INTERNATIONAL SEMINAR ON SPORT AND EXERCISE PSYCHOLOGY 2026

13th



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SEOUL, KOREA

서울과학기술대학교
SEOULTECH SEOUL NATIONAL UNIVERSITY OF SCIENCE & TECHNOLOGY

ASPASP
Asian South Pacific Association of Sport Psychology

HELP
Health & Exercise Psychology Laboratory

Welcome Address

Dear colleagues and students,

It is my great pleasure, on behalf of the Organizing Committee, to warmly welcome you to the 13th International Seminar on Sport and Exercise Psychology (ISSEP), hosted by the Department of Sport Science at Seoul National University of Science and Technology in Seoul, Korea.

We are honored to host this seminar, featuring participants from across Asia and beyond who are dedicated to advancing the field of sport and exercise psychology in both research and practice. Your presence reflects a shared commitment to promoting athletes' performance, mental health, healthcare, and overall well-being through scientific inquiry and professional collaboration.

The primary aim of this seminar is to contribute to the academic development of sport and exercise psychology researchers and students in the Asian region. Over the coming sessions, we will share research findings, exchange ideas, and explore new theoretical and applied perspectives.

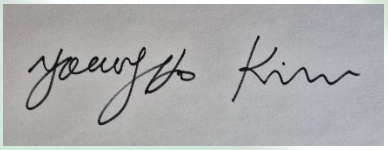
Equally important, this seminar is an opportunity to recognize, understand, and respect the rich cultural diversity of the Asian region. Our countries differ in language, history, social systems, and sporting environments, yet we share many common challenges and aspirations. Through our discussions, we hope to explore how cultural contexts shape athletes' experiences, coaching practices, physical activity promotion, and mental health support.

Ultimately, we hope that this seminar will serve as a platform for an academic and cultural community that contributes to enhancing the international visibility and standing of Asian scholarship in sport and exercise psychology. By presenting high-quality research, engaging in constructive debate, and strengthening our regional collaboration, we wish to ensure that Asian perspectives and evidence are more fully represented in the global discourse.

I would like to extend my sincere appreciation to all presenters, participants, and students for contributing your time, expertise, and enthusiasm. I am also deeply grateful to our colleagues, staff, and volunteers at the Department of Sport Science, the HELP teams, and SEPC, whose hard work has made this event possible.

I hope that the13th ISSEP will be an inspiring and meaningful experience for each of you that offers not only new knowledge and research opportunities, but also lasting friendships and partnerships across countries and cultures.

Chair of the Organizing Committee of the 13th ISSEP
Youngho Kim, PhD, Professor
Department of Sport Science
Seoul National University of Science and Technology



Scientific Review Board

1. Youngho Kim, Seoul National University of Science and Technology, **KOREA**

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13. Feng-Tzu Chen, National Tsing Hua University, **TAIWAN**

14. Tanida Julavanichpong, Burapha University, **THAILAND**

ISSEP 2026 Scientific Program

Time	Activity
February 08	**Day 1: Room 911, Mugung Hall (No. 57, Building)**
10:00-	Arrival & Registration
-	Rest & Free time

Time	Activity
February 09	**Day 2: Room 911, Mugung Hall (No. 57, Building)**
08:00-09:00	Breakfast
09:00-09:30	**Opening ceremony** Moderator: Seonjong Lee & Jisu Kim **- ISSEP Merit Award** Presider: Youngho Kim 1. Frank Jing-Horng Lu (Chinese Culture University, Taiwan) 2. Naruepon Vongjaturapat (Burapha University, Thailand) **- Celebrating performance (K-pop Dance and Singing)**
09:30–10:00	**Keynote Speech 1** Stress in Sports: Measurement, Empirical Studies, and Future Directions Presider: Naruepon Vongjaturapat Speaker: Frank Jing-Horng Lu
10:00–10:20	**Invited Speech 1** Mindfulness, Subjective Happiness and Health among Trainee Teachers Presider: Kuo-Pin Wang Speaker: Chin Ngien Siong, & Teo Boon Sian
10:20–10:40	**Invited Speech 2** How Transformational Coaches Build Athlete Mental Toughness: Motivational and Coach–Athlete Relationship Pathways Presider: Garry Kuan Speaker: San-Fu Kao
10:40-11:00	**Break Time**
11:00–11:20	**Invited Speech 3** From Algorithms to Action: A Five-Year Research Trajectory on AI-Driven Physical Activity Behavior* Presider: Soojin Kang Speaker: Dojin An
11:20–11:40	**Invited Speech 4** The Role of Emotion Categories in Optimizing Athletes' Emotional Readiness Presider: Chin Ngien Siong Speaker: Karen Lo
11:40–12:00	**Invited Speech 5** From Rest to Pre-Competition: Heart Rate Variability Transitions as a Marker of Autonomic Readiness in Para-Swimmers Presider: Youngho Kim Speaker: Sarawut Kusump

Time	Activity	
February 09	**Day 2: Room 911, Mugung Hall (No. 57, Building)**	
12:00-15:00	**Lunch & Break**	
	Poster Session	**9th Floor, Mugung Hall (No. 57, Building)**
15:00–15:30	**Keynote Speech 2** Bridging Theory and Practice: Developing Mental Toughness for Enhanced Athletic Success in Malaysian Sport Presider: Chatkamon Singnoy Speaker: Garry Kuan	
15:30–15:50	**Invited Speech 6** Revisiting Athletic Identity in Adolescent Student-Athletes: Insights from the Three-Factor Process Model Presider: San-Fu Kao Speaker: Chung-Ju Huang, & Ya-Cheng Yeh	
15:50–16:10	**Invited Speech 7** Determinants of Physical Activity Among Chinese Adolescents: A Multi-Group Analysis Across Weight Statuses Presider: Karen Lo Speaker: Liying Yao	
16:10–16:30	**Invited Speech 8** Rethinking the "Student-Athlete": How Stereotypes Shape Athletes' Identity, Motivation, and Performance Presider: Feng-Tzu Chen Speaker: Yawen Hsu	
16:30–16:50	**Break Time**	
16:50-18:00 *Exercise Psychology Session (18:10)	**Plenary Session – Oral Presentation**	
	Exercise Psychology Presider : Dojin An	Room 207, Mugung Hall
	Performance Psychology Presider : Jonghwa Lee	Room 206, Mugung Hall
	Sport Psychology – 1 Presider : Naruepon Vongjaturapat	Room 205, Mugung Hall
	Sport Psychology – 2 Presider : Garry Kuan	Room 217, Mugung Hall
18:10–	**Welcome Dinner**	

Time	Activity
February 10	**Day 3: Conference Tour**
08:00-09:00	Breakfast
09:00–11:00	Departure to Ski Resort
11:00-12:00	Gondonla and Sightseeing
12:00-13:00	Lunch & Break
13:00-16:00	Free time – Ski or Sled
16:00-18:00	Come Back to SeoulTech
18:00-	Rest & Free time

Time	Activity
February 11	**Day 4: Room 911, Mugung Hall (No. 57, Building)**
08:00-09:30	Breakfast & Rest time (Packing)
09:30–09:50	**Invited Speech 9** Mastering the Digital Arena: Best Practices in Sport Psychology for World-Class Esports Success Presider: Yu-Kai Chang Speaker: Chatkamon Singnoy
09:50-10:30	Cultural Performance
10:30-11:00	Closing Ceremony

Oral Presenters - ISSEP 2026

February 09	**Plenary Session – Oral 1: Exercise Psychology (Presider: Dojin An)**
16:50-18:10	**Room 207, Mugung Hall (No. 57, Building)**
16:50-17:00	**Oral Presentation 1-1** Study of the age and bodyweight influences on Individuals comfort and pillow type selections Chih Min Wu, Shan Chun Yao, Wei Ming, Lin, Wen Yi Wang, & Zong Yan Cai
17:00-17:10	**Oral Presentation 1-2** The Correlations between Exercise Motivation, Perception of Health Promotion Plans and Exercise Behavior of Bangkok Cogenertion Company Limited's Employees Wannee Jermsuravong, Jade Puengchanchaikul, & Kunat Pithapornchaikul
17:10-17:20	**Oral Presentation 1-3** The Effects of Pickleball Participation on Job Stress and Burnout among University Staff: The Mediating Effects of Exercise Self-Efficacy and Social Capital Donghee Kang, & Youngho Kim
17:20-17:30	**Oral Presentation 1-4** Acute Effects of Multi-Modal Martial Arts on Mood and Mindfulness in High-Risk Adults with ADHD: A Research Proposal Using EEG Effective Connectivity Analysis Chi-Jui Lee, Wei Zhang, Dong-Yang Fong, & Chiao-Ling Hung
17:30-17:40	**Oral Presentation 1-5** Effects of Different Muscle Stretching Programs on Flexibility in Physically Inactive Adolescents Thanumporn Thonglong
17:40-17:50	**Oral Presentation 1-6** Can YouTube Promote Sports Participation? A Technology Acceptance Model Approach to College Students' Motivations for Using Sports Content Jisu Kim, Dojin An, & Youngho Kim
17:50-18:00	**Oral Presentation 1-7** Thai–Korean Perspectives on Measuring Values, Life Skills, and Learning Outcomes in Physical Education and Youth Sport: A Literature Review Choosakul, Julvanichpong, Inchai, Ahn, & Park
18:00-18:10	**Oral Presentation 1-8** Attitudes and Behaviors for Healthy Exercise of the working-age population in Udon Thani Municipality During the Coronavirus 2019 (COVID-19) Rittirong Unjana

February 09	**Plenary Session – Oral 2: Performance Psychology (Presider: Jonghwa Lee)**
16:50-18:00	**Room 206, Mugung Hall (No. 57, Building)**
16:50-17:00	**Oral Presentation 2-1** Longitudinal associations among sleep quality, athletic mental energy, and athletic performance: A cross-lagged panel model Wei-Jiun Shen, Frank, J. H. Lu, & Yi-Hsiang Chiu
17:00-17:10	**Oral Presentation 2-2** EEG-based Sensorimotor Rhythm Neurofeedback Training for Motor Performance: A Systematic Review Lin, Chen-Yu, & Wang, Kuo-Pin
17:10-17:20	**Oral Presentation 2-3** A new approach in sports: Function-specific instruction framework for EEG neurofeedback training Kuo-Pin Wang, Hatem Elbanna, & Thomas Schack
17:20-17:30	**Oral Presentation 2-4** Neural Efficiency Under Pressure: Neuro-psychophysiological Mechanisms of Deception Detection in Rugby Union Across Skill Levels (Research Proposal) Wei-Ting Chen, & Kuo-Pin Wang
17:30-17:40	**Oral Presentation 2-5** The Effects of Biomechanically Stable Putters on Psychological Confidence and Putting Performance Across Golf Handicap Levels Wang Meng, & Garry Kuan
17:40-17:50	**Oral Presentation 2-6** ANXIETY AND SELF-CONFIDENCE IN ROYAL THAI NAVAL SPECIAL FORCES TRAINEES Nuntaporn Pattanaviboon, Phichayavee Panurushthanon, & Sirichet Punthipayanon
17:50-18:00	**Oral Presentation 2-7** A STUDY STRESS RECOVERY IN TEAM ATHLETES Suttirak Nasome, Phichayavee Panurushthanon, & Sirichet Punthipayanon

February 09	**Plenary Session – Oral 3: Sport Psychology-1 (Presider: Naruepon Vongjaturapat)**
16:50-18:00	**Room 217, Mugung Hall (No. 57, Building)**
16:50-17:00	**Oral Presentation 3-1** The effects of mindfulness-based integrated psychological intervention to return to play related psychological variables on patients with anterior cruciate ligament reconstruction: A study protocol Jeffrey Yu, Poyu Chen, Wai-Hing Pang, & Yu-Kai Chang
17:00-17:10	**Oral Presentation 3-2** The Effect of Mental Warm-Up on Mental Readiness Flow State and Training Abilities of Goalkeeper Wimonmas Prachakul, Kittiphat Kerdphol, & Niromlee Makaje
17:10-17:20	**Oral Presentation 3-3** Body Mass Index and Physical Fitness Levels among Secondary School Students Alexander Goverthan A/L Kanabathy, Chin Ngien Siong, & Dadialyna Dayang Levoh
17:20-17:30	**Oral Presentation 3-4** The Effects of Pre-Performance Routines on Athletic Performance and Related Psychological Characteristics in University Football Club Athletes: Preliminary Results of Psychological Consulting Dahyun Park, & Youngho Kim
17:30-17:40	**Oral Presentation 3-5** The Cognitive Dissonance of Gender: External Stereotypes and Internal Identity Among Japanese Sport Science Students Wenjing Cheng
17:40-17:50	**Oral Presentation 3-6** Reliability and Validity Study of the Traditional Chinese Version of the Athlete Psychological Strain Questionnaire (APSQ-TC): A Study Protocol Wei-Chiun Wu, Yun-Rui Yang, Ling-Wen Huang, Jui-Ti Nien, & Yu-Kai Chang
17:50-18:00	**Oral Presentation 3-7** Mental Toughness, Mental Energy, and Burnout: Pathways to Positive Psychological Functioning in Youth Athletes Elvis Mehid, Garry Kuan, Ngien Siong Chin, & Yee Cheng Kueh

February 09	**Plenary Session – Oral 4: Sport Psychology-2 (Presider: Garry Kuan)**
16:50-18:00	**Room 205, Mugung Hall (No. 57, Building)**
16:50-17:00	**Oral Presentation 4-1** Effects of Biofeedback Training on Athlete Anxiety: A scoping review Chang Yang, & Tsung-Min Hung
17:00-17:10	**Oral Presentation 4-2** Mental Health Symptoms and Disorders Among Taiwanese Collegiate Athletes: A SMHAT-1 Based Study Yun-Rui Yang, Wei-Chiun Wu, Ling-Wen Huang, Jui-Ti Nien, & Yu-Kai Chang
17:10-17:20	**Oral Presentation 4-3** Exploring the Role of Sport Participation in International Students' Cross-Cultural Adaptation: A Qualitative Study of Perceived Social Support in the UK Yuqing Wang, Daniel Bloyce, Tomoaki seki, & Hikiro Nakamoto
17:20-17:30	**Oral Presentation 4-4** Motivation and Identity Integration: Predicting Academic and Athletic Outcomes among Trainee Teachers Oliva Anak Akiu, Ting Pei Siang, Teo Boon Sian, & Chin Ngien Siong
17:30-17:40	**Oral Presentation 4-5** The Effects of Attentional Focus Strategies and Mental Fatigue on Jump Service Accuracy in Collegiate Volleyball Players Hai-Wei Liu
17:40-17:50	**Oral Presentation 4-6** TARGET Dimensions, Situational Motivation and Physical Education Adherence among Undergraduates Ting Pei Siang, Chin Ngien Siong, Teo Boon Sian, Arthur Ling, & Oliva Anak Akiu
17:50-18:00	**Oral Presentation 4-7** The Effect of Layup Skill Development in Basketball using a Circle Hoop to Help in Jumping to Score for Mathayom 6 Students at Ratchaborikanukroh School Thanakrit Prakobsuk, Sataporn Phakhunthod, & Chaithipat Songsricharoen

Poster Presenters - ISSEP 2026

February 09	**Poster Session**
12:00-15:00	**9th Floor, Mugung Hall (No. 57, Building)**
1	**Poster 1** Psychological Coping in Elite Golf Performance: A Single-Case Hanchu Chang, & Yawen Hsu
2	**Poster 2** The Quality of Inclusive Sport Teams: A Review of Psychological Mechanisms and Related Factors Weiren Chen, & Yawen Hsu
3	**Poster 3** Health Status of Older Adults Participating in a Community-Based Elderly School Program Klanarong Krikaew, & Austtasit Chainarong
4	**Poster 4** The Relationship Between Negative Quality Perceptions, Fan Loyalty, and Re-Attendance Intention in the Chinese Professional Baseball League Yan-Hua Huang, & Yawen Hsu
5	**Poster 5** A Review of Eye-Tracking Applications in Sport Settings Yu Lun Lin, & Yawen Hsu
6	**Poster 6** Correlates of Nutrition Knowledge, Attitudes, and Practices Among Sport University Students: A Questionnaire-Based Study Zhou Xin, Garry Kuan, Shiming Li, & Yee Cheng Kueh
7	**Poster 7** The Effects of Pitch Types on Hitting Quality and Batting Outcomes: Evidence from the 2023 World Baseball Classic Kuo Chen, & Yawen Hsu
8	**Poster 8** The Relationship Between Coaching Leadership and Parental Support among Junior High School Basketball Teams Chi-Ting Hsu, & Yawen Hsu
9	**Poster 9** The Development of the Thai Mental Toughness Inventory Tanida Julvanichpong, Naruepon Vongjaturapat, & Wichai Julvanichpong

10	**Poster 10** Empowering and Disempowering Motivational Climates and Youth Athletes' Psychological Outcomes: A Narrative Review Hsiang-Yun Chang, & Chung-Ju Huang
11	**Poster 11** The Impact of Coach-Athlete Relationship on Athlete Burnout: A Narrative Review Jo-Han Chang, & Chung-Ju Huang
12	**Poster 12** Contrasting Health Literacy in Physical Activities: A Study Across Various Academic Stages in Exercise and Sport Science Students Tanida Julavanichpong, Kittipob Hanmanop, Thanakorn Huan-Kim, Thiranat Maneejak, Napas Namthongton, Veerapat Suwatthanapiriy, Satanachan Sucharit, Chatkamon Singnoy, Puangtong Inchai, & Chairat Choosakul
13	**Poster 13** Self-Identity and Role Conflict in Student Athletes : a literature review Yang-Kai Chen, & Wen-Yi Wang
14	**Poster 14** Listening to Children in CLIL PE: Exploring Primary Students' Voices and Experiences Wen-Yi Wang, & Liang-Hsin Chen
15	**Poster 15** An Investigation of Factors Associated with Physical Activity Engagement among undergraduate students at Burapha University Wattikorn Leesuriyaporn, Hathaikarn Chunchiao, Natradee Saengkhrut, & Pannala Pholchai
16	**Poster 16** Effects of Breathing Training on Psychological States in Resistance Training: A Review of the Literature Chia-Cheng Yang, & Chi-Wen Yen
17	**Poster 17** A Literature Review on Creative Dance Groups for Emotional Awareness and Recognition in Children with Special Needs Wei-An Hsieh, & Wen-Yi Wang
18	**Poster 18** Coaching Leadership Style and Team Climate on Collective Flow: A Literature Review Sian-Kai Chuang
19	**Poster 19** A Review of Laban Movement Analysis Applications in Children's Muscular Coordination and Body Control Abilities. Chang Pei-Ling

20	**Poster 20** Exploring the Link Between Resilience and Motor Proficiency in Children with Attention Deficit/Hyperactivity Disorder (ADHD): A Preliminary Correlation Analysis Shou-Ming, Huang, & Ting-Yu, Chueh
21	**Poster 21** A Development of Emotional Regulation Questionnaire for Thai Athletes (ERQ-TA) Thararat Khowkim, Chatkamon Singnoy, Sukanya Charoenwattana, Naruepon Vongjaturapat, Junggil Park, Chairat Choosakul, & Tanida Julvanichpong
22	**Poster 22** Social Support and Psychological Rehabilitation for Injured Athletes: A Literature Review Wei-An Hsieh, & Wen-Yi Wang
23	**Poster 23** Effect of acute relaxation training on state-trait anxiety, athletic mental energy, and sport performance in general adult badminton players Hsi-Hsien Hsu, Frank JH Lu, Wen-Chuan Chuang, & Theresa Chyi
24	**Poster 24** The Model of Sport Psychology Consulting Processes and Practical Considerations Chia-Yu Chang, & Wei-Jiun Shen
25	**Poster 25** Linguistic Strategies in Public Discourse Affecting Mental Toughness of Thai National Esports Athletes Korada Mattayakorn, & Apichaya Keawuthai
26	**Poster 26** Friendship Quality and Motivation: The Perspective of Relationship Motivation Theory Hsin-Lun Tsai, & Wei-Jiun Shen
27	**Poster 27** Social Support and Physical Activity Adherence in Older Adults: A Literature Review An-Sin Chang, & Chung-Ju Huang
28	**Poster 28** Effects of Smoking Urges on Perceptual Discrimination Ability and Aerobic Exercise Performance in Collegiate Athletes Kai-Chien Yang, & Chou, Chien-Chih
29	**Poster 29** The Association between Sports Club Participation, Sports Enjoyment, and Exercise Adherence among Korean College Students Seokjun Yoon, Shinhye Kim, & Youngho Kim

30	**Poster 30** Physiological and Psychological Benefits of Motion-Sensing Games for Individuals with Disabilities: A Literature Review Hsin-Yu Yen, & Chung-Ju Huang
31	**Poster 31** The Health Benefits of Stacking Cups for Individuals with Disabilities: A Literature Review Hsin-Yu Yen, & Chung-Ju Huang
32	**Poster 32** Effects of Martial Arts on inhibitory control and Arousal Regulation in Children with Attention-Deficit/Hyperactivity Disorder Kai-Yu Peng, & Ting-Yu Chueh
33	**Poster 33** The Effects of Physical Activity on Self-Regulation, Self-Esteem, and Self-Efficacy among Out-of-School Adolescents Yeonwoo Kim, Seungchan Lee, & Youngho Kim
34	**Poster 34** Motivations for Playing Pickleball: A Literature Review: Integrative Literature Review Zong-Jin Li, & Wen-Yi Wang
35	**Poster 35** The Relationship Between Emotional-Related Cognitive Flexibility and Muscular Fitness in Late Middle-Aged and Older Adults: A Study Protocol Michael Chen, Jeffrey Yu, & Yu-Kai Chang
36	**Poster 36** The Effects of Acute Exercise Integrated with Varying Cognitive Loads on Inhibitory Control in Collegiate Athletes Lai Hsing Yao, & Chou, Chien-Chih
37	**Poster 37** Growth of University Students Majoring in Physical Education Based on Participation in Sports Talent Sharing Activities Min Ju Kim, & Kyu Lee Shin
38	**Poster 38** Mindfulness Levels and Sports Anxiety among Ball sports Athletes: A Study Protocol Wai-Hing Pang, Michael Chen, Yun-Rui Yang, & Yu-Kai Chang
39	**Poster 39** The Effects of Physical Activity on Cognitive Function and HRV in Children With ADHD: A Scoping Review Yu-Wen Huang, & Ting-Yu Chueh

40	**Poster 40** A Comparative Study of Mindfulness Between Physical Education and Non-Physical Education Students Yu-Min Ho, Zongheng Wu, & Lin Chi
41	**Poster 41** Effects of Environmental Differences on Flow, Mood States and EEG on Cycling Jonghwa Lee, Soojin Kang, & Youngho Kim
42	**Poster 42** The Role of Neurofeedback Training in Precision Sport Skills Performance: A Systematic Review Yu-Ting Lo, Chien-Lin Yu, Shih-Huan Chen, Kuo-Pin Wang, & Tsung-Min Hung
43	**Poster 43** Mindfulness Training for Emotion Regulation in Athletes: A Narrative Review Hsin-Yu Lai, Chiu-Mei Hsu, & Chung-Ju Huang
44	**Poster 44** The Effects of Exercise Interventions on Emotional Regulation, Mental Health, and Self Control in Children with ADHD: A Systematic Review Tzu-En Huang, Yi-Ling Wu, & Tsai-Wen Lin
45	**Poster 45** Effects of the training using self-modeling with visual cues on skill performance, imagery, and sport-confidence of adolescent female soccer players Jisu Kim, Seonjong Lee, & Youngho Kim
46	**Poster 46** The Effects of Exercise Interventions on Executive Function in Children With Cerebral Palsy: A Systematic Review Yang, Shang-Hsun
47	**Poster 47** The Effects of Exercise on Hot Executive Function in Children With Neurodevelopmental Disorder: A Scoping Review Chen-Chi Sun, & Ting-Yu Chueh
48	**Poster 48** Physical Activity and Self-Concept Development in Children: A Systematic Review Lin-Ying Pan, & Wen-Yi Wang
49	**Poster 49** The effects of balance-based exercise interventions on motor skills, executive function, and behavioral symptoms in children with ADHD: A systematic review Wen Yi Li

50	**Poster 50** Coach Autonomy Support and the Development of the Five Cs in Adolescent Athletes: A Systematic Review Yi-Tzu Lee, & Wen-Yi Wang
51	**Poster 51** Effects of Power Training and Plyometric Training on Physical Performance and Sport Attention in Collegiate Badminton Players Yu-Chieh Huang
52	**Poster 52** The Effects of Acute Exercise Interventions on Executive Function in Children with Autism: A Scoping Review Bo-Yi Chen, & Ting-Yu Chueh
53	**Poster 53** The Effect of a Single Session of Sensorimotor Rhythm Neurofeedback Training on Golf Putting Performance Under Pressure Wu, Jen-Hao, & Tsung-Min Hung
54	**Poster 54** Effects of Pressure on Pitching Location Variability in Elite High School Baseball Pitchers Ching-Kai Wang, & Tsung-Min Hung
55	**Poster 55** Decoding Youth Athletes' Sport Specialization: A Scoping Review Ji-Heng Juang, Ya-Ting Juang, Yi-Hsiang Chiu, & Frank J H Lu
56	**Poster 56** Effects of Acute Exercise Interventions on Prefrontal Alpha EEG Asymmetry and Affective Outcomes: A Systematic Review HUNG TA HEISH
57	**Poster 57** Preliminary Effects of Resistance Training on Task Switching and Clinical Symptoms in Adults with ADHD: A Multiple-Baseline Single-Subject Study Wei Zhang, Chi-Jui Lee, Dong-Yang Fong, & Chiao-Ling Hung
58	**Poster 58** Effects of a Brain Endurance Training Intervention on Sport Performance: A Literature Review Chien-Yen Wang
59	**Poster 59** Integrating behavioral and neuroelectric evidence: Exercise-induced enhancement of executive functions in children and adolescents with preterm birth Feng-Tzu Chen, Ruei-Hong Li, Chen-Sin Hung, Chien-Heng Chu, & Yu-Kai Chang

60	**Poster 60** Life Stress and Defense Mechanisms in Adolescent Athletes: A Scoping Review Ya-Ting Juang, Ji-Heng Juang, Yi-Hisang Chiu, & Frank J. H. Lu
61	**Poster 61** The Effect of Competitive Anxiety on Swimming Performance: A Systematic Review Chia–Han Lee, & Wen–Yi Wang
62	**Poster 62** The effects of aerobic exercise intervention on cognitive function and heart rate variability: Literature Review Yi-Xuan, Cheng, Huan-yu Liang, Szu-Yu Tung, & Feng-Tzu Chen
63	**Poster 63** Neurocognitive Activity During the Preparation of Pistol Shooting: Comparative EEG Profiles of Skilled Deaf Shooters and Novice Shooters Ting-Yu Chueh, & Kai-Yu Peng
64	**Poster 64** A Review of Tai Chi and Executive Function: Evidence and Insights from Studies in Taiwan Szu-Yu Tung, Ting-Yu Chao, Yi-Xuan Cheng, & Feng-Tzu Chen
65	**Poster 65** Effects of High-Intensity Interval Exercise Combined with Respiratory Muscle Training on Executive Function and Heart Rate Variability in Adults with Obesity: A Research Proposal Ting-Yu Chao, Szu-Yu Tung, Huan-Yu Liang, & Feng-Tzu Chen
66	**Poster 66** Association between Pupillary Responses and Executive Function After Acute Aerobic Exercise Huan-Yu Liang, Yi-Xuan Cheng, Szu-Yu Tung, & Feng-Tzu Chen

Keynote Speech 1

Stress in Sports: Measurement, Empirical Studies, and Future Directions

Frank Jing-Horng Lu

Department of Physical Education, Chinese Culture University

Stress is a big issue in sport psychology. It not only influences athletes' performance but also links to cognition, emotions, and behavior. In sports, the stress-induced anxiety received much attention from researchers who proposed many models to explain the arousal-performance relationship. In addition, stress may cause athletes' burnout, injury, eating disorders, substance abuse, interpersonal difficulties, and physical and mental health problems. To examine stress, researchers have developed many measures to evaluate athletes' perceived state from a global approach to life-situation-specific perspectives. Using these tools, we are able to understand how stress influences athletes' psychological state, as well as their cognitions and emotions. In this speech, I will introduce current stress measures in sports, discuss how empirical studies have found, and propose suggestions for applications and research in the future.

