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&
THE 4TH ASEAN COUNCIL OF PHYSICAL
EDUCATION AND SPORT
(ACPES 2018)**

MOHE/ACPES 2018
*FASTER, HIGHER, STRONGER:
TECHNOLOGICAL ADVANCEMENTS IN SPORTS
& PHYSICAL EDUCATION*

25TH & 26TH SEPTEMBER 2018

**FACULTY OF EDUCATIONAL STUDIES,
UNIVERSITI PUTRA MALAYSIA (UPM)**





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EDUCATION AND SPORT
(ACPES 2018)**

PROCEEDINGS



ABSTRACT FOR

ORAL

PRESENTATION



ORAL ABSTRACT

**THE JOB CHARACTERISTICS MODEL: AN EXTENSION TO
PHYSICAL EDUCATION TEACHERS MOTIVATION**

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ABSTRACT

This article is designed to enhance understanding about how job characteristics motivate physical education teachers. This is an important area of research because Ministry of Education Malaysia invest so much time and money into the creation and development of their physical education teachers and it is important to understand how the work they do relates to their motivation. We applied the organizational behavior concepts of the Job Characteristics Model developed by Hackman and Oldham (1975) to physical education teachers in order to better understand the work of physical education teachers and raise awareness of this important gap in the literature. Our hope is that the proposed research agenda will spark interest in and contribute to the legitimacy of physical education as a field of research.

Keywords: Job characteristics model (JCM)



ORAL ABSTRACT

**HOW TO BE A SUCCESS SPORT EVENT ORGANIZER? A CASE STUDY
OF SPORT EVENT ORGANIZER IN CENTRAL JAVA INDONESIA**

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ABSTRACT

Success in becoming an event organizer is strongly influenced by many factors, different locations and types of events to be held will make different ways of managing as well. One factor must be considered is the consumer satisfaction to the performance and service of the committee. Due to the good service quality, customer would come back to reuse the service. The aim of this study was to find out the way to be a success sport event organizer in Central Java rest on the customer satisfaction. This quantitative descriptive study was conducted using survey method with population came from the participants of sport events throughout Central Java and were chosen by accidental sampling with 141 respondents. Survey consists of Tangible, Empathy, Responsiveness, Reliability, Assurance, and Consumer Satisfaction in the form of checklist by using Likert scale 1 to 4. The data showed that the average value of the five variables was 3.03 or 75.78% respondent said if the variables were needed to make event successful. On the other hand, the average value of customer satisfaction was 3.08 or 76.91%, so it could be mentioned that all customers satisfied with the committee because they fulfilled the requirements. Based on statements before, the committee was success to conduct the event and on closer view, the assurance factor had the highest average value of 3.11 or 77.87%, meaning the committee strongly assured the participants that the sport event would take place well. In addition, with the average score 3.21 or 80.32% participants would like to participate again when the committee conducts the same event on the future.

Keywords: Sport event organizer, customer satisfaction, sport management, central java



ORAL ABSTRACT

**THE ROLE OF FIELD STUDY TO IMPROVE THE SPORT
ENTREPRENEURSHIP'S INTEREST ON PHYSICAL EDUCATION
STUDENTS**

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ABSTRACT

Basically entrepreneurship is how to form the mindset, attitude, and behavior of people to become an entrepreneur. In addition, giving soft-skill to the students is also one way to equip students so they can have the character as entrepreneur. Soft-skill can be obtained through learning that prioritizes the approach of field practice, so that students can have real work experience. Segers (2004) stated that one of the key characteristics of effective learning and assessment models is to focus on high skills or competencies relevant to their future work. The aim of this study is to find out the role of field study for improving sport entrepreneurship's interest on physical education students. This quantitative study was conducted using a 5-point likert survey method consist of three dependent variables and one independent variable with 115 respondents from Physical Education students. The data showed that the value of R is 0.662, this indicates that there is a moderate or strong relationship between field study (X) on entrepreneurship interest (Y). R square value of 0.439 could be interpreted that the field study can affect entrepreneurial interest of 43.9% while the remaining 56.1% is explained by other variables not examined in this study. Through the result of this study, we could see that field study has role to enhance the entrepreneurship's interest, though there are other factors affect, such as the curriculum and educators.

Keywords: Sport entrepreneurship, sport management, field study



ORAL ABSTRACT

**INJURY RISK OF UPPER EXTREMITY IN BASEBALL PITCHERS:
KINETICS PERCEPTION**

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ABSTRACT

Upper extremity is the important part at the time in pitching, and every pitcher has a different style. Previous study showed increased pitch counts have been linked to increased complaints of shoulder and elbow pain in youth pitchers. The purpose of this study was to compare kinetics data of upper extremity on fastball, curveball, and slider potentially injuries. Twenty-four baseball pitchers participated in this study. After signed informed consent and placed forty-eight reflective markers on head, upper extremities and lower extremities, participant threw the ball fifteen time each pitch type five meters away from the pitching marker on standing position in indoor laboratory. Kinetic parameters were calculated using software (Motion Monitor) to compute the musculoskeletal human models using motion capture data. Parameter of torques and forces were calculated using Motion data. Repeated measurement ANOVA was used to test the effects of pitching phases. Only on forearm supination torque at arm acceleration phase was significant difference. Another eighteen parameters from arm cocking phase, arm acceleration phase, arm deceleration phase, and follow-through were no significant differences base on kinetics parameters data. Ground reaction force at fastball was greater than curveball and slider. Parameters of fastball also take the domination at arm cocking, arm acceleration, and follow-through. Only on arm acceleration curveball take over the domination of kinetics parameters compared to fastball and slider. Overall, fastball has more injury risk than curveball and slider in pitching phases. Increased kinetics parameter might be proven to have more injury risk. Interpretation data by analyzing functional anatomy can be more useful in early detection of pitching injuries.

Keywords: Kinetic, pitching, fastball, curveball, slider



ORAL ABSTRACT

DEVELOPMENT SKILLS HANDBALL JUMPING SHOOT BY USING METRONOME

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ABSTRACT

This study is intended to create a jumping-off goal for handball for students. Use the metronome application to make voice calls to practice skills. Practice for 4 weeks the results of the study showed that the average score from the test in the handball was analyzed by using the mean is 8.67 and the test results after the training is 13.00. The standard deviation was 1.70 and the test results after the training is 1.12. Comparison of mean scores reveals that post-training performance has increased, indicating that the results of the training result in improved student skills. In addition, when analyzing the individual sub-skills, the results show that the median of Preparation was 1.30 and the post test was 2.40. The Leg movement pre-exercise score was 1.60 and the post-test result was 2.57. Body control had a pre-exercise test result of 1.57 and a post-exercise test score of 2.50. Arms control had a pre-exercise test result of 1.63 and a post-exercise test score of 2.60. The score was 2.57 and the post-test result was 2.93. The comparison of the results of all tests in all skills is the same, with all skill levels increasing. Show that the practice can develop students effectively and in line with the objectives of the research, the development of a training model that can improve the skill of jumping, shooting, and fire doors effectively and accurately at all stages. It can be concluded that students have the skills to practice jumping and shooting skills effectively before practicing.

Keywords: Handball, jumping shoot



ORAL ABSTRACT

REPRESENTATION NUTRITIONAL STATUS AND PHYSICAL ACTIVITY OF STUDENT: STUDY IN PUBLIC HEALTH STUDENT OF UNIVERSITAS NEGERI SEMARANG, INDONESIA

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ABSTRACT

Background: Indonesia have serious problems, there were triple burden disease. The triple burden disease were infection, non communicable disease and re-emerging disease. Cancer as serious NCDs in Indonesia had 1,4 % percentage and Central Java had 2,1 % percentage from total population. Another NCDs that had serious percentage was stroke. Stroke had 12,1 % percentage in Indonesia and 12,3 % in Central Java from total population (Risksdas, 2013). The government had a program called GERMAS (Gerakan Masyarakat Hidup Sehat) to reduce NCDs that focused on prevention program. The example of GERMAS was having physical activity for 30 minutes per day. The aim of this research was know the physical activity and nutritional status of public health students as the promotor of GERMAS program to the public. **Method:** This research used quantitative approach with cross sectional design. The instrument that used on this resaerch were short IPAQ and BMI questionnaire. The total of sample was 97 that divided in to 7 male and 90 female from public health on second year. **Result:** The result was 42,9% of male had low IPAQ score, then 42,9% of male had moderate IPAQ score, and 14,3% had high IPAQ score. While in 90 female sample had a result 68,9 % of total had low IPAQ score, then 18,9% had moderate IPAQ score, and 12,2% had high IPAQ score. From the BMI of respondent showed that 57,1 % had thin BMI, then male with normal BMI had 28,16% percentage from total, and male with obese BMI had 14,3%percentage of total. While from female showed that 22,2% had thin BMI, then female with normal BMI was 75,6%, and obese female was 2,2% from the total. **Conclusion:** A half past public health student had low IPAQ score and normal BMI.

Keywords: Non Communicable Disease, IPAQ, BMI



ORAL ABSTRACT

THE EFFECT OF PHYSICAL FITNESS ON THE STUDENT'S GRADE POINT AVERAGE STUDY PROGRAM PHYSICAL EDUCATION OF HEALTH AND RECREATION STKIP TAMAN SISWA BIMA

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ABSTRACT

This research is a regression research that aims to determine the effect of physical fitness on grade point average. The subjects of this research were students of semester V study program physical education of health and recreation STKIP Taman Siswa Bima penjasesrek which amounted to 50 people. Technique of collecting data used by TKJI test and documentation. Data analysis technique used in this research by using regression analysis. The data used for regression analysis are physical fitness data and grade point average data of semester student. The results showed that there was a significant effect of physical fitness on grade point average of the students of semester V study program physical education of health and recreation proved that $p = 0.000 < 0.05$.

Keywords: Physical fitness, grade point average, physical education of health and recreation



ORAL ABSTRACT

**CONTRIBUTION OF MENTAL EXERCISE TOWORD IMPROVING
ACHIEVEMENT FOR SWIMMER OF CENTRAL JAVA TRAINING
CENTER FOR STUDENT IN POMNAS XV 2017**

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ABSTRACT

The purpose of this research was to determine the Role of Training Concentration, Goal Setting and Muscle Relaxation against Self-Esteem Improvement Swimmer of Central Java Training Center for Student. The population is Swimmer of Central Java Training Center for Student 2017, which amounted to 8 people. This research uses data analysis techniques based on data that has been collected. Qualitative data processing or interviewing is done by making informant answer category. The results show that the improvement of mental skills is followed by the improvement of the achievements of all swimmers. Improvement of achievement that happened at Swimmer of Central Java Training Center for Student can be seen to increase performance, proved athletes can improve record time at best time. But the target or goal setting time record on all athletes has not been able to achieve the goal setting they are targeting. Conclude that interventions for effective mental training in improving the achievements of swimmer. The research still apply the same mental training to all swimmer. We recommend that there are no individual mental training programs for each athlete. The next research needs to adjust the giving of the form and the mental skill portion for each swimmer. So the mental training program is more individualized, focused and focused.

Keywords: Concentration, goal setting, muscle relaxation



ORAL ABSTRACT

**EFFECT OF HIGH-INTENSITY INTERVAL TRAINING (HIIT)
TRAINING ON THE IMPROVEMENT OF VO2 MAX SOCCER
PLAYER STKIP TAMAN SISWA BIMA**

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ABSTRACT

Football is a sport activity that requires longer physical activity than other sports. The purpose of this research is to know whether there is influence of High-Intensity Interval Training (HIIT) training to increase Vo2max soccer player STKIP Taman SiswaBima. In this research will be used research Quantitative method of experiment. Initial stages are done by giving (pre-test), after which is given treatment (treatment) by applying the exercise method. In the final test will be done taking data by measuring the ability of soccer players after treatment is given during the study (post-test). To obtain valid data on post-test measurement is done three times. The sample in this study is soccer player STKIP Taman SiswaBima amounted to 22 people. Conclusion There are significant differences in the effect of High-Intensity Interval Training (Hiit) on improving the Vo2max soccer player STKIP Taman SiswaBima. Based on the result of data analysis that t-count is 322.023while t-table 2.086 with significant level 0,05% thus t value > t table showing that nil hypothesis (Ho) is rejected and alternative hypothesis (H1) accepted. So it can be concluded that there is influence HIIT to VO2 Max football player STKIP Taman SiswaBima. Based on the calculation of percentage results obtained that the increase in Vo2max soccer player STKIP Taman SiswaBima is amounted to 7.26%.

Keywords: High-Intensity Interval Training (HIIT) training, VO2Max football players STKIP Taman Siswa Bima



ORAL ABSTRACT

**PARTICIPATION OF SOCIETY BIMA REGENCY IN SPORTS
REVIEWED FROM SPORT DEVELOPMENT INDEX**

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ABSTRACT

This study aims to determine the level of Society participation and to determine the factors that influence the level of Society participation in exercising in the district of Bima by taking 3 Regency as representative of all areas of low, medium and high in this study that is Regency Bolo, Soromandi Regency, Wera with a total sample of 270 people. Each Regency is 90 as a representative of the whole. In this study using descriptive qualitative. Data were obtained by survey, interview and questionnaire. Sampling in this research with probability sampling technique that is proportionate stratified random sampling by using formula of Sport Developmant Index and got sampel counted 90 responden, then analyzed descriptively. The results of this study, Bima Regency of West Nusa Tenggara Province in 2017 are summarized as follows: The index of community participation rate in Regency Bima is 0.440. This index is at number 3 above the value of the participation index. This means that the value of this participation index indicates that the level of Society participation Bima regency for sports activity is still very low.

Keywords: Society participation, sports, sport developmant index



ORAL ABSTRACT

EFFECTS OF 12 WEEKS COMBINED WEIGHT AND CHAIN VERSUS COMBINED WEIGHT AND ELASTIC BAND VARIABLE RESISTANCE TRAINING ON UPPER AND LOWER BODY MUSCULAR STRENGTH AND ENDURANCE AMONG UNTRAINED MALES IN IRAN

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ABSTRACT

Several studies have shown a positive association between variable resistance training and improvement of muscular performance. However, the most effective type of variable resistance training to improve muscular performance (such as; strength and endurance) in untrained individuals remains unclear. The objective of this research was to examine the effects of 12 weeks combined weight and chain versus combined weight and elastic band variable resistance training on muscular strength and endurance among untrained male adults. Fifty healthy untrained males (age: 21.5 ± 1.95 years) were randomly selected and assigned into three groups: combined weight and chain (WC), combined weight and elastic band (WE), and free-weight (CG). From week 1 until week 12 all groups trained with 3 to 4 sets of 8 - 12 repetitions with 70% to 80% of 1RM for 2 days per week. Approximately 65% of the resistance was provided by free-weights and 35% of the resistance was provided by chains and elastic bands for the WC and WE groups. Upper and lower body muscular strength and endurance using one-repetition maximum, and maximum repetitions were measured before, in the middle and after the intervention. Results reported there were significant increases in upper and lower body muscular strength and endurance in all groups in the middle and after the intervention ($p < 0.05$), and these variables increased more and faster significantly in WC and WE groups compared with CG group. Finally, although in the middle and after the intervention there were not significant differences in upper and lower body muscular strength and endurance between WE and WC groups ($p > 0.05$), the results showed WE variable resistance training had a better effect insignificantly to improve upper and lower body muscular strength and endurance in the middle and after 12 weeks of variable resistance training among untrained males.

Keywords: Combined weight and chain, combined weight and elastic band, maximum repetitions, one-repetition maximum, variable resistance training



ORAL ABSTRACT**THE IMPACT OF MOBILE APPS ON THE LEVEL OF PHYSICAL ACTIVITY IN ADOLESCENT GIRLS DURING THE WEEKENDS**

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Background: Smartphones are omnipresent and offer real-time information on the go. Predominantly, adolescent girls were found to be engaged in levels of physical activity (PA) below the recommended levels of at least 60 minutes of moderate-to-vigorous intensity daily, and especially during weekends. Lack of sufficient PA can lead to a risk of contracting non-communicable diseases (NCDs). This exploratory study investigates the impact of mobile apps to promote and increase the PA level of adolescent girls during weekends, the perceived benefits and challenges of using the mobile apps and the recommendations. **Methods:** 36 adolescent girls aged 15 years ($M_{age}=14.9$; $SD=0.30$) participated in the study that spanned 4-weekends. A mixed-method design was used to garner a holistic perspective on the effectiveness of mobile apps. Participants completed the Three Day Physical Activity Recall (3DPAR) survey. PA level indicators such as metabolic equivalent (MET) score, blocks of moderate-to-vigorous PA (MVPA), vigorous PA (VPA) and step count were analysed quantitatively with SPSS software version 24 (2x2 related factorial analysis of variance group). To comprehend the quantitative results, focus group interviews (FGIs) were conducted for 8 participants based on their mean MET score ($N=3$ High MET, $N=5$ Low MET). **Results:** Although there was a general decrease in the level of PA among all the participants during the weekends, the experimental group experienced a lesser decrease than the control group. There were significant differences in the MET score and step count ($p<0.05$). The qualitative results revealed that perceived benefits of using the mobile apps such as motivation, self-monitoring, goal-setting and sense of autonomy helped prevent the decrease in PA to a certain extent while perceived challenges such as being negative about apps, cumbersome and confusing app features, annoyance and lack of privacy discouraged participants from using the apps. Recommendations such as customization of users' account, simplify app for use and inclusion of rewards were suggested. **Conclusion:** Mobile apps have the potential to promote an increase in PA level but require careful selection of mobile app to engage adolescent girls. Suggestions to improve the existing intervention and future recommendations will be discussed.

Keywords: Adolescent girls, mobile apps, weekends, physical activity



ORAL ABSTRACT

PERBEZAAN PECUTAN PURATA ANTARA JARAK 30 METER, 60 METER DAN 90 METER DALAM KALANGAN ATLET OLAHRAGA BERUMUR 16 DAN 17 TAHUN

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ABSTRAK

Tujuan: Lari pecut ialah acara olahraga jarak dekat yang memerlukan tenaga tinggi untuk membuat larian secepat mungkin. Acara ini memerlukan koordinasi bahagian-bahagian anggota badan, iaitu ayunan tangan dan kaki. Pecutan larian dapat ditentukan melalui ketangkasan menukar arah dengan cepat dan kepantasan reaktif seorang individu. Kelajuan maksima seorang atlet boleh ditentukan melalui perbezaan larian pada tiga fasa larian iaitu fasa permulaan, fasa dataran dan fasa pecutan. Tujuan kajian ini dilaksanakan adalah untuk mengenalpasti sama ada terdapat perbezaan pecutan purata antara jarak 30 meter, 60 meter dan 90 meter dalam kalangan atlet muda olahraga. Tiga objektif ingin dicapai iaitu mengenalpasti purata pecutan, halaju dan perbezaan purata pecutan dalam jarak 30 meter, 60 meter dan 90 meter dalam kalangan atlet olahraga berumur 16 dan 17 tahun. **Metodologi:** Reka bentuk kajian yang digunakan adalah berbentuk *expos-facto* dan instrumen kajian adalah "*timing gate*" sebagai alat mengutip data. Prosedur kajian berpandukan kepada aktiviti yang telah ditetapkan iaitu para peserta perlu melakukan senaman memanaskan badan dan beberapa kali cubaan mula dan pecutan. Setelah bersedia, peserta dilepaskan oleh pelepas. Masa diambil berdasarkan elektronik "*timing gate*" yang telah di letakkan sepanjang larian pada jarak 30 meter, 60 meter dan 90 meter. Seramai 30 atlet olahraga telah melibatkan diri dalam ujian pecutan dan data telah dicatatkan dalam borang skor. **Keputusan:** Kadar purata pecutan bagi jarak 30 meter dan 60 meter lebih didominasi oleh atlet berumur 16 tahun (M:3.73, SP:0.16, dan M:7.09, SP:0.23) manakala bagi jarak 90 meter di unggul oleh atlet 17 tahun (M:10.26, SP:0.28) Namun begitu kadar pecutan tidak mempunyai perbezaan yang signifikan antara atlet 16 dan 17 tahun pada jarak 30 meter ($t=2.19$: $p=0.15$) 60 meter ($t=0.02$: $p=0.89$) dan 90 meter ($t=0.46$: $p=0.51$). Bagi kadar halaju, data menunjukkan berlaku penurunan kadar halaju apabila jarak bertambah. **Rumusan:** Keputusan menunjukkan kadar pecutan bagi jarak 30 meter dan 60 meter lebih didominasi oleh atlet berumur 16 tahun manakala bagi jarak 90 meter di unggul oleh atlet 17 tahun. Namun begitu kadar pecutan tidak mempunyai perbezaan antara kumpulan umur. Hasil kajian menunjukkan kadar halaju larian semakin menurun apabila jarak bertambah.

Kata Kunci: Lari pecut, pecutan, halaju, atlet muda



ORAL ABSTRACT

**PROMOTING THE AWARENESS OF HEALTHY AND FIT LIFE
THROUGH GENERAL GYMNASTICS FOR TOURISM AND
RECREATIONAL ACTIVITIES**

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ABSTRACT

To minimize risks of diseases resulting from hypo kinetics such as heart disease, stroke, hypertension, diabetes, etc. as well as to increase fitness, it is necessary to socialize several alternatives of problem solving. One of the alternatives which has effective and efficient value is having physical exercises in the form of general gymnastics for tourism and recreational activities. The objectives of this study are: 1) Providing the kindergarten teachers in Banjarnegara with general gymnastics; 2) Increasing the physical fitness of the Kindergarten teachers. The targeted group of these activities is the kindergarten teachers in Banjarnegara regency. The method applied in this research including: 1) Lecturing for theoretical materials; 2) demonstration method for providing the participant with skills; and 3) assignment method for increasing the participant's skills mastery. The result of these community service activities shows that the majority of the participants have increased physical fitness. This is signified by the improved silent pulse profile, working pulse profile and recovery. There was a significant increase of the participants' skills. In addition, the participants were able to explain the benefits of sports especially gymnastics for physical fitness in tourism and recreational activities. The conclusion that can be formulated from these activities is physical fitness, knowledge and skills of the participants increased with an adequately significant level. It is advisable that: 1) the awareness of community about the importance of sports should be increased specifically the general gymnastics that can be done for tourism and recreation and 2) the government or other related parties should upgrade the public infrastructure and facilities of sports for tourism and recreational activities.

Keywords: Healthy life, general gymnastics, tourism activities, recreation



ORAL ABSTRACT

**PERCEPTIONS OF SERVICE QUALITY OF MALAYSIAN UNIVERSITY
RECREATIONAL FITNESS CENTER USERS**

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ABSTRACT

The purpose of this study was to examine user's perceptions of service quality and future intention to use campus recreation fitness center in Universiti Putra Malaysia. Data were collected from 200 students and staff of the university (males = 140, females = 60) who frequently used the campus recreation fitness center. The questionnaire consisted of items based on the Likert-scale Service Quality Assessment Scale (SQAS) developed by Lam, Zhang and Jensen (2005). Behavioral intention is based on three questions modified from Cunningham and Kwon (2003). The results showed that recreation fitness center users are satisfied with the overall staff service quality (m=34.14) and fitness facility service quality (m=34.14), but moderately satisfied with overall facility service quality (m=30.77) and overall program service quality (m=24.44). The findings indicated UPM recreation fitness center users have a high intentions (m=4.02) to recommend the recreation center to other people and to renew their membership. The result also show overall staff service quality ($\beta = .288$ $p < .05$) and overall facility service quality ($\beta = .251$, $p < .05$) contribute significantly towards predicting behavioral intention. This means recreation fitness center users in UPM will continue their membership in the future or suggest other people to become members if they perceived the recreation fitness center as being conveniently located as well as user friendly in terms of safety and parking.

Keywords: Service quality, campus fitness center, behavioural intentions



ORAL ABSTRACT

**A STUDY OF PERCEPTIONS OF SERVICE QUALITY OF UNIVERSITY
RECREATIONAL FITNESS CENTER USERS IN THAILAND**

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ABSTRACT

The purpose of this study was to examine user's perceptions of service quality and future intention to use campus recreation fitness center in Mahasarakham University, Thailand. Data were collected from 250 students and staff of the university (males = 181, females = 69) who frequently used the campus recreation fitness center. The questionnaire consisted of items based on the Likert-scale Service Quality Assessment Scale (SQAS) developed by Lam, Zhang and Jensen (2005). Behavioral intention is based on three questions modified from Cunningham and Kwon (2003). The results showed that recreation fitness center users are satisfied with the overall staff service quality (m=33.72) and fitness facility service quality (m=18.21), but moderately satisfied with overall facility service quality (m=37.48) and overall program service quality (m=24.44). The findings indicated recreation fitness center users have a high intentions (m=3.72) to recommend the recreation center to other people and to renew their membership. The result also show fitness facility service quality ($\beta = .300$ $p < .05$) and overall facility service quality ($\beta = .278$, $p < .05$) contribute significantly towards predicting behavioral intention. This means recreation fitness center users in Thailand will continue their membership in the future or suggest other people to become members if they perceived the recreation fitness center as being conveniently located as well as user friendly in terms of safety and parking.

Keywords: Service quality, campus fitness center, behavioural intentions



ORAL ABSTRACT

***BURNOUT* DI KALANGAN ATLET DAN HUBUNGANNYA DENGAN
KOMITMEN SUKAN**

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ABSTRAK

Kajian ini bertujuan untuk mengkaji hubungan antara komitmen sukan dengan burnout di kalangan atlet Universiti Putra Malaysia (UPM). Seramai 150 atlet dipilih sebagai subjek kajian menggunakan persampelan mudah. Instrumen terdiri dari item berkaitan komitmen sukan (Scanlan et al. 1993) dan burnout atlet (Raedeke 200). Dapatan kajian menunjukkan majoriti atlet (n=55, 36%) mempunyai komitmen sukan pada tahap sangat tinggi. Bagi tahap burnout pula, majoriti atlet berada pada tahap rendah (n=47, 31.3%). Analisis korelasi melaporkan terdapat hubungan signifikan yang negatif antara komitmen sukan dan burnout. Ini bermakna sekiranya komitmen sukan berada pada tahap tinggi maka burnout atlet adalah pada tahap rendah. . Atlet yang tinggi tahap burnout akan sering mempunyai perasaan yang negatif terhadap sukannya yang akan mempengaruhi tahap burnout atlet seterusnya mereka mungkin akan meninggalkan kariernya sebagai atlet sekiranya tidak diatasi.

Kata Kunci: Komitmen sukan, *burnout*, atlet universiti, motivasi sukan



ORAL ABSTRACT

**ANALYSIS OF STUDENTS AWARENESS, SERIOUSNESS AND
ACTIVENESS IN JOINING PHYSICAL EDUCATION**

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ABSTRACT

The Indonesian national system put students as the object of learning and their voice are likely not counted. In fact, asking and listening to the students affections toward their learning interest are very essential to create an effective learning (Foley, 2015). This research is an explorative research design aims to investigate the students affection toward Physical education based on three criteria: Awareness, seriousness and activeness in Joining Physical Education. A purposive sampling method was used. It is pointing on 3 cities in central Java Provinces which representing 3 parts of Central Java, those are Semarang City (central), Tegal City (western) and Salatiga City (Eastern). There were 10 % of the total students on 57 school in Central Java (3404 students) were investigated using a set of closed questionnaire. The result showed that for the indicator of students seriousness 73.1% is in good category, the students awareness 57.9% is in good category and for the activeness 67.0% is in good category. It suggested that the students affections are in good condition and it should be the consideration of teacher, lecturer and stakeholder to maintain or improve the condition for the effective learning of Physical Education.

Keywords: Affections, awareness, effective learning, students



ORAL ABSTRACT

**EFFECT OF MUSIC WITH BRAINWAVE SYNCHRONIZER ON THE
PERFORMANCE OF COLLEGIATE THROWING ATHLETES**

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ABSTRACT

Brainwave entrainment has been a method used as a therapy to reduce anxiety and heighten concentration, facilitating brain to enter a specific state. In sports, brainwave alignment is facilitated as athletes utilized music in their pre-competition routines. The aim of this study is to know if wave-synchronized music influence power performance of collegiate athletes by gathering six (N=6) college throwers, 3 males and 3 females in a quasi-experimental research. Participants ranged from shotput, discus and javelin events. With reversal method, throwing performance data were collected for 11 days, with treatment days using both high (T1, T2, T4) and low (T3) frequency waves after every 2 untreated observations. Results show that synchronizing alpha waves (12 Hz) to music listened by athletes during warm-up leads to significant increase in throwing performances. On the other hand, synchronizing theta waves (0.5-3 Hz) to music produced lower throwing distances significantly when compared to day-before and day-after observations. Throwing performance for the untreated observations also showed an increasing trend before the theta wave treatment day. However, no long-term effect was seen after the alpha wave intervention as seen in latter untreated observations. Further studies are needed to compare music with and without wave synchronizers or to compare the utilization of preferred music versus unfavored music during warm-up.

