Contents

ORAL PRESENTATION

OP_ERM01

AUTOLOGOUS PERIPHERAL BLOOD STEM CELL TRANSPLANTATON IN PATIENTS WITH CHRONIC LUMBAR RADICULOPATHY

Hadyanto Lim[1,2], Ilham Hariaji [3], Inda M. Sinaga [1], Julenda I. Sebayang[1], Surjadi Rimbun [4], Menang B. Tarigan [5], Alexander P. Marpaung [6], Adrian Khu [7]

[1] Department of Pharmacology and Pharmacy, Faculty of Medicine, Universitas Methodist Indonesia, Medan
[2] Department of Molecular Biology and Molecular Genetics, Biomedical Sciences Studies, Faculty of Medicine, Universitas Methodist Indonesia, Medan
[3] Department of Pharmacology and Therapeutics, Faculty of Medicine, Universitas Muhammadiyah Sumatera Utara, Medan
[4] Department of Biochemistry, Faculty of Medicine, Universitas Methodist Indonesia, Medan
[5] Department of Internal Medicine, Endocrine and Metabolic Diseases Division, Faculty of Medicine, Universitas Methodist Indonesia, Medan
[6] Department of Microbiology, Faculty of Medicine, Universitas Methodist Indonesia, Medan
[7]Department of Surgery, Faculty of Medicine, Universitas Methodist Indonesia, Medan

Email: hadyantolim61@gmail.com

ABSTRACT

Pain in lumbar radiculopathy resulting from compression of nerve roots is the leading cause of long-term disability. Current pharmacologic drugs have a limited effect to support their use in chronic radicular pain. This study investigated the effect of mobilised peripheral blood stem cells (PBSCs) on pain intensity and functional improvement in patients with chronic lumbar radiculopathy. We administered granulocyte colony-stimulating factor (G-CSF, 5.0 μg/kg/day) subcutaneously once a day for 5 days to 10 patients (3 women and seven men aged 50-79 years) with chronic radicular pain for mobilisation of CD34+ and mesenchymal stem cells into the peripheral blood followed by the leukapheresis on the fifth day. Herniated discs and spinal stenosis causing lumbar radiculopathy were confirmed by magnetic resonance imaging (MRI). Circulating and intravenous infusion of autologous PBSCs were analysed by flow cytometry. Patients also received transforaminal injections of 3 ml of PBSC at each affected lumbar level and followed for 12 weeks. Intravenous peripheral blood CD34+ cells increased after leukapheresis from 0.85 ±0.01 cells/μL to 149.30±17.80 cells/μL, $p<0.0001$, peripheral blood mesenchymal stem cells increased from 0.0010 ± 0.0005 cells/μL to 0.0091 ± 0.0005 cells/μL, $p<0.0001$. No serious adverse effects were related to this transplantation. Our findings showed a significant improvement in pain scores and disability after the PBSC transplantation in patients with chronic lumbar radiculopathy. We suggest that intravenous PBSCs followed by transforaminal lumbar injections might be a potential cell therapy for patients with chronic lumbar radiculopathy. These findings warrant further study in a randomised controlled trial.

Keywords: Peripheral Blood Stem Cell, Chronic Lumbar Radiculopathy, Herniated Dics, Spinal Stenosis, Radicular Pain

ORAL PRESENTATION

OP_ERM02

FEASIBILITY OF INCLUDING CARDIORESPIRATORY FITNESS AS AUXILIARY INDICATOR FOR ASSESSING BODY WEIGHT STATUS-A CASE STUDY OF HUALIEN COUNTY

Cheng-Hao Wang[1,2*]、Sen-Fang Huang [3]

[1] Institute of Education, Tzu Chi University, Hualien, Taiwan, R.O.C.[2] Stella Maris Primary School, Hualien, Taiwan, R.O.C.[3] Center for Physical Education Teaching, Tzu Chi University, Hualien, Taiwan, R.O.C.

