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June 14–17, 2010 – Jyväskylä, Finland

Abstracts

Parallel Sessions

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Oral**Physical activity intervention and Sport for All****Phys Act Interv-1****The effects of the Transtheoretical Model based on Wellness Coaching on physical activity and well-being at work in a corporate setting**Aura Ossi¹, Valtakoski Topi²(Excenta Ltd¹, Excenta Oy², Finland)

To enhance physical activity and well-being at work, a Wellness Coaching project for one year was launched in a company of 430 employees. Based on the Transtheoretical Model (TTM) (Prochaska, DiClemente 1982), personal support for employees was provided by wellness coaches. Health Risk Assessment (HRA) was used to divide employees to intervention and control groups, as well as to analyze the changes in physical activity habits and health and wellness parameters.

335 employees (78%) answered voluntarily on HRA, and according to the findings, employees were divided into intervention (200) and control groups (135). In the intervention group all employees got a personal wellness coach, who supported their personal goals in personal meetings every three months, and by telephone or SMS messages every two weeks during the one-year project. To facilitate the coaches' task, employees' readiness for change was evaluated according to TTM principles in HRA in several areas ranging from increasing physical activity to weight loss, stress coping and general energy in life. The level of physical activity (PA) was determined as a percentage of employees to reach the criteria of HEPA (see Aura & Ahonen 2004, Abstracts Book of the 10th World Sport for All Congress in Rome).

The main finding of this study was a clear increase in the PA level of the intervention group, from 46% to 54% ($p < 0,05$). In the control group, the activity level remained the same (54% vs 56%, ns). It was interesting that employees with different personal wellness goals increased their PA differently; employees with physical wellness goals (physical activity and weight loss) increased their PA from 45% to 57%, $p < 0,01$, while employees with mental wellness goals (stress coping and general energy in life) increased their PA from 30% to 40%, $p < 0,05$. On the other hand, the increase in PA was associated with development of several wellness parameters. In the group with physical wellness goals, the increase of PA was associated with increased perceived health, decreased shoulder and back pain, better quality of sleep and a lower level of perceived stress. In the group with mental wellness goals, the increase of PA was associated only with decreased problems to carry on routine work. No changes in any wellness parameters were found in the control group.

It can be concluded that a properly implemented Wellness Coaching programme is an effective way to enhance PA in a corporate setting. Thorough inner communica-

tion is a basis to reach employees to answer HRA and thus be involved in Wellness Coaching. Strengthening of personal goals will support enhancing PA and through it improving wellness. Clear goals like physical activity and weight loss will probably be related to better results than more abstract goals like stress coping and energy in life. In this study, employees with physical goals had better development in mental wellness parameters compared to those employees with mental goals. To find out an effective and financially capable way to support employees' physical activity in the long run, further studies are needed.

Keywords: well-being at work, wellness coaching, corporate setting, health, Transtheoretical Model

Phys Act Interv-2**Quality seal SPORT PRO GESUNDHEIT (Sport for Health) celebrates its 10th anniversary**

Tzschoppe Petra

(German Olympic Sports Confederation, University of Leipzig, Germany)

The Quality Seal SPORT PRO GESUNDHEIT is a label for courses of health enhancing physical activity in sports clubs, released and awarded by the Germany Sports Confederation in cooperation with the German Medical Association. It stands for a high-quality, effective and nation-wide preventive exercise programme offered by sports clubs. The ultimate aim is a long-term development of a healthy lifestyle, of which exercise and sport are an accepted and important part. In 2000 it was launched in cooperation with the German Medical Association and celebrates this year its 10th anniversary.

The aim of the Quality Seal is to establish quality-tested, cost-effective and socially compatible nationwide primary preventive offerings. It primarily addresses those who do not exercise and also includes people with poor health prospects. For all sectors there are programmes for certain target groups, e.g. courses for children with underdeveloped motor function. To be awarded with the Quality Seal of the Sports Confederations, the following special criteria have been developed and have to be fulfilled by the sport clubs:

- target group-oriented offerings
- uniform organizational structure
- supported by quality management
- qualified trainers
- preventive health check-up
- sports club as active health care partners

Also an extensive system of quality management has been developed by the German Sports Confederation in collaboration with the different federations and with

the support of quality management expert to improve the quality of the SPORT PRO GESUNDHEIT courses. Health insurance companies in Germany are willing to bear a part of the expenses of the courses for their members. The financial support meets about 80 % of the costs. All of the 16 Federal Sports Confederations take part in this programme. Besides these Federations, the German Gymnastic Federation (Deutscher Turner-Bund), the German Swimming Federation (Deutscher Schwimm-Verband), the German Federation of Table Tennis (Deutscher Tischtennis-Bund), the German Life Saving Federation (Deutsche Lebensrettungs-Gesellschaft), the German Karate Federation, the German Aikido Federation (Deutscher Aikido-Bund) and the German Equestrian Federation also participate in SPORT PRO GESUNDEIT. Now the Quality Seal SPORT PRO GESUNDHEIT celebrates its 10th anniversary. The development of the Quality Seal in the last 10 years is magnificent. It is being implemented nationwide. Up to now, about 18.000 labels are awarded to sport clubs all over Germany and there are still a lot of applications for the label SPORT PRO GESUNDHEIT. In the German sport system there are about 29.000 trainers who are qualified to lead courses within this Quality Seal, and take regularly part in training in health enhancing physical activity. SPORT PRO GESUNDHEIT is a high-quality and cost-effective system with ongoing development.

Keywords: sport, prevention, health

Phys Act Interv-3

A minimum of 7 hours of activity per week – a political and practical case from Denmark

Roulund Susan

(National Olympic Committee and Sports Confederation of Denmark, Denmark)

As in many other countries, there is a focus in Denmark on healthy living and the benefits the society would get if the population was more active in doing sports and other activities. In Denmark, most children have school and school related activities until 4 pm and after that they often do sports in clubs organised mainly by volunteers. During a school week they typically practice 2 to 3 hours of sports.

84% of all children do sports on a regular basis outside school, but this number contains both girls from 7-12 years who are the most active (90%) and girls from 13-15 years who are the least active (77%). The numbers shows the challenge we have motivating young people to continue with their sports during the teenage period. The differences have been analysed and the findings show us that we must work on a more structural solution to create a generation of more active people.

The political part of the case shows that many clever people expressing the same sentence may make a difference. There has been a commission analysing and

describing the Sport for All activities in Denmark, ending its work in March 2009, in order to make recommendations for the Government. One of the recommendations for the children was: 7 hours of activity per week. There was also a commission working for the Government on how to prolong life expectancy. They also ended up with a conclusion for the children saying: 7 hours of activity per week. Finally the Government made a Health plan in October 2009, where the same goal was expressed. Political majorities do now agree that this is an important agenda – but they do not necessarily agree on how to reach the goal.

In the National Olympic Committee and Sports Confederation of Denmark we have decided to work with the content of the project together with the Danish Gymnastics and Sports Associations and with an organisation working with activities only for school children. This is a big step since the organisations are normally competing for funds and members. The first step now is to organise the activities and communicate about the projects we have developed for the target groups.

The projects focus on creating the best environment for practising sports in the day care for 4-6-year-olds and in schools for 6-16-year-olds. They will be presented shortly at the conference.

Keywords: active children, 7 active hours per week

Phys Act Interv-4

An analysis of students' activity levels and lesson context in middle school physical education classes in Korea

Kwak Eunchang

(Kyung Hee University, Republic of Korea)

Physical activity engagement during physical education classes is important for many reasons, including developing physical fitness and movement skills and promoting health. Not much is known about physical activity levels in secondary nor in elementary schools. Specific to Korea, limited activity space and large class sizes could affect the physical activity levels. Accruing physical activity in physical education is critically important in Korea because of overcrowding, lack of indoor and outdoor facilities, and the limited playground providing limited opportunities for physical activity outside school. The purpose of this study was to determine the students' activity level, the lesson context, and the total amount of physical activity per hour in 7th and 8th grade physical education classes. The subjects were 251 students (182: males, 69: females) from a total of 8 classes from three different middle schools in a metropolitan, in an urban area, and in a small town. The consent forms were completed prior to participation. For the data collection, SOFIT and pedometers were utilized, and the T-test and one-way ANOVA were used for data analysis. The number of walks and walking distance, and the expenditure

of calories were three dependent variables for determining student activity levels in the study. The result of this study showed that students were physically active during the prescribed class time. Most of the subjects focused on the exercise mechanics in the classes, and the behaviour of the teachers mainly comprised of instruction of exercise methods, correction of incorrect posture (67%) and observation. Anova and t-test showed that there were significant statistical differences in the number of walks $t(1)=10.365$, $p<.001$), the calory expenditures $t(1)=13.189$, $p<.001$) and walking distance $t(1)=13.162$, $p<.001$). With respect to the students' level of activity, students in boys-only schools were shown to be more active than those from co-educational schools. Male students were more active than female students in the number of walks $t(1)=.687$, $p<.001$) and calory expenditure $t(1)=-3.165$, $p<.01$). However, no significant differences were found in the number of walks between 7th and 8th graders. For the size of cities, significant differences were detected in the number of walks $F(2, 958)=37.915$, $p<.001$, in the expenditure of calories $F(2, 958)=33.051$, $p<.001$, and distance $F(2, 958)=43.452$, $p<.001$. The students of a metropolitan city had a higher number of walks, distance, and calory expenditure than those of the small town and the mid-size city. 8th graders were more active than the 7th grade students. Significant differences were reported in the number of walks $F(4, 956)=62.751$, $p<.001$, calory expenditure $F(4, 956)=66.986$, $p<.001$ and walking distance $F(4, 956)=91.858$, $p<.001$ in different class activities. Basketball was a more vigorous activity than any of the other activities such as team handball, soccer, field and track, and gymnastics. Overall, secondary school students' activity levels in Korea were similar to those of students in the U. S. and Hong Kong when observed by using the same SOFIT instrument. However, physical education fell far short in helping students to meet physical education recommendations (a total of 60 min per day). Engaging in physical activity during physical education is important for adolescents to learn movement skills and become physically fit, and it contributes to a variety of health benefits.

Keywords: physical education, lesson context, physical activity, student physical activity levels, SOFIT

Phys Act Interv-5

A community-based approach to walking promotion in Taipei

Jwo Hank¹, Chiu Allen Wen-Hsiang², Chang Hui-Mei², Lin Ching-Er³, Keh Nyit-Chin¹

(National Taiwan Normal University¹, Health Department, Taipei City Government², National Taichung

University³, Chinese Taipei)

Introduction

Self-paced exercise walking, characterized with weight-bearing, is one of the practical modules for health promotion for people at all ages. The campaign, utilizing a community-based approach (Green & Kreuter, 1999), was initiated partly to achieve a healthy city by the Department of Health, Taipei City Government in 2007. This study was designed to examine effectiveness for exercise walking rooted in communities in behavioural changes (Prochaska, Norcross, & DiClemente, 1994). Methods 42000 participants from communities in 12 administrative areas voluntarily participated in exercise walking programme for 3 months. Trained leaders were arranged for each community to shape regular walking behaviour. Self-report questionnaires on behavioural changes were administered before and after the entire programme to assess satisfaction and behavioural changes as a function intervention.

Results

Descriptive statistics showed decreasing numbers (from 50.3 % to 24.4%) in cognitive stage (pre-contemplation and contemplation stages) and increasing numbers (from 49.7 % to 75.5%) in behavioural stage (preparation, action, and maintenance stages) for all participants after the completion of the programme. Degree of satisfaction with the community-based walking programme was high with exercise time (82.2%), location (84.8%), programme content (86.5%), and quality of the leader (88.4%). Pair-t analyses for pre- and post-programme in behavioural changes found significance in positive transition from cognitive to behavioural stage ($t = -20.99$, $p < .05$). One-way ANOVA also revealed significant differences ($F = 328.34$, $p < .05$) in that duration for walking per week was longer for higher order than lower order in behavioural change stages. Discussion

Findings provided strong support for community-based approach for walking promotion in urban area in that community functions well in organisation of exercise-related activity. Positive stage transition of behavioural change suggested that structured exercise programme served for establishing regular exercise behaviour. Yet age, gender, and socio-economic variables should be further examined in terms of participation rate and their differences in behavioural change. Furthermore, findings from this study will also be discussed from the perspectives of spontaneous exercise behaviour induced by structured programme and Health Promotion Model (Pender, 1996).

Keywords: community-based approach, walking, stage of behavioural change

Oral

Targets of Sport for All: Children and youth 1

Targets: Children 1-1**The Norwegian rules for sport for children and the Rights of the Child in sport***Fagerlie Arne, Veum Anja*

(Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), Norway)

Topic: How do strong regulatory mechanisms ensure participation and development of children in sports?

Background

The Norwegian Olympic Committee is the first national sport organisation in the world with General Assembly approved rules governing competition for children and with Rights of the Child in Sport.

The Rules and the Rights govern all sport for children under 12 years of age.

The Rules were approved and have been in force since 1987, whereas the Rights of Children in Sport were approved in 2007.

The Rules are absolute regarding competition for children; i.e. where, when and under which context children can compete in sports. They also state rules on participation in competitions and on prize giving and ranking of children.

The Rights are built on the UN Convention on the Rights of the Child and represent important values in Norwegian sports and in the Norwegian society. In Norway, sport for children is conducted based on the prerequisites of the children – not on adult preferences. In the opinion of NIF, the children deserve the best from us and the best of us.

Results

We will discuss how these means have contributed to a participation in organised sports between 75 and 80 percent of all children in Norway. All of Norway's approx 7000 sports clubs must adhere to the Rules and the Rights of the Child.

Discussion

Strict regulations – but are they necessary?

Can other nations learn from Norway's experiences?

