to perform well	4.29	Very High
Components Mean	***4.28***	***Very High***
Team and Social Skills		
Confidence to communicate effectively with teammates	4.34	Very High
Positively influence my teammates	4.30	Very High
Confidence in my ability to work well with teammates	4.35	Very High
Components Mean	***4.33***	***Very High***
General Sports Efficacy		
Confidence in my ability to learn new sports skills	4.46	Very High
Perform well in my sport even under pressure.	4.30	Very High
Confidence in my ability to set and achieve goals	4.48	Very High
Components Mean	***4.41***	***Very High***
Grand Mean	**4.32**	**Very High**

Note: *N=199; Level Interpretation: 0.98-1.78 Very Low; 1.79-2.59 Low; 2.60-3.40 Moderate; 3.41-4.21 High; 4.22-5.02 Very High*

The data presented in Table 2 highlights that the athletes demonstrate a "Very High" level of sport self-efficacy across all components, with a grand mean of 4.32. Among the four dimensions, the highest-rated component is General Sports Efficacy (mean = 4.41), reflecting the athletes' confidence in their ability to learn new sports skills, set and achieve goals, and perform well under pressure. This finding aligns with Bandura's (1997) Self-Efficacy Theory, which posits that individuals with high self-efficacy are more likely to demonstrate resilience, goal-setting behaviors, and effective performance. Furthermore, the consistently high ratings in Team and Social Skills (mean = 4.33) underscore the athletes' ability to communicate, collaborate, and positively influence teammates, supporting the importance of social cohesion in team dynamics, as discussed by Carron et al. (2005).

Although the Physical Skills and Abilities component received a "Very High" mean of 4.26, the indicator "Maintain high level of energy during competition" had a relatively lower rating (mean = 4.18), interpreted as "High". This suggests that while athletes feel confident in their physical abilities, sustaining energy during high-pressure scenarios may be a potential area for improvement. The Mental Skills and Focus component (mean = 4.28) similarly highlights athletes' strength in staying calm and focused, further validating the link between mental resilience and athletic performance (Gould et al., 2002). Overall, the findings emphasize the athletes' robust self-efficacy while identifying areas, such as endurance and sustained energy, that could benefit from targeted training and interventions to maximize performance outcomes.

Level of Athlete's Sport Performance

Table 3 presents the level of athletes' sport performance in terms of three different classifications. Frequency and percentage distributions were used to analyze the data.

Table 3.

Athlete's Sports Performance Level

Performance Classification	**Level Interpretation**	***F***	**%**
Non-Finalist	Low	97	48.7
Non-Medalist	Moderate	61	30.7
Medalist	High	41	20.6
	Total	**199**	**100.0**

Table 3 shows that almost half of the athletes (48.7%) are non-finalists at the "Low" performance level. A non-medalist athlete can be classified as "Moderate" (30.7%) or "High" (20.6%), like an actual medalist. While one can see the distribution of nearly half the athletes under the "Low" range, it is quite pertinent to question the training schedule of the athletes and the actual quality of the training being administered. Especially in the aftermath of COVID-19, which led to a lack of high-quality training on a global scale, one can see the "systematic" as well as the "deliberate" practice being in place and can draw possible gaps leading to the podium issue.

The low percentage of medalists might also represent unevenness in external elements like access to high-level coaching, elite training environments, advanced technological resources,

or even stellar life circumstances, all of which are certainly relevant to Collins and MacNamara's (2012) environmental model of sports performance that they claim to be contextual, content, and causative.

The top performers in the lower categories of this sport are young individuals who should be entering the more advanced performance stages of their athletic careers. However, those stages are typically dominated by older athletes. If we want to know why this sport produces so many young champions, we need to look less at the athletes themselves and more at the societal and familial contexts in which these athletes are raised.

Furthermore, the reasonable showing of non-medalists implies advancement but emphasizes the necessity for specific assistance to close the divide between decent and excellent performance.

These findings highlight the need for comprehensive development programs for athletes. Such programs should be all-encompassing and should integrate the physical, technical, and psychological components of training. At the same time, they should undertake to resolve the sorts of systemic challenges that can get in the way of optimized high-performance athletic functioning.

Relationship between Positive Coaching and Athlete's Sport Self-Efficacy

Table 4 illustrates how positive coaching is correlated with an athlete's sport self-efficacy. The data are analyzed and presented using Pearson's r coefficient of correlation (and of course, a p-value, which indicates the level of significance we should ascribe to the r we obtained).

Table 4.

Relationship between Positive Coaching and Athlete's Sport Self-Efficacy

Correlations	**Athlete's Sport Self-Efficacy**			
	P	r	r^2	Decision
Positive Coaching	.000	.385**	14.82%	Reject Ho

****. Correlation is significant at the 0.01 level (2-tailed).**

The data presented in Table 4 shows a strong positive correlation between the two variables in question. Coaches' positive coaching is correlated with athletes' self-efficacy in their sport, with a p-value of .000, a correlation coefficient (r) of .385, and an effect size (r^2) of 14.82%. This does suggest that about 14.82% of the expressivity in athletes' self-efficacy can be traced to how positively and how well their coaches coach them. Of course, this is not a strong expressivity value. It does not seem to satisfy the standard of a good effect size. But we can look here, and we can point the finger at positive coaching!

The moderate correlation signals that other elements substantially impact athletes' self-efficacy besides coaching, like the pair of personal experiences and intrinsic motivation. Shelangoski (2013) makes these points in our first source.

Moreover, research conducted by Stephen, S. A. (2024) emphasizes the crucial mediating effects on self-efficacy of different motivational climates created by coaches. This work highlights the importance of not just being a "good" coach in the traditional sense but also being a "better" coach for all players by creating a more positive overall team environment. The research coordinates self-efficacy with more effective team environments, better goal-setting strategies with not just personal but also team goals, better performance overall during practice and competitions, and with the climate type created by the coach. In short, it ties together a lot of previously unfocused threads into a more coherent scheme.

Relationship between Athletes' Sport Self-Efficacy and Sport Performance

Table 5 presents the relationship between the athletes' sport self-efficacy and sport performance. Pearson-r coefficient of correlation and p- value were used to analyze the data.

Table 5.

Relationship between Athlete's Sport Self-Efficacy and Sport Performance

Correlations	**Athlete's Sport Performance**			
	+	r	r 2	Decision
Athlete's Sport Self-Efficacy	.110	.114	1.30%	Failed to Reject Ho2

***. Correlation is significant at the 0.01 level (2-tailed).*

The data in Table 5 indicates no significant relationship between athletes' sport self-efficacy and their sport performance, as evidenced by a p-value of .110, a low correlation coefficient ($r = .114$), and an effect size ($r^2 = 1.30\%$). This indicates that self-efficacy accounts for only 1.30% of the variation in sports performance. Thus, we fail to reject the second null hypothesis (Ho2). While self-efficacy is often cited as a critical psychological factor in sports, this result highlights that it alone may not be a direct predictor of performance outcomes.

New research by van den Berg et al. (2020) has demonstrated that self-efficacy alone does not ensure that a person will perform well in a task, their performance instead being reliant on several interconnected factors. These include physical skills, ability to strategize, and environmental influences.

Similarly, Barwood et al. (2020) argue that self-efficacy primarily enhances preparatory behaviors rather than directly influencing competition outcomes.

Weak correlation may also reflect dissimilarities in self-efficacy as a construct and performance as a focal outcome. Beattie et al. (2019) found that self-efficacy is connected to confidence, but this does not always equal good performance when the stakes are high. Iskandar, T. M., & Sanusi, Z. M. (2011) elaborate on the complexities of performance, explaining that self-efficacy is connected to confidence, but this does not always equal good performance when the stakes are high, or in this case, when the performance is under scrutiny.

All in all, this research highlights the necessity of addressing performance enhancement from many directions at once. In short, it calls for a blend of better preparatory psychology, more expert-level skill development, and much more effective performance environments to help individuals and teams reach their true potential.

Relationship between Coach's Positive Coaching and Athlete's Sport Performance

Table 6 presents the relationship between the coach's positive coaching and athlete's sport performance. Pearson-r coefficient of correlation and p- value were used to analyze the data.

Table 6.

Relationship between Coach's Positive Coaching and Athlete's Sport Performance

Correlations	Athlete's Sport Performance			
	P	r	r^2	Decision
Coach's Positive Coaching	.148	.103	1.06%	Failed to Reject Ho3

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 6 shows no significant relationship between positivity in coaching and the performance of my athletes. The p-value indicating the level of significance for this comparison is .148, which is not close enough to .05 to show that there is a significant enough relationship for me to reject the third null hypothesis (Ho3). My correlation coefficient indicates that this is a weak relationship (r = .103). Even if this relationship did exist and was strong enough to significantly correlate, the r^2 = 1.06% indicates that this coaching behavior only accounts for 1.06% of the reason why my athletes perform at the level they do.

Moreover, recent research has unveiled a more nuanced understanding of the association between coaching behavior and performance, highlighting the importance of contextual factors in this dynamic relationship. Lara-Bercial and Mallett (2016) draw out the implications of this for how we think about coaching at a national level, offering a recent example of how contextualized coaching behavior can be. For the national female soccer team, the coaching staff involved had to be very mindful of how to set up practices for such a diverse skill set. Even within a single practice, the individualized coaching strategy would be essential in working through the team's unique developmental needs.

In addition, Horn (2008) emphasizes the role of athlete perception and interpretation of coaching behavior in producing effects on performance. If athletes do not interpret positively or do not internalize or apply the feedback effectively, then the most positive and effective coaching may not lead to improved performance.

These findings indicate that when it comes to athlete development, the essential element of positive coaching may not directly affect performance; rather, performance may be more influenced by other components of an apparently simple equation—factors like training environments, athlete-coach communication, and individual athlete characteristics.

Conclusions

The conclusions that follow emerge from the findings of the study:

Positive coaching practices significantly augment and are effective in augmenting athletes' self-efficacy. However, these practices require alignment with other performance-related interventions to yield big results where it counts—in sports performance. This is a big deal because it highlights the importance of our not-very-motivational motivational climate and the 50/50 ratio of positive to negative statements that make up supportive coaching methods.

Self-efficacy in athletes is not enough by itself to enhance mental readiness and confidence and to ensure that these intangibles correlate to improved outcomes in competition. They might be highly self-efficacious, but unless their conditioning is top-notch and even the slightest factors, such as the ability to perform a certain movement without fouling or as a decathlete to throw the javelin far on Wednesday and not far on Thursday, are working for them, then self-efficacy becomes a not-so-secret ingredient in the recipe of winning. Part of this equation deals with the unresolved issue of why certain males and females have high levels of self-efficacy.

The limited or weak relationship between coaching strategies and athlete's performance underscores the complexity of factors influencing athletic success, requiring a multifaceted approach to training and suggests the necessity of integrating multifaceted training approaches, encompassing technical, physical, and psychological domains.

The majority of athletes fall within lower performance brackets, highlighting a gap in competitiveness among most athletes, emphasizing the need for enhanced training programs to improve skill levels, to elevate their competitiveness and to enhance outcomes in competitions.

Recommendations

This study highlights the importance of positive coaching in enhancing sport self-efficacy, psychological readiness, and overall development of student-athletes in Mindanao Association of State Tertiary Schools (MASTS). It recommends curriculum planners to incorporate psychological constructs into physical education and sports programs, focusing on mental conditioning, goal-setting theory, resilience training, and positive psychology. Professional development for coaches should be institutionalized, with training in positive communication, team-building facilitation, mental health first aid, and instructional coaching methodologies. Curriculum redesign and institutional support are crucial for integrating psychological development into athletic training. Future research should explore mediating and moderating variables, examine individual differences, and investigate non-cognitive performance indicators.

References

Amorose, A. J., & Anderson-Butcher, D. (2007). Autonomy-supportive coaching and self- determined motivation in high school and college athletes: A test of self-determination theory. *Psychology of Sport and Exercise, 8*(5), 654–670. https://doi.org/10.1016/j.psychsport.2006.11.003

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.

Baker, J., & Côté, J. (2003). Sport-specific practice and the development of expert decision-making in team ball sports. *Journal of Applied Sport Psychology*, 15(1), 12-25.

Baker, J., Côté, J., & Abernethy, B. (2003). Learning from the Experts: Practice Activities of Expert Decision Makers in Sport. *Research Quarterly for Exercise and Sport, 74*(3), 342–347. https://doi.org/10.1080/02701367.2003.10609101

Barwood, M. J., Rattray, B., & Neal, R. J. (2020). Self-efficacy in sport: Applications to coaching and performance enhancement. *International Journal of Sports Science & Coaching*, 15(5), 714-728.

Beattie, S., Lief, D., & Hardy, L. (2019). The role of self-efficacy in elite-level sport performance under pressure. *Frontiers in Psychology*, 10, 2250.

Burke, L. M., & Deakin, V. (2015). Clinical Sports Nutrition (5th ed.). McGraw-Hill Education

Biddle, S. J. H., Fox, K. R., & Boutcher, S. H. (2000). Physical Activity and Psychological Well-being. Routledge

Carron, A. V., Bray, S. R., & Eys, M. A. (2002). Team cohesion and team success in sport. *Journal of Sports Sciences, 20*(2), 119–126. https://doi.org/10.1080/026404102317200828

Carron, A. V., Colman, M. M., Wheeler, J., & Stevens, D. (2005). Cohesion and Performance in Sport: A Meta analysis. *Journal of Sport & Exercise Psychology, 24*(2), 168–188. https://doi.org/10.1123/jsep.24.2.168

Chase, M. A., Magyar, T. M., & Drake, B. M. (2005). The Role of Sport Self-Efficacy and Competitive State Anxiety in Predicting Performance in Collegiate Swimmers. Journal of Sport Behavior, 28(3), 236-250

Collins, D., & MacNamara, Á. (2012). The rocky road to the top: Why talent needs trauma. *Sports Medicine*, 42(11), 907-914.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Analysis of the National Education Policy 2020 and the Prospects for Sports Education

Dr. Jahanavee Ichchhaporia,
Director Sports and Associate Professor
Department of Physical Education and Sports, Marwadi University,
Rajkot, 360003, Gujarat, India
email: jahanavee28@gmail.com
Dr. Parikshit Ichchhaporia
Asst. Professor
Udhana Citizen Commerce College, Surat, India
Email: pkichchhaporia@gmail.com
Dr. Nishant Patel
Assistant Professor
Department of Physical Education and Sports
Marwadi University
Rajkot Gujarat

Abstract—Education is a foundation for individual growth and national progress that aims to cultivate ethical, analytical, and resilient individuals with scientific temper, creative imagination, and strong moral values. The National Education Policy (NEP) 2020 emphasizes the holistic development of learners by integrating physical education, sports, and yoga into the education system. This integration aims to foster health and wellness across all educational levels, ensuring physical fitness, mental stability, and emotional strength among students and stakeholders in educational institutions. NEP 2020 marks a paradigm shift by making physical education, sports, and yoga accessible from the grassroots to higher education levels. It envisions these components as critical to students' overall well-being and development while promoting a culture of fitness and wellness. This paper explores the implications of NEP 2020 on physical education teachers, coaches, professionals, and yoga instructors. It highlights the opportunities and challenges they face and assesses the future impact of NEP 2020 on health and wellness in education. Through a series of reflective questions and analyses, the study aims to raise awareness and provide insights into the evolving role of physical education, sports, and yoga under the NEP framework.Keywords—National Education Policy 2020; Physical Education; Sports; Yoga; Educational Institutes.etc.

Introduction:

The most significant potential in promoting national growth depends on education. Education aims to produce morally pure individuals with an analytical and action-oriented attitude, courage, resilience, and strong moral convictions and values. Developing each person's creative potential is one goal of education policy. The union cabinet of India approved the National Education Policy 2020 (NEP 2020) on 29 July 2020, outlining the country's future educational system goals. The new policy, which includes several beneficial modifications for every region of India, follows significant revisions to the previous policy. The legislation covers the entire educational system, from early childhood to higher education, as well as various training programs like skill, hobby, and vocational training [1-5]. It is widely recognized that physical education is intended to improve students' essential physical fitness, safety awareness, and sensitivity to movement, as well as their capacity to use these abilities in both basic and advanced movements. Sports have touched on many facets of human existence. Without sports education, a student's learning experience is incomplete. Playing sports helps us stay physically healthy and develops social and cognitive skills [6-8].

What is NEP

NEP 2020 Is A Critical Effort That The Indian Government Introduced In 2020, Which Was Notable For The COVID-19 Pandemic Worldwide And Revolutionary Ideas In The Field Of Education [9]. Various Stakeholders, Including Parents, Instructors, Students, Educational Institutions, Society, And The Country, Have Been Impacted By The Policy Changes. The Initiative Marks A Significant Development In The Indian Education System. Since Education Is The Cornerstone Of Every Country's Development, The NEP 2020 Seeks To Solve Issues Like Brain Drain, Where Many Of India's Finest Brains Work For Foreign Companies. It Also Emulates The Success Of Western Countries Recognized For Their Strong Educational Systems. The Upcoming Overhaul Of India's Educational System Has The Potential To Influence The Country's Future Development Trajectory, As It Is One Of The Most Populated And Culturally Diverse Countries In The World [10].