Keywords: Brainwave entrainment, throwing performance, arousal, alpha brainwave



ORAL ABSTRACT

**PERSEPSI GURU PERLAKSANA TERHADAP KEBERKESANAN
PENYAMPAIAN PERKHIDMATAN DASAR 1 MURID 1 SUKAN DI
SEKOLAH MENENGAH**

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ABSTRAK

Transformasi pendidikan yang diusahakan oleh Kementerian Pendidikan Malaysia (KPM) ke arah membentuk dasar 1 Murid 1 Sukan merupakan aspirasi kepada rasional penglibatan aktif murid dalam aktiviti sukan. Tujuan utama kajian ini dijalankan adalah untuk mengenal pasti keberkesanan penyampaian perkhidmatan Dasar 1 Murid 1 Sukan. Kerangka teoritikal kajian ini adalah berasaskan teori pemegang taruh dan *multiple constituency approach*. Keberkesanan penyampaian perkhidmatan program dasar 1 Murid 1 Sukan banyak bergantung kepada pencapaian matlamat yang telah ditentukan oleh bahagian sukan KPM dan memenuhi kepuasan pelbagai pemegang taruh seperti pegawai sukan, guru pelaksana, ibu bapa dan murid ke atas aktiviti yang telah dijalankan. Pendekatan *multiple constituency approach* menganggap sesuatu program itu berjaya dilaksanakan apabila program tersebut telah dapat memenuhi kepentingan pemegang taruh dan mencapai matlamat (Scheid Greenley, 1997). Kajian ini dijalankan terhadap 306 orang guru sekolah menengah di Putrajaya untuk mengenal pasti perbezaan keberkesanan penyampaian perkhidmatan, keupayaan organisasi dan kepuasan program antara jantina serta untuk mengenal pasti hubungan antara umur, tempoh perkhidmatan dalam organisasi dan tempoh memegang jawatan terhadap faktor yang menyumbang kepada keberkesanan penyampaian perkhidmatan, keupayaan organisasi dan kepuasan program. Data dianalisis menggunakan analisis deskriptif (min, sisihan piawai dan frekuensi) dan analisis inferensi ujian-t. Dapatan kajian menunjukkan terdapat perbezaan signifikan antara tugas utama $p < 0.046$ terhadap guru pelaksana lelaki dan guru pelaksana perempuan. Manakala tiada perbezaan signifikan bagi misi organisasi, aktiviti organisasi, faktor penyumbang kepada kejayaan program, keupayaan organisasi dan kepuasan program. Oleh itu, guru pelaksana yang terlibat dalam penyampaian perkhidmatan Dasar 1 Murid 1 Sukan perlu memberikan usaha penuh dan komitmen terhadap tugas bagi memastikan matlamat dasar ini tercapai.

Kata Kunci: Keberkesanan penyampaian perkhidmatan Dasar 1 Murid 1 Sukan, teori pemegang taruh, *multiple constituency approach*



ORAL ABSTRACT

**PERBEZAAN TAHAP PERKEMBANGAN KEMAHIRAN MOTOR
KASAR DALAM KALANGAN ATLET MUDA SUKAN RAGBI RIMAU**

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Tujuan: Penguasaan kemahiran motor kasar di kalangan atlet muda adalah penting untuk mempunyai penyertaan yang berjaya dalam sukan. Kajian ini bertujuan untuk mengenalpasti tahap perkembangan motor kasar dalam kalangan atlet muda sukan ragbi rimau. **Metodologi:** Kajian ini telah menggunakan kaedah *ex post facto* yang melibatkan 90 orang subjek yang berumur 8 tahun (30), 9 tahun (30), 10 tahun (30). Ujian perkembangan kemahiran motor kasar Ulrich (2000) telah menjadi instrumen untuk tahap perkembangan kemahiran motor kasar dalam kalangan atlet muda sukan ragbi rimau. **Dapatan:** Terdapat perbezaan yang signifikan [$F(2, 87) = 17.65, p = 0.00$] tahap perkembangan kemahiran motor kasar antara atlet muda sukan ragbi rimau yang berumur 8 hingga 10 tahun. Analisis ujian *Post Hoc* telah menunjukkan perbezaan yang signifikan bagi skor GMDQ atlet muda sukan ragbi rimau yang berumur 8 tahun dengan 9 tahun ($p = 0.00$), yang berumur 8 tahun dengan 10 tahun ($p = 0.05$) dan yang berumur 9 tahun dengan 10 tahun ($p = 0.00$). Skor kesetaraan umur lokomotor (AEL) [$F(2, 87) = 16.84, p = 0.00$] menunjukkan perbezaan yang signifikan antara atlet muda sukan ragbi rimau yang berumur 8 hingga 10 tahun dengan analisis ujian *Post Hoc* menunjukkan ($p=0.00$). Skor kesetaraan umur manipulatif (AEM) terdapat perbezaan yang signifikan [$F(2, 87) = 5.70, p = 0.01$] antara atlet muda sukan ragbi rimau yang berumur 8 hingga 10 tahun dengan analisis ujian *Post Hoc* menunjukkan ($p=0.01$). **Rumusan:** Tahap perkembangan kemahiran motor kasar atlet muda sukan ragbi rimau mengalami kelewatan. Kajian yang seterusnya dicadangkan untuk mengkaji kesan tahap perkembangan motor kasar sebelum dan selepas menjalani sesuatu pergerakan asas sukan ragbi rimau.

Kata Kunci: Kemahiran motor kasar, atlet muda, kesetaraan umur lokomotor, kesetaraan umur manipulatif



ORAL ABSTRACT

THE CORRELATION OF MUSCLE ARM STRENGTH, VO2 MAX AND KINESTHETIC PERCEPTION TOWARD ARCHERY SHOOTING'S ACCURACY OF CENTRAL JAVA PPLOP ARCHERY ATHLETES

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ABSTRACT

Achievement of precision shots in archery requires the support of several key components such as the arm muscle strength, VO2 Max, and kinesthetic perception of an athlete. Arm muscle strength needed to support the pull bow, VO2 Max components needed to maintain endurance athletes in order to have a consistent movement archery techniques, there are also aspects of kinesthetic perception needed to feel the movement of archery technique for athletes. The problem in this research is the correlation of arm muscle strength, VO2 Max, and kinesthetic perception toward archery shooting's accuracy distance 50 meter of central java PPLOP archery athletes. The purpose of this study are: 1) to know the correlation between arm muscle strength to the accuracy of archery shot distance 50 meters; 2) to know the correlation of VO2 Max to the accuracy of archery shot 50 meters distance; 3) to find out the correlation between kinesthetic perception to precision of archery shot 50 meters distance; 4) to determine the correlation of arm muscle strength, VO2 Max, and kinesthetic perception to the accuracy of archery shot 50 meters distance. This study uses descriptive correlational study, to find out if there is a link on each variable. Sempel in this research is all atlet of PPLOP archery of Central Java. Data collection techniques with survey methods with test and measurement techniques, namely tests and measurements of arm muscle strength, VO2 Max, kinesthetic perceptions, and the accuracy of the 50 meter shot. The results of this study are: 1) the correlation between arm muscle strength to the accuracy of 50 meters distance shot to get results of $0.152 > 0.05$; 2) the correlation between VO2 Max to 50meter distance accuracy get result of $0,02 < 0,05$; 3) the correlation between kinesthetic perception to 50 meters of shot accuracy get result $0,190 > 0,05$; 4) the correlation between arm muscle strength, VO2 Max, and kinesthetic persepsi to 50 meter shot accuracy get result of $0,063 > 0,05$. The conclusions of this study were: 1) there was no significant correlation between arm muscle strength to the accuracy of 50 meter distance shot; 2) there was a significant correlation between VO2 Max on the accuracy of 50 meter distance shot; 3) there was no significant correlation between kinesthetic perceptions of the 50 meter spacing accuracy; 4) there was no significant correlation between arm muscle strength, VO2 Max, and kinesthetic perception to the accuracy of 50 meter distance shot.

Keywords: Arm muscle strength, VO2 Max, kinesthetic perceptions, accuracy of archery shot



ORAL ABSTRACT

THE ROLE BODY STRUCTURE AND POSTURE ON THE SWIM SPOT

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ABSTRACT

Swimming achievement can be developed optimally since, in essence, every human has competing nature for achievement. This aspect is directly related to physical state from the point of views of: 1) body basic potential and ability, 2) body organ function, and 3) body structure and posture. According to M. Sajoto (1995:2) the biological aspect in the form of body structure and posture such as height is one of determinants for achieving skills in sport. A number of body structure and posture possibly influencing the speed of swimming are weight, leg length has 0.797 with a correlation coefficient of 79.7%., height and arm length. Leg length can affect swimming speed.

Keywords: Body structure and posture are weight, long legs, height and arm length



ORAL ABSTRACT

**DESCRIPTION OF BMI ON SPORT COACHING EDUCATION
STUDENTS ESPECIALLY IN TENNIS COACHING BATCH 2016**

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ABSTRACT

A healthy people is not only physically fit, but also spiritually healthy. So that healthy body and ideal in terms of health covering physical, mental and social aspects and not only free from diseases. All these aspects will affect the performance of each individual, in performing daily activities such as working, creating and doing things that are productive and useful. The problem of determining BMI (Body Mass Index) is often forgotten by students who are generally always busy with various daily activities. Even the students often find not knowing where categorized. In this occasion, the writer will discuss BMI on students who take specialist tennis coaching courses which became the favorite subjects for batch 2016 in 2018. Thus, this paper aims to determine sports coaching education students have normal, more or less BMI. From BMI sample data the writer obtained data that the average BMI of tennis coaching students is 20.798. With these data it can be concluded that BMI in students of coaching sciences can be categorized as normal. Although it is said to be normal, but must keep in mind the intensity, volume, frequency of exercise and the intake of nutritious food.

Keywords: BMI, intensity, volume, frequency, nutrition



ORAL ABSTRACT

GYMNASTIC CREATIONS AS A RECOMMENDATION SPORTS IN VILLAGE

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ABSTRACT

The enthusiasm of people to exercise is very high, especially with football. Because there is a claim that the sport of football is more fun, cheap and cool to improve physical fitness. But the sport is not suitable for the unproductive age again for heavy workout. This type of research is a qualitative research based on literature study. Literature is used to provide an overview of the known and unknowns of a particular phenomenon. The search and review of the literature relevant to a research topic can be done before, during and after the process of taking and analyzing the research data. Particularly in qualitative research, the use of literature has various purposes based on the type of qualitative research conducted. In general, in order to maintain the data's sustainability, extensive use of the literature was conducted after the research. The results show that the sport of football is still a favorite sport in the village, and one of the villages in rembang district has 60% unproductive age and 40% productive age to exercise. Seeing it we as a student have a role as agent of change and social control. Where we are part of the community and make a good change. Therefore a good sporting recommendation is gymnastics creations, as one form of introduction to other sports. Movement performed and selected music can be in accordance with the wishes of our own and can be done anywhere and anytime. Creed gymnastics has benefits for the body that increases stamina and endurance, reduce weight, reduce stress, prevent disease.

Keywords: Excercise, literature study, gynamstic, agent of chage, social control



ORAL ABSTRACT

PERBEZAAN TAHAP PERKEMBANGAN MOTOR KASAR DALAM KALANGAN KANAK-KANAK BERBEZA PENCAPAIAN AKADEMIK

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Tujuan: Kajian ini bertujuan untuk mengenalpasti perbezaan tahap perkembangan motor kasar kanak-kanak yang berbeza pencapaian akademik mereka. **Kaedah:** Kajian ini berbentuk *ex post facto* yang melibatkan 66 orang subjek (L=34, P=32) berumur Sembilan tahun. Ujian perkembangan motor kasar Ulrich (2000) dengan koefisien 0.88-0.96 telah dijalankan untuk mengukur tahap perkembangan motor kasar melibatkan kemahiran lokomotor dan kawalan objek. Skor yang diperolehi ditranskripkan bagi mendapatkan skor piawai dan skor *Gross Motor Development Quotient* (GMDQ). Pencapaian akademik pelajar dikategorikan kepada cemerlang, sederhana dan lemah. Kategori cemerlang ialah murid memperoleh 4A ke atas, pencapaian sederhana 4A ke bawah dan pencapaian lemah dengan tidak memperoleh sebarang A. Skor-skor ini dianalisa menggunakan perisian ANOVA bagi membandingkan min pencapaian kemahiran motor kasar berdasarkan pencapaian akademik. **Dapatan:** Analisis deskriptif menunjukkan min tahap perkembangan motor kasar bagi kanak-kanak cemerlang ($M:88.27$, $SP:11.26$), sederhana ($M:82.14$, $SP:8.7$) dan lemah ($M:76.68$, $SP:10.9$). Hasil dapatan menunjukkan terdapat perbezaan yang signifikan bagi GMDQ berdasarkan pencapaian akademik [$F(2, 63) = 7.31$, $p < .05$]. Bagi analisis *Post Hoc Test*, terdapat perbezaan yang signifikan bagi min GMDQ pencapaian cemerlang dengan sederhana ($p = .047$) dan cemerlang dengan lemah ($p = 0.00$). Perbandingan bagi skor kesetaraan umur lokomotor (AEL) dan skor kesetaraan umur kawalan objek (AEM), terdapat perbezaan yang signifikan pada tahap $p < .05$ dalam skor kesetaraan umur lokomotor untuk tiga kategori pencapaian [$F(2, 63) = 7.16$, $p < .05$] dan bagi skor kesetaraan umur kawalan objek [$F(2, 63) = 5.26$, $p < .05$]. Analisis *Post Hoc Test* menunjukkan perbezaan yang signifikan dalam skor kesetaraan umur lokomotor antara kanak-kanak cemerlang dengan lemah ($p = 0.00$) dan sederhana dengan lemah ($p = 0.05$). Skor kesetaraan umur kawalan objek menunjukkan perbezaan signifikan antara kategori cemerlang dengan sederhana ($p = .003$), dan cemerlang dengan lemah ($p = 0.022$). **Perbincangan:** Kajian menunjukkan terdapat sisihan perkembangan kemahiran motor kasar dalam kalangan kanak-kanak berbeza tahap pencapaian akademik. Hal ini dapat membuktikan tahap pencapaian akademik dapat dicapai dengan cemerlang jika seseorang itu mempunyai tahap perkembangan motor yang baik.

Kata Kunci: Kemahiran motor kasar, atlet muda, kesetaraan umur lokomotor, kesetaraan umur manipulatif



ORAL ABSTRACT**EFFECT OF JUMPING TRAINING ON GROSS MOTOR SKILLS DEVELOPMENT AMONG CHILDREN WITH DOWN SYNDROME**Wan Hazree Wan Zakaria¹, Hosni Hasan², Noor Azila Azreen Md Radzi³, Mohd Syrinaz Azli⁴^{1,2} Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Shah Alam, Malaysia³ Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Seremban, Malaysia⁴ Defence Fitness Academy, Universiti Pertahanan Nasional Malaysia, Sungai Besi, Malaysia2016558889@isiswa.uitm.edu.my**ABSTRACT**

The purpose of this study is twofold: to evaluate the gross motor skills proficiency among children with Down syndrome (DS) and to determine the effectiveness of jumping training's intervention program on the lower limb's muscular strength and kinematics properties of the experimental group. The proficiency of gross motor skills of thirty-two children (16 boys and 16 girls) with DS will be identified using the Bruinink-Oseretsky Test of Motor Proficiency Short Form, 2nd Edition (BOT2 SF) and Standing Broad Jump (SBJ) test to measure performance score of horizontal distance. Subsequently, the participants will be assigned into either a jumping training group [experimental group] (n=16) which will undergo a jumping training intervention program, or to a control training group [control group] (n=16). The training will be held for 2 days per week for 6 weeks. The effectiveness of the intervention program on their lower limb's muscular strength and kinematics properties will be evaluated. The lower limb muscular strength proficiency is parameterised with the SBJ test. The study outcome's variable of SBJ test are the performance score of horizontal distance, Motor Skill Inventory's qualitative assessment of horizontal jumping, and HDR camcorder recording of 2D kinematic study of the lower limb's ankle, knee and hip angles. It is expected that the boys and girls with DS will have differential gross motor skills and strength proficiency. The boys will score better in the Bruinink-Oseretsky Test of Motor Proficiency due to the physical attributes. In addition, the jumping intervention program for the experimental group likely will improve the lower limb's muscular strength and kinematic properties of the lower limbs because it will enhance the musculature's isokinetic dynamic and lower body's movement dynamic power. This work program might be used as a rehabilitative program for any delayed gross motor developmental milestone group especially the children with DS. Findings of this research will demonstrate how jumping training program among children with DS could be used as a rehabilitative program to enhance the physical performance in any societal community of DS such as non-governmental organisation, or medical institution.

Keywords: Gross motor skill development, lower limb muscular strength, biomechanic, jumping, children with down syndrome



ORAL ABSTRACT**PRE-RACE DETERMINANT FACTORS IN ELITE SWIMMING
PERFORMANCE-CHRONOLOGICAL AGE AND BODY STATURE**Thung J. S.¹, Kok L. Y.²¹ Shanghai University of Sport, China¹ National Sports Institute of Malaysia, Malaysia² Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysiajsthung@163.com**ABSTRACT**

Introduction: It has been suggested that body size could provide an advantage to athletes in many sports including sprint events for novice swimmers. However, it is not clear if the influence of body size is similarly found in elite level swimmers for sprint and endurance events. Therefore, this study examined the relationship between chronological age and body size with performance rankings by events for male and female elite level swimmers. **Methods:** 1113 swimmers (male, n=575; female, n=538) who published their chronological age (CA), body height (BH) and body weight (BW), and their official rankings from 32 swim events were extracted from the 2018 Commonwealth Games mobile application provided by Optus. Body mass index (BMI) was computed via the division of BW in kilogrammes by the square of BH in meters. A Spearman Rho correlation analysis was performed using a statistical software with alpha set at 0.05. **Results:** The Spearman Rho correlation coefficient (r_s) for sprint events involving females attained poor to moderate correlation in both the 50m (CA -0.41, BH -0.55, BW -0.30, BMI -0.30) and 100m (CA -0.27, BH -0.45, BW -0.19, BMI -0.19) sprints, while the dependant variables were poorly correlated in the 200m (CA-.28, BH-.32, BW-.13 & BMI-.13) events. Only the 400m achieved significant relationship in one variable (CA-.37). The r_s for sprint events comprising men varied from poor to moderate in the 50m (CA -0.35, BH -0.48, BW -0.41, BMI -0.41), and correlated weakly in the 100m (CA -0.36, BH -0.36, BW -0.29, BMI -0.29). The dependant variables correlated poorly to moderately for the men's 200m (CA-.41, BH-.20, BW-.22 & BMI-.22) and 400m (BW-.43 & BMI-.43) endurance events. The women's 800m and men's 1500m performance were not significantly correlated to all dependant variables. **Conclusion:** Male and female athletes with bigger body size and higher chronological age performed better than smaller and younger swimmers in all sprint events but the effects faded as distance increased in endurance events. Future talent identification programmes may need to consider body stature as one of the selection criteria for sprint swimming.

Keywords: Anthropometry, body stature, ranking, swimming



ORAL ABSTRACT

THE DEVELOPMENT OF EXERCISE MODEL TO INCREASE MOTOR ABILITY OF INDONESIA CP FOOTBALL TEAM PLAYERS

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ABSTRACT

This research was based on the reality that there is no motor ability exercise model for the CP football players. The coach has difficulty in handling the physical/motor ability exercise, such as the player easy to fall, the difficulty in reversing and changing the direction quickly, less balance, and bad coordination motion. The main research problem is how to develop Motor Ability Exercise Model with Circuit Method for Indonesian CP football team. The research purpose was produced a special circuit training model for CP football. The study design was used quasi experiment. Research subjects are 12 players of Indonesian CP Football team for APG Malaysia 2017. Data collection technique was used modification of motor ability test and development (Research and Development). The research was started from November 2016 and has been completed in June 2017. The research result was arranged a motor ability exercise model with Circuit Method for Indonesian CP football team, to improve motor ability effectively for Indonesian CP Football Team Team of National Training for 2017 Asean Paragames Malaysia, that is (1) motor ability exercise model with circuit model for flexibility, (2) motor ability exercise model with circuit model for strength (3) motor ability exercise model with circuit model for balance and (4) motor ability exercise model with circuit model for coordination.

Keywords: Exercise model, motor ability, CP Football



ORAL ABSTRACT

**TRADITIONAL GAME AS PIONEER OF INDONESIAN HERITAGE IN
INTERNASIONAL CLASS**

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ABSTRACT

The traditional sport is an Indonesian cultural heritage that should be preserved. This traditional sport can also as pioneer of Indonesian heritage in internasional class, and it is an element of the ten components of physical fitness. Traditional games is a symbol of knowledge of hereditary and have varying functions or message behind it, where in principle the game remains a game. Thus the form or shape it fun and exciting children because its purpose as a media game. Activity games that can develop psychological aspects of children can be used as a learning tool in preparation for the adult world. used as a broad term that includes a range of activities and behaviors that may act as a broad and diverse destination that suits the child's age. According to Pellegrini in Naville Bennet that the game is defined by three dimensions as follows: (1) game as trends, (2) games as a context, and (3) games as a behavior that can be observed. The role of traditional sports games as boosters aspect of sporting achievement can be developed from a few games such as, traditional games such as obstructed, stilts, dagongan, tug of war, sack race, and a long sandals as a tangible supporting role of sports achievement. execution of this ultimate goal is to support the achievement of national sports and hope to give a maximum contribution to the preservation of the traditional game business as a tangible cultural conservation.

Keywords: Traditional games, heritage, culture



ORAL ABSTRACT

THE EFFECT OF MASSAGE TREATMENT ON BLOOD PRESSURE AND RECOVERY ON STUDENT OF COACHING AND TRAINING OF SPORT EDUCATION PROGRAMS

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ABSTRACT

Sport Massage helps improve blood flow, relaxes muscles, recycles metabolic waste, and stimulates the work of various organs. increased blood flow will affect blood pressure and pulse rate. the purpose of research to find the difference influence of sports massage to blood pressure and recovery after doing the activity of 12-minute run test conducted by a coaching and training of sport education programs. Type of Quasi Experiment research. The sample of 22 male active in exercise aged 20-21 years is divided into 2 groups. The experimental group received treatment of sport massage and the control group was not treated. The research instruments are sphygnomanometer, stethoscope, whistle and stopwatch. The test instrument is a 12 minute run. The result of the measurement was analyzed regression test (influence) with 5% significance level. The results of data analysis obtained from the results of regression test. The experimental group and control test on the pulse has a significance level of 0.024 and F count of 1.147. Systolic blood pressure has a significance level of 0.001 and F arithmetic 0.658, diastolic blood pressure has a significance level of 0.000 and F arithmetic 5.905. Suggestion of this research that sport massage can be used as a vehicle to healthy life and as student of sport do not have to hesitate to study, deepen, and researching physical therapy science.

Keywords: Massage treatment, blood pressure, recovery



ORAL ABSTRACT

**MANAGEMENT WOODBALL CLUB UNIVERSITAS NEGERI
SEMARANG, INDONESIA CENTRAL JAVA**

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ABSTRACT

This study aimed describe club's management woodball Semarang State University. This study used a qualitative descriptive approach. Techniques of collecting data using interviews, observation and documentation. The subjects of this study coaches, administrators and athletes. Results showed: 1) Management of classified medium, for purpose of achievement and excellent service to all members but do not have administrative requirements in form of rule by laws.2) Management Training Program Coaches and Athletes categorized well, focus to target of training program full responsibility and motivation.3) Management Infrastructures categorized medium, namely the existence of alternative solutions, creative and innovative.4) Management Funding categorized as good, doing the accounting, were able to look for opportunities and use funds effectively and efficiently. Conclusions and suggestions, 1) The management considered good for that board service is further enhanced and fully responsible for duties performed. 2) training program coaches and athletes are categorized well, the future focus more on achievement, maintained for beginners and more improved achievement. 3) Management infrastructure being classified, facilities and infrastructure officer more responsibilities and more detailed inventorying. 4) Management of both categories of funding, future Unnes woodball clubs can establish cooperative relationships with sponsors who can help in terms funding so that club needs can be met without having collect a fee members.

Keywords: Mangement, club, woodball, Unnes



ORAL ABSTRACT

**HYDRATION STATUS AMONG SCHOOL CHILDREN IN SEKOLAH
KEBANGSAAN, SEKOLAH JENIS KEBANGSAAN(CINA) AND
SEKOLAH JENIS KEBANGSAAN (TAMIL) IN KLANG VALLEY**

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ABSTRACT

Background: Existing data indicate that poor hydration status adversely affects the health status of school children, but hydration studies among school children have not received sufficient research and educational attention. The aim of this study was to investigate the habits of water intake, water retrieval, and hydration status among school children in Malaysia. **Methods:** A total of 215 school children (100 boys and 115 girls), ages between 8 and 12 years filled out a supervised questionnaire which included questions pertaining to socio-demographics, lifestyle habits, perceived symptoms, hydration status was determined using the amount of water consumed. Mean values were calculated and used to determine the hydration status of participants. Multivariable regression analysis was used to determine odds ratios (ORs) and 95% confidence interval for factors associated with poor hydration status of participants. **Results:** About 46.4% of participants were dehydrated. **Conclusions:** Indeed, there is dehydration and associated risk factors among school children. Intervention programs to reduce dehydration among school children should include these factors among others for the improved quality of life and academic performance.

Keywords: Hydration, school children, health effects



ORAL ABSTRACT

**THE RELATIONSHIP BETWEEN AGILITY AND THE SPEED OF
SICKLE KICK AT CENTERING ATHLETES AND TRAINING
EDUCATION STUDENTS IN NORTH MOLLUCA PROVINCE**

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ABSTRACT

The purpose of this research is to know the relation between agility with sickle kick speed at athletes of PPLP of North Molluca province. This research was conducted in PPLP of North Maluku province with sample of 8 people. The method used to obtain agility data by using boomerang run test, while to obtain kick speed data by using kick speed test. Data analysis using Moment Product Moment correlation formula at significance level $\alpha = 0,05\%$. The results of this study indicate that: there is a significant relationship between agility and speed of sickle kick. Result of calculation of data analysis from both variable show that, $r = 0,975 > r\text{-table} = 0,456$ at significance level $\alpha = 0,05\%$ and $0,575$ at significance level $\alpha = 0.01\%$. so it was concluded that agility can make a significant contribution to the yield of the sickle-kick speed.

Keywords: Agility, the speed of a sickle kick, martial arts (Pencak silat)



ORAL ABSTRACT

**USING TEAMS GAMES TOURNAMENTS (TGT) COOPERATIVE
TECHNIQUE FOR LEARNING ACHIEVEMENT IN HEALTH-RELATED
FITNESS OF THAI HIGH SCHOOL STUDENTS**

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ABSTRACT

Teams-Games-Tournaments: Cooperative Learning has captured the interest of educationists as an instructional methodology provides opportunities for students to develop skills in group interactions and in working with others that are needed in today's world. The purposes of this research were: 1) to compare the learning achievement in health-related fitness of students by using the Teams Games Tournament (TGT), 2) to investigate students' opinions towards TGT Cooperative Learning Technique with health-related fitness of Thai Senior High School students. This research was a quasi-experimental research with a one group pretest-posttest design. The sample consisted of 24 Grade 11 students in first semester academic year 2017 at Surasakmontree School in Bangkok, Thailand. They were acquired by purposive sampling. The research instruments were the lesson plans by using TGT Cooperative Learning Technique with health-related fitness exercises, the achievement test, and students' questionnaire responded to using TGT Cooperative Learning Technique with health-related fitness exercises. The statistical analysis employed were percentage, mean, standard deviation, t-test Dependent and Content Analysis. The results revealed that: First, the learning achievement of Grade 11 students after using TGT Cooperative Learning Technique (eight weeks) with in health-related fitness exercises were higher than comparing to before experiment with statistical significant at the .05 level. Second, the students' opinions toward TGT Cooperative Learning Technique with health-related fitness exercises were very positive with overall at high level. Based on these findings, it can be concluded that the application of cooperative learning type TGT technique is effective in teaching health-related fitness.

Keywords: Teams games tournament, Thai high school students, cooperative learning



ORAL ABSTRACT

STUDENTS' INTEREST ON CBI IN AEROBIC ENGLISH CLASS

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ABSTRACT

Interest hold an important roles in education system. It assumed that students who has highest interest tend to be success in learning subject knowledge. This research is trying to answer how does students interest in studying Aerobic-English using Content Based Instruction method? How is the relation between students interest in studying using CBI method to their performance as aerobics instructor (in English)? This is a quantitative research. A set of questionnaire used as the main instrument in order to find out the students interest. SPSS Anova and correlational with Pearson method were used to analyze the research finding. Population in this study is sport science students with random sampling method. The samples are 25 students from third and fifth semester who never got aerobic subject before. They got the aerobic class based on CBI during short semester for 3 weeks. The questionnaire consisted of 20 questions. The research suggest that the students' interest on CBI method is in the medium category. However, there is minimum relation between students interest in studying using CBI method to their performance as an aerobics instructor. It is suggested that the research need to be conducted in longer period of class.

Keywords: Students' interest, CBI, Aerobics, English



ORAL ABSTRACT

USAGE OF FRUIT-INFUSED WATER (COMBINATION APPLE, BANANA, AND LEMON) AS AN EFFORT TO MAINTENANCE PERFORMANCE SOFTBALL ATHLETE FROM DEHYDRATION DUE TO EXERCISE

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ABSTRACT

The purpose of this review was to analyse the current evidence investigating the effect of fruit-infused water to maintenance performance from dehydration on softball athlete's. This is review study, a literature search of multiple databases was used to identify studies that met the criteria for this review. A literature consist of fluid intake, athlete's performance, dehydration, aerobic exercise, and anaerobic exercise. Exercise is known as physical stress that can affect the body's physiological work. Some of the negative effects of prolonged exercise are dehydration (decreased body fluids from normal levels), where the continuing effect of dehydration leads to changes in metabolism such as decreased blood sugar as a supply of energy sources, and loss of minerals and body electrolytes, increased body temperature, changes in the cardiovascular system, and impaired neurological function. Inadequate fluid consumption may affect fatigue, hydration status, and athlete performance. Fatigue can be experienced by all athletes in various sports, one of them is a softball athlete. Fatigue occurs due to the amount of sweat that comes out during the game and is not balanced with enough fluid consumption to maintain the body fluid balance so as to increase the risk of dehydration.

Keywords: Performance, softball athlete, dehydration, exercise



ORAL ABSTRACT

**EFFECTS OF AEROBIC AND BODY LANGUAGE ON WOMEN’S
ARMS, THIGHS AND WAIST AFTER GIVING BIRTH
(AN EXPERIMENTAL STUDY ON MEMBERS OF SENAM IBU SEHAT IN
DISTRICT BANDARJO UNGARAN 2017)**

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ABSTRACT

Losing weight could be done by exercise as a measured and arranged activity, it is expected to use energy from fat in muscle cell tissue. For examples, doing aerobic and body language. Population of the study are 110 member of *Senam Ibu Sehat* in Bandarjo district. The sample of study is 58 members of *Senam Ibu Sehat* in Bandarjo village. The study proved that aerobic and body language affect the size of arms, thighs, and waists of *Senam Ibu Sehat* members.

