ExSPORT 2024

1st International Summit Conference on

Exercise Science, Sports Management, Outdoor Recreation, and Physical Education

28th August–29th August 2024

Program Book

ORGANIZED BY

IN COLLABORATION

SUPPORTED BY

1st International Summit Conference on

Exercise Science, Sports Management, Outdoor Recreation, and Physical Education

Exporting Research Insights to Practical Applications in Sports
Turning Challenges into Opportunities

28th August-29th August 2024

Main Organizer:

FSR Faculty of Sports Science and Recreation

Universiti Teknologi MARA

Co-Organizer:

UPI The Education University

Supported by:

Persatuan Pendidik Jasmani & Kesihatan Malaysia

Aqua Putra Malaysia

UNA Coffee

MASRA Malaysia Aquatic Rescue Association

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ExSPORT 2024 PROGRAM BOOK

WELCOMING MESSAGE
RECTOR OF UiTM CNS

Welcome, esteemed colleagues and participants.

It is with immense pleasure and honour that I welcome you to the International Summit Conference on Exercise Science, Sports Management, Outdoor Recreation, and Physical Education—ExSPORT 2024. This distinguished event represents a significant moment in our fields, gathering passionate individuals from across the globe who share a commitment to advancing sports and its impact on society.

Under the theme "Bridging Innovations in Sports: Expanding Opportunities Through Research," ExSPORT 2024 is designed to be a hub of collaboration and forward-thinking. Over the course of this conference, you will have the opportunity to engage with renowned keynote speakers, participate in dynamic workshops, and delve into a range of presentations showcasing the latest research and developments in our disciplines.

We are privileged to have the support and collaboration of various esteemed organizations that have made this event possible. Their invaluable contributions have helped shape this conference into a platform for meaningful exchange and progress.

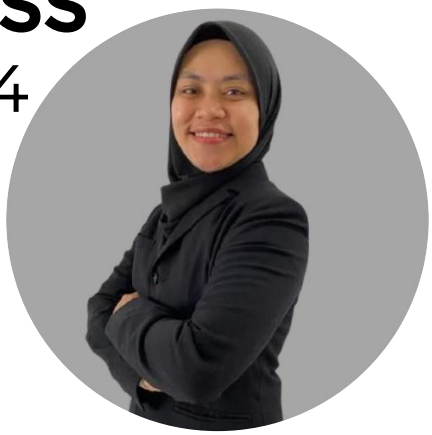
I encourage you to seize this unique opportunity by sharing your insights, engaging with peers, and building connections that will drive the future of our industry. Your active involvement is vital to the success of this summit, and I am excited about the innovative discussions and partnerships that will emerge from our collective efforts.

Thank you for your dedication to pushing the boundaries of exercise science, sports management, outdoor recreation, and physical education. Together, we can lead the way in transforming these fields and inspiring the next generation of professionals.

Once again, welcome to ExSPORT 2024. Let us make this a memorable and impactful event for all.

PROFESSOR DR. YAMIN YASIN
Rector
Universiti Teknologi MARA (UiTM)
Negeri Sembilan

WELCOMING ADDRESS
CHAIR OF ExSPORT 2024



Dear, esteemed colleagues and participants.

It is with great pleasure and honour that I welcome you to the 1st International Summit Conference on Exercise Science, Sports Management, Outdoor Recreation, and Physical Education, taking place online from 28th August-29th August 2024. This pioneering event marks a significant milestone in our fields, bringing together leading researchers, practitioners, and educators from around the globe.

Our conference, themed "Exporting Research Insights to Practical Applications in Sports: Turning Challenges into Opportunities," aims to foster an environment of collaboration and innovation. Over the next two days, you will have the opportunity to engage with thought-provoking keynote speakers, participate in interactive workshops, and explore a diverse range of presentations that highlight the latest advancements and trends in our disciplines.

We are proud to co-organize this event with Universitas Pendidikan Indonesia and to have the support of Pendidikan Jasmani & Kesihatan Malaysia, AQUA PUTRA Malaysia, UNA Coffee, and the Malaysia Aquatic Rescue Association. Their contributions have been invaluable in making this conference possible. I encourage you to take full advantage of this unique gathering by sharing your ideas and findings, networking with fellow professionals, and participating in social events. Your active participation is key to the success of this summit, and I look forward to the vibrant discussions and valuable connections that will emerge from our time together.

Thank you for your dedication to advancing the study and practice of exercise science, sports management, outdoor recreation, and physical education. Together, we can inspire and lead the next generation of professionals in our respective domains.

Once again, welcome to the 1st International Summit Conference. Let us make this an unforgettable and impactful experience.

DR. RAJA NURUL JANNAT RAJA HUSSAIN
Chair
ExSPORT 2024

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KEYNOTE SPEAKER ACADEMIA

YM Associate Professor Dr. Raja Mohammed Firhad Raja Azidin

Dean
Faculty of Sports Science & Recreation, Universiti Teknologi MARA

SESSION DETAILS

28 August 2024 I Wednesday

9.30 – 10.30 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic

Internal and External Training Load Monitoring in Elite Sports: Challenges and Practical Implications

Biography

Associate Professor Dr. Raja Mohammed Firhad Raja Azidin is a Dean at the Faculty of Sports Science and Recreation, Universiti Teknologi MARA (UiTM), Malaysia. He completed his PhD at Liverpool John Moores University (LJMU), United Kingdom focusing on developing biomechanical and neuromuscular injury risk assessment. He also has a special interest in advanced strength and conditioning for high-performance athletic success. He currently served as Head of Strength and Conditioning for Selangor Football Club, competing in Malaysia Professional Super League. He oversees the physical conditioning department of the club with a particular focus on players' football-specific physical development and monitoring training load, together with initiating applied research in football-related areas. He also serves as the Malaysian Association of Sports Medicine (MASM) executive committee.

Presentation Summary

Training load (TL) monitoring using both internal and external load have been vastly utilized especially in elite sports. Applying continuous assessment on training and match performance data, TL monitoring have been shown to assist coaches to design and modify training sessions based on individual player position, team tactics and physical demand. Previous scientific recommendations also have highlighted the importance of monitoring TL to enhance team and individual athlete performance as well as to reduce the risk of injury. The primary aim of this presentation is to provide applied scientific views on the challenges and practical implications of both external (global positioning system) and internal (heart rate, rating of perceived exertion) TL monitoring in elite sports.

KEYNOTE SPEAKER ACADEMIA

Professor Dato' Dr. Md Amin Md Taff

Vice-Chancellor
Sultan Idris Education University (UPSI)

SESSION DETAILS

28 August 2024 I Wednesday

10.30 – 11.30 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic
Development and Transformation of Recreation in Malaysia: Navigating Challenges and Opportunities

Biography
Professor Dato' Dr. Md Amin Md Taff is a distinguished academic and the Vice-Chancellor of Sultan Idris Education University (UPSI). He earned his PhD in Parks and Recreation Management from Universiti Putra Malaysia (UPM) in 2010. An expert in Outdoor Adventure and Sports Management, he has made significant contributions to outdoor adventure education. Prof. Dato' Dr. Md Amin was the first UPSI academician to serve as Director of the Malaysian Education Office in Washington, DC (2014-2017), fostering international collaborations. In 2017, he became UPSI's first alumnus to be appointed Deputy Vice-Chancellor (Student Affairs), and in 2021, the first to be named Vice-Chancellor. Renowned for his leadership, he is committed to advancing higher education in Malaysia. With over 120 publications, his work spans education, management, and consulting, making him a respected figure in academia.

Presentation Summary
This study delves into the evolution of recreational and commercial spaces in Malaysia, highlighting the rapid growth and transformation in this sector. A key focus is on the emergence of integrated lifestyle centers, such as the Kompleks Sukan dan Sosial Alam (KSSA), which combine multiple recreational, sports, and social facilities under one roof. These centers reflect a shift towards a more holistic approach to recreation, catering to diverse needs while promoting a healthy, active lifestyle. The study also explores the challenges faced in the planning and management of these centers, including sustainability and community engagement, as well as the opportunities they present in enhancing the quality of life and supporting the nation's broader social and economic goals.

KEYNOTE SPEAKER INDUSTRY

Mohd Izham Mohamad

Nutritionist
National Sports Institute (ISN)

SESSION DETAILS

28 August 2024 I Wednesday

14.00 – 15.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Biography

Mohd Izham Mohamad is an expert in Nutrition for Health and Performance, holding a BSc in Nutrition (2007) and an MSc in Health Science (Nutrition) (2015) from the National University of Malaysia (UKM). He currently serves as the Center Head and Senior Sport Nutritionist at the National Sports Institute of Malaysia and is a member of the Nutrition Society Malaysia (NSM). As Team Lead for the Malaysia Cycling Program, he specializes in nutrition education, sports supplements, hydration, and dietary strategies to enhance performance. Since 2009, Mohd Izham has played a key role in managing nutrition interventions for high-performance sports, particularly in cycling. He has been directly involved in coordinating sport science and medicine services for major international events, including the Olympics, Commonwealth, and Asian Games. With experience as a Team Nutritionist and Assistant Team Manager, he is dedicated to helping athletes achieve their goals, particularly those aiming for success in Asia, Commonwealth, and Olympic Games.

KEYNOTE SPEAKER ACADEMIA

Associate Professor Dr. Jajat Darajat Kusumah Negara

Senior Lecturer
Universitas Pendidikan Indonesia (UPI)

SESSION DETAILS

28 August 2024 I Wednesday

15.00 – 16.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic
The Impact of Physiological Exercise on Elite Athlete Performance

Biography
Dr. Jajat Darajat Kusumah Negara is a distinguished expert in Sports Physiology and Biomechanics, currently serving at the Department of Physical Education, Universitas Pendidikan Indonesia. His academic work includes numerous scientific publications, books, and teaching materials in these fields. Dr. Jajat applies his expertise by mentoring athletes, including West Java Pekan Olahraga Nasional (PON) athletes and the Indonesian National Baseball and Softball Team. He collaborates with the Ministry of Sports in Indonesia and holds leadership roles in sports organizations, such as Director of West Java Softball and Head of the Sports Sciences Division at KONI Bandung. Additionally, he serves as an Assessor Trainer for the National Professional Certification Agency (BNSP) and supervises students at all academic levels.

Presentation Summary
This study examines the significant impact of physiological exercise on elite athletes' performance, focusing on mechanisms like muscle hypertrophy, cardiovascular adaptations, and energy metabolism. Key biomarkers such as lactate threshold, VO_2 max, and hormone levels are analysed to gauge athletic capability. The research highlights the benefits of resistance and aerobic training in enhancing strength, endurance, and recovery, alongside psychological gains like mental toughness. The role of nutrition in optimizing performance and recovery is also discussed. Through case studies and recent advances in exercise physiology, the study provides evidence-based recommendations for developing effective, individualized training programs, emphasizing the ongoing importance of exercise physiology in improving athletic performance.

KEYNOTE SPEAKER ACADEMIA

Professor Dr. Hairul Anuar Hashim

Director
Sports Centre, Universiti Sains Malaysia (USM)

SESSION DETAILS

29 August 2024 I Thursday

9.00 – 10.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic

Cognitive processing of environmental cues associated with active and sedentary behaviors among overweight adolescents

Biography

Professor Dr. Hairul Anuar Hashim is the Director of the Sports Centre at Universiti Sains Malaysia (USM). He holds a PhD in Sports Psychology from the University of Western Australia. With extensive expertise in sports psychology, he contributes significantly to developing and managing sports programs at USM. His academic and practical insights are instrumental in advancing sports psychology research and application within the university and beyond. Professor Dr. Hairul Anuar has a significant educational background, with an MSc in Sports Psychology from Springfield College, Massachusetts, and a PhD from the University of Western Australia. His work includes over 300 publications, encompassing journal articles, books, and chapters. He also actively consults for various sports organizations, including the National Sports Council, and provides expertise in sports psychology. In addition to his academic pursuits, he is an active volleyball player and coach.

Presentation Summary

Reversing this trend of increased physical inactivity among adolescents is considered a global priority. Although extensive research on physical activity intervention has been conducted and published, evidence exist suggesting that the proposed interventions have relatively short-term effects and unsustainable changes in physical activity behavior. The stated problem may be addressed by facilitating permanent changes in exercise behavior, which requires an understanding of the mechanism of habit formation. It is known that habit can be decomposed into an automatic behavioral execution in response to stimulus cues. However, it is unclear is how various environmental cues are cognitively perceived, its implicit-explicit evaluation, and the impulsive-reflective responses to those cues. Thus, by decomposing the interaction between environmental cues and cognitive processing, a better prediction can be made to the potential behavioral responses, and subsequently habit formation. Therefore, this presentation will summarize our recent research on the roles of environmental cues in the formation of exercise habit among overweight adolescents.

KEYNOTE SPEAKER ACADEMIA

Dr. Radzliyana Radzuwan

Senior Lecturer
Universiti Teknologi MARA (UiTM) Seremban Campus

SESSION DETAILS

29 August 2024 I Thursday

10.00 – 11.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic
The Future of Sport Tourism

Biography
Dr. Radzliyana Radzuwan is currently a senior lecturer in the Faculty of Sports Science and Recreation (FSR) at Universiti Teknologi MARA (UiTM) Seremban Campus, Negeri Sembilan Branch, Malaysia. She obtained her PhD from the School of Tourism, Hospitality, and Event Management at Universiti Utara Malaysia (UUM) in 2016. Her areas of interest include Sport Event Tourism, Sport Tourist Behaviours, Sport Management, Sport Communication, and Organizational Behaviour in Sport. She has nearly 20 years of teaching experience, significantly contributing to her areas of interest. In addition to her academic career, Dr. Radzliyana is a member of several associations, including the Tourism Educators Association of Malaysia (TEAM), the Malaysian Institute of Management (MIM), and The Institute of Internal Auditors Malaysia (IIAM). In 2021, she was assigned as the research officer to develop the Occupational Framework for the Sport Industry under the Department of Skills Development, Ministry of Human Resources, Malaysia.

Presentation Summary
The pace of change in sports tourism is formidable. New investors and innovators are storming into the industry, sweeping in new platforms, products and events that are challenging the status quo of sports tourism in every country and community around the world. The tremendous increase in satellite and internet media coverage over the past decade has fuelled a worldwide fascination with active, healthy ways of life, contributing to sports tourism's rise. The United Nations of World Tourism Organization (UNWTO) stated that sports tourism has an estimated growth rate of 17.5% between 2023-2030, moving masses intra and intercontinental. In Malaysia, it is an important income generator in the tourism industry, contributing approximately RM5 billion annually and it is supported by a broad global audience as sporting events usually attract both domestic and international participants. In addition, the government commitment to promoting the expansion of the sports tourism industry and plans to build additional or upgrading existing sports facilities and infrastructure soon deserves commendation. Malaysia with its distinct combination of modern amenities and natural beauty is ideal for all types of sporting events from local to international competitions.

KEYNOTE SPEAKER ACADEMIA

Associate Professor Dr. Mohamad Shariff A. Hamid

Head of Department
Faculty of Medicine, University of Malaya (UM)

SESSION DETAILS

29 August 2024 I Thursday

14.00 – 15.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic
Prolotherapy and Platelet-rich Plasma: Promises and Pitfalls

Biography
Associate Professor Dr. Mohamad Shariff A. Hamid is a consultant sports medicine specialist in the sports medicine department of the University Malaya Medical Centre and an academician at the sports medicine unit, Faculty of Medicine, University Malaya. Dr. Shariff completed his undergraduate MBBS training at the University of Adelaide in 1996. He later obtained a Master of Sports Medicine in 2004 and a PhD in 2014. Dr. Shariff is also a visiting consultant at the National Sports Medicine Centre. He is the current president of the Society of Exercise in Medicine Malaysia and the vice president of the Malaysian Association of Sports Medicine. His research interests include sports injury prevention & management, and auto biologicals use for soft tissue injury management

Presentation Summary
This presentation delves into prolotherapy and platelet-rich plasma (PRP) therapy, two innovative techniques for managing chronic musculoskeletal pain. We will explore how prolotherapy stimulates tissue repair through irritant injections and its potential for healing and pain reduction while addressing its limitations and transient discomfort. PRP therapy's use of concentrated growth factors for tissue regeneration and pain relief will be examined alongside the ongoing debate about its long-term efficacy. By presenting a balanced view of both methods, this session aims to inform and empower decision-making in pain management, highlighting the promise and challenges of these emerging therapies.

KEYNOTE SPEAKER ACADEMIA

Associate Professor Dr. Eva Julianti Pramudyawardhani

Senior Lecturer
Universitas Negeri Jakarta (UNJ)

SESSION DETAILS

29 August 2024 I Thursday

15.00 – 16.00 (MYT)

https://meet.google.com/kgc-xqyd-ege

Presentation Topic

Social Inclusion in Inclusive Classrooms: The Role of PE Teacher in Classroom Management

Biography

Associate Professor Dr. Eva Julianti P. is a distinguished academic at Universitas Negeri Jakarta, specializing in Physical Education, Health, and Recreation. She earned her PhD from Universitas Negeri Jakarta in 2020. Dr. Eva plays a vital role in the Department of Physical Education, significantly contributing to curriculum development and educational materials. Her research focuses on enhancing physical education practices and promoting health and recreation. Known for her dedication to advancing educational standards, Dr. Eva actively participates in various university initiatives. Her extensive experience and contributions solidify her reputation as a respected figure in physical education and health, making her a valuable asset to the academic community and her field.

Presentation Summary

This discussion explores how classroom management in physical education (PE) classes at inclusive schools influences social inclusion among regular students and those with special educational needs and/or disabilities (SEND). Social inclusion, though a relatively new concept, is crucial for enhancing teachers' understanding. PE teachers play a vital role in fostering interaction between regular students and SEND by using a consistent approach for all students, rather than tailoring exercises specifically for SEND. Teacher enthusiasm and creativity significantly impact the PE classroom environment. Every SEND student has the right to be included and actively participate in regular PE classes. Effective classroom management by creative PE teachers is essential for ensuring that all students achieve the goals of PE learning.