Email: f4316hover@gmail.com

ABSTRACT

According to the World Health Organization, the global prevalence of obesity continues to rise among both adults and children. Health-Promoting Schools (HPS) project has been conducting for more than 25 years in Taiwan, and which WHO has promoted since 1990. Body Mass Index (BMI) is the primary indicator used to assess students' health status of body composition, but its association with physiological health is still frequently debated, such as: not able to measure fat directly, not establish the fat distribution around the body, not determine the function of body fat. Particularly, it is confirmed that current BMI-based definition of obesity can both underestimate and overestimate adiposity and underdiagnose and overdiagnose illness. Cardiorespiratory fitness (CRF) is a crucial health indicator, and has been scientifically evidenced an associated with morbidity and mortality reduction. In the 2022 academic year, we incorporated CRF as a supplementary measure of student health status in HPS program at Hualien County in Taiwan. This study examined the feasibility of using CRF as an auxiliary indicator for the HPS program. Surveyed involved program staffs and teachers via an online Likert scale 1-5 questionnaire from May 9 to May 26, 2023. A total of 182 valid responses were collected from 95 schools (100% response rate). Results showed: (1) Recognition of CRF as a valid indicator scored an average of 4.03/5 (SD = 0.807), indicating high agreement. (2) Administrative feasibility scored 3.59/5 (SD = 0.842), indicating moderate-to-high feasibility. (3) The overall effectiveness of health promotion scored 3.81/5 (SD = 0.787), also at a moderate-to-high level. (4) The total average score was 76.19%, exceeding the 60% feasibility threshold. Based on the findings, we recommend that CRF should be regarded as a routine measure as BMI, and formally integrating as health indicator in HPS program nationwide, and even worldwide.

Keywords: Health Promoting School, Body Mass Index, Obesity, Overweight, Cardiorespiratory Fitness

ORAL PRESENTATION

OP_ERM03

IMPACT OF A 6-WEEK EXERCISE PROGRAM ON PSYCHOLOGICAL MEASURES IN BREAST CANCER PATIENTS

Cynthia Anne Cornelius[1,2], Garry Kuan[2], Kok Lian Yee[1], See Mee Hoong[3]

[1]Department of Sport Science, Faculty of Applied Sciences, Tunku Abdul Rahman University of Management and Technology, Malaysia
[2]Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, Malaysia
[3]Breast Surgery Unit, Department of Surgery, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

Email: cynthiaac@tarc.edu.my

ABSTRACT

This study examined the effects of a 6-week exercise program on psychological outcomes in breast cancer patients during the early postoperative period. Twenty-five breast cancer patients who underwent surgical treatment (mean age: 66.24 ± 8.70 years; height: 154.40 ± 3.82 cm; weight: 62.27 ± 11.16 kg) participated in this non-randomized controlled study. Following the removal of surgical draining tubes, participants participated in the structured exercise program. Psychological outcomes such as perceived social support, psychological distress, quality of life and exercise behaviour were measured at baseline (T0), Week 3 (T1), and Week 6 (T2). Results indicated significant improvements across multiple psychological domains. Perceived social support and quality of life mean scores increased significantly from T0 to T2 (both $p = 0.001$) indicating an improving support system and quality of life. Psychological distress scores indicated a notable decrease in mean scores from T0 to T2 at $p = 0.01$, reflecting a decrease in negative emotional states hence improving functional outcomes after surgery. Furthermore, psychological constructs related towards exercise behaviour demonstrated significant positive change in perceived cost and benefits of change behaviour (both $p = 0.001$), increased in self-efficacy ($p = 0.001$), engagement in both behavioural processes ($p = 0.001$) and experiential processes ($p = 0.001$). Implementation of early rehabilitation programs proves beneficial in improving mental health and functional outcomes of breast cancer patients highlighting the positive role that early exercise program has in enhancing the psychological well-being and supporting behaviour change among breast cancer patient in the early stages of recovery.

Keywords: Breast Cancer, Exercise, Behaviour Change, Psychological Distress, Quality of Life, Social Support

ORAL PRESENTATION

OP_ERM04

CROSS-CULTURAL ADAPTATION, RELIABILITY, AND VALIDITY OF THE CHINESE VERSION OF THE CHILD AND ADOLESCENT MINDFULNESS MEASURE (CAMM-C)

Yuefan Li[1], Garry Kuan[1]

[1]*Exercise and Sports Science Programme, School of Health Sciences, University Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia*