Keywords: Body language, the alteration size of arms, thighs, and waist after giving birth



ORAL ABSTRACT

**GAMES TEACHING IN SINGAPORE SCHOOLS: THE GAMES
CONCEPT APPROACH**

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ABSTRACT

In Singapore schools, physical education (PE) teachers use the Games Concept Approach (GCA) for games teaching. Introduced in 1999, the GCA enabled PE teachers to shift the emphasis from the mere acquisition of skills to one where students can transfer their learning from one situation to another (Curriculum Planning & Development Division, 1999). The GCA focuses on teaching the underlying tactics of games and the necessary performance skills, and comprises a five-stage lesson structure (Student Development Curriculum Division, 2016). Harvey and Jarrett (2014) considered the GCA as one of the game-centered approaches (e.g., Teaching Games for Understanding and Play Practice) and highlighted the “growing emergence of game-centered approach research from South East Asian countries” (p. 291). Despite the growing emergence, there has been no attempt to consolidate what the researchers have learnt about the GCA. Thus, the aim of this presentation is to explicate the GCA, summarize the existing GCA-related research, and suggest future research directions.

Keywords: Physical education, games teaching, game-centered approaches, game concept approach



ORAL ABSTRACT

THE CONTRIBUTION OF AGILITY, BALANCE AND SPEED OF REACTION OF THE FOOT AGAINST THE DRIBBLE SKILL IN THE GAME OF FOOTBALL AT THE CLUB UNIVERSITY OF NADHLATUL ULAMA

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ABSTRACT

This research aims to gain answers to problems: 1). Is there a contribution towards agility skill dribble in soccer Clubs on University users Nadhlatul Ulama. 2) Is there a contribution balance against skill dribble in soccer Clubs on University users Nadhlatul Ulama. 3) Was there a reaction foot speed against the contribution of skill dribble in soccer Clubs on University users Nadhlatul Ulama. 4). Is there a contribution of agility, balance and reaction speed of foot, dribble skills against users in football club University of Nadhlatul Ulama..The study was descriptive in nature against three free variables and bound variables one. Population and sample is a University Club Nadhlatul Ulama. Selected by random sampling sample obtained as many as 50 people. Technique of data analysis used the regression (test-r). Based on the results of the data analysis can be summed up as follows: 1). There is a contribution towards the agility skill dribble in soccer Clubs on University users Nadhlatul Ulama. β -value $\alpha = 0.929$ ($p < 0.05$), where the great contribution of 86.30%. (2) There is a balance of contributions towards skill dribble in soccer Clubs on University users Nadhlatul Ulama. With the value of $\beta = 0.0780$ ($p < 0.05$), where the great contribution of 60.80% (3). There are contributions from the reaction speed of the foot against the skill dribble in soccer Clubs on University users Nadhlatul Ulama Cirebon, β -value $\alpha = 0.0740$ ($p < 0.05$), where the great contribution of 54.70% 4). There is contribution of agility, balance and reaction speed of foot, dribble skills against users in football club University of Nadhlatul Ulama Cirebon, with a value of $R_0 = 0.931$ ($p < 0.05$), where the great contribution of 86.70%.

Keywords: Agility, balance, reaction speed of foot, football



ORAL ABSTRACT

**COMMUNITY PARTICIPATION IN EXERCISING IN BIMA REGENCY
OF THE PROVINCE NTB VIEWED FROM SPORT DEVELOPMENT
INDEX**

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ABSTRACT

This study aims to determine the level of Society participation and to determine the factors that influence the level of Society participation in exercising in the district of Bima, Indonesia. The Researchers Conducted the study by including three Regencies as representative of all areas of low, medium and high in this study Which are the subdistrict of Bolo, subdistrict of Soromandi, and subdistrict of Wera with a total sample of 270 people. Each regency has 90 samples as a representative of the respective subdistrict. In this study, the researchers used descriptive qualitative methods, by way of survey, interview and questionnaire. Sampling in this research was done with probability sampling technique that is proportionate stratified random sampling by using formula of Sport Development Index and the researchers sampled 90 respondents from each subdistrict, and later analyzed the data descriptively. Bima Regency by taking 3 subdistrict as a sample: Sub-District of Bolo, Sub-District of Soromandi, and Sub-district Wera, the number of samples with 270 people. Every town in the take 90 people are divided into age groups: age of children (7-12 years) 30 persons, the age of teens (13-17 years) and the age of 30 adults (18-40 years) 30 persons that each age group consisted of 15 men – men and 15 people pe perempuan. The results of this study, concluded that the index of community participation rate in Regency Bima is 0.440. One of the indicators of SDI that has already examined shows the numbers in the range 0.000 – 0.499 means construction of the bima Regency sports are still at a low category. Need for cooperation between local government, Service, education, youth and sports, KONI also in making policies for improving public participation bima Regency as as an effort to boost the development of sports more either.

Keywords: Community participation, sports, sport development index



ORAL ABSTRACT

**ADMINISTERING GUAVA RED MALONDIALDEHIDE LEVELS TO
CHANGES THAT GOT MAXIMUM PHYSICAL ACTIVITY ON SSB
SPARTA PLAYERS DK**

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ABSTRACT

This research aims to know the influence of the giving of the guava red malondealdehyde to the changes that get physical exercise a maximum of 300 meter run in the form of football player of Sparta DK Kab. Deli Serdang. This type of research is an experiment with a population of players SSB Sparta Dk Engineering the acquisition of samples used is the total sampling population that meet the karteria samples, samples that used sebanyak 15 people. The study lasted for 2 weeks with a frequency of three times for 2 weeks. The first meeting to take a sample of pre-test and the second and third meetings taking post-test. Research instrument by measuring the levels of malondialdehyde in the blood. To measure it is by examination in the laboratory of Integrated University of North Sumatra. From the results of the data analysis done with test-t two parties obtained That t calculate the t table, meaning $<$ there is decreased to the level of malondealdehyde in the Group given red guava during treatment and there are increased levels of malondialdehyde on groups that do not give red guava so that it can be concluded that "there is influence the granting of guava red against levels decrease malondialdehyde on a Spartan football player DK Deli Serdang Regency. Deli Serdang who get maximum physical activity".

Keywords: Red Guava Juice, Sub-Maximal Pulse, MDA (*Malondialdehyde*) levels



ORAL ABSTRACT

**THE INFLUENCE OF EXERCISE AGILITY IN SPURTER TO THE
SPEED ACCELERATION 30 METERS**

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ABSTRACT

The purpose of this study was to determine the effect of agility training on the ability of acceleration speed on sprinters. The research sample consisted of 32 male student sprinters in Central Java. The sample consisting of a group experiment 1, AIB1 and AIB2 having category agility high and low trained ledler drill 16 sprinter. Samples for the experimental group 2 were 16 sprinters who had high and low A2BI and A2B2 agility trained up and down stairs. Pre-test, mid-test and post-test data showed that ledler drill training for high-agility sprinter (AIB1) showed significant results in an increase of 30 meters acceleration. Increased acceleration speed from 6.32 seconds to 6.07 seconds. For the ledler drill training group for low agility sprinter (AIB2) showed significant results with pre test data of 6.76 to 6.58 seconds. Up and down stairs for groups with high agility (A2BI) showed significant results in an increase of 30 meters acceleration speed, from pre test with a time of 7.18 seconds to 6.75 seconds.

Keywords: Agility, acceleration, sprinter



ORAL ABSTRACT

THE ACUTE EFFECTS OF STEP RATE MANIPULATION ON RUNNING ECONOMY OF INTERMEDIATE LONG DISTANCE RUNNERS: A PILOT STUDY

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ABSTRACT

The aim of study was to determine the acute effects of step rate manipulation on running economy of intermediate long distance runners. Total of three male (age: 27.6 ± 2.5 yrs, predicated VO_{2max} : 55.4 ± 0.5 ml/kg/min) were participated in this study. Four times of one km with randomized step rate manipulation (+0%, +3%, +6% and +9%) was carried out, running speed set between 12.1–12.8 km/h. Running mechanics (impact force and loading rate) were measured by instrumented treadmill (Pressure Treadmill, Noraxon, USA), running economy (oxygen uptake, respiratory quotient, heart rate response and metabolic equivalent) were measured by metabolic analyzer (Model: K5, COSMED, Italy). Metronome was used as rhythms throughout the study. The overall results indicated there was reduction in loading rate (+0%: 1.65 ± 0.21 BW/s; +3%: 1.59 ± 0.10 BW/s; +6%: 1.70 ± 0.17 BW/s; +9%: 1.64 ± 0.26 BW/s) and slight increment in impact force (+0%: 70.08 ± 16.51 BW; +3%: 68.51 ± 13.09 BW; +6%: 69.76 ± 14.32 BW; +9%: 65.75 ± 12.35 BW). However, individual participant shown better response in particular stage (M01 lowest in +9%, impact force: 1.34 BW; loading rate: 66.25 BW/s, M02 +3%, impact force: 1.61 BW; loading rate: 70.63 BW/s) but not linear reduction as the step rate increases. Results exhibited similar outcome in running economy as RQ (+0%: 0.97 ± 0.12 ; +3%: 1.01 ± 0.14 ; +6%: 0.99 ± 0.06 ; +9%: 0.94 ± 0.06), predicted VO_2 (+0%: 45.54 ± 12.81 ml/kg/min; +3%: 46.25 ± 10.93 ml/kg/min; +6%: 43.15 ± 11.19 ml/kg/min; +9%: 44.93 ± 9.20 ml/kg/min), HR (+0%: 147 ± 6 bpm; +3%: 149 ± 5 bpm; +6%: 150 ± 2 bpm; +9%: 149 ± 3 bpm), MET (+0%: 14.53 ± 4.17 ; +3%: 13.66 ± 3.39 ; +6%: 13.36 ± 3.74 ; +9%: 12.71 ± 2.51). Therefore, no indication shows higher step rate enhances running economy and made lesser force exerted on the ground. However, step rate manipulation able to identify positive effects in certain stages for individual in running performance and injury reduction.

Keywords: Step frequency, running mechanics, marathon, running performance



ORAL ABSTRACT

ACADEMIC PERFORMANCE OF STUDENTS ENGAGED IN ATHLETIC AND NON-ATHLETIC COMPETITION

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ABSTRACT

There were people who said that students engaged in athletics and non-athletics competitions usually full down in academics; others said that after physical activities students become active in the classroom. A descriptive research was used utilizing closed ended questionnaire to determine the welfare and or if its shortcoming outweighs the welfare and possibly propose measures to help students improved their academic performance. There were 67 students mostly in the Junior year who participated in this study, 22 were male and 45 were female. Most of them participated in sports and athletics while few in non-athletics. Most of them agreed that these activities helped them developed better time management skills. They spent less than three hours practice between all athletics/non-athletics commitments while devoting more than three hours for school work outside classroom and said that they could have better or same grades if not involved but then they agreed to choose to compete and agreed that academic support services helped them succeed. Their involvement in these competitions helped them identify their life skills and determined their career direction and motivated them to attend classes. Most of them got a General Point Average ranging from 1.0 to 2.0 and agreed that their involvement in sports and academic events on credits totals for eligibility motivated them toward degree completion and persistence towards graduation.

Keywords: Academic performance, athletic and non-athletic competitions, descriptive research, time management, career direction



ORAL ABSTRACT

MOTIVATION, SELF CONTROL AND ATHLETES' PEAK PERFORMANCE

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ABSTRACT

Motivation urges athletes to mobilize, self-control drills athletes' individual competence to adapt themselves in the expected circumstances and peak performance corresponds with their best performance when facing matches. All these important aspects may contribute to athletes' best performance. This study aims at investigating the correlations between motivation and self-control towards athletes' peak performance. Data collection used questionnaires that addressed athletes' motivation, self-control, and peak performance. Eighteen football athletes from Semarang State University who had previously experience in the national championships level participated in this study through the purposive sampling method. Data analysis used the Products -moment correlations. The results showed that there were correlations between motivation and peak performance with the value of .752, self-control and peak performance were .607 and motivation and self-control towards peak performance were .696. The significant correlations were found between motivation and self-control towards athletes' peak performance. These indicated that the higher motivation and self-control, the higher peak performance the athletes performed. On the other hand, the lower motivation and self-control, the lower peak performance the athletes performed. This study concludes that motivation and self-control aspects contribute to athletes' peak performance.

Keywords: Motivation, self-control, athletes' peak performance



ORAL ABSTRACT

**MODIFIED EQUIPMENT TO ENHANCE SKILL ACQUISITION
IN BADMINTON**

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ABSTRACT

The aim of this study was to examine the effect of modified equipment on skill acquisition for children. Modified equipment is well recognized as one of the most effective methods for children to acquire skills in sports. The participants aged between 7 – 9 years old, without any prior formal badminton experience, were divided into two groups randomly, namely the standard racquet (SR) and modified racquet (MR). They underwent a five-week program conducted by a certified badminton coach. Hitting opportunities and stroke effectiveness were tabulated during a mini-competition at the end of the five weeks. The results for hitting opportunities showed that there was a statistically significant difference between SR group ($M = 24.9$, $sd = 1.37$) and MR group ($M = 35.1$, $sd = 1.79$); $t(18) = 14.30$, $p = 0.000$. The results for stroke effectiveness showed that there was a significant difference between SR group ($M = 15.4$, $sd = 1.07$) and MR group ($M = 24.1$, $sd = 1.45$); $t(18) = 15.25$, $p = 0.000$. The result of this study demonstrated that reducing the racquet's size provided more hitting opportunities and the production of successful strokes. By manipulating task and environmental constraints skill acquisition can be enhanced among children.

Keywords: Modified equipment, skill acquisition, task constraints, environmental constraint, talent development



ORAL ABSTRACT

**EXPLORING THE TREND FOR PHYSICAL ACTIVITY AMONGST
INTERNATIONAL STUDENTS STUDYING WITHIN MALAYSIAN
UNIVERSITIES**

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ABSTRACT

The purpose of this study is to explore and review the physical activity habits of male and female international students (from Africa, Europe, Asia and America) who are studying in Malaysia and the impact of conditions such as climate, personal safety, social environment and access to facilities may have for them. Eight international postgraduate students, aged between 30-35 years old (2 African, 3 European, 2 Asian and 1 American) participated in this qualitative research, a personal interview and audiotape were used and the sessions were professionally transcribed. The findings indicated that the physical environment affects the choices made by participants, with regard to exercising. Personal safety is also a barrier in participating in physical activity especially for female students. In conclusion, this study found that weather (heavy rain) has a direct impact on the student choices of engaging in outdoor activity, as there is more risk of injury. A public health strategy to promote PA should strongly emphasize the role of environmental influences, and create more opportunities for the public to become physically active in their daily lives.

Keywords: Physical activity, International students, physical environment, weather



ORAL ABSTRACT

**EVALUATION OF 2013 CURRICULUM IMPLEMENTATION ON
PHYSICAL EDUCATION, HEALTH, AND SPORT OF SENIOR AND
VOCATIONAL HIGH SCHOOL IN KULON PROGO**

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ABSTRACT

This study had a purpose to know: 1) the 2013 Curriculum implementation of content standard on Physical Education, Health, and Sport of Senior and Vocational High School in Kulon Progo. 2) the 2013 Curriculum implementation of process standard. 3) the 2013 Curriculum implementation of assessment standards. 4) teachers' and principals' perception of Physical Education, Health, and Sport. The population in this study was 52 Senior and Vocational High School. The sample of this study was 18 Senior and Vocational High School (proportionale stratified random sampling). The instruments used in this study were questionnaire for the teachers and the students and interview for the principals and the teachers. The result showed that. 1) 77.6% of content standard average was suitable with the 2013 Curriculum. However there were also some obstacles due to the lack of the facilities, infrastructure, and the book distribution. 2) 79.5% of process standard average was suitable with the 2013 Curriculum, but the teaching and learning process was not entirely as expected. 3) 73.5% of assessment standard average was suitable with the 2013 Curriculum, but the teachers considered the rubric as an obstacle because it contained too many criteria. 4) The principals' and teachers' perception toward 2013 Curriculum was good, but it has to be prepared better than before. The conclusion could be covered by 76.91% of content standards, process standards, and assessment standards average was suitable with the 2013 Curriculum, but there were some obstacles in its implementation. Based on these results, the government was expected to continue the 2013 Curriculum, but it should be prepared well including the preparation of human resources, facilities, infrastructures, textbooks, and simplified assessment standards. Schools which will use the 2006 Curriculum again are still possible to apply the positive values of 2013 Curriculum and in the teaching of Physical Education, Sport and Health, there must be many elements playing/Teaching Games for Understanding (TGfU).

Keywords: Evaluation, implementation, 2013 curriculum, physical education, health, sport



ORAL ABSTRACT**THE INTERACTION BETWEEN LEARNING AND PERFORMANCE OF AN ISOMETRIC GOAL-DIRECTED AIMING TASK AT DIFFERENT HAND POSTURE**

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Repetitive movement of a goal directed aiming task improves performance typically reflected by reducing errors. Learning rate is optimal when errors are least, while this is true for all goal directed aiming tasks, however, this may vary at different postures and mode of contractions. The aim of this study was to examine learning rate and performance of a submaximal isometric hand goal-directed aiming task at neutral and pronation hand postures. A total of thirty healthy right-hand dominance adults participated ($n = 30$; age: 22.66 ± 3.2 years) and were randomly assigned to neutral or pronated posture ($n=15$ per group). Ten sets of sixteen targets which distributed symmetrically about the origin were performed. The aiming error of each movement towards a target was calculated and analysed between the sets to determine differences in learning rate and performance between different postures. The results revealed that the learning rate was similar ($p > 0.05$) for both neutral (1.387/set, SEM: 0.2528) and pronated (1.428/set, SEM: 0.2569) postures. However, the pronated posture showed significantly higher errors ($p < 0.05$) in initial ($p = .018$) and optimal ($p = .0005$) performance. In conclusion, the findings of this study suggest that although the learning rates are similar for both postures, performance is better in neutral as oppose to pronated hand posture, due to the lesser initial and optimal performance error. Therefore, when performing a goal-directed aiming task, it is important to consider the posture and orientation of the limb for optimal performance. Practically, these findings can benefit athletic performance and rehabilitation programs. Future work could examine different types of goal-directed aiming task in an applied setting.

Keywords: Goal-directed aiming task, learning rate, performance, posture



ORAL ABSTRACT

CONSERVATIVE GAMES IN AQUATIC TO INCREASE PHYSICAL FITNESS AND SPORTSMANSHIP VALUE STUDENTS AT ELEMENTARY SCHOOL

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ABSTRACT

Physical fitness and sportsmanship value becomes an important issue for students in Indonesia. The problem of lack of movement for school students to be an interesting subject for the meticulous and found solutions, fast food, online games, video games to be one cause of students in elementary school for lazy to move of course this affects the fitness owned by most students in elementary school. Physical fitness has relevance to students undergoing routines especially affecting physical appearance of physical and spiritual, performance at school and at home, as well as health owned by students. The collapse of the existing norms in the schools owned by students becomes a big question in this era, the various cases of student violence, even student violence against teachers becomes a problem that needs to find a solution through aquatic media we try to provide solutions to the problems that occur, in the hope that the values contained therein will be able to be absorbed by the students so it becomes a solution for teachers to provide movement learning especially water activities. So it is necessary to research the existing problems through socialization in elementary school children about fun games that use the media of water activity and can increase the value of students' sportsmanship in elementary school with the game "Conservative Games in Aquatic".

Keywords: "Conservative Games in Aquatic", physical fitness, modification, sportsmanship

**ORAL ABSTRACT****A CROSS-SECTIONAL STUDY: THE PREVALENCE OF LOW BACK PAIN (LBP) AMONG MALAYSIAN ARMY MILITARY PERSONNEL AND FACTORS ASSOCIATED WITH LBP**

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ABSTRACT

The purpose of this cross-sectional study was to identify the prevalence of low back pain (LBP) and explore possible factors that associate with LBP among Malaysian military personnel in the year 2018. A self-administered questionnaire on sociodemographic information, occupational background, occupational exposure and LBP evaluation were used in this study. A total of 330 respondents participated in this study and 321 (97%) of them completed and returned the questionnaires. One-hundred-and-fifty-seven respondents complained of LBP giving a prevalence of 48.9%. For sociodemographic information, significant association were found between LBP with smoking status ($\chi^2 = 5.335$; $p = 0.021$), history of LBP ($\chi^2 = 9.889$; $p = 0.002$), and history of accident ($\chi^2 = 30.89$; $p < 0.001$). The occupational background which were significantly associated with LBP were military rank ($\chi^2 = 5.803$; $p = 0.016$) and category of regimen ($\chi^2 = 11.681$; $p = 0.001$). In addition, occupational exposure; lifting weights with one hand ($\chi^2 = 12.42$; $p = 0.0004$), lifting weights with two hands ($\chi^2 = 11.55$; $p = 0.001$), pushing weights ($\chi^2 = 13.86$; $p = 0.0002$), pulling weights ($\chi^2 = 11.06$; $p = 0.001$), and work physical activity ($\chi^2 = 11.76$; $p = 0.001$) also showed significant association with LBP. Respondents who have history of accidents (OR = 4.602, 95% 2.390-8.861), respondents with history of low back pain (OR=1.917, 95% 1.109-3.312), respondents in combat regimen (OR = 1.8, 95% 1.101-2.941) and respondents in which work physical activity of 600 METS or more (moderate/high PA) (OR = 2.228, 95% 1.019- 4.869) were more likely to have LBP. It is recommended that preventive measures should be implemented to identify modifiable factors in individuals with history of LBP and accident to avert reinjury. Moreover, safe and contemporary physical training should be provided particularly in the combat regimen to promote work efficiency and for LBP injury prevention.

Keywords: Low back pain, army, occupational background, occupational exposure



ORAL ABSTRACT

**SPORTS SERVICES CUSTOMER DISSATISFACTION: EFFECTS OF
POST-CONSUMPTION EVALUATION FACTORS ON CUSTOMER
COMPLAINING BEHAVIOUR**

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ABSTRACT

The purpose of the study is to understand the effects of sport service post-consumption evaluation factors on customer complaining behaviour due to dissatisfactory or negative sports service experience. A non-experimental, cross-sectional online survey was used for this study. 411 valid surveys were collected through sharing of the online survey on various platforms, over an eight-week period. This study sheds light on the evaluative thought and behavioural processes pertaining to sport service post-consumption and the resulting actions taken by consumers. The empirical findings suggest that all the tested independent variables were strongly and significantly correlated with the propensity to complain with the independent variable “perceived benefits/cost of complaints” having the strongest correlation. Moreover, complaints were more likely to be made online than offline when dissatisfied. Ultimately, the present study suggests that dissatisfied customers generally make their complaints using online mediums especially when there is an increased perceived benefits/cost of complaining. Hence, it would be beneficial for sports service providers to improve its Customer Relationship Management as well as revise existing company policies and guidelines in order to quell unavoidable customer dissatisfaction and hence channel these customer dissatisfactions into customer loyalty and satisfaction, thus benefitting the company or organisation.

Keywords: Customer relationship management, sports service, complaining behaviour



ORAL ABSTRACT**AN EXPLORATORY STUDY ON THE MENTAL WELL-BEING OF
ATHLETES IN SINGAPORE**

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Benefits of physical activity have been well-established in terms of physical and mental aspects of an individual's health (HPB, 2011). However, little is known about the benefits of sports participation with regard to mental well-being particularly among Singapore athletes. Hence, this study aims: 1) to gain a better understanding on the current status of mental well-being among Singaporean athletes and 2) to determine if there is any association between years of participation and competing in sports with mental well-being of athletes. 170 Singaporean athletes (age between 18 to 30 years old) were recruited for the current study. They were grouped into three main categories: elite (represent the national team, $n = 55$), competitive (represent inter-varsity teams, $n = 61$) and recreational athletes (no competition experience but have played the sport for minimum six months, $n = 54$). The participants completed the 30-item Singapore mental well-being scale (Chan et al., 2013). The mean scores for the five subscales were high (range from $M = 3.91$ to $M = 4.16$) based on a Likert scale from 1 (almost never) to 5 (almost always). One-way MANOVA analyses did not reveal any significant difference among the three categories of athletes in mental well-being or any of its subscales. However, there are moderately large correlations between years of participation ($r = .37, p < .01$) and competing in sports ($r = .44, p < .01$) with mental well-being of Singaporean athletes. Findings from this exploratory study seem to suggest that sport involvement at elite, competitive and recreational level in Singapore may have beneficial effects on mental well-being. Further research are needed to gain further insights into the mental well-being of athletes so that practitioners can be more informed about their athletes' socio-emotional needs when implementing training and competition programmes.

Keywords: Athletes, mental well-being, sports



ORAL ABSTRACT

TA-COCK TAKRAW WITH KOCK

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ABSTRACT

Sepak takraw is a sport combination between volleyball and football that recently was favored by the people of Indonesia. Sepak takraw is popular because of the acrobatic beauty that is shown when playing sepak takraw. The acrobatic beauty of sepak takraw becomes the main attraction for the society. But the attraction turns into fear when will learn or try to play sepak takraw. To perform acrobatic movement of course required preparation when practicing in order to perform acrobatic movements properly. In addition, the fear that arises can also be caused because there is no land to play and no partner to play. Because to play sepak takraw requires field and players. The sepak takraw field is about the same size as a badminton court and consists of six players divided into two squads. To answer and overcome the fear of playing sepak takraw, the innovator creates a new sport. The sport is Ta – Kock.

Keywords: Sport, sepak takraw, acrobatic



ORAL ABSTRACT

CONFORMITY OF INTEREST AND TALENT IN FOOTBALL AND VOLLEYBALL OF STUDENTS AT JUNIOR HIGH SCHOOL

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ABSTRACT

Research Problem: How do the conformity of interests and talents to the students of SMPN 1 Bansari in sport of football and volleyball. Purpose of the study: to know the conformity of interest and talent of SMPN 1 Bansari student in football and volleyball. Method of the study uses survey with descriptive approach and the technique of collecting the data uses test. The design of this study is one-shot case study. The research variables are student's interest and talent as the dependent variable. The sample of this study is the participants of sport extracurricular of football and volleyball in SMPN 1 Bansari which are amounted to 108 students. The sampling technique using Cluster Random Sampling. The result of conformity of interest and talent of football which are suitable 15 students (30.61%), less suitable 23 students (46.94%), and unsuitable 11 students (22.45%). Conformity of sports interest and talents of volleyball of male students which are suitable 9 students (27.27%), less suitable 4 students (12.12%), and unsuitable 20 students (60.61%). Conformity of interest and talent of sports volleyball of female students which are suitable 11 students (42.31%), less suitable 3 students (11.54%), and 12 students unsuitable (46.15%). Suggestions: 1) to the Principal should provide a policy to require sport extracurricular of football and volleyball, 2) for the teacher of sport to provide intensive training to students who have the conformity of interests and talents, and directing the students who have less/unsuitable to switch to other sports. 3) students whose interests and talent are suitable to maintain the potential and practice diligently. Students who are less or unsuitable can switch to other sports which are suitable to the sports potential test results.

Keywords: Interest and talent, football and volleyball



ORAL ABSTRACT

OBESITY OF SCHOOL CHILDREN IN INDONESIA: RISK FACTORS

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ABSTRACT

Obesity is defined as an abnormal or excessive condition of fat accumulation in adipose tissue to some extent that can damage health. Obesity is a common problem of schoolchildren. Risk factors for obesity are genetic, overeating, lack of motion / exercise, psychological factors, the environment. This article will analyze some research results to determine the risk factors of obesity cases in school children. The design of this paper is a review of literature related to nutrition issues. most of the literature used in this paper is the journal and previous academic research results. Data were analyzed with 95% confidence interval and $\alpha = 0,05$. Result of research on minor hypothesis, it was found that there was significant correlation between environmental factor (diet and physical activity) with obesity level, and psychological factor with child obesity level. genetic there is no significant relationship with child obesity level. In the main hypothesis acceptable to H_a , there is a significant relationship between risk factors of obesity with obesity rate of school children.

Keywords: Obesity, risk factor



ORAL ABSTRACT

**CONTRIBUTIONS TO THE STRENGTH OF LIMB MUSCLES AGAINST
LONG JUMP RESULTS OF SMP NEGERI 4 PEKANBARU**

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ABSTRACT

There are still many students who earn a low result in the sport of long jump and then the strength of limb muscles students is still not good and it can be said to have an impact on the results of a leap into a short. Then some students still looks stiff body flexibility in terms of insufficient. less lead to good results until the long jump which is owned by the students. From the description the purpose of this research is to know the contributions to the strength of limb muscles against long jump results of SMP Negeri 4 Pekanbaru. As for this kind of research i.e. research korelasional by comparing the results of measurements of two different variables in order to determine the level of contribution between these variables. The population in this research is grade VIII SMP Negeri 4 Pekanbaru i.e. as many as 15 students the son, given a population only slightly so researchers took samples with the technique of total sampling population was made or all the samples, thus the sample Research totalling 15 people. From the results of the calculations note that $r_{hitung} = 0.651$. On a significant level of 5% was found to be $r_{tabel} = 0.514$. Thus $r_{hitung} > r_{tabel}$ or $0.651 > 0.514$. Based on the results of the calculation of the value of the correlation can be stated that the basic hypothesis (H_0) was rejected and the alternative hypothesis (H_a) in receipt of "there is a relationship of muscle strength Limbs long jump results against Students of SMP Negeri 4 Pekanbaru

Keywords: Contributions, limb muscles, long jump



ORAL ABSTRACT

**VIDEOTAPES FEEDBACK TO IMPROVE THROWS DISCIPLINE
ATHLETES PERFORMANCE**

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ABSTRACT

The purpose of this study was to determine the effect of videotapes feedback on throws discipline. The research method is one group pretest posttest design. The sample of this research are student athletes (n=7). Treatment was given 7 times. The data analyzed with paired T-test (α : 0,05). Obtained value of $t = -4,384$ which less than t -table = $-2,447$ which mean there is difference of throw result between pre test and posttest. This proves that videotapes feedback produces good feedback to improve athlete's performance.