NEP and Physical Education

Sports education will soon be included in the curriculum as part of a new attempt to improve the Indian educational system. NEP 2020 aims to develop a comprehensive educational system. Today, schools regard athletics as an extracurricular activity. Games are frequently held after school, once or twice a week. We all miss the fact that sports education begins in the classroom. Such lessons will be very valuable at all levels of the educational system. Participating in sports helps students develop various skills, including acceptance, leadership, discipline, charity, collaboration, honesty, and team spirit. Most schools understand that education is about a child's development, which includes more than just academics, and sports are a crucial component. Undoubtedly, a structured sports curriculum is required. Schools in India are beginning to realize how important sports are to a child's overall development and how important it is to encourage them to play various sports. Formerly, the focus was just on academics, but as parents and school

officials become more conscious of the life skills that sports help kids develop, they are pushing their kids to play sports. Precisely, we are asking for RQ1. How does NEP 2020 impact physical education teachers, coaches, professionals, and yoga instructors in educational institutions?

RQ2. What are the opportunities and challenges associated with implementing physical education, sports, and yoga across all educational levels under NEP 2020? RQ3. What is the future impact of NEP 2020 on promoting health and wellness in education through physical education, sports, and yoga?

Research Methodology

The study employs a quantitative research approach through a structured questionnaire survey. We collect the primary data by distributing a questionnaire survey to professors, coaches, teachers, and directors in educational institutions.

Section Headings

No more than three levels of headings should be used. See Table I for formatting details and Subsection B above for an example.

Selection of the Variables

The need for physical attributes is based on the related literature, exciting research, journals, and expert opinions of various stakeholders in physical education, such as professors, coaches, teachers, directors, etc., as shown in Figure 1.

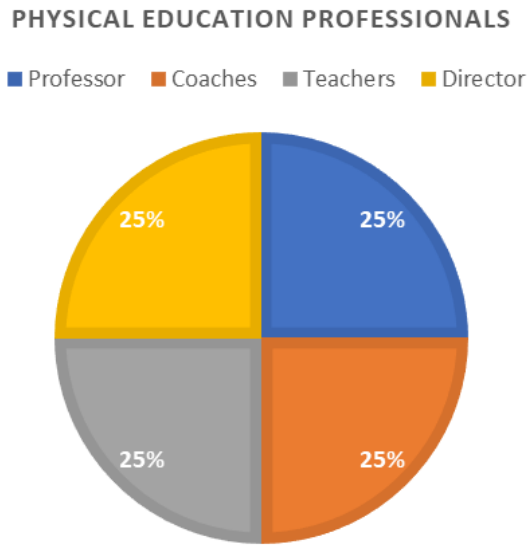


Figure 1. Physical education professional

1) Professor: All professionals working in colleges/universities in the physical education & sports domain.
2) Director: Professional working in the university's Department of Physical Education & Sports and handling various administrative tasks.
3) Coaches: Professionals who are gamer/sports specific and take care of sports coaching in school/college/university and clubs, etc.
4) Teachers: Professionals associated with the school as PT teachers, taking care of the secondary and higher secondary sports/PE classes.

Selection of the Participants

In the present study, 20 professors from various colleges/universities from the Department of Physical Education & Sports, 20 directors from various universities deputed in the Department of Physical Education & Sports, 20 teachers who are working as physical education teachers in various schools, and 20 coaches who are all working as sports/games-specific coaches in schools/colleges/universities and clubs were selected as participants.

Tools

The data was collected from physical educators in Gujarat through a questionnaire (Appendix A). The researcher has created a self-developed questionnaire considering the previous studies done on NEP in Google form after analyzing several theses, publications, and research papers on perspectives of the physical education professional for the NEP to promote the sports ecosystem in educational institutions. The study report used specific techniques, such as the descriptive analysis method.

Result Analysis and Interpretation of Data

The study has been analyzed for 80 respondents. The simple percentage analysis shows that:

Gender of the Respondents

The responses came from a maximum of 73% male and 27 % female respondents, as shown in Figure 2.

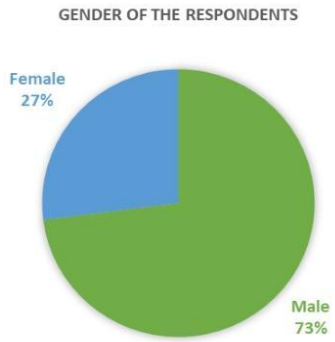


Figure 2. Gender of the respondents

Among the most essential modifications suggested in the NEP 2020 is this one: for the last 34 years, India has used the 12th education system. Regarding professional opinions on this update, 48% agreed and believed it is a good change, 25% agreed but had their reason for putting any case, and 7% were neutral about the decision. 5% of respondents believed it was not a good change, whereas 15% believed the old system was the best and opted for the education system (Figure 3).

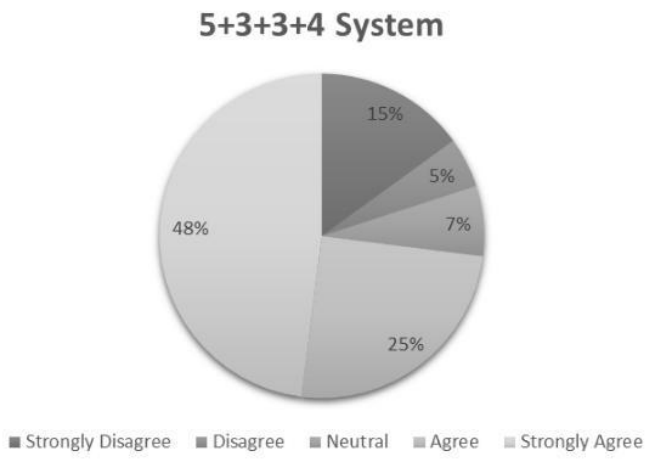


Figure 3. 5+3+3+4 system

The suggestion of teaching in one's mother tongue is an excellent idea. Still, it will bring about new challenges such as textbooks, teacher accessibility, and qualifications and expertise, necessitating detailed information and guidelines, and the outcome of the new concept will take time. 8.3 respondents strongly disagreed with this suggestion, whereas 8.3 were neutral. 20% of respondents showed that they agreed to have this change in the education system. In contrast, 63.3% of the majority of respondents strongly agreed with this proposal to make kids' education easier so they can understand the concept well in the mother language (Figure 4).

Figure 4. Teaching in mother tongue

Indeed, sports play a vital part in developing life skills and value systems for students and Around 6.7% of respondents strongly disagreed with this statement, whereas 1.7% responded that they disagreed. 13.3 respondents were neutral about the same, whereas 13.3 respondents agreed with this statement. 66% of respondents strongly agreed that sports should be vital to a cross-curriculum to develop students' self-discipline, teamwork, responsibility, and citizenship skills (Figure 5).

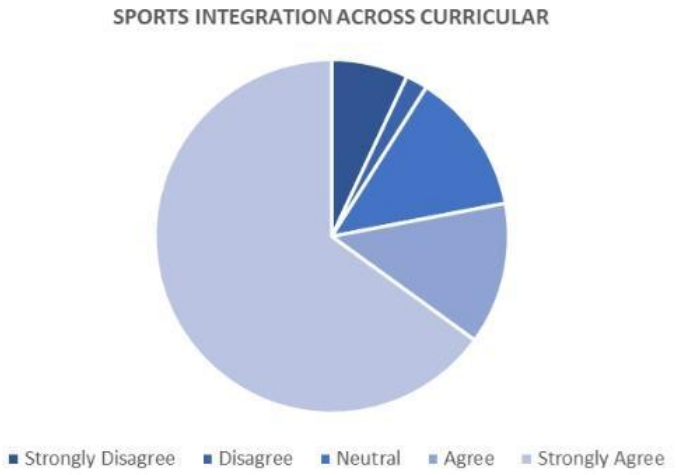


Figure 5. Sports integration across curricular

NEP emphasizes the possibility of offering various regular courses, including yoga, social sciences, creative arts, and music. This project will open up new career opportunities. Even if they are highly strong in these fields, many students are dropping out because they are either not offered regular classes or are given less focus than regular courses. Such an approach could be a novel strategy for motivating kids and maximizing their potential. A very small percentage of the respondents, 6.7%, shared their strong disagreement about this proposal, whereas 1.7% shared that they disagree with this change. 13.3% of respondents were neutral, and 13.3% of respondents agreed. However, a large number of respondents, 65%, strongly agreed to bring this change to give experiential learning to the students (Figure 6).

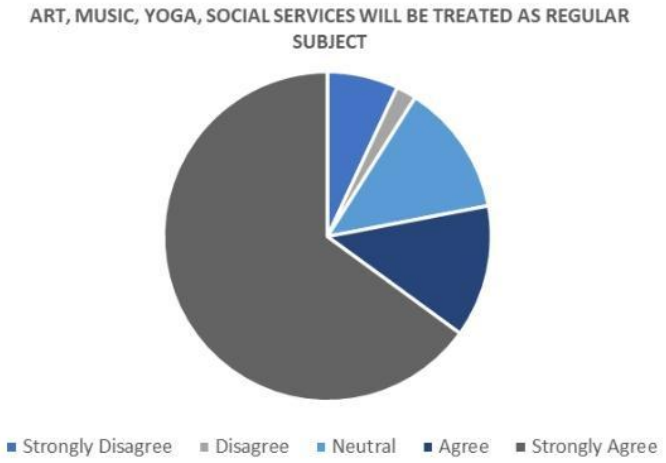


Figure 6. Art, Music, yoga, and social services are treated as a regular subject

It is critical to examine all elements of health and well-being at a young age, and it is also necessary to make kids aware that, in addition to bookish knowledge, knowing how to maintain physical fitness is essential. Sports Coaches and trainers are crucial in all educational institutes to develop value systems for students. A well-planned physical education program indeed develops character and a good value system in students' lives, but it requires adequate planning and time to execute. 5% of respondents highly disagreed with this statement, whereas 1.7% displayed that they did not agree. 5% of respondents were neutral. Most respondents agreed with this proposal that it would be really beneficial for the pupil to accept fitness as a regular activity; hence, 33.3% of respondents agreed, and 55% agreed with this proposal statement (Figure 7).

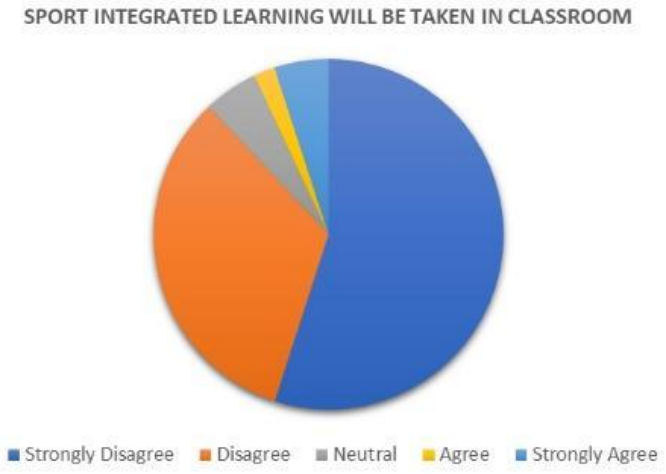


Figure 7. Sport-integrated learning in the classroom

To develop healthy competition and sportsmanship among young students, the first priority is to make them aware of the importance of participating in various games and sports competitions in their lives. This would be one of the best proposals of the NEP, as coaches often do not get adequate time and classes to prepare school/university teams. For this statement, 5% of respondents strongly disagreed, and 3.3% of respondents did not agree with 5% (Figure 8).

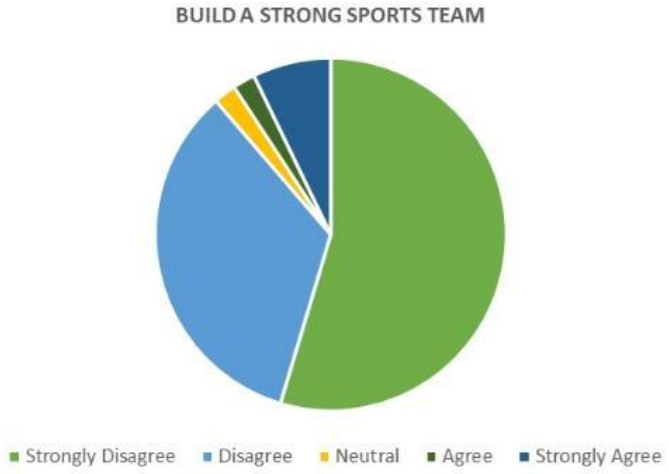


Figure 8. Build a strong sports team

The primary goal of the educational system is the holistic development of the pupils, and sports are essential to achieving this goal. NEP places considerable emphasis on the cultural and sports aspects of the school and university curricula. These will encourage students to dedicate more time to their choice-based assignments and might yield positive outcomes. 6.7% of participants strongly disagreed with this assertion, whereas 1.7% disagreed. 1.7% of respondents were undecided, while 36.7% agreed with the statement. Most participants (53.3%) strongly agreed with the statement and thought it may be helpful (Figure 9).

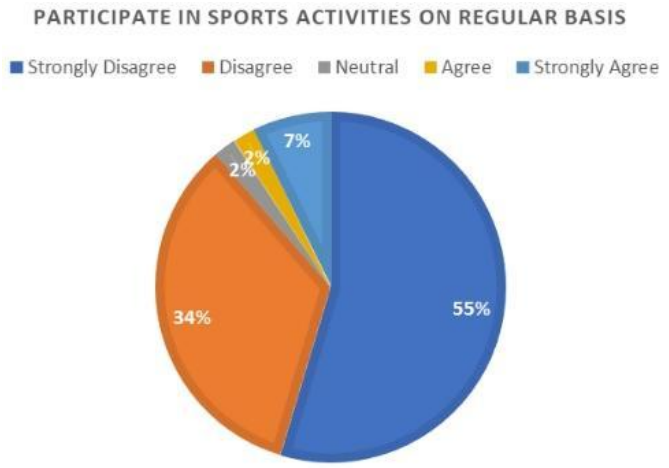


Figure 8. Participate in sports activities on a regular basis

NEP2020 suggests creating a physical education department and adding physical education as a subject to curricula in higher education institutions. HEI has developed numerous programs and policies to encourage physical activity and wellness. The likelihood of employment openings in physical education may grow with the implementation of NEP2020. About 6.7% of respondents strongly disagreed with this remark, and another 6.7% disagreed with it as well. In comparison, 20% of respondents agreed with this statement, 58.3% strongly agreed with it, and 8.3% of respondents were neutral (Figure 10).

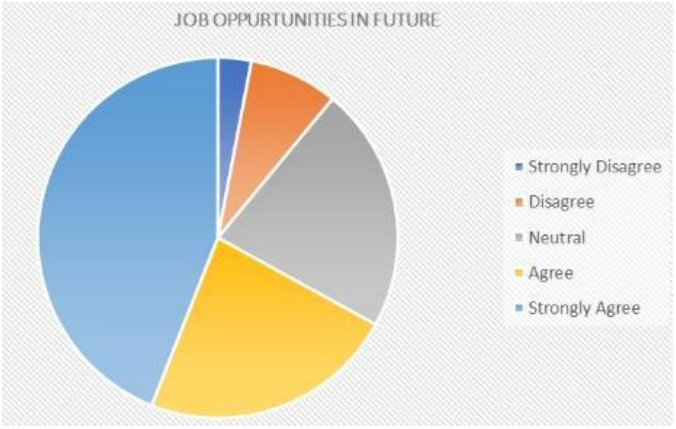


Figure 9. Job opportunities in future

The current NEP 2020's goal is to give all applicants a multidisciplinary and liberal education. NEP further emphasizes the inclusion of yoga as an essential course in the curriculum of HEIs and schools. 5% of respondents strongly disputed this statement, and an additional 5% disagreed. By contrast, 33.3% of participants agreed with the statement, 46.7% strongly agreed, and 10% were neutral. (Figure 10)

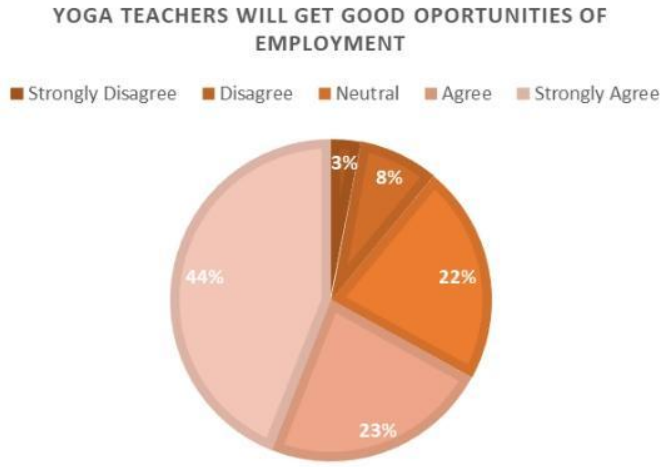


Figure 10. Yoga teachers' good opportunities for employment

To succeed in any sector, knowledge must always be updated. Teachers must ensure all students easily understand their material to impart quality information to their learners. Numerous associations in physical education, including UGC, AICTE, HRDC, and NCTE, are hosting workshops, seminars, and refresher courses. Educators will be encouraged to enroll in these courses to deepen their knowledge and abilities. A tiny fraction of respondents—6.7%—shared that they strongly disagreed with this idea, while 1.7% said they did not agree with the move. 23.3% of respondents agreed, while 8.3% of respondents were neutral. However, a significant number of respondents—60%—strongly concurred that teachers should stay updated with new information to effectively instruct children in various sports and activities. They are required to attend different workshops, seminars, and refresher courses (Figure 11).