Email: liyuefan@student.usm.my

ABSTRACT

The Child and Adolescent Mindfulness Measure (CAMM), a ten-item questionnaire using a five-point Likert scale, was developed by Greco *et al.* (2011) to assess mindfulness in children and adolescents aged nine years and above. This study aimed to validate the Chinese version (CAMM-C), providing data from a Chinese sample to improve the original measure's reliability/validity and facilitate mindfulness research in China by establishing a standardised psychological tool. The CAMM was translated into Chinese, adhering to forward and backward translation protocols. Confirmatory factor analysis (CFA) was then used to validate the CAMM-C, with five experts involved in the translation phase (including professional Chinese-English translators and sports science/psychology specialists proficient in both languages). Mplus 8.0 was used to perform CFA on data from 282 Chinese adolescents aged nine and above. CAMM-C validation demonstrated good reliability/validity: RMSEA (90% CI) = 0.074 (0.068-0.080); SRMR = 0.031; CFI = 0.959; TLI = 0.953; Cronbach's alpha = 0.938. All ten original items were retained, showing strong internal consistency (0.904-0.927). The successful validation of the CAMM-C indicates that it serves as a reliable and valid psychological measurement tool for assessing mindfulness skills in Chinese children and adolescents aged nine years and above, within the Chinese cultural context. Future research will extend this work to different regions and increase the sample size to further strengthen the reliability and cultural adaptability of the original CAMM.

Keywords: Confirmatory factor analysis; Chinese adolescents; children; mindfulness.

ORAL PRESENTATION

OP_ERM05

THREE-DIMENSIONAL INTERACTION MECHANISMS WITHIN THE FAMILY SPORTS ENVIRONMENT: AN INTEGRATED MODEL FOR ADOLESCENTS'

Li Shen[1], Garry Kuan[1], Ke Zhou[2]

[1] Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia
[2] School of Physical Education, Henan University, Kaifeng, Henan, China

Email: lishen@student.usm.my

ABSTRACT

Integrating socio-ecological and family systems theories, this study investigates how physical (equipment/space), behavioural (parental modelling/co-activity), and psychological (values/support) dimensions of the home sport environment interact to shape adolescents' exercise intentions. The family sport environment was assessed, with structural equation modelling (SEM) employed to examine the three-way interaction and mediating effects of self-determined motivation. Key findings included: (1) A synergistic effect of the three-dimensional home environment on exercise intentions was observed through direct and indirect pathways (total effect $\beta = 0.52$, $p < 0.001$), with behavioural ($\beta = 0.31$) and psychological ($\beta = 0.28$) components playing a notably greater role than the physical environment ($\beta = 0.15$). (2) A significant three-dimensional interaction effect showed the behavioural environment reinforced the psychological environment's promotion of autonomous motivation ($\Delta R^2 = 0.07$, $p < 0.01$), while the physical environment played a compensatory role solely when the behavioural environment was weak (moderating effect $\beta = 0.12$, $p < 0.05$). (3) Self-determined motivation partially mediated the impact of the three-dimensional environment on exercise intentions (mediator share 38.6%), and community sport resources positively moderated the association between the home environment and individual motivation (cross-level interaction $\beta = 0.09$, $p < 0.05$). The study highlights the need for synergistically optimising the home sport environment through physical support, behavioural modelling and psychological empowerment to stimulate intrinsic motivation for exercise in adolescents. A "family-school-community" ecological linkage strategy is proposed, providing a theoretical framework for policymakers to design effective family sport promotion programmes.

Keywords: Family sport environment; Self-determination theory; Exercise intention

ORAL PRESENTATION

OP_ERM06

A PRELIMINARY FINDINGS OF THE EFFECT OF VIRTUAL REALITY AUGMENTED TREADMILL TRAINING FOR INDIVIDUALS WITH SPINAL CORD INJURY

***Wadhwa G*[1], *Anand P*[2], *Rishi P*[3]**

[1]*PhD. Scholar, Faculty of Physiotherapy, SGT University, & Assistant Professor ISIC Institute of Rehabilitation Sciences, India*