CONFERENCE SCHEDULE

DAY 1 I 28th AUGUST 2024

CONFERENCE SCHEDULE

DAY 1 I 28th AUGUST 2024

Emcee: Muhammad Wafi A. Rahman
Meeting Link: https://meet.google.com/kgc-xqyd-ege

08:30 – 09:00 **Registration**

09:00 – 09:30 **Welcome Remarks**
Dr. Raja Nurul Jannat Raja Hussain
Chair of ExSPORT 2024

Opening Speech
Professor Dr. Yamin Yasin
Rector of Universiti Teknologi MARA (UiTM) Negeri Sembilan

09:30 – 10:30 **Keynote Speaker 1** I Academia

YM Associate Professor Dr. Raja Mohammed Firhad Raja Azidin
Dean of Faculty of Sports Science and Recreation, Universiti Teknologi MARA (UiTM)

10:30 – 11:30 **Keynote Speaker 2** I Academia

Professor Dato' Dr. Md Amin Md Taff
Vice-Chancellor of Sultan Idris Education University (UPSI)

11:30 – 12:30 **PRALLEL SESSION I**

ROOM 1	-	Sports Science
Moderator	|	Muhammad Zulqarnain Mohd Nasir
Meeting Link	|	https://meet.google.com/kgc-xqyd-ege
ROOM 2	-	Social Science
Moderator	|	Muhammad Wafi A. Rahman
Meeting Link	|	https://meet.google.com/wmg-qawx-nne

BREAK

Emcee: Razif Sazali
Meeting Link: https://meet.google.com/kgc-xqyd-ege

14:00 – 15:00 **Keynote Speaker 3** I Industry

Mohd Izham Mohamad
Nutritionist of National Sports Institute (ISN)

15:00 – 16:00 **Keynote Speaker 4** I Academic

Dr. Jajat Darajat Kusumah Negara
Senior Lecturer of Universitas Pendidikan Indonesia (UPI)

16:00 – 17:00	**PARALLEL SESSION II**	ROOM 1	-	Sport Science
		Moderator	|	Nurul Ain Abu Kassim
		Meeting Link	|	https://meet.google.com/kgc-xqyd-ege
		ROOM 2	-	Social Science
		Moderator	|	Razif Sazali
		Meeting Link	|	https://meet.google.com/wmg-qawx-nne
17:00	End of Day 1			

PARALLEL SESSION 1 | ROOM 1
SPORTS SCIENCE
DAY 1 | 28th AUGUST 2024 | 11:30 – 12:30 [MYT]

SESSION LINK: https://meet.google.com/kgc-xqyd-ege

PAPER ID	TITLE
ExS001	Assessing the Quality and Validity of Diet and Exercise Plans Generated by AI Chatbots: A Preliminary Study Using the NExGEN Prompt Generator System **Main author / Presenter:** Azwa Suraya Mohd Dan
ExS002	Integration of an AI Chatbot with a Personalized Diet and Exercise Prompt Generator: A Proof-of-Concept Study in Obese Adults **Main author / Presenter:** Azwa Suraya Mohd Dan
ExS005	Acute Effect of Different Exercise Modalities (Badminton vs Closed-skills) on Multi-domain Cognitive Functions in Recreationally Active Older Adults **Main author / Presenter:** Syed Murshid Syed Zubir
ExS006	Identification of Types of Drop Techniques with Pulling on Pencak Silat Matches Regulation in 2022 **Main author / Presenter:** Zulfikar Ubaidillah Riky
ExS007	Development of Upper Body Strength Training for Pencak Silat Athletes in the Adult Competition Category in the Pre-Competition Phase **Main author / Presenter:** Bahar Rozaq Maulidan
ExS014	Acetaminophen Ingestion and Its Influence on Exercise Performance: A Meta-Analysis of 18 Randomized, Double-Blind, Crossover Studies **Main author / Presenter:** Nur Mim Naimah Zainuddin
ExS020	Six-week Intermittent Exercise Training with and without Blood Flow Restriction on Physiological Responses and Endurance Performance in Young Adult Men **Main author / Presenter:** Zafyrah Mior
ExS021	Impact of Religious Fasting on Resting Blood Pressure and Hydrogen Sulfide Bioavailability in High-Normal Blood Pressure Population **Main author / Presenter:** Syahirah Amirah Syaharudin

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS001

Assessing the Quality and Validity of Diet and Exercise Plans Generated by AI Chatbots: A Preliminary Study Using the NExGEN Prompt Generator System

Azwa Suraya Mohd Dan, Adam Linoby, Sazzli Shahlan Kasim, Siti Aida Lamat, Sufyan Zaki, and Razif Sazali

Email: azwamohddan@gmail.com

Artificial intelligence (AI) chatbots like ChatGPT are increasingly used in obesity research to track diets, activity, and energy expenditure. However, its effectiveness in diet and exercise planning depends on the precision and completeness of user inputs. This study evaluates the quality of ChatGPT output when combined with the newly developed diet and exercise prompt generator system, NExGEN. A cohort of obese participants (n = 18) was enlisted to contribute interpersonal data for the NExGEN prompt generator. Utilising ChatGPT-4, this data informed the creation of personalised weekly dietary and exercise plans. Accredited professionals (n = 16) conducted a blind evaluation of these plans by grading the quality and validity of the NExGEN-ChatGPT responses using the DISCERN and content validity index (CVI), respectively. The evaluators graded the NExGEN-ChatGPT responses as bottom tier 2.2% of the time, middle tier 16.3% of the time, and top tier 81.5% of the time. The CVIs score was ≥80% with a correlation coefficient between 0.89 – 0.99, and overall Cronbach's alpha score at 0.798. This study demonstrates that integrating ChatGPT with the NExGEN system effectively generates high-quality diet and exercise plans for obese individuals, as evidenced by favourable quality and validity assessments by professionals.

Keywords: Artificial intelligence, obesity, physical activity, weight loss, weight management, nutrition.

ExS002

Integration of an AI Chatbot with a Personalized Diet and Exercise Prompt Generator: A Proof-of-Concept Study in Obese Adults

Azwa Suraya Mohd Dan, Adam Linoby, Sazzli Shahlan Kasim, Siti Aida Lamat, Sufyan Zaki, and Razif Sazali

Email: azwamohddan@gmail.com

Poor diet and physical inactivity rank as the primary modifiable risk factors for death and disease. Advancements in artificial intelligence (AI) chatbot technology offer significant opportunities to provide scalable, personalized support for diet and physical activity. This proof-of-concept study aimed to evaluate the preliminary efficacy of exercise, and dietary interventions delivered through the integration of ChatGPT with the newly developed diet and exercise prompt generator system, NExGEN. This 12-week single-arm pre-post study was conducted in Selangor, Malaysia, from July 2023 to February 2024. The study involved obese adults recruited via social media posts and flyers. The intervention provided access to an AI chatbot, ChatGPT-4, and began with an introductory session of NExGEN for each participant. Participants submitted weekly diet and activity logs, along with ChatGPT dialogue records. The primary outcomes assessed were the feasibility and preliminary efficacy of the program in altering diet and physical activity. Secondary outcomes measured included body composition (using height, weight, and waist circumference) and blood pressure. Initially, 71 individuals expressed interest in participating, of whom 54 met the eligibility criteria, and 48 completed the intervention. After 12 weeks of intervention, the average body weight significantly decreased to 97.5 ± 14.9 kg, with a mean reduction of 4.8 kg (95% CI: 3.9 to 5.7 kg, $p < 0.001$). BMI also decreased by 1.7 kg/m² (95% CI: 1.4 to 2.1 kg/m², $p < 0.001$). Additionally, waist circumference significantly decreased from 110.2 ± 10.4 cm to 105.8 ± 9.8 cm, representing a reduction of 4.4 cm (95% CI: 3.6 to 5.2 cm, $p < 0.001$). Blood pressure did not show significant changes. The intervention demonstrated excellent feasibility in terms of recruitment, retention (85.2% at 12 weeks), and safety (no adverse events reported). The intervention leveraging AI chatbot technology (ChatGPT) integrated with NExGEN, demonstrated notable improvements in weight loss and

waist circumference among obese adults, suggesting promising avenues for scalable health behaviour change interventions.

Keywords: *Artificial intelligence, obesity, physical activity, weight loss, weight management, nutrition.*

ExS005

Acute Effect of Different Exercise Modalities (Badminton vs Closed-skills) on Multi-domain Cognitive Functions in Recreationally Active Older Adults

Syed Murshid Syed Zubir, Raja Nurul Jannat Raja Hussain, Adam Linoby, Aqil Zulkhairi, and Azwa Suraya Mohd Dan

Email: syedmurshid25@gmail.com

This study investigates the cognitive benefits of acute exercise modalities in elderly individuals, focusing on engagement in badminton (open-skills) versus closed-skill (e.g., swimming, cycling and running) exercises, compared to sedentary activity. A total of 67 participants aged 60 and above were categorised into three groups: badminton (open-skills) (BAD, n = 21), closed-skill exercise (CSP, n = 22), and a sedentary control (CON, n = 24) group. The study evaluated the cognitive impact of a single exercise bout on these tasks. Results revealed that participation in badminton exercises significantly improved executive function and working memory compared to closed-skill and passive activities. Specifically, in the N-Back Task, the BAD group showed a reaction time of 810.4 m/s and 75.2% accuracy, outperforming the CSP (reaction time: 826.2 m/s, accuracy: 70.8%) and CON groups (reaction time: 840.8 m/s, accuracy: 56.2%). Similarly, in the TMT-B, the BAD group (46.7 seconds) outperformed the CON group (64.0 seconds). Accurately, the BAD group showed notable cognitive enhancements post-exercise, particularly in working memory and executive functions. For instance, the BAD group improved in TMT-B from 46.7 seconds to 45.4 seconds post-exercise, while the CSP and CON groups did not exhibit similar improvements. These findings suggest that the type of physical activity plays a critical role in cognitive health, with badminton offering superior benefits. The study highlights the importance of exercise modality in cognitive function enhancement among the elderly, challenging the notion that all forms of physical activity are equally beneficial for cognitive health.

Keywords: *Open-skills, close-skills, cognitive function, elderly.*

ExS006

Identification of Types of Drop Techniques with Pulling on Pencak Silat Matches Regulation in 2022

Zulfikar Ubaidillah Riky and Kurniati Rahayuni Alwi Idrus

Email: zulfikar.ubaidillah.2006316@students.um.ac.id

Changes to the pencak silat regulations in 2022 regarding technical playing in the sparring category pencak silat athletes have an impact on the emergence of new types of fall techniques. But until now, there has been no scientific evaluation or discussion of the types of fall techniques with the pull that have been used. Therefore, this research aims to analyze the types of fall techniques with pulls in the sparring category pencak silat athletes as the first step of evaluating and learning techniques in depth. This research method uses a visual research method with qualitative and quantitative data analysis techniques. The number of subjects identified was 354 videos of matches in 2023 with details, 155 videos from provincial championships, 161 videos from national championships, and 38 from international championships. The research findings are eleven types of fall techniques with pulls described qualitatively. From the results of quantitative data, it is known that three types of techniques are often used in provincial, national, and international matches, including type 6 - pull, catch, and sweep (25.61%), type 3 - pull and cutout (19.35%), and type 5 - pull and side fall hook (18.77%).

Keywords: *Pencak silat, regulation 2022, drop technique with pull.*

ExS007 **Development of Upper Body Strength Training for Pencak Silat Athletes in the Adult Competition Category in the Pre-Competition Phase**

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In pencak silat, upper body strength is very important to support the techniques performed, such as gripping, pulling, and counterattack techniques when we are knocked down by an opponent. So, a trainer must understand the training program that suits your needs. The aim of this development is to provide a variety of training tailored to the needs of Pencak silat athletes in the pre-competition phase. On this basis, researchers developed a strength training model based on the needs of the pencak silat sport by carrying out the Research and Development (R&D) method with an FGD (focus group discussion) approach with pencak silat experts and physical strength conditioning experts. The research was carried out in stages and resulted in 10 upper body strength training models in the pre-competition phase, namely (1) cobra push-up, (2) bench press, (3) barbell row, (4) bosu lateral step with battle rope, (5) one hand push combine, (6) multi planar pull with resistance band, (7) side pull with resistance band,(8) clean and press,(9) multi-directional pull for take down with resistance band,(10) from ground to up single hand pull push. This movement model has gone through expert testing and small and large group testing, so it is concluded that this product can be put into practice in training.

Keywords: *Upper body, pencak silat, strength, training, performance.*

ExS014 **Acetaminophen Ingestion and Its Influence on Exercise Performance: A Meta-Analysis of 18 Randomized, Double-Blind, Crossover Studies**

Nur Mim Naimah Zainuddin, Adam Linoby, Iqbal Khan, Fatin Nur Shahirah Zamri, and Syed Murshid

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This meta-analysis investigates the effects of paracetamol (acetaminophen; ACT) ingestion on exercise performance, addressing conflicting findings in existing literature. The present study conducted a thorough search across five databases: PubMed (MEDLINE), Web of Science (WoS), Cinahl (EBSCOhost), SPORTDiscus (EBSCOhost), and grey literature. The methodological quality of studies was assessed using the Cochrane Risk of Bias tool. All included studies employed a randomized, double-blind, crossover design. The main meta-analysis of 18 eligible studies revealed a trend toward statistically significant differences in outcomes between PLA administration and ACT intake (overall SMD = 0.12 [95% CI: -0.01 to 0.26], p=0.072). Sensitivity analysis revealed that excluding one study significantly affected the results, shifting the pooled effect size to an SMD of 0.32 ([95% CI: 0.16 to 0.31], p=0.0491). In subgroup analysis, aerobic exercise demonstrated a slightly lower effect size (SMD = 0.11 [95% CI: -0.07 to 0.27]) compared to anaerobic exercise (SMD = 0.15 [95% CI: -0.06 to 0.37]), with neither showing statistical significance ($p > 0.05$). Further comparison among exercise intensities revealed the highest effect size in maximal intensity exercise (SMD = 0.15 [95% CI: -0.06 to 0.37]), surpassing moderate (SMD = 0.12 [95% CI: -0.09 to 0.32]) and high intensity (SMD = 0.08 [95% CI: -0.25 to 0.4]), yet none reached statistical significance ($p > 0.05$). This study indicates that ACT may offer conditional benefits in certain contexts, reflecting the diverse methodologies in our meta-analysis. Future research should focus on specific dosages, precise ingestion times, and a broader range of exercises to further understand its impact on exercise performance.

Keywords: *Exercise performance, acetaminophen, ergogenic, aerobic, anaerobic, intensity.*

ExS020

Six-week Intermittent Exercise Training with and without Blood Flow Restriction on Physiological Responses and Endurance Performance in Young Adult Men

Zafyrah Mior, Adam Linoby, Amirul Shamsuddin, Azwa Suraya Mohd Dan, Tengku-Fadilah Kamalden, Reshandi Nugraha, and Felipe Domingos Lisbôa

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Exercise training with blood flow restriction (BFR) has gained attention for its potential to enhance muscular strength and hypertrophy, yet its combined effects with high-intensity intermittent exercise training (IET) remain underexplored. This study addresses this gap by evaluating the impact of a 6-week IET program, with and without BFR, on endurance performance and physiological responses in recreationally active young adult men. Twenty-eight participants were pair-matched (using estimated and randomly assigned to IET-BFR (mean ± SD: age 21 ± 2 years, body mass 59 ± 9 kg, height 1.7 ± 0.09 cm) and IET-only (mean ± SD: age 21 ± 2 years, body mass 60 ± 8 kg, height 1.69 ± 0.08 cm) groups. The IET-BFR group performed high-intensity intermittent exercises with inflatable cuffs (154 ± 6 mmHg) for 19.5 ± 0.5 minutes, while the IET-only group trained without cuffs. Both groups completed 12 training sessions, with assessments conducted using the Yo-Yo Intermittent Recovery Level 1 test (Yo-Yo IR1), blood lactate levels, heart rate (HR), and rate of perceived exertion (RPE). Results revealed a significant improvement in Yo-Yo IR1 performance (IET-BFR: 1,444 ± 319 m vs. IET-only 1,330 ± 362 m; $p < 0.05$) and significantly lower blood lactate levels during the exercise tests (IET-BFR: 7.37 ± 1.84 $mmol.L^{-1}$ vs. IET-only 8.33 ± 2.20 $mmol.L^{-1}$; $p < 0.05$). No significant differences were observed in HR or RPE between the groups. These results indicate that integrating BFR into IET protocols could boost exercise performance, potentially by increasing the efficiency of lactate clearance.

Keywords: Blood flow restriction, intermittent exercise, physiological responses, endurance performance, lactate clearance.

ExS021

Impact of Religious Fasting on Resting Blood Pressure and Hydrogen Sulfide Bioavailability in High-Normal Blood Pressure Population

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Hydrogen sulfide (H_2S) has emerged as a critical gasotransmitter with significant roles in blood pressure (BP) regulation and cardiovascular health. Despite growing evidence from pre-clinical studies highlighting the vasodilatory effects of H_2S, its role during fasting in humans remains unexplored. This study tested the hypothesis that religious fasting during Ramadan would reduce resting BP and enhance H_2S bioavailability in individuals with high-normal BP. We examined the effects of a month-long fasting regimen on systolic BP and plasma H_2S levels in fourteen adult Muslim men with high-normal BP (systolic BP 130-139 mmHg, diastolic BP 85-89 mmHg; mean ± SD: age 32 ± 5 years, body mass 85 ± 4 kg, height 1.7 ± 0.08 m). Baseline tests were conducted before fasting, followed by assessments on Day-1, Day-14, and Day-28 at two fasting durations (5 hours and 10 hours). The results demonstrated a significant reduction in systolic BP at the 10-hour fasting duration on Day-14 (mean decrease of 8.5 ± 3.2 mmHg) and Day-28 (mean decrease of 10.2 ± 3.8 mmHg) compared to baseline ($p < 0.05$). Additionally, plasma total H_2S concentrations increased significantly on Day-7 (mean increase of 15.3 ± 4.1 µM) and Day-28 (mean increase of 17.8 ± 4.5 µM) compared to baseline and Day-1 ($p< 0.05$). These findings suggest that religious fasting can effectively lower BP and increase H_2S bioavailability, providing a non-pharmacological approach to managing BP in high-normal BP populations.