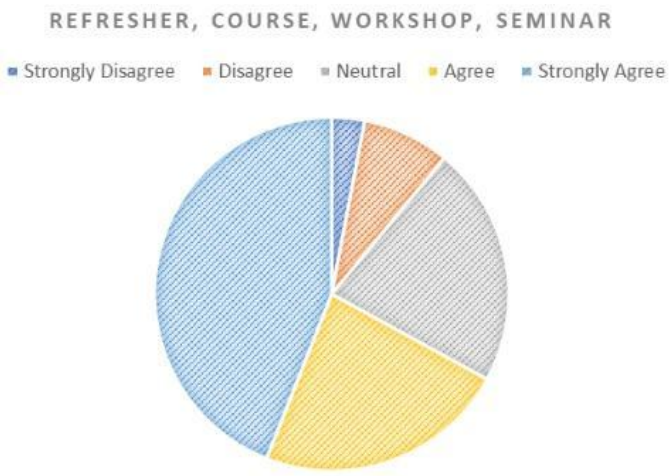


Figure 11. Refresher, course, workshop, seminar

Every educator will need significant support from their school and HEI to participate in numerous workshops and courses and gain scientific and advanced knowledge in their profession. It will be the HEI's enormous duty to assist its employees in strengthening their knowledge in whatever ways possible. The NEP has recommended that every HEI offer strong assistance in modernizing the Indian educational system. Just 6.7% of respondents expressed a severe disagreement with the help they will receive from their institutes, and 1.7% disapproved because their institutes will not offer support. 10% of respondents were neutral, and 31.7% of respondents agreed. However, a significant proportion of participants—50%—strongly concurred that they will receive assistance from their organization to enroll in different courses to acquire advanced and scientific knowledge in their profession (Figure 12).

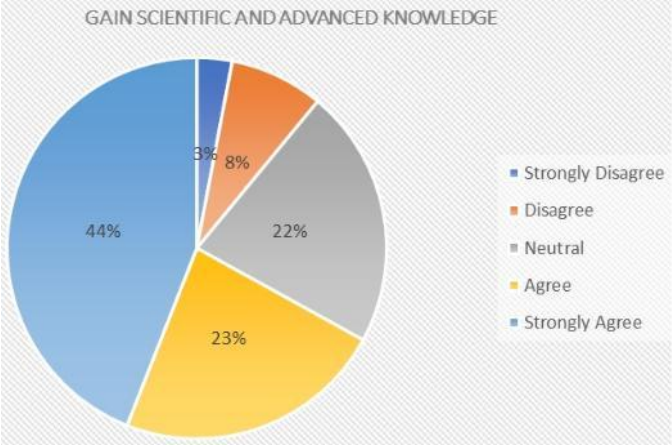


Figure 12. Gain scientific and advanced knowledge

New players are constantly encouraged to have fun and improve their abilities through grassroots coaching. Irrespective of the players' origins, it fosters the development of their local talent and confidence. It also lessens the possibility of racism, sexism, and prejudice while fostering diversity. Football at the grassroots level teaches players, young and old, the value of friendship, camaraderie, and collaboration in addition to technical ability. Even the grownups in charge of the grassroots football programs have the opportunity to hone their fundraising, coaching, and research abilities. In this age of competition, all coaches must have a sense of coaching techniques in order to help athletes improve their skills in a brief period of time and for Only 6.7% of respondents said they strongly disagreed with this statement, and 1.7% said they did not agree. Where 18.3% were neutral and 26.7% agreed. Nevertheless, 46.7% of respondents strongly agreed that the key to success is to "catch them young," since only then can we generate elite athletes. Of those surveyed, 8.3% strongly disagreed with the statement, while 3.3%

indicated they did not agree. Where 23.3% agreed and 21.7% were neutral. However, 43.3% of respondents firmly believed that they will have more opportunities to demonstrate their value if sports and physical education are promoted at HEI (Figure 12).

Figure 13. Promoting grassroot-level training/coaching pedagogy

Since NEP places a strong focus on holistic development, physical education ought to be an essential component of the entire educational program. Teachers and other professionals in physical education will undoubtedly see an increase in job satisfaction when their efforts are recognized and valued. Approximately 8.3% of the participants expressed their severe disagreement with the statement, while 3.3% said that they did not agree with it. 21.7% were neutral. Job satisfaction may rise as a result of these changes in the workplace, according to 23.3% of respondents, and 43.3% of respondents strongly agreed with this statement (Figure 13).

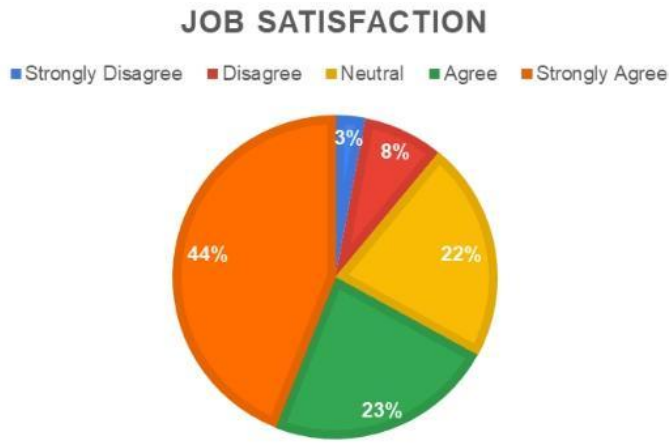


Figure 13. Job satisfaction

In keeping with this goal, the paradigm of (NEP) 2020 integrates yoga, sports, and physical education. Professionals in physical education, sports, and yoga will help bring health and wellness to every facet of an individual's personality. This framework's overarching goal is to make physical education, sports, and yoga become widely accessible and available with the establishment of professions in physical education and yoga through the primary to higher education institutions. As a result, these initiatives will support each and every Indian citizen's ability to stay well and be fit. It would be ideal if HEI made these courses core subjects for the students' benefit. It's interesting to see that 0% of participants claimed they disagreed with the statement, despite 8.3% expressing strong dissatisfaction with it. Neutral people made up 8.3%. 63.3% of respondents strongly agreed that we should implement NEP if physical education is incorporated as a key subject in the curriculum, and this view was supported by an additional 20.0% of respondents (Figure 14).

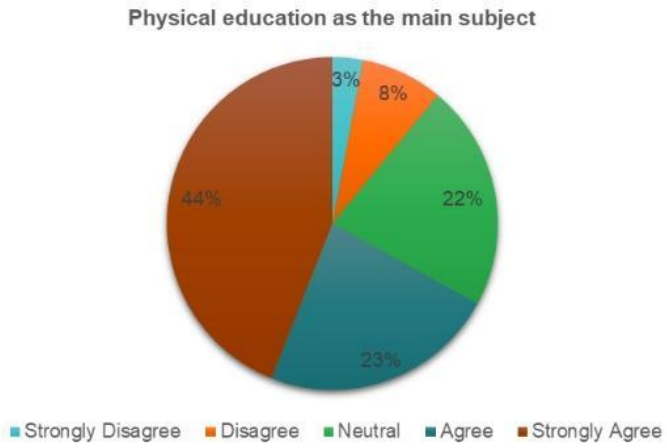


Figure 14. Physical education as the main subject

(NEP) has placed a high priority on the need for education to account for at least 6% of the overall budget. Developing this percentage is critical because, in comparison to other wealthy and developing nations, we currently spend relatively little on education. Extensive attention, substantial investments, and improved cost control are required. Hence, with this statement approximately 5% of the participants expressed their severe disagreement with the statement, while 3.3% said that they did not agree with it. 10% were neutral. The budget would be increased to support coaching sessions, purchases, events, etc., agreed upon by 21.7% of respondents, and 60% of respondents strongly agreed with this statement (Figure 15).

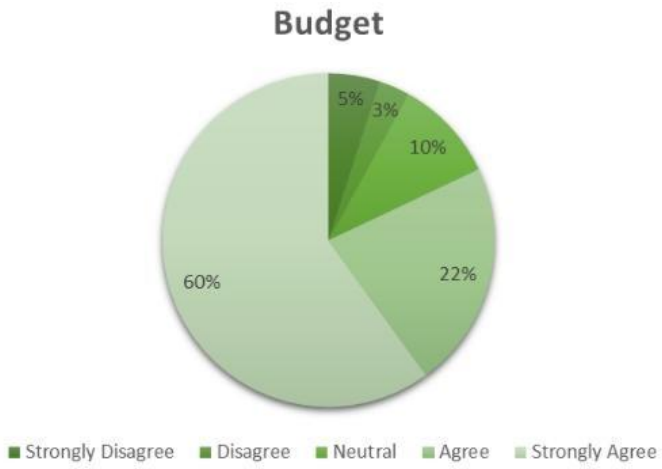


Figure 15. Budget

The success of a program, syllabus, or curriculum is determined by its execution from start to finish. NEP has offered numerous positive reforms and chances to enhance sports culture in India, as well as an extensive strategy for implementing these changes in the educational system. Nevertheless, individual and team conceptions will have a significant impact on the success of NEP in India. With this statement, around 6.7% of participants indicated strong disagreement, while 3.3% said they did not agree with it. Ten percent were neutral. 38.3% of respondents stated that the proper implementation of NEP will undoubtedly benefit sports culture, while 41.7% strongly agreed with this assertion (Figure 16).

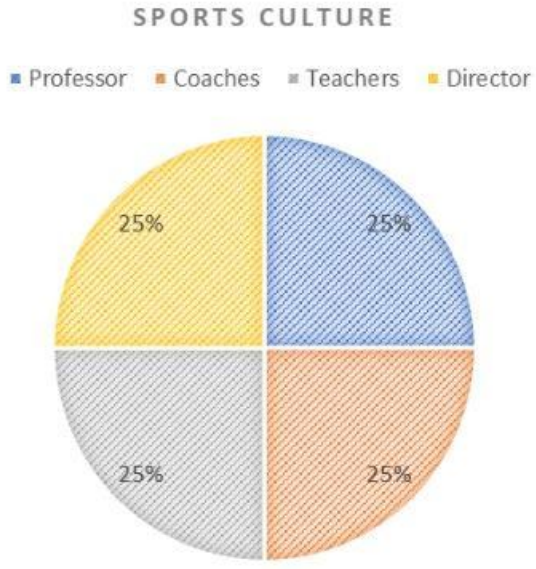


Figure 16. Sports culture

While any HEI intends to foster sports participation and a thriving sports culture on its grounds, it must first understand and embrace the requirements to accomplish those goals effectively. To succeed in curriculum development, the active participation of sports coaches, instructors, and trainers is essential. With this remark, around 5% of participants expressed severe disagreement, while 1.7% stated disagreement. 0 percent was neutral. 21.7% of respondents claimed that sportspeople will have a greater understanding of how to engage students in various activities; therefore, their input will surely benefit the effectiveness of the curriculum and program, while 71.7% strongly agreed with this assessment (Figure 17).

Figure 17. Sports coaches/teachers/trainer role in the curriculum

Research Questions and Answers

A. **RQ1. How does NEP 2020 impact physical education teachers, coaches, professionals, and yoga instructors in educational institutions?**

Answer to RQ1: NEP 2020 significantly impacts physical education teachers, coaches, professionals, and yoga instructors by recognizing their role in fostering holistic student development and integrating physical education into the core curriculum. It promotes professional development through mandatory upskilling and certification programs, enhancing career opportunities in schools, colleges, and wellness initiatives. However, challenges such as resource limitations and resistance to structural changes may hinder the immediate realization of these benefits.

B. RQ2. What are the opportunities and challenges associated with implementing physical education, sports, and yoga across all educational levels under NEP 2020?

Answer to RQ2: NEP 2020 creates opportunities to make physical education, sports, and yoga accessible across all educational levels, fostering inclusivity and early engagement in wellness practices. It encourages infrastructure development through public-private partnerships and integrates technology for gamified learning experiences. Additionally, it opens avenues for skill development, employment, and entrepreneurial opportunities in the wellness industry. However, challenges like inadequate resources, resistance to change, and insufficient funding could impact the uniform and timely implementation of these initiatives.

C. RQ3. What is the future impact of NEP 2020 on promoting health and wellness in education through physical education, sports, and yoga?

Answer to RQ3: NEP 2020 is expected to promote healthier generations by embedding physical education and yoga into the curriculum, reducing lifestyle diseases, and enhancing mental well-being. It fosters cultural revival through the global promotion of yoga and builds a health-conscious society by extending wellness education to community programs. The policy aligns with Sustainable Development Goals and prepares a future-ready workforce, emphasizing fitness and collaboration. However, its success will depend on effective implementation, monitoring, and addressing gaps in access and inclusivity.

Conclusion

It is critical to present all stakeholders' views on the NEP to emphasize the necessity of implementing this vital step in changing the education system. The Indian government has taken an important step to strengthen the Indian education system. This was a long-awaited development in India, and the proper implementation of the NEP will undoubtedly serve as a bridge between business and contemporary education. NEP is critical for developing a skill-based education system that would assist students in obtaining jobs in their identified fields. NEP supports all stakeholders in the education system and, on the other side, shares the high level of skills demanded of educators while demonstrating how to obtain them. So NEP will undoubtedly be required by the new BHARAT, and it demonstrates the correct road to global success.

Declaration of Interest Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethical Statement

Ethical approval is not applicable to this manuscript.

References:

[1] Patil, Ramesh. "National Education Policy 2020: The New Era of Transformation in School Education for 21st Century." *Int. Research J. Humanities and Interdisciplinary Studies (IRJHIS)* 3.1 (2022): 1-29.

[2] Sangeet, Bhawna. *National Education Policy (NEP) 2020*. Academic Guru Publishing House, 2024.

[3] Venugopal, K. R. *National Education Policy (NEP-2020) Issues, Challenges, and Implementation*. Techsar Pvt. Ltd., 2024.

[4] Agrawal, P., Kumar, M., Kumar, S., Sharma, M. P., & Teltumbade, G. R. An Overview of India's National Education Policy-2020.

[5] Kalyani, Pawan. "An empirical study on NEP 2020 [National Education Policy] with special reference to the future of the Indian education system and its effects on the." *Journal of Management Engineering and Information Technology* 7.5 (2020): 1-17.

[6] Professional Competence Attributes for Physical Education Trainee Teachers: New Education Policy (NEP 2020) Perspective. Manish Kumar, Dr. and Dr. Meenakshi. 4, NEW Delhi: NAT. Valatiles & Essent. oils, 2021; 8(4): 2021; 8(4): 2021;8(4):5688- 5697, 2021, Vol. 8.

[7] Umbarkar, Dr. Rajesh G. National Education Policy 2020. [book auth.] Dr. Vinay D. Bhogle. National Education Policy 2020. Nanded : Siddhi Publishing House, 2021, pp. 52-53.

[8] Physical Education and Sports in NAAC and NEP-2020. Dr. Rakesh Kumar Yadav, Dr. Somanpreet Singh. 12(8), Fatehgarh Sahib, Punjab : IJMER, 2020, Vol. 9.

[9] Khushnam, P. N. "National education policy 2020: A prudent vision of India’s soft power in the emerging world order." *India Quarterly* 78.2 (2022): 318-333.

Kulal, Abhinandan, et al. "Evaluating the Promise and Pitfalls of India’s National Education Policy 2020: Insights from the Perspectives of Students, Teachers, and Experts." *SAGE Open* 14.4 (2024): 21582440241279367.

Appendix

Questionnaire

S.N.	Questions
1.	Do you agree with the National Education Policy 2020 proposal, where the 10 + 2 system has been replaced by the 5 + 3 + 3 + 4 system?
2.	Do you believe it is a great idea, as recommended by NEP-2020, for their native language or a regional language to be the medium of instruction up to fifth grade?
3.	Do you agree that using cross-curricular teaching strategies, students can acquire values such as responsibility, citizenship, teamwork, self-initiative, self-direction, and self-discipline?
5.	According to the NEP-2020 proposal, arts, music, yoga, sports, and Social Services will be treated as regular subjects; in your opinion is this the right decision to give students a path to develop their skills there is?
6.	Is this the ideal approach to help children acquire life skills and a basic level of fitness through the use of sports integration in the classroom?
7.	NEP 2020 emphasizes developing physical fitness among all students. Will PE teachers get equal job opportunities in the future?
8.	As per the new education policy for 2020, yoga teachers will get excellent employment opportunities. Do you agree?
9.	Do you agree with the new education policy 2020, that all sports teachers need to update their knowledge to teach various sports/games as per the students understanding? They have to attend various refresher courses, workshops, seminars, etc.
10.	As per the new education policy 2020, all educational institutes will be providing ample opportunities to all teachers to gain scientific and advanced knowledge in their field. What is your take?
11.	Will the phrase “Catch them” support NEP to build world-class sportspeople, as it promotes grassroots-level teaching/coaching pedagogy?
12.	Will there be more possibilities of job satisfaction in comparison to the old

	education system?
13.	Should educational institutes include sports/physical education as a main subject at the primary level?
14.	The budget will be increased to purchase new equipment and sports goods to support coaching sessions. Do you support it?
15.	NEP-2020 proposes numerous opportunities to foster a sports culture in educational institutions, with implementation effectiveness being the sole determining factor. Do you agree with the suggestions?
16.	Should sports coaches/teachers/trainers be involved in the planning of the curriculum and annual event calendar?

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

The Impact Of Participation Level On Self-Esteem In Sports Players

Dr.P. SUPRIYA
Asst. Professor in Physical Education,
Govt. Degree College for Women, Begumpet, Hyderabad, Telangana, India.
Email: supriyanalla@gmail.com

Abstract

This study investigates the relationship between the level of sports participation and self-esteem among athletes. A sample of seventy (N=75) subjects in the age categories of 18 to 22 years, were divided into three groups. One is National or Inter University Players Group, second is State level Players group, third is Inter College or College level Players group. The variable tested for this study was delimited to Self-Esteem. The criterion variable chosen were tested with reliable testing tool. Self-Esteem was measured with Rosenburg Self Esteem Questionnaire (RSE) and scores were recorded based on the responses. Using a comparative approach, the research explores how varying degrees of involvement in participation affect athletes' self-perceptions. Anova and Tukey Post Hoc was used to test the data statistically. The results reveal that higher levels of participation are positively correlated with increased self-esteem, although various moderating factors such as age and type of sport also play a role. These findings have implications for sports psychology, athlete development, and mental health promotion in sporting environments.