Keywords: Videotapes feedback, throws discipline, shot put, discus throw, javelin throw



ORAL ABSTRACT

SIMILARITIES AND DIFFERENCES OF ANXIETY, STRESS AND DEPRESSION AMONG SELF-DEFENSE SPORTS (KARATE, TAE KWON DO AND PENCAK SILAT)

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ABSTRACT

To be a successfully athlete must have some components of readiness, such as physical, tactics, and mental. However, common psychological factors to athletes like anxiety, stress, and depression are able to disturb their performance, and it is different in each different sport. Moreover, negative disturbances could be so clear being observed in individual sports especially before and during the tournament compared to team sports. In fact, athletes could not enjoy their tournament when they feel anxious and not relax, particularly when they are thinking about the result, and stress could be either good or bad influence to athlete's performance, and this is quite similar with depression (tend to feel bad and has no desire or spirit to do the activity). Factually, athletes have been experiencing all these problems. Anxiety, stress and depression are factors that affecting athlete's performance (difficult to control himself), and unfortunately, most of athletes feel so hard to deal with these feeling during their match (they keep their mind filled by negative things). Therefore, this review article meant to identify the similarities and differences of anxiety, stress, and depression in martial arts (self-defense sports) especially in Karate, Tae Kwon Do, and Pencak Silat. By knowing and understanding the similarities and differences of negative disturbance, hopefully it could give a contribution to athletes, coach, or even the official teams in an effort to overcome the negative disturbance, and at last a good performance can be obtained with a good heart and emotional state.

Keywords: Anxiety, stress, depression, martial arts



ORAL ABSTRACT**USING THE REACTIVE BOUNDING COEFFICIENT TO EVALUATE
HORIZONTAL PLYOMETRIC PERFORMANCE**Jad Adrian Washif¹, Kok Lian Yee²¹High Performance Branch, National Sports Institute of Malaysia²Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor,
Malaysiajad_adrianwashif@yahoo.com**ABSTRACT**

Plyometric exercises such as drop jumping and bounding offer athletes a substantiated means of enhancing athletic performance. Between the two exercises, reactive measurement using bounding has received scant attention within the domain of training and conditioning. Consequently, the purpose of this study was to identify the viability of utilising a speed-bounding exercise to assess horizontal reactive strength. The term “Reactive Bounding Coefficient” (RBC) was used to represent measures of horizontal reactive strength. Eleven young, male elite-sprinters (age = 17.8 ± 1.3 yr; height = 1.72 ± 0.06 m; mass = 66.05 ± 6.10 kg; best 100 m sprint time = 10.77 ± 0.32 s) were tested for static jump (SJ), drop jump (DJ), 10 speed-bounding (RBC10), and 50 m sprint performance. Between-group comparisons based on sprint ability (fast [FSG] vs slow [SSG] sprint-group) and correlation coefficients were computed subsequently. FSG (n = 5; 50 m time = 5.82 ± 0.11 s; RBC10 = 7.46 ± 0.27) performed significantly better in RBC10 ($p = 0.036$) than SSG (n = 5; 50 m time = 6.09 ± 0.13 s; RBC10 = 7.09 ± 0.25). A very high correlation was attained between RBC10 and the criterion measure, SJ ($r = 0.830$). Additionally, the relationship between RBC10 with 30 m, 50 m, 10-30 m and 30-50 m sprint times yielded large correlations ($r = -0.519$ to -0.595). This positive trend however, was not observed for DJ reactive strength index (trivial to moderate correlations). Good reliability was shown for RBC10 and all sprint distances (<1.5% coefficient variation). In addition, all sprinters attained ground contact times of 0.12 to 0.20 s during RBC10, which indicates fast stretch-shortening (SSC) movement. The results suggest that the RBC10 provided good test sensitivity, and was able to discriminate between FSG and SSG. It seems that the RBC10 entails fast SSC, has acceptable levels of validity and reliability, and could be utilised to assess plyometric ability and enhance sprint performance.

Keywords: Athletics, explosive, power, speed-strength, stretch-shortening cycle



ORAL ABSTRACT

EFFECTIVENESS OF SOYBEAN MILK AND COW'S MILK INTAKE TO INCREASE MUSCLE ENDURANCE

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ABSTRACT

In everyday life, an athlete is always confronted with intense training loads in order to maximize endurance and muscle strength. Muscles as one of the organs that function as a support activity of the exercise can experience a decrease and increase of endurance. Muscular endurance is the ability of the muscles to perform a movement continuously in a certain time so as not to reduce a fatigue or pain during exercise. Persistence of one's muscles is influenced by many factors, one of which is the nutritional intake consumed, because nutrition intake greatly affects the performance of an athlete during exercise or match. Milk as one of the nutrient intake is often used as a treatment in improving the quality of body functions by most people, has a balanced content and high nutritional value. Almost all food substances such as carbohydrates, proteins, minerals, and vitamins are in it. Comparison of these substances is perfect, so it is suitable to meet human needs. In addition, milk is also a drink that is easily available and affordable for all people of Indonesia. Cow's milk and soy milk have almost the same composition or content. Both are very influential on muscle endurance, but there are differences in yield between soy milk and cow milk, so the authors want to analyze the effectiveness related to soy milk and cow milk intake to increase muscle endurance.

Keywords: Soybean, cow, milk, muscle endurance, performance



ORAL ABSTRACT

EXERCISE BEHAVIOUR IN HEALTHY PEOPLE AND PEOPLE WITH DEGENERATIVE DISEASES

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ABSTRACT

This is a narrative review article focusing on exercise behaviour issues in healthy people and people with degenerative diseases, aims to present a description and to explain factors affecting exercise behaviour. Writing methods started from problem identification, study literacy, data analysis, constructing an alternative problem solving, and conclusion. Twelve scientific journals and articles were used in this paper. Compared to healthy people, those who live with degenerative disease has higher awareness raising to be physically active, and they could accomplished world health organization recommendations for physical activity, but they need more stimulus factor such as the presence of their health care professional. In order to commit on good exercise behaviour, changing exercise behaviour strategies is applicable for everyone, with emphasizing on mental training particularly imagery, and other stimulus control like social supports either from government or citizen community. At last, we do hope that this paper could be used as avenues for future studies.

Keywords: Sports psychology, exercise behaviour, physical therapy



ORAL ABSTRACT

DEVELOPING BASIC MOVEMENT TWO STEP SKILL IN RHYMIC ACTIVITIES BY THE EXERCISE OD SCORE BAR IN MUSICAL FOR STUDENT GRADE 12 OF SATRI NONTHABURI SCHOOL 2017

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ABSTRACT

The purpose of this research were to 1) study research features on teaching physical education rthymic activities by the exercise of score bar in musical for student grade 12 of Satri Nonthaburi School 2017 that can be develop basic movement two step skill which one is the most problem of student in this subject 2) Developing basic movement two step skill in rthymic activities by the exercise of score bar in musical. The results of research synthesis were as follow: 1. The synthesis of research on Developing basic movement two step skill in rthymic activities by the exercise of score bar in musical showed that this materials can be develop this problem 100% by average before use the materials and after use materials of sample has improving to better than before use this materials. 2. The quality evaluation results of the research report found that the quality of the most research report were at the very satisfactory level. 3. Data for this research consisted sample 12 person average before use materials is 3.5 and average after use materials is 7.83.

Keywords: Rthymic activies



ORAL ABSTRACT**COMPARISON OF TRAINING METHODS USING SKIPPING WITH UP-AND-DOWN BENCH TRAINING METHODS ON SMASH SKILLS SEPAKTAKRAW ON LINE UP OF STUDENT ACTIVITY UNITS**

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Many exercise programs increase leg muscle strength, but are constrained by equipment in clubs on the Semarang public university campus so that they need simple tools but significantly increase leg muscle power. then the simple tool chosen is the skipping training method and the up and down bench training method to increase the limb power in sepak takraw smash. the two exercise models are compared which are more effective and efficient in increasing leg muscle power. The research method used is matching by subject design. The research subject students were the 25 students of Sepak takraw Student Activity Unit. The research sample of male athletes was 14 people with purposive sampling technique. The research variable consisted of two independent variables, namely skipping and up and down the bench, and one dependent variable, namely leg power. Data analysis using t test statistics with a significance level of 5% and d.b n-1. The results of the study: 1) In the experimental group 1 it is known that $t_{count} > t_{table}$ or $6.635 > 2.477$, meaning that there is a significant influence, 2) In the experimental group 2 it is known $t_{count} > t_{table}$ or $20,187 > 2.477$, meaning there is a significant influence, 3) The test results of the difference between pre-test and post-test experimental group 1 and experiment 2 are known $t_{count} > t_{table}$ or $2,671 > 2,477$, meaning that there is a significant difference in influence. From the results of different tests the mean is known to the experimental group 2 > experimental group 1 or $64.43 > 60.57$, meaning that the training method with up and down the bench gives better results than skipping. Conclusion There is an effect of skipping exercise method on the power of leg muscles in sepak takraw smash, 2) There is an effect of up and down bench training method on the power of leg muscles in sepak takraw smash, 3) Exercise and up and down bench method gives better results than skipping exercise method on deep leg power sepak takraw smash.

Keywords: Skipping, up and down training program, leg power



ORAL ABSTRACT

DEVELOPMENT OF SELF-EFFICACY TO EXERCISE BEHAVIORS INTENTION OF TYPE 2 DIABETES MELLITUS PATIENTS AT PATHUM THANI HOSPITAL, PATHUM THANI PROVINCE

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ABSTRACT

This quasi-experimental research aimed to study the development of self-efficacy to exercise behaviors intention of type 2 diabetes mellitus patients. Self-Efficacy Theory was used as a conceptual framework in this study. The study groups were 30 persons with diabetes mellitus type 2 which ages 30 years and over and received medical care at Pathum Thani hospital, Pathum Thani Province. Participants were simple random sampling to either the experimental group (n = 30). The experimental group received the development of self-efficacy to exercise behaviors intention program include 4 activity are 1) exercise of type 2 diabetes such as media lectures and manuals for diabetics, 2) optimal exercise and inappropriate exercise game for diabetics, 3) exercise plan and 4) brainstorming about outcome expectation in exercise. Data was collected at before and after implementing the program. Data analyzed by using Descriptive statistics and paired t-test. The study results showed that after participating in the development of self-efficacy to exercise behaviors intention program, the experimental group had higher mean scores in perceived self-efficacy to exercise behaviors than before participating in the program at α .05 significant level. It concludes that the program developed by the researcher can effectively promote self-efficacy to exercise behaviors intention program among patients with diabetes mellitus type 2.

Keywords: Development of self-efficacy, exercise behaviors intention, diabetes mellitus type 2 patients



ORAL ABSTRACT

**SOLUTION THE BREASTSTROKE SWIMMING BY 5 STUDENTS IN
M. 1/2**

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ABSTRACT

By observing the behavior of students in the subject pool. Secondary Grade 7 School Development Nonthaburi. I was assigned to teach it. Found that some students practical skills that Breaststroke not. Clarification is when training exercises such as catching, kicking, short foam frog legs. Thief caught long foam frog legs and to continue the practice of using foam. Students will have the during that Breaststroke frog legs pedaling, students were incorrect. I did not see or sample frog legs to pedal properly. The research has led to a media Aurasma allows students to see the preview on the right. The media on their mobile phones. Thus, the media Aurasma bring a medium of instruction in swimming courses, so students can see an example of a correctly. And the target audience, the researcher said. Ja, skills testing and frog legs pedaling through criteria.

Keywords: AR program



ORAL ABSTRACT

THE DEVELOPMENT OF ONLINE MULTIMEDIA ELECTRONIC BOOK IN METHOD OF TEACHING PHYSICAL EDUCATION FOR STUDENTS

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ABSTRACT

The purpose of this research were: 1) to establish and find the effective of online multimedia electronic book in method of teaching physical education, 2) to compare the achievement of learning between pre-study and post-study by online multimedia electronic book in method of teaching physical education, 3) to study satisfaction of students from using online multimedia electronic book in badminton for health. The instruments used in this research were: 1) online multimedia electronic book in method of teaching physical education, 2) the evaluation form in content and technical media production of user online multimedia electronic book in method of teaching physical education, 3) The test that measures the achievement of student who have used online multimedia electronic book in method of teaching physical education, 4) the satisfaction survey of students who use online multimedia electronic book method of teaching physical education. The result of this research were as follow: 1) The learning media about measuring and evaluating the education via online network, the quality of content stays on good level and the technical media production is in the most highest level. 2) The learning media about measuring and evaluating the developed education is effective. 3) The education achievement that study with online multimedia electronic book method of teaching physical education, post-study is higher than the pretest. 4) The students are satisfied to learning media about measuring and evaluating via online network in high level.

Keywords: Online, multimedia, electronic book, method of teaching physical education



ORAL ABSTRACT

**A CONCEPTUAL STUDY USING THEORY OF PLANNED BEHAVIOR
TO DETERMINE MARTIAL ARTS LEARNING BEHAVIOR IN
MALAYSIA: THROUGH AIKIDO PERSPECTIVE**

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ABSTRACT

This purpose of this study is to examine the factors that might encourage or discourage people in learning martial arts in Malaysia. We use Theory of Planned Behavior (TPB) as the theoretical framework in our study and Aikido, a modern Japanese martial art as our focus. TPB has been widely used in quite number of research areas such as health, transportation and environmental, to study the behavior of its targeted respondents (e.g. students, consumers, etc.). However, there is little research that has been conducted using TPB in martial arts, especially in Malaysia. Hence, we feel that it is time to use TPB to explore the martial arts learning behavior. Future researchers will be able to use this study as the foundation for future empirical research. It is hope that future research findings will be able help and assist Aikido instructors and practitioners to popularize and develop the Art further in Malaysia.

Keywords: Martial arts, physical activity, aikido, theory of planned behavior, Malaysia



ORAL ABSTRACT

**PROFILE OF PHYSICAL CONDITION OF FUTSAL PLAYERS OF
CENTRAL JAVA PROVINCE IN NATIONAL SPORTS WEEK
PREPARATION IN 2015**

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ABSTRACT

The purpose of the research is to know and describe the physical condition of the pre-term futsal PON of Central Java in 2015. This research is a descriptive research. The method used is a survey, with data collection techniques using tests and measurements. The subjects of the research are pre-PON players Futsal Central Java Year 2015 which amounted to 30 players. The instruments used are: (1) leg muscle strength, (2) velocity (3) agility, (4) leg power and (5) aerobic unitation with unit / kg / min. The result of this research shows that the profile of physical condition of pre-PON players of Central Java Year 2015 for leg muscle strength is in very poor category with percentage of 100% (12 people), at fast category speed with percentage of 50% (6orang), on category agility good enough with a percentage of 91,660% (11 people), limb leg muscle power with percentage of 50% (6person), and category for VO2MX category with percentage of 50% (6 people). Profile of the physical condition of pre-PON Central Java male futsal players in 2015 is still lacking for the biomotor component of leg muscle strength.

Keywords: Physical condition profile of futsal players



ORAL ABSTRACT

**MOTHER’S EDUCATION AS A DETERMINANT OF STUNTING
AMONG CHILDREN OF AGE 24 TO 59 MONTHS AND POLICY
ANALYSIS OF STUNTING IN INDONESIA**

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ABSTRACT

Stunting is a public health problem in developing countries. Indonesia has the fifth-highest level of stunting in the world. Stunting was the most severe problem that was impeding child growth and development. This study aims to determine the relationship between the characteristic of the mother with the incidence of stunting in under-five children (24-59 months) and to analyze the policy or program of stunting in Indonesia. The data was obtained from journals and previous academic research results. Information of policy and program related was obtained from related sectors such as Bappenas and Ministry of Health. The result showed that the variable which had the most dominant influence as the determinant of the incidence of stunting was mother’s education (OR = 1.9; 95% CI 1.188-3.133; p=0.08). It is suggested that family (parents) to pay attention to education, especially for mothers. Serious integrated effort should be taken into account of all levels as a policy recommendation beside Presidential Regulation no 42/2013 through National Movement of First Thousand Days of Life. Mothers or future brides should be given information of healthy pregnancy and nutrition.

Keywords: Stunting, mother’s education, policy analysis



ORAL ABSTRACT

ENERGY EXPENDITURE FROM PHYSICAL ACTIVITY AND BODY MASS INDEX AMONG KASETSART UNIVERSITY STUDENTS

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ABSTRACT

This descriptive research aimed to study Energy Expenditure from Physical Activity and Body Mass Index among Kasetsart University Students. The 17,207 population were currently 1- 4 years Kasetsart University students for second semester 2018. The samples were 400 students chosen by stratified random sampling. The instruments were the short form of international physical activity questionnaire (IPAQ) and Body Mass Index (BMI) that was calculated by Weight and High. Data were analyzed by using percentage, average, standard deviation. The findings indicated that most of Kasetsart University students were moderate activity level and their BMI were normal.

Keywords: Energy expenditure, physical activity and, body mass index



ORAL ABSTRACT

**PEMBENTUKAN INSTRUMEN MOTIF PENGLIBATAN REMAJA
DALAM SUKAN**

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ABSTRAK

Kajian ini bertujuan membentuk instrumen untuk mengenal pasti motif penglibatan remaja dalam bidang sukan. Instrumen Motif Penglibatan Sukan (MPS) dibina melalui dua fasa penyelidikan iaitu fasa penggubalan item dan ujian psikometrik instrumen. Penggubalan item soal selidik dilakukan mengikut proses *Nominal Group Technique* terhadap remaja yang aktif dalam sukan. Sebanyak 75 item telah terhasil daripada fasa penggubalan item soal selidik. Analisis faktor dan nilai pekali Alpha Cronbach digunakan untuk menguji bilangan faktor dan kebolehpercayaan dalaman data. Soal selidik MPS telah ditadbir ke atas 582 orang remaja yang aktif bersukan bagi mendapatkan analisis faktor dan kebolehpercayaan instrumen. Hasil proses analisis komponen prinsipal soal selidik MPS mempunyai 58 item merangkumi sembilan faktor iaitu Menaikkan Nama Negara, Kesihatan dan Kecergasan, Peningkatan Kemahiran, Inginkan Cabaran, Inginkan Kejayaan, Kebanggaan Keluarga, Kebanggaan Diri, Kestabilan Emosi dan Jaminan Masa Depan. Muatan faktor untuk setiap item adalah dalam julat 0.40 hingga 0.74 dan nilai kebolehpercayaan (alpha) adalah dalam julat 0.66 hingga 0.93. Kesahan kandungan MPS telah dinilai oleh tujuh orang pakar bidang dan telah mengesahkan MPS mempunyai kesahan kandungan dan dapat menguji dengan tepat motif penglibatan remaja dalam bidang sukan. Dapatan kajian ini menunjukkan instrumen MPS mempunyai kesahan dan kebolehpercayaan yang tinggi dan boleh digunapakai dalam mengenal pasti motif penglibatan remaja dalam sukan.

Kata Kunci: Instrumen, motif penglibatan sukan, atlet remaja



ORAL ABSTRACT

ENERGY CONSUMPTION LEVEL AS A DETERMINANT OF CHRONIC ENERGY DEFICIENCY AT FEMALE STUDENT IN UNNES, INDONESIA

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ABSTRACT

Background: Indonesia has four main nutritional problems, one of them was Chronic Energy Deficiency that the sufferer was only woman. Indonesia risk prevalence of Chronic Energy Deficiency in woman (not pregnancy) was 20.8% while in Semarang city was 12.2%. Highest percentage of energy consumption level in Central Java was in very lack indicator in the amount of 46.7% from total woman in central java. The aim of this research to know whether energy consumption level as determinant of chronic energy deficiency among Universitas Negeri Semarang students. **Method:** this research used quantitative approach and cross sectional design. The instrument of research was food recall 24 hour questionnaire and mid upper arm circumference tape. Respondents were 97 female students at Universitas Negeri Semarang. **Result:** Data analyzed by Chi Square analysis, p value 0.678, PR 1.516 (CI 95%: 0.48 – 4.788). Mean of energy consumption level and mid upper arm circumference size were 1012 ± 507.73 and 24 ± 2.673 . **Conclusion:** energy consumption level has no relation with chronic energy deficiency at female students of Universitas Negeri Semarang, Indonesia.

Keywords: Calories intake, chronic energy deficiency, mid upper arm circumference



ORAL ABSTRACT

THE RELATIONSHIP BETWEEN GROSS MOTOR DEVELOPMENT AND SOCIOECONOMIC OF SCHOOL CHILDREN AGED 7 TO 9 YEARS

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ABSTRACT

Socioeconomic status (SES) and gross motor development (GMD) are known to be influential factors of a child's well-being. Therefore, this study was conducted to determine whether there is a relationship between gross motor skill of school children aged 7 to 9 years old and their socioeconomic status. A total of 605 pupils comprising boys and girls were selected to undergo the relationship gross motor development (TGMD) to determine their gross motor development status. Through the findings, children age of 9 had the highest mean of manipulative scores (SMS) ($M = 3.97$, $SD = 1.991$), locomotors score (SLS) ($M = 4.14$, $SD = 1.941$) and gross motor development quotient score (GMDQ) ($M = 65.49$, $SD = 9.132$). On the other hand, the SES form was distributed to the parents in order to get information on the students' SES. The result showed that the mean score of their socioeconomic status (SES) is at a medium high level ($M = 3904.45$, $SD = 3.895$). In correlating the children's SES and GMD, the result indicated that there is a very weak correlation between the two. The relationship between socioeconomic status (SES) and gross motor skills of children age 7 to 9 years old is also not significant ($r = 0.020$, $p > 0.05$). It shows that the socioeconomic status of parents is not affected by the gross motor development of the children age 7 to 9 years.

Keywords: Socioeconomic status, gross motor development, school children, locomotor skill, manipulative skill



ORAL ABSTRACT

EMERGING FISH-BORNE PARASITES AND DETECTION

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ABSTRACT

Worldwide, food borne infections are emerging as a major public health problem, with more than 50 million people being infected. The attraction of uncooked, freshwater fish for natives in regions endemic for fish borne zoonotic parasites generates continuing public health problems. Several reports indicate that metacercaria of the *Opisthorchis* trematode with the potential to cause disease are found in freshwater fish. Opisthorchiasis caused by *Opisthorchis viverrini* remains a major public health problem in many parts of Southeast Asia including Thailand, Lao PDR, Vietnam and Cambodia. The phenomena of tropical diseases such as Opisthorchiasis and fish-borne parasites have led to the development of the health informatics. Parasitic fish-borne diseases have been generally under recognized, however they are becoming more common. Fish-borne parasites contain a number of species that infect humans and are recognized as the causative agents of disease. The biological cycle, geographical distribution, and epidemiology of fish-borne parasites are characterized. These infections are common in populations living in low income countries, particularly in Southeast Asia. The diagnosis of these diseases is mostly relying on parasitological techniques and only a limited number of drugs are currently available for treatment, most of which are unspecific. This paper reviews the most important emerging fish-borne parasites, and discuss about the biology, medical and epidemiological features, and current treatment and molecular techniques, specifically polymerase chain reaction-based methods that provide sensitive, rapid, and quantitative analytical tools in order to clarify the current epidemiology of these infections and for both effective diagnosis and treatment in developing countries.

Keywords: Fish-borne, *opisthorchis viverrini*, detection



ORAL ABSTRACT

THE EFFECT OF COMPRESSION SOCKS ON RUNNING PERFORMANCE IN EXPERIENCED AND NOVICE RUNNERS

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ABSTRACT

Compression socks (CS) were first introduced as a rehabilitation aid or treatment for patient with venous disorder such as thrombosis, edema and phlebitis. CS improve blood flow by giving pressure to the surface veins, arteries and muscles to force the blood to circulate through narrower channel. In return, arterial pressure is increased which causes more blood to return to the heart from the limbs. CS was later introduced as a mechanical ergogenic aid for sports mainly for endurance sport. This study aims to measure the effect of compression socks during a maximal treadmill exercise test on the running performance parameters on novice and experienced runners. Participants will be randomized into two group (n=8 in each). All participant required to attend the sports laboratory on 2 sessions each separated by 7 days. Group 1 will wear the compression socks (CS) and group 2 will wear the Smooth Socks (SS) during their first session and vice versa during the second session. There will be a total of 10 stage for maximal treadmill exercise test. The first stage starts with speed set at 2.74 km/h and gradient set at 10%. The gradient and speed will be increased every three minutes. Blood lactate (Bla) and rate perceived of exertion (RPE) will be taken every 10 second before the stage end. It is expected that novice runners will have a more substantial effect when wearing compression socks compared to experienced runners. Novice runner has a greater potential of improvement than experienced runners because of their physiological state. From this study, the physiological response during running while wearing a compression socks on experienced and novice runners will be distinguished. It will also help in providing the evidence needed to strengthen or to reject the claim made by the CS manufactures.

Keywords: Running, compression



ORAL ABSTRACT

RELATIONSHIP BETWEEN SOCIAL SUPPORT, ENVIRONMENTAL FACTORS AND SPORTS PARTICIPATION AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

Lack of sports participation is a growing problem around the world that affects all walks of life including the school students. The purpose of this study was to examine the relationship between family, friends, and environmental variables and sports participation among secondary school students. A 20 items (10 items for the family support and 10 items for the friends support) scale adapted from the Social Support and Exercise Survey (Sallis et al., 1987) was used to measure family and friends supports variables. The environmental factors were measured by four items adapted from Amherst Health and Activity Study (Sallis et al., 2002). The present study utilized the convenience sampling method and a total of 105 students attending two public secondary schools in the Kuala Lumpur area, volunteered to participate in the study. Data were analysed using Pearson correlation. Results indicated significant relationship between friends support and participation in sports. In terms of family support and environmental factors, no significant association were found in the study. The present study demonstrated that friends have an important role to play in the sports activity behaviour of the secondary school students and this positive friends supports may foster the students' participation in sports activity. Therefore, we may argue that the involvement of the secondary school students' friends may be critical for promoting and maintaining the sports activity behaviour of the students and sports activity with friends should be considered in health promotion programs among the secondary school students.

Keywords: Social support, family, friends, environment, school students, sports participation



ORAL ABSTRACT

**THE INFLUENCE OF TEACHING STYLES EXERCISE AND MOTOR
EDUCABILITY LEVEL ON THE LEARNING OUTCOMES OF KARATE
TO THE 7TH YEAR STUDENTS OF SMPN 10 METRO**

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ABSTRACT

The purposes of this research was to identify: (1) the differences between the teaching style exercise by using visual media and teaching styles exercise by using audiovisual media to the learning outcomes of Karate; (2) the differences between the influence among the students who have high and low motor educability to the learning outcomes of Karate; (3) the interaction between the teaching style exercise and motor educability level towards the mastery of learning outcomes of Karate. This research use experiment method with two treatment forms and each treatment have two stages as the attribute. The sampling technique used was random sampling technique and obtained 64 students from the total population of 236 students. The technique of data analysis was two ways Anava by using SPSS 20.0 program with the significance degree of 5% and continued by the Tukey test. From the data analysis the result for Hypothesis 1 was there is difference influence between the teaching style exercise by using visual media and audio visual media towards the learning outcome of karate with the $F_{value} > F_{table}$ or $32,761 > 2,76$ and the significance value $0,000 < 0,05$. The result for Hypothesis 2 was there is difference influence between the students who have high and low motor educability towards karate learning outcomes, with $F_{value} > F_{table}$ or $9,355 > 2,76$ with the significance value $0,003 < 0,05$. The result for Hypothesis 3 was there is interaction between teaching training style and the students' motor educability to the learning outcomes of Karate, with $F_{value} > F_{table}$ or $5,430 > 2,76$ and the significance value $0,023 < 0,05$. In conclusion: (1) teaching style exercise by using visual media gives better influence to the karate learning outcomlie rather than teaching training by using audiovisual media; (2) the students with high motor educability bring a better influence rather than the students with low motor educability; (3) there is interaction between the teaching training style and the students' motor educability to the learning outcomes of Karate.

Keywords: Teaching style, motor educability, karate



ORAL ABSTRACT

**PENDEKATAN ALAT ADAPTASI STEP MODEL SPEKTRUM INKLUSI
DALAM MENINGKATKAN PERKEMBANGAN MOTOR KASAR MURID
SINDROM DOWN PROGRAM PENDIDIKAN KHAS INTEGRASI
(MASALAH PEMBELAJARAN) SEKOLAH RENDAH**

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ABSTRAK

Kanak-kanak sindrom Down (SD) mengalami kelewatan dalam perkembangan kemahiran motor kasar akibat daripada masalah hipotonia, hiperfleksibiliti ligamen, postur yang lemah serta kekurangan perkembangan aspek fisiologi. Keupayaan kemahiran motor kasar kanak-kanak SD tidak berkembang mengikut kronologi kanak-kanak normal. Keadaan ini menjejaskan pergerakan fizikal dan aktiviti harian kanak-kanak SD. Maka guru pendidikan khas perlu menggunakan pendekatan pengajaran dan pembelajaran bersesuaian dalam mengajar kemahiran motor. Oleh itu kajian ini melihat sejauh manakah aktiviti fizikal yang mengaplikasikan Model Spektrum Inklusi dengan alat adaptasi STEP dapat meningkatkan Gross Motor Quotients (GMQ) dalam kalangan murid SD di Program Pendidikan Khas Integrasi (PPKI) Masalah Pembelajaran (MP). Kajian ini melibatkan empat orang murid SD (2 lelaki dan 2 perempuan) yang berumur antara 7 hingga 10 tahun dari dua buah sekolah di Wilayah Persekutuan Kuala Lumpur. Program intervensi yang terdiri daripada aktiviti lokomotor dan manipulasi alatan telah dilaksanakan selama 2 bulan (8 sesi) dan setiap satu sesi mengambil masa 30 minit. Keputusan kajian mendapati bahawa terdapat peningkatan dalam min GMQ (52.75/160 ke 64.75/160). Keputusan ini menunjukkan alat adaptasi STEP Model Spektrum Inklusi dapat membantu untuk merapatkan jurang kesamaan umur perkembangan motor kasar semua peserta kajian. Walau bagaimanapun, pengkaji mencadangkan untuk melanjutkan tempoh masa intervensi bagi mengoptimalkan kesan peningkatan kemahiran motor kasar.