Keywords: Fasting, blood pressure, hydrogen sulfide, gasotransmitter, cardiovascular health.

PARALLEL SESSION 1 | ROOM 2

SOCIAL SCIENCE

DAY 1 | 28th AUGUST 2024 | 11:30 – 12:30 [MYT]

SESSION LINK: https://meet.google.com/wmg-qawx-nne

PAPER ID	TITLE
ExS004	Effect of Reward Toward Job Performances Among Employees in Decathlon Petaling Jaya Branch **Main author / Presenter**: Siti Zawiyah Azmi
ExS008	Exploration of Football Fanaticism Among Aremania Supporters After the Kanjuruhan Tragedy **Main author / Presenter:** Hildhan Mas Ari Didanta
ExS009	Media Coverage on Sporting Events in Malaysia: Issues and Challenges **Main author / Presenter:** Ahmad Faisal Mohamed Fiah
ExS010	Transformational Leadership Behavior and Group Cohesion Values in the Outdoor Recreation Program Among Sports Science and Recreation Students **Main author / Presenter:** Siti Sarah Khairul Anuar
ExS011	Sports Participation on Multiple Intelligences: A Cross-Sectional Study of University Student-Athletes **Main author / Presenter:** Hazirah Pethie
ExS012	A Preliminary Study on Assessing Recreation Resource Impacts at GeoBudaya Berkeley Trail, Lenggong Geopark, Perak, Malaysia **Main author / Presenter:** Siti Noorbaizura Bookhari

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS004 **Effect of Reward Toward Job Performances Among Employees in Decathlon Petaling Jaya Branch**

Siti Zawiyah Azmi, Rozita Abdul Latif, Mohammad Adzly Rajli, Azlina Zid, and Maizan Mohd Noor

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Performance is critical to organizational success, with efficient employee performance being paramount. Reward systems are an essential component of institutions, fostering reliable performance and behaviour to achieve greater success. This research study examines the impact of rewards on job performance among employees at the Decathlon Petaling Jaya Branch. Utilizing a quantitative methodology, the study employs a survey approach to gather data from employees. The objectives include identifying the types of rewards provided, analyzing job performance, and exploring the relationship between rewards and job performance. The findings indicate a positive correlation between rewards—such as medical aid, bonuses, profit-sharing, and incentives—and employee job performance. However, variations were observed in respondents' perceptions of the adequacy and effectiveness of these rewards. Additionally, the study highlights employees' proactive approaches to task management and timely completion, reflecting a positive work ethic. The conclusions emphasize the crucial role of effective reward systems in enhancing employee job performance and organizational productivity. The study recommends that managers and leaders in the sports retail industry refine and optimize their reward systems to better meet their employees' diverse needs and expectations, thereby contributing to improved job performance and organizational success.

Keywords: *Reward, job performances, sport retailers, employee.*

ExS008 **Exploration of Football Fanaticism Among Aremania Supporters After the Kanjuruhan Tragedy**

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This research will explore the fanaticism of Aremania as one of the football supporters in Indonesia who has experienced the Kanjuruhan tragedy. The aim of this research is to explore the level of Aremania fanaticism after the Kanjuruhan tragedy which refers to the 4 supporters quadrants. Apart from that, knowing the form and level of fanaticism of Aremania supporters. Later we will focus on the level of fanaticism from various aspects of the approach. This research approach is a qualitative approach that looks at social problems using certain conceptual and theoretical approaches. Data collection techniques consist of observation, interviews and documentation. Data analysis was carried out through several stages, namely data collection, data reduction, data presentation, and drawing conclusions. The research results are based on the data obtained, there are 4 supporter quadrants which are grouped into supporters, fleneurs, fans, and followers. (Supporters) have become Arema supporters more since childhood, (Fleneurs) most of the respondents buy tickets/jerseys to help the clubs finances, (Fans) have become Arema Fans mostly starting from television and Aremania attractions at the stadium, (Followers) Most respondents know Arema more from their parents and close friends. The results of the research show that there are several themes, including 1) The story of becoming Aremania, 2) The positive and negatives sides of Aremania, 3) experiences at the location of the kanjuruhan tragedy, 4) important lessons from the kanjuruhan tragedy, 5) Changes in fanaticsm, 6) The future Indonesian football, 7) regulations on the use of tear gas, 8) manifestation of being Aremania, 9) sacrifice of being a supporter, 10) interest in supporting Arema Fc.

Keywords: *Kanjuruhan disaster, fanaticism, Aremania.*

ExS009 **Media Coverage on Sporting Events in Malaysia: Issues and Challenges**

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Since independence in 1957, Malaysia has seen a lot of sporting events, domestically and internationally being organized. The most memorable sporting event ever hosted by Malaysia was the Commonwealth Games in 1998 while there was also other international sporting events hosted by Malaysia such as the Sea Games and other world level sporting events. Apart from that, there are also domestic sporting events organized in this country. Those sporting events are normally hosted and organized by sports associations or sports clubs or event promoters. Education institutions such as higher learning institutions and schools also would organize sporting events and normally in searching for future generation athletes and certain events has been a tradition to each institution. In terms of media coverage, for international or higher-level sporting events, perhaps they do not have many issues in getting the coverage due to the "news value" factor of those events. But, what about other level events, especially those organized by independent organizers or any sports club in this country? There are many contributing factors that lead to the media coverage, synonymously known as "pull factor" and generally we know that media coverage is important to publicize and popularize sports. Therefore, this paper is intended to discuss the issues and challenges of sporting events in Malaysia especially pertaining to media coverage.

Keywords: *Sporting events, media, publicity, sports journalism.*

ExS010 **Transformational Leadership Behavior and Group Cohesion Values in the Outdoor Recreation Program Among Sports Science and Recreation Students**

Siti Sarah Khairul Anuar and Ahmad Fikri Mohd Kassim

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This study aims to explore the relationship between transformational leadership behavior and group cohesion values in the outdoor recreation program curriculum among Sport Science and Recreation students. The four main components are employed to define the idea and style of transformational leadership: idealized influence, intellectual stimulation, inspirational motivation, and individual consideration. A transformative leader must exhibit idealized influence by demonstrating exemplary behavior. It is vital that leaders provide inspirational motivation to encourage followers to be committed to the organization's objectives. Moreover, intellectual stimulation involves fostering innovation, creativity, critical thinking, and problem-solving. Individualized consideration entails the leader addressing the unique needs of each follower, acting as a mentor or coach. Group cohesion pertains to the affirmative connection and feeling of inclusion among the group members. It transcends mere relational dynamics, encompassing a nurturing and supportive group atmosphere, empathetic comprehension, and acknowledgment. A total of 230 participants (120 male and 110 female) volunteered and completed the questionnaire. The survey employed the Multifactor Leadership Questionnaire (MLQ) 5x-short and the Group Environment Questionnaire (GEQ) to assess the elements affecting transformational leadership and the significance of group cohesion in the research. The findings demonstrated a significant correlation between (i) the factors of transformational leadership (such as idealized influence, intellectual stimulation, inspirational motivation, and individual consideration) and individual attraction to the group task (ATG-T), (ii) the factors of transformational leadership and group integration task (GI-T), and (iii) transformational leadership with ATG-T and GI-T. In summary, the potential of transformational leadership to improve the coherence of groups involved in outdoor recreation educational activities is remarkable. By employing transformational leadership, individuals holding leadership roles are empowered to effectively promote and encourage cooperation towards a common objective, thus fostering a sense of unity and cooperation among group members.

Keywords: *Group cohesion, outdoor recreation, transformational leadership, values.*

ExS011 **Sports Participation on Multiple Intelligences: A Cross-Sectional Study of University Student-Athletes**

Hazirah Pethie and Patricia Pawa Pitil

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Student-athletes are a unique group, facing numerous challenges in maintaining excellent academic performance while balancing their sports commitments. Participation in sports has significantly impacted their socialization, intellectual growth, and character building. It is essential to address the factors underlying these issues and devise effective strategies to help student-athletes successfully navigate their academic and athletic pursuits. Howard Gardner's theory of multiple intelligences (MI) provides a valuable framework for understanding the diverse cognitive strengths and weaknesses of individuals. This theory posits that intelligence is not a single entity but rather a combination of several distinct intelligences, including kinesthetic, intrapersonal, logical, interpersonal, and linguistic intelligences. By evaluating student-athletes through the lens of MI, we can gain insights into how their unique intelligence profiles influence both their athletic performance and personal growth. The objective of this study was to investigate the multiple intelligences of student-athletes and examine the differences in MI subdomains based on gender, type of sport, age group, and ethnicity. To achieve this objective, a cross-sectional survey research design was employed, utilizing a sample of 182 student-athletes representing the university. Overall, the multiple intelligences of the students were high. Among the five MI subdomains, kinesthetic intelligence scored the highest ($M = 21.51 \pm 2.99$), followed by intrapersonal ($M = 20.17 \pm 3.13$) and logical intelligences ($M = 18.78 \pm 2.83$). Interpersonal ($M = 17.80 \pm 3.11$) and linguistic intelligence ($M = 15.33 \pm 3.35$) received the lowest scores. Independent sample t-test results revealed significant differences in the kinesthetic, interpersonal, and intrapersonal intelligences between genders, while logical and interpersonal intelligences differed significantly by type of sports ($p < .05$). Logical intelligence was the only subdomain showing a significant difference between age groups, while none of the ethnicity groups showed significant differences in any of the subdomains ($p > .05$). Significant differences were found in several MI subdomains based on gender, type of sport, and age group. Specifically, kinesthetic, interpersonal, and intrapersonal intelligences differed between genders, while logical and interpersonal intelligences varied by type of sport. Additionally, logical intelligence showed differences across age groups. Overall, the results underscore the importance of a holistic approach in supporting student-athletes, leveraging their strengths in kinesthetic, intrapersonal, and logical intelligences while addressing areas like interpersonal and linguistic intelligences. Tailored strategies based on MI profiles can help balance their athletic success and personal development.

Keywords: *Athletic performance, multiple intelligences, student-athletes, university students.*

ExS012 **A Preliminary Study on Assessing Recreation Resource Impacts at GeoBudaya Berkeley Trail, Lenggong Geopark, Perak, Malaysia**

Siti Noorbaizura Bookhari, Mas Aiyu Jamaludin, Siti Zubaidah Mat Tahir, Nor Hidayah Ishak Hizam, Sri Rahayu Mohd Sa'ad, Mazzueen Md. Khalid, Mohd. Salleh Daim, and Zakaria Hashim

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Recreation ecology is a field of study that assesses, examines and monitors any impact due to visitors coming to carry out recreational activities, especially in natural areas. In line with the recognition of Lenggong Geopark as a National Geopark on 16 September 2021, it is sure to be the primary destination focus for visitors who want to enjoy the uniqueness of geological heritage in this geotourism area. In fulfilling the visitor's desire to engage more closely with these ecological heritage resources, the trail is a specific medium that connects the resources and the prospective visitors who are interested. However, the large number of visitors can cause problems with the overall quality of the trail system, causing undesirable changes and damaging components of natural resources such as soil, vegetation, wildlife, and water. This problem has directly affected the integrity of the management in maintaining recreational benefits, even creating conflicts between visitors and difficulties in achieving management sustainability. Therefore, this study aims to assess the conditions along the Berkeley GeoBudaya Trail and subsequently provide the management with an understanding of the current status of the trails so that appropriate actions can be taken to curb damage from continuing to occur.

Through data collection, 24 sampling points were obtained with a consistent distance gap of 50 meters, each from one to another, making the entire distance of the Berkeley GeoBudaya Trail 1.2 kilometers long. The assessment was carried out using three main techniques, Rapid Survey Technique, Census Sampling Technique, and Cross-sectional Measurements, to determine the factors influencing the recreation resource impact of the trail. The findings of the study show that the current status of recreation resource impacts on the Berkeley GeoBudaya Trail is between low to moderate, preserved, and the environment still retains its naturalness. The significant contribution of such an assessment is believed to be advantageous to the management in ensuring the sustainability of the trail system by accommodating visitation while enhancing the protection of natural resources along the Berkeley GeoBudaya Trail.

Keywords: *Recreation ecology, recreation resource impacts, trail impact assessment, natural resource management, GeoBudaya Berkeley Trail.*

PARALLEL SESSION 2 | ROOM 1
SPORTS SCIENCE
DAY 1 | 28th AUGUST 2024 | 16:00 – 17:00 [MYT]

SESSION LINK: https://meet.google.com/kgc-xqyd-ege

PAPER ID	TITLE
ExS022	Comparative Analysis of Intermittent Exercise Training with and without Blood Flow Restriction on Physiological and Performance Matric **Main author / Presenter:** Amirul Aiman Shamsuddin
ExS023	A Comparative Analysis of Technical Characteristics Between Top World Ranking vs Top-One Malaysian Athlete in Men's Single Badminton Matches 2023 World Tour **Main author / Presenter:** Arisya Ismail
ExS024	Independent and Synergistic Impact of Mouth Rinsing with L-Menthol, Carbohydrate, Caffeine and Combination L-Menthol + Carbohydrate + Caffeine on Intermittent Performance in Recreationally Active Young Men **Main author / Presenter:** Muhammad Azizi Shah
ExS025	A Comparative Analysis of Technical Proficiencies: Viktor Axelsen Versus Anders Antonsen in Men's Singles Badminton during the 2023 World Tour **Main author / Presenter:** Muhammad Nabil Esa
ExS028	Manchester City's Premier League Dominance: Longitudinal Study for Season 2021-2023 **Main author / Presenter:** Muhammad Zunnurain Nor Azam
ExS029	The Effect of AMRAP Training on Skill Performance Among Healthy Collegiate Students **Main author / Presenter:** Mohd Armizan Mohd Zuhairi
ExS030	The Effect of AMRAP Training on Fitness Components Among Healthy Collegiate Students **Main author / Presenter:** Muhammad Luqman Hakim Mohd Noordin
ExS031	An Analysis of Physical Fitness During Pre-Competitive Phase Among Young Athletes **Main author / Presenter:** Syaiditina Aisyah
ExS032	Comparison Between Individual and Team Sports in Physical Fitness During the Pre-competition Phase **Main author / Presenter:** Nurshammeza Mohd Shamsul

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS022

Comparative Analysis of Intermittent Exercise Training with and without Blood Flow Restriction on Physiological and Performance Matric

Amirul Aiman Shamsuddin, Adam Linoby, Zafyrah Mior, Azwa Suraya Mohd Dan, Tengku-Fadilah Kamalden, Reshandi Nugraha, and Felipe Domingos Lisbôa

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This study tested the hypothesis that intermittent exercise training (IET) combined with blood flow restriction (BFR) would improve muscle oxygen saturation (SmO_2) and exercise performance. We investigated the effects of 6 weeks (3 days per week) of intermittent exercise training combined with BFR on the high-intensity intermittent exercise performance, SmO_2, blood [glucose], and rating of discomfort. Following completion of a baseline Yo-Yo intermittent recovery level 1 test (Yo-Yo IR1), twenty-eight young men recreationally active in endurance-based sports were pair-matched and randomly assigned to the IET-BFR and IET-only groups. The IET-BFR group performed IET (50% of the maximum distance covered in Yo-Yo IR1 at baseline in 5 sets) with inflatable cuffs (1.3 × resting systolic blood pressure), and the IET-only group performed the same training without inflatable cuffs. Performance in the Yo-Yo IR1 was 8.3% greater ($p < 0.05$) with IET-BFR (1,444 ± 319 m) compared to IET-only (1,330 ± 362 m) after 18 training sessions. Additionally, the IET-BFR group exhibited significantly higher post-training SmO_2% during the Yo-Yo IR1 test ($p < 0.05$). There were no significant differences between groups in blood [glucose] or rating of discomfort. These findings suggest that incorporating BFR into IET protocols could effectively enhance exercise performance, potentially attenuating the decline in local oxygen delivery.

Keywords: *Blood flow restriction, intermittent exercise, muscle oxygenation, exercise performance, endurance training.*

ExS023

A Comparative Analysis of Technical Characteristics Between Top World Ranking vs Top-One Malaysian Athlete in Men's Single Badminton Matches 2023 World Tour

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This study conducts a comparative analysis of technical characteristics between top world-ranking and Top 1 Malaysia Athletes in men's singles badminton matches during the 2023 World Tour. The objective of this research is to analyse gameplay between two players, providing insights for coaches and athletes to enhance their training and performance techniques. The focus of this study is Viktor Axelsen, the top 1 world ranking, and Lee Zii Jia, the Malaysian athlete. The technical characteristics that have frequently been analysed were (serve, drop, net, smash, lob, defence, drive and clear). Variables were obtained using YouTube videos and notational analysis r = 0.99 and % of error 0.3%. Mann-Whitney U was used to describe and to determine the difference in the technical characteristics used by the Top 1 World Ranking and Top 1 Malaysia Athletes, between the groups' analyses, significant found out only seven out of 16 (success and unsuccess) which was lob unsuccess ($p = 0.03$, $r = 0.252$), clear success ($p = 0.001$, $r = 0.60$), clear unsuccess ($p = 0.021$, $r = 0.28$), drive unsuccess ($p = 0.001$, $r = 0.46$), defend unsuccess ($p = 0.001$, $r = 0.51$), drop unsuccess ($p = 0.35$, $r = 0.23$) and smash unsuccess ($p = 0.016$, $r = 0.29$). The study revealed that technical characteristics can improve player performance for better tournament results. It highlights the importance of using these characteristics as guides for improving performance. Effective play increases the chances of winning, while poor performance leads to losing matches.