Introduction

Self-esteem is subjective sense of overall personal worth or value. Similar to self-respect, it describes level of confidence in abilities and attributes. Having healthy self-esteem can influence motivation, mental well-being, and overall quality of life. However, having self-esteem that is either too high or too low can be problematic. Better understanding what unique level of self-esteem is can help to strike a balance that is just right.

Self-esteem is a foundational aspect of psychological health and a critical component in the performance and development of athletes. Engaging in sports can influence an individual's perception of self-worth, with potential benefits extending beyond physical fitness. The present study explores how the level of participation in sports—categorized as recreational, amateur, and

professional—relates to self-esteem in sports players. By identifying these differences, this study contributes to sports psychology by offering insight into how various levels of athletic engagement may shape psychological well-being.

Self-esteem is crucial for the emotional, social, and academic development of girls. One influential factor in building self-esteem is participation in sports. However, access to sports and the cultural environment surrounding girls' participation vary significantly between rural and urban areas. This paper analyzes how these differing environments shape the psychological benefits girls gain from sports, with a focus on how self-esteem is developed, supported, or hindered.

Self-Esteem and Sports: The Core Relationship

Self-esteem refers to an individual's overall subjective sense of personal worth. Research consistently shows that participating in physical activity enhances confidence, promotes a positive body image, and fosters social belonging—all contributing factors to improved self-esteem in girls (Slutzky & Simpkins, 2009).

Literature Review

Numerous studies have identified a positive association between physical activity and self-esteem (Fox, 2000; Ekeland et al., 2004). Athletes are frequently found to have higher self-worth due to the structured environment, social reinforcement, and accomplishments that accompany sports participation. However, differences in the level of commitment, expectations, and stress may result in varied impacts on self-esteem. Some researchers argue that professional athletes benefit from greater self-confidence due to their accomplishments (Gould et al., 1996), while others warn of the psychological costs of competitive pressure (Stevenson, 1990). This study seeks to build on this literature by providing a comparative analysis of self-esteem across different levels of sports participation.

Methodology

Selection of subjects: For the present investigation seventy-five (75) girl students of Government Degree College for Women, Begumpet, Hyderabad was selected randomly. Their age ranged between 18 to 22 years.

- National or IUT Level (n = 25)
- State Level (n= 25)
- Inter College or College Level (n= 25)

Selection of Variable and Procedure: The instrument used in obtaining data of each player's Self-esteem was the Rosenberg Self-Esteem Scale (RSE) and scores were recorded for the groups. The questionnaire administered to the players and instructions were given to the subjects. The questionnaire has 10 statements, each statement describing some personal experience. Each statement was evaluated on "Strongly Agree", "Agree", "Disagree" or "Strongly Disagree". The researcher requested them to record the appropriate answer for each item depending on the options.

Scoring: The scale can be scored by totalling the individual 4-point items after reverse- scoring the negatively worded items. Higher scores indicate higher levels of global self-esteem.

Norms: Low Self-Esteem would be between 0-15.
Normal Self-Esteem would be 15-25.
High Self-Esteem would be above 25.

Statistical analysis

The data collected from the groups on selected variable was statically examined to find out whether there was any significant difference between the groups on Self-Esteem. Data were analysed using **one-way ANOVA** to compare self-esteem scores across the three groups. **Post-hoc Tukey tests** were used to determine specific group differences. The level of significance was fixed at 0.05 level of confidence.

Results:

Table showing the Impact of participation level on self-esteem in sports players

Level of Participation	Mean	Std Dev
Inter-University	19.5833	2.50303
State Level	18.0000	1.83533
College Level	15.3721	2.39069

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	209.223	2	104.612	20.195	.000
Within Groups	372.963	72	5.180		
Total	582.187	74			

Tukey Test

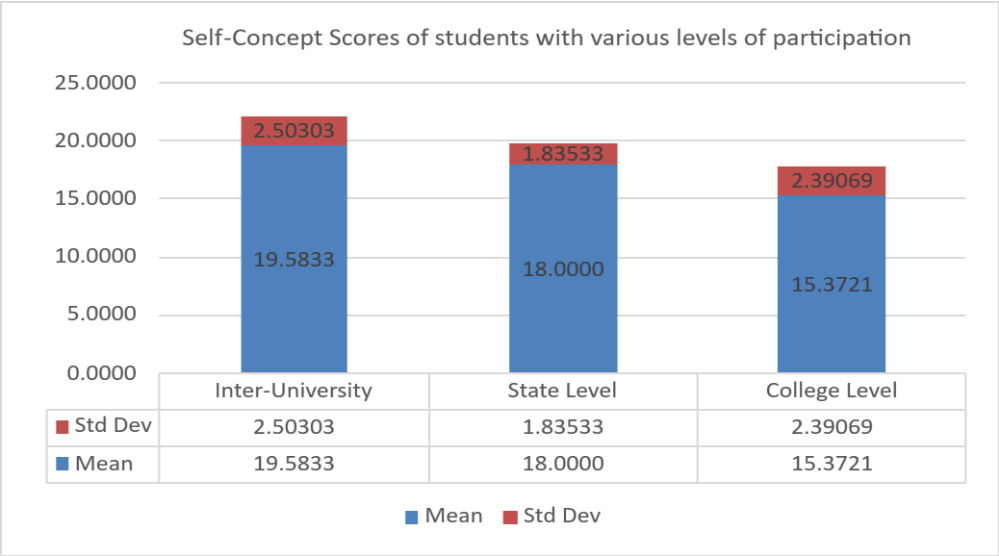
			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	University	State Level	1.58333	.83107	.145	-.4055	3.5722
		College	4.21124*	.74306	.000	2.4330	5.9895
	State Level	University	-1.58333	.83107	.145	-3.5722	.4055
		College	2.62791*	.61601	.000	1.1537	4.1021
	College	University	-4.21124*	.74306	.000	-5.9895	-2.4330
		State Level	-2.62791*	.61601	.000	-4.1021	-1.1537

*. The mean difference is significant at the 0.05 level.

The Anova table suggests there is a significant difference exists on self-esteem among various participation level subject's groups with highest self-esteem found to be in students of Inter-University followed by State group then with college group. Tukey Post hoc test suggests that there is no significant difference exists among Inter-University group and state group with remaining other group comparison the significant difference exists.

The table shows Mean ± SD among Inter-University, State Group and College group compared with 15 as standard good self-esteem level. The analysis revealed a statistically significant difference in self-esteem scores among the three groups.

Bar diagram showing the Impact of participation level on Self-Esteem in sports players



Discussion

The main aim of the study was to find out the Impact of participation level on Self-Esteem in sports players, findings support that the self-esteem increases with higher levels of sports participation. This may be due to greater social validation, goal achievement, and identity reinforcement experienced by Inter University and National players. While Stare level players and college level players benefit from moderate engagement and structure, recreational participants may not receive the same psychological reinforcement, potentially explaining their lower self-esteem scores.It is important to note, however, that National level players are also exposed to high levels of stress and performance anxiety, which could impact mental health in other domains not captured by this study. Additionally, factors such as coaching quality, team support, and personality traits may also influence self-esteem outcomes and warrant further investigation.

Conclusion

This study concludes that there is a significant positive relationship between the level of participation in sports and self-esteem. These insights are valuable for educators, coaches, and mental health professionals aiming to enhance athlete development and well-being. Future research should examine longitudinal changes and include qualitative data to explore underlying psychological mechanisms.

References

- Ekeland, E., Heian, F., & Hagen, K. B. (2004). Can exercise improve self-esteem in children and young people? British Journal of Sports Medicine, 38(3), 292–298. https://doi.org/10.1136/bjsm.2002.001425
- Fox, K. R. (2000). Self-esteem, self-perceptions and exercise. International Journal of Sport Psychology, 31(2), 228–240.
- Gould, D., Eklund, R. C., & Jackson, S. A. (1996). Coping strategies used by U.S. Olympic wrestlers. Research Quarterly for Exercise and Sport, 67(4), 383–396.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton University Press.
- Stevenson, C. L. (1990). The athletic stereotype: Conceptualization and measurement. International Review for the Sociology of Sport, 25(3), 243–257. https://doi.org/10.1177/101269029002500305

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Impact of Physical Education to improve the life style challenges on Corporate Excellence

Dr. Pradeep Kumar Lenka
Assistant Professor
Prof. V.B. Shah Institue of Management, R.V. Patel College of Commerce (E.M.),
V.L. Shah College of Commerce (G.M.),
Sutex Bank College of Computer Applications and Science, Amroli, Surat.
Email. pradeeplenka9429016830@gmail.com

Abstract: This Research paper explores the multifaceted relationship between Physical Education (PE) principles, regular physical activity, and the attainment of corporate excellence. Moving beyond traditional metrics of productivity, we investigate how the integration of PE concepts – encompassing teamwork, discipline, resilience, and well-being – within the corporate structure contributes to enhanced employee performance, organizational culture, and overall business success. Through a review of existing literature and the analysis of potential implementation strategies, this paper argues that prioritizing physical well-being is not a peripheral benefit but a fundamental driver of sustainable corporate excellence in the contemporary business environment. **Keywords:** Corporate Excellence, Physical Education, Employee Well-being, Productivity, Teamwork, Organizational Culture, Human Capital, Workplace Wellness.

Introduction:

In an increasingly dynamic and competitive global market, organizations are constantly seeking innovative strategies to optimize performance and achieve sustained excellence. While traditional approaches often emphasize intellectual capital, technological advancements, and strategic planning, the significance of employee physical and mental well-being as a core driver of organizational success is gaining increasing recognition. This paper posits that the principles and practices inherent in Physical Education (PE) offer a powerful, yet often underutilized, framework for cultivating corporate excellence.PE, traditionally associated with school curricula, extends far beyond the development of athletic skills. It instills fundamental life skills such as teamwork, communication, discipline, resilience, and a proactive approach to health. These

attributes are directly transferable and highly valuable within the corporate context. This research aims to explore the theoretical underpinnings and practical implications of integrating PE principles and promoting physical activity within organizations, investigating its impact on key indicators of corporate excellence, including employee productivity, innovation, collaboration, and overall organizational culture.

Literature Review:

Existing research across various disciplines supports the notion that physical activity and the principles of PE positively influence individual and organizational outcomes.

* Physical Activity and Cognitive Function: Studies in neuroscience and exercise physiology have consistently demonstrated the positive impact of physical activity on cognitive functions such as attention, memory, and executive control (Ratey & Hagerman, 2008). Increased blood flow to the brain, neurogenesis, and the release of neurotrophic factors contribute to enhanced mental clarity and improved decision-making – crucial elements for corporate success.

* Physical Activity and Mental Well-being: Exercise is a well-established stress reliever and mood enhancer (Sharma et al., 2006). Regular physical activity can reduce anxiety, depression, and burnout, leading to a more positive and resilient workforce. Employees with better mental well-being are more engaged, productive, and less likely to experience absenteeism (Goetzel et al., 2014).

* Teamwork and Collaboration in Physical Activity: Team sports and group fitness activities inherently foster teamwork, communication, and cooperation (Carron & Eys, 2012). Participants learn to coordinate efforts, support each other, and work towards shared goals – skills directly applicable to project teams and interdepartmental collaborations within organizations.

* Discipline and Goal Setting through Physical Training: Achieving fitness goals requires discipline, perseverance, and the ability to set and adhere to plans. These qualities, developed through consistent physical training, translate to a more focused and goal-oriented workforce capable of tackling complex tasks and overcoming professional challenges (Weinberg & Gould, 2019).

* Workplace Wellness Programs and Organizational Outcomes: A growing body of research highlights the positive return on investment for workplace wellness programs that incorporate physical activity initiatives. These programs have been linked to increased productivity, reduced healthcare costs, lower absenteeism, and improved employee morale (Baicker et al., 2010).

Conceptual Framework:

This research proposes a conceptual framework that illustrates the pathways through which the integration of PE principles and physical activity can lead to corporate excellence.

- {Physical Education Principles & Physical Activity}

- {Development of Soft Skills (Teamwork, Discipline, Resilience, Communication)}
- {Enhanced Individual Well-being (Physical & Mental Health, Reduced Stress)}
- {Improved Cognitive Function (Focus, Memory, Decision-Making)}
- {Positive Organizational Culture (Collaboration, Engagement, Morale)}
- {Corporate Excellence (Increased Productivity, Innovation, Retention, Profitability)}

This framework suggests that by fostering the development of essential soft skills, enhancing individual well-being, and improving cognitive function, PE and physical activity contribute to a more positive and productive organizational culture, ultimately driving corporate excellence.

Potential Implementation Strategies in the Corporate Setting:

Integrating PE principles and promoting physical activity within organizations can take various forms, tailored to the specific needs and resources of the company. Potential strategies include:

* On-site Fitness Facilities and Programs: Providing accessible and convenient fitness options encourages employee participation.

* Organized Sports Leagues and Team-Building Activities: Fostering camaraderie and teamwork through shared physical experiences.

* Subsidized Gym Memberships and Wellness Incentives: Making fitness more affordable and rewarding.

* Integration of Movement into the Workday: Encouraging short exercise breaks, walking meetings, and ergonomic workspaces.

* Educational Workshops on Health and Wellness: Raising awareness and promoting healthy habits.

* Leadership Engagement and Role Modelling: Demonstrating the importance of physical well-being from the top down.

Discussion and Implications:

The evidence suggests a strong correlation between the principles of PE, regular physical activity, and key drivers of corporate excellence. By cultivating essential soft skills, enhancing individual well-being, and improving cognitive function, organizations that prioritize the physical health of their employees are likely to experience a more engaged, productive, and innovative workforce.

The implementation of PE-inspired initiatives requires a shift in organizational culture, recognizing physical well-being as a strategic asset rather than a mere employee benefit.

Leadership commitment and the development of tailored programs that resonate with employee needs are crucial for successful integration.

Limitations and Future Research:

While the theoretical framework and existing literature provide a strong foundation, further empirical research is needed to quantify the direct impact of specific PE-inspired interventions on various metrics of corporate excellence. Longitudinal studies tracking the effects of implemented programs over time, as well as comparative analyses across different industries and organizational structures, would provide valuable insights. Future research could also explore the role of technology in facilitating and promoting physical activity within the workplace.

Conclusion:

In conclusion, this research paper argues that Physical Education offers a powerful and often overlooked pathway to achieving corporate excellence. By embracing the principles of teamwork, discipline, resilience, and prioritizing the physical well-being of employees through targeted initiatives, organizations can cultivate a more engaged, productive, and innovative workforce. Moving beyond traditional approaches to corporate development, recognizing the embodied advantage inherent in a physically active and healthy workforce is crucial for sustained success in the 21st-century business environment.

References:

Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. Health Affairs, 29(2), 304-311.

Carron, A. V., & Eys, M. A. (2012). Group dynamics in sport. Human Kinetics.

Goetzel, R. Z., Ozminkowski, R. J., & Serxner, S. A. (2014). The business case for worksite health promotion. Annual Review of Public Health, 35, 303-323.

Ratey, J. J., & Hagerman, E. (2008). Spark: The revolutionary new science of exercise and the brain. Little, Brown and Company.

Sharma, A., Madaan, V., & Petty, F. D. (2006). Exercise for mental health. Primary care companion to the Journal of clinical psychiatry, 8(2), 106.

Weinberg, R. S., & Gould, D. (2019). Foundations of sport and exercise psychology. Human Kinetics.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Impact Of Multimedia On Teaching Basic Cricket Rules In India

Dr. Sunil Kumar Gadipally,
Physical Director
Department of Physical Education & Sports,
JNTUH University College of Engineering Manthani,
Peddapalli Dist, Telangana State, India.
Email: sunilkumar.gadipally@gmail.com

Abstract:

To-day's classroom practices are quite different from those of yesterday. Similarly, the classroom practices in the coming century may be quite different from those of today. The shape of future school, colleges and universities is bound to change radically due to technological impact in the years to come. Multimedia means making appeal to different senses instead of one as in the traditional method. Multimedia includes High Technology Instructional Media. The present study was to investigate the role of multimedia on teaching basic cricket rules of JNTUH University women cricket specialization students. Forty students studying bachelor's degree in the Department of Physical Education and Sports Sciences, with the age from 18 to 20 years (mean age = 19+_ 0.5 years) were selected for this study. They were divided in to two groups of twenty subjects each namely the traditional practical method of teaching group and multimedia based modular of teaching group (teaching cricket rules).A computer expert was consulted to develop the courseware programme to teach the basic cricket rules and it was discussed with him how to develop software based on the modules. The achievement test consisted of 100 questions. Out of 100 questions, 60 objective type questions and 40 fill in the blanks type questions were present. The total score of the test was 100. For each correct answer, the score was one and for each wrong answer the score was zero. The statistical tool used for this study was't'-ratio. The results of the study shows that the mean values of traditional lecture method of teaching group and multimedia based modular method of teaching group were 50.75+_ 2.89 and 70.25+_ 2.998 respectively. The obtained't' ratio value 20.61 was greater than the required table value of 2.0246 for significance at 0.05 level of confidence with DF 38. The results of the study showed that there was a significant difference between traditional lecture method of teaching group and multimedia based modular method of teaching group in teaching cricket rules in favor of experimental group.**Keywords:** Multimedia, High Technology, Teaching Basic Cricket rules etc.