Are there other nations that have considered similar means?

Keywords: rights, children, regulation, rules, participation

Targets: Children 1-2**Family Sport as a positive approach to life: Concept, reality and experience***Kapustin Peter*

(Private University Schloss Seeburg, Germany)

In 1982, the Institute of Sport Science/University Würzburg in Germany started a co-operative programme which was very unique and innovative concerning the standards at that time: 12 families with retarded and multi-handicapped children along with non-handicapped siblings started a weekly family sport programme. This

idea was completely new, as this mixed target group did not appear in specialized literature or in sport practice. Considering the understanding of sport at that time, the family group was too heterogeneous for sport activities, since sport was focused on competition in various disciplines with norms and rules, and practiced in special facilities. However, to widen the development of sport it was, and still is, necessary to consider three main dimensions: (1) type of sport; (2) target group; (3) motivation.

Motto: people do not need to adapt to sport, but rather sport needs to be adapted to people!

With these three dimensions in mind, family sport is a situation-oriented, creative modification of sport with suitable activities and group dynamics in gyms, playgrounds, pools, forests, beaches, winter landscapes, etc. Together with the pioneer families a suitable concept was developed and the family group steadily increased in size until 1987 with up to 40 families and more than 100 members. At this time, a positive first evaluation of the group led to the foundation of the first Family Sport Club in Germany. Since then, additional partner family sport clubs have been founded in Nürnberg (Bavaria), Suhl (Thüringen) and other cities throughout Germany.

In addition, annual family vacations for 1-2 weeks have taken place since 1985 as an extra family sport event in summer and winter (with destinations in Bavaria, Austria or Italy). Often families with retarded and/or handicapped children feel isolated and even handicapped themselves, in terms of life within the social community and leisure time. For these families, the family sport programme means much more than physical activity; family sport offers a way out of social isolation into integration: it supports and enriches family life, makes family friendships possible, combines physical activities with emotional experiences and humor, is good for health and offers ideas for sport and recreation activities in each family.

After 27 years, the project initiator (and author of this report) finished his engagement with the project in a final evaluation. The evaluation study involved a questionnaire, with closed and open questions, that was distributed to 84 member families in three cities. 79 families responded – an excellent rate of 94%. The results support the first evaluation 1987 and the initial personal expectations. Indeed, the families perceive the family sport club experience to be far more than only a physical activity. Nobody wanted to miss this part of family life, the friendship between the participating families and this experience of healthy and integrative sport.

The following presentation focuses on the family sport concept in word and picture, followed by selected evaluation results.

Keywords: Family Sport, psycho-social aims, children with a handicap

Targets: Children 1-3**The turning points at which 4 to 19-year-old Japanese**

children distance themselves from sports

Fujiwara Naoyuki, Kudo Yasuko, Shibuya Shigeki
(Sasakawa Sports Foundation, Japan)

Introduction

The decline in the physical strength of children is of major public concern, and the importance of sports is growing more than ever in Japan. Under these circumstances, Sasakawa Sports Foundation (SSF) carried out a survey on sports participation of children aged 4-9 years for the first time in Japan. SSF reports on the latest state of participation of Japanese children in sports, based on the results of the abovementioned survey and a survey on people aged between 10 and 19 years that SSF performs every four years.

Methods

A survey carried out by SSF on sports participation of children aged 4-9 years in 2009. SSF also conducted a survey on sports participation by people aged 10-19 years, three times, in 2001, 2005 and 2009. The populations for both of the surveys were resident males and females nationwide. The surveys were performed by using the household drop-off survey method with a questionnaire. The numbers and rates of valid responses were 1,196 (72.5%) for the survey of children aged 4-9 years, and 1,989 (66.3%) for the survey of people aged 10-19 years.

Results

A question about the frequency of participation in exercise or sports revealed that 5.3% of the respondents aged 4-9 years had not done any exercise or sports in the previous year; while 33.5% had done so seven times or more a week. Concerning the same question put to people aged 10-19 years, 14.4% of the respondents answered that they had not done any exercise or sports in the last year, which was higher than the 12.5% revealed in 2001, and the 11.7% in 2005. On the other hand, the proportion of this age group who had done exercise or sports seven times or more a week was 31.4%, which was a rise from the findings in 2001, of 21.8%, and from the 28.5% in 2005. This suggests a growth in bipolarization of the physically inactive group and the high frequency group. The results of the surveys of children aged 4-9 years and 10-19 years were analyzed to determine the turning points at which this bipolarization accelerates. The analysis revealed that the bipolarization accelerates at three points in time – at the age of 8 years, proceeding into middle school (at the age of 12), and proceeding into high school (at the age of 16), and that bipolarization is more significant among girls than boys.

Discussion

Based on the surveys, it is assumed that one of the reasons why girls distance themselves from sports is the types of sports and exercise available for them. To prevent girls from withdrawing from sport, an environment in which girls of preschool-age can have chances to enjoy "sports" in the same manner as the boys, should be established, and sports and exercise that rise girls' interest

should be developed and provided.

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Sasakawa Sports Foundation. 2010. National Sports-Life Survey of Young People.

Keywords: bipolarization, children, sports participation

Targets: Children 1-4**Self-evaluated motor competence and physical activity of adolescents**

Purtsi Jarno¹, Viholainen Helena², Havas Eino³, Cantell Marja⁴, Rintala Pauli⁵, Tolvanen Asko⁶, Ahonen Timo⁶
(The Finnish CP Association / LIKES Research Center¹, Finland, Department of Education, Special Education / University of Jyväskylä², Finland, LIKES Research Center³, Finland, Department of Pediatrics / University of Calgary⁴, Canada, Department of Sport Sciences / University of Jyväskylä⁵, Finland, Department of Psychology / University of Jyväskylä⁶, Finland)

Motor skills play a significant role in adolescents' physical activity, and thus also an important role for general health (Cantell et al. 2008). Among the boys, perceived sports competence can also predict intentions to be physically active (Lintunen et al. 1999). In this study, the main purpose was to test 1) the feasibility of a self-evaluated questionnaire of motor competence (DCDQ-A) among Finnish middle school adolescents in one school district; 2) if there were various motor competence profiles to be found; 3) the association of self-evaluated motor competence (DCDQ-A), the enjoyment of physical activity, physical activity status, school success and self-concept in PE.

The data (N=671) consisted only of few missing values and the covariance coverage range between .957 and 1.0. In the factor analysis 12 out of the 17 original items were loaded in three factors each consisting of four items [X²(32)=68.41, p<.001, CFI=.99, TLI=.99, RMSEA=.041, WRMR=.70]. The latent profile analysis (LPA) revealed a four class solution based on the BIC (19812.70) to fit the data best. This resulted in four groups with different profiles, whereas (AVG1) group (n=385; 57.4%) and [AVG2 (n=225; 33.5%)] were fairly close to the mean. Group with the highest motor competence [HMC (n=46; 6.9%)] was one standard deviation above the mean and group with the lowest motor competence [LMC (n=15; 2.3%)] was more than 1.5 standard deviations below the mean. We studied if the different motor competence profiles had an association with physical activity. We found a significant difference between the groups in physical education grade, enjoyment of PE, self-concept of PE, the number of activities participated in, intensity of physical activity, the amount of sport equipment owned and PE grade [F(21,1527)=8.29, p<.001].

The (LMC) group differed from the other groups signif-

icantly ($p < 0.001$) in self-concept of PE and in the enjoyment of PE. They also participated in fewer physical activities and owned fewer pieces of sport equipment than the most competent adolescents ($p < 0.001$). There was a significant difference ($p < 0.001$) in PE grades between those with the lowest motor competence and those with an average motor competence. There were no differences in BMI between any of the groups.

In sum, the self-evaluated motor competence questionnaire (DCDQ-A) is feasible in identifying low motor competence and may be used in identification of motor problems in adolescents. Furthermore, the motor competence is associated with the physical activity status.

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Lintunen et al. 1999. *Scand J Med Sci Sports*.

Keywords: motor competence, physical activity, adolescents

Targets: Children 1-5

Evaluation of the exercise workload of broadcast gymnastics for children and adolescents

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(The Capital Institute of Physical Education of China¹, Beijing University of Chinese Medicine², People's Republic of China)

Introduction: Broadcast calisthenics had been taken as routine in elementary and middle schools in China with the aim of increasing physical activity and promoting health and physical fitness of students for decades. Broadcast calisthenics consists of a routine of 8 segments, each consisting of set of mostly low-impact movements performed in time to music. Few literatures on evaluation of the exercise workload are found (Jiang et al., 2001; Zhou, Ji & Ma, 2002). The purpose of this study is to evaluate the exercise workload of the 3rd series of national broadcast calisthenics for elementary and middle school students (3SNBCEMS). This study is located in the scope of physical activity, physical fitness and health in elementary and middle school students.

Methods: One hundred and twenty students with a mean age of 13.1 ± 2.1 years (ranges from 11 to 17 years old) were randomly selected from 4 elementary and middle schools as subjects. A maximal oxygen up-

take (VO₂max) cycle ergometer test was performed by each student to obtain VO₂max and maximum heart rate (HRmax) values. In a laboratory, oxygen uptake (VO₂), metabolism equivalents (METs) and heart rate (HR) were measured continuously throughout a broadcast calisthenics session for each student. Rate of perceived exertion (RPE) was measured as well.

Results: The mean values of %VO₂ reserve (%VO₂R) during the entire calisthenics session varied from 30.7 to 41.2, and the mean values of %HR reserve (%HRR) and RPE varied from 39.0 to 56.9 and 9.0 to 10.4 respectively. The mean METs during most of the segments across the 4 routines calisthenics session were significantly higher ($P < 0.05$) than the value of 3.0 METs (Haskell et al., 2007).

Discussion: The current study demonstrates that the exercise workload of the 3SNBCEMS session varies from low to moderate levels, and do not meet recommendations for levels of physical activity (PA) for improving or maintaining health or cardiorespiratory fitness in adults by the ACSM (American College of Sports Medicine, 1998). When compared with the guidelines of the minimum intensity (80% HRmax) of training for improvement of peak VO₂ in children and adolescents suggested by Baquet, Van Praagh & Berthoin (2003), only 1 segment (the 7th segment) of the 4 routines was performed over the level of intensity suggested. But as part of a school-based PA intervention project, the 3SNBCEMS would be beneficial to prevention of an inactivity lifestyle and improvement of physical fitness in children and adolescents according to recommendations of most studies (Strong et al., 2005). The accumulation of time may be more important than the intensity of PA for children and adolescents. Children and adolescents prefer different forms of PA to meet their instinct of exploring. More PA sessions of different forms should be part of the recommendations of PA for physical fitness and health in children and adolescents. The 3SNBCEMS should be one of the recommended physical activities for children and adolescents.

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Keywords: %HRR, broadcast gymnastics, exercise intensity, elementary and middle school students, %VO₂R

Oral

General policies serving Sport for All 1

Gen Policies 1-1

An active society demands new thinking, flexibility

and new solutions

Staun Preben

(National Olympic Committee and Sports Confederation of Denmark, Denmark)

An active society is a clever and well-planned society, which meets the needs of the youth on the street level.

A new agenda must be drawn when we are talking about motivating the youth to a more active life. The new agenda should have a look at the future of city planning and the future design and architecture of sport facilities. In a way the focus of city planning and the architecture of sport facilities is a new beginning, a new start. Instead of concentrating on how the youth of today can be physically active, one should rewind the tape and look how we can motivate the youth of tomorrow to be a generation of sport and physical activity.

One important contribution that the Olympic Movement can make in creating a generation of sport and physical activity is to be more focused on the importance of city planning and city design so that future streets, parks and places motivate people to be physically active. If one cannot get future generations to use their body when they go to school or work or are doing their daily shopping, the harder it will be to get these people to be active in sport. Improving accessibility, enhancing amenity and increasing awareness should be the key words in the Olympic Movement's focus of creating an active society.

Improving accessibility is about providing easy, safe and convenient access to a choice of opportunities for participating in sport and physical activity and active travelling for the whole community.

Enhancing amenity focuses on promoting environmental quality in the design and layout of new sports and recreational facilities, their links and relationship to other buildings and the wider public realm.

Increasing awareness should raise the prominence and legibility of sports and recreation facilities and opportunities for physical activity through the design and layout of the sport facilities and the planning of cities.

Discussed above is what one can call new solutions on how to use means of city planning and architecture of sports facilities in creating a sporting and a physically active generation of youth, who are facing sporting and physical activity opportunities when stepping outside their front door.

Keywords: active architecture

Gen Policies 1-2

Global Sport Policy Networks in Sport for Development

Groll Michael

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This presentation will combine two issues in sports sciences which are becoming more and more important. It will explain Global Sport Policy Networks in Sport for Development, considering also latest developments in this field. Sport for Development has now been recognised as a meaningful topic in development circles as well as

in scientific communities. It can be seen as a direct response to the call for implementation of the UN Millennium Development Goals via Sport.

Sport politics, in general, has now been identified as a field, which needs a systematic scientific approach. The use of instruments and methods from the political sciences is strongly recommended. After some general assumptions on political sciences of sport, the area of Sport for Development will be described as political arena (Van Eekeren, 2006), in which networks offer best guarantee for open discussion on themes and methodologies (Vanden Auweele, 2006). The collaboration of different actors in Sport for Development can be characterized as co-operation between governmental, non-governmental and transnational actors. In political sciences, these co-operations are called Global Policy Networks (Groll, Guett & Noelke, 2010). The driving force in Global Policy Networks is the exchange of resources. These resources are: legitimation, legislation, information and expertise, financial as well as legal resources. For each actor it is crucial that they know about the interests of each party involved. Even more important is to think about how the resources can be strengthened. The presentation will give some examples on that. Having learnt this, one might be able to understand the complexity of existing networks. Furthermore, certain situations which are commonly labelled as instrumentalization by business or political actors, can simply be analyzed as an exchange of resources.