Keywords: *Technical characteristics, men's singles badminton, comparative analysis, notational analysis, performance strategies.*

ExS024

Independent and Synergistic Impact of Mouth Rinsing with L-Menthol, Carbohydrate, Caffeine and Combination L-Menthol + Carbohydrate + Caffeine on Intermittent Performance in Recreationally Active Young Men

Muhammad Azizi Shah, Adam Linoby, Nur Irdina Farhani, Azwa Suraya Mohd Dan, Harris Kamal Kamaruddin, Reshandi Nugraha, and Marco Machado

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This study examined the hypothesis that mouth rinsing with carbohydrate (CHO), caffeine (CAF), L-menthol (MEN), and their combination (CHO+CAF+MEN; MIX) would improve performance during high-intensity intermittent exercise. Eighteen recreationally active young men (mean ± SD: age 22 ± 2 years, body mass 62 ± 7 kg, height 168 ± 0.06 cm) participated in a randomized, double-blind, placebo-controlled crossover study. Participants completed six trials involving mouth rinsing with CHO, CAF, MEN, MIX, a placebo (PLA), and a control (CON; plain water). The CHO mouth rinse (1440 ± 288 m) significantly enhanced exercise performance in the Yo-Yo intermittent recovery level 1 (Yo-Yo IR1) test compared to PLA (1383 ± 282 m) and CON (1373 ± 282 m) (both $p < 0.05$), but not when compared to other rinses. There were no significant differences in heart rate (HR), muscle oxygenation (SmO_2), blood lactate, or blood glucose levels between the different mouth rinse conditions. These results suggest that CHO mouth rinsing can improve intermittent exercise performance without affecting physiological markers such as HR, SmO_2, lactate, or glucose. Further research should explore the mechanisms behind these performance improvement effects and the potential benefits for different athletic populations.

Keywords: *Mouth rinsing, carbohydrate, caffeine, L-menthol, muscle oxygenation, blood glucose.*

ExS025

A Comparative Analysis of Technical Proficiencies: Viktor Axelsen Versus Anders Antonsen in Men's Singles Badminton during the 2023 World Tour

Muhammad Nabil Esa, Arisya Ismail, Anis Shafira Abdul Harith, Muhamad Noor Mohamed, Raja Nurul Jannat Raja Hussein, Sharifah Maimunah Syed Mud Puad, and Muhamad Safiq Saiful Annur

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Badminton, known for its fast-paced play and requiring advanced skills and conditioning, has seen impressive performances in the 2023 World Tour, especially by Danish player Viktor Axelsen. Yet, there's a noticeable difference when compared to his fellow Danish player Anders Antonsen, who is currently ranked 10th in the world. The purpose of this study is to compare the techniques employed by Viktor Axelsen and Anders Antonsen. The primary criteria for analysis include all fundamental techniques in badminton, specifically the lob, defense, drop shot, smash, net play, drive, clear, and serve. Data for these variables were obtained using YouTube videos and notational analysis (r=1.0, % of error= 0.29%). The Mann-Whitney U test was employed to describe and determine the differences in the technical characteristics used by Viktor Axelsen and Anders Antonsen. Significant differences were found in six out of 16 technical categories (both success and unsuccess rates): clear success (p=0.001, r=0.64), clear unsuccess (p=0.001, r=0.48), drive unsuccess (p=0.001, r=0.38), defense unsuccess (p=0.001, r=0.67), drop shot success (p=0.001, r=0.72), and drop shot unsuccess (p=0.05, r=0.21). In conclusion, the study reveals that technical characteristics significantly impact player performance, leading to better results in tournaments. By comparing the success and unsuccess rates of serves, lobs, clears, net play, drives, defense, drop shots, and smashes, the analysis provides insights into how these elements contribute to overall performance. This comparative study underscores the importance of understanding and refining these technical aspects for players aspiring to achieve better results in competitive tournaments.

Keywords: *Badminton, technical characteristics, Danish player, Mann-Whitney U test, performance analysis.*

ExS028 Manchester City's Premier League Dominance: Longitudinal Study for Season 2021-2023

Muhammad Zunnurain Nor Azam, Arisya Ismail, Muhammad Nabil Esa, Anis Shafira Abdul Harith, Muhamad Noor Mohamed, Muhamad Safiq Saiful Annur, and Mohd Aizzat Adnan

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This study investigates the factors contributing to Manchester City Football Club's sustained dominance in the Premier League between the 2020/21, 2021/22 and 2022/23 seasons. Employing a longitudinal research design, the study examines the interplay between tactical details and the effect of player changing towards tactical details in Manchester City throughout the 2020/21, 2021/22 and 2022/23 seasons. Key areas of analysis include Guardiola's tactical philosophy, player recruitment and development, and the impact of player change. The sample size in this study was 114 matches (N=114) of the English Premier League, and it was divided into three seasons, which are 2020/21, 2021/22 and 2022/23. Furthermore, the methodology used was notational analysis and secondary data. The data is collected from Premier League Official Apps. Besides, based on analysis conducted by Kruskal-Wallis, the findings showed there are significant differences in terms of the shot-off target (X^2=8.33, p=0.016). The other variables show there is no significant difference in data and the p-value>0.05. For successful passing (X^2=2.75, p=0.253), for unsuccessful passing (X^2=5.79, p=0.055), for shot on target (X^2=1.64, p=0.440), and for scoring (X^2=1.15, p=0.564). Moreover, the present study revealed that the significant difference was only found in shots off-target. Other than this, the variables show that there are no significant differences. This is because the effectiveness of a team's attacking force in scoring goals is largely determined by its formation, player characteristics, and shooting abilities. Other than that, this team's style of play emphasises precise ball possession and methodical attacks, a formula that has been instrumental in their domestic and European triumphs. In conclusion, there is a significant difference in the shot-off target. But there is no significant difference in successful passing, unsuccessful passing, shot on target, and scoring.

Keywords: Manchester City Football Club, Premier League dominance, tactical details, player characteristics.

ExS029 The Effect of AMRAP Training on Skill Performance Among Healthy Collegiate Students

Mohd Armizan Mohd Zuhairi, Maisarah Shari, Mardiana Mazaulan, Sharifah Maimunah Syed Mud Puad, and Raja Nurul Jannat Raja Hussain

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In recent years, there has been a growing global concern over sedentary behavior due to its adverse effects on health and well-being. The As Many Reps/Rounds as Possible (AMRAP) training methodology, a key element of high-intensity interval training (HIIT) programs, has gained prominence in the fitness industry for its versatility, time efficiency, and significant health benefits. However, research on the impact of AMRAP training on skill performance components among students is limited. This study aimed to examine the effects of AMRAP training on speed, agility, power, and balance in healthy collegiate students. A total of 24 healthy collegiate students (17 males, 7 females) aged 20-21 years participated in the study. Participants were randomly assigned to either an AMRAP or Traditional Resistance Training (TRT) group for six weeks. The AMRAP group performed exercises designed to maximize repetitions or rounds within a specified timeframe, while the TRT group followed a conventional resistance training protocol. Both groups trained three times per week at 60%-67% of maximum heart rate. Skill performance components were assessed using standard protocols: speed was measured with a 30m dash, agility with a T-test, power with a vertical jump test, and balance with a stork stand test. Statistical analysis was conducted using paired t-tests to compare pre-and post-intervention results within groups and independent t-tests to compare differences between groups. Both groups showed significant speed improvements (AMRAP: -0.14s, TRT: -0.36s), agility (AMRAP: -3.31s, TRT: -2.91s), power (AMRAP: +4.2cm, TRT: +4.66cm), and balance (AMRAP: +2.65s, TRT: +11.24s). No significant differences were observed between the AMRAP and TRT groups in all skill performance components except for balance (p<0.05) with the TRT group showing a more substantial improvement compared to the AMRAP group. This may be due to the nature of traditional resistance training, which often includes more static and controlled movements that require stabilization and balance, thus providing greater balance training stimuli compared to the more dynamic and rapid movements characteristic of AMRAP. In conclusion, these

findings suggest that AMRAP can be an effective alternative to traditional resistance training, especially for those seeking time-efficient workout options. Traditional resistance training might be more beneficial for enhancing balance.

Keywords: *AMRAP training, agility, collegiate students, power, speed.*

ExS030 **The Effect of AMRAP Training on Fitness Components Among Healthy Collegiate Students**

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In recent years, there has been a rise in global concern over sedentary behavior due to its negative impact on health and well-being. The As Many Reps/Rounds as Possible (AMRAP) training methodology, integral to high-intensity interval training (HIIT) programs, has garnered attention in the fitness industry for its versatility, time efficiency, and substantial health benefits. However, research on the impact of AMRAP training on health fitness components among students remains scarce. This study aimed to examine the effects of AMRAP training on body composition, flexibility, muscular strength, muscular endurance, and cardiovascular endurance in healthy collegiate students. A total of 24 healthy collegiate students (17 males, 7 females) aged 20-21 years participated in the study. Participants were randomly assigned to either an AMRAP or Traditional Resistance Training (TRT) group for six weeks. The AMRAP group performed exercises designed to maximize repetitions or rounds within a specified timeframe, while the TRT group followed a conventional resistance training protocol. Both groups trained three times per week at 60%-67% of maximum heart rate. Fitness components were assessed using standard protocols: body composition was measured via bioelectrical impedance analysis, flexibility with a sit-and-reach test, muscular strength with a hand-grip test, muscular endurance with a push-up test, and cardiovascular endurance with a VO_2 max test. Statistical analysis was conducted using paired t-tests to compare pre- and post-intervention results within groups and independent t-tests to compare differences between groups. Both groups showed significant improvements in body composition (AMRAP: -4.5% body fat, TRT: -3.4% body fat), flexibility (AMRAP: -0.3 cm, TRT: -5 cm), muscular strength (AMRAP: +2.4 kg, TRT: +2.2 kg), muscular endurance (AMRAP: +12 push-ups, TRT: +13 push-ups), and cardiovascular endurance (AMRAP: +10.7 ml/kg/min VO_2 max, TRT: +12.4 ml/kg/min VO_2 max). However, no significant differences were observed between the AMRAP and TRT groups in any of the fitness components. The absence of significant differences between groups may be due to the short duration of the intervention. Future research with extended training periods is recommended to fully understand the potential impact of AMRAP training on fitness components in healthy collegiate students. In conclusion, the study demonstrates that AMRAP training programs are safe for healthy collegiate students and yield significant improvements in various health fitness components. These findings suggest that AMRAP can be an effective alternative to traditional resistance training, especially for those seeking time-efficient workout options.

Keywords: *AMRAP training, body composition, collegiate students, muscular strength, muscular endurance.*

ExS031 **An Analysis of Physical Fitness During Pre-Competitive Phase Among Young Athletes**

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The pre-competitive phase represents a crucial period in an athlete's training cycle, during which the emphasis transitions from building foundational fitness to refining specific skills and optimizing overall physical performance. Young athletes require customized training strategies to enhance their physical fitness, preparing them for the rigours of competition and enabling them to excel in their respective sports. This study aims to evaluate the physical fitness levels of young athletes during the pre-competitive phase, offering insights into the efficacy of current training practices and pinpointing areas for potential improvement. A total of 209 SUKMA athletes participated in this study, undergoing five fitness tests designed to measure various aspects of their physical fitness: body mass index (BMI), sit-and-reach test, Yo-Yo endurance test (YYET), countermovement jump test (CMJ), and one-minute push-up test. These assessments

were conducted before and after the athletes' preparatory phase to evaluate changes in BMI, flexibility, cardiovascular endurance, muscular power, and muscular endurance. The results revealed significant differences in muscular power, flexibility, muscular endurance, and cardiovascular endurance ($p<0.001$) between the pre-and post-testing phases. However, BMI did not show any significant changes. These findings highlight the effectiveness of the pre-competitive training phase in enhancing key physical fitness components, although BMI remained unaffected. Future research should focus on further elucidating strategies to optimize young athletes' physical health and performance during this pivotal pre-competitive period, ensuring they are adequately prepared for competition demands.

Keywords: *Physical fitness, pre-competitive phase, young athletes, fitness assessment.*

ExS032 **Comparison Between Individual and Team Sports in Physical Fitness During the Pre-Competition Phase**

Nurshammeza Mohd Shamsul and Raja Nurul Jannat Raja Hussain

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Periodization in sports training is a strategic approach designed to optimize athletes' performance at specific times. This method divides training programs into several phases, each with distinct goals and emphasis. The pre-competition phase, a critical period within the competitive phase, focuses on reducing general conditioning while increasing sport-specific training. This phase aims to transition athletes from training to competitive readiness by enhancing technical skills, tactics, and maintaining high workout intensity. Understanding the physical fitness differences between individual and team sport athletes during this phase can inform tailored training interventions. The primary objective of this study was to compare physical fitness levels between individual and team sport athletes during the pre-competition phase. The variables measured included body composition, flexibility, muscular power, cardiovascular endurance, and muscular endurance. A total of 92 SUKMA athletes were recruited for this study, consisting of 42 individual sports athletes (participating in tennis, karate, pencak silat, and muaythai) and 42 team sports athletes (participating in basketball, cricket, and volleyball). The participants underwent a series of physical fitness assessments consist of body composition, flexibility, muscular power, cardiovascular endurance, and muscular endurance. Data were analyzed using independent t-tests to compare the physical fitness variables between individual and team sports athletes. The independent t-test analysis revealed that there were no significant differences between individual and team sports athletes in body composition (BMI: individual sports = 21.17 ± 3.05, team sports = 21.39 ± 2.83, $t(90) = -0.346$, $p = 0.730$), flexibility (sit-and-reach test: individual sports = 37.48 ± 6.59cm, team sports = 39.61 ± 5.69cm, $t(90) = -1.658$, $p = 0.101$ muscular power (countermovement jump test: individual sports = 41.17 ± 11.16, team sports = 41.68 ± 13.85, $t(90) = -0.195$, $p = 0.846$), and cardiovascular endurance (yoyo endurance test: individual sports = 43.28 ± 7.89ml/kg/min, team sports = 40.33 ± 7.43ml/kg/min, $t(90) = 1.846$, $p = 0.068$). However, a highly significant difference was found in muscular endurance between the two groups during the pre-competition phase (1-minute push-up test: individual sports = 27.65 ± 12.24, team sports = 40.33 ± 7.43, $t\ (90) = 4.357$, $p < 0.01$). This study indicates that while body composition, flexibility, muscular power, and cardiovascular endurance do not significantly differ between individual and team sports athletes during the pre-competition phase, muscular endurance does show a marked difference. These findings suggest that training programs during the pre-competition phase may need to be tailored differently for individual and team sport athletes to address specific fitness components effectively. Future research should explore the underlying factors contributing to these differences and evaluate the long-term impacts of tailored training interventions on athletic performance.

Keywords: *Individual sports, team sports, physical fitness, pre-competition phase, periodization.*

PARALLEL SESSION 2 | ROOM 2

SOCIAL SCIENCE

DAY 1 | 28th AUGUST 2024 | 16:00 – 17:00 [MYT]

SESSION LINK: https://meet.google.com/wmg-qawx-nne

PAPER ID	TITLE
ExS013	Investigation on Effective Communication and Group Cohesiveness in the Outdoor Program Curriculum at the Faculty of Sports Science and Recreation, UiTM **Main author / Presenter**: Syaza Nur Nadirah Afzainizam
ExS015	Comparison Factors of Volunteer Attitudes of Leadership Behavior, Behavior Belief, Normative Belief, and Control Belief Among Students in Outdoor Program Curriculum at the Faculty of Sports Science and Recreation UiTM Between Genders **Main author / Presenter:** Nor Adilla Shamsudin
ExS016	Game On: CRPD's Push for Inclusive Sports **Main author / Presenter**: Nur Azlina Mohamad Zahari
ExS018	The Relationship Between Burnout and Turnover Intention Among UiTM Segamat Employees **Main author / Presenter:** Anis Madihah Zulkefli
ExS019	The Relationship Between Perceived Stress and Sleep Quality Among MSN Perak Athletes **Main author / Presenter:** Nurul Nadia Najihah Mohd Azmi
ExS026	How Depression, Anxiety and Stress (Mental Health) are Related to Sleep Quality During Ramadhan Fasting Among UiTM Seremban 3 Faculty of Sports Science and Recreation Students **Main author / Presenter:** Khaliq Mohammad Reza
ExS027	Effect of Physical Activity on Cognitive Function and Sleep Quality Among UiTM Seremban 3 Students **Main author / Presenter:** Akif Saat

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS013

Investigation on Effective Communication and Group Cohesiveness in the Outdoor Program Curriculum at the Faculty of Sports Science and Recreation, UiTM

Syaza Nur Nadirah Afzainizam and Ahmad Fikri Mohd Kassim

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This research endeavour seeks to compare the difference between level of education on effective communication and group cohesiveness through outdoor recreation program curriculum at the faculty of sports science and recreation, UiTM. The study delves into two fundamental components of effective communication: external perception encompassing clarity and information dissemination, and internal disseverance focusing on conflict resolution. In addition, the analysis of group cohesiveness entails an examination of four dimensions: individual attractions towards the group in social contexts (ATG-S), individual attractions towards the group in task-oriented settings (ATG- T), group integration-social (GI-S) and group integration-task (GI-T). A set of questionnaires based on Interpersonal Communication Skills (ICS) and Group Environment Questionnaire (GEQ) was completed by 233 students who took an outdoor recreation program. The respondent in this study consists of male (n=121) and female (n=112) respondents. The result revealed that external perception is positively associated with group integration social (GI-S) but negatively associated with individual attraction to the group task (ATG- T). Internal disseverance is positively associated with individual attraction to the group social (ATG-S), group integration social (GI-S) and group integration task (GI-T). Conversely, negatively associated with individual attraction to the group task (ATG-T). The findings underscore the complex interplay between external factors (such as perception) and internal group dynamics (such as conflict management) in shaping overall group cohesiveness and member engagement. These findings could help students and academicians understand the elements of group cohesiveness which can lead to more effective group work and improved learning experience for better educational achievement.