Introduction: To-day's classroom practices are quite different from those of yesterday. Similarly, the classroom practices in the coming century may be quite different from those of today. The shape of future school, colleges and universities is bound to change radically due to technological impact in the years to come.

Readers Digest defines multimedia as combination of modes of communication, such as video, audio text. According to Encyclopedia of Education, the term "multimedia instructional system" refers to the use of appropriate and carefully selected varieties of learning experiences which, when presented to learner through selected teaching strategies, will reinforce and strengthen one another so that the learner will achieve pre-determined and desired behavioural objectives.

Multimedia means making appeal to different senses instead of one as in the traditional method. Multimedia includes High Technology Instructional Media (Pillai, 2020). In teaching learning process in classroom situation different media are used viz., video, computer and other projected and non projected aids to make learning more effective. A teacher using multimedia can make even difficult concept clear to a below average student easily. Multimedia devices are more capable of penetrating deeply into human character with an immediate excitement than any other single medium.

Any discussion on multimedia without highlighting the current use of computers will be incomplete. The decreasing cost and increasing availability of micro computers in schools have led researchers as well as teachers to become more interested in CAI (Pillai, 2020).

According to a research, which was conducted by Annarino, the use of multimedia at elementary school enhanced teaching and stimulated pupils learning the somersault. In the above study the components of the multimedia system included texts and printing materials, still images, sound, analogue video cameras, video recorders and presentation walls. The results indicated that school children, which had been taught using multimedia, performed better than children who had been taught by the traditional way did. Multimedia can be considered a special kind of software.

The main scope of SE is ensure high quality of software with reduced costs and time that meets the requirements of the customer (e.g., portability, reliability, usability, reusability and design) by structuring the developmental process into specific phases, cascades or cycles, e.g., inception, elaboration, construction and transition with several core workflows or problem analysis, definition of requirements, sketch, specifying the interface, implementation, integration and verification, installation, validation and documentation and modification, expansion and correction (Balzert, 2023).

Methods:

In this duty, forty students studying bachelor's degree in the Department of Physical Education and Sports Sciences, Osmania University were randomly selected by lot method from the total of 405 students as subjects. The age of the subjects were ranged from 18 to 20 years (mean age = 19=_0.5 yrs). They were divided in to two groups of twenty subjects each namely the traditional practical method of teaching group and multimedia based modular of teaching group (teaching cricket rules).

Development of Computer Software:

Since a multimedia approach would be incomplete without application of computer software. A Computer expert was consulted to develop the courseware programme to teach the basic cricket rules and it was discussed with him how to develop software based on the modules.
Though there are various programmes such as "drill and practice programme", "tutorial programme", since this is the most widely used type of computer programme. The purpose of this programme as to provide practice on skills and knowledge so that students can remember and use what they have been taught.

The software was prepared in such a way that it ensured the following.

1. Letting students work at their own peace.

2. Providing immediate feedback and reinforcement.

3. Measuring performance quickly and giving students information on their performance.

Procedure:

To evaluate the effectiveness of multimedia based modules and to compare the achievement of the learners taught multimedia based modular approach with that of traditional lecture method of teaching group and modernized multimedia based modular method of teaching group, an achievement test was constructed. Questions of objective type nature were framed without omitting any unit. Multiple choice and fill in the blanks were the types of questions used in this achievement test. The questions were framed so as to suit the level of bachelor's degree students in physical education. Utmost care was taken to avoid ambiguity and ambivalences.

The item analyses were included in the final form of achievement test selected on the basis of item analysis. Initially 120 questions of objective type in nature were framed for tryouts. 60% multiple choice questions & 40% fill in the blanks or were framed for the achievement test. Multiple choice test items were composed of a stem followed by a series of possible responses or options. The stem is a direct question or an incomplete statement ability to analyse and synthesise. These test items are questions or incomplete statement, which require highly short and specific answers. The answer is usually a significant word or expression.

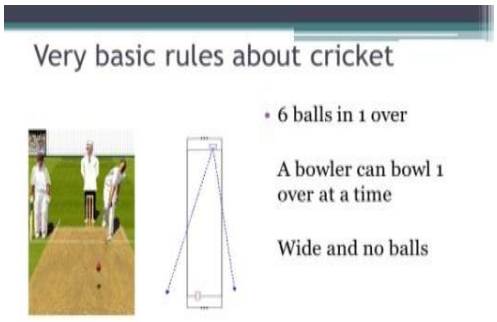
The experimental group was taught through multimedia based modular approach for a period of 40 working days at the rate of one hour per day especially in the evening after the class hours. The students were taught by using computers with multimedia software. The software was also used on turn basis since we could not provide sufficient number of computers. Three units were covered the period of investigation. The experimental group learners were encouraged to make self study with the help of the instructions given in the modules.

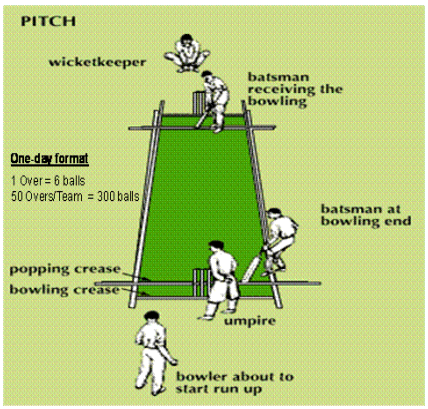
Collection of the Data:

At the end of experimental period, an achievement test was conducted to the learners of the multimedia based modular method of teaching group and the traditional lecture method of teaching group. The responses given by the statement in the test formed the vital data required for the analysis. The achievement test consisted of 100 questions. Out of 100 questions, 60 objective type questions and 40 fill in the blanks type questions were present.
The total score of the test was 100. For each correct answer, the score was one and for each wrong answer the score was zero.

Statistical Tool Used:

The independent‘t’ ratio was used to find out the significant differences, if any between traditional lecture method of teaching group and multimedia based modular method of teaching group in teaching cricket rules. In all cases, 0.05 level of confidence was fixed to test the significance.





Results:

The results of the study shows that the mean values of traditional lecture method of teaching group and multimedia based modular method of teaching group were 50.75+2.89 and 70.25+_ 2.998 respectively. The obtained‘t’ ratio value 20.61 was greater than the required table value 2.0246 for significance at 0.05 level of confidence with DF 38. The result was shown that experimental group has better understanding in basic cricket rules than the traditional lecture method group.

Discussion and Conclusion:

The results of the study showed that there was a significant difference between traditional lecture method of teaching group and multimedia based modular method of teaching group in teaching cricket rules. This may be due to the fact that normally the video based or television based teaching produces subjects' interest to listen the lesson. It also gives relaxation, motivates the learners by having attractive colour letters, pictures etc., in the video graphs or multimedia packages. The finding of the study yields the similar results of Antonisamy (2012), Bhatt (2008), Kalimathu (2003) and George (2000). The use of multimedia and the traditional method of teaching, provide a future path, which enhance performance. There exist are more software programs that pupils may use in order to find positive applications in physical education and to stimulate their learning.

References:

- ✓ Pillai, "Appropriate Instructional Media Selection in India", Media and Technology for Human Resource Developments, 1:1, 2020.
- ✓ Balzert, H. Lehrbuch der Software-Technik. Softwareentwicklung, (Heidelberg: Spectrum Akademischer Verlag, 2023).
- ✓ N. I. Goggin, M.E. Finkenberg, and J.R. Morrow, "Instructional Technology in Higher Education Teaching", Online Source, 2000.
- ✓ Antoniasamy, "A Study of the Effectiveness of Teaching Environmental Concepts to School Dropouts Through Video and Charts", Unpublished M.Phil, Dissertation, Madurai Kamaraj University, (2012).
- ✓ Cratty, J Bryant, "Movement Behavior and Learning", Philadelphia: Lea and Fibiger, 2015.
- ✓ Dale, Hollings, Worth Barbara "The effect of anxiety on performing goals and learning gross Motor task". International Dissertation Abstract, Volume…35, 2012, p.245.
- ✓ Griffin, Marry Roland, "An analysis of state and Trait Anxiety experience in sports competition by Women at different age levels". International Dissertation Abstract, Vol. 32, No. 12, 2003, P.3758A.

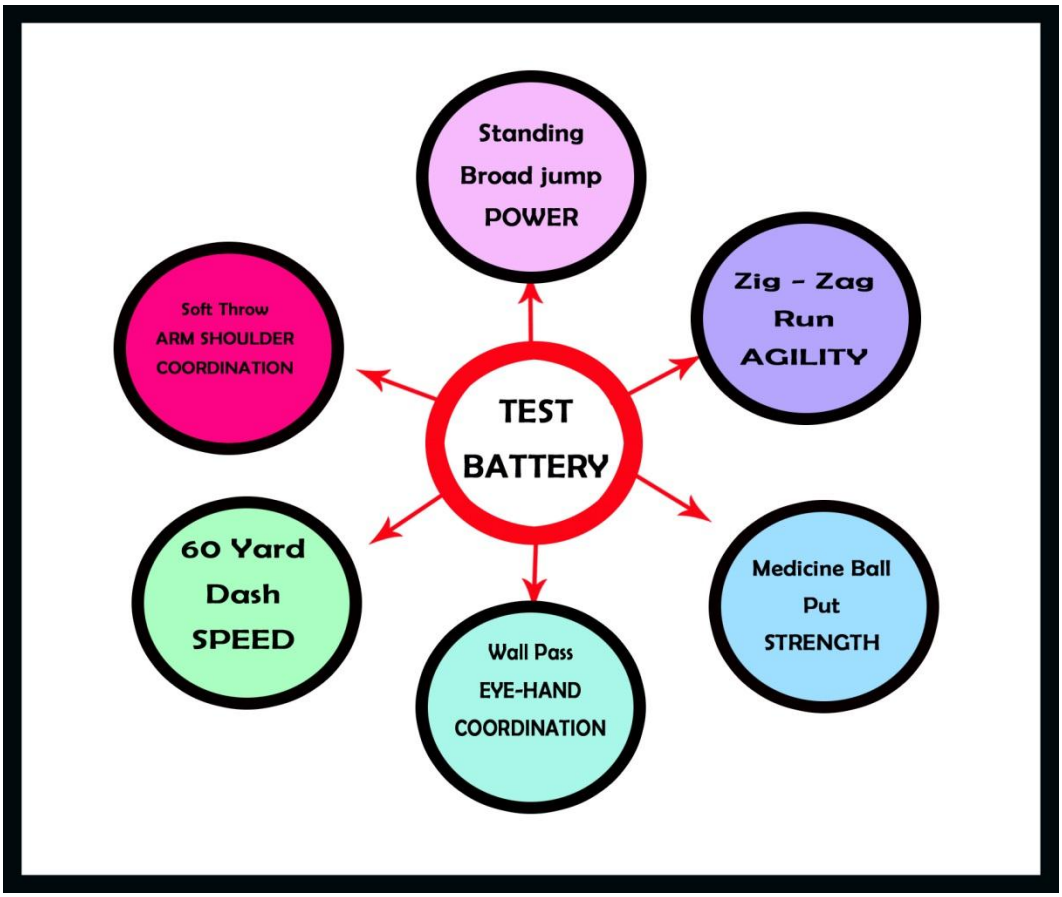
ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Effect Of Varied Training Designs On General Motor Ability Among Inter Collegiate Basketball Players At Hyderabad

Dr. S. Someshwar Rao,
M.A.,M.P.Ed., M.Phil., Ph.D.
Head, Department of Physical Education
Avanthi Degree & PG College, BarkatpuraHyderabad.

Introduction: To identify all published studies using the General Motor Ability Test (GMAT), a standardized, laboratory-based measure for selected upper extremity activities of daily living (ADLs); and to summarize its current uses and provide recommendations for its future use. Barrow General motor fitness test is good to check the general motor ability of an individual, which includes motor components like strength, endurance, agility, flexibility and coordination abilities etc. "The first battery with six items showed a correlation coefficient of 0.95, while the three item battery with the 29 item battery showed a cprrelation coefficient of 0.92.**Data sources:** search was performed using the terms "General Motor Ability Test" and "GMAT." The reference lists of all articles obtained were reviewed for additional studies not appearing in the literature search. In addition, the original manual for the use and administration of the GMAT was reviewed.

Methodology: All basketball players from Hyderabad Govt and Private Colleges examining the Physical properties of the general motor ability test (GMAT) or using the general motor ability test (GMAT)as an outcome measure were identified. Articles simply mentioning the general motor ability test (GMAT) without providing data and case reports or abstracts.



Data synthesis: it is one of the popular motor ability testing procedures for Hyderabad Basketball college male players and selected 6 items form General Motor ability,

Standing Broad Jump (to measure power) .1

Zig –Aag Run (to measure Agility) .2

Medicine Ball Put (to measure Strength) .3

Softball Throw (to measure coordination) .4

Wall Pass (to assess eye- hand coordination) .5

60yard Dash (to measure speed) .6

which he did over about 120 college men. These items were chosen to measure five factors of motor ability identified with the help of expert advice. Based on the notion of measuring motor performance, an experiment with two groups of 60 Basketball player from govt.college (N = 60), 19 to 20yr., 60Basketball Players from Private College(N=60) same age (national level), with Players of the same size and age was conducted, to identify the important abilities for the achievement of excellence in this sport. Motor abilities (whole-body coordination, dynamic balance, and static balance, sense of kinesthesia, whole-body movement time, and eye-hand coordination) as well as perceptual abilities (whole-body reaction time, anticipation of coincidence, and depth perception) were compared.

Analysis showed that scores on measures of whole-body coordination, dynamic balance, and static balance were higher for private College groups of athletes than for corresponding control groups. Moreover, private College group scored higher than those in the Govt. College group. These findings indicate the presence of systematic differences between Private College group and Govt College group on motor abilities related to experience in this sport..

Conclusions: We recommend that the 5-item version of the GMAT and assessment of only the functional ability domain be adopted as standard going forward. Further research should include examination of sensitivity over time.

References :

- Cognitive, perceptual, and motor abilities in skilled basketball performance. Kioumourtzoglou E, Derri V, Tzetzis G, Theodorakis Y.Percept Mot Skills. 1998 Jun;86(3 Pt 1):771-86. doi: 10.2466/pms.1998.86.3.771.PMID: 9656269
- Relationship of visual perceptual deficit and motor impairment in children with developmental coordination disorder. Tsai CL, Wu SK.Percept Mot Skills. 2008 Oct;107(2):457-72. doi: 10.2466/pms.107.2.457-472.PMID: 19093607
- Factors discriminating gymnasts by competitive level. Vandorpe B, Vandendriessche J, Vaeyens R, Pion J, Lefevre J, Philippaerts R, Lenoir M.Int J Sports Med. 2011 Aug;32(8):591-7. doi: 10.1055/s-0031-1275300. Epub 2011 May 11.PMID: 21563024
- Balance ability and athletic performance. Hrysomallis C.Sports Med. 2011 Mar 1;41(3):221-32. doi: 10.2165/11538560-000000000-00000.PMID: 21395364 Review.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Effects Of Circuit Training On Selected Performance Variable For Inter Collegiate Hockey Players Of Palamuru University

Dr. Y. Srinivasulu, Assistant Professor (C)
Department of Physical Education,
Palamuru University, Mahabubnagar, Telangana, India.

Abstract

The purpose of the study to find out the effect of circuit training on selected performance variables. To achieve the purpose of (30) thirty inter collegiate hockey players of Palamuru University Mahabubnagar Telangana, India. From MVS Degree college, SCNM Govt Degree College and University P.G College Palamuru University, Mahabubnagar. Their age category from 18-25 years, they were divided in two groups, groups of fifteen each. Group 1 underwent circuit training, group 2 underwent control group. Their did not participate in any special training, apart from their regular curricular activities. Training was given for eight weeks and alternative three days per week. The pre and post test were conducted before and after training for eight weeks. The criterion variables namely Speed, Agility and endurance have been selected as dependent variables for this study. The training period would be the eight weeks. The data collected from two groups before and after training period were statistically analyzed by using "t" test at 0.05 level of confidence was fixed to test the significant. The result shows that speed, agility and endurance of the selected subjects was significantly improved on experimental group and control group due to the effect of circuit training. **Key Words** : Circuit Training, Speed, Agility and Endurance.

Introduction

According to the International Hockey Federation (FIH), "the roots of hockey are buried deep in antiquity". There are historical records which suggest early forms of hockey were played in Egypt and Persia 2000 BC, and in Ethiopia c. 1000 BC. Later evidence suggests that the ancient Greeks, Romans and Aztecs all played hockey-like games. In Ancient Egypt, there is a depiction of two figures playing with sticks and ball in the Beni Hasan tomb of Khety, an administrator of Dynasty XI. In Ancient Greece, there is a similar image dated. 510 BC, which may have been called because it was played with a horn and a ball.[6] Researchers disagree over how to interpret this image. It could have been a team or one-on-one activity (the depiction shows two active players, and other figures who may be team-mates awaiting a face-off, or non-players waiting for their turn at play). Billiards historians Stein and Rubino believe it was among

the games ancestral to lawn-and-field games like hockey and ground billiards, and near-identical depictions appear in later European illuminated manuscripts and other works of the 14th through 17th centuries, showing contemporary courtly and clerical life.