[2] *Professor & Dean, Faculty of Physiotherapy, SGT University, India*

[3] *Associate Professor, Faculty of Physiotherapy, SGT University, India*

Email: garimawdhw@gmail.com

ABSTRACT

The ability to walk again and become functionally independent is the topmost priority of individuals with spinal cord injury (SCI). Traditional overground gait rehabilitation methods, although found to be effective, offer limited engagement and lack motivation and consistency. Augmenting virtual reality with a treadmill for gait rehabilitation could be an effective solution to overcome the challenge. The engaging and interactive nature of virtual reality and repetitive task-specific training through treadmills can significantly contribute to accelerating the recovery process of individuals with incomplete spinal cord injuries. 10 individuals with incomplete SCI (AIS B, C, or D) were recruited from the Indian Spinal Injuries Center, New Delhi, and were provided with 15 sessions of 20 minutes of virtual reality-assisted treadmill training using the Technobody Walker View System. Post intervention, the spatio-temporal parameters of the gait cycle, the balance, and the functional independence measures were compared to the baseline values. The preliminary finding reported the promising potential of VR-augmented treadmill training on step length, hip and knee range of motion of the joint, Berg balance, and Spinal Cord Injury Independence Measure. Additionally, the intervention is found satisfactory and acceptable with participants with no adverse event. Despite the small sample size, these early findings suggest that VR-augmented treadmill training may offer a novel, effective rehabilitation strategy for individuals with SCI, with potential applications in clinical rehabilitation settings. Further research with a larger sample size and longer follow-up periods is needed to validate these findings and determine the long-term benefits of this intervention in SCI rehabilitation.

Keywords: Spinal Cord Injury, Virtual Reality Augmented Treadmill Training,

ORAL PRESENTATION

OP_ERM07

ENHANCING PHYSICAL HEALTH ASSESSMENT AND INTERVENTION FOR CHILDREN: A CASE STUDY FROM KINDERGARTEN IN GUANGDONG PROVINCE, CHINA

Zhang Haiyan[1,3], Garry Kuan[1], Kueh Yee Cheng[2], Luo Yi[4]

[1] School of Health Sciences, Universiti Sains Malaysia
[2] School of Medical Sciences, Universiti Sains Malaysia
[3] Guangzhou Huali College, China.
[4] Guangzhou Institute of Physical Education, China.

Email: zhanghaiyan@student.usm.my

ABSTRACT

This study aimed to enhance physical health in children aged 5-6 years through scientific assessments and systematic movement interventions, specifically evaluating the effects of a 12-week structured movement curriculum on physical function and motor skills. 39 senior kindergarten children (aged 5-6 years) from a Guangzhou kindergarten volunteered, with parental consent obtained. A 12-week exercise intervention programme was carried out, comprising bi-weekly sessions lasting 30-45 minutes. The curriculum included warm-up activities (rhythmic exercises, fun games), basic motor skill training (walking, running, jumping, throwing, climbing), team sports (tug-of-war, role-playing), and relaxation sessions. Instructional techniques involved game-based learning, demonstrations, and individual guidance. For data collection, the Test of Gross Motor Development-3 (TGMD-3) assessment was employed to quantitatively evaluate mobility and object control skills. Paired sample t-tests were conducted to identify statistically significant differences between pre- and post-intervention scores. From the results, high correlation coefficients were observed (r = 0.903 for displacement; r = 0.788 for object control; r = 0.912 total score) with a significant p-value of 0.001, indicating strong improvement. Large t-values (t = 7.393, t = 8.233, t = 9.815) confirmed highly statistically significant enhancements in post-test scores ($p < 0.001$). The exercise programme significantly improved physical health and basic motor skill development among young children. This study demonstrated the efficacy of short-term intensive interventions and highlighted the effectiveness of gamification and age-appropriate design in fostering children's engagement in physical activities, offering a replicable model for reforming kindergarten physical education curricula.

Keywords: Physical health; Structured exercise curriculum; Intervention enhancement programme

ORAL PRESENTATION

OP_ERM08

COMPARATIVE MATCH RHYTHM ANALYSIS OF ELITE WOMEN'S TABLE TENNIS

Linghong Liu[1], **Garry Kuan**[1]