Keywords: psychological state, social facilitation, psycho-physiological approach, mind-body integration

Invited Speech 1

Mindfulness, Subjective Happiness and Health among Trainee Teachers

Chin Ngien Siong[1*] & Teo Boon Sian[2]

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[2]SJKC Chung Hua Undop, Sri Aman, Sarawak, Malaysia

The mental well-being of trainee teachers is a critical concern within initial teacher education, as it significantly both their overall well-being and teaching efficacy. This study examined mindfulness, subjective happiness and general health among 548 trainee teachers aged 19 to 33 (1.82 ± 0.68) at the Institute of Teacher Education Campuses in Sarawak, Malaysia. The study employed the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Subjective Happiness Scale (SHS), and the 12-item General Health Questionnaire (GHQ-12; Goldberg, 1997). Independent t-test showed that there was significant difference between the gender on MAAS, $t = 2.072$, $p = .039$. Besides, the one-way ANOVA revealed significant difference between the three age groups on MAAS, $p < .001$, and perceived abilities dimension, $p = .003$. Moreover, the two-way ANOVA for gender (male vs female) and age groups (19 – 33 years old) showed that there was significant main effect of gender on MAAS, p .034, whereas the main effect of age group was significant on MAAS, $p < .001$, and perceived abilities, $p = .005$, respectively. No significant interaction between Gender × Age on all the variables, $p > .05$. Furthermore, Mindfulness (MAAS) was significant positive correlation with self-esteem and depressive symptoms, while significant negative correlations with perceived abilities and happiness. Happiness (SHS) exhibited a significant positive relationship with perceived abilities but a significant negative relationship with self-esteem. Self-esteem was strongly and negatively correlated with perceived abilities and positively correlated with depressive symptoms. The correlation coefficient between the variables ranged from -.051 to .409. The findings underscore the importance of integrating psychological well-being supports into teacher training programs to improve mindfulness outcomes.

Key words: Mindfulness, Happiness, Health, Trainee Teachers

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Invited Speech 2

How Transformational Coaches Build Athlete Mental Toughness: Motivational and Coach–Athlete Relationship Pathways

San-Fu Kao

National Tsing Hua University, Taiwan

Research on coach transformational leadership and athlete mental toughness has yet to fully explore the influence of processes and mechanisms linking the two. This study examines two mediating pathways: task-involving climate perception and coach-athlete relationship quality. Grounded in self-determination and conservation of resource theories, we propose that coach transformational leadership fosters a supportive environment and offers a leader-follower exchange relationship as resources, which in turn strengthens mental toughness. We surveyed 301 volleyball players and utilized path analyses with bootstrapping methods to examine our hypotheses. Our findings indicate that an athlete's task-involving climate perception and coach-athlete exchange relationship play pivotal roles in determining the indirect impacts of coach transformational leadership on athlete mental toughness. We identify the intricate nature of coach transformational leadership, which encourages the development of athlete self-determination and cultivates high-quality coach-athlete relationships, consequently bolstering athlete mental toughness.

Key words: Coach transformational leadership, mental strength, perceived motivational environment, psychological resource, mental toughness

Invited Speech 3

From Algorithms to Action: A Five-Year Research Trajectory on AI-Driven Physical Activity Behavior*

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Artificial intelligence (AI)–driven recommendation algorithms have increasingly reshaped the environments in which physical activity decisions are made by personalizing content, structuring exposure, and influencing habitual behavior. However, prior research has largely examined technology acceptance and physical activity separately, offering limited explanation of how algorithmic environments translate into actual behavior change. This invited presentation introduces a five-year, theory-driven research trajectory grounded in sport and exercise psychology and extending the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). The project progresses through five sequential stages: conceptual mapping, theory development, measurement construction, structural validation, and experimental verification. Early stages employ systematic review, text mining, and meta-analytic approaches to identify theoretical gaps and propose an AI-specific physical activity acceptance framework. Subsequent phases focus on developing and validating a scale capturing behavior-shaping AI acceptance and testing structural pathways linking AI acceptance, physical activity intention, and actual behavior using structural equation modeling. The final stage experimentally manipulates AI recommendation environments and incorporates wearable-based objective data to establish causal evidence of AI-driven behavior change. By conceptualizing AI algorithms as behavioral mediators rather than neutral technologies, this research provides theoretical and methodological contributions to sport and exercise psychology and offers a foundation for designing psychologically informed AI-based physical activity interventions.

Key words: Artificial Intelligence Algorithms, Behavioral Mediation, Experimental Behavioral Change, Physical Activity, Technology Acceptance Model (UTAUT2)

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Invited Speech 4

The Role of Emotion Categories in Optimizing Athletes' Emotional Readiness

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Anxiety significantly influences athletic performance outcomes (Hanin, 2000). While techniques like deep breathing, meditation, visualization, and attentional control are standard, their success hinges on athletes' understanding how emotions impact readiness and selecting the right tools for the moment (Hanin, 2007). Juri Hanin's Individual Zones of Optimal Functioning (IZOF) model identifies the personalized blend of anxiety, excitement, and confidence that drives peak performance for each athlete (Hanin, 2000).

Hanin's framework explains that emotions arise from appraisals of goal attainment likelihood, evolving through repetition into stable patterns unique to the person, task, and setting (Hanin, 2000). Hanin's IZOF model employs athletes' metaphors for pre-competition emotions, showing that even negative states like "a fish out of water" can boost performance, while overly positive ones like "a calm lake" may foster complacency and underperformance. Two dimensions guide analysis: hedonic tone (pleasure–displeasure), separating pleasant emotions (e.g., excitement) from unpleasant ones (e.g., anxiety); and performance functionality (optimal–dysfunctional), where confidence enhances outcomes but excessive anxiety impairs them. This helps athletes profile and regulate emotions for peak competitive readiness.

This symposium aims to strengthen participants' understanding of emotion categories and how that can enable athlete's targeted arousal regulation, ultimately enhancing performance (Ruiz et al., 2015).

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Invited Speech 5

From Rest to Pre-Competition: Heart Rate Variability Transitions as a Marker of Autonomic Readiness in Para-Swimmers

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Performance in competitive swimming depends on the effective regulation of physiological arousal and attentional focus, particularly during the transition from rest to competition. In para-swimming, athletes face additional neuromuscular, sensory, and environmental constraints, making autonomic readiness a critical factor for both performance and well-being.Heart rate variability (HRV) is commonly used as a non-invasive indicator of autonomic nervous system regulation. While resting HRV is widely interpreted as a marker of recovery and regulatory capacity, less attention has been given to how this capacity is expressed during the pre-competition phase. This presentation focuses on the transition of HRV from resting to pre-competition as a meaningful indicator of autonomic readiness in para-swimmers.HRV data were collected from competitive para-swimmers during a resting baseline and immediately prior to competition. Resting HRV was used to represent baseline autonomic regulatory capacity, whereas pre-competition HRV reflected anticipatory stress and situational adjustment. Rather than emphasizing absolute HRV values, analyses focused on individual transition patterns between resting and pre-competition states.The findings revealed substantial inter-individual variability in HRV transitions among para-swimmers. Some athletes demonstrated stable HRV patterns from rest to pre-competition, while others showed adaptive shifts consistent with task demands. Importantly, stable or adaptive HRV transitions were associated with more controlled arousal and perceived readiness, suggesting effective autonomic regulation rather than under-arousal or disengagement.These results support the interpretation that readiness in para-swimming is not defined by a single optimal HRV level, but by the athlete's ability to flexibly regulate autonomic responses during the pre-competition phase. This presentation proposes an applied psychophysiological framework emphasizing HRV transitions as a practical tool for monitoring readiness, informing mental preparation strategies, and supporting individualized performance planning in para-swimming. HRV is discussed as a supportive, ethical, and athlete-centered measure within inclusive high-performance sport systems.

Key words: Heart Rate Variability, Autonomic Readiness, Para-Swimmers

Keynote 2

Bridging Theory and Practice: Developing Mental Toughness for Enhanced Athletic Success in Malaysian Sport

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Athletic performance is influenced by many factors, including physical, tactical, technical, and psychological components. Among these, psychological factors frequently serve as the tipping point that determines success or failure in competition. Research by Kuan (2022) demonstrated that mental ability can account for over fifty percent of an athlete's success in competitive settings. Mental toughness, a term often cited by athletes, coaches, and applied sports psychologists, emerges as a critical psychological trait correlated with performance outcomes in elite sports.This presentation offers a comprehensive examination of mental toughness, exploring its fundamental concepts, theoretical frameworks, underlying mechanisms, and empirical research, alongside practical applications within the context of Malaysian sports. The discussion begins with an engaging overview that contextualizes the role of sport psychology in enhancing athletic performance. Coaches and practitioners will gain access to a theoretical model designed to guide interventions aimed at fostering mental toughness in athletes. The presentation is organised into four key sections: the importance of sport psychology in applied settings, contemporary research findings, the interplay between self-efficacy and other psychological variables on marginal gains, and applied sports psychology initiatives in Malaysia settings. The primary contribution of this presentation lies in the practical guidelines provided to assist athletes and coaches in implementing sport psychology strategies, ultimately enhancing performance outcomes. By bridging theory and practice, this work aims to cultivate a deeper understanding of applied sports psychology, empowering Malaysian athletes and coaches to achieve greater success in sports.

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Invited Speech 6

Revisiting Athletic Identity in Adolescent Student-Athletes: Insights from the Three-Factor Process Model

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Introduction: Athletic identity refers to the extent to which individuals define themselves in the athlete role and is an important psychological resource for athletic career development. In sport psychology, the Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993) is widely used to assess the strength of this identification, but it offers limited insight into the developmental processes of identity formation. In contrast, the three-factor identity model from developmental psychology (Crocetti et al., 2008) conceptualizes identity development through commitment, in-depth exploration, and reconsideration of commitment, resulting in five identity statuses: achievement, closure, moratorium, searching moratorium, and diffusion. Applying this process-oriented framework allows for a more nuanced examination of inter-individual differences in athletes' identity development. **Purpose:** This two-wave study examined the feasibility of applying the three-factor identity model to the assessment of athletic identity in adolescent student-athletes. **Results:** The model demonstrated an acceptable to good fit in the athletic context ($\chi^2 = 225.33$, df = 62, CFI = .95, TLI = .93, RMSEA = .07, SRMR = .09). Identity statuses derived from this model differed from prior classifications, with relatively stable and homogeneous patterns observed, particularly achievement and moratorium. Furthermore, positive changes in commitment and in-depth exploration were associated with greater career adaptability and better mental health. **Conclusion:** These findings provide preliminary support for applying the three-factor identity model to athletic identity assessment. Future multi-wave studies are needed to clarify the long-term relationships among athletic identity processes, career adaptability, and mental health in student-athletes.

Key words: Identity Formation; Identity Status; Career Development; Well-Being

Invited Speech 7

Determinants of Physical Activity Among Chinese Adolescents: A Multi-Group Analysis Across Weight Statuses

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Adolescent physical activity is influenced by a multifaceted array of factors, including physical, socio-ecological, and psychological components. Among these, the interaction between individual psychology and social support frequently serves as the tipping point that determines whether youth engage in active lifestyles or remain sedentary. However, amidst the "dual burden of malnutrition" currently facing Chinese youth, the specific mechanisms driving participation across different weight statuses remain underexplored. Research by Yao (2026) indicated that these determinants are not universal but are highly distinct across the BMI spectrum, suggesting that weight status fundamentally alters the pathways to behavioral adoption. This study offers a comprehensive examination of these weight-specific pathways by integrating family and friend support, physical environment, self-efficacy, and stage of change into a unified analytical framework. Using multi-group structural equation modeling on a sample of 1,573 adolescents, the analysis reveals striking disparities. While normal-weight adolescents exhibit a balanced engagement model, distinct constraints emerge at the extremes. Specifically, underweight youth rely primarily on internal readiness and self-regulation mechanisms. Conversely, overweight and obese adolescents demonstrate a "socially dependent" pattern where friend support acts as a critical lever, yet environmental resources often fail to translate into action. The primary contribution of this work lies in the practical guidelines provided to challenge "one-size-fits-all" interventions. By bridging psychological theory and public health practice, these findings empower policymakers to implement precision strategies supporting the Healthy China 2030 initiative.

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Invited Speech 8

Rethinking the "Student-Athlete": How Stereotypes Shape Athletes' Identity, Motivation, and Performance

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Student-athletes navigate an identity space that is often shaped—and constrained—by pervasive academic stereotypes. Research across social psychology has long shown that stereotype threat undermines performance, yet its mechanisms and consequences for athletes remain underexplored. This talk integrates findings from three experimental studies examining how language, media narratives, and psychological interventions influence athletes' cognitive performance, motivation, and self-concept. In the first study, exposure to negative academic stereotypes significantly reduced athletes' mathematics performance and increased behavioral self-handicapping, particularly when tasks were labeled as difficult. The second study extended these effects to identity-relevant media messages: both explicit negative descriptions and "special-case" superstar success stories lowered career adaptability, optimism, and willingness to engage in challenging academic tasks, revealing the subtle harm of psychologically distant role models. The final set of studies tested brief interventions based on identity safety and self-complexity. Reading identity-safe messages and engaging in high self-complexity exercises both increased academic challenge-taking, whereas low self-complexity magnified vulnerability to stereotype threat. Together, these findings highlight how stereotypes shape not only performance, but also the developing identities and future trajectories of student-athletes. Reframing the narratives surrounding athletes—and fostering multidimensional identities—offers a promising pathway toward more equitable academic and athletic environments.

Key words: stereotype threat, intervention, career thoughts, self-concept

Invited Speech 9

Mastering the Digital Arena: Best Practices in Sport Psychology for World-Class Esports Success

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Background: In the highly competitive landscape of professional esports, technical skill alone is insufficient for sustained success. Athletes often encounter significant psychological barriers, including intense cognitive load, emotional volatility, and the immense pressure of high-stakes environments. This presentation examines best practices implemented in esports, featuring case studies from PUBG PC, RoV, and Valorant. The objective is to present a proven, scientific framework for mental and physiological performance management that elevates professional esports athletes to world-class standards

Methodology (The Best Practice Framework): The intervention follows a systematic 7-step process as 1) Scientific Literacy: Educating athletes on the physiological mechanisms of stress to facilitate cognitive reframing. 2) Biometric Regulation: Implementing real-time Heart Rate Monitoring and breathing techniques to manage autonomic nervous system arousal. 3) Neuro-Cognitive Training: Utilizing Focus Band (EEG) technology to train and measure "Flow State" and sustained attention. 4) Performance Analytics: Correlating biometric data with in-game performance metrics to ensure evidence-based development. 5) Strategic Priming: Using targeted multimedia storytelling and daily mindfulness to maintain long-term mental resilience. 6) Leadership Alignment: Coaching In-Game Leaders (IGLs) to maintain team stability under extreme conditions. And 7) Real-Time Competition Support: Providing direct psychological intervention and stabilization during world-class tournament finals.

Results show that the application of this framework during PGC 2025 demonstrated a significant improvement in Heart Rate Recovery (HRR) and decision-making accuracy under pressure. Despite the intense distraction of a 16-million-baht prize pool and social media influence, the athletes maintained peak focus, ultimately securing the Championship and Thailand's first world-class title in this category.

Conclusion: This case study serves as a benchmark for esports organizations worldwide, proving that a structured, psychophysiological approach is a key success factor in transitioning from elite talent to World Champion status.

Keywords: Best Practices/ Esports/ Psychophysiology/ PUBG PC/RoV/ Valorant

Oral Presentation 1-1

Study of the age and bodyweight influences on Individuals comfort and pillow type selections

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Pillow height, shape, and type of material affect the shoulder and neck support level, which influences muscle tension, cervical spine alignment, and overall sleep comfort. However, pillow designs may not align with individual sleeping positions and head-neck-shoulder angles, leading to variations in subjective comfort.

Purpose of this study was to investigate the influences of head-neck-shoulder angles and subjective comfort on pillow type selection. **Methods**: aged 20above adults were recruited as subjects. “Human Joint Tool” and “Questionnaire on Differences Between Subjective and Objective Pillow Selection.” 44 participants were finished all tests, including the supine and lateral head-neck-shoulder angles and comfort ratings. Data analyzed by SPSS two-way ANOVA to examine differences among age groups, sleeping positions, and pillow types in both subjective and objective comfort ratings. **Results**: No significant differences between subjective and objective comfort ratings across sleeping positions. These was shown participants' subjective pillow selection with objective measurement recommendations. under30 age group shown greater adaptability across sleeping positions (including side sleeping) with stable comfort ratings. Conversely, above30 age group exhibited significantly lower comfort ratings during “side sleeping.” With increasing age, the physiological tolerance for non-supine postures may decrease, leading to higher requirements for pillow support of side sleeping. Age may be a key variable influencing sleep comfort. **Conclusion**: Based on this study, for younger individuals, pillow selection and sleeping position have a relatively minor impact on sleep comfort. However, for aged 30 and above, “sleeping position” (particularly side sleeping) becomes the decisive factor affecting comfort, rather than mere differences in pillow material. Future study should incorporate age and sleeping position habits into consideration.

Key words: Memory Pillow, Sleep Posture, Numeric Rating Scale for Pain

Oral Presentation 1-2

The Correlations between Exercise Motivation, Perception of Health Promotion Plans and Exercise Behavior of Bangkok Cogenertion Company Limited's Employees

Wannee Jermsuravong[1]*, Jade Puengchanchaikul[1], & **Kunat Pithapornchaikul[1]**

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The research objectives were to find the correlations between motivation and perception of health promotion plans and exercise behavior of employees in Bangkok Cogeneration Company Limited. The sample group in this research survey were 32 employees of Bangkok Cogeneration Company Limited. Three questionnaires (exercise motivation questionnaire, the perceptions of the company's health promotion plan and exercise behavior) were validated by researcher and test the IOC. Statistics used in data analysis were mean, standard deviation, and Pearson's Correlation (r).

Research Findings

1 The correlation between 1) intrinsic motivation (In-Mo) and extrinsic motivation (Ex-Mo) r = .625** 2) Ex-Mo was correlate with perception of the company's health promotion plan (P-HPP) r = .454** and 3) P-HPP was correlate with exercise behavior (Ex-Beh) r = .485**. These correlations were significant at the 0.01** level.

2 In term of gender, male were found that the correlation between In-Mo and Ex-Mo r = .625** was significant at the 0.01 level and P-HPP and Ex-Beh r = .444*. was significant at the 0.05 level. In female were found that the correlation between In-Mo and Ex-Mo r = .763*, In-Mo and Ex-Beh r = .832**, Ex-Mo and P-HPP r = .775*, Ex-Mo and Ex-Beh r = .668*. These correlations were significant at the 0.01** and 0.05* level.

3 In term of less than 10 years of work experience were found that the correlation between In-Mo and Ex-Mo r = .715**, In-Mo and P-HPP r = .481*, In-Mo and Ex-Beh r = .538*, Ex-Mo and P-HPP r = .455*. Work experience more than 10 years were found the correlation between In-Mo and Ex-Mo r = .612**, and P-HPP and Ex-Beh r = .699*. These correlations were significant at the 0.05* level.

Key words: motivation, perception of health promotion plans, exercise behavior

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Oral Presentation 1-3

The Effects of Pickleball Participation on Job Stress and Burnout among University Staff: The Mediating Effects of Exercise Self-Efficacy and Social Capital

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Background: Job stress and burnout have become pervasive issues among modern professionals, exacerbated by sedentary lifestyles and a lack of leisure time. University staff, in particular, face a complex environment comprising student guidance and administrative pressures, yet sports intervention studies targeting this group remain scarce. **Purpose:** This study aims to investigate the impact of Pickleball a rapidly growing sport known for its low barriers to entry and high social interaction on the psychological burnout of university staff and to verify the mediating roles of exercise self-efficacy and social capital. **Methods**: A 4 week pilot test was conducted with 30 university staff members in Seoul. Participants were assigned to an experimental group (n=15) or a control group (n=15). The experimental group participated in a Pickleball program twice a week, while the control group maintained their routine sedentary leisure activities. Data analysis was performed using the statistical software **R**. A t-test was utilized to compare differences between groups and pre-post changes, and a mediation analysis was conducted to verify psychological mechanisms. **Results**: First, participation in Pickleball significantly reduced job stress and burnout levels among university staff. Second, exercise self-efficacy and social capital significantly improved in the experimental group following the program. Third, exercise self-efficacy and social capital were found to significantly mediate the relationship between Pickleball participation and the reduction of job stress and burnout. This suggests that personal and social resources enhanced through physical activity act as a buffer against work-related exhaustion. **Conclusion**: This study demonstrates that Pickleball serves as an accessible and effective leisure activity that contributes to the mental health and organizational culture of university staff. However, the short duration and small sample size are noted as limitations. Future research should incorporate longitudinal tracking, qualitative methods, and cross-national comparative studies to further validate the effectiveness of Pickleball in a global context.

Key words: Pickleball, University Staff, Job Stress, Burnout, Exercise Self-Efficacy, Social Capital

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Oral Presentation 1-4

Acute Effects of Multi-Modal Martial Arts on Mood and Mindfulness in High-Risk Adults with ADHD: A Research Proposal Using EEG Effective Connectivity Analysis

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Introduction: Adults at high risk for Attention-Deficit/Hyperactivity Disorder (ADHD) frequently exhibit subclinical symptoms and affective dysregulation (AD), yet often access to early interventions, despite their heightened vulnerability to emotional dysregulation and functional impairment. Multi-modal martial arts exercise training (martial arts MET), which integrates physical activity, coordinative martial arts routines, and mindfulness practice, has been proposed as a potential strategy for enhancing emotion regulation. However, the acute effects of martial arts MET on mood states, mindfulness awareness, and the underlying neural mechanisms remain unclear.

Objectives: Building upon prior evidence supporting the role of martial arts MET for cognitive and emotional regulation, this study aims to examine the immediate effects of a single martial arts MET session on mood states and mindfulness in adults at high risk for ADHD, and to explore associated changes in brain network dynamics using EEG-based effective connectivity analysis.

Methods: A randomized within-subject crossover design will be employed. Thirty-six Adults at high risk for ADHD participants, identified using the adult ADHD self-report scale (ASRS), using the two experimental conditions separated by a one-week washout: (1) an acute martial arts MET session consisting of dynamic warm-up, martial arts routines emphasizing mind–body integration and coordinative control, mindfulness-oriented exercises, and cool-down stretching; (2) an active control condition involving video-based martial arts instruction combined with self-directed practice. Mood states and mindfulness will be assessed before and after each condition using validated self-report measures. Resting-state EEG will be recorded, and Directed Transfer Function (DTF) analysis will be applied to quantify effective connectivity among brain regions associated with emotion regulation.

Expected Results: Relative to the control condition, acute martial arts MET is expected to reduce negative mood states and enhance mindfulness awareness. At the neurophysiological level, increased prefrontal-driven top-down effective connectivity within emotion regulation networks is anticipated, reflecting short-term modulation of regulatory neural dynamics.

Key words: Affective regulation, Mind–body exercise, Brain network dynamics, High-risk adults, Cognitive–emotional regulation

Oral Presentation 1-5

Effects of Different Muscle Stretching Programs on Flexibility in Physically Inactive Adolescents

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The purpose of this study was to investigate and compare the acute effects of different muscle stretching programs on flexibility in physically inactive adolescents. The participants were 30 adolescents with low flexibility levels, aged 15–18 years, from Udon Phichai Raksa Phitthaya School. They were divided into three groups: (1) dynamic stretching, (2) passive stretching using external force, and (3) proprioceptive neuromuscular facilitation (PNF) stretching. The training program was conducted for 6 weeks, three days per week, 50 minutes per session. Flexibility was assessed using the back scratch test (right hand on top and left hand on top), the sit-and-reach test, and the trunk extension (prone press-up) test. Statistical analysis included calculation of the mean and standard deviation. Differences within groups were analyzed using a paired-sample t-test, and differences among stretching methods were analyzed using one-way analysis of variance (ANOVA). When significant differences were found, post hoc comparisons were performed using the least significant difference (LSD) method. The level of statistical significance was set at .05. The results showed that after stretching programs, all three groups demonstrated a statistically significant increase in flexibility at the .05 level. However, in the dynamic stretching group, no statistically significant difference was found in the back scratch test with the right hand on top, although the mean value increased after stretching. Comparisons of flexibility among the three groups revealed no statistically significant differences between groups both before and after the training program at the .05 level. In conclusion, all three muscle stretching programs were effective in improving flexibility and muscular power.