Circuit Training

Circuit training was invented in 1953 as an efficient way for coaches to train many athletes in a limited amount of time with limited equipment. The exerciser moved through a series of weight training or calisthenics arranged consecutively. It was a fast-paced workout of 15-45 seconds per station with little (15-30 seconds) or no rest between stations. Today, this is known as "circuit weight training." Research has shown that it can increase muscular strength and endurance. There is a mild improvement in aerobic stamina but only if the rest periods are kept very short. Another variation is "aerobic circuit training." Aerobic stations like a treadmill, rower, bike, or stepper (one to five minutes per station) are interspersed with weight-training stations. This protocol has been found to increase aerobic stamina and muscular endurance and endurance. A well-designed circuit can help to correct the imbalances that occur in any sport played to a high level. It can also be one of the best types of training for improving strength endurance be it for a sport such as soccer or a classic endurance event like the triathlon. If you haven't quite reached "elite athlete" status yet, circuit training is superb for general fitness and caters for a wide variety of fitness levels. A great time saver, it can be a refreshing and fun change from the more monotonous types of exercise. Circuit training in itself is not a form of exercise per se, but the way an exercise session is structured. Routines can be developed for strength development or for improving endurance or some combination of the two.

Objectives Of Circuit Training

1. The circuit training work will increase our general work capacity by improving our ability to tolerate increasing level of muscular fatigue (stamina improvement). Overtime, the circuit training will have shorter rest intervals between exercises, thus maintaining elevated heart rates during the circuit workouts and helping you to upgrade your cardio respiratory capacity (stamina improvement).
2. Circuit efforts will enhance our overall body strength, including the strength and resiliency of muscles. Tendons and ligaments, the integrity of your joints and the strength density of our supporting bone structure (strength improvement).
3. The circuit programme will increase the lean muscle mass by a moderate amount and decrease the body fat level through high levels increase of energy expenditure. (body composition improvement)

Statement Of The Problem

The purpose of the study was to find out the effect of circuit training on selected performance variables for inter collegiate hockey players of palamuru university.

Hypothesis

It was hypothesized that the circuit training will significantly improve the selected performance variables for inter collegiate hockey players of palamuru university.

Significance Of The Study

This study is significant in the following ways.

1. The study will help the selected fitness qualities endurance, speed, agility and endurance in hockey players.
2. The study will helpful to the physical education teacher and coaches to design a training programme to development inter college hockey players.
3. This study will helpful to improve the physical fitness variables for offensive and defensive players at inter collegiate level.
4. The treatment used in present study will helpful to the hockey player to improve the overall ability in hockey.

Delimitations

The study was delimited in the following aspects.

1. This study was delimited to inter college level hockey players only.
2. The age of the subjects was fixed in the range of 18-25 years.
3. This study was delimited to the following selected physical fitness components were speed, agility and endurance. This study was confined to thirty (30) hockey players only.
4. The subjects of the present study were confined to male section only.

Limitations

The following limitations of the study utilized to the recognized while interpreting and generating the result.

1. The subjects health habits, general attitude and socio economic conditions, daily routine work, climatic conditions and environmental factors and physiological status were not taken into consideration.

Methodology

The selected subjects (N=30) were divided into two groups each containing of fifteen. The experimental group underwent the circuit training programme for alternate days in a week and eight weeks in total and control group was in kept under the control of the investigator in which they were in as usual activities. The purpose of the present study was to find the effect of circuit training on selected speed, agility and cardio endurance for inter-collegiate men hockey players of Palamuru University, Telangana. To achieve the aim of this study the investigator had randomly selected thirty inter-collegiate level men hockey players of Palamuru University, Mahabubnagar, Telangana. Their age was ranged from 18-25 years. The selected subjects (N=30) were divided into two groups each containing of fifteen. The experimental group underwent the circuit training programme for three days in a week and eight weeks in total and control group was in kept under the control of the investigator in which they were in as usual activities. The statistical tool used for this present study is described here. The significance of the mean differences between the pretest and post test values of the variable by the experimental and control group during the treatment period of eight weeks were tested by applying ‘t’ test.

Selection Of Subjects

The purpose of the present study was to find the effect of circuit training on selected performance variables for inter-collegiate hockey players of Palamuru University. From MVS Govt Degree college, SCNM Govt Degree College and University P.G College Palamuru University, Mahabubnagar. Their age was ranged from 18-25 years.

Selection Of Variables

The research scholar reviewed the available scientific literatures and had discussions with experts in the field of hockey to identify the components underlying the present problem. Based on these the following variables were considered for the present study as follow.

1. Speed.2.Agility. 3.Endurance.

Criterion Measures

The following criterion measures were chosen for this study.

1. Speed was measured by using 50 yard dash and recorded to the nearest one-tenth of a second.
2. Agility was measures by using 10x10 yard shuttle run test and recorded to the nearest one-tenth of a second.
3. Endurance was measured by using 12 minutes run and walk test and recorded in minutes and seconds.

Statistical Techniques

The present study paid its attention mainly on testing the effectiveness of circuit training on selected performance variables for inter-collegiate hockey players of Palamuru University. The statistical tool used for this present study is described here. The significance of the mean differences between the pretest and post test values of the variable by the experimental and control group during the treatment period of eight weeks were tested by applying‘t’ test.

TABLE-I :SIGNIFICANCE OF MEAN GAINS / LOSSES BETWEEN PRE AND POST TEST OF EXPERIMENTAL GROUP SELECTED PERFORMANCE VARIABLES

S.No	Variables	Initial test	Post test	Mean diff.	σ DM	‘t’ ratio	Sig.
01	Speed	8.70	8.43	.27	.51	5.20	Sig.*
02	Agility	15.89	15.24	.65	.11	5.89	Sig.*
03	Endurance	2202.00	2239.00	91.33	24.88	3.67	Sig.*

* significant at 0.05 level, mean diff = mean difference / σDm = standard error of difference between mean.

An examination of table 1 indicates that the obtained 't' values on selected fitness variables were speed (5.20), agility (5.89), and endurance (3.67). Since the obtained 't' ratios were greater than the required table value of 2.14 for df 1, 14 and it was found that the mean difference between initial and final test on selected variables were statistically significant at 0.05 level. Therefore it was concluded that the eight weeks practice of circuit training produced significant improvement on performance variables for inter-collegiate hockey players and the formulated hypothesis was accepted.

TABLE –II :SIGNIFICANCE OF MEAN GAINS / LOSSES BETWEEN PRE AND POST TEST OF CONTROL GROUP SELECTED PERFORMANCE VARIABLES

S.No	Variables	Initial test	Post test	Mean diff.	σ DM	't' ratio
01	Speed	8.69	8.68	.008	.0035	1.49
02	Agility	16.24	16.22	.017	.018	1.04
03	Endurance	2183.33	2184.33	1.00	14.81	.15

Mean diff. = mean difference / σDM = standard error of difference between mean.

An examination of table 2 indicates that the obtained 't' values on selected fitness variables were speed (1.49), agility (1.04), and endurance (.15). Since the obtained 't' ratios were lesser than the required table value of 2.14 for df 1, 14 and it was found that the mean difference between initial and final test on selected variables were statistically significant at 0.05 level. Therefore it was concluded that the formulated hypothesis was rejected.

Graphical Representation of Pre-Test and Post-Test Means Of Selected Fitness Variables Are Presented In Figure 1 To 3

Figure 1

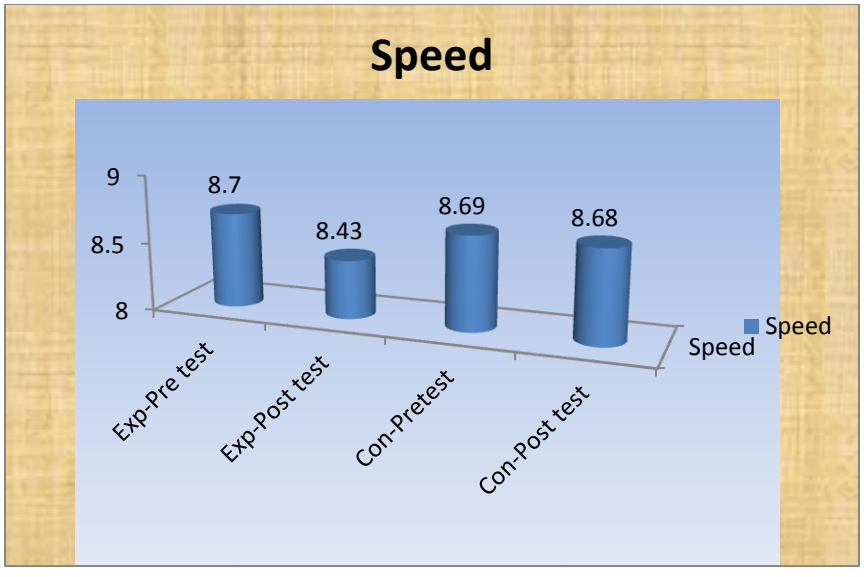


Figure 2

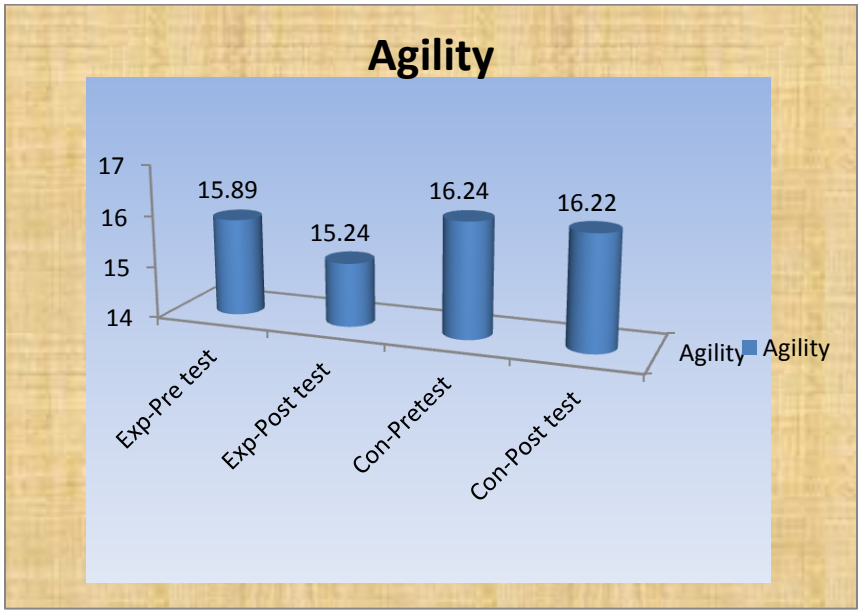
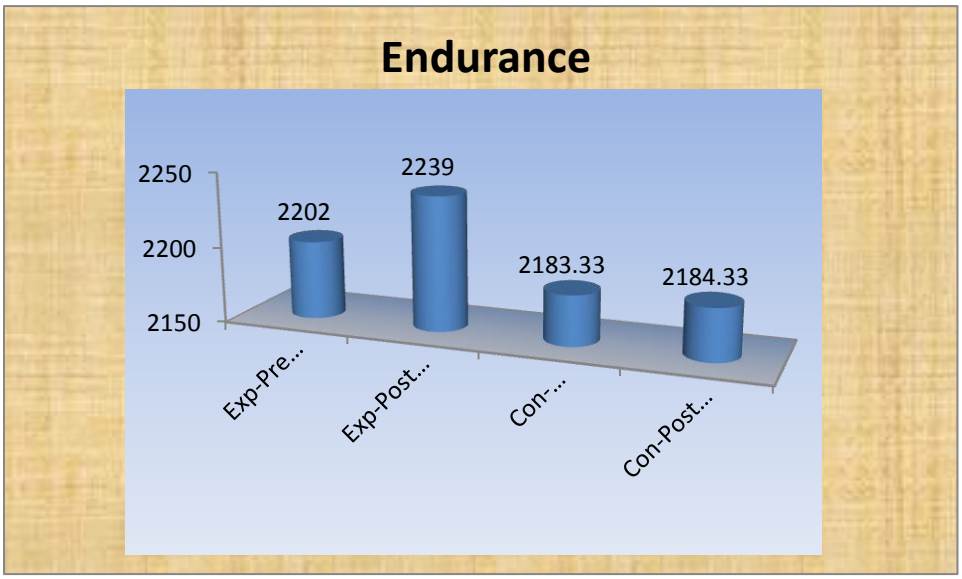


Figure 3



Discussion On Findings:

The results of the study showed that at the end of the eight weeks of circuit training was a significant improvement on the selected variables were speed, agility and endurance. The improvement is due to the circuit training programme specially designed to develop the performance variables included in this study. Generally speed, agility and endurance were developed in an overload principles based training even by the investigator to the subjects. This was confirmed by the studies conducted by Wilmore et al., (1978), Gettman et al., (1982), Marcinik et al., (1985), Jacobs et al., (1987), Harnnel et al., (1989), Wood et al., (2001), Gotshalk et al., (2004), Takeshima et al., (2004), Izquierdo et al., (2005), Chtara et al., (2008), Alcaraz et al., (2008), Taskin et al., (2009), Paoli et al., (2010). The hockey is a field game in nature to require a greater amount of excellence in performance variables. The same may be achieved by this present treatment to the hockey players. These might be a cause of development of selected fitness variables attained by the subjects.

Conclusions:

Based on the results of the present study the following conclusions have been drawn.

1. It was concluded that the circuit training programme significantly improved the selected variables like speed, agility and endurance for experimental group.
2. Further it was concluded that the selected variables like speed, agility and endurance showed insignificant improvements on control group.

Recommendations

The following recommendations have been made from the results of the study.

1. The study may be conducted on female hockey players too.The same study can be conducted by increasing in terms of numbers of hockey players as subjects.
2. The same study can be conducted with other variables such as physiological, socio-economic and psychological among the hockey players.
3. Similar study may be conducted in inter-university, state and national level hockey players. The same study may be conducted on other games i.e. football, volleyball etc.

References:

Ajmir Singh., Jagadish., Jagtar Singh Gill and Rachhpal Singh (2008). Essential of physical education. Pp. 24-27. ISBN: 978-93-272-4645-2 Ludhiana, Kalyani publishers.

Haennel R, Teo KK, Quinney A, Kappagoda T. Effect of hydraulic circuit training on cardiovascular function, department of medicine, university of Alberta, Edmonton, Canada, 1989.

James R Morrow, et al. (2005). Measurements and Evaluation in Human Performance. ISBN: 10-07360-5540-1.

Tanaji Lakde, Atul (2019). Field Hockey- National Game of India in General Parlance. Ashok yakkaldevi. p. 5. ISBN 978-0-359-69487-7.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Configuration Of The Body And Mind Through Yoga Mudras For Sustaining Inner Balance And Bliss: A Review

Dr. Kariga Anitha
Department of Physical Education, Government Degree College (Osmania University), Hayathnagar, Ranga Reddy District, Telangana, India.
Email: anitharajvalli61@gmail.com

Abstract

Mudras, symbolic hand and body gestures, play a significant role in yogic traditions by regulating the subtle energies within the human system. They are often compared to electrical switches, completing a pranic circuit in the body to activate specific pathways that enhance physical, mental, and emotional well-being. Mudras balance the five elements within the body—earth, water, fire, air, and space—ensuring health and mental harmony. For instance, Vayu Mudra releases excess air to relieve anxiety, while Surya Mudra enhances digestion by stimulating "inner fire." These gestures also act like software commands, instructing the nervous system to initiate specific actions, such as detoxification (via Apana Mudra) or emotional balance (via Hridaya Mudra). By unlocking the body's energy channels, mudras facilitate the flow of prana, contributing to both physical and emotional health. They also recharge the body's energy, much like a battery, with Prana Mudra revitalizing vitality and immunity.Mudras serve as tools for meditation, helping stabilize the restless mind and promote focus. Mudras are classified into categories like Hasta (hand gestures), Mana (mental gestures), and Bandha (locks), among others, and are rooted in the principle of the five elements. Scientific research supports their impact on the nervous system and stress reduction. Although further studies are needed, mudras are recognized for their profound impact on health and emotional stability, making them accessible and practical for everyday use.**Key words**: *Mudras, Prana, Elements, Energy balance, Self-healing*.

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Injury Rates and Treatable Injuries in Sepak Takraw: An Analysis

Anitha Kancharla
Physical Education Teacher, TGTWURJC COE (G)
Kalwakurthy,Nagarkurnool
E-mail: anithapolkam@gmail.com

Abstract

Reliable data on the occurrence of injuries in Sepak Takraw is scarce, primarily due to insufficient systematic records. This study sought to examine injury trends among Sepak Takraw players by analyzing information gathered from May 2023 to May 2025. A total of 218 players were involved across different competitions, which included nine national training camps and four international events. Injury information was collected through consultations with Dr. T. Senthamarai Kannan, the physiotherapist for the Indian Sepak Takraw team, along with interviews with coaches, players, and officials. Of the participants, 146 players experienced injuries. The most common injury areas were the ankle (men: 30%, women: 20%), knee (men: 30%, women: 40%), lower back (men: 20%, women: 30%), mid back (both genders: 20%), elbow (men: 30%, women: 10%), and wrist (men: 30%, women: 5%), with strikers particularly susceptible. Other injuries included bruises from ball impacts and occasional mild head injuries. Instances of cramps and spasms related to dehydration were also reported during matches. The majority of injuries were categorized as overuse injuries, resulting from repeated strain and overtraining. Physiotherapists and medical personnel at the events typically managed these injuries effectively, while more severe cases were sent to hospitals for specialized treatment. The study highlighted the critical role of rest and rehabilitation in ensuring complete recovery and optimal performance.**Keywords:** Injuries, Sepak Takraw, Overuse, Physiotherapy, Recovery etc.