[1]*Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia*

Email: liulinghong@student.usm.my

ABSTRACT

Rhythm is a key determinant of successful performance in elite table tennis. This study examined rhythmic variations associated with differing playing styles in elite female athletes, focusing on serve, receive, and scoring phases during serve stalemates. Video data were meticulously extracted from five singles matches (18 games and 820 strokes), during the group stage of the 57th WTT Championships between the Chinese and Indian national teams. Comprehensive metrics, mean, SD, and CV, were calculated for each phase to quantify rhythmic characteristics and tempo variations. No statistically significant differences comparing winners and losers across the three phases. However, a significant positive correlation existed between serve rhythm (SR) and receive rhythm (RR). In the serving phase, Chinese players consistently exhibited faster and notably more stable rhythms (CV = 20.1%), suggestive of a highly controlled tempo, while Indian players showed greater variability in their SR (CV = 25.2%), suggesting a more adaptable or disruptive serving. Conversely, in the receiving phase, Chinese players displayed greater rhythm variation (CV = 34% ± 0.03) compared to their Indian counterparts (CV = 29% ± 0.08), implying tactical adaptation. Notably, during the last phases, Chinese players demonstrated stronger rhythm control and efficiency (CV = 67.1% ± 12.13), whereas Indian players demonstrated greater rhythm disruption ability (CV = 72.4% ± 13.02). The findings highlight the impact of tempo manipulation on competitive outcomes in elite women's table tennis, revealing how contrasting rhythmic approaches can uniquely contribute to the overall dynamics and performance.

Keywords: Table Tennis, Rhythm Dynamics, Match Analysis

ORAL PRESENTATION

OP_ERM09

VALIDATION OF THE MALAY VERSION OF THE ATHLETIC MENTAL ENERGY SCALE (AMES) IN SARAWAK YOUTH ATHLETES

***Elvis Mehid*[1], *Garry Kuan*[1], *Chin Ngien Siong*[2], *Yee Cheng Kueh*[3]**

[1]*Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia*
[2]*Institute of Teacher Education, Batu Lintang Campus, Kuching 93200, Malaysia*
[3]*Biostatistics and Research Methodology Unit, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia*

Email: elvismehid85@gmail.com

ABSTRACT

This study aimed to validate the Malay version of the Athletic Mental Energy Scale (AMES) for use with young athletes in Sarawak, Malaysia. The research involved 503 athletes, aged 13 to 18 years, from various sporting disciplines across Sarawak. The original AMES was translated into Malay using standard forward-translation and back-translation methodologies to ensure both linguistic and conceptual equivalence. Confirmatory factor analysis (CFA) was subsequently employed to assess the factorial validity of the Malay-AMES, while reliability was determined using Cronbach's alpha (α) and composite reliability (CR) indices. The findings supported the original six-factor structure of the AMES. The derived model exhibited a strong fit with established indices (CFI = 0.952, TLI = 0.937, RMSEA = 0.053, SRMR = 0.04). The results of the assessment showed good internal consistency across all subscales, with both Cronbach's alpha and CR values exceeding the recommended threshold of 0.70. Further evidence supported convergent and discriminant validity. The results indicated that the Malay version of the AMES demonstrated sound psychometric properties and provides a valid and reliable tool for assessing athletic mental energy among youth athletes in Sarawak. This validated scale could be used in both research and applied sports psychology settings throughout Malaysia to gain actionable and useful insights.

Keywords: Athletic Mental Energy; Malay Version; Youth Athletes; Sports Psychology.

ORAL PRESENTATION

OP_ERM10

THE EFFECT OF EXERCISE ON HIGH-DENSITY LIPOPROTEIN IN ADOLESCENTS

Chen Xianjun[1,2], Garry Kuan[1], Tan Tingting[3]

1 Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia
2 College of Physical Education, Hainan University, Hainan, China
3 Haikou Changbin Primary School, Hainan, China

Email: chenxianjun@student.usm.my

ABSTRACT

With economic development, lifestyle changes have increased obesity rates, a significant risk factor for arteriosclerosis. Adolescent obesity-related health issues elevate the risk of chronic diseases, such as coronary artery sclerosis and hypertension, in adulthood. Exercise can mitigate obesity, prompting investigation into its impact on high-density lipoprotein (HDL). This study examined the relationship between exercise and HDL in 865 middle school students. The primary aim was to assess the effect of exercise on arteriosclerosis pathogenic factors, such as HDL, in adolescents, informing prevention strategies. A simple questionnaire survey was collected for baseline data, classifying participants by exercise habits, sporting activities, gender, and training years. Serum samples, obtained using a disposable negative-pressure venous blood collector, were analysed for HDL and total cholesterol (TC) levels via enzyme methods and spectrophotometry. The arteriosclerosis index was calculated as (TC)-(HDL)/(HDL). The results showed that exercise significantly affected HDL, with greater changes observed in boys. Increased exercise frequency, duration, aerobic activity, and intensity correlated with higher HDL and lower arteriosclerosis indices. Aerobic exercise and participation in physical activities effectively increased HDL levels; exercise duration should be maintained between 1–2 hours. This study confirms exercise's positive effect on HDL in adolescents, suggesting it could improve lipid metabolism and potentially aid in preventing arteriosclerosis. However, results are limited to schools in Quanzhou City, necessitating future research with broader age ranges and larger regional samples.