The presentation ends with the latest developments and activities in Sport for Development and Peace. These examples include the launch of the International Sport for Development and Peace Association, the work of the International Working Group on Sport for Development and Peace, the Belgian-African cooperation or with the goals of The World Sports Alliance. All these examples will be analyzed from the perspective of political sciences.

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Gen Policies 1-3

Utilising the city and community setting to encourage participation in Sport for All and physical activity

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Introduction

It is estimated that by 2050, 70 percent of the world's population will live in cities, with an everyday increase in urban population by 200,000. By their nature, cities have established infrastructure, administration and communication systems, policy and existing sponsorship of

sports-based programmes. This, combined with an increase in sedentary lifestyles within cities, makes cities and communities the perfect setting to reach out to citizens to promote and encourage participation in Sport for All and physical activity.

To this end, TAFISA, in cooperation with the IOC, is developing a global strategy for encouraging participation in Sport for All and physical activity, including the "Active Cities – Active Communities – Active Citizens" programme, "the Triple AC". The Triple AC is a social marketing programme aiming at encouraging cities and communities to develop a culture of physically active living with active citizens who reap all the benefits this entails, including health, social, environmental, economic, and integration benefits.

There has already been much scientific research in the field of Active Cities, and many comprehensive Active Cities programmes have been established around the world. However, to date there is no programme that both promotes and encourages the concept of active cities as well as allows the sharing of knowledge and experiences internationally to create a dynamic worldwide network of active cities and communities. As a global marketing and communications based programme, focusing mainly on encouraging, recognising and rewarding Active Cities programmes and interventions, the Triple AC aims to fill this gap.

Development of the Triple AC commenced one year ago with a series of international workshops. The programme is being developed in cooperation with the IOC, with input from other international bodies, including WHO Healthy Cities Network, and established Active Cities from around the world.

Triple AC's core is recognition and rewarding of innovative and effective Active Cities initiatives and programmes. Participants will have access to a self-assessment rating questionnaire which allows them to qualitatively establish, and then subsequently monitor, their level of activity and improvements. The Triple AC is a global programme that is widely inclusive, applicable, transferrable and open to any city, community and citizen, regardless of the level of development, race, religion, financial situation, size or location.

Conclusion

The Triple AC programme will be formally launched in 2010 with continuing development based on participant needs and requests. The first round of Triple AC awards will be presented late 2010. Ultimately the Triple AC programme will form a global network of cities, communities and citizens learning from each other and working toward a shared goal of active living, but still operating in unique ways that are relevant to their local level of development, customs and interests.

Keywords: citizens, cities, communities, Active, Sport for All

Gen Policies 1-4

The European Day of Sport

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Introduction

Since 2002, the Provincial Council of Barcelona has organized annually the Festival of the Sport (<http://www.diba.cat/festaesport>).

The Festival of the Sport is a recreational, popular sporting fest in which everyone may take part; activities are adapted to the physical level of the participants and it is not a competitive event. It is held at conventional sports facilities and in public areas in the first weekend of June. In 2009, it was organized in 196 municipalities of the province of Barcelona with an overall participation of 200,000 inhabitants. It was also organized in other Spanish territories.

The success of the Festival of the Sport has become the catalyser to promote the establishment of the Day of Sport in Europe. There exists several European Days but none about sport, despite its great social power.

The Provincial Council of Barcelona is promoting this initiative and it is working specially in two ways:

- Trying to get adhesions to this initiative (<http://www.diba.cat/festaesport/diaesport.asp>). Nowadays we have 500 adhesions from clubs, municipalities, sport athletes and key sport representatives like Mr. J.A. Samaranch, honour president of the International Olympic Committee (COI).

- Promoting the initiative in EU Sports meetings and congress

Development

The main objective of The European Day of Sport is to encourage European citizens to actively participate in sport and physical activity and spread its benefits at all levels. Other specific goals of the European Day of Sport are:

- To disseminate the values inherent to sport, such as an active lifestyle, health benefits, integration, camaraderie, respect for others, etc.

- To increase awareness of the range of activities and sporting bodies in the different European territories.

- To ensure that, for one whole day, sport is the protagonist, in both public spaces and in the sports facilities in European towns and cities.

- To involve as many European citizens as possible.

Provincial Council of Barcelona, as a leader of the European Day of Sport initiative, proposes its celebration date to be on the first Sunday in June or May 14, the date when women first participated in the Olympic Games (1900). However, the date is still open to debate.

The expected activities held during the European Day of Sport are sport and physical activities for all population in order to promote an eventual regular physical activity.

Conclusion

It is common to promote sport activities among the population by trying to make its practice easy and by removing

barriers.

Therefore we consider that creating the European Day of Sport can contribute to an increase in the citizens' participation in sport activities.

In Europe there are several days addressed to promote specific issues (music, consumers, solidarity, environment ...). For this reason, we think that now is the time this recognition arrives to all that sport entails in health, education, occupation, economy, and especially because of its contribution to the social welfare.

Keywords: European citizens, regular physical activity, health benefits, sport values, the Day of Sport

Gen Policies 1-5

Youth and sports development in Singapore

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The hosting of events, including the Youth Olympic Games in 2010, demonstrates the importance of developing youth sport to the government of Singapore. In this article we briefly explore a few of the key legacy initiatives and investments that are designed to enhance sport in Singapore for the community and inspire the next generation to be involved in sports to improve health, develop international relationships and contribute to a vibrant, multi-racial society and economy.

Developments: Investments in the sporting infrastructure for young people in recent years include a landmark dual-use scheme with 87 schools receiving new sports facilities. These infrastructural developments are linked in with new sports initiatives for youth, including junior sports academies, youth sport academies and other legacy projects related to the Youth Olympic Games.

The importance of youth development is reflected in such investments as the recent construction of a multi-million dollar venue for young people in the central area of Singa-

pore. This will be the venue for the Youth Olympic Games Basketball event and post games, numerous sports opportunities will be on offer.

A new legacy initiative is under development at present to provide multiple, inclusive options for young people to participate in a wide range of sports. The concept is to provide centres throughout Singapore for recreational participation in the 26 Youth Olympic Games sports. A holistic approach will be used to develop the skills of coaches and volunteers working with young people with the long-term aim of developing a sustainable community sports system and establishing clubs/leagues in a range of sports.

There is a large number of exciting investments and initiatives under development, but however, there is, also, a number of challenges associated with development during this period of hyper growth, including: Moving from an academic based education system to an approach including sport as a vital component of child/youth development; Developing sports volunteerism and levels of viewership; Ensuring that sports events are incorporated within holistic sports development and the associated time-frame to set up and run major sports events whilst developing legacy initiatives and operating business as a normal activity in a relatively new sports environment.

Conclusion

Substantial resource investment by the government and effective strategic planning is enabling Singapore to move forward and inspire the next generation of sports participants. The selection of events in Singapore and associated initiatives are starting to demonstrate legacy benefits for Sporting Singapore, but, there are, however, many challenges to deal with when developing sport so quickly, especially since the new initiatives and investments often compete against local conventional wisdom, for example, in the case of the importance of academic study versus the time available for young people to participate in sport.

Keywords: events, children, projects, youth, sport

Oral

Physical fitness and Sport for All

Phys Fitness-1

Physical activity and inactivity during normal daily life quantified by using electromyography

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Introduction

By definition, physical activity is bodily movement that is produced by the contractile activity of skeletal muscle that substantially increases energy expenditure. Energy expenditure is typically estimated for example by using heart rate while the actual muscle activity in quantifying physical activity level has been neglected. Our aim was to quantify the level of daily muscle activity in normal people from different age groups. Here only a subset of subjects is reported.

Methods

Healthy men (N=6) and women (N=6) aged 23-62 years (BMI: 22 SD3) volunteered for this study. Muscle activity was measured by using electromyography (EMG) with electrodes embedded into shorts to measure right and left quadriceps and hamstring muscle activity (Finni et al 2007). During 1-3 days of normal daily life pedometer and muscle activity measurements were performed with mean recording time of 10 hours, mainly on weekdays. The following parameters were analyzed from EMG: mean daily activity of each muscle group (right and left quadriceps femoris and hamstrings) as a % of maximal voluntary contraction (%MVC) and mean duration of five longest inactivity periods with activity less than 2% MVC.

Results

The muscle activation during a normal day, in general, was very low: 82% of the time it was below 5%MVC. The muscles were active for more than 50%MVC only 1% of the time. The effect of exercise to these % values varied, e.g.: A day with 2.5h cross-country skiing resulted in activation level being 65% of the time below 5%MVC, and 4% of the time over 50%MVC, while during a day with 1 hour strength training, 80% of the time the EMG was below 5%MVC and 1% of the time over 50%MVC. In this comparison, the longest inactivity periods (mean 22 min) were 8 minutes longer during the strength training day. For the entire group the five longest inactivity periods varied between 55 min and 22 min. The reported time spent sitting during a workday correlated positively with the longest inactivity period (mean $r=0.35$, $p<0.05$). The pedometer value correlated positively with muscle aEMG level (in three muscles, mean $r=0.45$, $p<0.01$).

Discussion

During normal daily life the muscles are inactive 72% of the time including very long (55min) continuous inactivity periods. Endurance exercises decrease the time of

very low activation more than strength training. Because long inactivity periods are related to e.g. cardiovascular disease and type 2 diabetes (Hamilton et al 2007), the findings of very long inactive periods even in people exercising regularly is alarming. The results stress the importance of non-exercise activity during the day to avoid long periods of inactivity.

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Phys Fitness-2

The influence of cardiovascular fitness on the relationship between genotype and neurocognitive function in late adolescence

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Introduction

Cardiovascular fitness and physical activity have been positively associated with executive cognitive functioning (i.e., planning, scheduling, coordinating, response inhibition, and working memory), which rely on the frontal region of the brain (Colcombe & Kramer, 2003). Recent studies suggest that the benefit of cardiovascular fitness is particularly strong in middle-aged individuals who carry the Apolipoprotein (APOE) e4 allele, a known genetic risk factor for Alzheimer's disease (AD) (Deeny et al., 2008). However, there have been no studies to determine this interactive relationship in adolescents. Therefore, the present study examined if cardiovascular fitness mediates the relationship between genotype and cerebral cortical responses in college-age males during a frontally-mediated executive challenge.

Method

Twenty nine e4 carriers (N=29; 15 high-fit, 14 low-fit) and thirty non-carriers (N=30; 15 high-fit, 15 low-fit) were stratified by cardiovascular fitness. Cognitive function was assessed by neuroelectric response, event-related potentials (ERPs) recorded at 11 sites (F3, Fz, F4, C3, Cz, C4, P3, Pz, P4, O1 and O2) to both an auditory Go/no-go executive task (ECF) and a non-executive Oddball task (non-ECF).

Results

The P300 amplitude, which is indicative of the recruitment of attentional resources, exhibited by the high-fit e4 carriers was higher relative to that observed in the low-fit e4 carriers during both the ECF and non-ECF tasks. Impor-

tantly, the high-fit e4 carriers were also undifferentiated from both groups of the non-carriers. Furthermore, high-fit individuals, regardless of genotype, exhibited shorter P300 latency than did the low-fit individuals at sites Fz, Cz and Pz during ECF task and site Pz during non-ECF task.

Discussion

The current findings revealed genetic specificity in the relationship between cardiovascular fitness and the brain processes indexed by P300 amplitude function during late adolescence in response to both ECF and non-ECF challenge, with greater benefit incurred for the ECF task. The results suggest that cardiovascular fitness alters neurophysiological stimulus processing in adolescents with particular benefit in those who carry APOE e4 and are vulnerable to dementia.

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Keywords: event-related potential, P300, cardiovascular fitness, Apolipoprotein, executive function

Phys Fitness-3

Young men's physical fitness profile and its association with health

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Obesity in youth has increased during the last ten years in Western countries. However, there is only limited scientific information available concerning physical fitness of youth. Nevertheless, it has been shown that physical fitness has decreased between the years of 1979 and 2004 in Finnish 20-year-old men and obesity has increased during the last 15 years (Santtila et al. 2006). The purpose of the present study was to examine physical fitness, body characteristics, and their association with health status.

A total of 856 men (age 25±5 yrs.), who were invited to a refresher training organized by the Finnish Defence Forces, volunteered for the present cross-sectional study. Height, body mass and waist circumference (WC) were recorded. Physical fitness tests consisted of grip strength, muscle endurance (recording the number of repetitions in one-minute push-up, sit-up and squat actions) and maximal oxygen uptake (VO₂max). The initial work load in the bicycle ergometer test was 50 W increasing by 25 W every minute until exhaustion. To estimate VO₂max, heart rate was recorded continuously by a heart rate monitor (Polar Electro, Kempele, Finland). Blood samples were drawn from the antecubital vein after a night of fasting for analyzing lipids and glucose. In addition, the participants filled a questionnaire of physical

activity and health.

Mean (±SE) height of the participants was 1.80±0.06 m, body mass 80.5±0.5 kg, body mass index (BMI) 24.8±0.1, and WC 0.86±0.04 m. 45 % of participants belonged to the poor category of physical fitness, while 37 % and 18 % were in the satisfactory and good fitness categories, respectively. The poorer the VO₂max, the higher were the triglyceride values. The mean total cholesterol value of the participants was 4.5±0.9 mmol/l, while more than 25 % had above 5 mmol/l. High level of oxidized LDL lipids was associated (p<0.01) with low level of VO₂max and muscle fitness. The mean blood glucose was 5.6±0.7 mmol/l, and 7 % were above the recommendation of 6 mmol/l. In addition, WC was positively associated with the values of triglyceride, cholesterol, glucose and blood pressure.