Keywords: *Effective communication, group cohesiveness, outdoor recreation program, curriculum development.*

ExS015

Comparison Factors of Volunteer Attitudes of Leadership Behavior, Behavior Belief, Normative Belief, and Control Belief Among Students in Outdoor Program Curriculum at the Faculty of Sports Science and Recreation UiTM Between Genders

Nor Adilla Binti Shamsudin, Ahmad Fikri Mohd Kassim, and Siti Hannariah Mansor

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Volunteers are crucial in developing students' self-identification and soft skills within organizations where task-focused roles prioritize competence and contribution over gender-specific norms. This approach fosters inclusivity, enabling individuals of all genders to participate equally based on their skills. Therefore, this study investigates differences in volunteer attitudes towards leadership behavior (behavioral belief, normative belief, and control belief) among students in the outdoor program curriculum at UiTM's Faculty of Sports Science and Recreation between genders. 233 questionnaires were distributed to the students FSR UiTM (Arau, Shah Alam, Puncak Alam, Seremban and Jengka). Results reveal that no significant gender differences in normative and control beliefs, promoting an organizational culture where all volunteers feel empowered to assume leadership responsibilities. Conversely, there was a significant gender-based difference in behavioral beliefs regarding leadership. The study underscores how gender stereotypes influence perceptions of leadership, potentially affecting male and female volunteers' leadership opportunities and effectiveness. Future research is warranted to investigate similar research with different kinds of population.

Keywords: *Volunteer attitude, leadership, behavioural belief, normative belief, control belief, outdoor recreation.*

ExS016 **Game On: CRPD's Push for Inclusive Sports**

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The Convention on the Rights of Persons with Disabilities (CRPD) plays a crucial role in recognizing and promoting the rights of persons with disabilities (PWD), particularly their right to access sports. This paper delves into the specific provisions of the CRPD that address the inclusion of PWD in sports activities, focusing on Article 9 and Article 30, which emphasize the integration of PWD in mainstream sporting events and the accessibility of sports venues. Employing a doctrinal legal research approach, the study scrutinizes primary legal sources, including the CRPD and national legislation, to highlight the importance of inclusive sporting opportunities and accessible sports facilities for PWD. Article 30 of the CRPD explicitly mandates the participation of PWD in cultural life, recreation, leisure, and sports, advocating for their inclusion in mainstream sports and the provision of disability-specific sports. It also stresses the necessity of making sports facilities accessible to PWD. Article 9 complements this by addressing the broader need for accessibility in public spaces, including sports venues. By analysing these articles, the study underscores the significant role of sports in enhancing the physical, mental, and social well-being of PWD. The global landscape of sports access for PWD reveals both progress and persistent challenges. While there have been advancements in recognizing the rights of PWD to participate in sports, Malaysia's legal frameworks still need to catch up to the comprehensive standards set by the CRPD. For instance, gaps in legislation and inadequate enforcement mechanisms hinder the full realization of these rights. The CRPD supports the principles of dignity, equality, and inclusiveness, but aligning national laws with these principles remains a critical task. To bridge these gaps, the research recommends several measures. National laws should be amended to incorporate specific provisions for sports access, ensuring that PWD has the same opportunities as others to engage in sports. Enhanced enforcement of existing laws is crucial, along with the signing and ratification of the Optional Protocol to the CRPD, which would bolster international accountability and commitment to these rights.

Keywords: *Access, disabilities, human rights, persons with disabilities, sports.*

ExS018 **The Relationship Between Burnout and Turnover Intention Among UiTM Segamat Employees**

Anis Madihah binti Zulkefli and Ummi Kalthum Mohd Mokhtar

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The purpose of this study is to investigate the relationship between burnout and turnover intention among governmental sector employees. It aims to identify key factors contributing to burnout, such as work overload and low pay, and examine their impact on employees' intentions to leave. The findings will help understand their level of burnout and turnover intentions and the reasons behind them. Methods: Using a quantitative approach, the study investigates the relationship between burnout and turnover intentions (N=210) through descriptive analysis and Pearson correlation. Results: The study at UiTM Segamat revealed that 61.82% of 165 employees experienced moderate burnout, with 9.71% facing high or very high burnout. Additionally, 56.36% showed moderate turnover intentions, while 9.09% had high turnover intentions. A significant correlation (Pearson correlation = 0.001, $p < 0.005$) between burnout and turnover intentions was found, emphasizing the need for effective burnout management to reduce turnover and improve employee well-being. Conclusion: In conclusion, many employees at UiTM Segamat experience moderate burnout and turnover intentions, often due to work overload and insufficient management support. There is a significant correlation between burnout and turnover intentions. Prioritizing employee well-being and aligning job roles with career aspirations can foster a motivated and stable workforce.

Keywords: *Burnout, turnover intentions, employees.*

ExS019 **The Relationship Between Perceived Stress and Sleep Quality Among MSN Perak Athletes**

Nurul Nadia Najihah Mohd Azmi and Ummi Kalthum Mohd Mokhtar

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The purpose of this study was to examine the relationship between perceived stress and sleep quality among athletes at MSN (Majlis Sukan Negeri Perak). This study involved 356 respondents (195=male, 161=female) from the Majlis Sukan Negeri Perak. The data analysis method that was used for the first and second research questions was descriptive statistics. The Pearson correlation was the third research question, the relationship between perceived stress and sleep quality. The Perceived Stress Scale (PSS) was utilized to assess respondent's level of perceived stress. The Athletes Sleep Behavior Questionnaire (ASBQ) was utilized to assess the respondent's frequency of sleep quality. The result stated that the highest mean for perceived stress was Unpredictable Perceived Stress, followed by Overloading Perceived Stress. Uncontrollable Perceived Stress was the least mean. For sleep quality, the highest mean was for sleeping behavior, while the lowest mean was for the domain of sleeping habits. The Pearson Correlation of the relationship between perceived stress and sleep quality showed a moderate positive relationship.

Keywords: *Perceived stress, sleep quality, Majlis Sukan Negeri Perak athlete.*

ExS026 **How Depression, Anxiety and Stress (Mental Health) are Related to Sleep Quality During Ramadhan Fasting Among UiTM Seremban 3 Faculty of Sports Science and Recreation Students**

Khaliq Mohammad Reza, Nurul Ain Abu Kasim, Raja Nurul Jannat Raja Hussain, Muhamad Noor Mohamed, Mardiana Mazaulan, Sharifah Maimunah Syed Mud Puad, Noor Azila Azreen Md Radzi, Maisarah Mohd Saleh, and Maisarah Shari

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One of the five pillars of Islam is to be fasting during the holy month of Ramadan according to the Qur'an. During Ramadan, Muslims avoid all food and drink, smoking and immoral behaviour from dawn until sunset. Numerous studies have documented the different impacts of fasting during Ramadan on sleep quality and mental health. For instance, Muslims rise early to attend the pre-dawn meal known as Suhur and the morning prayer (Fajr). The study examines how sleep quality, depression, anxiety, and stress are related among students while fasting during Ramadan. The participants for this study were 349 students from the Faculty of Sport Science & Recreation UiTM Seremban 3. Its goal is to recognize any alterations in sleep quality throughout this time and how these mental factors come together, possibly impacting overall mental wellness and quality of life. The study employs surveys to collect information from students at UiTM Seremban 3 Faculty of Sport Science and Recreation, with a specific focus on how fasting impacts mental well-being. Pearson correlation coefficient was used to analyse the data obtained. It shows that there is a significant relationship ($p < 0.05$) between all the variables. However, the result shows that the association of sleep quality between depression ($r = 0.173$) and anxiety ($r = 0.176$) had low strength of relationship. While the association of sleep quality between stress ($r = 0.342$) had moderate strength of relationship.

Keywords: *Sleep quality, depression, anxiety, stress, mental health.*

ExS027

Effect of Physical Activity on Cognitive Function and Sleep Quality Among UiTM Seremban 3 Students

Akif Saat, Nurun Naja, Nur Najihah, Naimi Sahira, Muhammad Taufiq, and Sharifah Maimunah Syed Mud Puad

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In the demanding landscape of university life, where sleep deprivation and mental exhaustion are commonplace, this study explores whether physical activity could be a game-changer for students, enhancing both academic success and overall well-being. Could physical activity be key to unlocking more significant cognitive potential and ensuring restorative sleep? Purpose: Although exercise and sleep quality are associated with cognitive function, their beneficial effects on cognitive function remain unclear. This study examines the impact of physical activity on sleep quality and cognitive function. Methods: 26 healthy young adults (age 22.3 ± 1.04 years) participated in this study. The Exercise amount was assessed using a uniaxial accelerometer. This study evaluated physical activity and sleep quality by actigraphy. Cognitive function was tested using the N-back task and the Wisconsin Card Sorting Test (WCST).Results: There were no significant associations between physical activity and sleep quality (B = -2.63e-4, p = 0.616), N-back task performance (B = -2.84e-4, p = 0.670), or WCST performance (B = -2.61e-5, p = 0.679), while sleep quality was significantly associated with N-back task performance (B = 0.540, p = 0.030) but not WCST performance (B = 0.0401, p = 0.097). Conclusion: Physical activity was not significantly associated with sleep quality or cognitive function. However, sleep quality was positively associated with working memory performance, suggesting that better sleep quality may enhance cognitive abilities in specific domains.

Keywords: *Physical activity, cognitive function, sleep quality, students, accelerometer, university students.*

CONFERENCE SCHEDULE

DAY 2 I 29th AUGUST 2024

CONFERENCE SCHEDULE

DAY 2 I 29th AUGUST 2024

Emcee: Nurul Ain Abu Kasim
Meeting Link: https://meet.google.com/kgc-xqyd-ege

08:45 – 09:00	**Registration**			
09:00 – 10:00	**Keynote Speaker 5** I Academia **Professor Dr. Hairul Anuar Hashim** *Director of Sports Centre, Universiti Sains Malaysia (USM)*			
10:00 – 11:00	**Keynote Speaker 6** I Academia **Dr. Radzliyana Radzuwan** *Senior Lecturer, Universiti Teknologi MARA (UiTM) Seremban Campus*			
11:15 – 12:30	**PRALLEL SESSION I**	ROOM 1 Moderator Meeting Link	- | |	Sports Science Nurul Ain Abu Kasim https://meet.google.com/kgc-xqyd-ege
		ROOM 1 Moderator Meeting Link	- | |	Social Science Muhammad Wafi A.Rahman https://meet.google.com/wmg-qawx-nne
12:30 – 14:00	**BREAK**			

Emcee: Muhammad Zulqarnain Mohd Nasir
Meeting Link: https://meet.google.com/kgc-xqyd-ege

14:00 – 15:00	**Keynote Speaker 7** I Academia **Associate Professor Dr. Mohamad Shariff A. Hamid** *Head of Department, Faculty of Medicine, University of Malaya (UM)*			
15:00 – 16:00	**Keynote Speaker 8** I Academia **Associate Professor Dr. Eva Julianti Pramudyawardhani** *Senior Lecturer of Universitas Negeri Jakarta (UNJ)*			
16:00 – 17:00	**PARALLEL SESSION II**	ROOM 1 Moderator Meeting Link	- | |	Sport Science Muhammad Zulqarnain Mohd Nasir https://meet.google.com/kgc-xqyd-ege
		ROOM 1 Moderator Meeting Link	- | |	Social Science Razif Sazali https://meet.google.com/wmg-qawx-nne
17:00	End of Day 2			

PARALLEL SESSION 1 | ROOM 1
SPORTS SCIENCE
DAY 2 | 29th AUGUST 2024 | 11:15 – 12:30 [MYT]

SESSION LINK: https://meet.google.com/kgc-xqyd-ege

PAPER ID	TITLE
ExS034	Effect of Cold-Water Immersion and Proprioceptive Neuromuscular Facilitation (PNF) Stretching on Muscle Soreness Among Negeri Sembilan Junior League U19 Hockey Players **Main author / Presenter:** Najihah Hayati Mohamad Zahir
ExS036	Effect of Sports Massage and Form Rolling on Muscle Soreness Among Negeri Sembilan Junior League U-19 Hockey Players **Main author / Presenter:** Adriana Balqis Che'Ad
ExS038	The Effects of Carbohydrate, Caffeine, L-Menthol, and Combination (Carbohydrate + Caffeine + L-Menthol) Mouth Rinsing on Intense Intermittent Exercise Performance in Recreationally Active Young Men **Main author / Presenter:** Nur Irdina Farhani
ExS040	Gender Difference in Fatigue Index and Power Output **Main author / Presenter:** Muhammad Zikry Riduan
ExS042	Effect of Proprioceptive Neuromuscular Facilitation (PNF) and Sports Massage on Muscle Soreness Among Negeri Sembilan U-19 Junior League Hockey Players **Main author / Presenter:** Noer Fatimah El-Zahra Hasan
ExS043	The Effect of Reception Quality on the Selection of Setting Zone **Main author / Presenter:** Muhammad Aniq Amsyar Azmin
ExS046	Does the Change of Coach Affect the Barcelona Team's Performance During the Spanish League? **Main author / Presenter:** Lokman Hakim Shamshul
ExS047	Positional Profiling Feasibility of U18 Ice-Hockey Players Based on Anthropometry and Aerobic Capacity **Main author / Presenter:** Attila Czont
ExS050	Analyzing Mayweather's Boxing Dominance: Factors and Outcomes **Main author / Presenter:** Noor Qhalif Noor Azizee

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS034

Effect of Cold-Water Immersion and Proprioceptive Neuromuscular Facilitation (PNF) Stretching on Muscle Soreness Among Negeri Sembilan Junior League U19 Hockey Players

Najihah Hayati Mohamad Zahir, Mardiana Mazaulan, Muhamad Noor Mohamed, Noor Azila Azreen, Raja Nurul Jannat Raja Hussein, and Nurul Ain Abu Kassim

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Muscle soreness is a common challenge faced by hockey players due to the high-intensity nature of the sport, which involves explosive movements, rapid direction changes, and physical contact. DOMS is an uncomfortable sensation, or the term used to describe the soreness, stiffness, tightness, swelling, and weakness of muscles, which is felt after performing a severe or unfamiliar exercise after 24 to 72 hours. Some studies suggested that cold water immersion could be an effective strategy for athletes to facilitate faster recovery, but further investigation is needed. Also, some studies have presented PNF stretching as a valuable opportunity to enhance recovery and reduce the impact of muscle soreness, but further research is required. The purpose of this study was to compare the effects of cold-water immersion and PNF stretching on reducing muscle soreness in Negeri Sembilan Junior League Hockey Players after a match. Ten participants underwent the CWI group and PNF stretching group. This study was a quasi-experimental design. The participants immersed their lower body for 15 minutes in cold water immersion (≤15 °C). For PNF stretching, starting with holding position for 10 seconds, the player pressed back against the trainer for 6 seconds. The trainer resists and keeps the leg in the same position. Finally, the player flexes his hip muscles as the trainer gently presses the leg as far as possible into the stretch. They are doing one repetition for each muscle. The participant's pain scale (PS), knee range of motion (ROM), and muscular power (PWR) were recorded at five-time frames before, immediately after the match, 24 hours, 48 hours, and 72 hours after treatment. The effects in muscle soreness scores between the two groups were analyzed using repeated measures ANOVA. The results indicated that both cold water immersion (CWI) and PNF stretching (PNF) had a significant effect on the pain scale (PS), knee range of motion (ROM), and muscular power (PWR) between five-time frames ($p<0.05$). Therefore, there was a significant difference in effect between CWI and PNF stretching. It can be concluded that cold water immersion was the best treatment overall for hockey players to reduce soreness after a match or training.

Keywords: *Cold water immersion (CWI), PNF stretching (PNF), delay-onset muscle soreness (DOMS), pain scale (PS), range of motion (ROM), muscular power (PWR).*

ExS036

Effect of Sports Massage and Form Rolling on Muscle Soreness Among Negeri Sembilan Junior League U-19 Hockey Players

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Hockey players frequently experience muscle pain as a result of the sport's high-intensity nature, which includes explosive movements, fast direction changes, and physical contact. DOMS is an uncomfortable experience or word used to describe muscular soreness, stiffness, tightness, swelling, and weakness that occurs 24 to 72 hours after undertaking a strenuous or unaccustomed activity. There have been studies that show sports massage may be a beneficial method for athletes that helps in speedier recovery, but further research is needed. In addition, studies have shown that foam rollers can help with recovery and reduce the impact of muscle discomfort, although further study is needed. The purpose of this study was to compare the effects of sports massage and foam rolling on reducing muscle soreness in Negeri Sembilan Junior League Hockey Players after a match. Ten people participated in both the sports massage and foam rolling groups. This study used a quasi-experimental design. The participants had a 20-minute sports massage on their lower bodies, while foam rolling began with pinpointing the uncomfortable or tight location of the muscle. Slowly lower your body onto the foam roller until

you experience discomfort. Hold this posture for 20 to 30 seconds. Perform one repeat for each muscle group: quadriceps, hamstrings, glutes, and groin. The Participant's pain scale (PS), knee range of motion (ROM), and muscle power (PWR) were measured at five -time points: pre-match, post-match, 24 hours, 48 hours, and 72 hours after treatment. The differences in muscular soreness scores between the two groups were examined using repeated measures ANOVA. The study found that sports massage (SM) and foam rolling (FR) significantly improved pain scale (PS), knee range of motion (ROM), and muscular power (PWR) over five-time frames ($p < 0.05$). As a result, the impact of athletic massage differed significantly from that of foam rolling. Overall, the foam roller was the most effective therapy for hockey players.