Key words: muscle stretching, flexibility, adolescents

Oral Presentation 1-6

Can YouTube Promote Sports Participation? A Technology Acceptance Model Approach to College Students' Motivations for Using Sports Content

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This study had two objectives: first, to examine the structural relationships among college students' motivations and intentions to use YouTube sports content and their actual sports participation; and second, to test the mediating effect of the Technology Acceptance Model (TAM) within these relationships. Data were collected from 319 college students in their 20s who had previously used YouTube to view sports content. The survey incorporated items from validated scales measuring motivation and intention to use YouTube sports content, TAM constructs, and sports participation. Descriptive statistics, confirmatory factor analysis, reliability testing, and correlation analysis were conducted, followed by structural equation modeling and bootstrapping. Model fit indices indicated an acceptable fit ($\chi^2/df = 2.72$, CFI = .94, TLI = .92, RMSEA = .074), with Cronbach's alpha coefficients ranging from .73 to .90. Motivation significantly predicted both intention and TAM, while TAM also significantly predicted intention. Bootstrapping analysis confirmed the significance of the indirect effect of motivation on intention via TAM. However, no significant mediating effect of TAM was found in the relationship between motivation and sports participation. These results highlight the partial mediating role of TAM in digital content consumption but suggest limitations in its influence on actual behavior change.

Key words: Intention, Motivation, Sports Participation, Technology Acceptance Model, YouTube Sports Content

Oral Presentation 1-7

Thai–Korean Perspectives on Measuring Values, Life Skills, and Learning Outcomes in Physical Education and Youth Sport: A Literature Review

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In contemporary Physical Education and Sport (PES) contexts, there is growing recognition that participation alone is insufficient to ensure the development of values and life skills among youth (Bailey, 2006; Camiré et al., 2020). Instead, such outcomes require intentional pedagogical design, systematic instruction, and reflective teaching practices grounded in Positive Youth Development (PYD) frameworks (Gould & Carson, 2008; Lerner et al., 2015). Consequently, the roles of physical education teachers and sport coaches have expanded beyond technical and tactical instruction toward the promotion of holistic learning outcomes aligned with values formation and life skills acquisition. This literature review synthesizes theoretical foundations and empirical evidence related to Values and Life Skills Instruction (VLSI), Self-Regulated Learning (SRL), and Youth Satisfaction in PES contexts. Drawing on PYD theory (Lerner et al., 2015), experiential learning theory (Kolb, 1984; Newman et al., 2020), and self-regulated learning models (Zimmerman, 2000; Zimmerman & Schunk, 2011), the review highlights how intentional VLSI practices can foster learners' cognitive, motivational, and behavioral regulation. Empirical studies indicate that pedagogical strategies explicitly targeting values and life skills—such as goal setting, reflection, autonomy support, and guided feedback—are associated with enhanced SRL processes and meaningful learner engagement (Bean & Forneris, 2017; Santos et al., 2019). Youth satisfaction is identified as a key outcome reflecting the quality of learning experiences in PES and a predictor of sustained participation and positive developmental outcomes (Scanlan et al., 1993; Camiré et al., 2021). Research consistently demonstrates that environments characterized by intentional VLSI and support for self-regulated learning are more likely to promote enjoyment, perceived competence, and internalization of values among youth (Curran et al., 2013; Koh et al., 2025). The review further examines advances in psychometric validation within educational and sport psychology, emphasizing the necessity of culturally responsive measurement instruments when extending interventions across contexts (Beaton et al., 2000; Hambleton et al., 2005). Evidence from cross-cultural studies suggests that instruments assessing VLSI, SRL, and youth satisfaction require rigorous translation, back-translation, and validation procedures to ensure construct equivalence and measurement invariance (Milfont & Fischer, 2010). This consideration is particularly relevant when extending interventions and instruments originally developed and tested in Singapore to Thai and Korean PES contexts.Based on the synthesis of theory and empirical findings, a conceptual model is proposed linking Values and Life Skills Instruction to Youth Satisfaction through the mediating role of Self-Regulated Learning. This model provides a theoretically grounded and empirically supported

framework for cross-cultural psychometric validation and intervention-based research, thereby strengthening the evidence base for values-driven education in Physical Education and Sport across diverse cultural settings.

Oral Presentation 1-8

Attitudes and Behaviors for Healthy Exercise of the working-age population in Udon Thani Municipality During the Coronavirus 2019 (COVID-19)

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Background: The COVID-19 pandemic has affected people's daily lives, particularly their attitudes and behaviors, which are crucial to the health of the working-age population. **Objective:** This study aimed to examine attitudes and health-promoting exercise behaviors of the working-age population living in municipal areas of Udon Thani Province during the COVID-19 pandemic, and to compare attitudes toward health-promoting exercise according to gender and age. The sample consisted of 402 working-age individuals aged 15–59 years, both male and female, residing in municipal areas of Udon Thani Province. The research instrument was a researcher-developed questionnaire. Data were collected through both on-site (field) questionnaires and online questionnaires. Data analysis employed descriptive statistics, including percentages, means, and standard deviations, as well as inferential statistics using independent t-tests and one-way analysis of variance (One-way ANOVA). The level of statistical significance was set at 0.05. **Results:** The results indicated that the majority of participants were male (51.70%) and female (48.30%). Most participants were aged 15–29 years (52.00%), followed by those aged 30–44 years and 45–59 years, respectively. Overall attitudes toward health-promoting exercise during the COVID-19 pandemic were at a positive level (mean = 3.91, standard deviation = 0.51). Comparisons of attitudes toward health-promoting exercise by gender and age revealed no statistically significant differences between males and females or among different age groups at the 0.05 level. Regarding health-promoting exercise behaviors during the COVID-19 pandemic, the overall level was moderate. When analyzed by gender, most male and female participants demonstrated moderate levels of health-promoting exercise behavior, accounting for 67.79% of males and 62.37% of females. When analyzed by age group, participants in all age groups most frequently exhibited moderate levels of exercise behavior, with 66.99% in the 15–29-year group, 61.97% in the 30–44-year group, and 66.67% in the 45–59-year group. **Conclusion:** These findings indicate that although the working-age population in municipal areas of Udon Thani Province had positive attitudes toward health-promoting exercise during the COVID-19 pandemic, their actual exercise behaviors remained at a moderate level. The results of this study can serve as baseline information for policymakers and relevant stakeholders in formulating policies, planning, and developing appropriate programs or measures to promote health-promoting exercise that align with the context of the working-age population during future public health crises in an effective manner.

Key words: Attitudes; Behaviors; Exercise; COVID-19; Working-age population

Oral Presentation 2-1

Longitudinal associations among sleep quality, athletic mental energy, and athletic performance: A cross-lagged panel model

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Introduction: Previous research has identified the potential mediating role of athletic mental energy (AME) in the relationship between sleep quality and athletic performance. However, causal interpretations of this mediation are limited due to the cross-sectional design. **Objectives**: The current study aimed to provide stronger evidence for the causal relationships among sleep quality, AME, and basketball three-point shooting outcomes (including shooting scores and shooting performance) by applying a cross-lagged panel model. **Methods**: One hundred and forty-five collegiate basketball players (71 males and 74 females; M_{age} = 19.62 ± 1.35) from 16 universities were recruited from Taiwan's University Basketball Association (UBA), specifically Division I and Division II leagues. The Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989) and the Athletic Mental Energy Scale (AMES; Lu et al., 2018) were used to measure athletes' sleep quality and AME. The shooting scoring system (Lu et al., 2020) and shooting percentage were employed to assess athletes' three-point shooting performance. The measurement procedure was repeated after a two-week interval. Structural equation modeling (SEM) was used to examine the cross-lagged relationships among sleep quality, AME, and shooting performance over the two-week period. **Results:** SEM indicated that sleep quality at Time 1 positively predicted sleep quality (β = .53, p < .001) and shooting score (β = .15, p = .027) at Time 2. AME at Time 1 positively influenced sleep quality (β = .16, p = .027), AME (β = .73, p < .001), shooting score (β = .23, p = .001), and shooting percentage (β = .25, p < .001) at Time 2. Moreover, shooting performance at Time 1 was positively associated with shooting performance (β = .47 and .43, all p < .001) at Time 2. **Discussion and Conclusion**: The results of the present study confirm the importance of resource-related factors in athletic performance. Furthermore, this study highlights the significant role of sleep quality and AME in predicting athletic performance over a two-week interval, providing preliminary evidence of causality in this mechanism. Future research could focus on developing field-based intervention strategies and exploring related mental states that influence this psychological process.

Key words: mental resource, optimal functioning, peak performance, mental health

Oral Presentation 2-2

EEG-based Sensorimotor Rhythm Neurofeedback Training for Motor Performance: A Systematic Review

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EEG-based neurofeedback training (NFT) is a method where individuals learn to control their own brain signals. Research has shown that NFT can improve mental states and enhance sports performance in recent years. Among the various brain signals, the sensorimotor rhythm (SMR) has been proven to have the strongest causal relationship with sport performance. However, there is currently no standard training method for SMR to reach an optimal training effect. Furthermore, no previous reviews have investigated the details of how to use SMR to improve motor performance. Therefore, this study aims to explore the optimal number of training sessions, the retention effects last, and combine training types, to construct a recommended guideline for SMR training protocol. Following the PRISMA method for this review. We identified from Web of Science, PubMed, and Scopus with 372 studies. 12 studies met the following criteria: (1) used SMR NFT; (2) included motor performance data (reaction time, precision, dexterity, balance); (3) control group; (4) RCT or non-RCT studies; (5) original peer-reviewed English studies. The results show that SMR NFT successfully helps individuals adjust their mental state and improve motor performance in various sports. However, most studies used inconsistent training methods, there is no direct evidence yet to prove which NFT training combination is preferred for optimal performance. Future research needs to focus on different training sessions and combinations to provide clearer guidelines for SMR NFT.

Key words: EEG, neurofeedback, sensorimotor rhythm, motor performance

Oral Presentation 2-3

A new approach in sports: Function-specific instruction framework for EEG neurofeedback training

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Neurofeedback training (NFT) uses real-time brain signals to help people learn how to regulate their brain activity. In sport, traditional EEG neurofeedback usually asks athletes to change specific brain waves at certain brain regions. However, many studies have shown mixed or unclear effects on performance. In this work, we introduce a new EEG neurofeedback approach called function-specific instruction (FSI). Instead of asking participants to directly control their brain waves, the FSI approach guides them to focus on the functional meaning of the task, such as core action elements. Brain activity changes are expected to occur naturally as a result of better motor control. Thirty beginner golfers were randomly assigned to three groups: traditional instruction, function-specific instruction, or a sham control group. All participants completed a pre–post neurofeedback intervention targeting mu rhythm (8–13 Hz) at the central brain region while performing a golf putting task. Putting accuracy and perceived attentional control were measured before and after training. The results showed that participants in the FSI group demonstrated clearer changes in mu power and greater improvements in putting performance compared with the traditional and sham groups. These findings suggest that function-specific instruction improves the effectiveness of EEG neurofeedback by linking brain regulation to meaningful task actions. Overall, this study suggests that moving from frequency-based control to function-based instruction may provide a more effective and practical direction for EEG neurofeedback in sport performance.

Key words: EEG neurofeedback, function-specific instruction, sport performance, motor control, attentional control

Oral Presentation 2-4

Neural Efficiency Under Pressure: Neuro-psychophysiological Mechanisms of Deception Detection in Rugby Union Across Skill Levels (Research Proposal)

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Introduction：In open-skill sports like Rugby Union, the ability to distinguish "honest signals" from "deceptive signals" is critical for defensive success. However, the neurophysiological mechanisms underlying this ability under competitive pressures—specifically anxiety and physiological fatigue—remain underexplored. **Objectives**：This study presents the research design and theoretical framework of an ongoing master's thesis. The primary objective is to investigate the effects of anxiety and fatigue on decision-making accuracy and neural efficiency during deception detection across different skill levels. **Methods**：A 3 (Group) × 3 (Condition) mixed design is proposed. Participants will include Experts (National/Elite), Amateurs (Under 3 years training), and Novices. The experiment will utilize a temporal occlusion anticipation task involving rugby sidestep and goose-step maneuvers. Anxiety and fatigue will be manipulated and validated via Heart Rate Variability (HRV) and subjective scales. Electroencephalography (EEG) will be recorded to analyze Frontal-midline Theta and Sensorimotor Alpha power. **Expected Results**：As data collection is forthcoming, we present our hypotheses based on the Neural Efficiency Hypothesis. We predict that Experts will demonstrate superior "resistance to deception" and maintain neural efficiency regardless of conditions. Conversely, Amateurs are expected to exhibit cortical inefficiency and performance decrements under pressure. **Conclusion**：This proposed study aims to bridge the gap between laboratory research and competitive reality, offering a rigorous neuroscientific protocol for examining defensive expertise in high-contact sports.

Key words: Neural Efficiency, Deception Detection, Rugby, Anxiety, Fatigue, EEG

Oral Presentation 2-5

The Effects of Biomechanically Stable Putters on Psychological Confidence and Putting Performance Across Golf Handicap Levels

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The design and biomechanical properties of a putter play a critical role in golf performance, particularly in the context of psychological factors that influence precision-based tasks. Putter stability, characterized by features such as optimized weight distribution and reduced torque, has been theorized to affect golfers' confidence, anxiety, and overall performance. However, empirical evidence examining the psychological effects of putter stability across varying skill levels is limited. This study investigates how biomechanically stable putters influence psychological confidence, anxiety, and putting performance among golfers with different handicap levels. A total of 90 amateur golfers were allocated into three handicap groups: low (0–10), medium (11–20), and high (21–30). Participants performed putting tasks using either a biomechanically optimized putter or a traditional putter. Putting accuracy, consistency, and distance control were measured using motion capture technology, while psychological variables were assessed using validated instruments including the Sports Confidence Inventory (SCI) and the State-Trait Anxiety Inventory (STAI). Data were analyzed using descriptive statistics and ANOVA to compare performance and psychological outcomes across groups and conditions. Results indicated that biomechanically stable putters significantly enhanced psychological confidence and reduced anxiety among high-handicap golfers, who also demonstrated improved accuracy and consistency. Medium-handicap golfers showed moderate improvements in both psychological and performance measures. In contrast, low-handicap golfers exhibited minimal psychological variation across putter types, suggesting that their mental performance may be less affected by equipment-related factors. Overall, the findings highlight the potential of biomechanically optimized putters to improve both psychological readiness and technical performance, particularly among less skilled golfers. These results underscore the importance of personalized equipment fitting in golf and provide a foundation for future research examining interactions between equipment design, psychological factors, and individual stroke mechanics in real-world settings.

Key words: EEG neurofeedback, function-specific instruction, sport performance, motor control, attentional control

Oral Presentation 2-6

ANXIETY AND SELF-CONFIDENCE IN ROYAL THAI NAVAL SPECIAL FORCES TRAINEES

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Special operations military training represents one of the most psychologically demanding environments, requiring trainees to perform effectively under extreme physical and mental stress. This study investigated changes in anxiety levels and self-confidence among Royal Thai Navy SEAL trainees participating in intensive special operations training programs. Understanding psychological responses to such demanding conditions is crucial for optimizing training protocols and developing effective mental resilience interventions. A descriptive comparative research design was employed to assess psychological states before and after training completion. The study population consisted of 300 trainees enrolled in Royal Thai Navy special operations programs during fiscal year 2025. Through purposive sampling based on eligibility criteria and voluntary consent, 80 Navy SEAL trainees comprised the final sample. Psychological assessment utilized the Revised Competitive State Anxiety Inventory-2 (CSAI-2R), a validated instrument measuring three dimensions: somatic anxiety (physical manifestations of anxiety), cognitive anxiety (mental worry and negative expectations), and self-confidence (belief in one's capabilities). Findings revealed significant adaptive psychological responses following intensive training. Somatic anxiety demonstrated a modest decline from pre-training (M = 1.57, SD = 0.62) to post-training (M = 1.47, SD = 0.66), indicating reduced physical anxiety symptoms. Similarly, cognitive anxiety decreased from pre-training (M = 1.78, SD = 0.78) to post-training (M = 1.71, SD = 0.67), suggesting diminished worry and negative cognitions. In contrast, self-confidence exhibited an upward trajectory, increasing from pre-training (M = 3.47, SD = 0.73) to post-training (M = 3.57, SD = 0.65), reflecting enhanced belief in personal competence. These results suggest that exposure to high-stress military training facilitates positive psychological adaptation, characterized by decreased anxiety and increased self-confidence. The findings provide empirical evidence supporting the psychological benefits of rigorous special operations training and offer valuable insights for developing mental skills training programs. Understanding these adaptive processes may inform the design of psychological support strategies to enhance performance and well-being in special forces contexts.

Key words: Navy SEAL, special operations, state anxiety, self-confidence, psychological adaptation, military training

Oral Presentation 2-7

A STUDY STRESS RECOVERY IN TEAM ATHLETES

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This study aimed to develop and examine the construct validity of the Recovery-Stress Questionnaire for Thai Team Athletes, adapted from the Recovery-Stress Questionnaire for Athletes- Sport Version (RESTQ-Sport-36) developed by Kallus and Kellman (2016). The Thai version of the 36-item questionnaire was translated and back-translated to ensure content validity, and its construct validity was evaluated using confirmatory factor analysis. Participants were 750 team sport athletes aged 18-23 years from Rajabhat Universities across Thailand. The results showed that the Thai version of the Recovery–Stress Questionnaire demonstrated a high level of internal consistency with a Cronbach's alpha coefficient of .945, indicating its suitability for assessing recovery-stress balance among Thai team athletes. The construct comprised two general domains-overall stress and overall recovery-encompassing four main components and twelve subcomponents, totaling 36 items. The model exhibited a good fit with the empirical data ($\chi^2 = 53.198$, df = 28, $\chi^2/df = 1.899$, p = 0.062, RMSEA = 0.046, CFI = 0.985, TLI = 0.964, and SRMR = 0.041). These findings suggest that the Thai version of the Recovery–Stress Questionnaire for Team Athletes is a reliable and valid instrument for assessing recovery and stress among Thai athletes.

Key words: RESTQ-Sport-36, Construct validity, Confirmatory factor analysis, Thai team athletes

Oral Presentation 3-1

The effects of mindfulness-based integrated psychological intervention to return to play related psychological variables on patients with anterior cruciate ligament reconstruction: A study protocol

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Background: Anterior cruciate ligament (ACL) rupture is a common injury in athletes' population; however, only 60-70% athletes successfully return to play after ACL reconstruction (ACLR) surgery. Previous research has revealed that psychological factors, rather than physical function, are the primary barriers to return to play. Hence, it is essential to incorporate psychological interventions for athletes undergoing ACLR rehabilitation to facilitate a successful return to play. **Objective:** The aim of this study is to examine the effects of mindfulness-based integrated psychological intervention on athletes recovering from ACLR. **Methods**: Sixty participants with ACLR will be recruited for this study. The participants will be assigned into either the psychological intervention group or the control group. The psychological intervention group will receive eight sessions of mindfulness-based integrated psychological intervention, while the control group will receive standard physical care. Outcome measures will include subjective knee function, pain, knee self-efficacy, kinesiophobia, readiness to return to play, anxiety, and mindfulness. **Expected Results**: This study hypothesized that participants receiving the mindfulness-based integrated psychological intervention will demonstrate higher subjective knee function, knee self-efficacy, readiness to return to play, and mindfulness, as well as lower levels of pain, kinesiophobia, and anxiety, compared with the control group.

Key words: ACL, ACLR, ACL rehabilitation, Mindfulness, Return to play

Oral Presentation 3-2

The Effect of Mental Warm-Up on Mental Readiness Flow State and Training Abilities of Goalkeeper

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The purpose of this research was to develop a mental warm-up model and study the effects of mental warm-up on mental readiness, flow state, and training ability for goalkeepers. Participants included 18 male goalkeepers aged 16-18 years. The tools utilized in the research include the mental warm-up model, the mental readiness assessment, the Thai version of the flow state scale crafted by Jiratthikul (2014), and the training ability assessment. The researchers developed the mental warm-up model and training ability assessment by determining the content accuracy through evaluation by 5 experts. In the experiment, the goalkeepers were asked to complete a mental readiness assessment before training and then engage in mental warm-up exercises, followed by a mental readiness assessment, all conducted over a period of 4 weeks. The results were analyzed using statistical methods, including mean, percentage, standard deviation, dependent t-test, and Pearson correlation coefficient, with statistical significance set at the 0.05 level. The research findings were as follows: 1) The mental warm-up model for goalkeepers was of quality and can be applied effectively. 2) Mental readiness, flow state, and training ability before and after mental warm-up sessions show statistically significant differences at the .05 level. 3) The mental readiness, flow state, and training ability of goalkeepers are significantly correlated at the .05 level, and the flow state and training ability are significantly correlated at the .01 level. Based on the research, it is recommended to have the mental warm-up. To enhance mental readiness, promote a flow state, and improve training efficiency for goalkeepers.

Key words: Mental warm up, Mental readiness, goal keeper

Oral Presentation 3-3

Body Mass Index and Physical Fitness Levels among Secondary School Students

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Introduction. Monitoring the relationship between body composition and physical capability is essential for promoting long-term health in adolescents. This study examined the health profiles of secondary school students to identify trends in weight distribution and fitness performance across different ages and genders in the State Sport School. **Methods.** This study analyzed the Body Mass Index (BMI) and physical fitness levels (SEGAK) of 355 secondary school students aged 13 to 17. **Results.** The cohort was predominantly male (68.2%) and ethnically diverse, with a balanced distribution among Malay, Native, and Chinese groups. Results showed that while the majority of participants (73.8%) maintained a normal BMI, significant gender-based differences emerged: males had a higher prevalence of being overweight (15.7%), while females recorded higher rates of both obesity (10.6%) and being underweight (3.5%). In terms of physical fitness, the cohort performed well overall, with 79.1% achieving "Superior" or "Excellent" SEGAK ratings. Notably, fitness levels showed an inverse correlation with age: 13-year-olds demonstrated the highest fitness rates while 17-year-olds recorded the lowest performance. **Conclusion.** The findings revealed a positive baseline for student health, with the vast majority maintaining a normal BMI and high fitness levels. However, the distinct age-related decline suggests that physical activity may be deprioritized as students approach their senior years, likely due to increased academic demands. These findings highlight the need for targeted fitness interventions for older adolescents and gender-specific health strategies to address the varying weight challenges faced by male and female students.

Key words: BMI, physical fitness, students

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Oral Presentation 3-4

The Effects of Pre-Performance Routines on Athletic Performance and Related Psychological Characteristics in University Football Club Athletes: Preliminary Results of Psychological Consulting

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This study investigated the effects of a pre-performance routine-based psychological counseling program, designed with consideration for the psychological characteristics and performance environment of university football club athletes, on their emotional regulation and athletic performance. A total of 23 male athletes (average age: 20.8) from the "Gaia" football club at Seoul National University of Science and Technology were randomly selected as participants. Over the course of three weeks, participants received the counseling program once a week for 30 minutes per session. After the program, their psychological characteristics (goal setting, confidence, concentration, and imagery) were measured using psychological skills assessments, the Test of Performance Strategies (TOPS), and a competitive anxiety inventory. In-depth interviews were also conducted to qualitatively analyze the athletes' personal experiences and subjective perceptions. The qualitative analysis revealed various psychological benefits, including reduced pre-game anxiety, enhanced concentration, improved emotional regulation, decreased negative thinking, better anxiety control, and increased resilience after mistakes. Quantitative results showed that participants reported high levels of satisfaction: support for mental management (M=4.43), positive changes in awareness and practice of emotional regulation (M=4.48), perceived effectiveness of routines in real-game settings (M=4.13), positive impact on performance (M=4.48), and improved ability to regulate tension (M=4.43). The overall program satisfaction was notably high, with an average score of 4.83 out of 5. This study presents the preliminary results of a MINI-TEAM PROJECT conducted by undergraduate students. Although the intervention period was short and only limited psychological counseling techniques were applied, the findings suggest that a tailored psychological counseling program focused on pre-performance routines provided meaningful support for emotional stability and performance among football club athletes. These results align with previous studies, indicating that extending the number of sessions, individualizing the counseling approach, and securing a sufficient intervention period may enhance the effectiveness of psychological counseling for improving athletic performance and related psychological traits.

Key words: routines, psychological consulting, performance, related psychological characteristics, university football club athletes

Oral Presentation 3-5

The Cognitive Dissonance of Gender: External Stereotypes and Internal Identity Among Japanese Sport Science Students

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This study examines the relationship between gendered perceptions of sports and the sex role identities of Japanese Sport Science students. A two-study design was employed. Study 1 (N=129) quantified the perceived gender typing of 48 sports on a 9-point scale. Results revealed a persistent but evolving gendered hierarchy, with the majority of sports (79.2%) now perceived as neutral, indicating a significant neutralization compared to past benchmarks. However, gender differences persisted: male students rated Track and Field events as more masculine and a feminine sport (Japanese Archery) as more feminine than females did, reflecting asymmetrical boundary maintenance. Study 2 (N=240) profiled sex role identity using the Bem's Sex-Role Inventory (BSRI). Contrary to the hypothesis predicting androgyny as an adaptive mechanism, the most prevalent identity was Undifferentiated (36.3%), surpassing the Androgynous type (32.5%). A chi-square test found no significant association between biological sex and BSRI type distribution, χ^2 (3) = 1.303, p = .728, suggesting a homogenizing effect of the specialized sports environment. Collectively, the findings reveal a critical dissonance: while these students perceive a broad neutralization of sports gender typing, their internal self-concepts converge toward an undifferentiated identity. This pattern suggests a strategic de-identification from gendered traits, as an adaptive response to the gendered pressures within Japanese sport culture, which is distinct from classical androgyny. The decoupling of social cognition from self-concept underscores the need to integrate critical gender pedagogy into sport science curricula to mitigate implicit biases in future sports practice.