Kata Kunci: Alat adaptasi STEP, *Gross Motor Quotients* (GMQ), model spektrum inklusi, sindrom down (SD)



ORAL ABSTRACT

**EFFECTS OF 8 WEEKS SINGLE SET VERSUS MULTIPLE SETS
RESISTANCE EXERCISE TRAINING ON UPPER AND LOWER BODY
MUSCULAR STRENGTH AMONG UNTRAINED MALES IN IRAN**

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ABSTRACT

It is generally accepted that the implementation of high-intensity resistance exercise training can cause several physiological adaptations such as strength and in recent years, many individuals have been attracted to weight training to increase the strength. One of the most important variables which affect strength improvement is training system and two common systems of resistance exercise training are single set and multiple sets. Choosing which training system is better is still open to question. The objective of this study was to examine the effects of 8 weeks single set versus multiple sets resistance exercise training on upper and lower body muscular strength among untrained male adults. Twenty-four healthy untrained males (age: 20.5 ± 1.8 years, body height: 174.9 ± 4.2 cm, body mass: 72.3 ± 3.2 kg, and body fat mass percentage: $\%18.2 \pm 1.3$) were randomly selected and assigned into two groups: single set (SS) and multiple sets (MS). Both groups trained for eight weeks with 70-80% of 1RM with 8-10 repetitions for 3 days per week which SS and MS groups performed one set and three sets of each exercise, respectively. Upper and lower body muscular strength using one-repetition maximum were measured before and after the intervention. Results reported there were significant increases in upper and lower body muscular strength in both groups after the intervention ($p < 0.05$), and upper and lower body muscular strength increased more significantly in MS group compared with SS group ($\%12.70$ increase in SS group and $\%23.43$ in MS group). The results showed MS resistance exercise training had a better effect significantly to improve upper and lower body muscular strength after 8 weeks of resistance exercise training among untrained male adults.

Keywords: Single set, multiple sets, one-repetition maximum, resistance exercise training



ORAL ABSTRACT

**USE OF “NUTRIATLET” SMARTPHONE APPLICATION-BASED
PERSONALIZED NUTRITION PROGRAM TO IMPROVE ENERGY
CONSUMPTION, BODY MASS INDEX, AND BODY FAT PERCENTAGE
AMONG MARTIAL ARTS ATHLETES**

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ABSTRACT

There are nutritional problems at the Central Java BPPOLP training camp. Data of 2017 shows 8% of athletes have less nutrition and 10% more nutrition. The aim of this study was to evaluate the effectiveness of individual nutritional plan planning on the percentage of energy consumption level (% ECL), body mass index (BMI) and body fat percentage (% BF). The research used one group pretest posttest design. The subjects consisted of 59 athletes of martial sports at BPPLOP Central Java. Individual nutrition program interventions performed for 1 month with aids in the form of smartphone nutriatlet applications. Statistical test using paired sample t test. The results showed that the mean ECL increased significantly after intervention, from $63.37\% \pm 8.57\%$ to $82.91 \pm 6.31\%$ ($p < 0.001$). The percentage of BF also improved after intervention, from $14.36 \pm 6.19\%$ to $13.40 \pm 5.88\%$ ($p < 0.001$). The mean BMI did not differ significantly, from 21.95 ± 2.51 to 22.02 ± 2.25 ($p = 0.524$). It can be concluded that individual nutritional programs using smartphone nutriatlet application instruments effectively improve the level of energy consumption and body fat percentage while maintaining a body mass index.

Keywords: Personalized nutrition program, energy consumption, BMI, body fat percentage



ORAL ABSTRACT

DEVELOPING INNOVATIVE LIBRARIANS: THE INFLUENCE OF COACHING IN TRANSFORMATIONAL LEADERSHIP

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ABSTRACT

Coaching is one of the traits in transformational leadership skills. It includes developing shared vision, creating productive work cultures and distributing leadership to others by performing tasks as a coach and aware of followers' needs and develops their potential qualities. In the context of academic library in Malaysia, librarians need to possess coaching approach in delivering services and transforming their subject matter knowledge and skills that may lead them to be innovative and enterprising as required by the government transformation agenda. The purpose of this paper is to gain a context specific understanding of how coaching influence innovative behaviour amongst academic librarians in providing services to clientele in order to support universities' objectives. A comparative case study was conducted at two academic libraries and the data was obtained using an instrument of focus group discussion with 12 academic librarians. The findings revealed that for both cases, the same style of coaching has been practised due to imitative organizational climate. Implications for the profession and future research are also discussed at the last section of the paper.

Keywords: Librarian, innovative, coaching, organizational climate



ORAL ABSTRACT

WE CALL THE SHOT: WOMEN REFEREES OFFICIATING MEN’S BASKETBALL

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ABSTRACT

This study sought to know the experiences of female referees in men’s basketball in the Philippines; to identify if female referees experienced gender abuse; to determine the problems they encountered; and to know how they coped with these problems. Using qualitative research method, experiences of the 6 female referees in the Philippines were determined and documented. Through the use of purposive sampling, participants and key informants were identified. Local, professional, new, experienced and former female referees together with the key informants who have significant knowledge about the participants were interviewed one-on-one with the help of the validated self-made interview guide questions. Female referees’ experiences are commonly linked with the coaches, spectators, and the pressure of the game, but still and all officiating for them is fun. The experiences of some female referees who claimed in experiencing gender abuse like touching, persistence cannot be considered forms of abuse but more on harassment. The problems of female referees are mostly verbal bullying, unequal physical strength, and attitude of the player, coach and audience. In coping problems female referees do it in an intrinsic way, by determining the cause and effect and learning from it and motivating oneself.

Keywords: Women referees, men’s basketball, officiating, college of human kinetics, Polytechnic University of the Philippines



ORAL ABSTRACT

DEVELOPMENT OF INTEGRATED HEALTH EDUCATION BASIC MODEL IN SUBJECT OF SPORT PEDAGOGY IN ELEMENTARY SCHOOL

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ABSTRACT

Objective: Low efforts of promotive and preventive health problems at schools is a reflection from lack of integrated health education materials in learning activities at elementary schools. The objectives of research are 1) To formulate basic material of health education 2) to do mapping of material on subject Sport Pedagogy at elementary school. **Methods:** This development research begins with development of basic health education materials involving related experts. A limited field trial was conducted involving 27 teachers of sport pedagogy subject in Gunungpati subdistrict of Semarang City. **Result:** The research succeeded in formulating the basic material of health education consist of 4 main components, 10 groups of material and 51 basic item materials of health education for elementary school. **Conclusion:** All of basic materials that formulated health education have been taught in sport pedagogy subject, but there were 9 materials have not been 100% taught in all schools.

Keywords: School health educator competency, elementary school teachers



ORAL ABSTRACT**FAKTOR MEMPENGARUHI PRESTASI PERUBAHAN PECUTAN
DALAM ACARA 100 METER ATLET ELIT NEGARA**

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Tujuan: Kajian ini adalah bertujuan untuk mengkaji dan menganalisis masa pecutan pelari pecut elit negara iaitu Khairul Hafiz Jantan pada jarak 30 meter, 60 meter dan 90 meter dalam acara 100 meter. Kajian ini juga dilakukan untuk mengenalpasti faktor-faktor yang mempengaruhi catatan masa larian pelari pecut elit negara. Faktor-faktor yang mempengaruhi catatan masa larian pelari pecut ialah penggunaan daya semasa keluar dari blok permulaan, sudut pinggul semasa fasa permulaan, jarak langkah yang konsisten dan kecondongan badan semasa fasa pecutan. **Kaedah:** Kajian ini hanya menggunakan satu sampel sahaja iaitu pelari pecut elit negara Khairul Hafiz Jantan. Teknik persampelan yang digunakan adalah teknik persampelan bertujuan. Ini kerana kajian ini memfokuskan kepada prestasi semasa pelari pecut elit negara yang telah memecahkan rekod kebangsaan selepas 18 tahun pada tahun 2016. Faktor-faktor yang dikaji akan dikenalpasti melalui analisis prestasi rakaman video larian pelari pecut elit negara dengan menggunakan peranti FOCUS X2. Pengkaji akan mengambil 20 buah video larian 100 meter Khairul Hafiz Jantan dalam pertandingan yang diiktiraf IAAF dan KOAM. Video-video tersebut akan dianalisis menggunakan peranti FOCUS X2 untuk menentukan min pecutan pada setiap jarak 30 meter, 60 meter dan 90 meter. Faktor-faktor yang mempengaruhi larian juga akan dianalisis menggunakan peranti FOCUS X2. Ujian ANOVA akan digunakan untuk membandingkan min pecutan bagi ketiga-tiga jarak 30 meter, 60 meter dan 90 meter. Perbandingan ini dapat mengenalpasti pada jarak manakah pengurangan masa pecutan berlaku. **Kesimpulan:** Kesimpulannya, dapatan kajian yang diperolehi akan membantu atlit dan jurulatih untuk mengenalpasti faktor-faktor yang mempengaruhi larian dalam mengekalkan masa pecutan pada setiap fasa larian.

Kata Kunci: Analisis prestasi, lari pecut, pecutan



ORAL ABSTRACT

FITNESS ADMINISTRATION PHENOMENA IN MAHASARAKHAM PROVINCE

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ABSTRACT

Mahasarakham province, the town of MahaSarakham is the provincial capital. It is the home of Mahasarakham University, the largest university in northeast Thailand with about 40,000 students, and Physical education college. In this study we would like to conduct correlation between the physical exercise center [Exercise and Sport Science Excellent Center = ESSEC EDU MSU and Sport Science Center Institute of Physical Education Mahasarakham = SSCIFE MK] or fitness administration between two university in Mahasarakham Province. We also analyzed the demographic information, association of administration and requirements to do physical exercise according to TH SarabunPSK gender and faculty. The period of fitness service between 4.00 – 8.00 pm, Guest service fee 40 baht per one time for SSCIFE MK and 80 baht per one time for ESSEC EDU MSU. The ESSEC EDU MSU facility was twenty four Cardio Zone, Machine Zone, Free Weight Zone, Boxing Zone, Stream / Sauna, Massages, Aerobic Exercise and Zumba Fighter and SSCIFE MK facility was nine Cardio Zone, Machine Zone, Free Weight Zone, Boxing Zone, Stream / Sauna, Massages, Aerobic Exercise and Zumba Fighter. Determine the fitness administration were Group Exercise by using Aerobic, Zumba, Bike, Fighter in ESSEC EDU MSU and Group 1 Aerobic/Step (EVD) Group 2 M-Body Balance, W-Gym ball, F-Core ABS in Sport science Center IPE MK. Comparative study of problems and needs in exercise for health in fitness of Mahasarakham Province. When classified by characteristics such as sex, age and the physical situation found that the guests had an opinion about the problem and the need for exercise. Place and equipment for exercise, services and personnel trainee were investigated for evaluation for exercise administration. This degree program is designed to meet the needs of a wide variety of fitness guests, who may potentially come from across the array of majors physical situation and who seek entry into the coaching, sport, recreation and fitness administration career fields.

Keywords: Physiological health, fitness, exercise, Mahasarakham



ORAL ABSTRACT

**HUBUNGAN ANTARA KEKUATAN OTOT BAHAGIAN SUPERIOR
SATAH TRANSVERS DENGAN PRESTASI ATLET REMAJA LOMPAT
BERGALAH MALAYSIA**

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ABSTRAK

Tujuan: Kekuatan otot bahagian superior satah transvers adalah penilaian kemampuan otot bahagian atas badan manusia terhadap prestasi sukan atau latihan. Acara lompat bergalah memerlukan kestabilan fungsi otot bahagian atas dan bawah badan bagi mengawal pergerakan untuk melepasi halangan. Kajian ini dilakukan adalah untuk melihat tahap kekuatan dan hubungan di antara tahap kekuatan otot bahagian superior satah transvers terhadap prestasi atlet remaja lompat bergalah Malaysia. **Kaedah:** Kajian ini adalah berbentuk Quasi-Eksperimental (tiada kumpulan kawalan). Subjek kajian terdiri daripada atlet remaja sekolah sukan dan sekolah sukan negeri (n=20) 10 lelaki dan 10 wanita berumur (13 sehingga 21 tahun) terlibat dalam kajian ini. Selain itu, kajian ini juga ingin melihat faktor-faktor seperti berat, tinggi, umur serta rekod peribadi sebagai faktor yang mempengaruhi prestasi atlet remaja lompat bergalah. Kajian ini melibatkan 3 ujian kekuatan otot bahagian superior satah transvers iaitu tarik tali duduk 3meter 30% dari berat badan, mendagu 5kali dan mendagu maksimum. Analisis kajian ini menggunakan kaedah statistik *IBM Statistical Package Social Science (IBM SPSS)* untuk melihat hubungan kekuatan otot terhadap prestasi serta faktor-faktor yang mempengaruhi prestasi atlet remaja lompat bergalah Malaysia. **Kesimpulan:** Ujian kekuatan otot bahagian superior satah transvers ini dapat membantu jurulatih dalam mengenal pasti prestasi atlet serta dapat membantu pada peringkat awal pemilihan bagi atlet lompat bergalah.

Kata Kunci: Kekuatan, superior satah transvers, prestasi, lompat bergalah

**ORAL ABSTRACT****ACUTE MODULATORY EFFECTS OF APPLE CIDER VINEGAR, GARLIC, GINGER, LEMON AND HONEY MIXTURE, WITH AND WITHOUT EXERCISE ON POSTPRANDIAL GLYCEMIA IN NON-DIABETIC FEMALES**

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ABSTRACT

Postprandial hyperglycemia is independently related to cardiovascular disease. Garlic, ginger, lemon, honey and apple cider vinegar are known to have anti-glycemic properties. However, the effectiveness of combination of these natural products on reducing postprandial glycemia is uncertain. The aim of the present study was to investigate the glucose-lowering effect of a novel mixture consisting of apple cider vinegar, garlic, ginger, lemon, and honey; alone and in combination with exercise in response to a high-carbohydrate meal in non-diabetic individuals. Ten, female subjects (mean age: 25 ± 2.67 years, mean BMI: 22.6 ± 3.5 kg/m²) participated in this randomised, cross-over intervention consisting of four trials: control (CON), mixture only (MIX), exercise only (EX), and exercise + mixture (EX-MIX). All trials involved consumption of a high-carbohydrate breakfast, then followed by rest in CON, consumption of natural product mixture in MIX, brisk-walking exercise in EX, and combination of mixture and exercise in EX-MIX. Blood glucose was measured at fasting, and at 30, 60, 90, 120 minutes post meal. Postprandial glucose response was calculated as area under the glucose curve. Two-way repeated measures ANOVA showed a significant group and time interaction ($p < 0.001$). Compared to CON, postprandial glucose responses were 8%, 13% and 15% lower in MIX ($p = 0.049$), EX ($p = 0.001$) and EX-MIX ($p = 0.005$) respectively. Postprandial glucose was 8% lower in EX-MIX compared to MIX ($p = 0.002$). In conclusion, consuming natural product mixture containing garlic, ginger, lemon, honey and apple cider vinegar reduced postprandial glycemia to a certain extent, however, combining mixture with exercise produced a greater attenuation effect compared to consuming mixture alone. This finding is indicative of a potential benefit of the novel mixture as a complementary management of hyperglycemia in high-risk individuals.

Keywords: Glucose, hyperglycemia, exercise, natural products



ORAL ABSTRACT**PERBEZAAN KESEPADUAN ANTARA PASUKAN SENIOR, JUNIOR
DAN PEMBANGUNAN BOLA JARING MALAYSIA**Siti Nor Farhana Mustafa¹, Soh Kim Geok², Aminuddin Yusof³, Soh Kim Lam⁴^{1,2,3} Fakulti Pengajian Pendidikan, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor
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Dalam bidang sukan, kewujudan semangat berpasukan dan sefahaman adalah penting untuk memupuk kesepaduan dalam kumpulan. Kajian ini dijalankan untuk mengenal pasti tahap kesepaduan yang wujud bagi kategori senior, junior dan pembangunan bola jaring Malaysia menurut persepsi pemain. Populasi dalam kajian ini ialah pemain bola jaring Malaysia yang terdiri daripada tiga kategori. Kategori Senior adalah pasukan Malaysia yang menyertai Sukan Sea 2017 (n=16). Kategori Junior adalah pasukan bola jaring junior bawah 21 tahun yang menyertai kejohanan Remaja Asia 2017 (n=26), dan kategori Pembangunan adalah pasukan bola jaring gabungan Sekolah Sukan Bukit Jalil dan Sekolah Sukan Tengku Mahkota Ismail (n=16). Kajian ini menggunakan borang soal selidik *Group Environment Questionnaire* (GEQ) yang dibangunkan oleh Carron pada tahun 1985. Soal selidik ini mengandungi 18 item bagi mengukur tahap kesepaduan dalam kalangan subjek kajian. Hasil kajian mendapati ketiga-tiga kategori pasukan bola jaring lebih cenderung kepada jenis kesepaduan yang berasaskan tarikan individu kepada kumpulan sosial dan integrasi kumpulan-tugasan. Nilai min yang dilaporkan untuk kategori senior, junior dan pembangunan adalah masing-masing adalah 4.74 ± 0.83 , 4.81 ± 1.00 , 4.81 ± 1.00 , dan 4.69 ± 0.99 . Walau bagaimanapun, tiada perbezaan signifikan di antara kategori pasukan yang dilaporkan, di mana $[F(2, 55) = .083, p > .05]$. Manakala, skor min bagi kesepaduan berdasarkan integrasi kumpulan masing-masing adalah 6.06 ± 0.45 , 5.65 ± 0.54 , dan 5.78 ± 0.75 . Keputusan yang tidak signifikan juga dilaporkan di antara kategori pasukan, dimana $[F(2, 55) = 2.549, p > .05]$. Secara kesimpulannya, pasukan yang lebih senior dilaporkan memiliki tahap kesepaduan yang lebih baik berbanding dengan junior dan pembangunan.

Kata Kunci: Kesepaduan, bola jaring, sosial, integrasi



ORAL ABSTRACT

**BIRTHDATE DISTRIBUTION OF PLAYERS IN THE AFC U 16
CHAMPIONSHIP QUALIFIERS**

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ABSTRACT

The objective of this study was to investigate the prevalence of the relative age effect (RAE) among the participants of the AFC under 16 Championships 2018. The birthdates (day, month and year) and playing position data were obtained from the Sports Medicine Unit of the Asian Football Confederation. Chi square analysis showed a significant difference ($\chi^2 = 101.071$, $p < .05$) in the birth date distribution with 31.8% of the players born in the first quartile (Jan – Mar), 24.9% in the second quartile (Apr – Jun), 17.9% in the third quartile (Jul – Sep), 14.2% born in the fourth quartile and 11.9% of the players were underaged (born in 2003, 2004 and 2005). From the 16 countries that have qualified for the final round, eight countries showed a significant difference in the birth date distribution. Iraq showed a reverse trend in the RAE with a majority of their players being underaged. The results of this study show that RAE exists at the highest level of youth soccer in Asia. It is suggested that biobanding is used for age group tournaments and tournaments are held twice a year in order to provide equal opportunities for younger players to realize their potential at the end of puberty.

Keywords: Relative age effect, RAE, soccer, AFC, youth, football



ORAL ABSTRACT

**MASUM ATHLETES' PERCEPTION ON TEAM COHESION, IMAGERY
USE AND IMAGERY ABILITY BASED ON TEAM SPORT**

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ABSTRACT

Many researchers have investigated the influence of team cohesion on imagery use. However, limited studies are done on imagery influence towards team cohesion. Positive relationship has been found between imagery functions and team cohesion based on team-level perspective from the previous study. While several studies have investigated the relationship between imagery use, and team cohesion, less research has examined the potential influence of imagery ability, imagery use, and team cohesion together. Therefore, this study would like to investigate the relationship between imagery ability, imagery use and team cohesion among MASUM athletes. Differences of dimension team cohesion, imagery function and imagery content between genders were also determined. A total of 215 MASUM students athletes participated in this study, male (n = 135) and female (n = 80). They completed self – administered questionnaire booklet that consisted of the *Group Environment Questionnaire* (GEQ: Eyes et al., 2007) to measure team cohesion, the *Sport Imagery Questionnaire- Team Sport* (SIQ-TS: Curtin et al., 2016) to assess the imagery frequency use from team level perspective, and *Sport Imagery Ability Questionnaire* (SIAQ: Williams & Cumming, 2014) to measure the capability to generate a number of images content athletes used in relation to sport. Multiple regression analysis revealed that motivational specific imagery, motivation general-mastery imagery, motivation general-arousal imagery, skill imagery ability and goal imagery ability was significantly related to the team cohesion dimensions of individual attraction- task (39%), group integration- social (35%) and group integration-task (42%). Positive significant relationships were seen between imagery use, imagery ability and team cohesion. Findings suggest that motivational imagery and cognitive imagery from a team-level perspective should be highlighted on team sport in order to increase team cohesion among athletes.

Keywords: Team cohesion, imagery use, imagery ability, MASUM athletes' perception, team sport



ORAL ABSTRACT

PHYSIOLOGICAL PROPERTY AND HEALTH SITUATION FOR EXERCISE OF NAKHON PHANOM UNIVERSITY STUDENTS

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ABSTRACT

The physiological health is vital issue to get good quality of life. In Thailand, authorities make policies and do campaign for encouraging the society to spend time doing exercise at least 30 minutes per day and 3-4 day per weeks. This study also analyzed the association of health problems and requirements to do physical exercise according to gender and faculty. A sample of 1,059 students in Nakhon Phanom University was sampled by the researcher and confirms 97% confidence. Using stratified sampling techniques and students are divided based on faculty. The instrument was the questionnaire with 5 point likert scale and analyzed using a software package to find the frequency, percentage, mean and standard deviation, and t-test with significant statistics at 0.05 level. The results show that physical activities of Nakhon Phanom university students were the same as the exercise in the university. The average activities were walking, running, football and badminton, respectively. Average daily exercise time was 1-2 days per week between 4 pm – 8 pm and 30-60 minutes per session. Most students give reasons for exercising to relieve stress, healthy and lose weight. Some students who do not like to do exercise because they did not have time for exercising. In addition, the place and equipment for exercising also did not enough. In conclusion, physical activities of Nakhon Phanom university students are very important to help students getting good quality of life. From the results suggest that the students should be encourage to spend free time to do exercise and the University should provide fitness club to attract students to do physical exercise and should also have daily staff to provide various activities and coordinated with relevant agencies in each area.

Keywords: Physiological health, requirements, exercise, Nakhon Phanom University



ORAL ABSTRACT

SOIL-TRANSMITTED HELMINTHIASES AND RISK FACTORS AMONG THAI HILL-TRIBE PRE-SCHOOL AGE CHILDREN IN REMOTE AREA OF THAILAND

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ABSTRACT

Soil-transmitted helminthiases (STH) remain one of the most prevalent health problems in the world, are also in the Thai hill-tribe group of Thailand. This study aimed to determine the prevalence and risk factors of STH among Thai hill-tribe pre-school age children (PSAC) in remote area of Thailand. A cross-sectional study was conducted from October to December, 2013 in Omkoi district, Chiang Mai province. The Thai hill-tribe PSAC were selected by simple random sampling technique. A stool survey of children was conducted in nine child development centers using the formalin-ether concentration technique. Their parents were interviewed regarding the risk factors. Chi-square test was performed to identify any association between STH. Multiple logistic regression analysis was fitted to identify risk factors of STH among the Thai hill-tribe PSAC. A total of 282 children were able to provide complete data. The study showed that 18.8% Thai hill-tribe PSAC were infected with one or more species of STH. *Ascaris lumbricoides* was the most prevalent STH (15.9%) followed by *Trichuris trichiura* (1.8%) and hookworm (1.1%), respectively. The significant risk factor of STH among Thai hill-tribe PSAC was ownership of a latrine (AOR = 0.298, $p = 0.045$). The present study showed that STH was a public health problem among Thai hill-tribe PSAC in the study area. Deworming of preschool children is warranted. Preventive measures should address important risk factors. Health education program regarding the construction and proper use of latrines are essential elements to prevent re-infection.

Keywords: Soil-transmitted helminthiases, *Ascaris lumbricoides*, pre-school age children, hill-tribe group



ORAL ABSTRACT

THE EFFECTS OF ACUTE MASSAGE IN TIME TRIAL ON MUSCLE STRENGTH AND POWER

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ABSTRACT

The purposed of this research was studied and compared the effects of massage in recovery time trial o muscle strength and power. The subjects were 8 male student volunteers, aged 19-22 years, in Institute of Physical Education, Sisaket Campus, Thailand. The research instruments in this quasi experimental was employed the active release technique of massage in 30 minutes. Also, the Keiser Air 250 Leg Press and Functional Trainer-Power Screen were administered for measuring leg and chest muscle strength and power as pre, after 24 and 48 hours of massage. Descriptive statistics and One way ANOVA with repeated ($p=.05$) was conducted in the data analysis. Results showed significance different ($p<.05$) for chest and leg muscle strength, and leg muscle power between pre, after 24 and 48 hrs of time trial. Overall, the acute response of this massage was founded the high performance at 48 hrs of time trial. Conclusions: This research showed that muscle strength and power were recovered by acute massage in time trial.

Keywords: Acute massage, muscle strength and power, recovery



ORAL ABSTRACT

**THE DEVELOPMENT OF THE ELDERLY’S PHYSICAL FITNESS
THROUGH “RUSEEDUTTON” EXERCISE**

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ABSTRACT

The purposes of this quasi experimental research were to compare the elderly’ s physical fitness between before and after participating Ruseedutton Exercise (RE) and study the satisfaction towards RE. The sample was 60 healthy elderly who were 50-69 years of age. There were divided into 30 of each experimental and control group. For the RE program was the standardized exercise program which presented by Department of Thai Traditional and Alternative Medicine, Ministry of Public Health. There were composed of 15 modes of RE, approximately 50-60 minutes, 3 times/week in 8 weeks. The physical fitness testing protocol was composed cardiovascular endurance, flexibility, and muscle strength/endurance. And also was used the satisfaction in RE questionnaire. For data analysis was computed by percentage, mean, standard deviation, and t-test dependent/ Independent. The findings were founded that the elderly’s physical fitness after doing RE, there was at the good level which showed significantly higher than before doing such RE ($P<.05$). While, there was not significantly for the control group. Moreover, their elderly’s satisfaction towards RE was at the very good level. This study was concluded that the RE could be one alternative exercise activity in elderly, in term of physical fitness and attitude improvement.

Keywords: Physical fitness of the elderly, ruseedutton exercise



ORAL ABSTRACT

EFFECT OF ARM SWING EXERCISE ON HEART RATE, BLOOD PRESSURE, BODY WEIGHT AND BALANCE OF THE ELDERLY WOMEN

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ABSTRACT

The purpose of this study was to study the effect of Arm Swing Exercise (ASE) on pulse rate, blood pressure, body weight and balance in elderly. The samples were composed of 50 healthy old female peoples in Sisaket municipal city, age 60-69 year. They were participated in ASE for 8 weeks, 3 days/week. In each day of ASE program, there were separated 3 phase of exercise (Warming up and cooling down for 10 minutes each, and main ASE for 30 minutes). The testing protocol by this research was used Polar Heart Rate Monitor, Sphygmomanometer, Weight Scale, Berg Balance Scale and Time Up and Go Test. For the data analysis, there were competed for mean, standard deviation, One Way ANOVA with repeated, and pos hoc test by Scheffe ' method. The finding of this research, after 4 and 8 weeks of ASE, there was founded that the resting heart rate and body weight had trend to be decreased, but there was no significant difference. Blood pressures were founded significant difference ($P < .05$). Moreover, for both static and dynamic balance, these research also founded significant difference ($P < .05$). This research conclusion, there was supported the positive benefit of ASE in term of physical fitness for elderly women. There could be promoted to be one potentially exercise activity in community as well.

Keywords: Arm swing exercise, balance, blood pressure, body weight, elderly women, heart rate



ORAL ABSTRACT

EFFECT OF MUSIC WITH BRAINWAVE SYNCHRONIZER ON THE PERFORMANCE OF COLLEGIATE THROWING ATHLETES

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ABSTRACT

Brainwave entrainment has been a method used as a therapy to reduce anxiety and heighten concentration, facilitating brain to enter a specific state. In sports, brainwave alignment is facilitated as athletes utilized music in their pre-competition routines. The aim of this study is to know if wave-synchronized music influence power performance of collegiate athletes by gathering six (N=6) college throwers, 3 males and 3 females in a quasi-experimental research. Participants ranged from shotput, discus and javelin events. With reversal method, throwing performance data were collected for 11 days, with treatment days using both high (T₁, T₂, T₄) and low (T₃) frequency waves after every 2 untreated observations. Results show that synchronizing alpha waves (12 Hz) to music listened by athletes during warm-up leads to significant increase in throwing distances of participants compared to the untreated trial performance. On the other hand, synchronizing theta waves (0.5-3 Hz) to music produced lower throwing distances significantly when compared to day-before and day-after observations. Throwing performance for the untreated observations also showed an increasing trend before the theta wave treatment day. However, no long-term effect of alpha waves was directly seen after the intervention as perceived in latter untreated observations. Further studies are needed to compare music with and without wave synchronizers or to compare the utilization of preferred music versus unfavored music during warm-up.