Keywords: *Sport massage (SM), foam rolling (FR), delay-onset muscle soreness (DOMS), pain scale (PS), range of motion (ROM), muscular power (PWR).*

ExS038 **The Effects of Carbohydrate, Caffeine, L-Menthol, and Combination (Carbohydrate + Caffeine + L-Menthol) Mouth Rinsing on Intense Intermittent Exercise Performance in Recreationally Active Young Men**

Nur Irdina Farhani, Adam Linoby, Muhammad Azizi Shah, Azwa Suraya Mohd Dan, Harris Kamal Kamaruddin, Reshandi Nugraha, and Marco Machado

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Mouth rinsing with solutions containing carbohydrates (CHO), caffeine (CAF) and L-menthol (MEN), has been suggested to enhance exercise performance by providing ergogenic effects through various mechanisms such as oral sensing and improved perceptual responses. However, the individual and combined impacts of these substances on high-intensity intermittent exercise remain unclear. This study aimed to address this research gap by examining the effects of CHO, CAF, MEN, and their combination (CHO+CAF+MEN; MIX) on exercise performance, heart rate (HR), and rating of perceived exertion (RPE) in recreationally active young men. Eighteen participants (mean ± SD: (mean ± SD: age 22 ± 2 years, body mass 62 ± 7 kg, height 168 ± 0.06 cm, VO_2 max 48 ± 3 mL/kg/min) underwent a randomized, double-blind, placebo-controlled crossover study involving six trials with different mouth rinse conditions. Results indicated that CHO mouth rinsing significantly enhanced performance in the Yo-Yo intermittent recovery level 1 (Yo-Yo IR1) test compared to placebo (PLA) and control (CON) (CHO: 1440 ± 288 m vs. PLA: 1383 ± 282 m, and vs. CON: 1373 ± 282 m; both $p < 0.05$), but not when compared to other rinses. RPE values for the CHO condition were significantly lower than PLA and CON during the Yo-Yo IR1 tests ($p < 0.05$). No significant differences in HR were observed among the conditions. These findings suggest that CHO mouth rinsing can enhance intermittent exercise performance, possibly by reducing perceptual effort, offering a practical strategy for athletes and active individuals.

Keywords: *Mouth rinsing, carbohydrate, caffeine, L-menthol, exercise performance.*

ExS040 **Gender Difference in Fatigue Index and Power Output**

Muhammad Zikry Riduan, Nurul Ain Abu Kasim, Raja Nurul Jannat Raja Hussain, Muhamad Noor Mohamed, Mardiana Mazaulan, Sharifah Maimunah Syed Mud Puad, Noor Azila Azreen Md Radzi, Maisarah Mohd Saleh, and Maisarah Shari

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Understanding how men and women react differently to high-intensity exercise is critical for designing effective training regimens. Research suggests that men can become fatigued even if they generally have a greater peak strength compared to women. This study looks into potential sex-based differences in fatigue resistance and power production. Healthy volunteers of both genders will go through a standardised Running-Based Anaerobic Sprint Test (RAST) methodology. The RAST measures peak power output (PPO), which is the greatest power generated during a sprint, and fatigue index, which is the drop in power output during repeated sprints. Twenty-four (N=24) participants were divided into two groups, twelve (n=12) male participants and twelve (n=12) female participants, to perform RAST. The statistical study will compare these measures across genders. This study seeks to determine if men and women differ significantly in fatigue resistance and power generation during high-intensity exercise. The findings can help to build gender-specific training tactics that address each sex's unique

physiological responses. An Independent Sample T-Test was used to analyse the data obtained. The minimum power output recorded for females was (M=94.3, SD= 35.7), whereas male data reported that the minimum power output was (M=136.8, SD=51.1) with p= 0.027. The maximum power was (M=251.2, SD=42.8) for female participants and males was (M=504.2, SD=345.9), and the p-value reported was 0.020. The findings of the fatigue index results showed that females had (M=3.30, SD= 0.77) while males showed (M=8.92, SD=8.01) with a significant p-value of 0.024. The results indicated there was a significant difference in power output and fatigue index between males and females.

Keywords: *Gender, fatigue index, power output.*

ExS042 Effect of Proprioceptive Neuromuscular Facilitation (PNF) and Sports Massage on Muscle Soreness Among Negeri Sembilan U-19 Junior League Hockey Players

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Muscle soreness is a frequent issue for hockey players due to the sport's high intensity, involving explosive movements, quick direction changes, and physical contact. Delayed Onset Muscle Soreness (DOMS) refers to the discomfort characterized by soreness, stiffness, tightness, swelling, and muscle weakness experienced 24 to 72 hours after engaging in intense or unfamiliar exercise. Previous studies have suggested that PNF stretching might be an effective strategy for athletes to accelerate recovery, but further research is necessary. Similarly, research has indicated that sports massage could enhance recovery and lessen muscle soreness, though additional studies are required. The purpose of this study was to compare the effects of PNF stretching and sports massage in alleviating muscle soreness among Negeri Sembilan junior league hockey players after a match. There were 10 participants exposed to the PNF stretching group and sports massage group. This study was a quasi-experimental design. For PNF stretching, participants started by holding the position for 10 seconds, and the player pressed back against the trainer for 6 seconds. The trainer resisted and kept the leg in the same position. Finally, the player engaged his hip muscles while the trainer carefully pushed the leg to its maximum stretch. They performed one repetition for each muscle. For sports massage, a certified sports therapist administered 20-minute treatments using hypoallergenic oil, massaging each muscle group for 2.5 minutes with effleurage, petrissage, and tapotement, including cupping, hacking, and knuckling. The participant's pain scale (PS), knee range of motion (ROM), and muscular power (PWR) were recorded at five different time points: before the match, immediately after the match, and 24-, 48-, and 72-hours post-treatment. The differences in muscle soreness scores between the two groups were analyzed using repeated measures ANOVA. The results indicated that both proprioceptive neuromuscular facilitation stretching (PNF) and sports massage had a significant effect on the pain scale (PS), knee range of motion (ROM), and muscular power (PWR) between five time frames ($p<0.05$). Therefore, there was a significant difference in the effect of PNF stretching and sports massage. It can be concluded that PNF stretching was the best treatment overall for hockey players to reduce soreness after a match or training.

Keywords: *Proprioceptive neuromuscular facilitation stretching (PNF), delay-onset muscle soreness (DOMS), pain scale (PS), range of motion (ROM), muscular power (PWR).*

ExS043 The Effect of Reception Quality on the Selection of Setting Zone

Muhammad Aniq Amsyar Azmin, Noor Azila Azreen Md Radzi, Raja Nurul Jannat Raja Hussain, Muhamad Noor Mohamed, Mardiana Mazaulan, Nurul Ain Abu Kasim, Sharifah Maimunah Syed Mud Puad, and Maisarah Shari

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In volleyball, reception is the first action, followed by setting. The quality of reception is crucial for winning a volleyball match because it can affect setting zone selection. This study aimed to determine the effect of reception quality on the selection of setting zones in volleyball. A total of 64 matches from the top four teams in two tournaments were selected: Sooka Super Series Volleyball 2022 (n=32) and the PKNS Invitational Volleyball League 2023 (n=32). Reception quality

was categorized using a 5-point numerical rating scale, ranging from 0 to 4 (0 = no reception/error, 1 = poor, 2 = average, 3 = good, 4 = excellent). Next, setting zone selection was categorized according to the consequent attacking areas in zones 1, 2, 3, 4, 5, and 6. Results showed that out of 24 variables of reception quality on the setting zone between Sooka Super Series Volleyball 2022 and the PKNS Invitational Volleyball League 2023, there are 14 variables that had significant differences ($p < 0.05$). The Sooka Super Series Volleyball had higher scores in reception quality (4), while the PKNS Invitational Volleyball League 2023 had higher scores in reception quality (3). This difference is attributed to the presence of professional teams that have raised the level of play to a higher level in terms of reception. This is likely due to their technique of keeping their arm platform parallel to the floor during contact with the ball. In both tournaments, setting zone 4 was the most frequently selected setting zone. Thus, zone 4 is considered the best option for attack zones due to the ample space it provides for attackers to perform spikes.

Keywords: *Volleyball, reception quality, setting zone.*

ExS046 Does the Change of Coach Affect the Barcelona Team's Performance During the Spanish League?

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Coaches play a crucial and highly influential role in football, with the capacity to greatly influence a team's direction and success. Changes in coaching, whether planned or unforeseen, can have a significant impact on team performance. This study aimed to compare the performance of the Barcelona team before and after the transition between two coaches by analyzing a total of 76 matches from the Spanish League (La Liga) across the 2010/2011 and 2022/2023 seasons. A significant difference between coaches were reported on short pass, shot on target, direct attack and indirect attack ($p<0.05$). The findings of this study suggest that coaching changes led to a decline in the performance of the Barcelona team. The current findings may be attributed to the insufficient time available for new coaches to effectively implement their football philosophies and strategies.

Keywords: *Performance indicators, attacking variables, coach changes.*

ExS047 Positional Profiling Feasibility of U18 Ice-Hockey Players Based on Anthropometry and Aerobic Capacity

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Identification of talented players necessitates both subjective and objective evaluations of their playing ability and performance. Evaluating anthropometric characteristics and general physiological performance can aid sports professionals in player selection. This study aimed to determine if positional profiling is feasible for national-level ice hockey players by examining their anthropometric characteristics and physiological performance in two different seasons. The study included two U18 ice hockey teams from the "Székelyföldi" Ice Hockey Academy (SZJA). Data collection occurred in May 2020 and June 2023 at the SZJA's Medical and Methodological Center. Body height, including barefoot height, was measured using a wall-mounted stadiometer (± 0.1 cm accuracy), while body weight was recorded with a standard scale. A standard incremental maximal oxygen uptake test was conducted in the laboratory using open-circuit spirometry and computerised instrumentation (CPET Cosmed, Italy) following the Bruce protocol. Additionally, cortisol levels were measured by ELISA from saliva samples to assess the players' physical stress levels. Descriptive statistics revealed no significant differences in anthropometric characteristics between forwards and defensemen. However, some potential differences in maximal and absolute oxygen uptake rates were observed. Although descriptive statistics indicated no significant differences between the two positions, the Mann-Whitney U test, considering all parameter values, identified significant differences between the groups in this sample.

Keywords: *VO_2 max, spiroergometric, cortisol, ice hockey, playing position.*

ExS050 **Analyzing Mayweather's Boxing Dominance: Factors and Outcomes**

Noor Qhalif Noor Azizee, Muhammad Zunnurain Nor Azam Muhammad Nabil Esa, Anis Shafira Abdul Harith, Muhamad Noor Mohamed, Raja Nurul Jannat Raja Hussein, and Noor Azila Azreen Md Radzi

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This study delves into the critical performance indicators contributing to Floyd Mayweather Jr.'s dominance in professional boxing, encompassing punching techniques, accuracy, and defensive strategies across his 48 professional matches. Utilizing quantitative ex-post-facto design and observational analysis of video footage, the research employs NacSport for data collection and Jamovi for statistical analysis. Key performance indicators such as jabs, crosses, hooks, uppercuts, blocking, and dodging were meticulously examined to compare Mayweather's performance with that of his opponents. The results highlight Mayweather's superior defensive capabilities, with significant differences in the frequency and effectiveness of blocking and dodging compared to his opponents. Successful jabs ($p = 0.002$), crosses ($p = 0.02$), lead hooks ($p = 0.004$), rear hooks ($p = 0.003$), and uppercuts ($p = 0.004$) all demonstrate statistically significant differences in performance. Inferential statistics further underscore the disparities, with Mayweather consistently outperforming his opponents in both offensive and defensive actions. Specifically, blocking ($p = 0.012$) and dodging ($p < 0.001$) showed substantial deviations, reinforcing his tactical superiority. The discussion of these results reveals several key insights into Mayweather's boxing technique and strategic approach. Mayweather's high accuracy in landing jabs and crosses demonstrates his ability to deliver precise and effective punches, which is crucial for maintaining offensive pressure and scoring points. His proficiency with lead hooks, rear hooks, and uppercuts highlights his versatility in exploiting various openings in his opponent's defences. Defensively, Mayweather's substantial advantage in blocking and dodging actions underscores his exceptional ability to anticipate and neutralise his opponents' attacks. This minimises the damage he sustains and creates counterpunching opportunities, further enhancing his offensive output. The conclusions emphasise the critical role of both offensive precision and defensive proficiency in boxing success. Mayweather's unmatched accuracy and defensive skills have been pivotal in maintaining his undefeated record.

Keywords: *Floyd Mayweather Jr, punching accuracy, defensive strategies, boxing performance indicator, total punch landed.*

PARALLEL SESSION 1 | ROOM 2

SOCIAL SCIENCE

DAY 2 | 29th AUGUST 2024 | 11:15 – 12:30 [MYT]

SESSION LINK: https://meet.google.com/wmg-qawx-nne

PAPER ID	TITLE
ExS033	Assessing the Multidimensional Scale of Place Attachment in Adventure Tourism Setting **Main author / Presenter:** Mohd Helme Basal
ExS035	The Effect of Physical Activity on Sleep Quality Among UiTM Seremban 3 Students **Main author / Presenter:** Nur Najihah
ExS037	Incorporating Outdoor Recreational Activities into Fitness Routine Among University's Students **Main author / Presenter:** Mohamad Nadzlee Alim
ExS039	The Exploratory Study on Physical Fitness Benefit of Outdoor Recreational Activities Among Student in UiTM Puncak Alam **Main author / Presenter:** Fiqrul Izzat Faidrul Iqmar
ExS041	The Relationship Between Physical Activity and Family Support Among School Students at Negeri Sembilan **Main author / Presenter:** Azizul Hakim Abu Bakar
ExS044	Relationship Between Healthy Lifestyle Behaviour and Quality of Life Among Active Adults **Main author / Presenter:** Alyessa Awra Batrisyia Mohammad Faridz
ExS045	Physical Activity Participant: Engagement Toward Cognitive and Physical Function Among Rural Veteran's Athletes **Main author / Presenter:** Siti Maizatul Akmal Mahbur
ExS066	Relationship Between Social Media Usage and Mental Health Among Members of Kuala Lumpur Golf and Country Club **Main author / Presenter:** Aql Alasri

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS033 **Assessing the Multidimensional Scale of Place Attachment in Adventure Tourism Setting**

Mohd Helme Basal, Azlizam Aziz, Nor Akmar Abdul Aziz, Mohd Aswad Ramlan, and Shahazwan Mat Yusoff

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The primary aim of this investigation is to assess the psychometric properties of a multidimensional place attachment scale using data collected from adventure tourists in Gopeng, Malaysia. A total of 100 questionnaires were distributed at the study site using a convenient sampling method, and exploratory factor analysis (EFA) was employed to evaluate the four key dimensions of place attachment: place identity, place dependence, place affect, and palace social bonding. The results revealed a four-factor solution that provides insights into the complex structure of the data. The first factor emerged as the most dominant, capturing a majority of the variance, while the subsequent factors contributed additional nuances to the understanding of the dataset's structure. The high communalities and significantly explained variance by the factors suggest that they represent meaningful constructs within the data, with each factor likely corresponding to a specific dimension of place attachment. Finally, descriptive statistics were used to assess the mean values of the dimensions, and the results indicate consistently high mean values across all dimensions. This study thus confirms the appropriateness of the multidimensional scale of place attachment in adventure tourism settings.

Keywords: Place attachment, factor analysis, adventure tourism, scale testing.

ExS035 **The Effect of Physical Activity on Sleep Quality Among UiTM Seremban 3 Students**

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Good physical activity enhances sleep quality. The main purpose of this study is to investigate the effect of physical activity on sleep quality among UiTM Seremban 3 students. It aims to identify key factors contributing to better sleep quality, such as being physically active and having an active lifestyle. Using a Cross-sectional design of a waist-worn accelerometer (Actigraph GT3X+), the study investigates the effect of physical activity on sleep quality among UiTM Seremban 3 students (n=26, age 22.3 ± 1.04) through descriptive analysis and simple linear regression. The study revealed that 38% of 26 participants showed poor physical activity results, with only 8% having a good physical activity level. In addition, 58% experienced average sleep quality, while only 12% experienced good sleep quality. Physical activity has an insignificant effect on sleep quality (Simple Linear Regression = 0.671, $p < 0.05$). It showed that physical activity has no impact on sleep quality. In conclusion, the majority of students experience a lack of physical activity due to their hectic lifestyles, which results in low physical activity. It is suggested that good physical activity will help you have great sleep quality.

Keywords: *Accelerometer, physical activity, sleep quality.*

ExS037 **Incorporating Outdoor Recreational Activities into Fitness Routine Among University's Students**

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This research investigated incorporating outdoor recreational activities into fitness routines among Physical and Health Education (PHE) students in Universiti Teknologi MARA (UiTM) Kampus Puncak Alam, which focuses on both physical fitness and mental well-being. The research examines how different outdoor recreational activities might improve students' general health and tackles the rising demand for motivating and efficient exercise solutions nowadays. The research integrated a quantitative questionnaire to collect extensive data on students' engagement in physical activities such as walking, hiking, running, jogging, and swimming as well as their perceived benefits. The research found that walking, hiking, running, jogging, and swimming were the most beneficial outdoor recreational activities for both male and female students in terms of both physical and emotional well-being. The chi-square test results based on p-values show that there were significant associations between gender and participation in outdoor recreational activities in swimming ($p<0.05$), day hiking ($p<.05$), running ($p<0.05$), kayaking ($p<0.05$), and jogging ($p<0.05$). The ANOVA result shows the F and p values for feeling useful ($F=3.62$, $p=0.01$), feeling relaxed ($F=4.45$, $p=0.00$), feeling energetic ($F=2.83$, $p=0.04$), problem-solving ($F=3.66$, $p=0.01$), clear-thinking ($F=4.98$, $p=0.00$), self-esteem ($F=2.86$, $p=0.04$), feeling loved ($F=2.96$, $p=0.03$), interested in new things ($F=2.78$, $p=0.04$), cheerful ($F=3.76$, $p=0.01$), and feeling confident ($F=3.48$, $p=0.01$) indicate the significant different based on gender.. These outdoor recreational activities show the strongest evidence of gender influence on participation rates. The students of both genders were love these activities, which have significant beneficial effects on their health and high engagement rates. The data also revealed preferences that are particular to gender, with men preferring to hike (86.4%) and jog (86.4%) and women also more likely to hike (92.9%) and jog (95.2%). The research has a wide range of implications, but one of its main points is that to create a supportive atmosphere that supports both physical and mental well-being, outdoor recreational activities should be incorporated into university wellness programs. Establishing and maintaining outdoor learning spaces and integrating them into the curriculum were recommended actions for educational institutions to improve the overall health of their students. These results show a solid basis for further study and program creation, and they were consistent with current literature emphasizing the mental well-being advantages of outdoor recreational activities. Hence, this research concludes that outdoor recreational activities at UiTM Kampus Puncak Alam were essential for improving the physical and mental health of students. University may foster a more comprehensive and health-conscious learning environment by adding these activities into physical fitness, which will eventually benefit students' general well-being and academic performance.