The present study demonstrated that in a large group of young adult men, the general level of physical fitness was quite poor. On the other hand, one third of the participants were in a good physical condition. Both poor cardiorespiratory and muscular fitness were associated with higher serum lipid and glucose concentrations as well as higher diastolic and systolic blood pressure, which may indicate a higher risk for type 2 diabetes, hypertension and atherosclerosis. In conclusion, the present findings suggest an important role of physical fitness and its contribution to body composition and health.

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Keywords: body composition, health, physical fitness, glucose, lipids

Phys Fitness-4

Effects of sports injury prevention training programme on the neuromuscular risk factors of non-contact anterior cruciate ligament injury in female soccer players

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INTRODUCTION

Female athletes have a 4- to 6-fold higher risk of anterior cruciate ligament (ACL) injury than their male counterparts who play at similar levels in sports involving pivoting and landing (Hewett et al., 2006). The purpose of this study was to investigate the effects of a sports injury prevention training programme (SIPTP) on the neuromuscular risk factors of noncontact ACL Injury in collegiate female soccer players.

METHOD

A total of 30 collegiate female soccer players were recruited and randomly divided into two groups (15 exper-

imental group and 15 control group). From the 30 athletes, we chose randomly 7 for a reliability test (Lim et al., 2009). The experimental group was instructed in the seven parts (warm-up, stretching, strengthening, plyometrics, agilities, proprioception, and cool-down) of the SIPTP and performed it during the first 25 minutes of team practice for the next 12 weeks, while the control group performed their regular training programme. A total of 21 reflective markers and two pair's electrode were then placed in pre-assigned positions. A two-way ANOVA (2 x 2) experimental design was used for the statistical analysis ($p < .05$). Post-hoc tests with Schffe's correction were used.

RESULTS

The reliabilities of knee flexion angle (intraclass correlation coefficient [ICC]=0.875), knee valgus angle (ICC=0.873) and knee abduction torques (ICC=0.791) were high for all athletes tested. Concerning neuromuscular risk factors, the experimental group showed higher knee flexion angles ($p=0.037$), lower knee valgus angles ($p=0.047$), hamstrings-quadriceps muscle activity ratios ($p=0.041$) and maximum knee extension torques ($p=0.049$) after training. In the control group, no statistical differences were observed between pre- and post-training findings ($p=0.097$ 0.901). At pre-training, no significant differences were observed between the two groups for any parameter (0.077 0.816). However, a comparison of the two groups after training revealed that the experimental group had significantly higher knee flexion angles ($p=0.037$), lower knee valgus angles ($p=0.029$), hamstrings-quadriceps muscle activity ratios ($p=0.043$), and higher maximum knee abduction torques than the control group ($p=0.048$).

DISCUSSION

These effects can be attributed to SIPTP because all of the training sessions were observed and subjects were instructed by three well-trained coaches throughout SIPTP. The SIPTP has the advantage that it requires little additional time on the athlete's part because it only requires 25 minutes per training programme (from warm-up to the cool-down exercises).

CONCLUSION

The SIPTP improved the neuromuscular properties associated with ACL injury as compared with the pre-training parameters and with the post-training parameters in the control group. This SIPTP could potentially modify the neuromuscular properties associated with ACL injury and lower the athlete's risk for injury.

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Phys Fitness-5

Effects of a 12-week Circuit Pilates Training (CPT) programme on stability, sensorimotor control and

posture for farmers with Musculoskeletal Disorder (MSD)

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Background

Stability exercise is increasing in popularity as a general and clinical exercise training technique. It is informed to improve balance, flexibility, core strength, postural awareness and is, hence, necessary in the protection from MSD (musculoskeletal disorders) by a large focus on efficient movement re-education. According to the research of Rural Development Administration (RDA) in Korea, 73.4% of farmers had musculoskeletal symptoms. However, there exists only a limited amount of research for developing Stability Exercise for farmers with MSD. Circuit Pilates Training (CPT) is a type of stability exercise and it was designed for farmers with MSD by Gyeonggi-do Agricultural Research & Extension Services in Korea. It helped to improve the ability of the neuromuscular system to monitor and manipulate movement during functional tasks by using the least amount of energy.

The objective of this study is to investigate a CPT programme to reduce musculoskeletal workload and to give farmers fundamental exercise for the prevention of MSD. This study aims at investigating the effect on body stability, sensorimotor control abilities and postural awareness for farmers with MSD.

Subject and Methods

A group of 48 farmers in 4 branches of Gyeonggi-do was chosen on the basis of fruit farming (apple, grape, pear). The subjects (female=31, male=17) aged 43 to 68 years old voluntarily participated in this 12-week study. The CPT programme regimen was undertaken 3 times a week for 12 weeks (1 with an instructor's lecture, 2 with video lectures). The subjects were tested in body stability, sensorimotor control and posture before and after the CPT program. Two-tailed matched-pair t-tests were used for statistical analysis. All statistical tests in this study were conducted at the .05 level of significance.

Results

The results obtained were summarized as follows;

1. Body stability in left-right and forward-back movement showed significant differences in male and female farmer groups with MSD ($p < .05$).
2. Sensorimotor control abilities in left-right and forward-back movement showed significant differences in male and female farmer groups with MSD ($p < .05$).
3. Posture awareness in postural analysis showed significant differences in male and female farmer groups with MSD by Posture Stress Index ($p < .05$).
3. There were no significant differences between male and female groups.

Conclusion:

The present results suggest that the CPT programme can be safely performed by farmers with MSD and leads

to improved body stability, sensorimotor control abilities and postural awareness. The more farmers do the CPT programme on a regular basis, the more they prevent the musculoskeletal symptoms and reduce pain by themselves in working conditions and daily life. Further support will be necessary to maintain farmers' health edu-

cation programmes and to keep farmers healthy against MSD in future.

Keywords: stability, sensorimotor, musculoskeletal disorders(MSD), farmers, Pilates

Oral Psychology/motivation and Sport for All

Psychol/motivation-1

The influence of peer pressure on the physical exercise behaviour of Chinese college students

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The researchers found that peer pressure has a great influence on smoking, drinking and other behaviours. So far, we have not found any research on the effects of peer pressure on the physical exercise behaviour of college students. This paper will conduct a preliminary study about this issue.

This paper aims, by using documents, a questionnaire survey and statistical analysis at studying the effects of peer pressure on college students' physical exercise behaviour. The objects of this research include sophomores, juniors and seniors of universities in China. 8159 questionnaires were distributed to students of 67 universities in 29 municipalities, autonomous regions and provinces, with an effective reclaiming rate: 90.06%. We used the SPSS programme to process the data.

Results

81.4% students choose their physical exercise partners from the same room, class and dormitory. Selecting other people as physical exercise partners accounted for 18.6%. Female students choosing their roommates as physical exercise partners accounted for 48.6%, which is a higher rate than for the male students, 18.4%.

The proportion who choose roommates as physical exercise partners decreases with grade. For the sophomores this rate is 41.7%, for juniors 39.1% and for seniors is 33.4%.

30.8% of the students who live in the provincial capital choose roommates as physical exercise partners, followed by the students who live in the medium-sized cities, for whom this percentage is 37.4%. The students who live in the country towns the rate is 41.1%, respectively, and for those who live in the rural areas, it is 43%.

The students who choose both the same-sex students and the opposite-sex students as their physical exercise partners, the number of hours to participate in physical exercise per month is 6.8, which is the highest found in this study. For the students, who choose the same-sex students as their physical exercise partners, the number of hours to participate in physical exercise per month is 6.8. For students, who often choose the opposite-sex students as their physical exercise partners, the number of

hours to participate in physical exercise is only 5.9.

Conclusion

The result indicates that the positive attitude of close classmates and friends has a positive influence on the exercise behaviour of the college students. If college students' close friends take part in physical exercises, it is likely that they themselves join sports games. On the basis of this it is possible to estimate the extent of college students participating in physical exercise. The result, moreover, indicates that the positive attitude of close classmates and friends has a positive influence on the exercise behaviour of the college students, which may be caused together by choice and influence. There is a peer pressure effect on the exercise behaviour of college students. There exists also "a recent optional" phenomenon when college students choose their physical exercise partners. Both the range among whom to choose physical exercise partners and the rate of choosing opposite-sex classmates as physical exercise partners increased with grade. For the students who live in big cities, the range of choosing physical exercise partners is bigger than for those who live in small cities and rural areas. The extent of physical exercise of college students who choose both the same-sex students and the opposite-sex students as their physical exercise partners is higher than the extent of those who only choose same-sex or opposite-sex partners.

Keywords: physical exercise behaviour, peer pressure, Chinese college students

Psychol/motivation-2

Assessment of physical condition in the elderly and relation with the level of physical activity

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Introduction

With the ageing population, maintaining independent living of the elderly is a major public health concern in which physical activity can play an essential role. To meet the needs of this population, it is necessary to adapt physical activity programmes to their wishes and their physical

condition level. It is therefore essential for the professionals to have easily applicable tools for evaluation in the field and/or clinical practice. The objectives of this study are to measure the level of physical condition of elderly in order to establish French references values for the US "Senior Fitness Test" and to investigate the relation between the measured fitness level and the declared level of physical activity.

Methods

Subjects are recruited by the French Sports for All Federation in 13 French counties among their members or during action of physical activity promotion within the general population. The ESNAP questionnaire has been administered to assess the declared level of physical activity. The subjects have been weighed, measured and the 7 physical condition tests have been administered in a pre-determined order. 24 seniors could complete the session (fitness tests and questionnaires) in 1.30 hour (or 30 in 2hrs). One coordinator, eight sport educators and one national examiner (to assure the respect of the protocol in every site) are needed per session in a space of 80m² minimum. Mindeval software has been used to collect and clean the data. Descriptive statistics have been determined: means, standard deviation, minimums, maximums and percentages. To compare the relation between the measured fitness level and the declared level of physical activity, student T test and Anova have been used. The PLSD Fisher test

has been done as post hoc analysis.

Results and Discussion

Between March and April 2009, 1237 men and women, aged 60 to 89 years, have been involved in the study. The average age was 69,7 for women and 70,8 for men. The results show significant correlations between the declared level of physical activity measured by ESNAP Questionnaire and the measured fitness level : 30-Second chair stand ($r= 0,22$, $p= 0,01$, $N= 1234$), Arm curl ($r= 0,24$, $p= 0,01$, $N= 1230$), 6 minute walk ($r= 0,30$, $p= 0,01$, $N= 717$), 2 minute step ($r= 0,25$, $p= 0,01$, $N= 506$), Chair sit-and-reach ($r= 0,09$, $p= 0,01$, $N= 1233$), Back Scratch ($r= 0,09$, $p= 0,01$, $N= 1224$), 8-Foot Up-and-Go ($r= -0,21$, $p= 0,01$, $N= 1236$). This last correlation is negative because the measure is reversed (one is better when one does it in a minimum time). Seniors who are physically active have better results at the Senior Fitness tests. From a health promotion perspective, the ESNAP Questionnaire could be a very useful first prognostic tool for the doctor or the nurse.

Keywords: health promotion, physical condition, autonomy, physical activity practice, evaluation

Psychol/motivation-3

Influence of an Olympic volunteer experience on the

volunteers' individual behaviour

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INTRODUCTION

Nearly 100,000 volunteers (70,000 during the Olympics, 30,000 for Paralympics, mainly comprised of Beijing area university students) were recruited to take part in the preparatory and implementation work of the 2008 Beijing Summer Olympics. With the smooth convening of the high level distinguished Olympics and the transition to the Post-Olympic environment, the experience of being an Olympic Volunteer had an important impact on the volunteers themselves and the entire Chinese sport-based volunteer system. This paper aims at revealing the influence of the Olympic volunteer experience on the volunteers' individual behaviour and at further analysing its significance through the investigation and research on BSU Olympic volunteers in 2008.

METHODS

This paper employed the methods of documentation, interview, questionnaire and mathematical statistics. A total of 100 BSU Olympic volunteers in 2008 were interviewed and they also filled the questionnaire to participate in this study.

RESULTS

i) Through the investigation and research on the BSU Olympic volunteers ($N=100$) in 2008, it was found that the volunteer experience primarily influences the volunteers' individual behaviour in six ways. 1. Firstly, the volunteers became a faithful audience of the sports game they served; 2. Secondly, the volunteers may become future participants and propagators of the sports game they served; 3. Thirdly, the volunteers themselves understood and propagated Olympism. 4. Fourthly, volunteering can purify and sublimate the volunteers' mental world; 5. Fifthly, volunteering can enhance the team spirit of volunteers and especially the teamwork abilities. 6. Lastly, volunteers can improve their skills and communication abilities.

ii) Based on the Likert rating system, it can be concluded that the most important influence is to help volunteers themselves understand and propagate Olympism ($M=4.2646$). In descending order of importance, volunteers might become participants and propagators of the sports game they served ($M=4.2224$), volunteering may purify and sublimate the volunteers' mental world ($M=4.1157$), the volunteers have become a faithful audience of the sports game they served ($M=3.8963$), volunteering can enhance the team spirit of volunteers and especially teamwork skills and abilities ($M=3.7026$), volunteers can improve their skills and communication abilities ($M=3.2706$).

DISCUSSION

To go further into the topic, these influences can have positive effects on some less popular Olympic sports programmes, and, at the same time, help promoting the construction of volunteer service system of the whole Chi-

nese society.