Introduction:

Every day, a lot of people all over the world participate in games and sports activities or competitions. Participation in sports improves physical fitness and overall health and wellness. Games and sports can also result in injuries, some minor, some serious and still other in life long medical problem. Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue i.e. Ligaments, muscles, tendons etc. There are numerous sports injuries happened in the field of sports. It is very important for all coaches, trainers and players to know the causes symptoms, prevention and treatment for all these common injuries in order to avoid most of these types of injuries, also to update the poor training methods. Sepak takraw is a traditional Southeast Asian sport that combines elements of soccer and volleyball, requiring high levels of flexibility, agility, and coordination. Despite its growing popularity, limited research exists on injury patterns and their relationship with training variables among sepak takraw players.

Ankle Injury is the common injury among Sports Persons

Nimrot Manalu (2025) et al studied Injuries Among Sepak Takraw Players: The Relationship Between Training Patterns, Rest Duration, and Injury Severity, Indonesian Sport and Physical Scientist.This study aimed to investigate the relationship between training patterns, rest duration, and injury severity among sepak takraw players in Medan City, Indonesia.A cross-sectional study was conducted involving 210 sepak takraw players from seven clubs in Medan City, Indonesia. Data were collected through structured questionnaires and injury assessment forms over a 12-month period. Training patterns, rest duration, and injury severity were analyzed using quantitative methods.The study revealed that 68.5% of participants experienced at least one injury during the observation period. Lower extremity injuries were most common (72.3%), followed by upper extremity injuries (18.9%). Players with inadequate rest periods (<48 hours between intensive training sessions) showed significantly higher injury rates ($p<0.001$). Training frequency exceeding 5 sessions per week was associated with increased injury severity (OR=2.34, 95% CI: 1.45-3.78). Training patterns and rest duration significantly influence injury occurrence and severity in sepak takraw players. Implementing structured rest periods and optimized training schedules may reduce injury risk and enhance player safety.

Amita Jaiswal, Prof.Rajesh Kumar (2024) Sports Injuries among Basket Ball Players of Hyderabad District– AReview, sports injuries can affect bones or soft tissue i.e. ligaments, muscles, tendonsetc. There are numerous sports injuries happened in the field of sports. The sample for thestudyconsists 100 Male Basket Ball Players of Hyderabad District between the age group 18to25Years. The questionnaire were used in the study. Whereas, the head injury area frequencyis 145and game injury percentage is 18.01%. The neck injury area frequency is 16 and game injurypercentage is 1.98%. The upper extremities injury area frequency is 253 and game injurypercentage is 31.45%. The torso injury area frequency is 114 and game injury percentageis14.16%. The lower extremities injury area frequency is 277 and game injury percentageis34.40 %. Hence, among all areas the highest percentage was 34,40% to lower extremities. Thehighest lower extremities injuries among basket ball Players are ankle and knee.

Purpose of the Study:

The purpose of the study is to analysie Injury Rates and Treatable Injuries in Sepak Takraw.

Methodology

This study sought to examine injury trends among Sepak Takraw players by analyzing information gathered from May 2023 to May 2025. A total of 218 players were involved across different competitions, which included nine national training camps and four international events. Injury information was collected through consultations with Dr. T. Senthamarai Kannan, the physiotherapist for the Indian Sepak Takraw team, along with interviews with coaches, players, and officials.

Results and Discussion:

Of the participants, 146 players experienced injuries. The most common injury areas were the ankle (men: 30%, women: 20%), knee (men: 30%, women: 40%), lower back (men: 20%, women: 30%), mid back (both genders: 20%), elbow (men: 30%, women: 10%), and wrist (men: 30%, women: 5%), with strikers particularly susceptible. Other injuries included bruises from ball impacts and occasional mild head injuries. Instances of cramps and spasms related to dehydration were also reported during matches.

Conclusions:

The majority of injuries were categorized as overuse injuries, resulting from repeated strain and overtraining. Physiotherapists and medical personnel at the events typically managed these injuries effectively, while more severe cases were sent to hospitals for specialized treatment. The study highlighted the critical role of rest and rehabilitation in ensuring complete recovery and optimal performance.

Recommendations:

The following suggestions are made for the benefit of players, coach's academicians and sports scientists.

1.Warm up is one of the most important techniques of injury prevention which contributes to increasing muscle temperature and thereby loosening of muscles. It also increases the heart and respiratory rate which results in increased blood glow and thereby more oxygen and nutrient supply to the working muscle. In addition it make muscles prepared for more severe pressures.

2.Cool down is as significant as warm up and plays an important role in injury prevention. It recovers the body and helps to return the body state to pre-exercise state. It also prevents blood pooling in the muscles and hence prevents the swelling and pain.

3.Avoiding overtraining is the key to prevent sports injury. Over training is referred to the work or stress imposed to the body which is beyond its capacity and body is not able to repair the damages happened. It may happen during a long time and with regular exercise without rest and recovery

References:

Nimrot Manalu (2025) et al -Injuries Among Sepak Takraw Players: The Relationship Between Training Patterns, Rest Duration, and Injury Severity, Indonesian Sport and Physical Scientist Association Journal, Indonesia, Volume 2, No.3, November 2025, ISSN 3064-4038

Jufrianis. (2023). Effect of Strength Conditioning on the Playing Skills of Sepaktakraw Athletes Universitas Pahlawan Tuanku Tambusai. INSPIREE Indonesian Sport Innovation Review, 4(2), 89. https://doi.org/10.53905/inspiree.v4i02.104

Amita Jaiswal, Prof.Rajesh Kumar (2024) Sports Injuries among Basket Ball Players of Hyderabad District– AReview, International Research Journal of Education and TechnologyPeer Reviewed Journal ISSN 2581-7795

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Exercise and Injuries in Sports and Games

Dr. Hanamant Jange
Principal and Co-ordinator
University College of Physical Education
Gulbarga University, Kalburagi – 585106, Karnataka, India
Email: drhsjange05@gmail.com

Abstract:
Exercise related injuries are common, but often preventable. Overuse injuries, caused by repetitive movements or pushing the body too hard, are a significant risk. Proper warm-ups, rest periods, and the use of correct exercise techniques can help minimize the risk of injury. Twelve common sports injuries include ankle sprains, groin pulls, hamstring strains, shin splints, ACL tears, tennis elbow, shoulder dislocations, rotator cuff injuries, knee injuries, fractures, concussions, and lower back pain. These injuries can occur due to various factors like overuse, sudden movements, or direct contact during sports activities. The causes of the injury are Over Training, over use of injuries, In correct technique, lack of warm up, ignoring pain and doing practice, increase in intensity without proper warm up etc. Treatment through Rest, Ice, Compression and Elevation to help reduce swelling and pain, Physical therapy to restore the strength, flexibility and range of motion. Pain management through pain relievers tablets and surgery. Injuries are common in team sports like foot ball, hand ball, basket ball, Hockey etc. Injuries are also common in combat sports like boxing, judo, wrestling, taekwondo, karate etc. Proper warming up, cool down, rest and recovery, gradual progression etc. are useful in preventing the injuries. Key words: Exercise, injuries, warming up etc.

Introduction:

Exercise related injuries are common, but often preventable. Overuse injuries, caused by repetitive movements or pushing the body too hard, are a significant risk. Proper warm-ups, rest periods, and the use of correct exercise techniques can help minimize the risk of injury. Twelve common sports injuries include ankle sprains, groin pulls, hamstring strains, shin splints, ACL tears, tennis elbow, shoulder dislocations, rotator cuff injuries, knee injuries, fractures, concussions, and lower back pain. Sports and games, while beneficial for health, also carry the risk of injuries. These can range from minor strains and sprains to more serious fractures, dislocations, and even concussions. Understanding the types of injuries, risk factors, and prevention strategies is crucial for athletes and participants at all levelEvery day, a lot of people all over the world participate in games and sports activities or competitions. Participation in sports improves physical fitness and overall health and wellness. Games and sports can also result in injuries, some minor, some serious and still other in life long medical problem. Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue i.e. Ligaments, muscles, tendons etc. There are numerous sports injuries happened in the field of sports. It is very important for all coaches, trainers and players to know the causes symptoms, prevention and treatment for all these common injuries in order to avoid most of these types of injuries, also to update the poor training methods. Sports Injuries are common muscle, bone or soft tissue injuries that occur during physical exercises or playing in sports and games. They include fractures, strains, sprain and healing will take from weeks to months.Sports injuries are commonly caused by overuse, direct impact, or the application of force that is greater than the body part can structurally withstand.

Types of Sports Injuries:

Sprains: Overstretching or tearing of ligaments, the tissues connecting bones.

Strains: Overstretching or tearing of muscles or tendons.

Fractures: Broken bones, often caused by a sudden impact or stress.

Dislocations: Displacement of a bone from its normal joint position.

Concussions: Brain injury caused by a blow to the head, potentially leading to loss of consciousness.

Tendinitis: Inflammation of a tendon, often due to overuse.

Stress Fractures: Tiny cracks in the bone caused by repetitive stress.

Prevention Strategies:

Proper warm-up and cool-down: Preparing the body for exercise and allowing for recovery is essential. Using proper techniques: Learning and practicing the correct form for each sport or exercise can reduce strain. Gradual increase in training intensity: Avoiding sudden jumps in intensity can prevent overuse injuries. Wearing appropriate protective gear: Utilizing helmets, pads, and other protective equipment can minimize injury risk. Proper hydration andnutrition: Maintaining a healthy diet and staying hydrated can aid in recovery and reduce the risk of heat-related injuries. Listen to your body: Don't push through pain, and allow for adequate rest and recovery.

Risk Factors:

Overtraining: Pushing the body too hard, too frequently, or for too long.

Incorrect techniques: Improper form during exercise or sport can strain muscles and joints.

Lack of proper warm-up and cool-down: Failing to prepare the body for activity or allow for recovery can increase injury risk. Inadequate equipment or protective gear: Not using appropriate shoes or protective gear can leave athletes vulnerable. Playing on hard surfaces: Increased impact on joints can lead to stress fractures and other injuries.

Prior injuries: A history of injuries can make an athlete more susceptible to re-injury.

Treatment Methods:Treatment through Rest, Ice, Compression and Elevation to help reduce swelling and pain, Physical therapy to restore the strength, flexibility and range of motion. Pain management through pain relievers tablets and surgery. Injuries are common in team sports like foot ball, hand ball, basket ball, Hockey etc. Injuries are also common in combat sports like boxing, judo, wrestling, taekwondo, karate etc.

Conclusions:

Proper warming up, cool down, rest and recovery, gradual progression etc. are useful in preventing the injuries. Key words: Exercise, injuries, warming up etc.

References:

https://my.clevelandclinic.org/health/diseases/22093-sports-injuries

https://www.hopkinsmedicine.org/health/conditions-and-diseases/sports-injuries/preventing-sports-injuries

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Effect of Circuit Training for development of Explosive Power among Kabaddi Players of Government College of Physical Education, Hyderabad

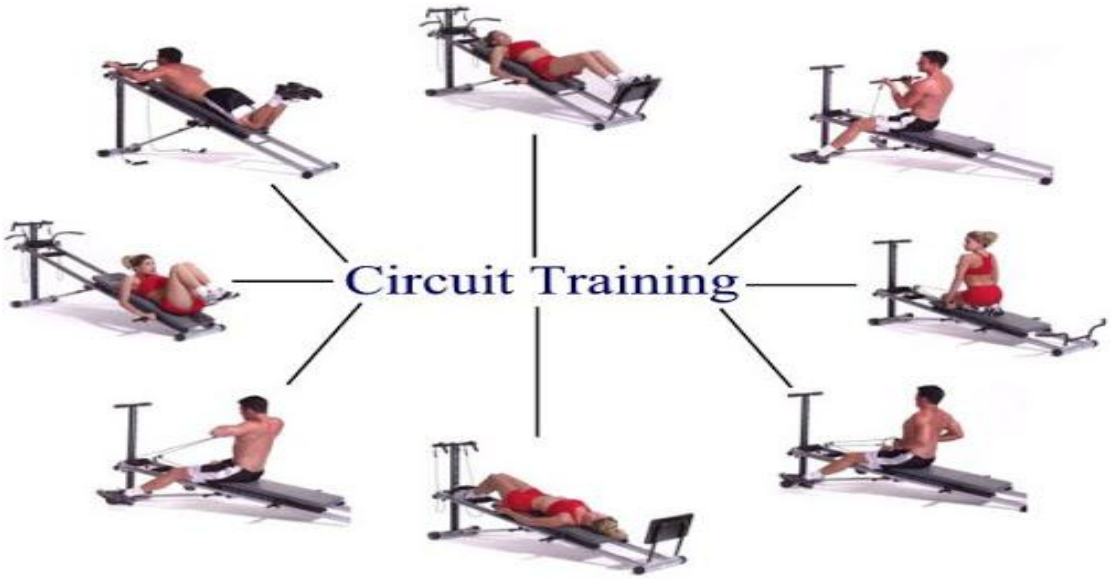
Dr. G. Madhavi
Lecturer in Physical Education
Govt. College of Physical Education, Domalguda, Hyderabad
email drmadhavibandari@gmail.com

Abstract:

The objective of the study is to determine the effect of circuit Training for development of explosive Power among Male Kabaddi Players of Government College of Physical Education , Domalguda, Hyderabad between the age group of 18 to 25 Years..The sample for the present study consists of 20 Male Kabaddi Players out of which 10 are experimental group and 10 are controlled group. Circuit training exercises of upper body, middle body, lower body which is done through continous method and interval methodto the Experimental Group along with general training of Kabaddi and control group has doing general Training of Kabaddi for Twelve weeks.To assess the explosive power in legs Standing Broad Jump Test were used in the Pre Test and Post Test of the Study. This study shows that the Experiment Group increase the explosive power compare to the control group. It is concluded that due to circuit training there is a improvement of explosive power among Kabaddi Players. The intensity of the circuit training should be appropriately adjusted to match the players fitness level and demands of kabaddi. This type of training helps develop the ability to generate quick bursts of force, which is crucial for various Kabaddi movements and techniques. Key words: circuit training, Kabaddi, explosive power etc.

Introduction:

Circuit Training is developed by the Scientist Morgan R.E. and Adamson G.T. at University of Leeds in the year 1957. This is Resistance to develop the motor abilities such as strength, Speed and endurance. Circuit training is a exercise "circuit" which consists of prescribed exercises which includes for the upper body, lower back, abdomen and Lower body. It can be done with own body Weight and using the resistance exercises such as Barbells, Medicine Balls etc. Circuit training is a specific work for the enhancement of explosive power. Exercises or drills that are combine speed and strength, it produces an explosive reactive movement.



SAMPLE OF CIRCUIT TRAINING EXERCISES

Aarif Majeed, Muzamil Ahmed Bhat (2019) Studied the effect of circuit training on motor fitness components and skill ability of Kabaddi players. 30 male Kabaddi players of age group 17-23 who represented their college in inter collegiate tournaments were selected randomly as subjects. The subjects were divided randomly into two equal groups of 15 (fifteen) subjects in each group i.e; experimental group and control group. The experimental group underwent to practice selected training programme for six days a week for 60 (sixty) minutes each day, for the period of eight weeks. The control group did not practice any specific training during the period of eight weeks. Data collected was analyzed at 0.05 level of significance and 't' test was computed for finding out the effect of circuit training on motor fitness components and skill ability of Kabaddi players. The study showed significant effect of circuit training on motor fitness components and skill ability of Kabaddi players.

Purpose of Research:

The objective of the study is to determine the effect of Circuit Training for development of explosive Power among Male Kabaddi Players of Government College of Physical Education, Domalguda, Hyderabad between the age group of 18 to 25 Years

Methodology.

The sample for the present study consists of 20 Male Kabaddi Players out of which 10 are experimental group and 10 are controlled group. Circuit Training exercises from 8 to 12 stations through upper body, lower body and middle body exercises which is done through continous method and interval method were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for Twelve weeks. Pre Test and Post Test were conducted in Standing Broad Jump among experimental group and controlled group of Kabaddi Players of Government College of Physical Education, Domalguda, Hyderabad.

Results and Discussion:

The Independent Samples t Test Statistics is applied for the Study. The Comparison were made among Experimental Group and Control Group in Pre Test and Post Test Mean

Table 1: Showing the Mean values and Independent Samples Test of Standing Broad Jump between experimental and control groups of Kabaddi Players.

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
Standing Broad Jump	Experimental	2.30 ± 0.157	2.41 ± 0.185	3.55	0.001
	Control	2.26 ± 0.159	2.22 ± 0.161		

*Significant at 0.05 level

In Table 1 the Mean values of Experimental Group of Kabaddi Players in Pre Test is 2.30 and Control Group Weight lifters is 2.26. Due to Core Strength Training the Experimental Group has increased the mean values in post test is 2.41 and due to general training the Control group has decreased from 2.26 to 2.22The Results of the Study shows that Experimental Group of Kabaddi Players has increased in the Performance of Standing Broad Jump.

Conclusions:

It is concluded that due to Circuit training there will be improvement in Explosive Power among Kabaddi Players. This type of training helps develop the ability to generate quick bursts of force, which is crucial for various Kabaddi movements and techniques.

Recommendations: It is recommended that similar studies can be conducted on other events in other events and also female kabaddi players.This type of study is useful to coaches to give proper coaching for development of motor qualities for improvement of performance Sports and Games.