Keywords: *Outdoor recreational activities, physical fitness, mental well-being.*

ExS039 **The Exploratory Study on Physical Fitness Benefit of Outdoor Recreational Activities Among Student in UiTM Puncak Alam**

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The study explored the physical fitness benefits of outdoor recreational activities among students at Universiti Teknologi MARA (UiTM) Puncak Alam, focusing on how often they participated, the benefits they perceived, and the obstacles they faced. A cross-sectional survey was conducted using a structured questionnaire distributed to 100 randomly chosen students, covering demographics, activity frequency, perceived benefits, and barriers. The data were analyzed using descriptive and inferential statistics, including t-tests and ANOVA. The results showed that 70% of students engaged in outdoor activities 2-4 times per month, mainly on weekends (73%), with an average frequency ($f = 3.19$). Significant physical benefits included maintaining health ($p = 4.42$), improving appearance ($p = 4.26$), staying slim ($p = 4.23$), and building strength ($p = 4.17$). Additional benefits included avoiding ill-health ($p = 4.15$), increasing endurance ($p = 4.20$), and enhancing agility ($p = 3.95$). High p-values indicated strong correlations between regular participation and enhanced physical health. Barriers to participating in outdoor recreational activities included the cleanliness and condition of recreation facilities ($p =$

4.35), lack of knowledge or skills (p = 4.14), safety concerns (p = 4.19), and logistical issues like travel time and distance (p = 4.24). The study concluded that outdoor recreational activities significantly benefit physical fitness and health, but barriers need to be addressed. Recommendations included improving facility conditions, increasing safety measures, and enhancing students' knowledge and skills to encourage participation, stressing the importance of supportive university policies to promote regular physical activity and reduce sedentary lifestyles, ultimately fostering a healthier student community.

Keywords: *Physical fitness, barriers, outdoor recreational activities.*

ExS041 **The Relationship Between Physical Activity and Family Support Among School Students at Negeri Sembilan**

Azizul Hakim Abu Bakar and Rozita Abdul Latif

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This study aimed to investigate the relationship between family support and physical activity among school students at Negeri Sembilan. The sample of this research is the school's students at Negeri Sembilan. This study involves 464 respondents (256=male,208=female). There are three sections to the questionnaire. Section A, demographic; section B, physical activity questionnaire for adolescents; and Section C, activity support scale for multiple groups. The data analysis method used for the first and second research questions was descriptive analysis. For the third research question, the relationship between physical activity and family support among school students at Negeri Sembilan was using Pearson's Correlation.

Keywords: *Physical activity, PAQ-A, family support, ACTS-MG.*

ExS044 **Relationship Between Healthy Lifestyle Behaviour and Quality of Life Among Active Adults**

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Healthy lifestyle behaviours, such as a healthy diet, regular physical activity, adequate sleep, and the avoidance of dangerous substances, are crucial for preventing chronic diseases and improving overall health. The purpose of this study is to evaluate healthy living behaviors and quality of life among active adults in Selangor, Malaysia, as well as to investigate the relationships between these factors. Four hundred sixty-one (461) persons were interviewed using demographic profiles, the Health Promoting Lifestyle Profile II (HPLP II), and World Health Organisation Quality of Life (WHOQOL) tools. The findings show that active people are committed to health-promoting behaviours, albeit there is room for improvement, particularly in physical activity and nutrition. Quality of life scores indicate that, while physical health and environmental elements are regarded positively, psychological well-being and social interactions may be improved. Negative associations between healthy lifestyle behaviours and overall quality of life show that, while necessary for health, these behaviours may also be seen as stressful, potentially decreasing overall life satisfaction. Furthermore, interactions with others, despite their poor correlation, are significantly associated with health satisfaction. This study emphasises the need to take a balanced approach to health, incorporating varied lifestyle behaviours to improve several parameters of quality of life for active individuals.

Keywords: *Healthy lifestyle behaviour, quality of life, active adults.*

ExS045 **Physical Activity Participant: Engagement Toward Cognitive and Physical Function Among Rural Veteran's Athletes**

Siti Maizatul Akmal Mahbur and Wahidah Tumijan

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Engaging in physical activity is essential for preserving and enhancing cognitive and physical abilities, particularly for rural veteran athletes. Nevertheless, there is a dearth of research documenting the outcomes specifically for this age group. The study aimed to determine the relationship between physical activity, cognitive function, and physical function among rural veteran athletes. The cross-sectional correlational design was used. Data was collected using the Montreal Cognitive Assessment (MoCA), Sports Performance Physical Battery Test – Chair Stand Test (SPPB), Physical Activity Readiness Questionnaire for Everyone (PAR-Q+), and Community Health Activities Model Program for Seniors (CHAMPS). There is a significant moderately positive relationship (r=0.460, p=0.009) between physical activity for all activities and cognitive performance. Physical function showed a non-significant correlation (r = 0.346, p = 0.057) with physical activity for all activities. In conclusion, rural veteran athletes engage in a substantial amount of physical activity, meeting or exceeding recommended guidelines. There is a positive relationship between physical activity levels and cognitive function, indicating that higher physical activity is associated with better mental health. The relationship between physical activity and physical function is weak, suggesting that while physical activity benefits cognitive health, it does not necessarily ensure high physical function in older age.

Keywords: Physical function, cognitive function, physical activity, Montreal Cognitive assessment (MoCA), Sport Performance Physical Battery Test (SPPB), Community Health Activities Model Program for Seniors (CHAMPS).

ExS066 **Relationship Between Social Media Usage and Mental Health Among Members of Kuala Lumpur Golf and Country Club**

Aql Alasri and Rozita Abdul Latiff

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This study aimed to investigate the Relationship Between Social Media Usage and Mental Health Among Members of Kuala Lumpur Golf and Country Club. A quantitative research design was applied which was a survey method by distributing a questionnaire via Google form to 421 members of Kuala Lumpur Golf and Country Club. Bergen Social Media Addiction Scale (BSMAS) was used to evaluate social media usage among the members with 6 items. The Depression, Anxiety, and Stress Scale-21 (DASS-21) were used to assess mental health with 21 items. Descriptive analyses were used to determine the members' highest mental health factors involvement. The result showed no significant difference ($p = 0.408$) regarding mental health factors between genders. Therefore, it failed to reject the null hypothesis. In addition, there was a significant relationship ($p < 0.001$) between social media usage and mental health with a moderate positive level of correlation ($r = 0.494$). The study's findings will provide a greater understanding of the differences between genders regarding mental health factors among the members of KLGCC. The study found a positive association between social media usage and mental well-being. Social media facilitated stronger connections, fostered community, and served as a channel for sharing golf-related information. The context-specific nature of the relationship, centered around shared interests, aligned with recent research on the benefits of active, engaged social media use in specific communities. To build on the findings, KLGCC should implement workshops, online forums, and campaigns on responsible social media use and mental health awareness. They could also create dedicated social media groups for members to connect over common interests. Regular monitoring and feedback from members could optimize these initiatives for promoting good mental health.

Keywords: Social media, mental health, depression, anxiety, stress.

PARALLEL SESSION 2 | ROOM 1
SPORTS SCIENCE
DAY 2 | 29th AUGUST 2024 | 16:00 – 17:00 [MYT]

SESSION LINK: https://meet.google.com/kgc-xqyd-ege

PAPER ID	TITLE
ExS051	The Analysis of Chelsea Performance Under Three Difference Coaches in English Premier League 2022/2023 Season **Main author / Presenter:** Aliff Azri
ExS052	The Comparison of Type of Set and Set Zone between China and Italy During the 2023 FIVB U21 Women's Volleyball Championships **Main author / Presenter:** Anis Shafira Abdul Harith
ExS055	Impact of Coach Changes on Manchester United Team According to Performance Indicator and Attacking Variable During English Premier League **Main author / Presenter:** Muhammad Razali
ExS056	Association Between Physical Activity and Sleep Duration Among Young Adults of UiTM Seremban 3 **Main author / Presenter:** Muhammad Taufiq
ExS058	Acute Effects of Heavy Resistance Band on Shooting Speed Among Futsal Players **Main author / Presenter:** William Agantha Anak Jekey
ExS059	Acute Effects of Barbell Hip Thrust on Speed and Power Among Volleyball Athletes **Main author / Presenter:** Muhammad Fauzi Mohd Sunif
ExS062	Differences in Performance Indicators Between Winning and Losing Teams in the Malaysia Super League **Main author / Presenter:** Preteev Rao
ExS063	Effects of High-Intensity Interval Training Towards Agility and Vertical Jump Among Female Volleyball Athletes: A Narrative Review **Main author / Presenter:** Sabrina Balqis
ExS064	Effects of 6-weeks Eccentric vs Concentric Barbell Hip Thrusts During Complex Training on Selected Physical Performances in Female Field Hockey Athletes **Main author / Presenter:** Nurulfarzana Mohamad Fauzi

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS051

The Analysis of Chelsea Performance Under Three Difference Coaches in English Premier League 2022/2023 Season

Aliff Azri, Noor Azila Azreen Md Radzi, Muhamad Noor Mohamed, Raja Nurul Jannat Raja Hussain, Maisarah Shari, Mardiana Mazaulan, Nurul Ain Abu Kassim, and Muhamad Safiq Saiful Annur

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The essence of a football club's success fundamentally hinges on its performance. In professional football, the dismissal of a coach is a significant and common occurrence, typically considered when the team's results fall short of the board's expectations. It is widely acknowledged among researchers that poor performance is a primary factor driving coaching changes. Despite extensive research on this subject, the impact of coaching changes on team performance remains ambiguous. Recent managerial changes at Chelsea have raised debate regarding their impact on team performance, reflecting a long history of trophy-chasing and frequent coach turnover. This study analyzed 38 matches of Chelsea FC from the 2022/2023 English Premier League season to evaluate and compare the team's performance under the coaching of Thomas Tuchel, Graham Potter, and Frank Lampard throughout their respective tenures. All matches were assessed based on the effectiveness and failure rates of short passes, long passes, shots, crosses, and tackles. One-way ANOVA revealed significant differences ($p < 0.05$) in two performance indicators (unsuccessful short passes and unsuccessful shots) across the three coaches. The results suggest a notable decline in team performance following each coaching transition. The findings of this study indicate that changes in coaching can cause destabilisation within a team's internal structure and staffing, potentially leading to a decline in performance. Coaches typically require at least one year to implement tactical changes effectively and ensure that players adapt to their strategic approach. The limited duration of less than a year provided to Chelsea's coaches has likely contributed to a decline in team performance.

Keywords: *Football, coach, performance indicator.*

ExS052

The Comparison of Type of Set and Set Zone between China and Italy During the 2023 FIVB U21 Women's Volleyball Championships

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The 2023 FIVB Volleyball Women's U21 World Championship, held in Mexico from 17 to 26 August, marked the 22nd edition of the tournament, featuring national teams under the age of 20. This study focuses on the top two countries, China and Italy, analyzing their setting zones during the championships. Two types of sets, standing and jumping, were examined across six setting zones: zones 1, zone 2, zone 3, zone 4, zone 5 and zone 6. A total of 15 matches played by China (N=770) and Italy (N=709) were analyzed using Microsoft Excel and Statistical Package for the Social Sciences (SPSS) version 26.0. Reliability and validity testing via Pearson Correlation revealed $r = 0.93$, while descriptive statistics indicated that Italy exhibited higher means and larger standard deviations for both the type of set and setting zone variables, suggesting greater variability compared to China. Chi-square tests of independence showed significant associations between the type of set and setting zones for both China ($\chi^2 = 84.120$, $df = 5$, $p = 0.001$) and Italy ($\chi^2 = 66.829$, $df = 5$, $p = 0.001$), indicating distinct strategic preferences in their set plays. The analysis revealed that the jumping set directed to zone 4 is the most effective combination. China and Italy, the top two teams, exhibited a significant preference for this zone, with the highest frequencies of sets directed towards Zone 4. This strategic insight highlights the importance of targeting Zone 4 to optimize set plays and enhance competitive performance in volleyball. The study underscores the importance of strategic planning in volleyball,

demonstrating that both countries employ unique approaches to optimize performance and counter opponents' strategies effectively.

Keywords: *Volleyball, stand set, jump set, set zone, set type, women.*

ExS055 **Impact of Coach Changes on Manchester United Team According to Performance Indicator and Attacking Variable During English Premier League**

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A coaching change is a significant yet common occurrence in elite football, and its effect on team success remains a topic of debate. This study aimed to compare the performance of Manchester United under two different coaches. To achieve this, a total of 76 matches from the English Premier League seasons 2010/2011 and 2022/2023 were analyzed. Team performance was evaluated using various indicators, including shots on target, shots off target, long and short passes, crosses, and free kicks, as well as attacking variables such as direct and indirect attacks. A significant difference was observed between the two coaches regarding long passes, crossing, direct attacks, and indirect attacks ($p < 0.05$). The results indicate that the team's performance significantly declined following the transition to a new coach. The findings of this study suggest that changes in coaching can lead to destabilization within the team's internal structure and staffing levels, which in turn may result in decreased performance.

Keywords: *Performance analysis, performance indicator, attacking variable, coach.*

ExS056 **Association Between Physical Activity and Sleep Duration Among Young Adults of UiTM Seremban 3**

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Sleep and physical activity have been shown to be correlated in research, but this association is only correlational and does not show relationships over time. This study aimed to investigate the correlation between physical activity and sleep duration. A total of 26 healthy young adults (age 21.0 ± 2.2 years) participated in this study. The amount of exercise and sleep duration were assessed using a uniaxial accelerometer. There was no significant correlation between total sleep time and calories burned ($B=-0.312$, $p=0.077$), moderate to vigorous physical activity ($B=-2.22$, $p=0.087$), while there is a significant correlation between total sleep time with steps count ($B=-0.0267$, $p=0.013$). The results suggest that there is evidence that physical activity can help in promoting healthier sleep. Other factors that may influence sleep among young adults include diet, daily lifestyle, and sleep routine

Keywords: *Sleep duration, physical activity, accelerometer, young adults.*

ExS058 **Acute Effects of Heavy Resistance Band on Shooting Speed Among Futsal Players**

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This study examined the acute effects of heavy resistance bands on shooting speed in futsal players. Thirty-two (N=32) university futsal players were split into control and experimental groups. Pre- and post-tests were conducted, with the experimental and control groups performing shooting speed measurements both with and without the heavy resistance band. The shooting speed was measured before and after the intervention using a 10-meter shooting test. Results showed that the experimental group demonstrated a significant improvement in shooting speed (2.00 ± 1.065 m/s) compared to the control group (1.75 ± 1.095 m/s). However, the difference between the groups was insignificant, $t(30) = 0.665$, $p = 0.18$. Despite this, heavy resistance band training enhanced muscle action and strength, improving shooting performance. In conclusion, while the observed improvement in shooting speed was not

statistically significant, incorporating heavy resistance bands into training programs may offer potential benefits for enhancing shooting speed and overall athletic performance in futsal players. Further research with larger sample sizes and varied training protocols is recommended to confirm these findings and provide more definitive training guidance for coaches and players

Keywords: *Shooting speed, heavy resistance band, futsal, strength training.*

ExS059

Acute Effects of Barbell Hip Thrust on Speed and Power Among Volleyball Athletes

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This study investigates the acute effects of barbell hip thrust (BHT) on speed and power among volleyball athletes. Twenty-four volleyball players (n=24) were selected to become the subjects of this study. Subjects were divided into two groups: the experimental group (EG) and the control group (CG). Forty-meter (40-m) sprint test and vertical jump test were used to measure speed and power. The study involved the EG doing BHT exercises, and the CG performed regular training. The EG did 3 sets of 5 repetitions using 80% of their one-repetition maximum (1RM) for BHT, with a 3-minute rest between sets. The post-test was conducted 14 minutes after the intervention. Similar procedures were carried out for speed and power variables on different occasions. The results revealed a significant improvement in speed {t (22) = 2.18, p = 0.041, p < 0.05} and power {t (22) = 2.23, p = 0.037, p < 0.05} for the experimental group (EG) compared to the control group (CG). Specifically, the EG demonstrated a speed of 0.40 ± 0.11 sec, whereas the CG showed a speed of 0.30 ± 0.11 sec. Regarding power, the EG scored much higher, with 2.75 ± 0.67 cm, compared to the CG's 2.22 ± 0.49 cm. These findings showed that the acute implementation of BHT can enhance speed and power in volleyball athletes and provide a valuable tool for volleyball training programs focusing on improving explosive performance.