Key words: Gender Stereotype, Sex Role Identity, BSRI, Sport Science, Japan, Undifferentiated Identity

Oral Presentation 3-6

Reliability and Validity Study of the Traditional Chinese Version of the Athlete Psychological Strain Questionnaire (APSQ-TC): A Study Protocol

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Background: In recent years, increasing attention has been paid to athletes' mental health, with evidence indicating that the prevalence of mental health symptoms among athletes is comparable to that of the general population. International sport organizations have emphasized the importance of developing assessment tools that capture athlete-specific psychological distress to facilitate early identification and timely intervention. However, Taiwan currently lacks standardized instruments for assessing athletes' mental health. The Athlete Psychological Strain Questionnaire (APSQ) is a brief screening tool designed to identify early psychological distress in athletes. Although previous research has examined its psychometric properties among combat sport athletes, its applicability to broader athletic populations remains limited. **Objective:** study aims to translate and validate the Traditional Chinese version of the APSQ for use among athletes in Taiwan. **Methods:** This study will follow a standardized questionnaire translation procedure and involve expert review to ensure semantic equivalence. A total of 500 athletes in Taiwan will be recruited to complete the Traditional Chinese version of the APSQ and the Kessler Psychological Distress Scale (K10). A subset of participants will complete the APSQ again after a two-week interval to assess test–retest reliability. The psychometric properties of the scale will be examined by evaluating internal consistency using Cronbach's α, and criterion-related validity will be assessed by examining the associations between the APSQ-TC and the K10. Construct validity will be further evaluated using confirmatory factor analysis. **Expected Outcomes:** The Traditional Chinese version of the APSQ is expected to demonstrate good reliability and validity in assessing psychological strain among athletes. This study aims to provide sport psychology practitioners with a reliable screening tool for athlete mental health, which may be further applied across different sport disciplines and competitive levels to enhance psychological health assessment and early intervention.

Key words: Athlete , Mental health, Psychological Strain, Reliability**,** Validity

Oral Presentation 3-7

Mental Toughness, Mental Energy, and Burnout: Pathways to Positive Psychological Functioning in Youth Athletes

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This study examined the structural pathways linking burnout, mental toughness, mental energy, and positive state of mind among youth athletes using structural equation modelling (SEM). A cross-sectional design was employed with 503 youth athletes from multiple sports in Sarawak, Malaysia. Burnout, mental toughness, and mental energy were modelled as latent constructs, while positive state of mind (APSMS) was specified as an observed outcome. The SEM demonstrated good fit to the data (CFI = 0.951, TLI = 0.937, RMSEA = 0.078, 90% CI [0.069, 0.087], SRMR = 0.044). Standardized structural paths (STDYX) indicated that burnout had a significant negative effect on mental toughness ($\beta = -0.311$, $p < .001$) and mental energy ($\beta = -0.126$, $p = .002$). Mental toughness showed a strong positive effect on mental energy ($\beta = 0.724$, $p < .001$). Positive state of mind was strongly predicted by mental energy ($\beta = 0.690$, $p < .001$), whereas the direct path from mental toughness to positive state of mind was non-significant ($\beta = 0.075$, $p = .204$), indicating that the influence of mental toughness on positive psychological state occurred primarily through mental energy. The model explained 9.7% of the variance in mental toughness ($R^2 = 0.097$), 59.8% of the variance in mental energy ($R^2 = 0.598$), and 56.0% of the variance in positive state of mind ($R^2 = 0.560$). Collectively, the findings identify mental energy as a central mechanism linking burnout-related risk and resilience-related attributes to positive psychological functioning in youth athletes.

Key words: burnout, mental toughness, mental energy, positive state of mind, youth athletes, structural equation modelling

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Oral Presentation 4-1

Effects of Biofeedback Training on Athlete Anxiety: A scoping review

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Introduction: Competitive sports environments demand peak performance under extreme pressure, where anxiety often triggers "choking" and cognitive interference, resulting in mediocre performances. To prevent that, Biofeedback (BFB) is a non-invasive self-regulation technique that monitors physiological signals to help athletes gain control over their mental and physical states. **Objectives:** This scoping review aims to investigate the effects of BFB interventions on the improvement on athlete anxiety and stress regulation, and examine what biofeedback indicators and physiological signals are predictable to anxiety in athletes. **Methods:** The scoping review was conducted in Scopus and PubMed databases using keywords related to biofeedback, athlete and anxiety. From an initial pool of 132 records, studies were screened against specific inclusion criteria: empirical, peer-reviewed, English-language sport intervention studies. After excluding case studies and non-sport interventions, 6 sources were included in the final analysis. **Results:** The synthesis demonstrates that BFB is a versatile tool for managing athlete anxiety through distinct psychophysiological pathways. HRV-BFB is highly effective for autonomic regulation reducing cortisol and physical stress. Multimodal BFB (Galvanic Skin Response/Skin Temperature) effectively targets state anxiety in high-pressure competition settings. Alpha Neurofeedback focuses on cortical regulation, helping athletes maintain a balance of "relaxation and focus" to prevent performance "choking". Collectively, these interventions empower athletes to master self-regulation and build psychological resilience. **Discussion:** The findings support the potential value of BFB in sport psychology for managing athlete anxiety. However, the review identified a primary methodological limitation regarding the lack of rigorous control designs. Most studies utilized no-intervention control groups, which fails to account for the placebo effect. Furthermore, there is a notable absence of longitudinal data to verify the long-term persistence of the observed psychological benefits. **Conclusion:** BFB training empowers athletes to master self-regulation and build psychological resilience. Future research should utilize longitudinal designs to establish clearer causal links between psychophysiological signal mastery and long-term competitive achievement.

Key words: Biofeedback, Heart Rate Variability, Athlete, Anxiety, Psychophysiology

Oral Presentation 4-2

Mental Health Symptoms and Disorders Among Taiwanese Collegiate Athletes: A SMHAT-1 Based Study

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Background: Athlete mental health has received increasing attention in recent years. Understanding the prevalence of mental health symptoms and disorders among athletes is essential for improving mental health resources, and developing supportive training environments and psychological interventions. In 2021, the International Olympic Committee (IOC) introduced the Sport Mental Health Assessment Tool-1 (SMHAT-1), which provides sport practitioners with a structured and systematic framework for mental health screening across multiple symptom domains. However, empirical data regarding the prevalence of mental health symptoms and disorders among Taiwanese athletes remain limited. **Objective:** This study aimed to investigate the prevalence of mental health symptoms and disorders among Taiwanese collegiate athletes using the IOC SMHAT-1 framework. **Methods:** A cross-sectional survey was conducted among 859 Taiwanese collegiate athletes using the IOC SMHAT-1, which assesses athlete psychological strain, anxiety, depression, sleep disturbance, alcohol misuse, substance misuse, and eating disorder. All questionnaires were completed anonymously. Descriptive prevalence rates were calculated for the total sample and stratified by sex (male vs. female) and injury status (injured vs. non-injured). **Results:** Overall, a high proportion of athletes screened positive for psychological strain (86.73%) and eating disorder risk (58.32%). Female athletes demonstrated higher prevalence rates than male athletes across most mental health symptoms and disorders as well injured athletes when compared with non-injured athletes. **Conclusion:** The findings indicate a high prevalence of mental health symptoms among Taiwanese collegiate athletes, with psychological strain and eating disorder being prominent. Female and injured athletes appear to be at greater risk across multiple mental health symptoms and disorders, suggesting that female and injured athletes represent populations with elevated mental health vulnerability. These results providing the whole picture of mental health symptoms and disorders using standardized tools such as SMHAT-1 and underscore the need for targeted prevention and intervention strategies within collegiate sport systems in Taiwan.

Key words: Elite athletes, Sport medicine, Mental health, Psychological Care

Oral Presentation 4-3

Exploring the Role of Sport Participation in International Students' Cross-Cultural Adaptation: A Qualitative Study of Perceived Social Support in the UK

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Introduction: International students often face significant psychological and sociocultural challenges when adapting to a new cultural environment. Previous research has highlighted the importance of perceived social support in facilitating cross-cultural adaptation; however, less attention has been paid to the role of sport participation as a social context through which such support is experienced and constructed. **Objectives:** This study aims to explore how sport participation contributes to international students' cross cultural adaptation in the UK, with a particular focus on the forms and meanings of perceived social support emerging through sporting experiences. **Methods:** A qualitative research design was adopted. Semi-structured interviews were conducted with international students studying in the UK who currently participate, or have previously participated, in sport, as well as domestic students who engage in sport alongside international students. Interviews lasted approximately 45–60 minutes and were conducted either face-to face or online. All interviews were audio-recorded and transcribed verbatim. Data were analysed using reflexive thematic analysis to identify recurring patterns related to sport participation, social interaction, and adaptation experiences. **Results:** Preliminary findings indicate that sport participation serves as an important platform for developing emotional, informational, and companionship support. Participants reported that shared sporting activities facilitated informal communication, reduced social distance, and promoted a sense of belonging. International students described sport as a space where language barriers felt less salient and cultural differences were negotiated more naturally. However, barriers such as limited confidence, perceived skill gaps, and institutional constraints also influenced access to supportive sport environments. **Discussion:** The findings suggest that sport participation can function as a meaningful social resource that enhances perceived social support and supports cross-cultural adaptation. Importantly, the quality of social interaction within sport contexts appears to matter more than participation alone. **Conclusion:** This study highlights the potential of sport participation as a supportive social environment for international students' adaptation in the UK. The findings offer implications for universities seeking to promote inclusion and well-being through sport-based initiatives.

Key words: Cross-Cultural Adaptation, Sport Participation, Perceived Social Support, International Students

Oral Presentation 4-4

Motivation and Identity Integration: Predicting Academic and Athletic Outcomes among Trainee Teachers

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Introduction: Trainee teachers face the unique challenge of balancing the demands of academic pursuits with the training and competitive schedules of their chosen sport which can significantly impact their motivation, academic performance and overall well-being. **Objectives**: This is a quantitative approach in understanding trainee teachers' motivation and identity within both academic and sports pursuits in the Institute of Teacher Education Malaysia Campuses. **Methods**: The Student Athletes' Motivation Toward Sports and Academics Questionnaire and Academic by Joy Gaston Gayles (2005) and Athletic Identity Scale (Mariya Yukhymenko, 2014) were used to measure 145 undergraduates-athletes (75 males, 70 females) across 3 age groups of 18 - 20, 21 - 23 and 24 - 25 years old in terms of their motivation and identity towards academics and sports. Descriptive analysis, independent sample t-test,one way ANOVA and two way ANOVA were conducted. **Results**: The independent sample t-test revealed that there were no significant difference between gender for academic motivation, $p = .65$, student athletic motivation, $p = .90$, career athletic motivation $p = .48$ and academic identity, $p = .78$ and athletic identity, $p = .61$. Besides, the one-way ANOVA revealed that there was no statistically significant difference between the three age groups for Academic Motivation, $p = 0.364$; Student Athletic Motivation, $p = 0.344$; Career Athletic Motivation $p = 0.437$; Academic Identity, $p = 0.410$ and Athletic Identity $p = 0.208$. Wheres, for the two-way ANOVA there was no significant main effect of gender on academic motivation, student athletic motivation, career athletic motivation, academic identity and athletic identity with $p > .05$. Next, there was no significant main effect of age groups on academic motivation, student athletic motivation, career athletic motivation, academic identity and athletic identity with $p > .05$*. Lastly, there was no significant interaction between gender and age groups on *academic motivation, student athletic motivation, career athletic motivation, academic identity and athletic identity ($p > .05$). **Conclusion**: The findings indicated that supportive and nurturing initiatives by adopting cooperative learning based on similar abilities and goals can help the trainee teachers to stay committed to both their academic and athletic endeavour.

Key words: trainee teachers, motivation, academic

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Oral Presentation 4-5

The Effects of Attentional Focus Strategies and Mental Fatigue on Jump Service Accuracy in Collegiate Volleyball Players

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Background: The jump serve is a critical closed-skill in volleyball where accuracy significantly dictates match outcomes. While the Constrained Action Hypothesis suggests that external focus (EF) enhances performance over internal focus (IF), it remains unclear if these benefits—specifically proximal vs. distal EF—persist under mental fatigue. Furthermore, the acute relationship between Heart Rate Variability (HRV) and technical precision during cognitive exhaustion requires further empirical evidence. **Research Objectives**: This study aims to: (1) compare the effects of IF, proximal EF, and distal EF on service accuracy; (2) examine mental fatigue as a moderator of attentional focus; and (3) analyze acute HRV changes as predictors of technical performance. **Methodology**: Collegiate volleyball players (N=30) will participate in a 2 (Fatigue: Non-fatigue vs. Mental Fatigue) × 4 (Focus: Control, IF, Proximal EF, Distal EF) within-subjects design. Mental fatigue will be induced via a 30-minute Stroop task. Service accuracy will be quantified using a validated weighted-zone scoring system. Physiological data including HRV indices (SDNN, RMSSD, LF/HF) and subjective measures (RPE, VAS-F) will be collected. Data will be analyzed using Two-way Repeated-Measures ANOVA. **Expected Results**: It is hypothesized that: 1) Focus Effect: Under non-fatigue conditions, distal EF will yield superior accuracy compared to IF and control groups. 2) Fatigue Impact: Mental fatigue will impair accuracy across all conditions. 3) Interaction: A significant interaction is expected, where EF strategies (particularly distal EF) act as a buffer, showing a smaller performance decline under fatigue compared to IF or control conditions.

Key words: Volleyball jump serve, Attentional focus, Mental fatigue, Heart Rate Variability (HRV)

Oral Presentation 4-6

TARGET Dimensions, Situational Motivation and Physical Education Adherence among Undergraduates

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Introduction: Physical inactivity is a growing concern among undergraduate due to their heavy schedules and workload which have resulted in negative health consequences. Despite studying physical education, many undergrad-uates still lead sedentary lifestyles and do not engage in regular physical ac-tivity. The study investigates the TARGET dimensions, situational motiva-tion and physical activity adherence in physical education (PE) among Phys-ical Education trainee teachers. **Methods**: The study consisted of 183 males and 237 females with an age range of 18 to 23 years old (1.43 ± .50) from several Institutes of Teacher Education campuses. The T.A.R.G.E.T. Measures (Epstein, 1989), Situational Motivation Scale (SIMS; Guay et al., 2000) and The Physical Activity Adherence Questionnaire (PAAQ; Corbin et al, 2008) were utilised and self-administrated. Descriptive analysis, independent-samples t-test, one-way ANOVA and two-way ANOVA were conducted in the study. **Results**: The independent-samples t-test revealed that there was statistically significant difference be-tween gender on authority, recognition, grouping, evaluation, external reg-ulation, amotivation and predisposing factors with $p < .05$. Conversely, there was no significant difference between the age groups on all the subscales in T.A.R.G.E.T. measure, SIMS and PAAQ with $p > .05$. Besides, the one-way ANOVA indicated that there was statistically significant between the three teaching methods on intrinsic motivation, $p = .006$ in SIMS. Furthermore, the between-subjects ANOVA for gender and age groups showed that there was significant main effect of gender on authority, recognition, grouping, evaluation, external regulation, amotivation, predisposing factors and ena-bling factors with $p < .05$. Similarly, there was significant main effect of age groups on amotivation, $p = .033$. Moreover, a significant interaction between Gender vs Age was found on time, $p = .026$. Next, the between-subjects ANOVA for gender and teaching methods indicated that there was signifi-cant main effect of gender on authority, grouping, evaluation, external regu-lation, amotivation, and predisposing factors with $p < .05$. Likewise, the main effect of teaching methods was significant on intrinsic motivation, $p = .009$. In addition, there was significant interaction between Gender vs Teach-ing Methods on authority, $p = .031$, external regulation, $p = .041$, and ena-bling factors, $p = .035$, respectively. **Conclusion**: The results concluded that the application of TARGET approaches as the mediating factors is needed in revitalizing the undergraduates' situational motivation and PA adherence in PE.

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Key words: TARGET; situational motivation; physical activity adherence;

Oral Presentation 4-7

The Effect of Layup Skill Development in Basketball using a Circle Hoop to Help in Jumping to Score for Mathayom 6 Students at Ratchaborikanukroh School

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The objectives of this research are: 1.) To study and compare the layup skills of Mathayom 6 students using a circle hoop to help jump to develop layup skills before and after studying. 2.) To study the satisfaction of using a circle hoop to help jump to score points of Mathayom 6 students towards the layup skill training using a circle hoop to help jump. The target group of the research is Mathayom 6/3 students who are studying in the second semester of the academic year 2024, Ratchaborikanukroh School, Ratchaburi Province, 10 people, by selecting a specific sample group. The research instrument is the layup skill training in basketball using a circle hoop to help jump to score created by the researcher. The results of the study found that the layup skill training in basketball using a circle hoop to help jump to score created by the researcher with an IOC value of 0.67 - 1.00 is at a usable level. The index of congruence (IOC) of the satisfaction questionnaire of the layup skill training in basketball using a circle ring to help in jumping to score from 3 experts found that the layup skill training in basketball using a circle ring to help in jumping to score.

Key words: Layup, Circle, Basketball, M.6 student

Poster Presentation 1

Psychological Coping in Elite Golf Performance: A Single-Case

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Effective psychological coping is critical for elite golf performance, yet limited research has detailed how coping processes unfold in real competitive settings. Golf is characterized by self-paced precision tasks, extended competition durations, and frequent performance fluctuations, placing high demands on attentional control and emotional regulation. Accordingly, psychological skills training is essential for enabling golfers to cope effectively with competitive stressors and maintain performance consistency. This study examined an individualized psychological coping program for an elite golfer. Using a parallel multiple-baseline single-case design, one Taiwanese male professional golfer was followed across 21 weeks, including baseline, intervention, and follow-up. Data from nine tournaments were collected through performance indicators, psychological assessments, competition logs, and field notes. The intervention emphasized scenario-specific coping routines, arousal regulation strategies, and tournament-based psychological support. Coping demands were categorized as special events (e.g., emotional surges, caddie–athlete coordination, qualification pressure) and general events (e.g., weather shifts, technical adjustments). In response to these demands, the sport psychologist systematically assessed situational characteristics and the athlete's psychological state, implemented individualized coping strategies through psychological skills training, and continuously adjusted interventions based on competitive feedback. Lower arousal scores aligned with poorer performance, indicating strong psychophysiological–performance coupling. Post-intervention, improvements were observed in emotional regulation, self-awareness, and attentional control. Findings demonstrate how tailored psychological coping strategies enhance consistency and adaptability in elite golf performance. This study highlights the importance of context-responsive coping plans in applied sport psychology

Key words: elite golf, coping strategies, golf psychology, applied sport psychology

Poster Presentation 2

The Quality of Inclusive Sport Teams: A Review of Psychological Mechanisms and Related Factors

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The paradigm in adapted physical activity has shifted from emphasizing physical "access" to prioritizing psycho-social "quality participation." However, existing assessments predominantly focus on the unilateral experience of athletes with disabilities, often overlooking the critical interactive influence of non-disabled peers. This review aims to integrate the dual-perspective assessment frameworks of Measure of Experiential Aspects of Participation (MeEAP) and Basic Needs Satisfaction in Sport Scale (BNSSS), utilizing Social Identity Theory to elucidate the key mechanisms underlying high-quality inclusion. Synthesizing relevant empirical literature, this paper reveals critical pathways determining inclusion quality. First, evidence refutes disability-trait determinism, indicating that environmental climate and coaching autonomy support-rather than the type or severity of disability-are the primary predictors of experiential outcomes such as engagement and mastery. Second, regarding interaction mechanisms, the analysis confirms the pivotal role of "mutuality." The satisfaction of peers' psychological needs (specifically relatedness) fosters the formation of a "common ingroup identity," which in turn significantly enhances the belongingness of athletes with disabilities. However, the literature also highlights a structural dilemma in current practices: athletes with disabilities consistently score lower on the "autonomy" dimension. This reflects that inclusive activities often devolve into one-way assistance due to peer dominance, failing to achieve genuine egalitarian cooperation. High-quality inclusion must transcend physical presence to pursue psychological reciprocity and shared identity. It is recommended that future research employ dyadic analysis to examine gaps in mutual needs and develop coaching strategies that promote power equality, thereby realizing authentic social inclusion.

Key words: Inclusive Sports, Quality Participation, MeEAP, Relatedness

Poster Presentation 3

Health Status of Older Adults Participating in a Community-Based Elderly School Program

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This survey study aimed to examine the health status of older adults participating in a community-based elderly school program organized by the Sanamchan Subdistrict Administrative Organization during the 2025 fiscal year. The participants consisted of 39 older adults who attended orientation and pre-enrollment preparation activities. Data were collected using a health status record form covering demographic characteristics and basic health information. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used for data analysis. The results showed that the majority of participants were female (79.5%), while males accounted for 20.5%. The mean age of the participants was 71.13 ± 5.97 years, with an age range of 60–87 years. Common underlying diseases included hypertension, diabetes mellitus, and dyslipidemia, which are prevalent non-communicable chronic conditions among older adults. These findings reflect the actual health profile of community-dwelling older adults at the local level. The findings of this study provide baseline health information that can support the planning and development of curricula and health promotion activities for elderly school programs. Such programs should be designed in accordance with the health conditions and functional capacities of older adults in the community to promote well-being and quality of life.

Key words: older adults; health status; elderly school; survey study

Poster Presentation 4

The Relationship Between Negative Quality Perceptions, Fan Loyalty, and Re-Attendance Intention in the Chinese Professional Baseball League

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Baseball has been an integral part of Taiwanese society since the post-war period, serving as both a major leisure activity and a symbol of cultural identity. After the 1968 victory of the Red Leaf Little League Team over Japan, baseball became the “national sport” and developed into a professional industry combining competitiveness and commercial value. This study surveyed 273 online community fans of six Chinese Professional Baseball League (CPBL) teams (mean age = 25.01, SD = 8.417; 196 males, 71.8%; 77 females, 28.2%) to examine the relationships among perceived service failures, loyalty, and repurchase intention. Analyses included difference tests, correlation, and hierarchical regression. Results showed that gender, merchandise ownership, and education influenced loyalty and repurchase intention, with females, merchandise owners, and lower-educated fans showing higher support. Financial commitment, attitudinal loyalty, and behavioral loyalty were positively related to repurchase intention, whereas perceived service failures were negatively related. Behavioral loyalty was the strongest predictor, and loyalty did not moderate the effect of service failures. The study highlights the importance of addressing service failures and promoting behavioral loyalty to enhance fan repurchase intention and provides practical implications for team marketing and fan engagement.

Key words: brand emotional attachment, Kano model, customer negative experience, spectator behavioral intention

Poster Presentation 5

A Review of Eye-Tracking Applications in Sport Settings

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Eye tracking is a key technique for investigating human attention and information processing and has become increasingly valuable in sport science research. As over 80% of external information is acquired through vision, eye movement behaviors offer direct insights into athletes' perceptual, cognitive, and decision-making processes. This review synthesizes research published between 2002 and 2025 that employed portable eye-tracking systems to examine visual behavior in ecologically valid sport environments. Studies across sports such as soccer, baseball, tennis, volleyball, and officiating tasks consistently report clear differences between expert and novice performers. Expert athletes demonstrate more efficient visual search strategies, characterized by fewer but more strategically placed fixations, enabling them to extract task-relevant information and anticipate actions more effectively, particularly under dynamic or high-pressure conditions. In addition, growing evidence suggests that visual and perceptual training interventions can enhance reaction time, attentional control, and visuomotor integration, with especially strong effects observed during adolescence. Although training outcomes vary by sport type and intervention design, overall findings indicate that visual training strengthens information pickup and perception–action coupling. These results highlight the importance of eye-tracking technology as both a research tool and a practical resource for evidence-based training and performance optimization in sport.

Key words: Eye tracking, Visual search behavior, Expert–novice differences, Perception–action coupling, Sport performance

Poster Presentation 6

Correlates of Nutrition Knowledge, Attitudes, and Practices Among Sport University Students: A Questionnaire-Based Study

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Nutrition plays a critical role in maintaining health and enhancing athletic performance; however, the level of nutrition-related knowledge, attitudes, and practices (KAP) among sport university students remains insufficiently examined. This cross-sectional study investigated nutrition-related KAP and their associated factors among 300 students from Shandong Sport University. Data were collected using an online questionnaire assessing demographic characteristics, nutrition behaviours, and KAP indicators. Overall, 58.7% of participants demonstrated adequate nutrition knowledge, 53.3% showed positive nutritional attitudes, and 55.3% reported engaging in appropriate nutritional practices. Significant associations were found between adherence to diet plans, the habit of reading food labels, and higher KAP scores. Additionally, students with lower household incomes reported limited access to nutrition information, which negatively influenced their knowledge and dietary practices. These findings highlight the need for strengthened nutrition education and targeted interventions within sport university settings. Integrating professional nutritional guidance and structured nutrition programs may further support athletes in optimizing performance and overall health. Study limitations include the reliance on self-reported data and the cross-sectional design, underscoring the need for future longitudinal research.

Key words: Nutrition; Knowledge, Attitudes, and Practices (KAP); Sport university students; Athletic performance; Dietary barriers; Cross-sectional study

Poster Presentation 7

The Effects of Pitch Types on Hitting Quality and Batting Outcomes: Evidence from the 2023 World Baseball Classic

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Since its launch in 2006, the World Baseball Classic (WBC) has provided a global platform for elite baseball competition and increased the international visibility of the sport. With the growing integration of data analytics in baseball, performance metrics have become essential for evaluating batting effectiveness. This study examined the effects of pitch types on hitting quality and batting outcomes among the quarterfinalist teams in the 2023 WBC. Batting-related data were obtained from the Baseball Savant database and categorized into hard-hit contact and weak contact. Descriptive statistical analyses were conducted to examine their relationships with batting average and slugging percentage across fastballs, changeups, and breaking balls. The results showed that hard-hit contact consistently led to higher batting average and slugging percentage across all pitch types, whereas weak contact resulted in substantially lower performance outcomes regardless of pitch type. Moreover, the positive impact of hard-hit contact on slugging percentage was more pronounced when batters faced changeups and breaking balls. These findings underscore the importance of contact quality in batting performance and provide practical insights for coaches and players seeking to optimize hitting strategies through data-driven approaches.