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Psychol/motivation-4

Person-centered approach and its effect on anxiety management and social skills development in sports settings

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The purpose of this study was to investigate the effect of a person-centered approach on the anxiety management and social skills development in athletes. The sample consisted of 44 participants (C.G., N= 21, age 14.57 SD=1.03 and I.G., N=23, age 13.96 SD=0.88), all athletes of the Greek soccer association. The intervention programme used was the person-centered approach, applied for 9 months (once per week for 50 minutes) after training. M. R. F. and CSAI-2 instruments were used for the evaluation measures prior and after the application of the intervention programme. In terms of somatic anxiety, statistically important differences were observed in the Intervention Group (I.G.) between the 1st and 4th measurement (M=1.26, SD=1.6, p<.001) and between 3rd and 4th measurement (F(1,42)=7.95, p<.05). Regarding self-confidence, statistically important differences were observed between the 2nd and the 3rd measurement (F(1,42)=3.95, p<.05) and between the 1st and the 4th measurement (M=1.39, SD=2.48, p<.05) in the IG. Regarding state anxiety, (CSAI-2) statistically important differences were also noticed between the 1st and 2nd measurement ((F(1,42)=5.62, p<.05), the 3rd and 4th measurement (F(1,42)=6.20, p<.05) and between the 1st and 4th measurement in the IG (M=5.70, SD=6.13, p<.001). As for trait anxiety, statistically important differences were observed between the 1st and 2nd (F(1,42)=9.84, p<.001), the 3rd and 4th measurement (F(1,42)=6.92, p<.001) and between the 1st and 4th measurement (M=7.04, SD=6.75, p<.001) in the IG. No statistically important differences were observed in the Control Group.

The statistically important reduction of somatic and state anxiety in the IG is attributed to the beneficial effect of the person-centered approach that helped soccer players to manage and reduce their somatic anxiety related to the possibility of injuries or physical damages during training or matches. An interesting finding is that athletes' self-confidence considerably decreased after the application of the method as compared to initial measurements. This result can be attributed to the fact that anxiety has

a negative (destructive) and a positive (constructive) nature, thus, anxiety reduction causes the reduction of both of its natures respectively. Consequently, reduction of positive anxiety causes the reduction of self-confidence for the reason that an athlete cannot use imagination or find proper solutions to achieve higher performance. Limitations of the study included the small sample of participants and the administration of treatment by only one PCA expert. Thus, future researches should include an additional PCA expert as an inter-observer being present throughout the study. Future researchs should compare the PCA application as opposed to other psychological approaches in sport settings.

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Keywords: soccer, person-centered, social skills

Psychol/motivation-5

Analysis on coaching patterns of Taekwondo Masters in Korea

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Introduction

The purpose of this study is to analyze the coaching types of Taekwondo Masters.

Methods

To conduct this study, we selected five taekwondo masters by purposive sampling. Five Taekwondo Masters were varied in age, education and force, and they finished the course to become a Taekwondo coach conducted by Kukkiwon, the World Taekwondo Headquarters. Their taekwondo experiences are 25 years, 28, 30 (two persons), and 33 respectively, which shows they have a lot of experience. Moreover, the length of their taekwondo coaching careers are 11 years, 14, 15, 20, and 23 respectively. We applied a qualitative study method to gather data with the help of training logs, participating observation, in-depth interviews and then analyzed and interpreted the contents. Through a such research design, we were able to categorize four coaching types of Taekwondo Masters.

Results

Firstly, the coaching type of active participation is most apparent in the main stage of training. Taekwondo Masters gave trial performances from the beginning to the

end and fully explained with constant interest. Taekwondo Masters mostly use this type of coaching when the audience consists of elementary students. They also make perfect training plans and give a short and clear feedback to make most use of the class hours, to mention some features.

Secondly, the coach-centered coaching type, is that they lead a training centered on Taekwondo Masters. The exercise intensity is very high, and Masters think that the more the trainees sweat, the better the training is.

Thirdly, in the learner-centered coaching type the trainers and trainees exchange their roles with each other. Taekwondo Masters induce participants to get involved themselves, so it is the type of adjusting by facial expressions or by the condition of the trainees.

Lastly, the coaching type of a director is apparent mostly in skilled people with high grades, in leaders teaching

players, and is expressed with non-teaching behaviours. This type of a coach places importance in the whole flow of the context rather than on details, and shows one's interest in teaching circumstances or in arranging a certain kind of an atmosphere.

Conclusion

Ideal Taekwondo Masters place the biggest importance in personality, and in order for the Taekwondo Masters to teach taekwondo well, they are to give constant interest to trainees with regard to the teaching of exercise functions, and for this, it is important for Taekwondo Masters to ceaselessly try and be devoted to the image of studying.

Keywords: ideal teaching, coaching pattern, taekwondo, type of teaching, Taekwondo Master

Oral Targets of Sport for All: Adults and Elderly 1

Targets: Adults 1-1

Sports within the workplaces 2010 project: goals, outcomes and future

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At the end of 2005, a new project of cooperation aiming at promoting sports and physical activities within the workplace was launched together by the major trade union confederations, namely the SAK-Central Organisation of Finnish Trade Unions, the AKAVA- Confederation of Unions for Academic Professionals in Finland and STTK- Finnish Confederation of Salaried Employees, by the major employer confederations, namely EK- Confederation of Finnish Industries, the Office for the Government as Employer, the Commission for Local Authority Employers and the Commission for Church Employers, by the major sport organisations, namely the Finnish Sports Federation, the Finnish Sport for All Association and the Finnish Workers' Sports Federation-TUL, as well as by three ministries, namely the Ministry of Education and Culture, the Ministry of Social Affairs and Health and the Ministry of Employment and the Economy.

To run the project, a structure comprising of an advisory committee and its presidium, a steering committee and working groups for Sport for All specialists, for labour market specialists and for communication specialists, was created. The project manager was the only employed person. The total amount of expenses by the end of this year will be 436 000 euros.

The initial goals were to find and spread good practices of physical activities for workplaces and to create models and structures to link sports and other aspects of working life like health and safety at work. In the course of the process, another important goal was devised: the development of people's working careers through sports activ-

ities and personal well-being.

By autumn 2007, 8 pilot projects were launched in different kinds of workplaces. Those places had the liberty to organize their intervention as they wished. Special attention was paid to persons who were rather sedentary or who only occasionally practised some physical activity. It was also important to focus on the cooperation between employers, employees and the healthcare system of the workplace. Two dissertations about the pilot projects and their progress were made by two university students. A guide for sports within the workplace was published. An overall evaluation was made by an independent researcher.

The most important result is the co-operation structure of the project itself. For the first time in the history of the Finnish labour market and sports, project partners are around the same table and they are committed to improving sports in the workplace. The model on how to organize sports within the workplace was found, thanks to the pilot project experiences. Another important outcome was the discovery of a big gap between the health care system at work and actions to improve employees' physical activity.

Now that the first leg of the project is ending, the partners are committed to establishing a lasting model to further improve the current state of sports within Finnish workplaces.

The project is funded by the Government of Finland: the Ministry of Education and the Ministry of Social Affairs and Health and Finland's Slot Machine Association RAY.

Keywords: trade union, workplace, employers, sports within the workplace, labour market

Targets: Adults 1-2**Pedometer-determined physical activity among Finnish adults: variation by age, sex, and socio-economic position**

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Introduction

Pedometers provide an objective measure of habitual physical activity that is feasible for use in large, population-based studies and physical activity promotion. Although information from different countries on population-based pedometer step counts is increasing, the need to collect and describe values for various populations across the world has been emphasized (Tudor-Locke et al, 2004). The aim of this study is to report daily steps among Finnish adults aged 30 to 45 years and to compare the step counts between different days of the week, and sex, age, education, employment status, and occupational groups.

Methods

Data were collected from 1,853 participants during winter 2007-08 as a part of the 27-year follow-up of The Cardiovascular Risk in Young Finns Study. Participants wore an Omron Walking Style One (HJ-152R-E) pedometer for seven consecutive days. Student t-tests and one-way ANOVA were used to evaluate differences in means of total steps and aerobic steps (gathered in bouts of at least 10 minutes of continuous ambulatory activity) in group comparisons. Two-way ANOVA models were computed for groups defined by age and sex, and repeated measures were computed by ANOVA models for sex and day of week.

Results

Participants averaged 7499 (SD 2908) total steps per day and 1925 (SD 2052) aerobic steps per day. Women (7824, SD 2925) took more total steps than men (7089, SD 2774) ($p < 0.001$). Approximately 15% of men and 20% of women took more than 10000 steps per day and would be classified as active, while 25% of men and 16% of women took less than 5000 steps per day and would be classified as sedentary, according to pedometer cut-points proposed by Tudor-Locke and Bassett. Although participants had higher mean total steps on weekdays than on weekend days, they took more aerobic steps on weekend days than on weekdays ($p < 0.001$). High level

non-manual work and unemployment were associated with having fewer total steps, but high level non-manual workers had more aerobic steps than other occupation groups.

Discussion

These results serve as a foundation for step comparisons with other populations. When comparing the mean total step count to other studies, the present sample is more inactive than other European populations from Switzerland (Sequeira et al, 1995) and Belgium (De Cocker et al, 2007) which have reported approximately 9,000-10,000 daily steps. In contrast to results from previous studies, we found that women took significantly more steps than men.

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Keywords: recommendations, adult, steps, physical activity, pedometer

Targets: Adults 1-3**Activity behaviour and behaviour change of adults from an intercultural perspective**

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Introduction

Not only in Germany but increasingly also in China there is a huge prevalence of the risk factor "physical inactivity" among the adult population. To avoid health-related problems and diseases (and as consequence rising costs in the health care system) based on sedentary behaviour, it is a national task to motivate a higher percentage of the population for the beginning and maintenance of regular physical activity. To develop effective interventions determining the process of behaviour change from inactivity to activity, it is necessary to have competent knowledge of the process and of the most important factors influencing physical activity behaviour.

Based on the discussion and the studies in health and behavioural sciences, we developed the FIT-Stage-Model of behaviour change, which describes, on one hand, the process of behaviour change from "Not considering to be physical active" to "Maintaining physical activity". On the other hand, the most relevant mediators and moderators both on the side of the person and the context are integrated in the FIT-Stage-Model, e.g. attitudes, motivation and orientation on the side of the person, activity-situation, activity-emotions and activity-support on the context side. Can this FIT-Stage Model be confirmed with respect to the determinants, on one hand, and to the health status, on the other hand? Both in Germany

and in China?

Methods

Sample: Data was gathered in Germany from $n = 176$, age 27 – 55, 45 % women; and in China from $n = 226$, age 27 – 55, 52 % women. In both countries the samples cover the different education levels (low, mean, high) and all six stages of activity (not considering, considering, preparing, exploring, maintaining, fluctuating). Measurement: The questionnaire includes the activity mediators' expectations, affective association, barriers, self-efficacy, body concept, plan for activation, stability of activity motivation, activity support, assessment and emotions connected with the activity situation. Secondly, the questionnaire includes aspects of the health situation, such as fitness, well-being, health complaints, chronic diseases, health satisfaction. Thirdly, the physical activity behaviour was obtained in details. Most instruments are based on established questionnaires, all instruments were again validated (e.g. factorial structure, internal consistency) within the samples in both countries.

Results

* We find in Germany as well as in China the expected correlation between the stage of activity and health situation –this means that people who are more active, are also healthier.

* Planning the activity is the only mediator, which is not discriminating between the activity stages. As for the other determinants, they seem to be suitable for use in intervention efforts.

Conclusion

The FIT-Stage-Model seems to be adequate for describing physical activity behaviour change and is suitable for use in the planning of population interventions.

The study is supported by the German Academic Exchange Service and the China Scholarship Council.

Keywords: physical activity, intervention, stage model, behaviour change

Targets: Adults 1-4

Winning Woman! – Towards increasing the number of women in leadership positions

Doll-Tepper Gudrun

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In many countries around the world women's participation rate in sport is increasing. This progress has been made in recent decades. However, this trend is not mirrored with regard to the number of women in leadership positions in sport organisations. Statistics and studies show clear discrepancies between participation rates and leadership positions of women. In order to increase the number of women in leadership positions, the German Olympic Sports Confederation (DOSB) declared 2009 to be the Year of Women in Sport to win more women and girls over to sport and executive committees of federa-

tions and clubs.

"We have already recorded some important stage victories at a national level. The number of girls and women in organised sports has risen to more than 40 percent, but this is not reflected in sports management. Therefore stage victories are only half the battle. The managing functions are nearly always held by men. This is a challenge for all of us and particularly for our member associations" declared Dr Thomas Bach, President of the German Olympic Sports Confederation. A number of activities entitled "WINNING WOMEN!" were set up to show that the inclusion of women is a victory for everyone in the sports world.

In order to increase the number of women in leadership positions, the competition 'Women to the top' was arranged. Any club with projects and activities aimed at equal participation of men and women in club committees could enter the competition. The DOSB was offering systematic guidance of the member associations through this process, including professional advice and support from a female team of experts from sports, politics and sciences. The aim of this being to help the associations in implementing this task and at the same time use coaching activities to motivate women further, and to give them the confidence to take the road to the top. Leadership Talent Camps were offered to women who were either interested in a leadership position or had taken up one recently. At the camps, aspects of competence in communication and negotiation, rhetoric and conflict management were discussed. A management team of successful women from industry, the science community, the political arena and sport management assisted and supported the participants. Due to the great demands the competition Women to the top and the Leadership Talent Camps continue in 2010.

Chancellor Dr Angela Merkel had assumed patronage of the "Year of Women in Sport" and praised the concept as "exemplary". Support came from prominent women from the political and sports arenas such as internationally successful athletes like several times Paralympics swimming medallist Kirsten Bruhn, Anna Dogonadze, who won Olympic gold in trampolining, Steffi Jones, the former national footballer and President of the LOC for the FIFA Women's World Cup 2011 in Germany, and several times Olympic biathlon champion Kati Wilhelm.