References:

Prof. Rajesh Kumar (2020)Effect of Plyometric and Circuit Training On Selected Physical Variables among Sprinters of Hyderabad District of Telangana State, IOSR Journal of Sports and Physical Education (IOSR-JSPE) e-ISSN: 2347-6737, p-ISSN: 2347-6745, Volume 7, Issue 2, (Mar –Apr 2020), PP 55-57

Aarif Majeed, Muzamil Ahmed Bhat (2019) Studied the effect of circuit training on motor fitness components and skill ability of Kabaddi players, International Journal of Psycho Rehabilitation

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

The Effect Of 12 Weeks Of Plyometric and Circuit Training On Explosive Power Among Inter Collegiate Hockey Players Of Osmania University

Dr. G. Akhila
Associate Professor, Department of Physical Education
College of Veterinary Science, Korutla, Jagital District
Telangana email:goliakhila82@gmail.com

Abstract: The purpose of the present study was to determine the effect of plyometric training and circuit training on the selected performance parameters such as a speed of intercollegiate male hockey players studying in affiliated colleges of Osmania University. To achieve the purpose of the study, the subjects were randomly selected from intercollegiate male hockey players of Osmania University, Hyderabad, Telangana, India and their age group was 18 to 22 years. The selected subjects were divided into three groups of 15 each, namely, two experimental groups and one control group. Out of total subjects of 45, 15 underwent plyometric training, another set of 15 underwent circuit training while the control group did not receive any specific training. The duration of the training period was 12 weeks at a rate of 3 sessions per week. 50 M Run Test were used for the Study to assess the speed among the Hockey Players. The results of the study reveal that there is a significant improvement on plyometric training group and circuit training group when compared to control group. The improvement in performance may be attributed to plyometric and circuit training. Key words: plyometric training, circuit training, hockey etc.

INTRODUCTION

Hockey is a globally recognized sport that is played on various surfaces including graass, artificial ground, or indoor courts. Each team has ten outfield players and one goalkeeper. Players use sticks—typically made from materials such as wood, fiberglass, or carbon fibre—to strike a hard, plastic ball. The length of the stick is usually proportionate to the player's height, reaching the hip. Only the flat side of the stick may connect the ball; using the other side is a not allowed. Goalkeepers may use specialized sticks with an extra curve for better control and surface area. Protective gear includes shin guards, mouth guards, and sport-specific attire. This sport is especially popular in regions like Western Europe, South Asia, Australia, New Zealand, South Africa, Argentina, and parts of the U.S. In North America, the term “field hockey” differentiates it from ice hockey. In Scandinavia, it’s sometimes called "land hockey." Only goalkeepers are allowed to use their bodies to block the ball, while field players must rely on the front side of their stick. Connecting the ball with the other part results in a penalty.

The sport is governed internationally by the International Hockey Federation (FIH), which oversees major tournaments like the Olympics, World Cup, and Champions Trophy. Indoor hockey is a popular variant played with five players per side on a smaller, enclosed field.

Kumar, R et.al 2019 A study to assess the impact of a 12-week training program on various physical fitness variables among young hockey players. Twenty-eight male players, aged 14.89 ± 1.66 years, underwent a structured training regimen focusing on strength, endurance, speed, flexibility, and coordination. Pre- and post-training assessments included measurements agility, maximum speed, shoulder strength, leg strength, and flexibility. Results revealed significant improvements in shoulder strength ($p < 0.01$), leg strength ($p < 0.01$), maximum speed ($p < 0.01$), and flexibility ($p < 0.05$) following the training period. However, CODS did not exhibit significant changes. These findings helps to understand the effect of 12- week training program in enhancing the fitness of hockey players, in terms of strength, speed, and flexibility. The study offers practical implications for coaches and trainers in designing effective training interventions to optimize players' performance and highlights the need for further research to explore task-specific training methods for improving CODS.

METHODOLOGY

The purpose of the present study was to determine the effect of plyometric training and circuit training on the selected performance parameters such as speed of intercollegiate male hockey players studying in affiliated colleges of Osmania University. To achieve the purpose of the study, the subjects were randomly selected from intercollegiate male hockey players of Osmania University, Hyderabad, Telangana, India and their age group was 18 to 22 years.

To achieve the purpose of the study, the subjects were randomly selected from intercollegiate male hockey players of Osmania University, Hyderabad, Telangana, India and their age group was 18 to 22 years. The selected subjects were divided into three groups of 15 each, namely, two experimental groups and one control group. Out of total subjects of 45, 15 underwent plyometric training, another set of 15 underwent circuit training while the control group did not receive any specific training. The duration of the training period was 12 weeks at a rate of 3 sessions per week. 50 M Run Test were used for the Study to assess the speed among the Hockey Players.The results of the study reveal that there is a significant improvement on plyometric training group and circuit training group when compared to control group. The improvement in performance may be attributed to plyometric and circuit training. The control group was not given any specific exercises.

DISCUSSION:

The mean difference between the pre and post-test results of control and experimental groups was tested using “t” ratio to determine the significance of the difference exhibited by the experimental and control groups during the training period of 12 weeks.

Table – I:Computation of "t" ratio between pre-test and post-test means of Experimental and Control groups on Speed IN 50 M Run Test

Groups ↓	Pre-Test for Speed-50 M		Post-Test for Speed-50M		"t"-Test
	Mean	SD	Mean	SD	
Circuit Training	7.37	0.556	6.80	0.551	5.461 *
Plyometric Training	7.77	0.679	7.30	0.535	4.474 *
Control Group	7.63	0.556	7.60	0.563	1.000

The Pre Test Mean of 50 M Run of Circuit Training is 7.37 and Post Test Mean is 6.80 that means there is a improvement from 7.37 to 6.80. The Pre Test Mean of 50 M Run of Plyometric Training is 7.77 and Post Test Mean is 7.30 that means there is a improvement from 7.77 to 7.30. The Circuit Training is found effective for Hockey Players for the development of Speed.

Conclusions: The results of the study reveal that there is a significant improvement on plyometric training group and circuit training group when compared to control group. **Recommendations:** The improvement in performance may be attributed to plyometric and circuit training and its helpful for the coaches for enhancing the performance.

References

Kumar, R. A., Balamurugan, D., & Raja, V. K. (2004). Combined Effect of Plyometric Training and Skill Training on the Development of Fitness Related Parameters and Skill Performance Variables among Male Volleyball Players. International Journal of Health, Physical Education and Computer Science in Sports, 8(1), 15-17.

Kumar, R., Lehri, A., Singh, S., & Sharma, S. (2019). 12-week training-induced effects on selected fitness parameters among field hockey players. International Journal of Physiology, Nutrition and Physical Education, Volume 4, 1715-1718. https://doi.org/10.22271/journalofsport

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Effect Of Circuit Training And Plyometric Training On Development Of Explosive Power Among University Female Basket Ball Players In Telangana Region

Dr. Suramoni Rajini
Physical Director
TGSWRDC, Mahabubnagar,Telangana
email:suramonirajini@gmail.com

Abstract:

The aim of this study was to find out The Development of Explosive Power among University Female Basket Ball Players in Telangana Region. To achieve the purpose of the study Forty Five female Basket Ball players have been randomly selected from different Universities of Telangana. The age of subjects was ranged from 19 to 25 years. The selected subjects were divided into three groups of 15 each, namely, two experimental groups and one control group. Out of total subjects of 45, 15 underwent plyometric training, another set of 15 underwent circuit training while the control group did not receive any specific training. The duration of the training period was 8 weeks at a rate of 3 sessions per week. Standing Broad Jump were used for the Study to assess the explosive power among female Basket Ball. The results of the study reveal that there is a significant improvement on plyometric training group and circuit training group when compared to control group. Hence Circuit training and plyometric is recommended to the female basket ball players to enhance the motor abilities.Key words: Circuit Training, Plyometric Training, explosive power, basket ball etc.

Introduction:

Basketball is a dynamic sport requiring numerous high-intensity actions to execute game techniques and tactics (Mancha-Triguero et al., 2019). Players with high levels of physical fitness, including agility, power, and endurance, can perform well with limited recovery time (Rodríguez-Fernández et al., 2023). Several fitness training methods have been employed for basketball players, such as resistance, core, functional, game-based conditioning, and highintensity interval training (Cao et al., 2024).

Prof. Rajesh Kumar (2020) studied about the effect of Plyometric and Circuit Training on selected Physical Variables among Sprinters of Hyderabad District of Telangana State. To achieve this purpose, forty five Sprinters in the age group of 16 to 20 years those who have participated in the Hyderabad Open Sprints Athletics Championships at Gachibowli Stadium, Hyderabad for the year 2019 taken as subjects. The selected forty five subjects were divided into three equal groups of fifteen each as two experimental groups and one control group, in which group – I (n=15) underwent plyometric training for three days per week for Twelve weeks, group – II (n=15) underwent the Circuit Training for three days per week for Twelve weeks and group – III (n=15) acted as control who are not participate any training apart from their regular activities. The selected Physical variables such as abdominal strength, speed and leg explosive power were assessed before and after the training period. Sit Up Test, 50 M Dash and Standing Broad Jump are the Tests were used to conduct the pre test and post for Measuring the Physical Variables such as Abdominal Strength, Speed and explosive power of legs. The results of the study it was found that there was a significant difference of performance due to Plyometric and circuit training when compared with the control group.

Aim Of The Study:

The aim of this study was to find out The Development of Explosive Power among University Female Basket Ball Players in Telangana Region. To achieve the purpose of the study Thirty female Basket Ball players have been randomly selected from different Universities of Telangana The age of subjects was ranged from 19 to 25 years.

Methodology

The sample of the study consists of Forty Five female Basket Ball players have been randomly selected from different Universities of Telangana. The age of subjects was ranged from 19 to 25 years

The selected subjects were divided into three groups of 15 each, namely, two experimental groups and one control group. Out of total subjects of 45, 15 underwent plyometric training, another set of 15 underwent circuit training while the control group did not receive any specific training. The duration of the training period was 8 weeks at a rate of 3 sessions per week. Standing Broad Jump were used for the Study to assess the explosive power among female Basket Ball..

Criterion Variables And Test:

S.NO	**Dependent Variables**	**Testes/ Instruments**	**Unit of Measurement**
1.	Explosive Power	Standing Broad Jump	metres

Results And Discussion.

The Standing Broad Jump were used for the Study to assess the explosive power among female Basket Ball Players.

Table-1 :Circuit Training And Plyometric Training - Computation Of 'T' Value Of Standing Broad Jump Test

Group	Variables	Mean		SD		Obtained 't' values
		Pre	Post	Pre	Post	
Circuit training	Explosive power	1.98	2.09	0.234	0.0830	0.410
Plyometric training	Explosive power	2.03	2.19	0.195	0.0830	2.66
CG	Explosive power	1.98	1.9	0.11	0.14	1.8

The Pre Test Mean of Standing Broad Jump of Circuit Training is 1.98 and Post Test Mean is 2.09 that means there is a improvement from 1.98 to 2.09. The Pre Test Mean of Standing Broad Jump of Plyometric Training is 2.03 and Post Test Mean is 2.19 that means there is a improvement from 2.03 to 2.19. The Plyometric Training is found effective for female basket b all players for the development of Explosive power.

Conclusions

It was concluded that circuit training and plyometric training significantly improved explosive power. The comparison between the treatment groups proved that plyometric training was significantly better than circuit training in improving explosive power of the female Basket Ball players.

Recommendations:

It is recommended that similar studies can be conducted on other events in other events and also Male basket ball players.This type of study is useful to coaches to give proper coaching for development of motor qualities for improvement of performance Sports and Games.

References

Mancha-Triguero, D., Garcia-Rubio, J., Calleja-Gonzalez, J., and Ibanez, S. J. (2019). Physical fitness in basketball players: a systematic review. J. Sports Med. Phys. Fit. 59, 1513–1525. doi:10.23736/S0022-4707.19.09180-1

Rodríguez-Fernández, A., Ramirez-Campillo, R., Raya-González, J., Castillo, D., andNakamura, F. Y. (2023). Is physical fitness related with in-game physical performance?A case study through local positioning system in professional basketball players. Proc.Institution Mech. Eng. Part P J. Sports Eng. Technol. 237

Prof. Rajesh Kumar (2020) Effect of Plyometric and Circuit Training On Selected Physical Variables among Sprinters of Hyderabad District of Telangana State, IOSR Journal of Sports and Physical Education (IOSR-JSPE) e-ISSN: 2347-6737, p-ISSN: 2347-6745, Volume 7, Issue 2, (Mar –Apr 2020), PP 55-57

Cao, S., Liu, J., Wang, Z., and Geok, S. K. (2024). The effects of functional training onphysical fitness and skill-related performance among basketball players: a systematicreview. Front. Physiology 15, 1391394

ISSN 0975--7732
Asian Journal of Physical Education and Computer Science in Sports
Volume No.32, No.1
ISRA Journal Impact Factor 5.011
A Peer Reviewed (Refereed) International Research Journal

Comparison of Explosive Power among Kabaddi and Kho Kho Players of Inter Collegiate Level of Osmania University

Dr. Ramavath Prakash
Asst. Professor and Head
Department of Physical Education,
AV College, Domalguda, Hyderabad
prakashkhokho222@gmail.com

Abstract:

The purpose of the study was to find out the effect of Explosive Power among Male Kabaddi Players and Male Kho Kho Players of Inter Collegiate Level of Osmania University. For the present study the 25 Kabaddi players and 25 Kho Kho Players of Osmania University between the age group of 18 to 25 Years. The standing Broad Jump Test Pre and Post Test were conducted among two groups to assess the explosive power of legs. The Kabaddi Players Mean in Standing Broad Jump is 2.48 and Kho Kho Players Mean is 2.32 . Hence Kabaddi Players is having better Standing Broad Jump Performance compare to Kho Kho Players. Explosive power is crucial for Kabaddi, enabling players to execute powerful tackles, quick escapes, and rapid movements. It's the force behind decisive actions like lunges, jumps, and changes of direction. Kabaddi players need both leg and upper body explosive power for offensive and defensive maneuvers. Key Words: Explosive Power, Kabaddi, Kho Kho etc.

Introduction:

Kabaddi is a contact team sport played between two teams of seven players. The objective of the game is for a single player on offense, referred to as a "raider", to run into the opposing team's half of the court, touch out as many of their players and return to their own half of the court, all without being tackled by the defenders in 30 seconds. Points are scored for each player tagged by the raider, while the opposing team earns a point for stopping the raider. Players are taken out of the game if they are touched or tackled, but are brought back in for each point scored by their team from a tag or a tackle.

The game of Kho-Kho is based on natural principles of physical development. It is vigorous and fosters a healthy competitive spirit among youths. It is not merely running with speed but it's a 'CHASE' a natural instinct to overtake to pursue, to catch a kill. No doubt speed is the heart and to stand to a relentless pursuit of 9 minutes at a stretch (turn) this heart demands stoutness,

Avula Srinivas(2023) studied effect of Explosive Power among High School Kabaddi Players and Kho Kho Players of Central Telangana. For the present study the 50 High School Kabaddi players and 50 Kho Kho Players of Central Telangana. The standing Broad Jump Test Pre and Post Test were conducted among two groups to assess the explosive power of legs. Regarding the leg explosive power of the selected high Kho-Kho and Kabaddi players of Central Telangana. Mean of the leg explosive power of Kho-Kho players is 183.71 with 7.542 Std. Deviation and mean of the Kabadi Players is 186.89 with 5.880 Std. deviation. The mean difference between leg explosive power of the Kho-Kho and Kabaddi players is 3.182. This implies that the motor fitness variable such as leg explosive power of Kho-Kho and Kabaddi players are showed significantly difference

Purpose of the study:

The purpose of the study was to find out the effect of Explosive Power among Male Kabaddi Players and Male Kho Kho Players of Inter Collegiate Level Players Osmania University.

Methodology:

For the present study the 25 Kabaddi players and 25 Kho Kho Players of Osmania University between the age group of 18 to 25 Years. The standing Broad Jump Test Pre and Post Test were conducted among two groups to assess the explosive power of legs

Results and Discussion:

Table 1: One Way Anova Is Used To Test The Significance Mean Difference Between Kabaddi Players And Kho-Kho Players In Standing Broad Jump.

Descriptives	N	Mean	Std. Deviation	Std. Error
Kabaddi	60	2.48	0.10	0.013
KhoKho	60	2.32	0.05	0.006
Total	120	2.40	0.11	0.010

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.833	1	0.833	117.408	0.000
Within Groups	0.838	118	0.007		
Total	1.671	119			

The Kabaddi Players Mean in Standing Broad Jump is 2.48 and Kho Kho Players Mean is 2.32 . The Standard Deviation of Kabaddi Players is 0.10 and Kho Kho Players is 0.05..Hence Kabaddi Players is having better Standing Broad Jump Performance compare to Kho Kho Players.The Sum of Squares and Mean Square between the Groups is 0.833 The F Value is 117.408 and Sig. of Anova is 0.000 that is below the value of 0,05. Hence there is difference between Kabaddi Players and Kho Kho Players in Standing Broad Jump i.e. explosive Power . The Kabaddi Players Performance is better than Kho Kho Players in Standing Broad Jump.

Conclusion:

It can be conclude that there is a significant difference between Kabaddi Players in Kho Kho Players. The Kabaddi Players is having better explosive power compare to Kho Kho Players.

Recommendations:

Based on analysis of collected data, the investigators would like to recommend the research work to extend further more as mentioned below.

.Further research, as well as the published findings, will contribute to the Kabaddi and Kho Kho coaching. The study also helps the physical educationists and coaches understanding the knowledge and performance of the players.

References:

Avula Srinivas (2023) Comparison of Explosive Power among High School Kabaddi Players and Kho Kho Players of Central Telangana, 2023, IRJEdT Volume: 05 Issue: 12 | Dec-2023