Key words: Hard-hit, Slugging percentage, Batting average, World Baseball Classic, Statistical analyses

Poster Presentation 8

The Relationship Between Coaching Leadership and Parental Support among Junior High School Basketball Teams

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This study aimed to examine the relationship between coaches' leadership behavior and parental support among junior high school students participating in school basketball teams, as well as to compare differences among students with various background variables. The participants were 13 - to 15-year-old basketball team members, and data were collected using the "Questionnaire on the Relationship between Coaches' Leadership Behavior and Parental Support in Junior High School Basketball Teams" through purposive sampling. A total of 108 questionnaires were obtained, with 100 valid responses. Data were analyzed using SPSS 21.0, employing descriptive statistics, independent sample t-tests, one-way ANOVA, and Pearson's product–moment correlation. The results revealed that gender differences significantly affected the "training and instruction behavior" dimension of coaches' leadership; students with varying best competition results and competition experience showed significant differences in the "reward behavior" and "autocratic behavior" dimensions. Regarding parental support, the "opposition to participation" dimension differed significantly by gender, while the "increased physical activity" dimension differed significantly across levels of competition experience. Additionally, a significantly positive correlation was found between coaches' leadership behavior and parental support among junior high school basketball teams in Chiayi County, indicating that higher levels of coaches' leadership behavior were generally associated with higher levels of parental support.

Key words: junior high school basketball, coaching style, parental involvement, physical activity, sport-based educational advancement

Poster Presentation 9

The Development of the Thai Mental Toughness Inventory

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Mental toughness is often described as a psychological characteristic that is generally considered to be positively linked to sport achievement and performance. However, to date, there has not been a psychometrically sound mental toughness measure that has been standardized and validated on a Thai sample. Therefore, the purpose of the present study was to develop and validate the Thai Mental Toughness Inventory (TMTI), which was developed based on the mental toughness model (Middleton, 2005a). The TMTI was translated into Thai, then back-translated based on Brislin's (1987) translation method, and administered to a sample of 655 Thai high school athletes (235 males and 420 females) from 13 sports schools in various regions in Thailand. Statistical analyses were conducted using SPSS, and the construct validity was evaluated using confirmatory factor analysis (CFA) in LISREL 8.50. The CFA results supported a 12-factor structure consisting of (1) Self-Efficacy, (2) Positive Comparisons, (3) Task Value, (4) Potential, (5) Task Familiarity, (6) Personal Bests, (7) Stress Minimization, (8) Mental Self-Concept, (9) Positivity, (10) Perseverance, (11) Task Focus, and (12) Goal Commitment. The overall scale showed strong internal consistency (α = .95), and factor intercorrelations ranged from .46 to .99. The model fit indices also showed an acceptable-to-good fit for the total sample (χ^2 = 1,658.64, df = 528, RMSEA = .057, NNFI = .977, CFI = .981), and acceptable fit for male athletes (χ^2 = 1,276.59, df = 528, RMSEA = .058, NNFI = .974, CFI = .978) and female athletes (χ^2 = 1,223.03, df = 528, RMSEA = .075, NNFI = .961, CFI = .968) separately. Overall, the results of this study supported the TMTI as a valid and reliable instrument for assessing mental toughness in Thai adolescent athletes.

Key words: Thai Mental Toughness Inventory; mental toughness; confirmatory factor analysis; validity; reliability; youth athletes

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Poster Presentation 10

Empowering and Disempowering Motivational Climates and Youth Athletes' Psychological Outcomes: A Narrative Review

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Background and Purpose: In competitive sports, coach-created motivational climates play a pivotal role in influencing athletes' well-being and behaviors. This narrative review synthesizes the specific impacts of "empowering" and "disempowering" motivational climates on adolescent and young adult athletes. **Methods:** Data were retrieved from Airiti Library, EBSCO, and Google Scholar. Six empirical articles (2020–2025) aligning with Duda's (2013) framework were selected for analysis. Participants included a variety of athletes from swimming, football, and basketball. **Results:** The review identifies the **e**mpowering climate as a protective factor. Characterized by autonomy and social support, it enhances self-confidence, mental toughness, psychological safety, and self-regulatory efficacy, thereby reducing burnout, fear of failure, and doping intentions. Conversely, the disempowering climate correlates with adverse outcomes. By triggering anxiety and undermining psychological safety, it compromises attentional control and emotional regulation, increasing intentions regarding dropout and doping. **Conclusion:** Coach-created motivational climates significantly influence acute states (e.g., burnout) but have limited effects on stable traits (e.g., grit). Notably, a "neutral climate" is insufficient for retention; only active empowering behaviors yield positive effects. The findings reveal that coaches are recommended to shift from "passive neutral" to "active empowering" styles. Constructing environments centered on "psychological safety"—where errors are viewed as learning opportunities—is crucial. Future research should employ longitudinal designs to establish causality and investigate neutral climates across diverse cultures.

Key words: Empowering Motivational Climate; Disempowering Motivational Climate; Psychological Outcomes; Narrative Literature Review

Poster Presentation 11

The Impact of Coach-Athlete Relationship on Athlete Burnout: A Narrative Review

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Introduction: Athlete burnout is a critical determinant of athletic performance and psychological well-being, often serving as a primary precursor to performance decrements and premature sport withdrawal. The coach-athlete relationship is identified as a pivotal source of social support within the sporting environment, playing a vital role in mitigating athlete stress and enhancing psychological adaptation. **Purpose:** This narrative review aims to examine the influence of the coach-athlete relationship on athlete burnout and analyze the mediating or moderating effects of training satisfaction, communication quality, and relationship maintenance strategies. **Methods:** This narrative review examined six empirical studies published between 2020 and 2025, identified through searches of PubMed, Web of Science, and Google Scholar using the keywords “coach–athlete relationship” and “athlete burnout.” **Results:** Findings indicate that high-quality coach-athlete relationships (characterized by closeness, commitment, and complementarity) are significantly and negatively correlated with athlete burnout. Coaches utilizing democratic leadership styles and high-quality two-way communication can effectively reduce emotional/physical exhaustion and sport devaluation in athletes. Furthermore, training satisfaction and the fulfillment of basic psychological needs (autonomy, competence, and relatedness) serve as key mechanisms in further alleviating burnout symptoms. **Discussion:** A robust coach-athlete relationship serves as a core protective factor in preventing athlete burnout. Practically, it is recommended that coaches cultivate an autonomy-supportive and democratic atmosphere while implementing relationship-maintenance strategies to bolster athlete resilience. Future research should integrate environmental support with individual motivation to further clarify causal mechanisms, thereby ensuring athletes' long-term career health and achievement.

Key words: Athlete Burnout, Coach-Athlete Relationship (CAR), Basic Psychological Needs Satisfaction, Relationship Maintenance Strategies.

Poster Presentation 12

Contrasting Health Literacy in Physical Activities: A Study Across Various Academic Stages in Exercise and Sport Science Students

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This research aimed to assess health literacy related to physical activity among Exercise and Sports Science students across different academic years. Involving 194 students selected via simple random sampling from Burapha University, the study utilized a comprehensive questionnaire A pivotal instrument in this methodology was the " Health Literacy in Physical Activities for Adolescents" questionnaire, adapted from Khunkitti's 2020 work and conceptually based on Pander, Murdaugh, and Parsons (2011) work to evaluate various aspects of physical activity literacy, including knowledge, access, opinions, and engagement. The questionnaire demonstrated a reliability coefficient of 0.85. Statistical methods, such as ANOVA, were employed for analysis. The findings indicated uniformly high levels of health literacy across all academic years in areas such as knowledge and perceptions of physical activity, with moderate engagement in physical activity. No significant differences were observed across academic years in students' understanding, accessibility, opinions, family and community involvement, and physical activity practices.

Key words: Physical Activity; Health Literacy; Physical Activities

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Poster Presentation 13

Self-Identity and Role Conflict in Student Athletes : a literature review

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Introduction: Student-athletes in higher education simultaneously assume academic and athletic roles, making issues of self-identity development and role conflict a long-standing focus in sport psychology and educational research. This dual-role experience not only influences academic and athletic performance but is also closely associated with psychological well-being, gender and ethnic differences, career development, and the availability of institutional support systems. Despite a growing body of research, there remains a need for a systematic synthesis clarifying how student-athletes negotiate and integrate multiple identities within higher education contexts. **Purpose**: This literature review aimed to synthesize recent empirical research on self-identity and role conflict among student-athletes in higher education, with particular attention to identity salience, processes of role integration, and the role of institutional environments in psychological adaptation. **Methods**: A literature review was conducted using the Google Scholar database, identifying international empirical studies published after 2018. Representative studies were selected and analyzed to capture key thematic domains, including changes in identity salience, strategies of identity differentiation and integration, diverse identity profiles, and the influence of institutional support systems on student-athletes' psychological adjustment. A thematic synthesis approach was employed to integrate findings across studies. **Results**: The findings indicate that: (1) identity salience among student-athletes is dynamic and shaped by academic performance, athletic achievement, and institutional contexts; (2) a strong athletic identity enhances competitive motivation, yet insufficient identity integration is associated with psychological adjustment challenges; (3) student-athletes characterized by a dual-investment identity profile consistently demonstrate superior academic and athletic outcomes, higher motivation, and better psychological well-being compared to single-role–oriented peers; and (4) gender and ethnic differences play a critical role in identity negotiation processes, with female student-athletes generally exhibiting stronger academic identification. **Conclusion**: Overall, role conflict among student-athletes should not be viewed solely as an individual-level challenge but rather as a phenomenon embedded within institutional structures and cultural expectations. Future research should adopt longitudinal designs to examine the long-term effects of identity development on psychological health and career trajectories. Thereby informing more effective support policies for student-athletes in higher education.

Key words: Student-athletes, Self-identity, Role conflict, Psychological adjustment, Identity salience

Poster Presentation 14

Listening to Children in CLIL PE: Exploring Primary Students' Voices and Experiences

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Background/Purpose: Content and Language Integrated Learning (CLIL) has been widely promoted as an effective pedagogical approach for integrating subject content and language learning in primary education. In the context of physical education (PE), CLIL is frequently positioned as a pedagogically advantageous setting due to its embodied, interactive, and activity-based nature. Despite this potential, empirical research on CLIL PE has predominantly privileged teachers' perspectives, instructional strategies, and learning outcomes, with limited attention to how young learners themselves experience and make sense of bilingual PE environments. Drawing on the theoretical framing of student voice, this study examines primary students' lived experiences of CLIL PE within Taiwan's emerging bilingual education context. **Method:** Adopting a qualitative research design, participants were recruited from six CLIL PE classes across Grades 1, 3, and 5 in five public primary schools in Taipei City. All participating schools implemented locally developed CLIL PE materials informed by the CLIL framework. A total of 105 students consented to participate, with 34 students purposively selected for interviews to represent variations in motor skill proficiency and responsiveness to English use during instruction. Data sources included systematic classroom observations using the Flanders Interaction Analysis Categories System (FIACS), semi-structured student interviews, and drawing-based questionnaires designed to access children's perspectives in developmentally appropriate ways. Data were analyzed through the constant comparative method. **Results:** The findings reveal that students experienced CLIL PE as involving differentiated levels of linguistic and cognitive challenge, with individual differences in coping strategies and engagement patterns. Across grade levels, enjoyment emerged as a central mediating factor shaping students' acceptance of CLIL PE, outweighing the perceived importance of language learning. While students generally expressed positive attitudes toward bilingual PE, their accounts also highlighted structural tensions within current CLIL PE practices, including limited opportunities for meaningful language interaction, ambiguous language learning expectations, and a perceived trade-off between instructional talk and physical activity time. **Conclusions:** By foregrounding children's voices, this study advances CLIL PE scholarship by repositioning learners as epistemic contributors rather than passive recipients of bilingual instruction. The findings underscore the necessity of conceptualizing CLIL PE not only as a language-integrated instructional model but also as a pedagogical space where enjoyment, embodiment, and meaningful participation are central to sustainable bilingual education practices.

Key words: student voice; CLIL physical education; bilingual pedagogy; primary education; qualitative inquiry

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Poster Presentation 15

An Investigation of Factors Associated with Physical Activity Engagement among undergraduate students at Burapha University

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This study aimed to investigate the factors related to sports activities and exercise behavior among undergraduate students at Burapha University. Data was collected from an online questionnaire completed by 371 second- to fourth-year undergraduate students. The findings of this study are expected to provide insights into the key factors that promote exercise participation among students and can be used to plan and develop effective health promotion programs within the university.

1. Planning related to resources (Planning + 4M's): The overall mean score was 4.08 (S.D. 0.87). It was found that sports-related activities were regularly organized at a high level (mean = 4.15, S.D. 0.85).

2. Organizing related to resources (Organizing + 4M's): The overall mean score was 4.14 (S.D. 0.80). It was found that the staff had a high level of knowledge and understanding of their duties (mean = 4.19, S.D. 0.80).

3. Leading related to resources (Leading + 4M's): The overall mean score was 4.19 (S.D. 0.88). It was observed that the sports activity staff demonstrated good interpersonal skills at a high level (mean = 4.23, S.D. 0.77).

4. Controlling related to resources (Controlling + 4M's): The overall mean score was 4.14 (S.D. 0.81). It was found that there was substantial support for sports activity budgets at a high level (mean = 4.16, S.D. 0.80).

Key words: factors of sports event management , exercise , student at BUU

Poster Presentation 16

Effects of Breathing Training on Psychological States in Resistance Training: A Review of the Literature

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Introduction: It is known that mental (anxiety, pressure, self-efficacy, etc.) and muscles of athletes are important to their performance. **Purpose**: HRV seems to be the connection of breath training and resistance training by mental effects, so this study would focus on realizing the effects of breathing training on psychological status in resistance training. **Method**: The related studies will be collected, summarized, and categorized to help realize the details of the connection of breathing training, psychological status, and resistance training. **Results**: The study mentioned that breath training can enhance interoceptive processes. Interoception, the sensing and processing of visceral stimuli through the ascending branch of the brain-body axis resulting in the conscious perception of bodily processes, plays a role in emotional experience, self-regulation, decision-making, and consciousness. Altered autonomic nervous system function is an established characteristic of inadequate recovery from training. Vagal markers of heart rate variability (HRV) reflect cardiac-parasympathetic modulation and are suppressed for 12–48 h post-RT. Breath patterns such as Diaphragmatic breathing can increase the amplitude, which raises HRV significantly. As researches shows, the emotion function modulating parts, VMPFC (Ventromedial Prefrontal Cortex), amygdala, and insula will be enhanced when HRV raises. **Conclusion and discussion**: It is found that the topic of breathing training and resistance training has been discussed less. Hope this study can help the following experiments.

Key words: breath training, heart rate variability(HRV), resistance training

Poster Presentation 17

A Literature Review on Creative Dance Groups for Emotional Awareness and Recognition in Children with Special Needs

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Introduction: Children with Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) commonly experience difficulties in emotional awareness, recognition, and regulation, which may hinder their social interaction and daily functioning. These challenges are often rooted in embodied and sensorimotor processing differences, limiting the effectiveness of interventions that rely primarily on verbal or cognitive modalities. **Purpose:** This literature review aimed to synthesize existing research on creative dance–based group programs and to examine their mechanisms and effects on emotional awareness, emotional recognition, and social functioning in children with ASD and ADHD. **Methods:** A narrative literature review was conducted to identify peer-reviewed empirical studies, action research, and systematic reviews published within the past five years (2020-2025). Electronic databases, including Airiti Library and Google Scholar, were searched using keywords such as "Creative Dance," "Dance Movement Therapy," "ASD," "ADHD," "Emotional Recognition," and "Social Interaction." The selection criteria prioritized studies that involved children and adolescents with special needs and reported specific outcomes related to emotional or social functioning. Findings were synthesized across quantitative measures (e.g., standardized emotional and behavioral scales, eye-tracking indices) and qualitative evidence (e.g., observational reports and participant narratives) to provide a comprehensive overview of intervention efficacy. **Results:** The reviewed literature indicated differential yet complementary effects across diagnostic groups. For children with ASD, creative dance interventions—particularly those emphasizing mirroring, imitation, and cooperative movement—were associated with improvements in non-verbal emotional recognition, interpersonal attunement, and social engagement. For children with ADHD, structured rhythmic activities combined with guided improvisation supported attention regulation, impulse control, and emotional self-awareness by channeling excess motor activity into purposeful expression. Across both groups, participation in creative dance was consistently linked to enhanced body awareness, movement confidence, and emotional expressiveness. **Conclusion:** Creative dance–based group programs represent a promising embodied approach for supporting emotional and social development in children with special needs. By engaging sensorimotor, affective, and interpersonal processes, creative dance may serve as a valuable complementary modality within multidisciplinary intervention frameworks aimed at fostering emotional regulation, social participation, and holistic development.

Key words: Creative Dance, Dance Movement Therapy (DMT), Autism Spectrum Disorder (ASD), ADHD, Emotional Regulation

Poster Presentation 18

Coaching Leadership Style and Team Climate on Collective Flow: A Literature Review

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Introduction: Collective flow, or team flow, is a shared optimal psychological state emerging from coordinated action toward common goals. It significantly enhances team performance, engagement, and well-being. Unlike individual flow, collective flow depends heavily on interpersonal quality and team dynamics. In sports and organizational psychology, coaching leadership and team climate are recognized as critical antecedents. **Purpose:** This literature review synthesizes empirical evidence on how coaching styles and team climate jointly facilitate collective flow. Specifically, it clarifies how coaching resources translate into the psychological and behavioral dynamics necessary for this shared experience. **Methods:** A systematic search was conducted across databases including ScienceDirect, Wiley, and Taylor & Francis. The review integrated qualitative and quantitative studies, ranging from phenomenological analyses to longitudinal research using structural equation modeling (SEM). Key measurement instruments, such as the Team Flow State Inventory (TFSI) and Team Flow Measure (TFM), were also examined through a thematic synthesis approach. **Results:** Findings indicate that coaching behaviors characterized by supportive supervision—such as autonomy support, social support, and constructive feedback—help teams balance challenges and skills. Supportive, non-controlling leadership consistently predicts a higher likelihood of collective flow. Regarding team climate, a reciprocal relationship exists between collective efficacy and collective flow: team confidence promotes flow, which in turn reinforces efficacy. Additionally, shared ambition, professional autonomy, and open communication are essential environmental conditions for fostering these states. **Conclusion:** Collective flow arises from the synergy between external coaching leadership and internal team climate. Interventions should prioritize supportive leadership and the intentional cultivation of a shared vision and open communication. Strengthening collective competence and autonomy not only facilitates flow but also promotes sustained peak performance and holistic team development.

Key words: Team Flow, Coaching Leadership, Team Climate, Collective Efficacy

Poster Presentation 19

A Review of Laban Movement Analysis Applications in Children's Muscular Coordination and Body Control Abilities.

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Physical activity during childhood has long-term effects on physical health. Insufficient physical activity increases the risk of cardiovascular disease in adulthood (Chen & Chiang, 2006), while children's participation in physical activity is also associated with body composition and physical fitness (Chang & Cheng, 2010). These findings highlight childhood as a critical period for developing a healthy body. However, in Taiwan, the physical activity levels of school-aged children remain significantly below international recommendations (Tsai & Wu, 2009). According to physical fitness indicators published by the Ministry of Education, body composition, flexibility, muscular endurance, explosive power, and cardiorespiratory endurance are essential measures of physical function. Considering children's developmental characteristics, coordination and agility should also be included as important indicators (Chu et al., 2008). Laban Movement Analysis (LMA) is a systematic framework for analyzing human movement through the dimensions of body, effort, space, and flow, providing a theoretical basis for understanding movement quality and body control. This paper adopts a literature review approach to examine domestic and international studies related to Laban Movement Analysis, children's movement development, and body control abilities. The review focuses on how Laban Movement Analysis has been discussed and applied as a theoretical framework for understanding children's body control, muscle use, and movement stability(Laban,1975；Russell,1965). Through synthesizing relevant literature, key concepts of Laban Movement Analysis associated with body control and muscular coordination are identified. This review aims to provide a theoretical reference for the field of physical and movement education and to support further discussion on children's movement development from a movement analysis perspective.

Key words: Laban Movement Analysis, Children's Motor Control, Motor Development

Poster Presentation 20

Exploring the Link Between Resilience and Motor Proficiency in Children with Attention Deficit/Hyperactivity Disorder (ADHD): A Preliminary Correlation Analysis

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Introduction: Children with Attention-Deficit/Hyperactivity Disorder (ADHD) frequently encounter motor coordination deficits alongside diminished psychological resilience (Filipe et al., 2021). According to the Environmental Stress Hypothesis (Cairney et al., 2013), motor coordination challenges may act as a primary stressor, leading to secondary psychosocial difficulties. While physical activity is a recommended strategy, understanding the baseline association between motor proficiency and resilience dimensions is a critical prerequisite for developing targeted interventions. **Objectives:** The purpose of this study was to: (1) investigate the cross-sectional correlation between motor proficiency and psychological resilience in children with ADHD. **Methods:** Fourteen children with ADHD (N = 14) were recruited for this preliminary analysis. Baseline assessments were conducted using the Bruininks-Oseretsky Test of Motor Proficiency, Second Edition (BOT-2) and the 25-item Connor-Davidson Resilience Scale (CD-RISC-25). Given the small sample size and non-normal distribution of the pilot data, non-parametric Kendall's Tau (τ) was employed to examine the associations between motor proficiency and resilience scores. **Results:** A significant positive correlation was observed between BOT-2 scores and CD-RISC-25 scores (τ = .430, p = .036). Furthermore, a significant correlation was specifically found between BOT-2 scores and the "Coping" dimension of CD-RISC-25 (τ = .453, p = .030). Standardized regression coefficients further indicated moderate effect sizes for BOT-2 scores on "Coping" (β = .386, R^2 = .149) and "Regulation of Emotion and Cognition" (β = .364, R^2 = .132), although these did not reach statistical significance (p > .05) due to the limited statistical power of this pilot sample. **Conclusion:** The findings highlight that motor proficiency is a significant physical correlate of psychological resilience in ADHD. The robust link with coping abilities supports the notion that motor competence may serve as a protective factor against environmental stressors. Future longitudinal data will determine if improving motor skills directly enhances resilience traits in this population.

Key words: ADHD, Motor Proficiency, Resilience, CD-RISC

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Poster Presentation 21

A Development of Emotional Regulation Questionnaire for Thai Athletes (ERQ-TA)

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This study aimed to translate and adapt the Emotion Regulation Questionnaire (ERQ), originally developed by Gross and John (2003), into Thai and examine its construct validity and reliability in measuring emotion regulation among Thai athletes. The translation followed the back-translation process, as suggested by Beaton et al. (2000), to ensure the preservation of meaning within the Thai cultural context. Confirmatory Factor Analysis (CFA) was employed to test the fit of the two-factor model, which includes Reappraisal and Suppression. The results indicated that the translated and adapted questionnaire had a good fit with the empirical data, as evidenced by CFI (0.991) and RMSEA (0.0275). The correlation between the two factors was moderate, suggesting that these emotion regulation strategies can function independently in different contexts. The findings demonstrate that the adapted questionnaire is an effective tool for assessing emotion regulation among Thai athletes and has the potential to be applied to other populations and contexts. Further psychometric evaluations are recommended when using the questionnaire in new settings.

Key words: emotion regulation, reappraisal, suppression, Thai athletes, back-translation, confirmatory factor analysis (CFA)

Poster Presentation 22

Social Support and Psychological Rehabilitation for Injured Athletes: A Literature Review

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Introduction: Sports injuries represent an inevitable risk in competitive sports. Their impact extends beyond musculoskeletal damage, often accompanied by psychological distress such as identity crises, anxiety, and fear. However, traditional sports medicine frequently prioritizes physiological restoration, overlooking the critical aspect of psychological reconstruction. **Purpose:** The purpose of this literature review was to synthesize existing research on social support in sport injury contexts and to examine how different sources and types of social support contribute to injured athletes' psychological rehabilitation. **Methods:** This study adopted a literature analysis approach. A systematic search was conducted across major academic databases using the keyword "psychology of sport injury and rehabilitation"published within 2010-2025. Initially, a total of 1,827 records were identified, including 1,684 journal articles and 143 dissertations. A publication date filter restricting results to the past five years was applied, yielding 858 records. Following title and abstract screening, as well as a manual search of reference lists from key studies, eight relevant articles were ultimately selected for synthesis. These included empirical studies, clinical case reports, and theoretical models in psychology. Findings were categorized according to types of social support (emotional, informational, and material) and their intervention effects were summarized. **Results:** The synthesis revealed three overarching themes as follow (1) Buffering Effect: Social support effectively buffers injury-related stress and mitigates catastrophic thinking. (2) Source Appropriateness: "Informational support" provided by athletic trainers and physicians reduces uncertainty regarding the injury, while "emotional support" from teammates and family members alleviates feelings of isolation and enhances rehabilitation motivation. (3) Psychological Resilience: "Informal interactions" and a culture of open communication within the organization significantly improve athletes' psychological resilience and self-recovery capabilities, thereby satisfying their basic psychological needs for autonomy, competence, and relatedness. **Conclusion:** Social support functions as a critical mechanism linking physical rehabilitation with psychological recovery following sport injury. These findings highlight the importance of coordinated support systems involving medical staff, coaches, and peers to promote holistic rehabilitation and facilitate athletes' successful return to sport.

Key words: Sports Injury, Social Support, Psychological Rehabilitation, Psychological Resilience

Poster Presentation 23

Effect of acute relaxation training on state-trait anxiety, athletic mental energy, and sport performance in general adult badminton players

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This study investigated the acute effects of a single session of progressive muscle relaxation on physiological, psychological, and motor performance in non-athletic adult badminton learners. Fifty participants aged 20 years or older with less than 5 years of badminton experience completed a repeated-measures design. In the first session, participants engaged in 20 minutes of their habitual relaxation activity (self-controlled relaxation condition). Two weeks later, they received a 20-minute PMR intervention (PMR condition). Heart rate was recorded across 4 phases within each session, namely resting-HR, anxiety-HR (after anxiety inducing), relaxation-HR (after relaxation), and Exercise-HR (during motor testing). Psychological states were assessed using the State-Trait Anxiety Inventory (Spielberger et al., 1983) and the Athletic Mental Energy Scale (Lu et al., 2018), and motor skill performance was evaluated via the standardized badminton skill test (Lu, 1998). Results demonstrated that, compared with self-controlled relaxation, PMR more effectively regulated physiological and psychological states and enhanced motor skill performance. The relaxation-HR was significantly lower than resting-HR, with reductions persisting into questionnaire-answering and skill-testing phases. PMR significantly decreased state anxiety (approaching a medium effect size) and increased athletic mental energy, particularly in the vigor dimension. Skill performance in short serves, long serves, and left baseline clears was significantly better following PMR. Although skill improvements may partly reflect learning transfer, findings support that a single PMR intervention produces small-to-moderate effects on heart rate reduction, anxiety regulation, mental energy enhancement, and selected badminton skill improvements among non-athletic badminton players.