Gender equality is a fundamental principle of the Olympic Movement. Following the basic ideal of Sport for All, the DOSB activities entitled WINNING WOMEN intend to not only give every woman access to sports and physical activity, independent of their age, social class, racial and ethnic heritage, but also aims at facilitating women's access to decision-making positions in sport. The Congress is a good opportunity to present the results of the WINNING WOMEN activities, to exchange experiences regarding gender equality in sport and to raise awareness of the essential role that women play for the future of sports worldwide.

Oral**Health enhancing physical activity (HEPA) promotion: Mission also for sport organizations?****HEPA promotion-1****Current status of HEPA promotion***van Mechelen Willem*

(Department of Public and Occupational Health, VU University Medical Center, Netherlands)

...

HEPA promotion-2**The role of EU in HEPA promotion***Velázquez Pedro*

(Sport Unit, EAC, Spain)

...

HEPA promotion-3**The national example of HEPA promotion: Case Finland***Vasankari Tommi*

(UKK Institute, Finland)

...

HEPA promotion-4**The national example of HEPA promotion: Case Switzerland***Kahlmeier Sonja*

(University of Zurich, Institute for Social and Preventive Medicine, Switzerland)

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Oral**Targets of Sport for All: Children and youth 2****Targets: Children 2-1****Youth sports club as an initiator of smoke and alcohol free facilities***Kokko Sami, Kannas Lasse, Villberg Jari*

(University of Jyväskylä, Finland)

Sports facilities are influential settings in which youth participating in sports club activities are exposed to potentially unhealthy role model behaviour by adults, which is important when considering that research has shown sports club participating youth to be as equally at risk of developing snuff and alcohol use. Thus, the purpose of this study was to examine what youth sports clubs have done in order to achieve a smoke and alcohol free environment during youth activities, and to enquire if young athletes have witnessed substance-use in sports facilities during club activities.

The data is based on the sports club survey conducted during 2007 involving 97 youth sports clubs in Finland. The survey reached 273 club officials, 240 youth coaches and 646 young athletes from four sports disciplines. The data was analysed with distributions and cross-tabulations.

Despite that most of the coaches considered their sports facilities as smoke and alcohol free or almost so, every fourth youth had witnessed alcohol use, almost half oral snuff use and two-thirds smoking within sports facilities. From the club's perspective, two-thirds of club officials stated that their club has been passive regarding initiation of substance use prevention policies of sports facilities that had to be prompted into action by the facility manager. For example, every fourth club had not dis-

cussed at all and every third only a little about substance-related regulations of the sports facilities with the facility managers. Furthermore, co-operation with other sports clubs on these issues had been rare for the majority of the clubs. The activity of the clubs' improved when the perspective was changed towards the clubs guidance to coaches and other club officials; two-thirds of the clubs had guided their actors on smoke and alcohol free environments fairly often.

There were some differences between different kinds of clubs; based on club officials' evaluations, team sport-focused clubs had been more active in both discussions on sports facilities and in guidance of their own actors ($p < .001$) than individual sport-focused clubs. Similarly, single discipline clubs were more active in guiding their coaches ($p = .001$) than multi-discipline clubs. Moreover, quality certified clubs were more active on guidance given to club officials ($p = .008$) than non-certified.

On the basis of the results presented here, it can be said that Finnish youth sports clubs have not invested enough effort on environment-based factors that relate to smoke and alcohol free sports facilities. Accordingly, young athletes' various observations on substance-use indicate that sports facilities are not smoke and alcohol free at the moment. Thus, in order to achieve smoke and alcohol free environments during youth activities, more active dialogue between the facility management and the users (clubs), as well as between different actors within sports clubs, can be called for.

Targets: Children 2-2**The importance of role models in encouraging adolescent girls to be more physically active**

Kirby Joanna

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Introduction

A key challenge is establishing and maintaining adolescent girls' involvement in physical activity. Several variables are associated with participation; however, understanding ways in which to address these important determinants is critical. The relevance of role models in relation to health risk behaviours has previously been identified. Practitioners have suggested the need to understand the impact that role models could have on girls' physical activity, and identified a gap in the synthesis of the available academic and grey literature. The purpose of this review therefore, was to summarise and discuss whether engaging role models in the community is beneficial in encouraging physical activity among adolescent girls.

Methods

A literature review was carried out, using a selection of primary research and systematic reviews. Key databases were used to identify both academic and grey literature. Where possible, studies published within the last 10 years were drawn upon; however older key papers were also included where appropriate. Search criteria remained broad in order to capture all available research in the area of role models and physical activity among adolescent girls.

Results

The literature suggests that the use of role models differs between genders and changes with increasing age. This highlights the importance of acknowledging differences between boys and girls in their use of physical activity role models. Adolescent girls draw their role models from a variety of sources, including parents, teachers, peers, sports stars and media figures. However, similarities between themselves and their role models appear to be a key factor, with female PE teachers, and mothers providing particularly relevant role models among this group. The family remain as popular role models, even as girls become older. Sports stars may have a role to play in increasing physical activity among girls; however, it is important for girls to feel that they are able to relate to that athlete in some way.

Discussion

Role models are an important factor in relation to adolescent girls' physical activity, and as such need to be understood and applied within the context of other potential influencing factors. Involving parents in physical activity interventions may be an appropriate strategy to adopt. Furthermore, PE teachers have an important role to play in identifying their pupils' motivations, as well as engaging with a wide variety of girls with different physical activity aspirations. Further research into the specific use of direct role models, such as mothers, teachers and

peers, would add to the knowledge already surrounding this area, and help inform appropriate interventions targeted specifically at this group.

Acknowledgments:

This review was supported by a 'Knowledge Exchange on Public Policy in Scotland' grant funded by the Scottish Funding Council.

Keywords: role model, physical activity, adolescence, girls

Targets: Children 2-3**The proportion of active transport to school among 10-year-old children and changes over 1 year in a mid-sized European city**Titze Sylvia¹, Kohlberger Theresa¹, Hofbauer Nicole², Uranitsch Gudrun²(Institute of Sports Science, University of Graz¹, Austrian Mobility Research, Graz², Austria)

Introduction

For children it is recommended to accumulate at least 60 minutes of physical activity during a day. Active transport to school provides the kids the opportunity to accumulate daily physical activity. Because of the many possibilities to reach the school by motorized transport it is assumed that the proportion of pupils actively commuting to school is not very high and that there is a decreasing trend in active transport to school. The aim of the study was to examine the commuting mode of primary school children and to compare the behaviour with the commuting mode of children of the same age one year earlier. Furthermore, kids were asked about their preferred transportation mode.

Methods

In the city of Graz (Austria) 1071 kids (51% girls, mean-age 10 years, SD=0.76) were asked about their commuting habits to school applying a questionnaire in 2009. Twenty seven out of the total of 39 schools in the city of Graz participated. The children were divided in those who actively commuted to school (walking, cycling or scooter) and those who mainly used motorized transportation.

The results were compared with a similar survey which took place in 2008 among children of 8 schools (N=271). Chi-Square test was used to compare the differences in the commuting behaviour between 2008 and 2009.

Results

In 2009, 56.6% of the 1071 children commuted actively to school. In 2008 the proportion was 50.6%. The difference from 2008 to 2009 was not statistically significant. There is a clear difference between the actual commuting mode and the preferred commuting mode. Almost 70% of the children would like to use the bicycle or the scooter to go to school. Public transport and car were not among the favourites.

Discussion

The proportion of 10-year-old kids actively commuting to school in the city of Graz is lower compared to Switzerland (about 70%) but higher compared to U.S. (about 13%). Given the fact that motorized transport increases, in general, changes in the physical environments near schools to increase the safety of active commuting are needed in order to maintain or even increase the proportion of active commuters.

Targets: Children 2-4

Swimming and Lifesaving for Juniors – an important start for a lifetime Sport for All

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INTRODUCTION

Swimming and lifesaving are important kinds of sport

- in the fight against drowning and to reduce the number of drownings (world-wide 500.000 to 1.000.000 per year)
- for improving the health of young and elderly people.

METHOD

1st Step:

It is recommended to start as early as possible with swimming lessons and train the risk prevention and self-rescue methods with young children.

After babies and infants become familiar with the water, a basic knowledge can be taught:

- in kindergartens,
- in schools,
- in clubs,
- in holiday resorts, etc.

2nd Step:

After this first education, it is very important to make swimming attractive for these children. This can be done by:

- a systematic further education in swimming, jumping and diving in conjunction with an award system,
- demonstration and training of various self-rescue techniques,
- offering swimming competitions as individual and team disciplines.

3rd Step:

At the age of 10 to 11 years, first elements of lifesaving should be added (aim: "Junior Lifesaver"):

- diving and simple searching under water,
- towing and transport techniques,
- techniques for leaving the water.

4th Step

At the age of 12/13 years the education as (basic) Lifesaver* can start. At the same time the further education and training in swimming must be continued.

Additional disciplines could be:

- swimming with obstacles,
- towing of victims at different distances,
- simulated rescue cases,
- First Aid and CPR.

Also in this phase competitions are a popular incentive.

5th Step

A specific swimming training and the education as Lifesaver **/Lifeguard*** should follow. This training includes attractive elements as:

- skin diving,
- scuba diving (rescue diving),
- simulated rescue case in pools, lakes, rivers and at the beach,
- paramedical education,
- rescue management,
- participation and practical experiences in the voluntary lifeguard service.

Varied training and competitions complete the programme and make it attractive. Special awards are an additional incentive.

Beside the own regular training, the lifesavers can be qualified as instructors or trainers. These excellent qualified experts then become the educators of young people, where they can spread their long standing experience and knowledge.

RESULT

Swimming and lifesaving is a very attractive sport for juniors and can be varied with age. New incentives can be involved at all times. Swimming and Lifesaving for Juniors is the start for an important lifetime Sport for All. With such programmes the infants, children and adolescents are introduced to the humanitarian engagement by the means of sport, which they can practise lifelong.

Swimming and especially lifesaving Sport for All with its attractive programmes for all ages offer the chance to:

- reduce the rate of drownings,
- health support and
- integration of different human groups.

Swimming and lifesaving is one of the best and most relevant of lifetime Sport for All.

Lifesaving associations, which offer such Sport for All programmes, have in addition the advantage of constant or increasing number of participants and members, which is contrary to the demographic development (for example in Germany we have almost 50% less children and youth compared with 1975).

Another positive effect for such associations is an increasing degree of fame, improving of the income as well as an increasing number of employees.

Keywords: swimming, lifetime, sport, lifesaving, juniors

Targets: Children 2-5

Country report: Sport for All as a tool for youth education

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(Italian National Olympic Committee, Italy)

Introduction

Educating the youth is an essential task for each human society, decisive in the progress of civilisation.

However, today this educational task has become more

difficult and complex in industrialised as well as in developing countries, even if due to different causes and with different dynamics in both realities. In the West, the problem arises owing to a set of new and contributory factors that have weakened the educational role played by family, school, world of work and media. The Third World is paying for the shortage of means committed to education, now exacerbated by the global financial and economic crisis. The Italian case is presented as a paradigm of the educational problem: why we speak – and even the Catholic Church speaks – of educational challenge to be fought and won if we want to ensure the future of the country.

Development

The term "youth education" involves a different concept that is wider than "youth teaching". How the shared aims of youth education today are defined today? The purposes of education of the younger generation according to the "Convention on the Rights of the Child" presented by the UNO in January 1990 and other "international charters".

The acknowledgement of the effectiveness of sport as a tool of informal education. Three debate stages:

2004, "Year of Education through Sport" for the European Union; the 10th IOC World Congress "Sport for All as a tool for education and development"; 2005 "International Year of Sport and Physical Education" for the UNO. Indications and recommendations.

Conclusion

To perform its educational functions to the utmost degree, Sport for All shall be organised and practised on the basis of specifically individuated principles and criteria.

The benchmarks of a sport which has an ideal educational effectiveness are:

- Educational intentionality
- Values and aims
- Planning and flexibility: different models and tools for different contexts
- Voluntary work and operators' training
- Sports club and associational network
- Relation to the social community

Sport for All should be considered a more suitable sport form to attain educational ends among youth age groups.

Keywords: country report

Oral

General policies serving Sport for All 2

Gen Policies 2-1

Quebec en Forme : a public and philanthropic alliance to support communities' mobilization on active living and healthy eating environments.

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INTRODUCTION

Quebec is a province with a long history of leisure and transport type of physical activity promotion. Despite efforts invested over the years, children and youth are not markedly active, i.e. only 40% meet current recommendations. The most pressing challenges to change the situation are to make the decision makers in all walks of life concerned about children and youth leisure and transport physical activity, to ensure physical and financial access for all children and youth and to see that the animation and the infrastructures are of the top quality.

DEVELOPMENT

Quebec en Forme (QEF) is an initiative stemming from a unique partnership between philanthropy and government. Created in 2007, its aims by 2017, to build healthy eating and active living (HEAL) environments for children and youth, through an extensive support of local communities' mobilization projects, including native communities.

Except from its provincial office, the structure is decentralised and staffed with territory directors, nutrition and exercise specialists, technology assistants and office assistants. Each directorate supervise 4 to 6 regions, each

one being staffed with regional agents and development agents mostly trained in social development, social work or community development. Their function is to assist the projects stakeholders according to the terms of reference specific to HEAL and Community mobilization (written under the guidance of expert committees). QEF has an overall budget of 14M CAD.

Indicators, assessment and planning tools, seminars, etc., were developed for the agents and the local partners. Alliances were officialised with the Ministry of Health, to avoid the work in silos in regard to the government fight against obesity, with the 2007-2017 400M CAD Healthy Living Fund, to ensure that nationally funded projects serve as catalyst to the local projects aiming to build HEAL environments and with various NGO, to ensure that their broad national service offer can be applied to the local organizations.