Keywords: Brainwave entrainment, throwing performance, arousal, alpha brainwave



ORAL ABSTRACT

**HUBUNGKAIT AMALAN GAYA HIDUP TERHADAP KEPADATAN
TULANG DALAM KALANGAN PELAJAR UNIVERSITI PUTRA
MALAYSIA**

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ABSTRAK

Kepadatan tulang seseorang dipengaruhi oleh gaya hidup seseorang yang terbahagi kepada aktiviti fizikal, amalan pemakanan, amalan merokok dan kawalan stres. Isu pengabaian terhadap amalan pemakanan yang baik bukanlah sesuatu yang baharu lagi di Malaysia terutama bagi remaja yang bergelar pelajar. Ditambah pula dengan kekurangan penglibatan pelajar dalam aktiviti fizikal boleh menyebabkan masalah osteoporosis pada usia yang muda. Tujuan kajian ini dijalankan adalah untuk mengenal pasti hubungan amalan gaya hidup serta kepadatan tulang pelajar Fakulti Pengajian Pendidikan, Universiti Putra Malaysia. Selain daripada itu, perbezaan kepadatan tulang dan amalan gaya hidup antara jantina pelajar juga dikenal pasti. Soal selidik *Health-Lifestyle* (Bobroff, 2007) digunakan untuk mendapatkan data berkaitan gaya hidup responden manakala mesin *SONOST 3000* digunakan bagi mengumpul data kepadatan tulang responden yang terdiri daripada 300 pelajar Fakulti Pengajian Pendidikan, Universiti Putra Malaysia. Berdasarkan hasil kajian, seramai 148 bersamaan 49.33% orang pelajar berada pada tahap amalan gaya hidup yang cemerlang diikuti dengan 122 atau 40.67% pelajar berada pada tahap baik. Baki pelajar yang tinggal daripada 300 orang pelajar iaitu seramai 30 (10%) orang pelajar berada pada tahap gaya hidup yang berisiko. Manakala, bagi tahap kepadatan tulang dalam kalangan pelajar Fakulti Pengajian Pendidikan menunjukkan seramai 149 bersamaan 49.67% orang pelajar berada pada tahap osteopenia. Manakala, seramai 138 atau 46 % orang pelajar mempunyai kepadatan tulang yang normal. Seramai 14 (4.67%) orang pelajar pula berada pada tahap osteoporosis. Hasil kajian yang dijalankan menunjukkan tidak terdapat perbezaan yang signifikan ($p = 0.151$; $p > 0.05$) tentang kepadatan antara tulang lelaki dan tulang perempuan walaupun kepadatan tulang lelaki lebih tinggi. Dapatan kajian juga menunjukkan tidak terdapat hubungan yang signifikan ($p = 0.352$; $p > 0.05$) tentang corak amalan gaya hidup antara lelaki dan perempuan. Namun, terdapat hubungan korelasi kepadatan tulang dengan gaya hidup pada $r = 0.65$ iaitu pada tahap sederhana di $p = .000$; $p < 0.5$. Hasil dapatan kajian ini memberikan input berguna kepada pelajar Universiti Putra Malaysia untuk lebih peka dan sedar tentang kepentingan mengamalkan gaya hidup yang sihat bagi menjaga kesihatan tulang.

Kata Kunci: Gaya hidup, kepadatan tulang, pelajar universiti



ORAL ABSTRACT

DELAYED ONSET MUSCLE SORENESS MANAGEMENT CONCEPT

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ABSTRACT

Delayed onset muscle soreness (DOMS) is usually caused by repeated exposure to eccentric muscle contraction or unfamiliar exercises. It increases steadily after exercise and reaches to peak between 24 and 48 hours. Eccentric exercise causes damage to muscle cells leading to release of creatine kinase enzymes, which increases within 1-3 days. Symptoms of DOMS include loss of strength, pain, muscle weakness, stiffness and swelling resulting in decreased physical performance and psychological distress. Loss of maximum strength occurs within the first 48 hours and can be recovered in full for up to 5 days. The maximum pain occurs within 1-3 days after exercise and recovery within 7 days. Stiffness and swelling may increase after 3-4 days and disappear within 10 days. Prostaglandin E2 is released within 1-3 days after eccentric muscle contraction, which causes swelling and dull pain. The most common treatments used to reduce DOMS symptoms are active exercise, heat, and cryotherapy. A moderate intensity of exercise could reduce the symptoms of DOMS, may be due to this exercise improves blood circulation or increases endorphin release, resulting in the increased removal of noxious waste product and finally reduce pain. Heat effects can increase the temperature of muscle tissue, increase blood flow, which may help clear inflammation mediators from the muscle tissue. Heat also enhances the ability of the connective tissue to expand, increase joint ROM, increase the resistance of muscle tissue to tearing, improve motor unit recruitment, improve smooth muscle contraction, improve muscle fatigue, increase proprioception, and inhibited pain signals. Effects of cold include changes in skin, subcutaneous, intramuscular and joint temperatures. Reduction in tissue temperature stimulates cutaneous receptors to activate the sympathetic adrenergic fibers that cause local arterioles and venules constriction resulting in decrease swelling, the rate of metabolism, inflammatory response, vascular permeability, and edema. It is evident that all three treatments are likely to reduce the symptoms of DOMS. Researchers want to know which treatment can help reduce the symptoms of the best.

Keywords: Delayed onset muscle soreness, exercise, heat, cryotherapy



ORAL ABSTRACT**HUBUNGAN PENGLIBATAN KOKURIKULUM DAN PENCAPAIAN
AKADEMIK PELAJAR TINGKATAN LIMA SMK ALOR AKAR
KUANTAN**

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Tujuan: Penyelidikan yang dijalankan adalah untuk menentukan hubungan terhadap tahap penglibatan kokurikulum dengan pencapaian akademik pelajar SMK Alor Akar, Kuantan Pahang. Kajian itu turut menentukan perbezaan terhadap pemboleh ubah – pemboleh ubah yang dikaji. Secara amnya, kajian ini bakal menggambarkan situasi semasa bagi tahap penglibatan kurikulum dan pencapaian akademik pelajar SMK Alor Akar, Kuantan Pahang. **Kaedah:** Reka bentuk kajian yang digunakan dalam kajian ini adalah reka bentuk kajian diskriptif dengan menggunakan kaedah tinjauan. Lokasi kajian ini adalah di SMK Alor Akar, Kuantan Pahang. Populasi kajian ini adalah pelajar tingkatan lima SMK Alor Akar dan jumlah responden yang terlibat adalah seramai 116 pelajar (lelaki = 37, perempuan = 79) dengan menggunakan kaedah persampelan purposif. Kajian ini telah menggunakan borang soal selidik sebagai instrumen kajian. **Dapatan:** Hasil analisis dalam kajian menunjuk tahap penglibatan kokurikulum pelajar berada tahap baik dengan nilai min 74.99 (SP=9.35), manakala bagi tahap pencapaian akademik pelajar pula berada pada tahap baik dengan nilai min 7.21 (SP=1.80). Manakala bagi analisis perbezaan di antara jantina terhadap tahap penglibatan kokurikulum pelajar tidak terdapat perbezaan yang signifikan [$t(146) = -0.167$, $p = 0.86$] dan bagi prestasi pencapaian akademik juga tidak terdapat perbezaan signifikan antara pelajar lelaki dan perempuan [$t(146) = -1.277$, $p = 0.20$]. Bagi persoalan kajian yang terakhir iaitu menentukan hubungan tahap penglibatan kokurikulum dengan prestasi pencapaian akademik menunjukkan hubungan yang signifikan ($r = 0.396$, $p = 0.01$). **Perbincangan:** Penglibatan pelajar terhadap kokurikulum menunjukkan tahap yang baik dan pencapaian akademik pelajar juga berada pada tahap yang baik. Ini menunjukkan bahawa terdapat hubungan yang positif di antara tahap penglibatan kokurikulum dengan pencapaian akademik. Ini bermaksud setiap pekali r yang meningkat atau menurun dalam tahap penglibatan kokurikulum bakal mempengaruhi pencapaian akademik pelajar tingkatan 5 SMK Alor Akar, Kuantan Pahang.

Kata Kunci: Hubungan



ORAL ABSTRACT

THE DEVELOPMENT OF HEALTH BEHAVIOUR QUESTIONNAIRE FOR UNDERGRADUATE STUDENTS IN MALAYSIA: A PILOT STUDY

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ABSTRACT

Health- risk behaviour among college students in Malaysia are a matter of concern as it carries a habit that they will bring later to adulthood. This study was conducted to develop a health behaviour questionnaire of college students in Malaysia based on the Health Behaviour model and the Health Promoting Behaviours (HPB) model by using confirmatory factor analysis (CFA). First of all, delphi technique was used to determine the content validity of the scale with a panel of experts. A pilot study was conducted among 50 undergraduate students of Universiti Putra Malaysia. Self- administered questionnaires (adapted and translated into Bahasa Malaysia) was given to respondents comprising of students at Universiti Putra Malaysia. The proposed Health Behaviour Questionnaire (HBQ) has good construct validity and reliability and can be used as an evaluation tools to measure the health behaviour components of a healthy lifestyle among Malaysian undergraduates. Hence, further data collection can proceed to obtain an overall health behaviour among Malaysian university students and the development of Health Behaviour Questionnaire (HBQ) for this population.

Keywords: Health behaviour questionnaire, university students



ORAL ABSTRACT

**STRESS AND MENTAL HEALTH BETWEEN STUDENT ATHLETES
AND NON-STUDENT ATHLETES IN UNIVERSITI PUTRA MALAYSIA**

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ABSTRACT

Mental health problems among university students are in the rise. This is even much so seen among student athletes. However, limited studies were investigated on the issue especially among student athletes in Malaysia. Hence, the objective of the study was to investigate the prevalence of stress and mental health among athletes and non athletes in Universiti Putra Malaysia. A correlational study based on questionnaire was conducted among 195 athletes and non athletes with a mean age of 20.12 ± 1.8 years that reside in one of the colleges of Universiti Putra Malaysia. *Inventory of College Students Recent Life Experiences* (ICSRLE: Kohn, Lafreniere & Gurevich, 1990) and *General Health Questionnaire-28* (GHQ-28: Goldberg, 1978) were used in the study. Overall, 75% of the students were moderately stress with 74% were at risk of psychiatric disturbance. Higher stress, somatic symptoms, anxiety, social disfunction and risk of depression were seen higher among the female students. There were significant differences seen on somatic symptoms, anxiety and social disfunction between the sexes. There were significant differences seen on social disfunction and risk of depression between athletes and non-athletes where athletes were seen having more mental distress. There was a moderate relationship between stress and mental distress among the students at Universiti Putra Malaysia. A substantial proportion of students are suffering from stress and mental distress. Female students and student athletes were seen to be at more risk on developing mental distress. Further studies need to be carried out to identify associated factors related to stress and mental health among university students (students athletes and non-student athletes) in order to curb mental distress on this population.

Keywords: Stress, mental health, student athletes



ORAL ABSTRACT

**PERSEPSI ATLET TERHADAP GAYA KEPIMPINAN JURULATIH
BOLA SEPAK SEKOLAH YANG DIGEMARI DENGAN GAYA
KEPIMPINAN SEBENAR JURULATIH BOLA SEPAK DI DAERAH ALOR
GAJAH, MELAKA**

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ABSTRAK

Kajian ini bertujuan untuk mengenal pasti sama ada terdapat perbezaan yang signifikan dari segi persepsi atlet terhadap gaya kepimpinan jurulatih bola sepak sekolah yang digemari dengan gaya kepimpinan sebenar jurulatih bola sepak di Daerah Alor Gajah. Kajian ini melibatkan semua pemain, iaitu seramai 190 pemain bola sepak pasukan sekolah yang berumur di bawah umur 18 tahun yang telah menyertai Pertandingan Bola Sepak antara Zon Peringkat Daerah Alor Gajah. Instrumen *Leadership Scale for Sports (LSS)* yang dibangunkan oleh Chelladurai & Saleh (1980) telah digunakan untuk mengumpul data. Soal selidik ini terdiri daripada 40 item yang telah diedarkan kepada pemain bola sepak. Hasil kajian menunjukkan bahawa gaya kepimpinan yang paling digemari oleh atlet ialah tingkah laku latihan dan arahan (min=3.29) dan tingkah laku demokratik (min=3.20), manakala, dimensi tingkah laku autokratik adalah gaya kepimpinan yang paling tidak digemari (min=2.97). Gaya kepimpinan sebenar jurulatih ialah tingkah laku latihan dan arahan (min=4.49), diikuti dengan tingkah laku demokratik (4.40), maklum balas positif (min=4.40), sokongan sosial (min=4.35), dan tingkah laku autokratik (min=4.20). Tidak terdapat perbezaan yang signifikan dalam semua dimensi tingkah laku jurulatih yang digemari dan sebenar kecuali tingkah laku autokratik. Nilai-t yang diperolehi adalah $t(187) = 3.18$, $p=0.002$.

Kata Kunci: Persepsi, gaya kepimpinan, jurulatih, bola sepak, remaja



ORAL ABSTRACT

**KECERDASAN SPIRITUAL DAN TINGKAH LAKU KESIHATAN
DALAM KALANGAN PELAJAR DI SEKOLAH SEKITAR SERDANG**

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ABSTRAK

Kajian ini telah dilaksanakan ke atas murid tingkatan empat di SMK Seri Serdang dan SMK Seri Indah yang bertujuan untuk melihat hubungan antara kecerdasan spiritual dan tingkah laku kesihatan mereka. Seramai 284 orang responden yang terdiri daripada pelajar lelaki dan perempuan telah dipilih menggunakan kaedah persempelan bertujuan. Terdapat dua instrumen yang digunakan untuk mengukur tahap kecerdasan spiritual dan tingkah laku kesihatan iaitu *The Spiritual Intelligence Self-Report Inventory* (SISRI- 24; King, 2008) dan *Healthy Lifestyle Scale for University Student* (HLUS; Wang et al., 2012). Kajian ini menggunakan analisis statistik deskriptif untuk mengukur tahap kecerdasan spiritual dan tahap tingkah laku kesihatan murid manakala analisis statistik infrensi ujian – T telah digunakan untuk mengenalpasti jika terdapat hubungan signifikan antara kecerdasan spiritual dan tingkah laku kesihatan terhadap jantina. Hasil kajian mendapati terdapat perbezaan yang signifikan antara kecerdasan spiritual dengan jantina namun tidak terdapat perbezaan signifikan antara tingkah laku kesihatan dengan jantina. Seterusnya, analisis korelasi *Pearson* telah digunakan untuk mengenal pasti tahap hubungan antara kecerdasan spiritual dengan tingkah laku kesihatan dalam kalangan murid. Hasil analisis mendapati bahawa hubungan antara tahap kecerdasan spiritual dan tingkah laku kesihatan adalah pada tahap yang sederhana dan terdapat perbezaan signifikan antara kecerdasan spiritual terhadap tingkah laku kesihatan. Berdasarkan dapatan kajian ini, dapat dirumuskan bahawa murid di kedua- dua sekolah tersebut tidak mempunyai masalah dari segi tingkah laku kesihatan dan kecerdasan spiritual.

Kata Kunci: Kecerdasan spiritual, tingkah laku kesihatan, pelajar sekolah menengah



ORAL ABSTRACT

OPTIMIZING REST INTERVAL AND LOAD INTENSITY ACCORDING TO HEART RATE VARIABILITY AND BLOOD PRESSURE CHANGES: A DESIGN OF EXPERIMENT APPROACH

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ABSTRACT

The statistical design of experiment (DOE) is a process of planning controlled experiments for investigating the effects of certain processes on specific experimental units. Even though the DOE method has been applied in a broad range of different scientific fields, the utilization of the DOE in sports and exercise research is limited. This statistical method was used to analyze the effects on the sympathetic modulation after resistance training (RT) utilising three different rest intervals between sets (1, 2 and 3 minutes) and three different load intensities measured as a proportion of the repetition maximum or RM (5RM, 10RM and 15RM) in physically active men. Eight-one physically male participants (mean \pm SD: age = 21.6 \pm 1.1 yr) who performed moderate to vigorous activity a minimum of 30 minutes a day on most days of the week were recruited. After the determination of 5RM loads for the bent-over row (BR), bench press (BP), dead-lift (DL) and squats (SQ), the participants performed a single RT session. The participants were divided into nine groups with each group receiving a different combination of load intensity and rest interval during RT. Applying the DOE with the use of the Design Expert software, alongside with the analysis of variance (ANOVA), the findings of the study indicate that rest intervals of 2 min between sets and a load intensity of 15RM resulted in minimum low frequency (LF: 4.05 Hz), maximum high frequency (HF: - 6.24 Hz), minimum systolic blood pressure (SBP: -14.64 mm Hg) and minimum diastolic blood pressure (DBP: -7.08 mm Hg) 50-minutes after the completion of the full-body RT session. This suggests that an intermediate rest interval coupled with lower load intensities induced positive sympathetic modulation after a single-session RT.

Keywords: HRV - DOE - resistance training



ORAL ABSTRACT

**THE EFFECTS OF REPETITIVE OVERHEAD THROWING ON
SHOULDER IMBALANCE**

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ABSTRACT

Posture and muscle strength are very important for performance of athlete in a game. If the athlete does not have good strength or posture, he may not be able to perform well in the game. The purpose of this investigation was to evaluate the effect of repetitive overhead throwing on shoulder imbalance of water polo players. Forty-two subjects from under-21 professional water polo team were selected to participate in this study. Participants were fully informed about the procedures and process of this study. A T-test statistical analysis were utilized to evaluate the differences in strength of bilateral shoulder among water polo players. For the test, subjects undergone a pre designed warm up by researcher that is related to the test for the eight shoulder anatomical movement strength in both the right and left shoulder. The anatomical shoulder movement strength (Flexion, Extension, Abduction, Adduction, Horizontal Abduction, Horizontal Adduction, Internal and external rotation) were tested by the Hand-Held Dynamometer (MicroFET2, Hoggan Health Industries). The results showed that there were significant differences on bilateral shoulder anatomical movement strength among the water polo players. The results of T-test Flexion ($t= 136.09$ and $p< .001$), Extension ($t= 110.92$ and $p< .001$), Abduction ($t= 121.89$ and $p< .001$), Adduction ($t= 101.47$ and $p< .001$), Horizontal Adduction ($t= 92.3$ and $p< .001$), horizontal Abduction ($t= 95.6$ and $p< .001$), Internal Rotation ($t= 109.6$ and $p< .001$) and External Rotation ($t= 102.18$ and $p< .001$) showed the p value are less than 0.05 for all variables of the test. In conclusion the results of this study prove that due to training method and nature of this game which involves repetitive overhead throwing with one arm had resulted in and imbalance of the shoulder muscles. A conditioning program for professional water polo players should emphasized in training to rectify this condition.

Keywords: Shoulder imbalance, water polo, overhead thrower

**ORAL ABSTRACT****TAHAP AKTIVITI FIZIKAL DAN EFIKASI KENDIRI DALAM
KALANGAN PELAJAR PENDIDIKAN JASMANI UNIVERSITI PUTRA
MALAYSIA**

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ABSTRAK

Tahap aktiviti fizikal di antara individu yang berlainan biasanya adalah berbeza dan dipengaruhi oleh kepercayaan individu berkenaan terhadap kemampuan mereka untuk melakukan perubahan seperti yang dikehendaki. Susulan daripada itu, kajian ini dijalankan untuk menentukan tahap aktiviti fizikal dan efikasi sendiri dalam kalangan pelajar Bachelor Pendidikan (Pendidikan Jasmani) di Universiti Putra Malaysia (UPM) dan mengenal pasti sama ada terdapat perbezaan antara tahun pengajian bagi tahap aktiviti fizikal dan efikasi sendiri dalam kalangan pelajar Pendidikan Jasmani UPM. Kajian ini adalah berbentuk tinjauan deskriptif dengan menggunakan soal selidik Transtheoretical Model yang telah dibangun oleh Prochaska (1979). Populasi dalam kajian ini terdiri daripada kesemua pelajar Pendidikan Jasmani UPM iaitu seramai 179 orang iaitu seramai 46 orang pelajar tahun satu, 49 orang pelajar tahun dua, 36 orang pelajar tahun tiga dan selebihnya 36 orang pelajar tahun empat. Reka bentuk adalah tinjauan deskriptif. Instrumen kajian yang digunakan adalah set soal selidik Transtheoretical Model (Prochaska, 1979). Dapatan kajian menunjukkan majoriti pelajar Pendidikan Jasmani (UPM) berada pada tahap tertinggi iaitu tahap yang kelima bagi tahap aktiviti fizikal. Nilai peratusan bagi pelajar tahun satu, dua, tiga dan empat masing-masing adalah 47.8%, 67.3%, 81.3% dan 69.4%. Analisis secara detail mendapati bahawa tidak terdapat perbezaan yang signifikan bagi tahap aktiviti fizikal mengikut tahun pengajian di mana $F(179) = .352$, $p = .787$, $p > 0.05$. Pelajar tahun dua dilaporkan memiliki tahap efikasi sendiri yang paling tinggi diikuti oleh pelajar tahun satu, tiga dan empat. Nilai min yang dilaporkan masing-masing adalah 3.510, 3.057, 2.970 dan 2.950. Analisis secara detail mendapat bahawa terdapat perbezaan yang signifikan antara tahun pengajian bagi efikasi sendiri di mana $F(179) = 4.776$, $p = 0.003$, $p < 0.05$. Konklusinya, walaupun hampir kesemua pelajar Pendidikan Jasmani (UPM) mempunyai tahap aktiviti fizikal yang tinggi tetapi pelajar tahun dua yang mendominasi dapatan kajian bagi efikasi sendiri.

Kata Kunci: Aktiviti fizikal, efikasi sendiri



ORAL ABSTRACT

THE RELATIONSHIP BETWEEN EXTRINSIC MOTIVATION AND THE PHYSICAL ACTIVITY LEVEL AMONG SCHOOL STUDENTS

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ABSTRACT

Nowadays, people have realized that physical activity play critical role in determining health and wellness of an individual. This is proven by the existence of many research on this area which indicate that people start to emphasize in this matter. In addition, it is also well known that motivation is one of the main factor that determine whether people will participate in performing physical activity or not. Either extrinsic or intrinsic, both play major role in determining the level of physical activity. Therefore, this study is made to investigate the relationship between extrinsic motivation and physical activity level. The researcher has selected randomly 195 students from SMK Alam Megah 2, Seksyen 28, Shah Alam, Selangor as a respondent for this study. The method of this study is by using questionnaire that adapted from International Physical Activity Questionnaire (IPAQ) and Exercise Motivation Inventory (EMI), which then being edited to fulfil the requirement of this study. The results from this study show that there are positive and significant relationship between extrinsic motivation and physical activity.

Keywords: Motives, physical activity (PA), students, health



ORAL ABSTRACT

**THE EFFECT OF THE MODIFIED BOONMEELONG STICK EXERCISE
ON FLEXIBILITY, NUTRITIONAL STATUS AND HEALTH STATUS IN
NONG BUA RAWE DISTRICT, CHAIYAPHUM PROVINCE, THAILAND**

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ABSTRACT

The elderly are more prone to developing various illness such as heart diseases and arthritis with advancing age, and many individuals are unable to engage in intensive exercise. Physical activities will help people live longer, healthier live. A study was undertaken to determine if the modified Boonmeelong stick exercise program could make a difference to the people live longer, healthier live. The investigator interviewed the people for information concerning personal data, family's socioeconomic, behavior, nutritional status and health status. A total of 120 individuals aged above 60 years (60 male and 60 female) from Nong Bua Rawe district, Chaiyaphum Province, Thailand were examined. During the 6 weeks exercise program, the time required and the number of times the short stick was dropped were investigated. The exercise activities was also evaluated base on heart rate measurement. The experimental designed with pre-test and post-test of exercise program group and control group. The results showed the improvement of behavior after investigation (p-value <0.001), 46.7% of elderly with underlying diseases, 63.3% of experimental group with normal BMI and 48.3% of control group with BMI average. The study showed a decrease in unwanted outcome among elderly who received exercise program. The study therefore showed the stick exercise program individuals played a key role in the prevention of unwanted outcome and diseases. However, in the case of the late elderly, the high frequency of short stick drops and changes in heart rate during warming up must be considered.

Keywords: Stick exercise, elderly, health status



ORAL ABSTRACT**AKTIVITI FIZIKAL DAN KESEJAHTERAAN MENTAL DALAM
KALANGAN PELAJAR UNIVERSITI PUTRA MALAYSIA**

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Kajian ini bertujuan untuk mengenalpasti hubungkait aktiviti fizikal dengan kesejahteraan mental dalam kalangan pelajar Fakulti Pengajian Pendidikan Universiti Putra Malaysia. Dalam kajian ini, aspek berikut telah dikaji; tahap aktiviti fizikal dan kesejahteraan mental, perbezaan antara jantina dalam kesejahteraan mental dan aktiviti fizikal, perbezaan antara tahun pengajian dalam aktiviti fizikal dan kesejahteraan mental dan hubungan antara aktiviti fizikal dengan kesejahteraan mental dalam kalangan pelajar Fakulti Pengajian Pendidikan Universiti Putra Malaysia. Instrumen soal selidik yang digunakan telah diadaptasi daripada *International Physical Activities Questionnaire (IPAQ)* and *The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*. Seramai 300 orang pelajar Fakulti Pengajian Pendidikan, Universiti Putra Malaysia telah diambil sebagai sampel kajian. Analisis kajian mendapati aktiviti fizikal dan kesejahteraan mental dalam kalangan pelajar Fakulti Pengajian Pendidikan berada pada tahap sederhana. Tiada perbezaan yang signifikan antara jantina bagi kesejahteraan mental dan aktiviti fizikal. Analisis ANOVA satu hala telah dijalankan untuk membezakan tahap kesejahteraan mental dan aktiviti fizikal antara tahun pengajian. Dapatan kajian mendapati bahawa terdapat perbezaan yang signifikan antara tahun pengajian bagi aktiviti fizikal ($F(3) = 57.26, p = 0.00$). Analisis Post Hoc pula menunjukkan terdapat perbezaan yang signifikan bagi aktiviti fizikal di antara pelajar Tahun 1 dengan Tahun 4, Tahun 2 dengan Tahun 4 dan Tahun 3 dengan Tahun 4 iaitu pada nilai ($p = 0.00$) dan Tahun 2 dengan Tahun 3 iaitu pada nilai ($p = 0.003$). Manakala tiada perbezaan yang signifikan bagi aktiviti fizikal di antara pelajar tahun lain. Terdapat hubungan positif yang sederhana di antara aktiviti fizikal dan kesejahteraan mental. Kesimpulannya, diharapkan dapatan kajian ini memberi manfaat kepada pihak universiti agar dapat mewujudkan program yang boleh meningkatkan tahap penglibatan aktiviti fizikal dan seterusnya kesejahteraan mental dalam kalangan pelajar universiti.

Kata Kunci: Aktiviti fizikal, kesejahteraan mental, pelajar universiti



ORAL ABSTRACT

EFFECTS OF SODIUM BICARBONATE INGESTION ON RATE OF PERCEIVED EXERTION, BLOOD LACTATE AND PERFORMANCE AMONG UiTM SHAH ALAM ATHLETES

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ABSTRACT

The purpose of this study was to identify the effects of sodium bicarbonate ingestion (NaHCO_3) ($0.3 \text{ g.kg}^{-1} \text{ BW}$) on RPE (rate perceived exertion), blood lactate and beep test of 2 x 20m shuttle run among UiTM trained runners. A total of 12 trained runners (age: 21.50 ± 5.3 years; weight 68.83 ± 5.0 kg; height: 168.1 ± 1.3 cm) from UiTM Shah Alam were recruited in this study. They underwent two experimental trials which required ingestion of NaHCO_3 ($0.3 \text{ g.kg}^{-1} \text{ BW}$) trial and placebo ($4 \text{ g.kg}^{-1} \text{ BW}$ of NaCl) an hour before beep test (2 x 20 meter shuttle run). The study was conducted in a double blind randomized cross-over design. Each trial was separated by 7 days apart. The ingestion of the treatments were given 60 minutes prior to the beep test. A five minute of standardized warm-up followed by 2 minute rest was given before the beep test. Blood lactate were measured at pre ingestion and post-test, while RPE and performance (cumulative running time) were recorded post beep test. The result showed that cumulative running time for beep test recorded longer time with sodium bicarbonate trial (11.235 ± 1.495 minute) compared to placebo trial (9.186 ± 1.406 minute). Blood lactate concentration for NaHCO_3 trial was higher than the NaCl ($7.683 \pm .8576 \text{ mmol.L}^{-1}$ vs. $6.166 \pm .5993 \text{ mmol.L}^{-1}$). No significant difference was found in RPE following NaHCO_3 and NaCl ingestion respectively ($12.708 \pm .5418$ vs $12.958 \pm .6894$). To conclude, ingestion of NaHCO_3 ($0.3 \text{ g.kg}^{-1} \text{ BW}$) 60 min prior to beep test improved athletes' endurance performance.

Keywords: Blood lactate, performance, RPE, cumulative running time



ORAL ABSTRACT

NEW DIRECTION IN HEALTH CARE FOR SILK WEAVING GROUP

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ABSTRACT

Introduction: silk weaving is a profession that uses hand and sitting all the time, it is a risky job to get hurt and have pain in the muscles of the body. This problem demonstrates the nature of the ergonomics and causes the decline in physical. Theory of self-care and health belief model can be used as a guideline for modifying the health care behavior of individuals. **Objective:** To study the problems and health care model of silk weaving groups, applying self-care theory and health belief model theory. **Education scope:** The study of self-care theory, show that self-care is behavior to learn, self-care will become a habit, if it has been done for a while. The person must have knowledge of the target and create a good habit in the practice. The past behavior modification model, studies of elderly patients, patients with overweight and obesity, Theory of self-care can change the behavior of health care, and the study of health belief model, when a person is afraid of perceived threat to himself, the person will follow the instructions, to prevent disease and deal with problems. It is important to be aware of the benefits that you will receive. The study was conducted with a sample of middle-aged, elderly, military-aged patients, Health belief models can be used to modify health care behaviors. Applying these two theories as a guideline for changing health behaviors seems to be developing and useful in health care of silk weaving group. **Conclusion:** Modification of health care behaviors of silk weaving groups is important, but there are still relatively few studies and no clear pattern. Therefore, the researcher was interested in studying the development of the health care model of silk weaving group, the self-care theory and the health belief model were used to guide the health of the silk weaving group. **Results:** Theory Used to Modify Health Behaviors 2 This Theory a new approach to self-care of silk weaving by hand, to have better health care behaviors and to improve physical fitness to work happily.