Key words: anxiety, athletic mental energy, badminton, heart rate, progressive muscle relaxation

Poster Presentation 24

The Model of Sport Psychology Consulting Processes and Practical Considerations

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Introduction: Sport psychology consulting has received increasing attention and development, and its effectiveness in applied sport settings has been widely discussed in the literature. In particular, sport psychology skills training has been proposed as a means of addressing athletes' psychological needs arising from training and stress, thereby contributing to the stabilization of mental states and the improvement of sport performance. **Objectives**: The purpose of this study was to establish a clear and consistent model of sport psychology consulting processes, with the aim of providing appropriate interventions for athletes and ensuring the quality and effectiveness of consulting practice. **Methods**: A narrative and integrative review approach were employed in present study, synthesizing existing literature related to sport psychology consulting, psychological skills training, and applied consulting practices. In addition, practical experiences and professional recommendations from applied consultants were analyzed to construct a systematic and practice-oriented consulting model. **Results**: The analysis indicated that sport psychology consulting emphasizes the importance of adopting a person-centered attitude to address athletes' individual needs. In addition, consultants are required to clarify their professional roles and to follow relevant ethical principles and professional standards during the consulting process, in order to ensure athletes' safety and privacy. Furthermore, the consulting process was organized into a systematic structure consisting of four sequential stages: insight and analysis, planning and instruction, execution and application, and evaluation and adjustment. **Discussion**: By outlining a systematic consulting process, the proposed model provides a practical framework for sport psychology consulting. This framework may serve as a guideline for consultants when developing and implementing intervention plans in applied sport settings. In conclusion, the present model clarifies key process components and professional considerations in sport psychology consulting, offering a structured reference for future applied practice.

Key words: Sport psychology skill, Intervention, sport psychological consultancy

Poster Presentation 25

Linguistic Strategies in Public Discourse Affecting Mental Toughness of Thai National Esports Athletes

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This study aimed to examine the linguistic strategies used in public media discourse that influence the mental toughness of Thai national esports athletes. The population consisted of 35 Thai national esports athletes participated in the 19th Asian Games. This research employs a mixed-methods approach. Quantitative research analyzes the mental toughness of athletes, while qualitative research focuses on collecting textual data from public comments posted by followers on a Facebook fan page discussing esports competitions and interviews with the athletes. The findings revealed that there are a total of six linguistic strategies used in the discourse regarding esports at the 19th Asian Games: 1) lexical choices, 2) negative presupposition, 3)metaphor, 4) causal and conditional sentence structures, 5) questions, and 6) modality. Analysis of the mental toughness of the Thai esports athletes indicated a high overall mental toughness ($\overline{X}$= 20.54, SD = 2.49). Further analysis of individual components showed high mean scores across all components including task specific attention ($\overline{X}$ = 21.42, SD = 3.13), task value ($\overline{X}$ = 21.24, SD = 2.22), stress minimization ($\overline{X}$ = 21.03, SD = 3.06), self-efficacy ($\overline{X}$ = 21.00, SD = 2.12), personal bests ($\overline{X}$ = 20.64, SD = 3.05), perseverance ($\overline{X}$ = 20.55, SD = 3.68), task familiarity ($\overline{X}$ = 20.45, SD = 2.87), mental self-concept ($\overline{X}$ = 20.30, SD = 3.38), positivity ($\overline{X}$ = 20.24, SD = 3.79), goal commitment ($\overline{X}$ = 20.15, SD = 3.16), positive comparisons ($\overline{X}$ = 20.03, SD = 2.96), and potential ($\overline{X}$ = 19.39, SD = 3.38). When examining individual components, the three highest-ranked dimensions, in descending order, were task focus, task value, and stress minimization. Conversely, the three dimensions with the lowest mean scores were goal commitment, positive comparisons with opponents, and perceived potential. The study found that both positive and negative linguistic strategies in public discourse influence the mental toughness of athletes. Notably, athletes with less competitive experience (less than 5 years) are more affected by these strategies compared to those with over 5 years of experience.

Key words: Linguistic Strategies, Mental Toughness, Thailand National Esports Athletes, Public Discourse

Poster Presentation 26

Friendship Quality and Motivation: The Perspective of Relationship Motivation Theory

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Introduction: In team sports contexts, interactions among peers play a critical role in shaping athletes' experiences and psychological development. However, existing motivation research has predominantly focused on factors such as coaching behaviors, team cohesion, and training environments, while relatively limited attention has been paid to the quality of friendships among teammates. Given that sport friendships are characterized by emotional support, trust, and cooperative engagement, these interpersonal relationships may exert a meaningful influence on athletes' motivation, engagement, and persistence. Therefore, examining sport friendship quality from a theoretical perspective is warranted. **Objectives:** The purpose of the present study was to examine the role of sport friendship quality in athletes' motivational processes and to explore how peer relationships can be understood within the framework of Relationship Motivation Theory (Knee & Brown, 2023). **Methods:** This study employed a narrative literature review approach to synthesize previous research related to sport friendship and peer relationships in athletic contexts. The reviewed literature was analyzed and interpreted through the lens of Relationship Motivation Theory in order to clarify the theoretical links between interpersonal relationships and motivational regulation. **Results:** Findings from the reviewed literature indicate that key dimensions of sport friendship quality, including trust, emotional support, and positive interaction, align closely with the characteristics of high quality relationships proposed in Relationship Motivation Theory. These relational features contribute to the satisfaction of basic psychological needs for autonomy, competence, and relatedness. Moreover, empirical evidence suggests that peer acceptance and companionship are associated with higher levels of intrinsic motivation, greater behavioral stability, and stronger persistence in sport participation. Collectively, these findings indicate that sport friendship quality functions not merely as a form of social connection but as a critical psychological condition that shapes motivational processes. **Discussion:** The perspective advanced in this review highlights the importance of interpersonal processes that have received limited attention in prior motivation research within team sport settings. By integrating sport friendship into Relationship Motivation Theory, the present study extends the theoretical application of this framework and underscores the significance of peer relationships in understanding athletes' motivation and engagement in sport.

Key words: peer influence, relationship quality, motivation processes, social support

Poster Presentation 27

Social Support and Physical Activity Adherence in Older Adults: A Literature Review

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Introduction: Physical activity (PA) is a cornerstone of healthy aging, yet insufficient activity levels remain a prevalent challenge among older adults. Social support is recognized as a vital protective factor for maintaining PA adherence; however, the specific roles of its multidimensional functions remain a critical area for further investigation. **Purpose:** This study examined the relationship between functional social support and PA adherence among older adults through a literature review, focusing on how social networks and group environments influence healthy aging. **Method:** A systematic literature review was conducted to synthesize evidence from longitudinal studies and evaluations of community-based group PA programs. The analysis focused on investigating the impact of various social support dimensions—including emotional, companionship, and tangible support—on objectively measured PA and subjective well-being among older adults. **Results:** The results revealed that companionship and emotional support are the strongest predictors of long-term PA adherence. Tangible support is a critical "gatekeeper" for older adults living alone to overcome participation barriers. Additionally, group settings enhance self-efficacy and mental health through instructor guidance and peer social comparison. **Conclusion:** Social support is a vital protective factor for maintaining PA among the elderly. Health interventions should prioritize group-based models with high interpersonal interaction and provide practical assistance to vulnerable, solo-living populations to improve overall quality of life.

Key words: Social Support; Physical Activity; Adherence; Healthy Aging; Social Isolation

Poster Presentation 28

Effects of Smoking Urges on Perceptual Discrimination Ability and Aerobic Exercise Performance in Collegiate Athletes

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Purpose: This study investigated the effects of smoking urges on Perceptual Discrimination and aerobic exercise performance among collegiate athletes. **Methods:** A total of 20 collegiate athletes with nicotine dependence were recruited. A within-subject counterbalanced design was employed to compare the effects of three conditions—smoking, smoking abstinence, and daily-life control—on Perceptual Discrimination and aerobic performance. Data were analyzed using one-way repeated-measures analysis of variance (ANOVA). **Results:** Regarding aerobic exercise performance, the abstinence condition yielded significantly superior outcomes compared to the other two conditions. For Perceptual Discrimination, no significant differences were observed in accuracy or error rates across the three conditions. However, reaction time exhibited significant differences: the smoking condition showed the fastest response, followed by the abstinence condition, while the daily-life condition was the slowest. Furthermore, smoking urges differed significantly among conditions, with the highest levels reported in the abstinence condition, followed by the daily-life condition, and the lowest in the smoking condition. **Conclusion:** During the withdrawal period, elevated smoking cravings and perceived fatigue—likely induced by withdrawal symptoms—may diminish attentional resource allocation and impair behavioral control. Additionally, aerobic performance was optimal under the smoking abstinence condition, providing further evidence of the detrimental effects of smoking on cardiorespiratory function.

Key words: smoking urges, cognitive function, aerobic exercise

Poster Presentation 29

The Association between Sports Club Participation, Sports Enjoyment, and Exercise Adherence among Korean College Students

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Objectives: The purpose of present study was to analyze the differences in sports enjoyment and exercise adherence according to the level of participation in sports clubs among college students, and to identify the correlation and influence between sports enjoyment and exercise adherence in sports clubs. **Methods**: Data were collected from 150 college students participating in sports clubs, and a non-probability sampling was used to select the study subjects. The final 140 responses were used for the analysis, excluding 10 that did not complete the questionnaire or were not sincere in their responses. One-way ANOVA, correlation analysis, and multiple regression analysis were conducted to analyze the data, and the following results were obtained. **Results**: First, there was a partially significant difference between sports enjoyment and exercise adherence according to the level of participation in sports clubs among college students. In terms of the difference by participation frequency, college students who participated in sports clubs more than three times a week had higher perceived competence in the sports enjoyment than those who participated once or twice a week. Club atmosphere was higher among college students who participated three or more times per week than among those who participated twice per week and higher among those who participated once per week than among those who participated twice per week. The practice and benefits of sports enjoyment and the predisposing, enabling, and reinforcing of exercise adherence were higher for students who participated twice and three times a week than for students who participated once a week. In terms of difference by participation period, students who participated for 18 months or less, 24 months or less, and more than 24 months were higher than students who participated for 12 months or less on the perceived competence of the sports enjoyment and the predisposing of exercise adherence. Second, the effects of sports enjoyment on exercise adherence showed that perceived competence, practice and benefits, and

club atmosphere of sports enjoyment influenced predisposing of exercise adherence, and perceived competence and club atmosphere influenced enabling of exercise adherence. Finally, wins and competition and club atmosphere of sports enjoyment influenced reinforcing of exercise adherence. **Conclusions**: We found that there is a significant relationship between sports enjoyment and exercise adherence among college students participating in sports clubs.

Key words: College students, Exercise adherence, Sports club participation, Sports enjoyment

Poster Presentation 30

Physiological and Psychological Benefits of Motion-Sensing Games for Individuals with Disabilities: A Literature Review

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Introduction: Individuals with disabilities face challenges in learning motor skills due to limitations in physical abilities and cognition. Motion sensing games, capable of being played indoors, offer a promising alternative, free from restrictions of time, location, and physical ability. Platforms like Nintendo Switch have begun to see applications in special education and rehabilitation, aiming to enhance physical activity, motor skills, balance, and cognitive functions. **Purpose:** This review explores the physiological and psychological benefits of motion-sensing game interventions for individuals with disabilities. **Methods:** Using keywords such as “active video gaming,” “somatosensory gaming,” and “motion sensing game intervention,” we conducted searches in Google Scholar, Scopus, and Chinese online library databases. The review encompassed randomized controlled trials, quasi-experimental studies, and systematic reviews, summarizing the empirical evidence on the health benefits of motion sensing games. **Results:** Findings indicated that motion sensing game interventions demonstrate effectiveness in improving balance, hand-eye coordination, gross motor function, and certain physical fitness indicators. They show good feasibility and acceptance, particularly among children with autism, cerebral palsy, and intellectual disabilities. However, the benefits in daily functioning and long-term performance compared to traditional physical therapy are inconsistent. Limitations in current research include small sample sizes and short intervention periods, with game type and exercise intensity significantly impacting outcomes. **Discussion:** Motion-sensing games can lower barriers to physical activity for individuals with disabilities, promoting physical and mental health and increasing rehabilitation motivation. Future research should focus on large-scale, long-term randomized studies and standardized intervention models to reinforce their health promotion benefits.

Key words: Active Video Gaming; Somatosensory Gaming; Nintendo Switch

Poster Presentation 31

The Health Benefits of Stacking Cups for Individuals with Disabilities: A Literature Review

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Introduction: Individuals with disabilities often face limitations in physical and cognitive abilities for participating in conventional sports activities challenging and potentially unsafe. As a result, accessible and adaptable forms of physical activity are needed. Sport stacking (cup stacking) is a low-cost activity with minimal restrictions related to time, location, weather, age, or ability level, suggesting its potential suitability for individuals with disabilities. **Purpose:** This study aimed to examine whether sport stacking is an appropriate and beneficial physical activity for individuals with disabilities through a systematic review of existing literature. **Methods:** A literature search was conducted using the keywords “cup stacking,” “sport stacking,” and related Chinese terms across Google Scholar, Scopus, and online library databases. A total of 22 relevant studies were reviewed, including 17 intervention studies (6 domestic and 11 international) and 5 studies that employed sport stacking as an assessment tool. Participants ranged from elementary school children to older adults. **Results:** Intervention studies involving the general population demonstrated that sport stacking significantly improved attention, hand–eye coordination, bilateral coordination speed, reaction time, fine motor skills, balance, higher-level functional performance, and emotional regulation. Studies focusing on individuals with disabilities reported improvements in fine motor skills, manual dexterity, hand–eye coordination, balance ability, and cognitive function. However, two studies found no significant effects on motor development among school-aged children and adolescents, possibly due to variations in intervention duration, methods, and participant characteristics. **Conclusion:** The findings indicate that sport stacking has considerable potential as a health-promoting physical activity for individuals with disabilities. Future research should further explore its effects across different disability populations and intervention designs to optimize its application in adaptive physical activity programs.

Key words: Sport Stacking; Individuals with Disabilities; Health Promotion; Fine Motor Skills

Poster Presentation 32

Effects of Martial Arts on inhibitory control and Arousal Regulation in Children with Attention-Deficit/Hyperactivity Disorder

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Introduction: Inhibitory control plays a critical role in physical and mental health, school readiness, social interaction, and overall quality of life. Deficits in inhibitory control are also considered a core characteristic of children with attention-deficit/hyperactivity disorder (ADHD). Previous research has further indicated that children with ADHD often exhibit lower levels of arousal , as measured by heart rate variability (HRV) during cognitive task performance, suggesting atypical arousal regulation that may reflect underlying executive function impairments. Consequently, enhancing inhibitory control and improving arousal regulation in children with ADHD has become an important research focus. **Purpose:** The purpose of this study is to examine the effects of a martial arts exercise intervention on inhibitory control performance and arousal regulation in children with ADHD. **Methods:** This study employed a randomized controlled trial design and recruited children aged 8 to 12 years diagnosed with ADHD. Participants were randomly assigned to an martial art (MA) group or a control (CON) group. The MA group participated in an 8-week martial arts exercise program, conducted twice per week for 90 minutes per session. Before and after the intervention, all participants completed the Simon Task and the Flanker Task to assess inhibitory control. Heart rate variability (HRV) was recorded using a Polar H10 device during the pre-task resting period and throughout the cognitive tasks to evaluate arousal regulation. Data were analyzed using JASP software with a 2 × 2 mixed factorial design to examine the main effects of group (MA vs. CON), time (pre-test vs. post-test), and their interaction on inhibitory control performance and HRV indices. **Hypotheses:** It is expected that the MA group will demonstrate improved inhibitory control performance, as evidenced by faster reaction times and higher accuracy rates. Additionally, the MA group will exhibit increased arousal levels during cognitive task performance, as reflected by changes in heart rate variability, particularly RMSSD, indicating improved arousal regulation.

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Key words: ADHD, Martial Arts, Cognitive Function, Arousal Regulation

Poster Presentation 33

The Effects of Physical Activity on Self-Regulation, Self-Esteem, and Self-Efficacy among Out-of-School Adolescents

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The present study examined differences in self-regulation, self-esteem, and self-efficacy among out-of-school adolescents based on their participation in physical activity, and explored the effects of physical activity and self-regulation on self-esteem and self-efficacy. A total of 280 adolescents (aged 14–18) completed structured questionnaires, including the International Physical Activity Questionnaire for Adolescents (IPAQ-A), Volitional Components Inventory (VCI), Rosenberg Self-Esteem Scale (RSES), and General Self-Efficacy Scale (GSES). Data were analyzed using descriptive statistics, exploratory factor analysis, Cronbach's α, one-way ANOVA, Pearson's correlation analysis, and hierarchical regression analysis. The results showed that physically active adolescents had significantly higher self-regulation, volitional inhibition, self-esteem, and confidence. Self-regulatory mode strongly predicted self-esteem and also influenced confidence, self-regulatory efficacy, and task difficulty preference. Volitional inhibition mode affected only confidence. Findings highlight the importance of physical activity and self-regulation in promoting psychological well-being in out-of-school youth.

Key words: Out-of-school adolescents, Physical activity, Self-regulation, Self-esteem, Self-efficacy

Poster Presentation 34

Motivations for Playing Pickleball: A Literature Review: Integrative Literature Review

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Introduction: With global population aging and increasing attention to health promotion, sport activities that combine physical engagement and social interaction have gained growing interest. Since its introduction in 1965, pickleball has rapidly expanded in the United States and internationally due to its simple rules, low entry barriers, and broad appeal across age groups. Beyond its recreational value, pickleball has been associated with multiple psychological and social benefits. However, an integrated synthesis of participation motivations and psychological outcomes across age groups and cultural contexts remains limited. **Purpose:** This literature review aimed to synthesize research published between 2018 and 2025 on motivations for playing pickleball and its associated psychological benefits. The review focused on identifying age- and culture-specific motivational patterns and discussing implications for health promotion and sport development. **Methods:** A systematic literature search was conducted for studies published between 2018 and 2025, encompassing research from the United States, Europe, and Asia. The reviewed literature included diverse populations, such as older adults, adolescents, and college students, and employed quantitative surveys, qualitative interviews, and systematic review approaches. A thematic synthesis method was used to integrate findings across studies. **Results:** The synthesized literature indicates that motivations for participating in pickleball vary substantially by age and cultural background. Older adults primarily engage in pickleball for health maintenance, social interaction, and emotional well-being, whereas younger participants tend to emphasize competitive challenge, skill development, and achievement. Culturally, studies from the United States commonly highlight health and social motives, while European research places greater emphasis on technical mastery and competitive aspects. Furthermore, regular participation in pickleball has been consistently associated with enhanced well-being and self-efficacy, as well as reduced loneliness and depressive symptoms among older adults. **Conclusion:** Overall, pickleball represents a promising medium for promoting cross-generational engagement and holistic health. Integrating pickleball into health promotion initiatives and physical education programs may enhance participation across diverse populations. Future research should employ cross-cultural comparisons and longitudinal designs to further clarify the relationships between participation motivations and psychological benefits.

Key words: Pickleball, Participation motivation, Psychological well-being, Health promotion

Poster Presentation 35

The Relationship Between Emotional-Related Cognitive Flexibility and Muscular Fitness in Late Middle-Aged and Older Adults: A Study Protocol

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Introduction: Cognitive flexibility, a core executive function, enables dynamic adjustment of cognitive resources in response to changing environmental demands. While research has demonstrated positive associations between muscular fitness and general cognitive function in aging adults, the specific relationship between muscular fitness and emotional-related cognitive flexibility remains unexplored. **Objective:** This study aims to investigate the association between muscular fitness and emotional-related cognitive flexibility in late middle-aged and older adults, hypothesizing that greater muscular fitness would predict enhanced performance on emotional-related task-switching measures. **Methods:** A total of approximately 70 adults are expected to be recruited for this study. Participants underwent assessments including the Mini-Mental State Examination (MMSE) and measurement of Body Mass Index (BMI). Emotional-related cognitive flexibility was evaluated using an emotional task-switching paradigm. Additionally, the combined standardized relative maximum muscular strength score (ZC_MF) was calculated by first estimating maximal strength of upper and lower limbs, dividing by body weight to obtain relative muscular strength values, and then combining and standardizing these measures. Response time (RT) of correct responses and accuracy (ACC) were recorded for pure blocks, and for non-switch and switch trials within mixed blocks. Local switch costs (switch RT minus non-switch RT) and global switch costs (pure block RT minus non-switch RT) were calculated separately for RT and ACC as the behavioral indices. Hierarchical multiple regression analyses were conducted to examine the relationship between combined muscular fitness and emotional task-switching performance. For each behavioral outcome, two sequential models were tested: Model 1 included age and MMSE scores as covariates; Model 2 incorporated ZC_MF to determine its unique contribution. Statistical significance was established at α=.05. **Expected Outcomes:** It is expected that greater muscular fitness will be associated with reduced local switch costs in response time, reflecting more efficient task-set reconfiguration, and with enhanced global switch cost accuracy, indicating improved maintenance and coordination of multiple task sets under emotional conditions.

Key words: Muscular Fitness, Late Middle Age, Older Adult, Cognitive Flexibility

Poster Presentation 36

The Effects of Acute Exercise Integrated with Varying Cognitive Loads on Inhibitory Control in Collegiate Athletes

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Purpose: This study aimed to investigate the effects of acute exercise with different Varying of cognitive load on inhibitory control in collegiate athletes. **Methods:** A total of 25 collegiate athletes were randomly assigned to one of three counterbalanced conditions: high-cognitive-load exercise, low-cognitive-load exercise, or a control condition. Inhibitory control was assessed using the Stroop test before and after the intervention, while heart rate was continuously monitored throughout the experimental session. A 3 (scenario: high-cognitive-load exercise, low-cognitive-load exercise, control) × 2 (Stroop condition: congruent, incongruent) repeated-measures ANOVA was conducted to examine changes in reaction time and accuracy. In addition, a one-way repeated-measures ANOVA was performed on the Stroop effect (incongruent minus congruent). **Results:** compared with the control scenario, both high- and low-cognitive-load scenarios were associated with significantly faster reaction times under both congruent and incongruent conditions. In terms of accuracy, the low-cognitive-load scenario showed a significantly greater improvement than the high-cognitive-load scenario, whereas no significant difference was observed relative to the control scenario. No significant differences were found among scenarios in the Stroop effect on reaction time (incongruent minus congruent). **Conclusion:** The findings indicate that acute exercise improves overall reaction time regardless of the presence of cognitive load. In contrast, improvements in accuracy were observed only under the low-cognitive-load scenario. Further research is warranted to clarify the mechanisms underlying these differential effects.

Key words: Cognitive load, acute exercise, inhibitory control

Poster Presentation 37

Growth of University Students Majoring in Physical Education Based on Participation in Sports Talent Sharing Activities

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Introduction: Although the Korean sports legislation explicitly stipulates 'the right to sports', there are still 'social and cultural vulnerable groups' due to economic, physical, and regional restrictions, and practical alternatives are needed to solve them. In response to these social demands, the 'sports talent sharing' of Physical Education majors is a unique alternative that combines learning and service, promoting the social contribution of academic knowledge and educational growth. **Objectives:** This study attempted to explore the experiences of university students majoring in physical education who participated in sports talent sharing activities from a phenomenological perspective and to understand the essential meaning of experiences and multidimensional growth patterns during activities in depth. **Methods:** Through purposeful sampling, the study selected eight students from the Department of Sports Science at S University who participated in more than 80% of the Descent Sports Foundation's 'YOUNG MOVERS' program in 2023. Data collection was conducted through one-on-one in-depth interviews using semi-structured questionnaire. The collected data went through open coding and inductive categorization, and the subjective meaning given to the experience by the participants was extracted to derive the process of growth. **Results:** The results revealed that sports talent sharing activities enhanced the intellectual, emotional, social, and career competencies of university students majoring in physical education. First, in terms of intellectual capability, practical knowledge focusing on the field was acquired through various activities to apply major theory to the actual teaching field. Second, in terms of emotional capability, they developed confidence and flexible coping skills as a leader by resolving unexpected field situations. Third, in terms of social capability, they experienced close interactions with institutions and participants, strengthened cooperation capabilities, and acquired social values. Third, in terms of social capability, they strengthened their cooperation capabilities and internalized social values through close interactions with participating organizations and beneficiaries. Fourth, in terms of career capability, the social contribution of the major was confirmed through practical experience, pride in the major was increased, and career goals were clarified. **Conclusion:** This study confirmed that sports talent-sharing is a decisive opportunity to provide various activity experiences and strengthen core practical competencies to university students majoring in physical education beyond mere service. Participants reaffirmed the value of their major through direct experience in the field, which led to the establishment of their major identity. Therefore, it is necessary to introduce a sports service-learning model and policy support that can systematically support this in the future university education field.