Keywords: Exercise; Adolescents; High-density lipoprotein; Arteriosclerosis index

ORAL PRESENTATION

OP_ERM11

EFFECT OF STRUCTURED EXERCISE ON BENIGN FIBROEPITHELIAL BREAST LESIONS IN A FEMALE PATIENT

Arun Thampi[1]

[1]*Asia College of Exercise Medicine, Malaysia*

Email: dyuthi.fitness@gmail.com

ABSTRACT

A 32-year-old female diagnosed with benign fibroepithelial breast disease was enrolled in a structured exercise program aimed at improving overall health and supporting non-invasive management of breast pathology. Initial ultrasonography showed bilateral fibroadenocystic changes and an ill-defined hypoechoic lesion in the left breast measuring 18 x 11 mm, classified as BIRADS 4. Fine Needle Aspiration Cytology confirmed the lesion to be benign. A 24-week structured exercise program was implemented, involving daily treadmill walking and resistance training 3 to 4 times per week. At the end of the program, follow-up imaging revealed the lesion remained stable in size and morphology, leading to a revised BIRADS score of 3. No surgical intervention was required. Alongside this clinical progress, the patient showed reductions in body weight and fat mass, improved cardiovascular performance (evidenced by reduced heart rate during submaximal treadmill tests), and increased muscular strength and endurance as assessed by the Chair Stand and Timed Plank Hold tests. The participant also reported improved energy levels and reduced fatigue. These findings suggest that a structured, progressive exercise program may positively influence physical function, energy balance, and benign outcomes in breast health, particularly in individuals with non-malignant fibrocystic conditions.

Keywords: fibroepithelial lesion, structured exercise, benign breast disease, female health

ORAL PRESENTATION

OP_ERM12

PHYSICAL EXERCISE FOR INTERVENTION OF AGEING – A REVIEW

Vislavath Ashok[1]

[1]*Physical Education, Osmania University*

Email: vislavath.ashok@gmail.com

ABSTRACT

Exercise interventions for older adults should include a mix of aerobics, strength training, and balance activities. The recommended guidelines are 150 minutes of moderate intensity aerobic exercise or 75 minutes of vigorous-intensity aerobic exercise per week, along with at least two days of muscle-strengthening activities and balance exercises. Aerobic exercises Running, Walking, Cycling and Swimming are helpful for the development of cardio vascular health and endurance. Strength training helps to maintain and improve muscle mass and bone strength which are crucial for maintaining mobility and preventing from falls. Strength exercises can help maintain bone and functional health. This review found that exercise interventions for older adults are extremely diverse and that the findings from the included studies were mostly inconsistent. We were able to aggregate some of the effect sizes reported in the meta-analyses, which seem to suggest that the most effective interventions were resistance training, meditative movement interventions, and exercise-based active videogames. There is also mounting evidence of the protective effect of resistance training against health conditions typically associated with aging, including diabetes, heart disease, and cancer. The resistance training is beneficial for musculoskeletal health, promotes the maintenance of functional abilities, and protects from osteoporosis, sarcopenia, and lower-back pain. Regular physical activity can improve cardiovascular health, muscle strength, bone density, cognitive function, and mental well-being, contributing to overall health and longevity.