Keywords: Health care behavior, health belief model, theory self care



ORAL ABSTRACT

**PERKHIDMATAN DAN KEMUDAHAN SUKAN TERHADAP KEPUASAN
PELAJAR UNIVERSITI: KAJIAN KES**

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ABSTRAK

Kajian ini bertujuan untuk mengenal pasti penggunaan perkhidmatan dan kemudahan sukan universiti dalam kalangan pelajar. Seramai 216 pelajar Universiti Malaysia Sabah sebagai responden kajian. Kajian ini berbentuk kajian kuantitatif. Instrumen kajian diadaptasi dan digunakan berkaitan perkhidmatan, kemudahan sukan dan kepuasan pelajar. Kajian rintis dijalankan untuk menguji kesahan dan kebolehpercayaan instrumen kajian. Analisa data kajian dengan menggunakan program SPSS versi 20.00 (Statistical Package for School Science). Analisis statistik inferensi digunakan untuk menguji hipotesis kajian. Dapatan kajian menunjukkan terdapat perkaitan diantara perkhidmatan, kemudahan sukan dan kepuasan pelajar universiti. Dapatan kajian juga menunjukkan terdapat perbezaan yang signifikan terhadap penggunaan perkhidmatan dan kemudahan sukan mengikut jantina. Dapatan kajian menunjukkan perkhidmatan dan kemudahan sukan kurang memuaskan dalam pelajar lelaki. Dapatan kajian mendapati pelajar wanita adalah lebih ramai menggunakan perkhidmatan dan kemudahan sukan universiti. Kajian ini mencadangkan perkhidmatan dan kemudahan sukan disesuaikan dengan keperluan semasa agar menggalakkan penyertaan pelajar dalam aktiviti gaya hidup sihat. Penyediaan perkhidmatan dan kemudahan sukan juga dapat mendorong pelajar bergiat aktif dalam aktiviti sukan di peringkat kampus hingga mewakili universiti.

Kata Kunci: Perkhidmatan, kemudahan sukan, kepuasan, universiti, sukan, gaya hidup sihat, pelajar



ORAL ABSTRACT

THE RELATIONSHIP BETWEEN AGILITY, BALANCE, POWER AND DRIBBLING SPEED IN FOOTBALL PLAYERS

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ABSTRACT

Football is a contact sport and challenges physical fitness by requiring a variety of skills at different intensities. The objective of this study is to determine the relationship between agility, balance, power and dribbling speed in football players. Twenty football players age between 19 - 25 years old participated in this study. All participants performed T-test, single leg test, vertical jump test, and dribbling speed test. The result showed that there is significant correlation between agility and dribbling speed ($r = .16, p < .05$). A significant correlation also exists between balance and dribbling speed ($r = - .23, p < .05$). However, there is no significant correlation between power and dribbling speed ($r = .90, p > .05$). In conclusion, agility and balance will influence the dribbling speed in football players.

Keywords: Agility, balance, power, dribbling speed



ORAL ABSTRACT**COMPARISON BETWEEN TWO RECOVERY METHODS: COLD WATER IMMERSION VERSUS PROGRESSIVE MUSCLE RELAXATION IN REDUCING DOMS AMONG YOUNG ATHLETES**

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ABSTRACT

DOMS is caused by myofibril tears (muscle strains) which from an inflammatory response with intramuscular fluid and electrolyte shifts (Dutto & Braun, 2004). The usage of Cold Water Immersion (CWI) immediately after exercise has become most popular strategy to treat and prevent DOMS over the past decade. However, there is limited number evidence on its effectiveness due to impaired muscle performances. Progressive Muscle Relaxation (PMR), is a stress relief technique that relies upon subtle rather than gross (large) muscular movements to promote relaxation and tension relief, one of strategies to prevent DOMS but there is limited number of evidence on its effectiveness. The aim of this study was to compare the effectiveness between CWI and PMR on DOMS markers among young athletes. A total of 30 young athletes with mean age of $18.57 \pm .504$ years old, weight 61.92 ± 7.96 kg and height 170.67 ± 7.57 cm volunteered to participate in this study. Participants were required to perform 20 reps x 5 sets drop jump (DJ) to induce muscle damage. They were randomly assigned into three groups; CWI (n = 10), PMR (n = 10) and control group (n = 10). Immediately following damage-inducing exercise protocol, CWI group were required to submerge lower body until iliac crest level in 15°C of cold water for 16 minutes; whereas control group applied the same position without immersed in cold water for 16 minutes. Perceived muscle soreness, range of motion (ROM) and thigh circumference and 20 meter sprint performance have been used as DOMS markers in this study. Markers were measured pre-exercise, post-exercise, 24 hours, 48 hours, 72 hours and 96 hours post intervention. The results of mixed ANOVA have revealed a significant interaction ($p < 0.05$) in perceived muscle soreness and 20 meter sprint between each groups and measurements. On a contrary, there was no significant interaction found in ROM and thigh circumference ($p > 0.05$). In conclusion, a single bout of Cold Water Immersion (CWI) and Progressive Muscle Relaxation (PMR) are not beneficial to elicit positive effects of some DOMS markers.

Keywords: Cold water immersion, delayed-onset muscle soreness, progressive muscle relaxation



ORAL ABSTRACT**KEBERKESANAN PROGRAM INTERVENSI DALAM KEMAHIRAN
MENYANGGA PERMAINAN BOLA TAMPAR MURID LELAKI TAHUN****4**Tuan Rosazura Tuan Manan¹, Soh Kim Geok², Soh Kim Lam³, Salimah Japar⁴^{1,2} Fakulti Pengajian Pendidikan, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysia^{3,4} Fakulti Perubatan dan Sains Kesihatan, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan, Malaysiakims@upm.edu.my**ABSTRAK**

Kajian ini dijalankan untuk mengenalpasti keberkesanan program intervensi bagi membantu murid menguasai kemahiran menyangga bola tampar dengan mengaplikasikan reka bentuk kuasi eksperimental dan ujian pra dan pasca yang dijalankan selama 8 minggu. Instrumen Ujian Bola Tampar Braddy Wall Test yang dibangunkan oleh Braddy (1945) telah digunakan untuk menguji keupayaan pelajar untuk menyangga bola ke tembok sasaran. Seramai (n=50) orang murid lelaki tahun 4 dipilih sebagai sampel dan dibahagikan secara rawak kepada kumpulan kawalan dan eksperimen seramai 25 orang. Hasil kajian menunjukkan, tiada perbezaan signifikan terhadap penguasaan kemahiran menyangga kumpulan kawalan dengan pra ujian (M=7.28), pasca ujian (M=7.72) dan nilai $t(25)=0.831$, $p=0.414$. Terdapat perbezaan signifikan terhadap penguasaan kemahiran menyangga kumpulan eksperimen untuk pra ujian (M=6.04), pasca ujian (M=9.80) dan nilai $t(25)=7.094$, $p=0.001$, $p<.05$. Keputusan ujian iaitu (M=2.520) dengan nilai $t(50)=5.67$ pula menunjukkan terdapat perbezaan yang signifikan terhadap keputusan pasca kumpulan kawalan dan pasca kumpulan eksperimen apabila $p=.001$, $p<.05$ selepas 8 minggu program intervensi dijalankan. Kajian mendapati bahawa terdapat perbezaan yang signifikan dari segi penguasaan kemahiran menyangga ke sasaran di antara kumpulan kawalan dan eksperimen. Kumpulan eksperimen dilaporkan menunjukkan peningkatan dalam kemahiran menyangga ke sasaran yang signifikan bagi ujian pra dan pasca. Keadaan ini menunjukkan bahawa dengan menggunakan program intervensi adalah berkesan dalam meningkatkan keupayaan menyangga ke sasaran bagi murid lelaki tahun 4.

Kata Kunci: Praktis agihan, program intervensi



ORAL ABSTRACT**SELF – FITNESS PROFILING AMONG AGE 50’S INDIVIDUALS – CASE STUDY**Chee Hian Tan^{1*}, Jung Young Lee², Raja Mohammed Firhad Raja Azidin³^{1,3} Faculty of Sports Science & Recreation UiTM Shah Alam, Selangor, Malaysia² College of Physical Education Suwon University South Korea, Koreatanchee@salam.uitm.edu.my**ABSTRACT**

This study aimed to investigate the health status profile and the effect of physical activity on elderly adult aged 50's in the complications modern life with health concerned. Twenty (n=20) participants (age = 52 ± years, weight = 83 ± 1.5kg, height = 168 ± 30cm) were recruited in this study. Workload, heart rate, sleeping pattern, blood pressure and energy intake were recorded for duration of 3 continuous cycles (3 months). Our findings revealed 42.2% participants were very active (> 12,000 steps), 9.7% were active (> 10,000 steps), 0.11% were moderately active (7,500- 9,999 steps), 22.6% were not active (5000 – 7499 steps) and 16.2% were sedentary (< 5,000 steps). Participant's average running steps, average active time, total distance covered and energy expenditures during the first month was 11,161 steps, time 2 hours 5 min, 247.1 km distance and 1394 kcal. During the second month, the participants performed 13,197 steps, average active time of 2 hours 19 min, 296.8 km distance covered and 10,090 kcal energy expenditures. During the third month, the participant performed an average of 11, 005 steps, active time of 2 hours 5 mins, distance covered of 235.5 km and energy expenditures of 8528 kcal. 30% of the participants blood pressure were normal (120/80 mm Hg), 43% were pre - high blood pressure (130-140/80-90 mm Hg) and 27% participants were in the high blood pressure category. Our findings also revealed the participants have longer sleeping time (7 hours 7 mins) at post physical activity compared to pre - physical activity (6 hours 46 mins). All participants demonstrated an average 70% to 80% of their heart rate maximum, achieving moderate level of intensity. These finding suggest by identifying health status and delivering fitness knowledges has an important role in promoting active lifestyles in elderly age 50's population.

Keywords: Health profiling, physical activity, sleeping pattern, heart rate, blood pressure



ORAL ABSTRACT

THE COMPARISON OF TWO PROTOCOLS OF VARIABLE RESISTANCE TRAINING ON BODY COMPOSITION AMONG UNTRAINED MALES IN IRAN

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ABSTRACT

Several studies have shown a positive association between variable resistance training and improvement of muscular performance. However, the effect of variable resistance training to improve body composition in untrained individuals remains unclear. The objective of this research was to examine the comparison of 12 weeks combined weight and chain versus combined weight and elastic band variable resistance training on body composition among untrained male adults. Fifty healthy untrained males (age: 21.5 ± 1.95 years) were randomly selected and assigned into three groups: combined weight and chain (WC), combined weight and elastic band (WE), and free-weight (CG). All groups trained with 3 sets of 8 - 12 repetitions with 70% to 80% of 1RM for 2 days per week. Approximately 65% of the resistance was provided by free-weights and 35% of the resistance was provided by chains and elastic bands for the WC and WE groups. Body fat mass (FM) and body fat free mass (FFM) using bioelectrical impedance analyser were measured before, in the middle and after the intervention. Results reported although in the middle and after the intervention all groups showed a significant reduction in FM and significant gained in FFM ($p < 0.05$), there were not significant differences in FM and FFM among all groups ($p > 0.05$). However, FM decreased and FFM increased more insignificantly in WE and WC groups compared with CG group, and also FM decreased and FFM increased more insignificantly in WE group to compare with WC group during and after 12 weeks of variable resistance training ($p > 0.05$). The results showed WE variable resistance training had a better effect insignificantly to improve body composition in the middle and after 12 weeks of variable resistance training among untrained male adults.

Keywords: Combined weight and chain, combined weight and elastic band, bioelectrical impedance analyser, variable resistance training



ORAL ABSTRACT

**THE EFFECT OF TWO-HANDED OVERHEAD PASS TRAINING DRILLS
ON CHAIR BALL SKILL OF GRADE 9 STUDENTS**

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ABSTRACT

A purpose of this study was to compare to the two-handed overhead pass skill of Chair Ball of grade 9 students between before and after training. The subjects was grade 9 students from Kasetsart University Laboratory School Kamphaeng Saen Campus Center for Educational Research and Development selected by a simple randomize sampling, the total students were 38 people separated into two gender, are 16 males and 22 females respectively. The instruments consisted of one hand overhand lesson plan, an one hand overhead training drills, handball skill test questionnaire. The training period 6 weeks, each week the samples were trained 3 day a week, a 50 minutes session. The pre-experimental design was one-group pretest-posttest design. The data were analyzed by using percentage, mean and SD and t-test. The finding s were as follows; 1) the difference of mean before using skill training, mean = 4.16, SD = 1.911 after the skill training. Before and after using the skill set, students were found to have average after-use instruction using skill-based training. 2) After using the teaching method using skill training, develop the skill of hand overhead ball overhead. When testing the difference of mean before using skill training, the average = 4.16. SD = 1.911 and after training = 7.92. SD = 0.673. After considering the mean before and after training, it was found that students had average after using the teaching method. Skill development, one hand overhead. Higher than before using skill training.

Keywords: Two-handed overhead pass skill



ORAL ABSTRACT

STATUS OF HELMINTHIASIS AND HEALTHY RESIDENTS IN WANG MUANG DISTRICT SARABURI PROVINCE IN THAILAND

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ABSTRACT

Along with this advancement in education is a concurrent advancement in public health. Prevention and control programs dealing with parasitic diseases have been developed and implemented. Parasitic infection constitute a worldwide epidemic, and such infections are particularly prevalent in low income areas. The costs of interventions and public health issues will drive the cost of effectiveness for intervention strategies. Helminthes infection, is one of most common worldwide distributed parasitic infections among remote area and northeast, Thailand. The incidence survey of *helminthiasis* in villagers, area of Wang Muang, Sara Buri province, was undertaken in 2017. There were 403 subjects. Diagnosis was done by means of Modified Kato katz technique. It revealed that helminthes eggs were found in 8.18 % [33/403] of the villages, classified by species were as follows: *Opisthorchis viverrini* 16 [3.97%], Hook worm 10 [2.48%], Minute intestinal fluke 5 [1.24%], Echinostoma spp 1 [0.25%], and *Taenia* spp. 1 [0.25] respectively. the highest prevalence of in the group of liver flike was 20.69%. The average weight was 21.86 kilogram and the average height was 119.09 centimeters. This study show the prevalence of helminthiasis lower than the previous study because of the people is increasing availability of higher education and successfully for helminthiasis control from the government official unit. We plan to develop, implement, and evaluate educational programs in this area that will prove useful to public health services in the prevention and control of helminthiasis as well as other parasitic infections spread by human contact. Perhaps this type of approach and further study on the correlation of symptoms with infection may offer a comprehensive strategy to the helminthes dilemma.

Keywords: Helminthiasis, *Opisthorchis viverrini*, water reservoir



ORAL ABSTRACT

**KEKUATAN MENTAL DALAM KALANGAN PEMAIN BOLA SEPAK
SEKOLAH SUKAN NEGERI SEMBILAN**

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ABSTRAK

Kajian ini bertujuan untuk menentukan tahap kekuatan mental pemain bola sepak yang bersekolah di Sekolah Sukan Negeri Sembilan. Selain itu, kajian ini juga dijalankan untuk menentukan tahap kekuatan mental antara kumpulan umur pemain serta membandingkan tahap kekuatan mental antara kumpulan umur. Responden kajian terdiri daripada semua pemain bola sepak yang menuntut di Sekolah Sukan Negeri Sembilan (n=65) dalam lingkungan umur 13 hingga 17 tahun. Instrumen yang digunakan untuk mengukur kekuatan mental ini ialah Sport Mental Toughness Questionnaire (Sheard, Golby, & Van Wersch, 2009) yang mengandungi tiga konstruk iaitu keyakinan, kesabaran dan kawalan. Statistik deskriptif iaitu frekuensi, peratusan, min dan sisihan piawai digunakan untuk menganalisis tahap kekuatan mental dalam kalangan pemain bola sepak. Secara keseluruhannya dapatan kajian menunjukkan tahap kekuatan mental pemain bola sepak Sekolah Sukan Negeri Sembilan masih berada pada tahap sederhana. Pemain bola sepak berusia 15 tahun mempunyai tahap kekuatan mental yang lebih baik berbanding dengan kumpulan umur yang lain. Manakala, tahap kekuatan mental pemain berusia 13 tahun berada pada tahap rendah. Secara kesimpulannya, tahap kekuatan mental dalam kalangan pemain bola sepak yang bersekolah di sekolah sukan Negeri Sembilan didapati perlu ditingkatkan lagi. Justeru itu, pihak yang terlibat perlu mengambil langkah yang bersesuaian bagi meningkatkan kekuatan mental dalam kalangan pemain bola sepak kerana mereka merupakan pelapis kepada pasukan senior negara.

Kata Kunci: Kekuatan mental, bola sepak, sport mental *toughness questionnaire*, umur



ORAL ABSTRACT

**THE INFLUENCE OF SIDESTEP AND SKIP EXERCISE TO IMPROVE
FIRST BALL RECEPTION ABILITY IN TAKRAW’S
EXTRACURRICULAR ON STUDENTS OF JUNIOR HIGH SCHOOL
DEMAK**

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ABSTRACT

Receiving the first ball in takraw's game is very important, so it needs proper training to increase the speed of foot reaction. This study aims to describe the differences in the effect of side step exercises and skips in receiving the first ball. This is an experimental study with two group pre-test and post-test design. The sample of this study is 16 male students who take takraw extracurricular activities. The independent variables are side step and skips training, and the dependent variable is the first ball reception ability. Based on the results of the t-test, t count is 5.584 and t table is 2.365. Therefore $5,584 > 2,365$, that means there is a difference in the first ball reception ability between side step exercises and skips training. The average of first ball reception with side step training is 22.13 and skips training is 22.63. The conclusion is that there is a difference in influence between side step and skips training on the first ball reception ability. Both exercises could improve the first ball reception ability but skip training is better than the side step exercises in improving the first ball reception ability.

Keywords: Sidestep, skip, sepak takraw, reception, first ball



ORAL ABSTRACT

**THE COACHES' ROLES IN ATHLETE DEVELOPMENT SCALE USING
EXPLORATORY FACTOR ANALYSIS**

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ABSTRACT

Coaching provides effective development among athletes only when coaches perform their roles effectively through imparting knowledge and developing teaching skills. This scale development study involved one hundred ninety (190) coaches from the Division of Lanao del Norte to answer the questionnaires. In analyzing the data and in developing the scale, exploratory factor analysis (EFA) was used. After a series of scrutinizing the data, the valid and reliable scale was developed: Coaches' Roles in Athlete Development Questionnaire. The results of the investigation showed that three (3) themes/factors can be used to measure the coaches' roles in athlete development: instructor (factor 1), supervisor (factor 2), and assessor (factor 3). The findings of the study further showed that coaches' have very satisfactory roles in towards athletes' development. The scale has copious sampling adequacy and high level of reliability based on the computed Cronbach's alpha coefficient. The newly developed scale should be retested through confirmatory factor analysis to further validate the items.

Keywords: Assessor, coach, exploratory factor analysis, instructor, supervisor



ORAL ABSTRACT

**ROLES AND MANAGEMENT SKILLS OF COACHES: TOWARD
COACHES' TRAINING FRAMEWORK**

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ABSTRACT

Sports management skills and roles of coaches are vital elements in athletic development. Coaching, as a profession, is a multifaceted task that requires both technical and tactical skills. This study determined the sports management skills and coaches' roles needed for athletes' development in the Division of Lanao del Norte, Region X. Descriptive-correlational of quantitative research approach was to employ in this study in gathering data from the one hundred twenty (120) respondents. Findings revealed that for a coach to fully develop athletes' skills he must play the role of an instructor, supervisor, assessor and he must possess the management skills of a coach which include the communication skills, decision-making skills, technical skills, and conceptual skills. Coaches efficiently play their roles and intensively develop their management skills to produce competitive and competent players.

Keywords: Coach, development, Lanaodel Norte, management skills, role



ORAL ABSTRACT**THE EFFECTS OF SMALL SIDED GAMES TOWARDS FUTSAL SPECIFIC SKILLS AMONG MALE ADOLESCENTS**Jorrye Jakiwa¹, Pathmanathan K. Suppiah²¹Defence Fitness Academy, Universiti Pertahanan Nasional, Malaysia²Faculty of Psychology & Education, Universiti Malaysia Sabah, Malaysiajorrye@upnm.edu.my**ABSTRACT**

The aim of the study was to investigate the effects of small sided games (SSG) on the acquisition futsal specific skills among male adolescents. The participants of the study were split into two groups, a control group ($13.50 \pm .51$ years) and an experimental group ($13.50 \pm .51$ years). While the CG underwent specific skills training in football and futsal over 12 weeks; the EG were exposed to SSG of futsal, football and sepak takraw. The SSG intervention comprised of activities that manipulated the number of players (1 vs 1, 2 vs 2, 3 vs 3, 4 vs 4 and 5 v 5) and modified pitch sizes (Football & Futsal: 5 x 10 m, 10 x 15 m & 15 x 20 m, Sepak Takraw: 2 x 10 m, 3 x 10 m & 5 x 10m). Passing and dribbling skills were measured using the Loughborough Soccer Passing Test (LSPT) and Slalom Dribbling Test (SDT) before and after the intervention. Both the tests measure the speed of execution, thus a lower numerical score indicates better performance. There were significant differences between the groups in passing skills ($t = 10.23$, $p < .05$) and dribbling skills ($t = 3.89$, $p < .05$) in post test. The EG showed better performance in passing (73.11 ± 6.89 sec) than the CG (92.37 ± 4.84 sec). The dribbling test yielded significant differences ($t = 3.89$, $p < .05$); with the EG posting better performances (25.55 ± 1.12 sec) than the CG ($26.76 \pm .83$ sec). SSG are modified games that replicate real game situations with lower intensities. In line with the constraints approach, skill acquisition is enhanced when task constraints and environmental constraints are manipulated to compensate the individual's constraints. Furthermore, SSG include decision making aspects in skill acquisition.

Keywords: Small sided games, futsal, passing, dribbling



ORAL ABSTRACT

THE PERCEIVED OF SPORT WEBSITES ATTRIBUTES ON SPORT CONSUMPTION BEHAVIOR

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ABSTRACT

This study is to investigate the usage sport websites that influence sport consumption behaviour. A sample of spectators was used to analyse the influence of information, interaction, design, fulfilment and system on consumers satisfaction. The result has shown that there is a significant relationship between information, interaction, design, fulfilment and system with consumers' satisfaction to using the sport website. Multiple regression analysis shows that to predict consumers satisfaction by information, interaction, design, fulfilment and system quality. This result show sport website attribute as predicted for 61% variance which is determining consumers, satisfaction. Based on this result, sport marketing strategies could be recommended to maximize the usage of sport websites and the revenue of sport industry.

Keywords: Consumption behaviour, sport website, spectator, satisfaction, sport management industry, sport marketing



ORAL ABSTRACT

**HEPATITIS B IN MALAYSIA: MODIFIED DETERMINANTS
ASSOCIATION WITH HIGH RISK BEHAVIOR**

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ABSTRACT

Background: Hepatitis B (HepB) is an upcoming public health concern in Malaysia yet little is known about the risk behaviour of this infection in the country. Such information is essential for designing effective strategies to control HepB infection. The aim of this study was to assess to identify the modifying factors associated with high risk behaviours in Malaysia. **Methods:** A community-based cross-sectional survey was conducted between January and May 2016 in Selangor state of Malaysia. A two-stage cluster random sampling design and face to face interview conducted. Logistic regression was used to estimate the modifying factors between groups. **Results:** A total of 761 households completed the interviews and were included in the final analysis. The factors associated with risk behavior were people who vaccinated, perceived susceptibility and perceived severity. Participants who had good perceived susceptibility were 1.897 times more likely to have a greater risk behavior (OR: 1.897, 95% CI: 1.146-3.139, $p < 0.05$). **Conclusions:** This study reveals risk behaviour has influence on perception of susceptibility and severity of HepB among households in Malaysia. This highlights the need of changing perception towards HepB through well-designed awareness programme targeting the potential groups to reduce hepatitis B virus transmission.

Keywords: Hepatitis B, knowledge, awareness, hepatitis B vaccination, Hepatitis B infection



ORAL ABSTRACT

**INCREASING *KATA* LEARNING MOTIVATION (STANCE) THROUGH
MASTERY LEARNING**

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ABSTRACT

In general, the purpose of this action research is to increase the motivation to learn *Kata* in Karate classes through mastery learning. In addition, this study was conducted to determine the increase in motivation, process and improvement of learning outcomes on student *Kata* Karate. This action research using qualitative approaches. Subjects in this study were students of the second semester of a regular classroom Coaching Education State University of Medan. This study was conducted with four sessions consisted of two cycles, each cycle of two meetings. To test increased motivation to learn words through the mastery learning karate courses increased motivation to learn kata through mastery learning in the first cycle showed that 29 (60.42%) students have been completed, and 19 (39.58%) students not complete yet. This means that for psychomotor aspects of learning first cycle is not complete yet in the classical 85% of students studying completed. therefore necessary repairs for the next cycle. From the results of the assessment showed that 43 (89.58%) students had been completed, and 5 (10.42%) students not complete yet. This means that for psychomotor aspects of the learning cycle has been completed in the classical II ie 95% of students completed. Based on these results it can be concluded that: (1) with a complete learning method (mastery learning) can increase student motivation to learn karate. (2) the process of learning in the classroom to be more active with increasing student motivation to learn that affect the learning outcomes of each student.

Keywords: Mastery learning styles, motivation, and learning outcomes *Kata* karate



ORAL ABSTRACT

EFFECTING FACTORS OF SPEED IN TAEKWONDO FIGHTERS

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ABSTRACT

Physical fitness is ability of the body to make adjustments (adaptation) to the physical deliverance given to it (from daily work) without causing excessive fatigue. There are some components of physical fitness that Taekwondo fighters require, but there is also a physical fitness component that strongly supports the performance of athletes while fighting in a match. One of the most important components of physical fitness when kyorugi athletes fighting is speed. Speed is very important in the impact of a punch or kick, maybe the difference is only a fraction of a second. However points or grades for Taekwondo can occur in just a fraction of a second. Therefore, speed is a key component that is very important to win the taekwondo kyorugi game. This article aims to develop the pattern of athlete training to get achievement in the international arena. The main components of physical fitness that strongly support the performance of kyorugi athletes need to be maximized in order to become benchmarks when preparing an exercise program.

Keywords: Taekwondo fighter, components of physical fitness, speed



ORAL ABSTRACT

**HOMOLOGOUS REPRODUCTION: EXPLAINING THE
UNDERREPRESENTATION OF WOMEN IN TOP LEADERSHIP
POSITION OF SPORT ORGANIZATIONS**

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ABSTRACT

Recent research showed that women’s representation in sport such as coaches, technical officials, managers and administrators has increased over the years of unrelenting advocacies and policy revisions in national and international sporting platforms. However, research also showed that in the top level of management in sport organizations women still lag behind with their male counterparts. The purpose of this study is to present an in-depth explanation to the persistent lacking presence of women in top leadership positions in sport organizations through a phenomenological investigation. From a purposive maximum variation sampling of seven participants, top women leaders in national sport organizations of Malaysia were interviewed with their experiences in a male dominated environment. Results revealed that access and treatment discrimination were evident occurrences in the organization. Such discriminatory practices were noted by sport scholars to result a homologous reproduction in identifying and selecting members in the executive board. Whereby, such persons (i.e., men) in power were likely to provide opportunity to similar images (i.e., men) thus, increase its proportion in the organization. Hence, negative consequences contributed to the persistent underrepresentation of women in the top leadership positions. Moreover, participants offered suggestions and strategies in overcoming such challenges in advancing opportunities and career development in sport leadership.

Keywords: Access discrimination, treatment discrimination, underrepresentation, women in sport leadership



ORAL ABSTRACT

ENHANCING TRADITIONAL SPORTS AND GAMES OF INDIGENOUS PEOPLE FOR SOCIAL INCLUSION AND IDENTIFICATION OF THEIR CULTURE

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ABSTRACT

Indigenous people have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and cultural expressions, as well as the manifestations of their indigenous traditional sports and games. However, the importance and benefits of participation in sports and games particularly in ethnic community has less been recognized in a variety of disciplines in urban areas. Hence, this research conducted in the ethnic group of Iligan City, Philippines, the “Higaonon” tribe, provides the field of traditional sports and games to explore the social and personal impact of these aspects to the wider community. The study will benefit the people in urban areas with increase knowledge and understanding on the indigenous peoples’ culture and make visible the taken-for-granted assumptions about their traditional sports and games. This research conceptualized and employed two methods, observation and interview among the Higaonon children and elders in the research areas. During the conduct of the study, the respondents played their traditional games and sports and shared stories related to their identities and the challenges they face. The elders expressed their sentiments and aspirations that someday their indigenous sports and games will be recognized specially in schools. Hence, it is recommended that identities on their traditional games and sports should be known to other communities, and be introduced in schools during their physical education classes. In this way, traditional sports and games are not only helping tribal people to get physically fit but also inspiring older members of their community for their culture to be recognized in the wider community.

Keywords: Indigenous games & sports, ethnic community, identification of culture, social inclusion



ORAL ABSTRACT

**SPORT PERFORMANCE AND IMPLICIT BELIEFS AMONG
ATHLETES OF ILIGAN CITY NATIONAL HIGH SCHOOL**

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ABSTRACT

This study aims to answer how the athletes' sports performance is influenced by the way they think and feel about themselves. The findings and results of this study profoundly looked into the beliefs of the high school athletes in relation to their respective sports performances. The findings and results of this study will then be used as basis for suggestions on the improvement of the respondents' sports performance by considering their implicit beliefs, both incremental and entity. This study utilized the descriptive-correlation method of research. This method also involved comparing the respondents' implicit beliefs in their sports performances, vis-à-vis their corresponding age, body mass index, health status, annual family income, self-perception, peer support, parental support, socio-economic status, perceived teacher effectiveness, perceived school program effectiveness, community physical fitness program. A test on comparative-correlation was also conducted to explore the relationship between implicit beliefs and sports performance of the respondents. A random sampling of 400 athletes: 200 respondents from individual sports, 24 respondents from dual sports and 176 respondents from team sports of Iligan City National High School were the respondents of this study. Based on the findings, the respondents whose implicit beliefs are incremental have significantly better sports performances than respondents whose implicit beliefs are entity. Respondents whose implicit belief is incremental have significantly higher perceived school program effectiveness, perceived teacher factor effectiveness, and community fitness program than respondents whose implicit beliefs are entity.