A knowledge mobilization strategy is currently under review to harness the knowledge of local partners, to establish a dialogue with the scientific community (on the basis of such knowledge) and to deploy means (web 2.0, annual meeting, QEF «university», research briefs, bulletins, etc.) susceptible to induce change in the practice of local partners and foster innovation.

CONCLUSION

Preliminary analyses show local communities' endeavours still being nested in traditional roles (activity programming, installation sharing and resources' training). Community mobilization is recommended but it challenges the common understanding of the environmental

correlates of HEAL and the ability to identify the strategic levers susceptible to induce sustainable effects.

Keywords: youth, environments, physical activity, community mobilization

Gen Policies 2-2

Improving Infrastructures for Leisure-Time Physical Activity in the Local Arena (IMPALA): Mechanisms in use for developing infrastructures

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The EU-sponsored IMPALA project aims at identifying, implementing and disseminating good practices in the planning, financing, building, and managing of local infrastructures for leisure-time physical activity (LTPA) in twelve EU member states.

The project concerns different groups of sports and recreational facilities. This presentation concentrates on the mechanisms for the development of local infrastructures for LTPA identified by IMPALA.

The main source of information was a document analysis and, and in case of necessity, also individual interviews with experts. Both were guided by a semi-structured questionnaire.

National level administration defines the mechanisms and instruments at a high degree in smaller countries and in homogenous administrative environments. In all countries legislative documents exist to encourage people's active lifestyle, yet the development of infrastructure is often left out of its extent. Sports facilities in schools are encouraged to be utilised outside of educational activities only in some of the participating countries.

In most countries the mixture of four basic types of planning methods (inventory, per capita approach, needs assessment, participatory planning) are in use. Some kind of inventory on sports facilities has been performed in virtually all countries, though they show large differences in content and possibility of utilisation. Quantitative (per capita criteria) measurements are in use in half of the participating countries. Positive experiences of participatory and bottom-up planning were reported in small livinghoods, where people can have an influence on the development of "their own" LTPA facilities. "Allotted planning" was reported from South, inter-sectoral involvement from Northern Europe.

Public money is the main resource of sport and LTPA infrastructure development. Private funding is involved for facilities with forecasted profitability, marketing value or as an important "goodwill" target of the financier. Wealthy third sector organisations recently became involved in LTPA development projects. Public-private partnership attempts are not common yet.

Public procurement regulates mostly contractor selection,

where price is the decisive factor. Recently the quality (a longer lifespan expected together with the everyday higher comfort of use) is gaining in importance. The role of lobbying in the selection was denied by the Nordic countries, but admitted by a number of others.

In managing LTPA infrastructures the owner is responsible for the physical existence of the facility or infrastructure and the service provider is responsible for the provided service. Various forms of management practices, including the self-performed and sub-contracted forms, have been developed and released in different countries. We found a South to North and a large to small municipality trend; versatile models are common in the Southern countries and in large municipalities, and monochromes in the Nordic countries and in small municipalities.

Results of IMPALA will assist in concerting efforts for the development of local infrastructures for leisure-time physical activity in the EU member states, thus helping to reduce inequalities in access to infrastructures for leisure-time physical activity within and across nations.

Gen Policies 2-3

Creating active environments through citizens' participation: An open challenge

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The creation of active environments is continuously becoming a more relevant issue for those integrated projects aimed at interweaving several fields of public policies. Moreover, on the fields of town planning and mobility, the most advanced European experiences aim at more sustainable environments, in which the body plays a crucial role, and to a greater involvement of citizens.

The participative processes concerning the planning of active public spaces, whether carried out in a top-bottom or bottom-up strategy, developed intentionally by local administration or informally managed, can enhance active citizenship, especially among young people who live the public space as an embodied space. The speech presents the results of a qualitative research based, from a theoretical point of view, on the relation between the body and town planning while the applicative field of the research concerns the study of participative town planning processes and active environments in some European cases.

The tools of the research were interviews with key informants, direct observation, and an extensive documentary research.

The relation between body, town planning and architecture changed dramatically when the meter was adopted as the unit of measurement, later the theme of hygiene led the scene, just as today sustainability is the focus of many projects. At any rate, the body, whether it is highlighted as an indicator or disregarded, remains crucial in the social construction of the space. On one hand, the latest approaches and suggestions concerning

public spaces and mobility after Traffic Calming (Shared Spaces, Slim City, Vision Zero) emphasize expression of the body and responsibility as the main frame of urban safety and liveability. The urban landscape which derives from those approaches, encourages walking, cycling, walk-to-school projects and postmodern activities like skateboarding and parkour, as well as a wide range of bodily practices and sports often brought by immigrants, like cricket and ecua-volley and traditional games like pelota, petanque and flag throwing.

Participation can be expressed in many ways and can be directed towards the construction of active environments. Sensitization and involvement become crucial in the project aimed at enhancing active life styles and in planning spaces for everyday life.

No general successful methods and answers can be applied throughout Europe. Nevertheless, the speech shows the different tools and methods of involvement in formal and informal situations: Internet-based platforms, research-actions, street workshops and informal appropriation of public spaces.

Keywords: body, public space, town planning, participation, sports

Gen Policies 2-4

What motivates Finnish adults to participate in leisure physical activity?

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INTRODUCTION

Sedentary lifestyle is a serious health problem. Thus, there is a need to increase knowledge about participation motivation in adult populations. The aim of the study was to analyze reasons for participating in leisure physical activities.

METHODS

The participants of the study were 288 adults involved in the family physical activity courses in the Sports Institute Pajulahti in Finland during summer 2007. The participants responded to the Finnish version of the Recreational Exercise Motivation Measure (Rogers & Morris 2003). Responses were indicated on a 5-point Likert scale (1=strongly disagree . . . 5=strongly agree). In order to validate the scale for Finnish adults, the psychometric properties of it were analyzed. Background information including age, gender, and physical activity intentions was also collected.

RESULTS

Three dimensions with eight sub-dimensions were revealed using the exploratory factor analysis. The Cronbach alpha scores showed good internal consistency for the sum variables. "Intrinsic motivation" consisted of sub-dimensions of enjoyment (alpha 0.92) and task orientation (0.90), "Social motivation" consisted of social relatedness (0.92), ego orientation (0.92), and others' ex-

pectancies (0.83), "Body-Mind wellbeing" consisted of the sub-dimensions of appearance (0.87), mental well-being (0.90) and physical well-being/health (0.83). The motive scores were highest for physical well-being/health (mean score males/females 4.46/4.65), enjoyment (4.14/4.35), and mental well-being (3.84/4.15). T-tests revealed that females scored higher than males in enjoyment ($p=0.014$), mental well-being ($p=0.003$), physical well-being/health ($p=0.007$), and in appearance ($p=0.001$). With age, others' expectations of physical activity increased, and the role of appearance decreased. Enjoyment, physical and mental well-being, and task orientation correlated positively with physical activity intentions.

DISCUSSION

The motivation scores were highest for physical well-being, enjoyment, and mental well-being. This result demonstrates the strength of intrinsic motives. Partial support for the importance of some extrinsic motives was also evident in adults' voluntary participation in leisure time physical activities. The results support Deci & Ryan's (2000) theoretical view on intrinsic motivation as a key factor in involvement in voluntary activities. Prediction of continuing active participation was associated most strongly with enjoyment, but also with mental and physical well-being. Females scored higher than males in these motives, which seems to be the most important cue for the advertiers of fitness training services. Social motives, others' expectations, and appearance appear to be less effective arguments in promoting commitment to on-going physical activity.

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The Finnish Sports Institute Foundation has financially supported this study.

Gen Policies 2-5

Square leisure culture and the construction of a harmonious, healthy and civilized lifestyle

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Square leisure culture has played an increasingly important role in ordinary Chinese people's lives. How to meet the demands of people in their leisure in the city squares, and to explore the relationship between square leisure culture and the construction of a harmonious, healthy and civilized lifestyle, is a task that different stakeholders such as the government and related organizations should take into consideration. This paper discusses the core functions of square leisure culture, explores the relationship between them, and further puts forward four suggestions. Some leisure square in Zhejiang and Hunan Province etc.

have been used as case studies. The results show that leisure squares have provided a platform for the catharsis, and that the construction of square leisure culture is an effective way to enhance harmony in society; the squares are also a platform for mass leisure artistic and physical activities. Therefore the construction of square leisure is also an effective way to promote a healthy and civilized lifestyle. Four suggestions are made, concern-

ing: The promotion and making full use of the core functions of square leisure; to make policies to ensure the planning and supply of square leisure culture; the expansion of the service function; the coordination of the efforts of different stakeholders. Square leisure culture is a crucial resource for the city, and it can facilitate the construction of a harmonious, healthy and civilized lifestyle.

Oral

Activity/inactivity profiles in Sport for All

Activity/inactivity-1

Motor skill problems in childhood predict physical inactivity in adolescence

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Introduction

Motor skills are the underlying performance competence required for many types of physical activity. Childhood motor skill proficiency may thus be an important factor in determining physical activity level both in childhood and in later life. However, little longitudinal research has studied this relationship. This prospective longitudinal study evaluates the relationship between motor skill proficiency in childhood and physical activity level in adolescence in the Northern Finland Birth Cohort 1986.

Methods

The study sample consisted of 6527 children, whose parents responded to a postal inquiry concerning their children's motor skill proficiency at the age of 8 years. Children themselves reported their participation in physical activity at the age of 15-16 years. Physical activity level was described as metabolic equivalent-hours based on the intensity and volume of physical activity, and was divided into quintiles. Adolescents in the lowest physical activity quintile were classified as physically inactive. Odds ratios (OR) and their 95% confidence intervals (CI) for the level of physical activity at the age of 15-16 years were obtained from multinomial logistic regression and adjusted for body mass index and parental socio-economic position.

Results

Boys (OR 2.3, 95% CI 1.4-3.7) and girls (OR 2.0, 95% CI 1.0-4.0) with problems in gross motor skills in childhood were more likely to be physically inactive in adolescence, when compared to their peers without these problems. Problems in fine motor skills in childhood predicted physical inactivity in adolescence among boys (OR 1.9, 95% CI 1.4-2.6). Problems in fine motor skills in childhood did not predict physical activity in adolescence among girls.

Conclusion

Problems in motor skills in childhood may predict physical inactivity in adolescence, especially among boys. Supporting motor skill development in childhood may be an

important strategy to promote physical activity in later life and to prevent subsequent negative consequences of physical inactivity.

Keywords: child, longitudinal, physical activity, adolescent, motor skill

Activity/inactivity-2

A study of physical inactivity among the middle-aged from a socio-psychological perspective

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The degree of involvement in physical activity varies by country, region, work style, culture, gender and age. Influenced by the increased active population in developed countries as well as the increased concern with medical expenditures, there is a strong need to show the negative factors influencing the inactive lifestyle among the people. Recent studies indicate that there has been a significant decrease in involvement in physical activity among the middle-aged in Japan (Ikeda et al., 2002; Yamaguchi, 2007). Furthermore, in Japan, the obesity ratio is the highest among the middle-aged. The middle-aged have strong mental pressure in their workplaces as well as their home for child care. It is important to identify the factors influencing physical inactivity among the middle-aged, and this is also the purpose of this study.

Physical inactivity is conceptualized as a dichotomous variable of who is an active participant in exercise and sport activities (more than once a week) and an inactive participant (less than once a month). A review of the literature indicated that personal attributes, healthy lifestyle, such socio-psychological factors as competence, outcome experience, flow experience, and quality of life, determine the degree of involvement in exercise and sport activities (Bandura, 1986; Chogahara et al., 1998; Dishman, 1988; Yamaguchi, 2009). An analytical framework consists of personal attributes (free time, economic index), healthy lifestyle (walking time, health status, BMI), socio-psychological factors (competence, outcome expectations, flow experience) and quality of life (life satisfaction).

A questionnaire survey was conducted in two cities in Hyogo prefecture, Japan, from July 2nd to 31st, 2007. A questionnaire was provided to members of community sport clubs who were over 30 years and less than 59 years old, while members were asked to provide another questionnaire to their friend who was inactive in exercise and sport activities. Response rate was 89.3%, while 1,076 questionnaires were returned. Within the 1,076 questionnaires, 991 questionnaires were regarded as usable responses. Descriptive statistics and univari-

ate analysis were applied to data obtained. Furthermore, Hayashi's Quantification Theory (Nishida and Shin, 1984) was employed to determine whether selected independent variables would discriminate between the active group and inactive group.

Findings indicated that lack of time to conduct physical activities was an excuse for males, whereas having time was an important reason for females. Furthermore, the amount of walking time in a day and the inactive people's health status were lower than in the active group, while the BMI of the inactive people was higher than that of the active people. Inactive people have low competence in their physical fitness and athletic abilities, while they do not expect the effect and benefit of regular physical activities. Inactive people were less satisfied with their life than active people. Strategies for inactive people are discussed for enhancing Sport for All and physical activity.

Keywords: physical inactivity, Japan, middle-aged, socio-psychological factors

Activity/inactivity-3

Fit for Life's physical activity campaign on counteracting obesity

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Introduction

Obesity poses one of the most serious public health challenges worldwide. A reduction of daily physical activity together with increased consumption has resulted in overweight and obesity, also in Finland.

Fit for Life Program (KKI) is a government funded national health enhancing physical activity (HEPA) program focusing on sedentary adults. The Finnish government policy of health enhancing physical activity and nutrition has designed KKI on counteracting overweight and obesity of adults in Finland.

Take the chance campaign of KKI aims to create and develop new active tools for local authority networks in Finland, offer new material to support physical training and weight control, and via good practices increase physical activity and weight control among the target population.