Keywords: Exercise intervention, cardiovascular health, muscle strength

ORAL PRESENTATION

OP_ERM13

IMPORTANCE OF PHYSICAL EXERCISE AND YOGA AS REGENERATIVE MEDICINE FOR THE ELDERLY PERSONS

Jagan Mohan Sidda[1]

[1]*Vivekananda Govt. Degree College, Hyderabad, Telangana, India*

Email: jmsidda@gmail.com

ABSTRACT

Exercise plays a significant role in regenerative medicine by promoting tissue regeneration and improving stem cell function. Studies have shown that exercise can enhance the regeneration of muscle, neural, and other tissues by activating and mobilizing stem cells. Furthermore, exercise can help rejuvenate aged stem cells, improving their ability to repair and regenerate damaged tissues. Exercise can increase the number and activity of stem cells in various tissues, including muscle, bone, and brain. Yoga, with its blend of physical postures, breathing techniques, and meditation, offers a promising avenue for regenerative medicine in the elderly, promoting healthy aging and addressing age-related decline. Consistent practice can lead to improved joint function, increased flexibility, and enhanced overall mobility, supporting active and fulfilling lives. Yoga is often recommended for arthritis, improving flexibility, balance and functional mobility. Yoga can help manage cardiovascular risk factors like high blood pressure and contributing for healthier heart. Yoga is suitable for the seniors and elderly persons to suit different levels of physical ability to improve the fitness levels. Yoga is generally considered safe and low impact exercise to improve physical health. In conclusion, yoga offers a holistic approach to regenerative medicine for the elderly, addressing physical, mental, and emotional well-being while potentially supporting regenerative processes at the cellular level.

Keywords: Exercise, Yoga, fitness

ORAL PRESENTATION

OP_ERM14

EXERCISE AND INJURIES IN SPORTS AND GAMES

Hanamant Jange[1]

[1]*University College of Physical Education, Gulbarga University, Karnataka, India*

Email: drhsjange03@gmail.com

ABSTRACT

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

Keywords: Exercise, injuries, warming up etc.

ORAL PRESENTATION

OP_ERM15

PREVENTION OF NON COMMUNICABLE DISEASES THROUGH PHYSICAL EXERCISE

Ramavath Prakash[1]

[1]*Department of Physical Education, AV College, Domalguda, Hyderabad*

Email: prakashkhokho222@gmail.com

ABSTRACT

Physical exercise is a crucial tool in the prevention and management of non-communicable diseases (NCDs) like cardiovascular diseases, cancers, and diabetes. Regular physical activity reduces the risk of these diseases and also improves overall well-being, mental health, and cognitive function. The World Health Organization (WHO) recommends at least 60 minutes of moderate to vigorous-intensity physical activity daily for children and young people, and at least 150 minutes of moderate-intensity physical activity per week for adults. Physical inactivity is a major risk factor for NCDs and other health problems. Sedentary lifestyles can lead to a higher risk of heart disease, stroke, type 2 diabetes, certain cancers, and depression Exercise Strengthens the heart, improves circulation and helps lower blood pressure and cholesterol all which reduce the risk of heart attacks and strokes. Exercise helps improve insulin sensitivity and regulate blood sugar levels reducing the risk of developing type 2 diabetes. Physical activity helps burn calories and maintain a healthy weight which is important for preventing and managing many NCDs. Running, swimming, cycling, dancing, and walking are suitable exercise for the prevention of Non communicable diseases. Exercise enhances brain health, improves thinking skills and reduces the risk of cognitive decline. Hence Physical Exercise is a Medicine for the Prevention of Non communicable diseases.

Keywords: Physical exercises, mental health, running, swimming, cycling

ORAL PRESENTATION

OP_ERM16

INJURIES AMONG BASKETBALL PLAYERS OF HYDERABAD DISTRICT – A REVIEW

Suresh Reddy[1]

[1]*Govt Degree College, Hayathnagar, Hyderabad, Telangana, India*

Email: koppula.sureshreddy@gmail.com

ABSTRACT

Games and sports can also result in injuries, some minor, some serious and still other in life long medical problem. Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue i.e. ligaments, muscles, tendons etc. There are numerous sports injuries happened in the field of sports. The sample for the study consists of 100 Male Basketball Players of Hyderabad District between the age group 18 to 25 Years. The questionnaire was used in the study. Whereas, the head injury area frequency is 145 and game injury percentage is 18.01%. The neck injury area frequency is 16 and game injury percentage is 1.98%. The upper extremities injury area frequency is 253 and game injury percentage is 31.45%. The torso injury area frequency is 114 and game injury percentage is 14.16%. The lower extremities injury area frequency is 277 and game injury percentage is 34.40 %. Hence, among all areas the highest percentage was 34,40% to lower extremities. The highest lower extremities injuries among basketball Players are ankle and knee.