Key words: Sports talent sharing, University students majoring in PE, Qualitative research, Experience, Phenomenological study

Poster Presentation 38

Mindfulness Levels and Sports Anxiety among Ball sports Athletes:A Study Protocol

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Introduction: Competitive anxiety is a prevalent psychological challenge among ball sport athletes and is known to impair both performance consistency and psychological well-being. Athletes in ball sports are frequently exposed to high competitive pressure due to dynamic game environments, rapid decision-making demands, and continuous interpersonal interactions. Sport anxiety, particularly cognitive and somatic components, has been consistently associated with negative performance outcomes. Mindfulness, conceptualized as a non-judgmental awareness of present-moment experiences, has been proposed as a psychological resource that enhances attentional control and emotional regulation. However, empirical evidence examining this relationship specifically in ball sport athletes remains limited. **Objective:** This study aims to investigate the relationship between dispositional mindfulness and sport anxiety in ball sport athletes. **Methods:** This study will employ a cross-sectional research design. Competitive university-level ball sport athletes will be recruited as participants. Dispositional mindfulness will be assessed using validated self-report measures, such as the Mindful Attention Awareness Scale (MAAS). Sport anxiety will be measured using the Competitive State Anxiety Inventory-2 Revised (CSAI-2R), which assesses cognitive anxiety, somatic anxiety, and self-confidence. Data will be analyzed using descriptive statistics, Pearson correlation analyses, and multiple regression analyses to examine the associations between mindfulness and sport anxiety dimensions. **Expected outcomes:** It is expected that higher levels of dispositional mindfulness will be negatively associated with cognitive and somatic anxiety and positively associated with self-confidence. Furthermore, mindfulness is anticipated to significantly predict variance in sport anxiety dimensions after controlling for relevant demographic variables.

Key words: Mindfulness, Sport Anxiety, Competitive Anxiety, Ball Sport

Poster Presentation 39

The Effects of Physical Activity on Cognitive Function and HRV in Children With ADHD: A Scoping Review

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Attention-Deficit/Hyperactivity Disorder (ADHD) is considered the most common neurodevelopmental disorder among children, affecting 6% of children globally. According to the American Psychiatric Association (2013), this disorder is characterized by a developmentally inappropriate patten of inattention and impulsiveness/hyperactivity. These behavioral symptoms are accompanied by impairments in executive functions and other cognitive domains. From a neurophysiological point of view, ADHD related deficits in cognitive domains have been linked with a delayed structural maturation of the frontoparietal network and its hypoactivation during cognitive load. Based on the neurovisceral integration hypothesis, executive functions are modulated by brain regions that are also involved in the parasympathetic control of the heart rate. Only a few studies have investigated the effects of physical activity on heart rate variability (HRV) during the cognitive demand task. Thus, the aim of this study was to exam the effects of physical activity on cognitive performance and HRV in children with ADHD by the scoping review. A comprehensive search of the literature was performed in August, 2025. Web of Scopus was searched for relevant articles. The study included only empirical studies examining the effects of exercise interventions on cognitive performance and HRV in children with ADHD. After we reviewed the literature, two relevant studies were identified. These studies indicated that 20 to 30 minutes of acute aerobic exercise had positive effects on both cognitive function and HRV in children with ADHD. In summary, this systematic review provided preliminary evidence that acute aerobic exercise may serve as an effective intervention to transiently improve cognitive function and HRV in children with ADHD. However, further researches were required to explore how different types and intensities of exercise intervention influence cognitive function and HRV, aiming to offer a broader range of exercise therapy options for this population.

Key words: Physical Activity, Cognition, HRV

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Poster Presentation 40

A Comparative Study of Mindfulness Between Physical Education and Non-Physical Education Students

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Background: The concept of mindfulness has been an important course in psychological counseling in recent years. Derived from Buddhism, mindfulness refers to focusing on living in the present moment without making any judgments about internal or external stimuli. **Objective:** The purpose of this study is to explore the differences in mindfulness between students majoring in physical education and non-physical education majors, as well as the reasons behind these differences. **Methods:** The study adopts the methods of literature review, questionnaire survey, and mathematical statistics. A random sample of 80 physical education majors (40 males and 40 females) and 80 non-physical education majors (40 males and 40 females) was selected, with an average age of 21. Comparative analyses were conducted among four groups: the overall student population, male physical education majors vs. male non-physical education majors, female physical education majors vs. female non-physical education majors, and overall males vs. overall females. **Results:** The results show that there are differences in the five dimensions of mindfulness among the four groups, but all differences are not significant and the overall scores are low, indicating that students do not have a sufficient understanding of or attach enough importance to the concept of mindfulness. **Conclusion:** It is suggested that physical education majors should pay attention to psychological mindfulness practice to achieve better sports performance, and non-physical education majors should focus on cultivating mindfulness. Courses can be offered to popularize and promote mindfulness, enabling college students to better study and live through mindfulness training.

Key words: Mindfulness, Physical Education, Sport Performance

Poster Presentation 41

Effects of Environmental Differences on Flow, Mood States and EEG on Cycling

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The purpose of this study was to compare and analyze the effects of environmental differences on flow, mood states, and EEG during cycling. Fifty healthy adults participated in this experiment, but four dropped out, resulting in data from 46 participants. The Flow State Scale (FSS) was used to measure the degree of flow experience, the Profiles of Mood States (POMS) to measure changes in mood states, and the Quick-20 Dry EEG headset was used to measure EEG. The experimental task involved cycling at moderate intensity for 300 seconds in indoor, outdoor, and VR environments. Statistical analysis was performed using a within-group repeated-measures ANOVA, with a Bonferroni t test used for post-hoc testing. Results showed that FSS differed in Concentration on Task at Hand, Action-Awareness Merging, Loss of Self-Consciousness, Sense of Control, and Autotelic Experience, excluding Transformation of Time. Participants felt more immersed in the outdoor and VR environments than in the indoor environment. POMS showed differences in all factors Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigor-Activity, Fatigue-inertia, and Confusion-bewilderment, and the outdoor and VR environments showed more positive effects than the indoor environments. In addition, EEG showed differences in theta, alpha, and gamma waves, except for beta waves. In theta waves, activation was greater in the outdoor environment than in the indoor and VR environments, and in alpha waves, activation was greater in the outdoor, indoor, and VR environments in that order. In addition, in gamma waves, activation was greater in the VR, indoor, and outdoor environments in that order. The environment was found to affect flow, mood states, and EEG during cycling. This study will help understand the effects of exercise environments on flow, mood states, and EEG, and can serve as basic data for developing exercise environment guidelines for mental health and exercise or rehabilitation programs.

Key words: Cycling, Environment, Flow, Mood State, EEG, Quick-20

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Poster Presentation 42

The Role of Neurofeedback Training in Precision Sport Skills Performance: A Systematic Review

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Introduction: Neurofeedback training (NFT) has been increasingly applied to enhance sports performance across a wide range of athletic domains. However, existing reviews often adopt a broad perspective, limiting the ability to conduct in-depth evaluations of precision-based motor tasks. Precision motor skills require a high degree of fine motor control and are strongly influenced by athletes' psychological states, highlighting the need for a more targeted synthesis of evidence in this domain. **Objectives:** This systematic review aims to investigate the application and efficacy of neurofeedback training (NFT) in enhancing performance in precision motor skills. Specifically, it focuses on sports and activities that demand high levels of fine motor control and psychological regulation, while also examining methodological characteristics of existing studies. **Methods:** A comprehensive literature search was conducted using the PubMed, Scopus, and Web of Science databases, including empirical studies published prior to January 2025. The inclusion criteria were: (1) healthy adult participants aged 18–64 years; (2) interventions involving electroencephalography (EEG)-based neurofeedback training; (3) inclusion of a control group; and (4) assessment of performance outcomes related to precision motor skills. From an initial pool of 1,866 records, studies meeting all eligibility criteria were selected for final analysis. **Results:** A total of 17 empirical studies met the inclusion criteria. The reviewed studies examined precision sports and activities including archery, shooting, golf putting, and free throws. Neurofeedback protocols targeted Sensorimotor Rhythm (SMR, 12–15 Hz), Mu rhythm (8–13 Hz), Alpha (8–12 Hz), and Frontal Midline Theta (FMT, 4–7 Hz), with training durations ranging from 1 to 24 sessions. Results indicated that NFT may exert differential effects on precision motor performance depending on the targeted brainwave frequency and training duration. Differences were also observed between single-session and long-term training protocols in terms of immediate effectiveness and performance retention. **Discussion:** Most studies employed single-frequency neurofeedback protocols, while a limited number explored multi-frequency or combined-index approaches. Variations in control group design and participant skill level were identified as potential moderators influencing training outcomes. These methodological differences contribute to inconsistencies across findings and highlight challenges in comparing results across studies. **Conclusion:** This systematic review synthesizes current evidence on the application of NFT in precision motor skill performance, identifying both its potential benefits and methodological limitations. Future research should prioritize greater experimental rigor, standardized control conditions, long-term follow-up assessments, and a deeper investigation of the

underlying neural mechanisms to support the effective integration of NFT into precision skill training practices.

Key words: Precision Motor Skill, Neurofeedback Training, Electroencephalogram, Sport Performance

Poster Presentation 43

Mindfulness Training for Emotion Regulation in Athletes: A Narrative Review

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Introduction: In highly competitive sports, emotion regulation is regarded as a key psychological factor influencing athletic performance. Unlike traditional psychological skills training, mindfulness-based training highlights awareness of and acceptance toward present-moment experiences. **Purpose:** This review aimed to examine the mechanisms and effects of mindfulness-based interventions (e.g., MAC, MSPE, MBPP) on emotion regulation among athletes at different competitive levels. **Method:** Using keywords such as mindfulness, athletes, and emotion regulation, relevant empirical studies published between 2016 and 2022 were searched in Google Scholar, PubMed, and the Airiti Library. A total of six studies meeting the inclusion criteria were selected for comprehensive review and analysis. **Results:** The findings indicate that mindfulness-based training improves emotion regulation by reducing rumination, decreasing experiential avoidance, enhancing decentering ability, and strengthening internal locus of control. Mindfulness training also shares similarities with traditional psychological skills training in preventing emotional interference with performance, but demonstrates distinct advantages in reducing experiential avoidance. Moreover, intervention effectiveness was moderated by athletes age and training dosage. **Conclusion:** Mindfulness-based training provides an effective approach to enhancing emotion regulation in athletes, particularly by reducing experiential avoidance and increasing psychological flexibility, showing advantages over traditional methods. It is recommended that coaches and sport psychology practitioners consider age differences among athletes and ensure sufficient training dosage in practical applications to achieve optimal intervention outcomes.

Key words: Mindfulness; Emotion Regulation; Psychological Skills Training; Rumination; Athletic Performance

Poster Presentation 44

The Effects of Exercise Interventions on Emotional Regulation, Mental Health, and Self Control in Children with ADHD: A Systematic Review

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In recent years, a growing body of research has investigated the effects of exercise interventions on children with Attention-Deficit/Hyperactivity Disorder (ADHD), with particular attention to emotional regulation and impulse control. Most studies have reported favorable outcomes. Accordingly, the present study undertook a systematic review to synthesize evidence on the impact of exercise interventions on emotional regulation, mental health, and behavioral self-control in children with ADHD. A literature search was conducted using Scopus, with the timeframe restricted to 2017 2026 and English full-text publications. The main search terms were sequentially combined as follows: (a) ADHD + children + physical (193 records), (b) ADHD + children + physical + mental health (48 records), and (c) ADHD + children + physical + mental health + controlled study (28 records). Studies were further screened based on the following criteria: (a) the intervention included clearly defined physical exercise activities; (b) the participants were children; (c) the outcome variables pertained to emotional regulation, mental health, or behavioral self-control; and (d) the study adopted a randomized controlled trial (RCT) or quasi-experimental design. A total of seven studies met the inclusion criteria. Their intervention modalities encompassed swimming, yoga, and aerobic exercise, as well as a longitudinal investigation of physical fitness and the risk of psychological disorders. The review indicated that six out of the seven studies reported substantive benefits of exercise interventions on emotional and mental health outcomes in children with ADHD. Reported effects included improved emotional stability and cognitive flexibility through yoga and swimming, whereas aerobic exercise improved behavioral regulation and self-control. Moreover, the large-scale physical fitness cohort study demonstrated that cardiorespiratory fitness, muscular endurance, muscular strength, and flexibility were significantly negatively associated with psychological disorder risk. For example, a 30-second improvement in 800 meter run performance was associated with a 7–8% reduction in ADHD risk; an additional five sit-ups corresponded to a 4–6% decrease; a 20-cm increase in standing long jump

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performance was linked to a 4–5% reduction; and each 5-cm gain in flexibility was associated with a 3–4% decrease. These findings suggest that physical fitness may serve as an important protective factor for the mental health of children with ADHD. In conclusion, exercise interventions constitute a feasible and low-risk adjunct approach to enhancing the mental health of children with ADHD. Future investigations should employ more rigorous, longitudinal, and standardized research designs to further elucidate and substantiate the differential effects of various exercise modalities. The resulting evidence could offer a structured reference for educators, clinicians, caregivers and parents in developing curricula, activity programs, and behavioral support strategies for this population.

Key words: Attention-Deficit/Hyperactivity Disorder, Exercise Intervention, Emotional Regulation, Mental Health, Behavioral Self-Control, Randomized Controlled Trials

Poster Presentation 45

Effects of the training using self-modeling with visual cues on skill performance, imagery, and sport-confidence of adolescent female soccer players

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Purpose: The purpose of this study was to examine the effects of motion analysis and image training using the self-modeling with visual cues on skill performance, imagery, and sport-confidence of adolescent female soccer players. **Methods**: The participants were elite soccer players belonging to two girls' high school soccer teams, divided into an experimental group (D girls' high school, n=16) and a control group (I girls' high school, n=13). The experimental group performed motion analysis and image training when performing penalty kick, short kick, and long kick using self-modeling with visual cues, and the control group performed training using self-modeling video without visual cues. Before and after the training, the evaluation score was calculated according to the kick performance, imagery and sport-confidence factors were measured. For statistical analysis of all collected data, descriptive statistics, Friedman test, Mann-Whitney U test, and two-way ANOVA with repeated measures were used. **Results**: First, as a result of motion analysis using self-modeling with visual cues, the experimental group's penalty kick and short kick score were improved and statistically significant differences were found, but there was no significant change in long kick score. Second, as a result of image training using self-modeling with visual cues, the visual, kinaesthetic, mood, and controllability factors of the experimental group were improved except for the auditory factor, and the interaction effect was confirmed. In addition, the state sport-confidence of the experimental group was improved and the interaction effect was confirmed. **Conclusions**: The analysis of kick motion using self-modeling with visual cues was found to be effective in performing penalty kick and short kick of adolescent female soccer players. In addition, it was confirmed that it was helpful to improve visual, kinaesthetic, mood, and controllability among the sub-factors of imagery, and thus significantly affected state sport-confidence.

Key words: Adolescent female soccer players, Imagery, Sport-confidence, Self-modeling with visual cues, Skill performance

Poster Presentation 46

The Effects of Exercise Interventions on Executive Function in Children With Cerebral Palsy: A Systematic Review

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Introduction: Children with cerebral palsy (CP) frequently present motor impairments and executive function (EF) difficulties that negatively affect academic performance and daily functioning. Physical activity is a core component of CP rehabilitation, and recent studies have examined whether exercise programmes can concurrently enhance motor abilities and higher-order cognitive functions in this population. **Purpose:** This systematic review aims to synthesize evidence on the effects of exercise and physical activity programmes on EF and related cognitive outcomes in children and adolescents with CP, and to identify current research gaps. **Methods:** A systematic search of major academic databases identified peer-reviewed studies involving children or adolescents with CP who received exercise or physical activity interventions and reported at least one EF outcome. Eligible designs included randomized controlled trials (RCTs), quasi-experimental studies, and relevant narrative or scoping reviews. Data were extracted on participant characteristics, intervention parameters, and cognitive assessment tools, and substantial heterogeneity necessitated a qualitative synthesis. **Results:** Across a limited number of studies, structured exercise interventions generally showed favourable changes in EF-related outcomes. One RCT reported that a 12-week moderate-intensity cycling programme significantly improved inhibitory control in children with hemiplegic CP, reflected in faster and more accurate performance on Flanker and Stroop tasks than usual care, while other programmes improved cardiorespiratory fitness and motor function alongside gains in autonomy- and self-regulation-related domains of health-related quality of life conceptually linked to EF. **Discussion and Conclusion**: Current evidence suggests that aerobic and cognitively engaging physical activity may benefit EF in youth with CP, particularly inhibitory control, but the small number of EF-focused trials and heterogeneous assessment methods warrant cautious interpretation. Future research should prioritise adequately powered RCTs with clearly specified exercise prescriptions and standardised EF measures to support integrated rehabilitation programmes targeting both motor and executive functioning in this population.

Key words: Cerebral Palsy, Executive Function, Physical Activity, Children, Adolescents

Poster Presentation 47

The Effects of Exercise on Hot Executive Function in Children With Neurodevelopmental Disorder: A Scoping Review

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Introdution: Neurodevelopmental disorders (NDDs) are a heterogeneous group of developmental disabilities that emerge during the childhood development stage and exert long term effects on neurological function. This category encompasses conditions such as intellectual disabilities, Autism Spectrum Disorder (ASD), and Attention Deficit/Hyperactivity Disorder (ADHD). NDDs are frequently accompanied by difficulties in hot executive function (EF). Hot executive function (EF) refers to the high-level control processes mobilized by individuals in contexts involving emotion, motivation, or rewards. It includes abilities such as affective inhibitory control, value judgment, delayed gratification, and emotion regulation, which subsequently affects their behavioral regulation and social adaptation. Recent studies indicated that exercise interventions enhance hot EF performance in emotional and motivational contexts by increasing physiological arousal, emotional engagement, and prefrontal cortex activation. However, existing studies vary in research design, exercise types, and measurement indicators. **Purpose:** This study employs a scoping review to synthesize existing research on the effects of exercise interventions on hot EF in children with NDDs. **Methods:** A systematic search was conducted using the Scopus and PubMed databases. **Results:** An initial search yielded 311 articles; after removing duplicates, 277 remained. Following a title and abstract screening, 22 articles were retained. Ultimately, based on full-text screening, 5 articles were selected for final analysis. **Discussion:** The results suggest that various forms of exercise may have positive effects on affective inhibitory control and behavioral regulation. Nonetheless, methodological differences and sample limitations persist across studies. **Conclusions:** Although exercise intervention may improve hot EF in children with NDDS, future research should further explore the optimal exercise prescriptions for effectively enhancing hot EF in this population.

Key words: Neurodevelopmental Disorders, physical activity, Hot Executive Function

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Poster Presentation 48

Physical Activity and Self-Concept Development in Children: A Systematic Review

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Background: Physical activity (PA) is widely recognized as a fundamental contributor to children's physical and psychological development. During critical developmental stages, successful movement experiences play a pivotal role in shaping self-concept. A positive self-concept is closely associated with psychological resilience, social adjustment, and long-term mental health. However, existing findings regarding how physical activity influences children's self-concept through motivational and competence-related mechanisms remain fragmented. **Purpose:** This systematic review aimed to synthesize empirical evidence on the relationship between regular physical activity and self-concept development in children. Particular attention was given to the roles of activity intensity, intrinsic motivation, and perceived physical competence in shaping global self-worth and psychological well-being. **Methods:** A systematic literature review was conducted using PubMed, Web of Science, and the Airiti Library to identify empirical studies examining children's physical activity participation and self-concept. Studies employing objective activity measures (e.g., pedometers, heart rate monitoring) and validated psychological instruments (e.g., the Self-Perception Profile for Children, SPPC) were included. Findings were integrated using a thematic synthesis approach to identify consistent patterns across studies. **Results:** The synthesized literature demonstrates a robust positive association between regular physical activity and children's self-concept development. Children with higher activity levels consistently reported greater perceived physical competence and intrinsic motivation compared to their less active peers. Intrinsic motivation emerged as a key predictor of activity intensity. Furthermore, participation in socially engaging and enjoyment-oriented physical activities was found to enhance global self-worth and reduce anxiety among children, highlighting the role of PA as a catalyst for positive psychological development. **Conclusion:** Overall, the evidence supports physical activity as a critical mechanism for fostering positive self-concept and psychological health in children. Educational and sport practitioners are encouraged to design diverse, age-appropriate programs within motivationally supportive environments. By strengthening children's sense of competence and engagement through physical activity, such programs may contribute to sustained mental well-being and holistic developmental outcomes.

Key words: Physical activity, Self-concept, Perceived physical competence, Child development

Poster Presentation 49

The effects of balance-based exercise interventions on motor skills, executive function, and behavioral symptoms in children with ADHD: A systematic review

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Attention-Deficit/Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder characterized by inattention, impulsivity, and hyperactivity, and is often accompanied by deficits in executive function and motor control. Recent studies have suggested a close relationship between motor skills and executive function, indicating that physical activities requiring a high level of balance control may have positive effects on the cognitive and motor performance of children with ADHD. This study adopted a systematic review design to examine the effects of balance-based or balance-demanding physical activity interventions on children with ADHD. Literature searches were conducted using Google Scholar and Scopus as the primary databases, with relevant keywords selected according to the research focus. Three eligible empirical intervention studies were ultimately included for analysis, including a Balance-based Attentive Rehabilitation of Attention Networks (BARAN) program, a four-month skateboarding intervention, and inline skating exercise. The results indicated that balance-based physical activity interventions were associated with improvements in motor skills and executive function in children with ADHD. Overall, balance-oriented exercise interventions demonstrate potential value as non-pharmacological complementary strategies for children with ADHD. Future research is recommended to further compare the effects of different types of balance-based interventions.

Key words: Attention-Deficit/Hyperactivity Disorder (ADHD), Balance-based exercise, Executive function, Motor performance

Poster Presentation 50

Coach Autonomy Support and the Development of the Five Cs in Adolescent Athletes: A Systematic Review

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Introduction: Positive Youth Development (PYD) theory conceptualizes sport as a critical context for fostering adolescents' psychological assets and life skills. Existing research, largely grounded in Self-Determination Theory (SDT), suggests that coaches' autonomy supportive behaviors promote athletes' development by satisfying basic psychological needs for autonomy, competence, and relatedness. However, an integrated synthesis examining how coach autonomy support contributes to the development of the Five Cs (Competence, Confidence, Connection, Character, and Caring) and life skills among adolescent athletes remains limited. **Purpose:** This review aimed to systematically synthesize empirical evidence on the relationships between coach autonomy support, the "Five Cs" (Competence, Confidence, Connection, Character, and Caring), and life skills development in adolescent athletes. In addition, it examined the psychometric properties of commonly used instruments, such as the Life Skills Scale for Sport (LSSS), across different cultural and sporting contexts. **Methods:** A systematic literature search was conducted using electronic databases including Google Scholar and PubMed. Empirical studies addressing coach autonomy support, positive youth development, "the Five Cs model", and "life skills acquisition " were identified and synthesized. A thematic analysis approach was employed to integrate findings across studies. **Results:** The synthesized literature consistently demonstrates positive associations between coach autonomy support and both life skills acquisition and the Five Cs dimensions. Autonomy-supportive coaching climates are associated with higher intrinsic motivation and resilience among adolescent athletes, and life skills have been shown to mediate the relationship between coaching behaviors and positive behaviors beyond sport participation. Furthermore, measurement tools such as the LSSS generally exhibit strong psychometric properties across diverse samples and cultural contexts. **Conclusion:** Overall, the evidence highlights the central role of autonomy-supportive coaching environments in promoting holistic youth development and enhancing the educational value of sport. Coaches are encouraged to reduce controlling behaviors and provide athletes with meaningful opportunities for choice and decision-making. Future research and practice should integrate autonomy supportive strategies into coach education and youth sport programs to maximize the developmental and social impact of organized sport.

Key words: Coach Autonomy Support, PYD, Life Skills Acquisition, Five Cs

Poster Presentation 51

Effects of Power Training and Plyometric Training on Physical Performance and Sport Attention in Collegiate Badminton Players

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This study compared the effects of power training and plyometric training on physical performance and sport attention in collegiate badminton players and recreational participants. A quasi-experimental design was adopted, and 12 participants completed eight weeks of either power training or plyometric training. Measurements included reaction time and movement time assessed by the FitLight system, vertical jump height measured using a Kistler force plate, and concentration performance assessed by the d2 Test of Attention. The expected results indicate that both training methods can improve physical performance. Greater improvements in reaction time and sport attention are anticipated following plyometric training, whereas power training is expected to produce greater improvements in vertical jump height.

Key words: Power Training, Plyometric Training, Sport Attention, Reaction Time, Badminton

Poster Presentation 52

The Effects of Acute Exercise Interventions on Executive Function in Children with Autism: A Scoping Review

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The impact of acute exercise on the executive function (EF) of children with Autism Spectrum Disorder (ASD) is a field of growing academic interest. ASD is characterized by deficits in social communication and restricted or repetitive patterns of behavior, where impaired EF is closely associated with high levels of these restricted and repetitive behaviors. Executive function refers to the high-level control system responsible for regulating behavioral and mental processes. Given that EF deficits can negatively affect multiple aspects of life, exploring non-pharmacological interventions like exercise is essential. Acute exercise interventions, in particular, offer high practical value in educational and clinical settings due to their low time cost, implementation flexibility, and immediate efficacy. This study searched PubMed and Scopus for articles published up to October 2025, specifically including peer-reviewed English empirical studies examining the effects of acute exercise on EF in individuals with autism. The review identified six relevant studies, the majority of which found positive effects of acute exercise on EF in this population. Specifically, five articles demonstrated that cognitively engaging, coordinative, or motor-assisted exercise modes—including exergaming, circuit training, and assisted cycling—significantly enhanced inhibitory control and working memory, whereas simple aerobic exercise was found to be less effective or potentially detrimental to socio-emotional information processing. In summary, this scoping review provides preliminary evidence that acute exercise intervention can serve as an effective strategy for transiently improving EF in individuals with autism. However, future research should further investigate different types of acute exercise and their underlying physiological mechanisms to clarify the relationship between exercise intervention and executive function in ASD.