Keywords: Athlete, implicit beliefs, sports performance



ORAL ABSTRACT

**PERBANDINGAN TAHAP KEKUATAN MENTAL ANTARA ATLET
OLAHRAGA NEGERI SEMBILAN DENGAN ATLET OLAHRAGA
PARALIMPIK NEGERI SEMBILAN**

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ABSTRAK

Dalam konteks mendalami kekuatan mental dalam kalangan atlet sukan olahraga, kajian ini bertujuan mengenalpasti tahap kekuatan mental atlet olahraga Negeri Sembilan serta atlet olahraga paralimpik Negeri Sembilan dan membandingkan tahap kekuatan mental antara atlet olahraga normal dengan atlet olahraga paralimpik. Kajian ini merupakan kajian deskriptif yang menggunakan kaedah persampelan bertujuan. Responden kajian ini secara keseluruhan terdiri daripada 30 atlet olahraga iaitu masing-masing 15 atlet olahraga normal dan 15 atlet olahraga paralimpik. Soal selidik Sport Mental Toughness Questionnaire (SMTQ) yang dibangunkan oleh Sheard pada tahun 2009 telah diadaptasikan dan digunakan sebagai instrumen kajian untuk mengukur tahap kekuatan mental berdasarkan tiga sub skala iaitu keyakinan, ketetapan dan kawalan. Kajian mendapati bahawa kedua-dua kumpulan atlet olahraga dan atlet olahraga paralimpik berada pada tahap kekuatan mental yang sama iaitu tahap sederhana. Walau bagaimanapun, bila dikaji dengan lebih teliti didapati bahawa min yang dilaporkan oleh atlet olahraga paralimpik adalah lebih tinggi berbanding dengan atlet olahraga iaitu masing-masing 41.07 ± 6.48 berbanding 35.6 ± 3.96 . Perbezaan ini juga didapati signifikan di antara kedua-dua kumpulan ini dengan nilai $t(28) = -2.78$, $p = .009$. Tahap kekuatan mental dalam kalangan atlet olahraga paralimpik yang lebih baik khususnya dari segi aspek kawalan wajar diterokai dengan lebih mendalam bagi membantu meningkatkan tahap kekuatan mental dalam kalangan atlet olahraga di Negeri Sembilan.

Kata Kunci: Kekuatan mental, atlet olahraga, atlet olahraga paralimpik



ORAL ABSTRACT

IS THE WATER-BASED EXERCISE BETTER IN PREVENTING ANKLE INJURIES?

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ABSTRACT

Serious knee and ankle injuries continue to be a strong concern to athletes of many sports. The frequency of ankle injuries in sport is paramount. The sports which involve the lower limbs usually will cause injuries around ankle and leading to ankle instability. Moreover, stability plays an important role in preventing ankle injury for an athlete. Then, the aim of this study was to know the influence of different environments exercise like water-based and land-based effects on stability in athlete collegiate students of 18 to 25 years old, who are having habit of participating in sports regularly in University Pendidikan Sultan Idris, Malaysia. A total of 20 amateur athletes who had ankle sprain during their sporting activities were recruited for this study and randomly assigned in two groups; water-based (BMI $23.08 \pm 3.17 \text{ kg.m}^{-2}$) and land-based (BMI $23.94 \pm 4.86 \text{ kg.m}^{-2}$). The exercises session were carried out twice per week, 45 minutes to an hour for 8 weeks. Both groups underwent eight weeks of training for the aquatic exercises and land exercises. The changes (by pre and post-test) in dynamic stability and balance were measured for both group via Star Excursion Balance Test (SETB) for the injured legs. The results shows pre and post means differences of SETB test of water and land-based exercises groups were -5.26 ± 1.5 and -3.77 ± 1.94 cm, respectively. The post test results of both groups showed significant improvement in both groups $p < 0.00$. This study was concluded that water and land-based exercises are useful in preventing ankle injuries, but water-based exercises are more benefits compare to land-based exercises.

Keywords: Ankle injuries, water-based exercise, balance, dynamic stability, athlete



ORAL ABSTRACT

KESAN LATIHAN *MINDFULNESS ACCEPTANCE COMMITMENT-PHYSICAL* (MAC-P) KE ATAS PRESTASI AEROBIK, KEKUATAN MENTAL DAN EFIKASI KENDIRI FIZIKAL PELAJAR JURUSAN SAINS KEJURULATIHAN

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ABSTRAK

Kajian bertujuan menguji kesan latihan *Mindfulness Acceptance Commitment-Physical* (MAC-P) ke atas prestasi aerobik, kekuatan mental, dan efikasi sendiri fizikal pelajar jurusan Sains Kejurulatihan. MAC-P diadaptasi daripada pendekatan alternatif *Mindfulness Acceptance Commitment* (MAC) yang mengandungi elemen *mindfulness*, penerimaan dan komitmen. MAC percaya bahawa prestasi dapat ditingkatkan dengan menerima segala bentuk pemikiran dan emosi negatif secara terbuka, tanpa penilaian, dan hanya perlu meneruskan komitmen terhadap tugas yang lebih bermakna. Modul MAC-P dibina khusus dalam kajian ini ke arah peningkatan prestasi aerobik berdasarkan kerangka teoretikal sedia ada. Instrumen lain adalah ujian *Bleep*, *Mental Toughness Questionnaire* (MTQ), dan skala efikasi sendiri fizikal. Kajian menggunakan reka bentuk *Randomized Pretest-Posttest Control Group*. Subjek dibahagikan kepada kumpulan MAC-P (n = 21), PST (n = 21) dan kawalan (n = 21). Pelaksanaan intervensi adalah selama tujuh minggu, mengandungi 14 sesi, dua jam seminggu. *Analysis of Covariance* (ANCOVA) menunjukkan terdapat kesan intervensi yang signifikan ke atas prestasi pasca VO₂max, kekuatan mental, dan efikasi sendiri fizikal. Kumpulan MAC-P menunjukkan skor pasca VO₂max, dan efikasi sendiri fizikal yang tertinggi diikuti dengan kumpulan PST dan kawalan. Manakala kumpulan PST memperoleh skor pasca kekuatan mental yang tertinggi berbanding kumpulan MAC-P dan kawalan. Kesimpulannya, latihan MAC-P lebih memberi kesan terhadap prestasi aerobik dan aspek efikasi sendiri fizikal berbanding PST. Pendekatan MAC-P terbukti berupaya menjadi pendekatan alternatif selain PST ke arah peningkatan prestasi terutama dalam aktiviti sukan yang berlandaskan daya tahan aerobik.

Kata Kunci: Mindfulness Acceptance Commitment (MAC), Mindfulness Acceptance Commitment-Physical (MAC-P), Psychological Skill Training (PST), aerobik, efikasi sendiri fizikal



ORAL ABSTRACT

**HEALTH AND LIFESTYLE OF MUSLIM STUDENTS AND THEIR
ACADEMIC PERFORMANCE DURING THE HOLY MONTH OF
RAMADAN**

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ABSTRACT

This study aimed to know the Health and Lifestyle of Muslim Students and their Academic Performance during the Holy Month of Ramadan. There were 150 Muslim students being the respondents of this study and they were selected from different colleges in Mindanao State University-Iligan Institute of Technology from 2nd year to 4th year during the school year 2017-2018. This study utilized the Descriptive Design with random sampling and questionnaires to determine the Health and Lifestyle of Muslim Students and their Academic Performance during the Holy Month of Ramadan. Results showed that eating habits (Suhoor and Iftar meals), most of the respondents eat one to three cups of rice, one to two servings of ripened fruits, vegetable soup with fish, chicken or beef; and most of them drink one to five glasses of water during Suhoor and Iftar meals. In terms of the respondents' personal hygiene, most of them took a bath after Suboh and brushed their teeth after Suhoor and Iftar meals. In terms of the respondents' physical health, most of them did not exercise daily, did not gained weight after the month of Ramadan and did not suffer from headache or dizziness, bowel syndrome and vomiting. In terms of the respondents' sleeping habits, most of them slept in a state of dhikr (remembrance of Allah SWT), slept six to eight hours at night, took a nap after Luhoor prayer, slept with their head raised on a fewpillows and slept in the right position facing the Qiblah. In terms of the respondents' behaviors, most of the students came to class on time and still managed to pray even if they're at school. In terms of the respondents' academic performance, most of them still worked with their group mates even if they're hungry and still did well in exams. In terms of the respondents' reasons for fasting, most of them fast since it is one of the Five Pillars of Islam. In terms of the respondents' religious obligations, most of them prayed five times daily, prayed taraweeh after eating Iftar meal, performed Sunnah prayers and prayed in the last ten nights of Ramadan for Laylatul-Qadr. Furthermore, it was found out that there is a significant difference between the respondent's health habits, lifestyle, and religious obligations to their academic performance.

Keywords: Ramadan, health habits, lifestyle, academic performance, religious obligations



ORAL ABSTRACT

**COMPETENCY STANDARD FOR GRADUATES OF SPORT SCIENCE
DEPARTMENT BASED ON STAKEHOLDER**

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ABSTRACT

The development of Sport Science Study Program needs institution partner and stakeholder to improve quality and to equalize human resource in sports field in all sectors. This research purpose is to do compliance analysis among competency of Sport Science Study Program Graduates with standard needs of stakeholder competency. The approach used in this research is qualitative descriptive. The focus of this research is to do competency needs analysis among graduates with standard needs of stakeholder competency. This research subjects are institution partners which are government and non-government institution. The data have been collected by using interview techniques. Data analysis techniques consist of 1) data reduction 2) data model (data display) 3) verification/conclusion. The research results are 1) Students or graduates from Sport Science Study Program have insight and capacity about understanding the work mechanism well 2) the graduates could apply their knowledge in work well 3) the graduates are able to think critically on problems at work well 4) Has compatibility competency with institution area 5) the graduates have opportunity and chance to meet the needs of sport workers. The writer conclude that analysis shows there is compatibility among graduate's competence with competency standard of stakeholder.

Keywords: Competency, sport science study program, stakeholder



ORAL ABSTRACT

LEARNING STYLES AND STUDENTS PERFORMANCE IN RHYTHMIC ACTIVITIES

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ABSTRACT

This study was conducted to determine which learning style can produce good academic performance. Utilizing two thousand freshmen college students taking up rhythmic activities course at Central Mindanao University. It aimed at determining the learning style and students' performance and the significant difference of students' performance according to gender and ethnicity and assess whether the learning style possess significant influence on the students' performance. The VARK learning style questionnaire was used, adopted, modified and pilot-tested with the result in Cronbach's alpha of 0.946 that is reliable. Frequency counts, percentages, weighted mean and standard deviation, Pearson product moment correlation were employed. test of significance was set at 0.05 and 0.01 levels. The results revealed that auditory and read/write learning styles were often preferred and there is significant difference on the performance of students between male and female by which females perform better than males. However, there is no significant difference on the performance of students in rhythmic activities when grouped according to their ethnicity. The results suggest that the auditory and read/write learning styles could produce good academic performance.

Keywords: Learning styles, performance, rhythmic activities



ABSTRACT FOR POSTER PRESENTATION



POSTER ABSTRACT

NUTRITIONAL STATUS OF YOUNG ATLET IN CENTRAL JAVA PROVINCE

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ABSTRACT

Background: Adequate food intake and regular exercise are required by athletes to improve achievement, influencing factors such as nutrition knowledge and nutrition athletes intake (energy, protein, fat and nutritional status Method: This study is descriptive by using observational or observational methods, carried out in the Center for Education and Exercise Sports Student (PPLOP) of Central Java Province. The study was conducted from June to July 2017. The population in this study were all athletes registered in PPLOP of Central Java Province. The sample in this research is all athletes who actively practice in PPLOP of Central Java Province as many as 230 people. Nutrition knowledge data obtained through interviews with respondents. Data Intake of nutrients obtained through food recall 24 hours done 2 (two) times. Nutritional status data was obtained by performing anthropometric measurements. Data processing of nutrient intake is done by technique computerization with Nutrisurvey program Outcome: Level of knowledge of nutrition athletes in PPLOP Province Central Java is quite good as much as 60%, 30% of which is quite enough and 10% are classified as less. The nutrient intake of athletes in PPLOP of Central Java province shows that 70% with energy intake good and 25% enough energy intake and 5% less energy intake, 50% good protein intake and 45% enough and 5% less, fat intake 26% is more, 55% is good and 9% is classified as less, while nutritional status of athletes in PPLOP of Central Java Province based on IMT, hence normal nutritional status 88%, 5% fat and 7% thin. Conclusion: caloric adequacy of PPLOP athletes Central Java Province is good but there are still lacking, deficiency is due to the needs of each athlete different, but the supply of calorie intake is generalized, therefore there is still a need for improvement varied eating menu settings, in addition to meeting the adequacy of calories necessary Calorie needs calculations so that between the needs with sufficiency can be balanced.

Keywords: Energy, protein, fat, nutritional status



POSTER ABSTRACT

**THE DEVELOPMENT OF CHAIR BALL SKILLS IN PASSING A BALL
WITH TWO HANDS OVERHEAD BY USING TRAINING DRILLS FOR
PRATHOMSUKSA 3 STUDENTS**

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ABSTRACT

The purpose of this research was to compare Prathomsuksa 3 students' skill achievement in passing a ball with two hands overhead pre and post training by using training drills. The population is a sample of Prathomsuksa 3/2 students, Kasetsart University Laboratory School Kamphaengsaen Campus Educational Research and Development Center. The subject were 16 male students and 22 female students, totaling 38 students by Simple Random Sampling. The results showed that post training by using two hands overhead training drills, students had a higher score than pre training statistically significant at the .05 level. The skills achievement of students have increased post training with the training drills. The mean score pre training with the training drills was $\bar{x} = 4.89$ and $S.D. = 1.226$. The mean score post training with the training drills was $\bar{x} = 7.92$ and $S.D. = 0.673$.

Keywords: Two-handed overhead pass skill



POSTER ABSTRACT

TRAINING TOOLS USAGE FOR EFFECTIVE DRILL PETANQUE SKILLS

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ABSTRACT

This study is to investigate the teaching aids for effective petanque shooting skill drill amongst co-curriculum university students. The respondent of this study were 15 students' control group and 15 students' experimental group. The training tool for effective petanque skill drill is formed and tested repeatedly to obtain validity and reliability values. Pre-test and post-test are done at a distance of 6 meters to 9 meters for shooting skills drill. The data were analyzed through Statistical Package for the Social Sciences (SPSS version 20.00). The data were analyzed with mean, standard deviation and t-test. The experimental group using teaching tool is better performed shooting target and significantly compared to the control group. This result suggests that teaching tool petanque lob for co-curriculum university students to enhancing shooting skills and could offer manual procedure for shooting skill. Accordingly, if the petanque teachers, coaches, sports educators apply this tool in teaching petanque shooting skill, it shall be beneficial to beginners to improve their petanque skill and to participate inter-varsity games. Also, suggested for future research using web-based e-learning and video analysis new players performance petanque skills.

Keywords: Shooting skills, teaching tools, teachers, physical education, petanque, student



POSTER ABSTRACT**KESAN LATIHAN PLIOMETRIK KE ATAS PRESTASI LOMPATAN
DALAM KALANGAN ATLET LOMPAT JAUH**

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Kajian ini bertujuan untuk mengenal pasti keberkesanan program latihan pliometrik terhadap prestasi lompatan dalam kalangan atlet lelaki berumur 12 tahun. Mereka dibahagikan kepada kumpulan kawalan ($n = 12$) dan kumpulan rawatan ($n = 12$). Program latihan pliometrik dijalankan sebanyak dua (2) kali seminggu selama enam (6) minggu. Ujian prestasi lompatan, ujian lompat menegak, ujian lompat jauh berdiri dan ujian *squat* dilaksanakan semasa ujian pra dan ujian pasca. Data dianalisis dengan menggunakan ujian ANOVA dua hala untuk mengenal pasti perbezaan antara kumpulan, masa ujian dan interaksi antara kumpulan dan masa ujian. Keputusan ujian menunjukkan terdapat perbezaan yang signifikan bagi jarak lompatan antara kumpulan ($p < 0.01$) dan masa ujian ($p < 0.01$). Walau bagaimanapun tidak terdapat perbezaan yang signifikan antara kumpulan dan masa ujian pada pencapaian prestasi lompat menegak, lompat jauh berdiri dan ujian *squat*. Kesimpulannya latihan pliometrik menunjukkan peningkatan prestasi bagi jarak lompatan dalam kalangan responden. Implikasinya, latihan pliometrik yang lebih terancang dengan bebanan yang sesuai untuk kategori umur menengah rendah perlu dilaksanakan sebagai langkah penambahbaikan bagi meningkatkan prestasi yang lebih cemerlang.

Kata Kunci: Latihan pliometrik, prestasi lompatan, atlet lompat jauh



POSTER ABSTRACT

A SINGLE BOUT OF CYCLING EXERCISE EFFECTS ON SHORT TERM MEMORY

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ABSTRACT

Exercise plays a role in enhancing neurogenesis and brain plasticity. Actively involved in a musculoskeletal and cardiovascular activities at moderate intensity influences brain systems that involve in working memory processes. The aim of this study was to investigate the effect of memorising before and after a single bout exercise on short term memory. Methods. A total of 16 female university students with mean age of 23.63 ± 1.46 year old were involved in this study. Participants completed free recall test twice at pre and post-exercise. Exercise session involved a single bout cycling ergometer at 50 watts while maintaining 60 rpm for 30 minutes and two five minutes periods of warm up and cool down at 20 watts. Results. Percentage of words recalled in free recall test post-exercise did not improved compared to pre-exercise. Percentage of immediate recency words recalled post-exercise (51.25 ± 21.87 %) is higher than pre-exercise (48.75 ± 21.87 %) but no significant difference compared to pre-exercise ($p=0.751$). The percentage of words recalled post-exercise was correlated with heart rate during exercise ($r = -0.59$, $p=0.015$). Conclusion. Participants with higher heart rate during exercise had a lower percentage of words recalled at post compared to pre-exercise. However, a single bout of cycling exercise did not improve short term memory.

Keywords: Cycling exercise; short term memory



POSTER ABSTRACT**USING STOCHASTIC RESONANCE VIBRATION AS PART OF
REHABILITATION PROGRAMME FOR RECURRENT LOW BACK
PAIN TREATMENT: A CASE STUDY**Jad Adrian Washif^{1*}, Jorg Teichmann²¹ Sports Performance Division, National Sports Institute of Malaysia² Sports Medicine Division, National Sports Institute of Malaysiajad_adrianwashif@yahoo.com**ABSTRACT**

Low back pain (LBP) is a common disabling health problem and causes decreased spine proprioception. Vibration has been used as a treatment of LBP, but vibration with Stochastic Resonance (SRV) has not been thoroughly tested. SRV can influence behavioural responses to weak sensory inputs and motor nerve. **PURPOSE:** This study examined the application of SRV as LBP therapy. **SUBJECT:** A healthy, resistance-trained 32-year-old man presented no history of serious LBP in the past 5 years, except an intermittent non-specific mild discomfort. His back stress becomes unbearable after one of his resistance training sessions. A clinical examination revealed no suspicion of a serious spinal abnormality. The pain relief and anti-inflammatory non-steroid drug had helped to ease the discomfort. However, 4 weeks later, the pain had developed at a similar intensity. SRV then incorporated in his rehabilitation programme (RP). **METHODS:** The RP consisted of SRV therapy (4-5sets x 90s, 30s rest interval), along with strengthening exercises and musculoskeletal release (RP-SRV). SRV therapy was applied in lying and supine position. Self-reporting was acquired for 4 months post-rehabilitation period. **RESULTS:** Pain intensity ranged from 5 (distracting) to 9 (severe) of the 11-point scale of Numeric Rating Scale (NRS-11) prior to the first RP-SRV. LBP reduced considerably after 2 RP sessions and perceived normal after 4 sessions (NRS-11: 0-1). The Oswestry Disability Index was 66.7% (interpreted as “crippled”) prior to RP-SRV, and reduced to 15.6% and 6.7% after 4 and 7 RP-SRV sessions (after 2-3 weeks), respectively (“minimal”). Subsequently, a progressive resistance training adhered, and various free-weight exercises were performed up to 1.0 and 1.2 times relative to bodyweight after 2 and 4 months, respectively, with no complaint of LBP, except a mild discomfort felt at times from occupational activity. **CONCLUSION:** RP-SRV has potential benefits to recede recurrent severe-distracting LBP. However, further studies are needed to better understand the current findings and its mechanisms.

Keywords: Injury, noise, nonlinear system, sensory neuron, strength



POSTER ABSTRACT

**THE EFFECT OF USING AUDIO VISUAL AIDS ON LEARNING
ACHIEVEMENT IN THAI SWORD TEACHING AMONG GRADE 7
STUDENTS**

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ABSTRACT

Audio visual aids are important in education system. Audio visual aids are those devices which are used in classrooms to encourage teaching learning process and make it easier and interesting. Audio -visual aids are the best tool for making teaching effective and the best dissemination of knowledge .So there is no doubt that technical devices have greater impact and dynamic informative system. The purpose of this research were 1) to compare the learning achievement of Grade 7 students between before and after learning by using audio visual aids in Thai Sword Promnang - Promyuen teaching and 2) to determine the satisfaction of Grade 7 students to the audio visual aids in Thai Sword teaching. The subject were 39 students in Grade 7 in the second semester of academic year 2016 obtained by purposive sampling techniques. The instruments included 1) learning management plan 2) dance audio visual aids 3) Thai sword and Promnang - Promyuen skill test and 4) the students' satisfaction questionnaire. The learning period 6 weeks, 3 day a week. The data were analyzed by percentage, mean, standard deviation and dependent sample t-test. The results found that learning achievement in Thai Sword Promnang - Promyuen were higher than those before the learning at the .05. The students most satisfied with using of audio visual aids in Thai Sword teaching.

Keywords: Learning achievement, audio visual aids, Thai sword



POSTER ABSTRACT

THE DEVELOPMENT OF HANDBALL SKILLS BY USING ONE HAND OVERHEAD TRAINING DRILLS FOR PRIMARY SCHOOL STUDENTS

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ABSTRACT

The purpose of this research were to 1) to develop handball skills by an one hand overhead training drills 2) to compare the achievement of one-handed overhead skills pre and post training and 3) to study students' satisfaction on one hand overhead training drills. The study was conducted in the second semester of the second semester of the academic year 2560, with a sample total of 39 primary school students from purposive sampling. The instruments consisted of one hand overhand lesson plan, an one hand overhead training drills, handball skill test and satisfaction questionnaire. The training period 6 weeks, each week the samples were trained 3 day a week for 50 minutes session. The pre-experimental design was one-group pretest-posttest design. The data were analyzed by using percentage, mean and SD and t-test. The findings were as follows: 1) the handball skill mean score using an one hand overhead training drills of pre training were higher than post training significantly ($P < .05$) and after 6 week, student s satisfaction was high mean score.

Keywords: Handball skills, one hand overhead training drills, primary school students



POSTER ABSTRACT

THE DEVELOPMENT OF BASKETBALL DRIBBLING SKILLS BY USING THE BASKETBALL DRIBBLING SKILLS PRACTICES SETS FOR MATTAYOMSUKSA 3 STUDENTS, KASETSART UNIVERSITY LABORATORY SCHOOL KAMPHAENGAEN CAMPUS EDUCATIONAL RESEARCH AND DEVELOPMENT CENTER

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ABSTRACT

The results of the study were 1) to develop the efficiency of basketball dribbling drills, 2) to compare the learning achievement of secondary school students pre and post training program and 3) to compare the learning achievement between the groups training by the basketball dribbling drills with the non-practicing. To practice basketball performance skill of students in upper secondary school Demonstration School of Kasetsart University Center for Educational Research and Development The target audience of the research is 40 secondary school students on the first semester of academic year 2016. Research tools include: 1) basketball dribbling drills including 4 drills and 2) Basketball skill test. The statistic procedure including the efficiency of the drills set was 80/80 and the difference between the mean scores pre and post the test was analyzed by using the dependent sample t-test. The results of study were as follows; 1) The performance of basketball dribbling drills is based on objective criteria, $E1/E2=79.17/81.66$ 2) post 4 weeks, The learning achievement scores of the students was higher than pre significantly. 3) The achievement among the group trained by basketball dribbling drills was significantly different among the non-practicing students.

Keywords: Basketball dribbling drills, secondary school students



POSTER ABSTRACT

CHANGE IN STEP LENGTH AND STEP RATE WITH RUNNING VELOCITY

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ABSTRACT

During running, kinematics variables such as step length and step rates influence running speed. Runner travelling at a slow pace tend to increase velocity primarily increasing step length. At faster running speed, recreational runners rely more on increasing step frequency to increase velocity. The purpose of this experiment is to demonstrate changes in step length and step frequency at different walking and running speeds. The subject run/walks through the 50m course three times at three different speeds (slow, medium, fast). All subjects showed the positive trend line in step length for walking and running with the increase of velocity. All subjects show the positive trend line for the step rate in the change of velocity from walking to running. The data showed that when the step rate and the step length increase, the velocity in walking will increase. The data also showed that there were a slight change in step length and step rate for each subject to reach the maximum velocity in running. For the conclusion, at the higher velocity, subject tend to increase their step rate increasingly compare to the step length due to less energy consumption and the running economics. However, runners that want to increase their running in terms of step rate need to train their neuromuscular.

Keywords: Kinematics, running velocity



POSTER ABSTRACT

**EFFECT OF THE TWO-HANDED BOUND PASS TRAINING DRILLS
ON THE PERFORMANCE OF CHAIR BALL SKILL FOR ELEMENTARY
SCHOOL STUDENTS**

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ABSTRACT

This research aim to compare two-handed bound pass skill of elementary school students before study and after training. The subject was a total of 39 elementary school students at Kasetsart University Laboratory School Center for Educational Research and Development, selected by purposive sampling during the second semester of the second semester of the academic year 2560, The study model was one-group pretest-posttest design. The training period was 6 weeks, 3 day per week, a 30-45 minutes session. The research instrument consisted of 2 items: (1) The two-handed bound pass training drills (2) The two-handed bound pass skill tests. The data were analyzed by using percentage, mean, standard deviations, and dependent t-test. The finding was shown that after 6 weeks, the mean of two-handed bound pass skill improved than before were different significantly. The difference of mean before and after using the two-handed bound pass training drills, before using the two-handed bound pass training drills, the mean score = 5.36 /S.D. = .584 and after using the two -handed bound pass training drills,the mean score = 7.18 / S.D. = .683.

Keywords: Two-handed bound pass training drills, chair ball, elementary school students

**POSTER ABSTRACT****IS PLAYING TRADITIONAL GAMES IN PHYSICAL EDUCATION AN EFFECTIVE METHOD TO PROMOTE MODERATE-VIGOROUS PHYSICAL ACTIVITY AMONG ADOLESCENTS? – A STUDY PROTOCOL FOR MIXED-METHOD CROSSOVER DESIGN**Arif Azlan¹, Nor Farah Mohamad Fauzi², Ruzita Abd Talib³^{1,3} Nutritional Sciences Program, Centre for Community Health, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpur² Occupational Therapy Program, Centre for Community Health, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpurarifazlan2612@gmail.com**ABSTRACT**

Low youth physical activity (PA) is a global public health concern. According to recent nationwide studies, 80% of Malaysian adolescents aged 13 - 17 years did not meet the recommendation of 60-min of moderate-vigorous physical activity (MVPA) everyday, and almost 25% are overweight/obese. Physical and Health education (PE) lesson is a suitable setting to increase PA opportunities among adolescents during school hours. However, most traditional PE classes yield between 10-40% of class time in MVPA, below the current recommendation of 50%. Introducing traditional games during PE lessons may be a fun, viable option to promote MVPA, in addition to improving gross motor fitness, especially for those who are less inclined in sports. Therefore, this study aims to assess the effectiveness of playing traditional games during PE lessons as a method to increase MVPA among school adolescents. This study will utilize a mixed-method design consisting of qualitative (Phase One) and quantitative (Phase Two) approaches with the following aims: (1) to explore student's and teacher's perception regarding playing traditional games in PE lessons; and (2) to determine MVPA during PE lessons incorporated with traditional games. Phase One involves focus group discussion with Form One students and PE teachers in selected schools to explore suitable methods of incorporating traditional games in PE lessons. Findings from Phase One will help us to design a traditional games module which will be used in Phase Two during a PE lessons, for four consecutive weeks. Primary outcome include measurements of MVPA using accelerometry. Comparison will be made between MVPA in PE lessons incorporated with traditional games and regular PE lessons in the same subjects using a crossover design. The findings of this study will determine the effectiveness of including traditional games in PE lessons by addressing student's and teacher's need as an alternative and a sustainable method in increasing MVPA among adolescents during school hours.

Keywords: MVPA, physical education, traditional games, intervention



POSTER ABSTRACT

EFFECTING FACTORS OF SPEED IN TAEKWONDO FIGHTERS

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ABSTRACT

Exercise is one alternative that can be used as a tool for the formation of human character. Sport with the slogans sport for all, is a strategic first step towards the formation of character. The formation of character in addition to the basis of national culture is also colored by the culture and special characteristics of the sport. Therefore, to lift the image of Indonesia in the eyes of the world then one way is to build the greatness of Indonesia again: build the sport. With exercise, many positive characters can be formed in the sport's behavior. Through exercise, one will have responsibility, respect and caring with others. The values of perseverance, honesty and courage can also be obtained from sports activities and certainly there are many others. It is also the first step to re-position the sport in character formation. Character building program can be through sport, one of them by doing gateball sport. Gateball is a type of sport using a stick sticker, and is played by 2 (two) teams facing each other. The current role of gateball is getting bigger, gateball can be a lifelong source of happiness for people of all ages. Sport gateball done by all the time required in one game 30 minutes. Gateball sports include a simple sport, but it is a great benefit for character building. By doing sports gateball can bring up a positive character for the participants.

Keywords: Character, sport, gateball