Keywords: Injuries, ankle, knee, lower extremities

ORAL PRESENTATION

OP_ERM17

CONFIGURATION OF THE BODY AND MIND THROUGH YOGA MUDRAS FOR SUSTAINING INNER BALANCE AND BLISS: A REVIEW

Kariga Anitha[1]

[1]*Department of Physical Education, Government Degree College (Osmania University)*

Email: anitharajvalli61@gmail.com

ABSTRACT

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

Keywords: *Mudras, Prana, Elements, Energy balance, Self-healing.*

ORAL PRESENTATION

OP_ERM18

THE IMPACT OF PARTICIPATION LEVEL ON SELF-ESTEEM IN SPORTS PLAYERS

P. Supriya[1]

[1]*Govt. Degree College for Women, Begumpet, Hyderabad, India.*

Email: supriyanalla@gmail.com

ABSTRACT

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

Keywords: self-esteem, athletes, mental health

ORAL PRESENTATION

OP_ERM19

THE INFLUENCE OF FIVE MAJOR PERSONALITY TRAITS ON THE HAPPINESS OF TEENAGERS

Chen Kangle[1], Garry Kuan[1]

[1]Exercise and Sports Science Programme, School of Health Sciences, University Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia

Email: chenkangle@student.usm.my

ABSTRACT

The Five-Factor Personality Theory was proposed by American psychologists, which divides personality traits into five dimensions: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. This paper explores the relationship between the five major personality dimensions of adolescents and their sense of happiness. A questionnaire survey was conducted on 120 Chinese adolescents, and a 5-point rating system was adopted. According to the rating scale from completely disagree to completely agree, positive items scored from 0 to 4, and negative items scored from 4 to 0. Each personality dimension score ranged from 0 to 192. The higher the score of each dimension, the more obvious the personality tendency. The happiness index includes four dimensions: achievement, friendship, family affection, and environment. This assessment used a 4-point rating system, with the lowest score of 1 point and the highest score of 3 points for each test item. The score range was from 0 to 160 points, and the higher the score, the higher the life satisfaction. Based on data analysis, the five major personality traits of adolescents have certain relationships with positive emotions, negative emotions, and life satisfaction. The correlations of neuroticism were -0.37, 0.38, and 0.50, those of extraversion were 0.33, 0.34, and 0.42, those of openness were 0.27, 0.16, and 0.34, and those of agreeableness were 0.09, 0.02, and 0.19.

Keywords: Five major personality traits; teenagers; happiness

ORAL PRESENTATION

OP_ERM20

OPTIMISING PUTTER PERFORMANCE: THE EFFECT OF SHAFT POSITIONING ON DIRECTIONAL ACCURACY AND DISTANCE CONTROL

Wang Meng[1], Garry Kuan[2]

[1,2] Exercise and Sports Science Programme, School of Health Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia

Email: golfwong@student.usm.my

ABSTRACT

Putting performance in golf is significantly influenced by equipment characteristics, particularly shaft positioning. Although players and coaches often speculate on its impact, scientific studies are isolating shaft placement effects remain limited. This study investigates the impact of three shaft placements—forward (ahead of the head centre), Centre (neutral), and rear (slightly behind the head)—on putting accuracy and distance control. Thirty amateur golfers from three handicap categories (low, mid, high) performed putts at 1.5m, 3m, and 4.5m per configuration, on an indoor artificial green. All putters were standardised in head weight (360g), loft, and face balance to isolate shaft placement as the only variable. Launch direction, face angle at impact, ball speed, and distance deviation were measured using SAM PuttLab and a high-speed ball tracking system. Results showed forward-shafted putters enhanced distance control but compromised directional accuracy, especially among high-handicap golfers. Centre-shafted putters delivered balanced results, while rear-shafted putters improved directional consistency on short putts but introduced greater variability at longer distances. Low-handicap players showed adaptability across all configurations, whereas high-handicap players favored centre-shafted designs. These findings underscore shaft position as a crucial factor in personalized putter fitting. Custom fitting should consider not only stroke style and player skill but also shaft placement to optimize performance. Future studies should explore dynamic fitting systems that adapt to individual biomechanics and feedback.

Keywords: Golf putting; Shaft position; Directional accuracy; Distance control; Personalised fitting.