Key words: ASD, physical activity, Executive function

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Poster Presentation 53

The Effect of a Single Session of Sensorimotor Rhythm Neurofeedback Training on Golf Putting Performance Under Pressure

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Introduction: Competitive sport performance is shaped by skill execution and psychological state. In golf putting, pressure can lead to increased anxiety and physiological arousal, which may impair motor accuracy and cause choking. Research has shown that a single session sensorimotor rhythm (SMR) neurofeedback training (NFT) can enhance putting performance and reduce anxiety. However, the effectiveness of SMR NFT in response to the monetary pressure as well as the sustained effect reamined to be determined. **Objectives:** The present study aims to examine whether a single session SMR NFT mitigates performance deterioration under pressure in golf putting. Additionally, the participants will complete a follow-up assessment one week after the intervention to further examine the sustained effects of SMR NFT. Secondary objectives aim to investigate the associations between CZ SMR power, anxiety, perceived stress, confidence, and relaxation under pressure. **Methods:** Forty right-handed athletes (18–30 years) will be randomly assigned to the SMR neurofeedback or sham-feedback control groups. All participants will complete identical no-pressure baseline and monetary-pressure tests, including a pre-test and post-test with a monetary incentive of NT$1,500 per successful putt. During the intervention, participants will receive approximately 30 minutes of SMR neurofeedback or sham training, followed by an immediate post-test and a one-week retention test under monetary pressure. The EEG measures at Cz will be recorded concurrently during each pressure phase, and the psychological measures (CSAI-2, PSS-14, STAI-S, and VAS) will be collected at the same time points. Behavioral outcomes (success rate and radial error) will be analyzed using paired-sample t tests. Pearson correlations will be conducted to examine the association between SMR power, anxiety/perceived stress, and performance changes. **Expect (Expected) results:** This study anticipates that SMR NFT will significantly attenuate pressure-induced performance decrements and anxiety in precision motor tasks compared to the sham control group. And the beneficial effect of SMR NFT training on golf putting performance under pressure will be observed at the retention phase. Additionally, the elevated Cz SMR power will demonstrate negative correlations with anxiety, perceived stress, and positive correlations with self-reported confidence and relaxation.

Key words: sensorimotor rhythm neurofeedback, golf, choking under pressure, EEG

Poster Presentation 54

Effects of Pressure on Pitching Location Variability in Elite High School Baseball Pitchers

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Introduction: Psychological pressure may increase performance variability during movement execution. In baseball pitching, such variability may be reflected in fluctuations in ball release and motor control, leading to increased inconsistency in pitch location. Small variations in movement execution may result in greater dispersion of pitch outcomes, even when overall pitching mechanics remain relatively stable. Pitching location variability provides a direct indicator of pitching command stability under pressure because pitching performance relies on precise and repeatable control. **Limitations:** However, many studies examining pressure effects on motor performance have relied on laboratory-based tasks or indirect performance measures, limiting the applicability of findings to real sport-specific actions. In addition, the neural mechanisms linking pressure-related motor variability to sensorimotor cortical activity during actual sport performance remain insufficiently understood. **Objectives:** The primary objective of this study is to examine whether pitching location variability, indexed by the standard deviation (SD) of pitch location, changes under pressure in elite high school baseball pitchers. A secondary objective is to investigate the association between sensorimotor cortical event-related desynchronization and synchronization (ERD/ERS) patterns and pitching location variability under pressure. An exploratory objective is to examine whether pressure-related psychological states are associated with neural and behavioral responses. **Methods:** Thirty-four elite high school baseball pitchers will participate in this study. A within-subject crossover design will be used to compare pitching performance under pressure and non-pressure conditions, with pressure induced via a social-evaluative threat paradigm. Pitching performance will be indexed by pitching location variability, quantified as the standard deviation (SD) of pitch location. Electroencephalography (EEG) will be recorded to assess sensorimotor cortical ERD/ERS during pitching, and pressure-related psychological states will be assessed using validated self-report questionnaires. Within-subject comparisons will examine differences in pitching location variability between conditions, and associations between changes in ERD/ERS and pitching location variability will be analyzed to assess neural–behavioral relationships under pressure. **Expected Outcome:** It is expected that pitching location variability will increase under pressure. Changes in sensorimotor cortical ERD/ERS are anticipated to be associated with individual differences in pitching location variability, suggesting a relationship between neural activity and pitching control stability under pressure.

Key words: ASD, physical activity, Executive function

Poster Presentation 55

Decoding Youth Athletes' Sport Specialization: A Scoping Review

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Background: In recent years, youth competitive sport has shifted toward earlier selection and higher training intensity, making sport specialization an increasingly common—and often expected talent-development pathway. However, specialization is frequently accompanied by year-round training and competition, insufficient rest and recovery, and reduced opportunities for sport experiences, which may elevate the risks of overuse injury, overtraining, and sport burnout. Moreover, due to substantial variability in how specialization is defined and operationalized, the true feature of sport specialization remains unknown. **Purposes:** The present study employed a scoping review to systematically map the evidence based on definitions/concepts of youth sport specialization and to synthesize key patterns in physical, psychological, and developmental outcomes. **Methods:** A systematic search was conducted in major electronic databases (e.g., PubMed and Google Scholar) using Boolean combinations of keywords related to youth athletes, sport specialization, and outcome indicators, supplemented by hand-searching reference lists. Eligible studies were published in Chinese or English, involved youth or school-aged athletes, explicitly addressed sport specialization constructs or indicators, and reported at least one specialization-related outcome. **Results:** A total of 33 studies published between 2014 and 2025 were included, encompassing original research (cross-sectional, prospective/longitudinal, and retrospective designs), systematic reviews/meta-analyses, expert consensus statements, and clinical/organizational guidelines. Results indicated substantial heterogeneity in specialization definitions and measures; commonly used categorical indicators may conflate "specialization status" with high-exposure behaviors, thereby limiting cross-study comparability. The behavioral metrics of sports specialization can be categorized into months of participation per year, training/competition volume, intensive training periods, and insufficient rest, yielding more consistently delineated risk profiles. The behavioral outcomes of sport specialization can manifest as a signal of an elevated risk of overuse injury and an imbalance in the exposure–recovery ratio. Psychologically, sport specialization was more often associated with higher sport burnout and specific mental health difficulties. However, effect sizes varied as a function of contextual factors, including academic pressure, role conflict, and social expectations. Developmentally, the evidence did not support a linear narrative that earlier specialization reliably yields greater long-term success; instead, long-term performance and achievement appeared dependent on sport-specific demands and selection-system contexts. Overall, youth sport specialization does not inevitably result in adverse outcomes; instead, more consistent risks emerge when specialization co-occurs with year-round participation, high exposure coupled with inadequate recovery, and identity exclusivity, which are linked to overuse injury, burnout, emotional distress, and decreased sport participation. **Discussion:** Future research and practice should move beyond a dichotomous "specialized vs. non-specialized" framework and explanation. Further, a

combined sport exposure model and longitudinal monitoring using measurable indicators (e.g., participation months, training/competition volume, rest days, sleep, pain/fatigue, and burnout) can improve comparability and translatability of sport specialization research.

Key words: youth athletes; adolescent athletes; sport specialization; early sport specialization; single-sport specialization

Poster Presentation 56

Effects of Acute Exercise Interventions on Prefrontal Alpha EEG Asymmetry and Affective Outcomes: A Systematic Review

HUNG TA HEISH

Background: Previous research has demonstrated a clear association between asymmetrical activation of the prefrontal cortex (PFC) and psychological responses to exercise. Specifically, relatively greater resting activation in the left compared with the right PFC has been linked to more favorable psychological outcomes following exercise, including enhanced affective states, reduced anxiety, and improvements across multiple dimensions of arousal. **Purpose**: (1) to examine the influence of pre-exercise prefrontal EEG asymmetry on exercise-related responses, and (2) to investigate the effects of acute exercise on post-exercise prefrontal EEG asymmetry and associated affective and psychological states. **Methods**: A systematic review was conducted using studies retrieved from the PubMed and Scopus databases, including articles published up to December 27, 2025. Studies were included if they met the following criteria: (1) exercise or physical activity was used as the intervention; and (2) frontal alpha asymmetry assessed by electroencephalography (EEG) and affective or psychological variables were measured both before and after the exercise intervention. **Result**: reliminary findings suggest that baseline frontal alpha asymmetry may be related to affective responses during exercise. Acute exercise appears to induce changes in frontal alpha asymmetry that are accompanied by positive psychological outcomes, although heterogeneity across studies was observed. **Conclusion**: his systematic review suggests that frontal alpha asymmetry may play an important role in both pre-exercise predispositions and post-exercise affective responses. Acute exercise appears to influence prefrontal cortical activity and emotional states, highlighting the relevance of frontal alpha asymmetry as a neurophysiological marker in exercise psychology research.

Key words: exercise1, physical activity2, emotion3, mood4, affect5, valence6, stress7, arousal8, activation9, anxiety10, anxious11, depress12, energy13, calm14, relax15, electroencephalography16, electroencephalogram17, EEG18, Frontal19, Alpha20, asymmetry21

Poster Presentation 57

Preliminary Effects of Resistance Training on Task Switching and Clinical Symptoms in Adults with ADHD: A Multiple-Baseline Single-Subject Study

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Introduction: Adults with Attention Deficit Hyperactivity Disorder (ADHD) frequently exhibit persistent impairments in executive functions, particularly set-shifting. Although aerobic exercise has shown promise for improving executive control, the neurocognitive benefits of resistance training (RT) remain underexplored. In our previous study, we investigated the acute effects of a single RT session and found no significant immediate improvements in task-switching performance. This finding suggests that cognitive benefits in this population may require the accumulation of physiological adaptations associated with sustained training. **Objectives:** Building upon our acute-phase findings, this study investigated the feasibility and effects of a 12-week periodized chronic RT intervention on task-switching performance, neurobiological markers, clinical symptoms, and physical strength in adults with ADHD. **Methods:** A single-subject multiple-baseline design was employed over a 24-week period. Three adults with ADHD were assigned to staggered baseline phases (2, 6, and 6.5 weeks) to control for maturation effects. Following the baseline phase (Phase A), participants completed a 12-week periodized RT program (Phase B), followed by a non-intervention follow-up phase. Cognitive performance and P300 components were assessed using a task-switching paradigm with concurrent EEG recording. Serum insulin-like growth factor-1 (IGF-1) and vascular endothelial growth factor (VEGF) levels were monitored via blood sampling. Clinical symptoms were measured using the Adult ADHD Self-Report Scale (ASRS), State-Trait Anxiety Inventory (STAI), and Depression Anxiety Stress Scales-21 (DASS-21). For this preliminary report, intervention effects were evaluated using visual analysis and percentage change calculations. **Results:** Visual inspection revealed consistent improvements following chronic intervention, contrasting with acute-phase null results. Participant LR03 (2-week baseline) demonstrated the largest reduction in switch trial reaction time (-35.3%) and global mixing cost (-70.5%). Participants with longer baselines (LR01, LR02) showed reaction time reductions of 8.5% and 19.3%. Crucially, ASRS scores decreased by 9.9% to 19.4%, accompanied by concomitant reductions in anxiety and stress. Lower-limb strength increased by 50% to 118%, confirming high intervention fidelity. **Discussion and Conclusion:** Preliminary findings suggest that chronic RT is a feasible intervention for enhancing executive function and reducing both core ADHD symptoms and emotional dysregulation. These positive outcomes support a functional relationship between cumulative physiological adaptations and cognitive improvement. Biochemical analyses are ongoing to elucidate the potential neuroplastic mechanisms underlying these effects.

Key words: Mental Health, Strength Training, Cognitive Flexibility, Single-Case Experimental Design

Poster Presentation 58

Effects of a Brain Endurance Training Intervention on Sport Performance: A Literature Review

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Introduction: Mental fatigue is known to impair sport performance. In response to the detrimental effects of mental fatigue, researchers have developed and evaluated training protocols designed to target perceptual and cognitive demands associated with sport performance. Brain endurance training (BET) is an emerging training concept with the potential to enhance athletic performance. However, there is currently a lack of comprehensive reviews synthesizing BET intervention protocols and their associated performance outcomes. **Purpose**: This review integrates studies that used BET as the primary intervention in athletes and provides recommendations for future research. **Method**: A systematic search was conducted using the PubMed, Web of Science, ScienceDirect, Google Scholar, and Airiti Library database to identify studies studies pertaining to brain endurance training in the context of sport performance. The search encompassed the period from May 2015 to November 2024. The inclusion criteria required that studies address both brain endurance training and sport performance and examine changes in performance outcomes. **Results**: This review showed that different type BET (prior BET, post BET, con BET) could enhanced exercise performance (VO2max, time to exhaustion). Otherwise, inter BET can increase accuracy of padel hitting and soccer shooting under fatigue condition during exercise. **Conclusion**: BET appears to be an effective intervention for enhancing sport performance. Future research should investigate the underlying neurophysiological mechanisms, as well as training cognitive load management and periodization.

Key words: mental fatigue, cognitive load, sport performance, brain training

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Poster Presentation 59

Integrating behavioral and neuroelectric evidence: Exercise-induced enhancement of executive functions in children and adolescents with preterm birth

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Children and adolescents born preterm are at elevated risk for executive function (EF) difficulties and atypical brain development, yet exercise-based interventions in this group remain underexplored. This review explores how acute and chronic exercise may support EF in preterm-born youth from both behavioral and event-related potential (ERP) perspectives. The developmental foundations and lifespan significance of EF are outlined, followed by consideration of the nature and neural correlates of EF impairments associated with preterm birth. Exercise-induced EF and ERP adaptations in typically developing children and adolescents are then synthesized and used as a comparative framework for interpreting emerging evidence in preterm-born populations and related neurodevelopmental conditions. Particular attention is given to exercise dose, modality, and cognitive engagement, as well as ERP components. The review provides a conceptual and empirical basis for designing developmentally sensitive, evidence-informed exercise interventions for this vulnerable population.

Key words: physical activity, cognitive function, brain development, premature

Poster Presentation 60

Life Stress and Defense Mechanisms in Adolescent Athletes: A Scoping Review

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Background: Adolescent athletes, confronted with multiple demands from training, competition, and academic career development, often experience substantial life stress. Existing research has shown that life stress is associated with emotional distress, risk of injury, burnout, and dropout. Defense mechanisms, as psychological regulatory processes activated in response to stress, can influence perceived stress, emotional turbulence, and recovery, thereby shaping mental health and athletic performance. **Purpose:** This study adopted a scoping review approach to map and integrate research on life stress and defense mechanisms among adolescent athletes, to delineate their potential associations with burnout, emotions, mental health, and injury, training load and recovery, and to propose directions for future research. **Methods:** Following the PRISMA-ScR procedure, database searches, deduplication, and multi-stage screening were conducted to include empirical and review studies related to stress, burnout, emotions, and defense mechanisms in adolescent/young athletes. Through data organization and thematic synthesis, we summarized study samples, main variables, research designs, and core findings. A total of 11 core articles were included, encompassing systematic reviews/meta-analyses, narrative reviews, clinical reports, critical appraisals, cross-sectional and longitudinal studies, as well as conference abstracts. **Results:** The integrated findings indicated that: (1) Defense mechanisms show an interpretable process-based relationship with sport burnout and may form indirect pathways through variables such as resilience, perceived stress, and recovery status; they are also associated with longitudinal changes in the intensity and direction of competitive emotions. (2) Mental health risks among elite adolescent athletes often co-occur with the accumulation of stressors, insufficient support systems, and conflicting role demands, highlighting the need to understand individual differences in stress adaptation within a developmental context. (3) Overuse injuries, overtraining, and burnout are frequently linked to high exposure to training and competition, insufficient recovery, and inadequate monitoring, thereby constituting important stress contexts. (4) Sport specialization in is inevitably lead to negative outcomes; however, when it co-occurs with high training/competition involvement, strong identity binding to the athlete role, and limited coping resources, it is more likely to increase life stress and psychological risk. (5) Intervention studies indicate that psychological interventions targeting adolescent burnout are gradually accumulating, yet systematic assessment of defense mechanisms and clarification of their modifiable components remain relatively insufficient. **Conclusion:** This scoping review suggests that defense mechanisms may be an important psychological mechanism linking life stress with burnout and mental health outcomes in adolescent athletes. Nevertheless, studies that directly focus on life stress, concurrently include measures of defense mechanisms, and adopt longitudinal verification remain limited. Future research should employ standardized life-stress scales and defense-mechanism instruments, combined with longitudinal designs, stratified analyses (by sport,

gender, and competitive level), and objective monitoring of training load and recovery, in order to clarify causal pathways and develop more precise prevention and intervention strategies.

Key words: adolescent athletes; life stress; defense mechanisms; sport burnout; sport specialization

Poster Presentation 61

The Effect of Competitive Anxiety on Swimming Performance: A Systematic Review

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Background: Competitive swimming places substantial physiological and psychological demands on athletes. Competitive anxiety has been widely examined as a key psychological factor influencing performance; however, findings in swimming remain inconsistent. Recent research suggests that psychophysiological indicators, particularly heart rate variability(HRV) , may provide important insights into how anxiety interacts with training load and performance. To date, an integrated synthesis focusing on competitive swimming is still limited. **Purpose:** This systematic review aimed to synthesize empirical evidence published between 2015 and 2025 on the relationships among competitive anxiety, training characteristics, psychophysiological responses, and swimming performance. The review further examined whether existing findings support the Individual Zones of Optimal Functioning (IZOF)framework and the moderating role of sport confidence in competitive contexts. **Methods**: The review was conducted in accordance with PRISMA guidelines. A systematic search of the PubMed database identified empirical studies published between January 2015 and March 2025 that examined competitive or pre-competition anxiety in swimmers. Eligible studies reported outcomes related to swimming performance, psychological states, or physiological indicators such as HRV. Following screening and eligibility assessment, findings were synthesized using a thematic analysis approach. **Results**: Across studies, high-intensity and high-volume training periods were consistently associated with elevated competitive anxiety and mental fatigue, particularly when recovery was insufficient. The anxiety–performance relationship was predominantly non-linear, providing support for the IZOF model. Elevated anxiety levels were frequently accompanied by reduced HRV, indicating increased autonomic nervous system stress. Additionally, swimmers with higher trait anxiety tended to report lower sport confidence, whereas elite swimmers demonstrated more effective anxiety regulation and more adaptive psychophysiological responses. **Conclusion**: Evidence from the past decade suggests that competitive anxiety should not be conceptualized solely as a detrimental factor but rather as a performance-related psychological state requiring individualized regulation. Integrating HRV monitoring with psychological skills training may help identify athletes' optimal anxiety zones and enhance competitive performance. Future research should adopt integrated psychophysiological models to optimize training design and competition preparation in swimming.

Key words: Competitive anxiety, Swimming performance, Heart rate variability, Individual Zones of Optimal Functioning (IZOF)

Poster Presentation 62

The effects of aerobic exercise intervention on cognitive function and heart rate variability: Literature Review

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Cognitive function is inextricably linked to quality of life, and existing research indicates that regular exercise can effectively improve cognitive performance. Furthermore, heart rate and autonomic nervous activity are widely considered physiological indicators that can be promoted by exercise intervention, and these indicators also show a positive correlation with cognitive performance. However, no studies have yet reviewed the effects of aerobic exercise intervention on cognitive function and heart rate variability. Therefore, this article reviews the literature to examine the impact of aerobic exercise intervention on cognitive performance and heart rate variability, and summarizes and discusses the results of acute (single) or long-term interventions from the included articles. The review found that six articles have explored this topic, and most studies found positive benefits of aerobic exercise for cognitive performance. In summary, this literature review provides preliminary evidence that acute or chronic aerobic exercise intervention has positive benefits for both cognitive performance and heart rate variability; however, further research is needed to explore the dosage of aerobic exercise, its impact on cognitive function, and the accuracy of heart rate measurements.

Key words: fitness exercise, physical activity, heart rate variability, cognitive function

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Poster Presentation 63

Neurocognitive Activity During the Preparation of Pistol Shooting: Comparative EEG Profiles of Skilled Deaf Shooters and Novice Shooters

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Introduction: Several studies have indicated the relationship between sports performance and electroencephalographic (EEG) activity, particularly the association between superior shooting performance and decreased left temporal activation (i.e., higher alpha power) in hearing individuals; however, research focusing on deaf athletes remains limited. **Objectives**: This study aimed to employ an expert-novice comparison design (athletes vs. individuals without prior competitive shooting experience) to identify EEG markers associated with shooting performance of deaf individuals. **Methods**: 19 deaf expert shooters and 20 deaf novices were recruited. Each participant completed 30 shots under two conditions using a 10-meter air pistol: (1) aimed shooting and (2) non-aimed (motor control) shooting. Each condition comprised three rounds of 10 shots, totaling six rounds, with the conditions presented in a randomized order. After each round, participants completed the NASA-TLX to assess mental workload. **Results**: The results indicated that expert shooters demonstrated significantly higher average scores in the aimed shooting condition compared to novices (7.94 ± 1.24 vs. 2.76 ± 2.73). Regarding perceived workload, both groups reported significantly higher ratings in the aimed condition than in the action control condition, confirming the effectiveness of the experimental manipulation. EEG analysis focused on alpha power in the temporal lobes during the two seconds preceding the trigger pull. To isolate brain activity specific to the aiming task, alpha power from the motor control condition was subtracted from that of the aimed condition for each participant. The results revealed that expert shooters exhibited significantly higher alpha power in the right temporal region compared to novices (3.26 ± 2.23 dB vs. 0.7 ± 2.24 dB, $p = .001$, $d = 1.14$), while no significant difference was observed in the left temporal region (1.14 ± 3.62 dB vs. 1.09 ± 4.24 dB, $p = .968$, $d = 0.013$). **Discussion**: The present findings contrast with previous studies reported in hearing individuals and may therefore support the concept of crossmodal plasticity, whereby deprivation of a specific sensory modality is associated with neural reorganization to adapt to environmental demands. **Conclusion**: These findings suggest that decreased right temporal activation is associated with superior shooting performance in individuals with hearing impairments.

Key words: Precision Sports; EEG, Athlete, Optimal Performance

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Poster Presentation 64

A Review of Tai Chi and Executive Function: Evidence and Insights from Studies in Taiwan

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As Taiwan rapidly transitions into a super-aging society, identifying effective non pharmacological interventions to mitigate age-related cognitive decline has become a critical public health priority. Tai Chi Chuan (TCC), a traditional mind-body exercise, has gained international recognition for its potential cognitive benefits. This review aims to systematically synthesize the developmental trajectory and scientific contributions of TCC research conducted by Taiwanese scholars, focusing specifically on its impact on executive function (EF) and the underlying neurophysiological mechanisms. A narrative synthesis was performed on key empirical studies and theoretical frameworks published by prominent Taiwanese research teams over the past decade, encompassing behavioral assessments, neuroimaging (fMRI, DSI), and electrophysiological (ERP) evidence. Evidence suggests that TCC is uniquely effective in enhancing EF, particularly inhibitory control and task-switching, compared to purely aerobic exercises. Neuroscientific findings from Taiwan reveal that these behavioral improvements are associated with increased activation in the prefrontal and parietal cortices, enhanced attentional resource allocation (indexed by P300 amplitude), and improved heart rate variability (HRV) through autonomic regulation. Furthermore, cutting-edge research in Taiwan has established a "structural prediction model" demonstrating that the baseline integrity of the prefronto-striato thalamo-prefrontal (PSTP) white matter loop can predict the cognitive benefits derived from TCC training. Taiwanese research has evolved from early behavioral observations to sophisticated neuroimaging validations, establishing a robust evidence chain for TCC as a potent cognitive intervention. Future directions should focus on precision exercise prescriptions utilizing neural biomarkers and the integration of digital health technologies to facilitate the implementation of TCC in Taiwan's long-term care systems.

Key words: Tai Chi Chuan, Executive Function, Aging, Neuroimaging, Taiwan, Mind-Body Exercise

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Effects of High-Intensity Interval Exercise Combined with Respiratory Muscle Training on Executive Function and Heart Rate Variability in Adults with Obesity: A Research Proposal

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Obesity is a major global public health challenge associated with increased chronic disease risk and impairments in executive function and autonomic regulation. Individuals with obesity commonly exhibit reduced prefrontal cortical activity and decreased heart rate variability (HRV), reflecting compromised executive control and autonomic balance. Exercise interventions are effective in mitigating these deficits. High-intensity interval exercise (HIIE) has been shown to improve executive function and cardiac autonomic regulation, while respiratory muscle training (RMT) yields comparable benefits; however, their combined effects remain unclear. Therefore, this study aims to examine the effects of combined HIIE and RMT on executive function and HRV in young adults with obesity.Eighty obese participants aged 18–25 years (BMI ≥ 27 kg/m²; body fat ≥ 25% for males and ≥ 30% for females) will be randomly assigned to an intervention group (HIIE + RMT) or a control group. The eight-week intervention will include two sessions per week. Each session will consist of standardized Tabata-style HIIE (26 minutes) and a 10-minute pre-exercise RMT session using an inspiratory muscle training device set at 55% of maximal inspiratory pressure, with weekly load adjustments.Executive function will be assessed using the Stroop task, a spatial working memory task, and a task-switching paradigm. Resting HRV will be measured via electrocardiography and analyzed using SDNN, RMSSD, total power, and normalized high frequency power. Data will be analyzed using a two-way ANOVA (group × time). It is hypothesized that the HIIE + RMT group will show greater improvements in executive function and HRV, indicating enhanced prefrontal regulation and autonomic balance. These findings may address a gap in obesity-related exercise neuroscience and support the development of evidence-based precision exercise prescriptions.

Key words: exercise, respiratory training, heart rate variability, executive function, obese population

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Association between Pupillary Responses and Executive Function After Acute Aerobic Exercise

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Introduction: Acute aerobic exercise has been widely recognized for its potential to enhance executive function. With the integration of virtual reality (VR) in fitness, understanding how different levels of cognitive load—induced by environmental distractions and task complexity—influence these cognitive gains is crucial. Although pupillary responses are established physiological indicators of cognitive effort and autonomic arousal, the specific association between post-exercise pupillary changes and executive function performance in VR environments remains under-explored. **Purpose**: This study aims to investigate the association between pupillary responses and executive function after acute aerobic exercise under varying levels of intrinsic and extrinsic cognitive load within a VR setting. **Method**: Approximately 60 healthy adults will be recruited for a two-session experimental protocol. In the first session, participants will perform a cardiorespiratory fitness test (YMCA Submaximal Bike Test) while wearing a VR headset(Meta Quest 3s) equipped with a custom eye-tracking device to establish baseline pupillary data. In the second session, participants will be randomly assigned to one of four VR cycling conditions (moderate intensity) characterized by a 2x2 design: varying levels of intrinsic load (math task difficulty) and extrinsic load (environmental distractions). Executive function will be assessed pre- and post-exercise using the Digit Span, Stop Signal task, and Sternberg Scanning task. Pupillary diameter ratios will be calculated using the Daughman algorithm to analyze cognitive load changes. A 2-way mixed design ANOVA will be employed to examine the interaction between cognitive load conditions and changes in cognitive performance.

Key words: Executive Function, Cognitive Load, Exercise, Virtual Reality

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