Keywords: *Barbell hip thrust, speed, power, volleyball.*

ExS062

Differences in Performance Indicators Between Winning and Losing Teams in the Malaysia Super League

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Match analysis in soccer involves the systematic study of various elements of a game to understand performance, strategy, and outcomes. It is a critical component for coaches, analysts, and teams aiming to enhance their performance and gain competitive advantages. However, there is no study that has been reported on Malaysia elite football players. Analyzing the differences in performance indicators between winning and losing teams in the Malaysia Super League can provide insights into what factors contribute to a team's success. Thus, the first aim of this study is to determine the key metrics for performance indicators that distinguish winning teams from losing and then to compare the differences between these teams in the Malaysia Super League season 2024. Data will be collected from one hundred and forty-three players (n= 143) in thirteen matches (n=13) using a camera (Video Cam 3). The video will be transferred and analyzed using a match analysis system (LongoMatch). Performance indicators will be analyzed in ball possession, number of passes, number of shots and number of goals. The teams will be divided into three categories: Top Rank, Middle Rank and Bottom Ran. One-way ANOVA will be used to determine the differences in these three groups. It was expected that winning teams tend to have good scores in all key metrics that have been investigated. The findings in this study will provide valuable insight for coaches, players, and analysts by highlighting the critical areas of performance that can influence a team's chances of winning. At this point, it can be concluded teams can enhance their chances of winning by knowing the performance indicators that they should focus on. Further research could explore the impact of other variables such as player fatigue, psychological factors, and in-game decision-making on match outcomes.

Keywords: *Match analysis, soccer, elite athletes, performance indicator, Malaysia.*

ExS063 **Effects of High-Intensity Interval Training Towards Agility and Vertical Jump Among Female Volleyball Athletes: A Narrative Review**

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This narrative review investigates the effects of high-intensity interval training (HIIT) on agility and vertical jump performance among female volleyball athletes. While HIIT is widely recognized for its ability to enhance cardiovascular endurance and overall muscular strength, its specific impact on agility and vertical jump performance remains underexplored. The review synthesizes existing literature, revealing mixed results across various studies. Some research indicates potential benefits of HIIT in improving general physical fitness, which may indirectly support agility and jumping ability. However, other studies show that HIIT alone may not be sufficient to significantly enhance these specific performance metrics. The findings suggest that while HIIT can be an effective component of a broader training regimen, it may need to be combined with sport-specific drills, such as targeted agility exercises and plyometrics, to optimize performance outcomes in female volleyball players. This review highlights the need for further research, particularly studies that focus on gender-specific adaptations to HIIT, to better understand its efficacy in improving agility and vertical jump performance in female athletes. The review reveals that while HIIT is effective in enhancing overall cardiovascular and muscular endurance, its specific impact on agility and vertical jump performance in female volleyball players remains inconclusive, with mixed results across the studies reviewed. The evidence suggests that while HIIT may contribute to general fitness improvements that could indirectly benefit agility and jumping ability, it may not be sufficient as a standalone training approach for optimizing these specific skills

Keywords: *Volleyball, high intensity interval training, HIIT, vertical jump, agility, female.*

ExS064 **Effects of 6-weeks Eccentric vs Concentric Barbell Hip Thrusts During Complex Training on Selected Physical Performances in Female Field Hockey Athletes**

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Complex training is a combination of weight training and plyometric, where it alternates biomechanically similar high load weight training activities with plyometric exercises in the same program, for example squats and jump squats. The purpose of this study is to investigate the effects of eccentric barbell hip thrusts during complex training (ECT) and concentric barbell hip thrusts during complex training (CCT) on speed, agility, and power in female field hockey athletes. The other objective is to compare the effects of ECT and CCT on speed, agility, and power in female field hockey athletes. Twenty-seven female university athletes will be involved in a 6-weeks of training program. They will be divided into three groups: eccentric BHT during complex training (ECT, n = 9), concentric BHT during complex training (CCT, n = 9), and control group (CG, n = 9). Before and after the intervention, all athletes will assess for pre- and post-test in 20-m sprint test (speed), slalom sprint and dribble test (agility), and the countermovement jump (power). There are many research studies that have insight in the strength and conditioning field, but most of the studies have focused on male athletes, other types of sports and different types of exercise training. This study will provide the improvement of the athlete's on-field performances while reducing the chance of injury, help coaches and trainers to improve their athletes' growth and performances that lead to team's success, and give additional understanding and knowledge to other coaches and researchers.

Keywords: *Complex training, barbell hip thrust, speed, agility, power, field hockey.*

PARALLEL SESSION 2 | ROOM 2
SOCIAL SCIENCE
DAY 2 | 29th AUGUST 2024 | 16:00 – 17:00 [MYT]

SESSION LINK: https://meet.google.com/wmg-qawx-nne

PAPER ID	TITLE
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ExS049	Relationship Between Social Support and Athlete's Readiness to Return to Play Sports **Main author / Presenter:** Tengku Muhammad Faris Tengku Azharudin
ExS053	The Effect of Physical Activity on Cognitive Function on Young Adults Among UiTM Seremban 3 Students **Main author / Presenter:** Naimi Sahira
ExS054	The Effect of Sleep Quality on Cognitive Functions Among Young Adults in UiTM Seremban 3 **Main author / Presenter:** Nurun Naja
ExS057	Determination of Social Media Usage on Mental Health Among FSR Students at UiTM Seremban 3 **Main author / Presenter:** Samuel Millan Tommy
ExS060	The Relationship Between Human Resources Management Practices and Employee Engagement Among Staff in UPM Sport Centre **Main author / Presenter:** Muhammad Aliff Halim
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ExS065	The Development of Drowning Prevention Strategies Model in Malaysia: Need Survey Analysis **Main author / Presenter:** Muhammad Wafi A. Rahman
ExS067	Influence of Training Status on Ergogenic Effects of Probiotics Supplementation: A Meta-Analysis of Randomized Controlled Trials **Main author / Presenter:** Ayyub Roslan

ABSTRACT

ExSPORT 2024 PROCEEDINGS

ExS048 **Correlation Between Personality Traits and Goal Orientation Among E-Sport Players at UiTM Seremban 3**

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E-sports, a rapidly growing industry, requires a deep understanding of players' psychological profiles to enhance their performance and well-being. Competitive e-sport players at Universiti Teknologi MARA (UiTM) Seremban 3 face multifaceted challenges, including performance inconsistency, teamwork issues, stress management, motivation, and burnout. This study addresses these challenges by exploring the interplay between personality traits and goal orientation, aiming to understand how players' psychological profiles influence these problems. Utilizing the Big Five Inventory (BFI) to assess personality traits and the Task and Ego Orientation in Sports Questionnaire (TEOSQ) to evaluate goal orientation, the research involved 136 players and employed Pearson correlation analysis. Significant correlations were found: extraversion was strongly positively correlated with task orientation ($r = 0.655$, $p < 0.001$) and moderately with ego orientation ($r = 0.393$, $p < 0.001$); agreeableness showed a moderate positive correlation with task orientation ($r = 0.607$, $p < 0.001$) and a weaker correlation with ego orientation ($r = 0.404$, $p < 0.001$); conscientiousness correlated moderately with task orientation ($r = 0.553$, $p < 0.001$) and weakly with ego orientation ($r = 0.392$, $p < 0.001$); neuroticism was moderately correlated with task orientation ($r = 0.516$, $p < 0.001$) but weakly with ego orientation ($r = 0.217$, $p < 0.001$); and openness had a high correlation with task orientation ($r = 0.610$, $p < 0.001$) and moderate with ego orientation ($r = 0.445$, $p < 0.001$). These findings highlight the importance of understanding players' personalities to effectively address performance variability, improve teamwork, manage stress, and prevent burnout, offering insights for targeted interventions to enhance the e-sports experience and foster a resilient, competitive community at UiTM Seremban 3.

Keywords: *Big Five Inventory (BFI), Task and Ego Orientation in Sports Questionnaire (TEOSQ).*

ExS049 **Relationship Between Social Support and Athlete's Readiness to Return to Play Sports**

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Although sports involvement has been extensively proven to have physical and psychological advantages, players often encounter substantial challenges that can impact their readiness for competition, including stress, injuries, and academic pressures. Having the social support of friends, coaches, teammates, and family might enhance individuals' readiness to compete once more. The goal of this study was to determine the relationship between social support and athlete's readiness to return to sports within the Faculty of Sports and Recreation athletes from UiTM Seremban 3. Questionnaire methods were utilized to collect data, with a total of 349 participants completing the Athlete's Received Support Questionnaire (ARSQ) and Psychological Readiness to Return to Sport. The results show a significant relationship between all dimensions of social support and readiness to play ($p < 0.001$). Emotional support has a significant positive moderate relationship ($r = 0.417$, $p < 0.001$). Esteem support has a significant positive moderate relationship ($r = 0.419$, $p < 0.001$). Informational support is a positive moderate relationship ($r = 0.373$, $p < 0.001$), and Tangible support is a significant positive moderate relationship ($r = 0.366$, $p < 0.001$). In conclusion, the data indicates that esteem support and readiness to play sports were connected. The Emotional, Esteem, Informational, and Tangible support significantly contributes to athletes' readiness, thereby enhancing their performance and overall sports experience, potentially improving performance and well-being overall.

Keywords: *Emotional support, informational support, esteem support, tangible support, readiness to return to play sports.*

ExS053 The Effect of Physical Activity on Cognitive Function on Young Adults Among UiTM Seremban 3 Students

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The present study aims to investigate and understand the effect of physical activity on cognitive function among young adults enrolled at Universiti Teknologi MARA (UiTM) Seremban 3. A cross-sectional correlational research design was employed to examine this relationship in a sample of 26 conveniently selected, healthy students representing various faculties within the university. Participants aged 18-25 years underwent cognitive assessments using the Wisconsin Card Sorting Test (WCST) and the N-Back Test, while physical activity levels were measured using an accelerometer (Actigraph) over seven days. The study's evaluation of working memory (N-back Task, p = 0.670) and executive function (WCST, p = 0.679) revealed no significant correlation between levels of physical activity and cognitive performance. Hence, the lack of a significant relationship aligns with studies that have highlighted the influence of factors such as the type, intensity, and duration of exercise, as well as the specific cognitive measures used, on the observed associations, and a strong established link exists between sleep and cognitive function. These limitations underscore the need for further research to elucidate the complex relationship between physical activity and cognitive function.

Keywords: *Physical activity accelerometer, N-Back Test, working memory, Winsconsin Sorting Card Test (WCST), executive function.*

ExS054 The Effect of Sleep Quality on Cognitive Functions Among Young Adults in UiTM Seremban 3

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Both physiological and psychological processes are improved by having good sleep quality. Though good sleep is crucial, young people frequently struggle with it as a result of the modern lifestyle. The objective of this study is to identify the sleep quality, level of cognitive function and whether sleep quality has an effect on cognitive functions among young adults in UiTM Seremban 3. A total of 27 students from UiTM Seremban 3 were selected, and the data were collected over 7 days using protocol testing by Kato et al., (2018). Accelerometers were used to assess participants' sleep quality, while N-Back tasks for working memory and Wisconsin Card Sorting Test (WCST) for executive function were used to assess the cognitive function of participants. Linear regression was used to analyse the correlation between sleep quality, working memory, and executive function. Reports from 26 young adults in UiTM Seremban 3 (22.3 ± 1.04 years) indicate a higher prevalence of moderate sleep quality (6.13 ± 1.044) and cognitive function for N-Back Test (78.3 ± 4.22) and WCST (-0.236 ± 0.4559). The findings show that the correlation between sleep quality and working memory is a significant correlation (β=0.540; p=0.030), while the correlation between sleep quality and executive function shows no significant correlation (β= 0.120; p=0.097). These findings demonstrated sufficient evidence that sleep quality affects working memory ($p < .05$) but not executive function. Hence, sleep quality is associated with better cognitive performance of working memory in young adults.

Keywords: *Sleep quality, working memory, executive function, N-Back Test, Wisconsin Card Sorting Test (WCST).*

ExS057 **Determination of Social Media Usage on Mental Health Among FSR Students at UiTM Seremban 3**

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This study aimed to investigate the determination of social media usage on mental health among FSR students at UiTM Seremban 3. A quantitative research design was applied which was a survey method by distributing a questionnaire via Google form to 349 FSR students at UiTM Seremban 3. Bergen Social Media Addiction Scale (BSMAS) was used to test the usage of social media among the students with 6 items. Depression, Anxiety and Stress Scale-21 (DASS-21) were used to test the level of mental health with 21 items. Descriptive analysis was used to determine the highest mental health factors involved among the students. SPSS software version 28.0 was used to analyze data of the result. The result showed that stress is the highest dimension under mental health with a mean score of (M = 2.12, SD = 0.786). The result showed that there was no significant difference (p-value = 0.480) between genders regarding mental health factors. Therefore, it failed to reject the null hypothesis. In addition, there was a significant relationship (p-value < 0.001) between social media usage and mental health with a moderate positive level of correlation (r = 0.450). The study's findings will provide a greater understanding of the differences between genders regarding the mental health factors among the students.

Keywords: *Social media, mental health, depression, anxiety and stress.*

ExS060 **The Relationship Between Human Resources Management Practices and Employee Engagement Among Staff in UPM Sport Centre**

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This investigation examined the correlation between Human Resources Management (HRM) methodologies and workforce engagement among University Putra Malaysia (UPM) Sport Centre personnel. The primary goal of this research was to assess the effect of HRM practices on employee involvement. A quantitative methodology was employed, utilizing surveys distributed to 40 staff members. These surveys included questionnaires that assessed HRM practices and employee engagement. The results revealed high scores for HRM practices, particularly in performance appraisal (M = 3.96) and employee involvement (M = 3.95). Employee engagement levels also demonstrated a high score, with vigor recording the highest score (M = 4.44). Overall, there is a significant positive relationship between HRM practices and employee engagement (r = 0.662, p < 0.001). The results imply that efficient HRM practices are pivotal in cultivating employee engagement within the sports center environment. This study advances the understanding of the impact of HRM on employee engagement within university sports institutions and offers valuable insights for enhancing organizational strategies and outcomes.

Keywords: *Human resources practices, employee engagement.*

ExS061 **Relationship Between Social Support and Mental Health Among UiTM KARISMA Athletes**

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Social support is a cognitive evaluation procedure and a predictor of mental health. Although earlier research has emphasized the need for social support, it is still unknown how specifically it affects athletes' mental health. This study was to determine the relationship between social support and mental health in UiTM Seremban 3 Karisma athletes. The Perceived Social Support Scale (PSSS), Beck Hopelessness Scale (BHS), Kessler Psychological Distress Scale (K10), and Perceived Stress Scale (PSS) were among the quantitative questionnaires completed by 39 athletes, ages 18 to 26. The results showed that perceptions of social support and mental health had moderate to strong relationships. Support from friends' stress (r=0.085, p=0.600), psychological distress (r=-0.187, p=0.248, and hopelessness (r=-0.308, p=0.053). Significant others

did not significantly correlate with stress (r=0.034, p=0.835), psychological distress (r=-0.140, p=0.388, or hopelessness (r=-0.081, p=0.621), but crucially, family support did reveal a significant negative connection (r=-0.379, p=0.016) with psychological distress and not significantly correlate with stress (r=-0.119, p=0.465) and hopelessness (r=-0.243, p=0.130). These findings emphasize the critical role that family support plays in mitigating psychological discomfort and the need for comprehensive strategies in sports programs that involve family involvement and larger support systems. While encouragement from friends and significant others is helpful, it seems that family support plays a more important role in assisting athletes in maintaining their mental well-being.

Keywords: *Social support, mental health, psychological distress, hopelessness, stress.*

ExS065 **The Development of Drowning Prevention Strategies Model in Malaysia: Need Survey Analysis**

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Drowning remains a significant public health concern in Malaysia, particularly among children. Despite ongoing efforts to mitigate this risk, there is a pressing need for a comprehensive drowning prevention model tailored to the Malaysian context. This study aims to develop a drowning prevention strategies model through an extensive need survey analysis among parents, educators, and community leaders. Therefore, the main purpose of this study was to know the scenario and the need for analysis of the drowning prevention model from the expert point of view. The study is based on the Develop and Design Research (DDR; Saedah, Muhammad & Rozaini, 2020). IBM Statistics (SPSS) is utilized as the main statistical analysis software. A total of 187 respondents (N=187) among units of Pasukan Penyelamat di Air (PPDA) under Jabatan Bomba dan Penyelamat Malaysia (JPBM) have purposively been selected. Based on the analyses, over 90% of agrees was achieved for all statements in the survey. These findings provided a platform and systematic scholarly work on strategies for drowning prevention model development.

Keywords: *Drowning, Drowning Prevention Model.*

ExS067 **Influence of Training Status on Ergogenic Effects of Probiotics Supplementation: A Meta-Analysis of Randomized Controlled Trials**

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This meta-analysis investigates the influence of training status on the ergogenic effects of probiotics supplementation, addressing gaps in existing research. The present study conducted a comprehensive search across several databases: PubMed, Scopus, Web of Science (WoS), Cochrane Library, SportsDiscus (EBSCOhost), and Cinahl (EBSCOhost), along with a manual search of grey literature, adhering to the PRISMA guidelines. The methodological rigour of included studies was evaluated using the Risk-of-Bias 2 (RoB2) tool, ensuring a high standard of evidence assessment. All included studies employed a randomized controlled trial (RCT) design. The main meta-analysis of 27 eligible studies revealed a trend toward statistically significant differences in outcomes between PLA administration and PRO intake (overall SMD = 0.29 [95% CI: 0.05 to 0.52], p=0.019). In subgroup analysis, aerobic exercise demonstrated a slightly higher effect size (SMD = 0.69 [95% CI: 0.07 to 1.31]) compared to anaerobic exercise (SMD = 0.24 [95% CI: -0.14 to 0.62]). Muscular strength showed (SMD = 1.13 [95% CI: -0.24 to 0.50]), with neither of them reaching extreme statistical significance (p > 0.05 for anaerobic). This research underscores the conditional benefits of probiotics supplementation, reflecting the diverse methodologies and participant characteristics in our meta-analysis. Future studies should explore the mechanisms underlying these effects, considering specific strains, dosages, and timing of ingestion relative to exercise.

Keywords: *Probiotics, Meta-analysis, exercise performance, Gut Microbiome.*