Development

In autumn 2009 Take the chance seminars were organized in 18 towns to increase awareness and knowledge regarding HEPA and nutrition on counteracting obesity. The seminars were targeted for employees working at occupational health care, basic health care, for municipal service departments, for representatives of public or private organizations, sport clubs, as well as for representatives of research centers, educational institutions, and business.

At the seminars well-known experts of physical activity, nutrition, metabolic syndrome and motivational psychol-

ogy presented current results on their field of research. Regarding the seminar program KKI had close cooperation with the Finnish Diabetes Association and Finnish Heart Association. Local and national cooperation partners also presented their activities, equipment and tools for physical activity and weight control.

KKI provided financial support for the local organizer which mainly was the regional office of Finnish Sports Federation. Several provincial governments provided also financial co-support to cover local expenses.

Information about the seminars was disseminated widely via all networks involved organizing the seminars. KKI coordinated communications and marketing about the seminars as well as topics of the seminars for media.

Conclusion

In total, 1,843 people attended the one-day seminars. About 58 percent of the participants represented social and health sector. About 80 percent of participants attended the seminars relating to their work. The aimed target group was reached. 63 percent of the participants of the seminars gave feedback giving a score 8.5 (scale 4-10).

On a long term basis the aim of KKI is to create strong networks related to HEPA both at a national and local level. In case of Take the chance, KKI supported local authorities to create new, or strengthen established local service chains on counteracting overweight and obesity.

Keywords: networking, campaign, physical activity, obesity

Activity/inactivity-4

The effects of playing sport video games on youth sport participation

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With the development of new media technologies, sport video games (SVGs) modeling real life sports have become more lifelike to the sport images of traditional media outlets. Sport experience in a virtual environment enables younger generations to feel their initial emotional experience to a certain sport and increase their skill and knowledge related to that sport. SVGs are believed to create strong beliefs and more favorable attitudes toward a sport by facilitating youth learning from vivid and interactive experiences with the sport (Kim & Ross, 2006). Despite these perceived benefits of SVGs as educational tools, little empirical research has been conducted on the effects of new media on youth sport participation (YSP). The primary purpose of this study was to investigate the effects of SVGs on youth psychological and consumptive behaviors such as intention to participate in a real-life sport emulated by the SVG.

For the purpose of the study, Korean children in the analytical stage (7-11 yrs) were recruited from the popu-

lar game website: Magu Magu baseball game. During a four week period, a total of 258 participants, children (age 10.41 ± 0.59) completed the online survey. The survey included questions related to the frequency of playing SVGs, sport knowledge, sport interest and attitude, sport involvement, intent to participate in youth baseball programmes, and social-cultural factors which affect YSP. Each item utilized a 3-point Likert-type scale. The gaming frequency was measured by an open-ended question. In order to examine differences between the psychological and consumptive behaviours as a function of SVGs play, a one way between-group ANCOVA was used. Based on the individuals' amount of game use during a regular week, respondent segments were formed to compare gamers who were light, moderate, and heavy users.

Results of the ANCOVA revealed after adjustment by the covariates (Social-cultural factors), the frequency of SVG use influenced youth intent to participate in youth baseball programmes, $F(2,253)=6.49$, $p=.002$. A comparison of the adjusted means indicated moderate and heavy gamers had significantly higher levels of intent to participate in the baseball programme than light gamers. Moderate and heavy gamers had high levels of sport knowledge, more favorable attitude toward the sport and interest in the sport emulated by SVGs. However, moderate gamers showed higher levels of sport involvement than heavy gamers. Findings of this study indicated playing SVGs affects YSP as children play SVGs at a moderate level, supporting the idea that SVGs may increase sport knowledge and interests in sport participation.

Results also reveal that heavy gamers may sacrifice physical activities to play video games. Overall, the study shows the potential of SVGs as an educational tool. It is imperative that sport educators utilize SVGs to attract younger generations and promote YSP, especially among youth in the analytical stage in which children develop sport knowledge and social skills.

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Keywords: sport video games, youth sport participation, sport involvement

Activity/inactivity-5

Screen time of academicians in Turkey

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Background and purpose

Physical inactivity is a modifiable risk factor for cardiovascular disease, diabetes mellitus, cancer, obesity etc.

Screen time is one of the most important parts of physical inactivity. There is a general lack of information on physical inactivity trends in most countries. The purpose of this study was to examine screen time of Turkish academicians.

Methods

153 female and 334 male academicians (Mage=36.741, SD=8.67) participated in the present study. Physical Activity Assessment Questionnaire (PAAQ) and demographic information sheet were administered to the participants by self-report. Data were collected in Konya, Turkey. The term "screen time" refers to the combined time of both television and video viewing and computer use. In addition, the height and weight of the participants were asked in the questionnaire. The obtained data were evaluated according to gender, age, marital status, number of children, and Body Mass Index of the subjects. The differences in screen time (hours per week) for each variable were tested by using independent sample t test or one-way ANOVA.

Results

Screen time was calculated for weekdays (hours/weekday), weekend (hours/weekend) and for the whole week (hours/week). Screen time of the subjects was found to be significantly different according to their marital status, number of children, and age ($p<.05$), whereas no significant differences were detected in gender and Body Mass Index variables ($p>.05$). It was found that screen time decreased with increasing age. The screen time rate of single academicians was higher than that of married ones. Academicians who have no children had a higher screen time level than those who have two or more children. All the significant screen time differences were found in all the time calculations made (weekday, weekend, and the whole week).

Conclusion

The screen time of Turkish academicians was analysed in this study. Contrary to the earlier studies (Doh & Nayga, 2010), no screen time differences were obtained with regard to gender and BMI. We found that the academicians', especially of those who are single and young, screen time level is excessively high. The results indicated significant age differences in screen time. Similarly, Hagströmer et al. (2006) found significant age differences in sitting time. The average screen time of Turkish academicians was 6.62 ± 2.65 hours per day. They should be motivated to decrease their screen time.

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Keywords: academicians, screen time

Oral Health and Sport for All

Health-1**Health and socio-psychological factors related to the stages of exercise behaviour change in Japanese older adults**

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In recent years, promotion of physical activity based on behavioural science is at the center of attention in the field of exercise and sport in Japan. Transtheoretical model (TTM) is one of the behavioural science models. The stages of exercise behaviour change are the principal concept of TTM. The purpose of this study was to identify health and socio-psychological factors related to the stages of exercise behaviour change in Japanese older adults.

A survey was conducted by using a questionnaire. Data were collected from a sample of 412 students of senior colleges for the older adults in Osaka prefecture from July to September in 2007. The variables consisted of personal attributes, stages of exercise behaviour change, health factors and socio-psychological factors. Personal attributes consisted of gender, age, height, weight, and family structure. Stages of exercise behaviour change consisted of five stages: precontemplation, contemplation, preparation, action, and maintenance. The health factors consisted of cognition of health status and health behaviour. Health behaviour consisted of 14 items, such as nutrition, rest, stress and so on. The social factor consisted of human support including exercise instructor, family, friends and exercising peers. The psychological factors consisted of exercise self-efficacy, flow experience and outcome expectations. Exercise self-efficacy consisted of 4 items: confidence for distress, stress, lack of time, and bad weather. Flow experience meant exercise and sport satisfaction. Outcome expectation consisted of 13 items including positive and negative expectations. Descriptive statistics and variance analysis were conducted with SPSS11.5J.

More than half of the subjects were females. The average age was 67.5 ± 4.7 years. 47.3% (n=195) of the sample were males and 52.7% (n=217) females. 52% (n=195) of the sample were in the stage of maintenance. Almost 20% consists of subjects in precontemplation and contemplation; these subjects did not participate in exercise regularly. 21.9% were in preparation and 17.9% in precontemplation phases. Significant differences between males and females could not be examined. All variables in this study indicated significant differences in the stages. Cognition of health status, health behaviour, human support, exercise self-efficacy, flow experience, and outcome expectations were highest in the maintenance stage. Health behaviour, human support, exercise self-efficacy, flow experience and outcome expectation were lowest in the precontemplation stage. Cognition of health

status was lowest in the contemplation stage.

Most variables in this study were significantly related to the stages of exercise behaviour change in Japanese older adults. Health and socio-psychological factors should be considered to be more important in order to enhance the stages of exercise behaviour change in Japanese older adults.

Keywords: older adults, transtheoretical model, socio-psychology, factor, health

Health-2**Health Sport Environment**

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Introduction

The authors have a background of more than 20 years of studying the influence of the physical exercise on healthy and pathological subjects. The collaboration with the International Sport Climbing Federation, very attentive to Sport for All topics, facilitated in conducting this study.

The focus of this study is the promotion of physical and mental health through sport (indoor and outdoor sport) in subjects of different ages, involving school and work places, as well. The training of the Sport University students was conducted according to the input of Sport for All 2008.

The scope of this study is national.

Methods

We proposed a questionnaire to be completed by children of ages 6-13, to offer them the opportunity to voice their opinions about the sport school and to collect information about their lifestyle, health and their problems. We compared the results with those from the same questionnaire proposed in 2002.

We examined two different groups of working subjects: 25 employers and administrators of a village (age 30/55) as well as 124 Italian soldiers (age 28/60).

We proposed a programme of multidisciplinary training, including sport climbing that is a very spontaneous activity for the children (however, we are losing the vertical movement). Examination took place after 3 months and after 1 year.

Five students at the Sport University of Perugia compiled their graduation theses on Sport for All health topics through projects involving local and immigrant people.

Results

A high percentage of the children (most of them practice only one sport) and adults were overweight. All of the people need to be more in contact with nature. Many absences from work because of muscle-skeletal pathologies. High cardiovascular risk for the adults. After 1 year

of a personal training programme: improvement of objective and subjective data, including the mood and the integration of immigrant peoples involved in the projects of the students. The majority changed their lifestyle.

Discussion

The role of Sport for All for health (prevention and therapy) is indisputable. It is also important to find the lost feeling between man and nature. The education and the information (school, sport school, university, work place) can induce changes of lifestyle important for the adolescents' and adults' health. Students' theses, projects with schools and sport federations in collaboration with local authorities have an important role on health and on the integration of immigrant peoples but can also bring about new jobs and a new, healthier lifestyle and living spaces.

Health-3

Feasibility analysis of yoga exercise on Adolescent Idiopathic Scoliosis of college students

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Introduction

Adolescent idiopathic scoliosis (AIS) is present in 2 to 4 percent of children between 10 and 16 years of age according to Dobbs et al (1999). AIS seriously impacts the quality of life of both patients and their parents with limited activity, pain, reduced respiratory function, or diminished self-esteem. AIS is defined, as has already been reported (Kane, 1997), as a lateral curvature of the spine greater than 10 degrees accompanied by vertebral rotation. As Roach (1999), Miller (1999) and Sanders et al (2006) have proposed, the main risk factors for curve progression are a large curve magnitude, skeletal immaturity and female gender. There are some basic types of treatments for scoliosis as has already been reported (Stuart, 2003): observation, corrective gymnastics, electrical stimulation therapy, orthopedic traction, orthopaedic bracing, or surgery. However, treatments are often ineffective, invasive, and/or costly. Yoga is not only a physical exercise, but also a lifestyle practice including training the mind, body, and breath, as well as connecting with the spirituality. In this article we study the feasibility of yoga exercise on adolescent idiopathic scoliosis of college students, encouraging them to take actively part in sports.

Methods

Based on a questionnaire, literature and statistical methods, the article surveys the role of yoga and the influences of practicing yoga once a week in physical education classes during one term period on the students with Adolescent Idiopathic Scoliosis at Tongji University, China.

Results

The students have been taught a series of basic yoga movements edited by the teacher. The yoga exercises once a week during one term period have helped the students with scoliosis to increase their muscle strength, enhance the range of respiration, and especially to recover self-confidence in that they could do some sports for health and recreation.

Discussion

Yoga is an advanced and flexible form of sport for college students with Adolescent Idiopathic Scoliosis, considering the stretch and the contraction of the targeted muscle group or the breathing and philosophical lifestyle. As sport rehabilitation, it is essential to ensure the maximum benefit gained from research and practice.

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Keywords: Adolescent Idiopathic Scoliosis, yoga, college students

Health-4

Effects of persistent youth physical activity on chronic job strain in adulthood

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Introduction: Research results on the association between physical activity and work stress have been based on cross-sectional studies and are inconsistent. No studies have investigated the long-term effects of physical activity and sport participation in youth on job strain in adulthood. The purpose of this study was to examine the effects of sustained involvement in youth sports activities over 3 years on job strain in early midlife.

Methods: Participants (326 males and 338 females), from the ongoing Cardiovascular Risk in Young Finns Study, aged 9–18 years were initially enrolled in 1980 and followed until 2007. Leisure-time physical activity and participation in youth sports were assessed in 1980 and 1983 by using a self-report questionnaire completed in connection with a medical examination. Leisure-time physical activity was grouped into three categories according to tertiles of physical activity index at two phases: persistently active, moderate-active and persistently inactive. Youth sports participation was divided into five categories using a dichotomous variable of athlete vs. non-athlete in both phases: persistent athlete, starter, leaver, active outsider and inactive outsider. Chronic job strain was measured by a combination of high job demands and

low job control between 2001 and 2007.

Results: Youth physical activity and sport participation correlated negatively with chronic job strain in adulthood in both sexes. Men and women in the persistently inactive group were more likely to develop chronic job strain than those in either the persistently active group or in the moderately active group. Age, education or occupation did not explain the relationship but after additional adjustment for adult physical activity, the association disappeared in males but not in females. Also, in females the association disappeared when adjusted for Type A behaviour dimension, leadership. The result was similar when participation in youth sports was a predictor.

Discussion: The major finding of the present study was that sustained participation in youth sports activities over 3 years was associated with a significantly reduced risk of chronic job strain in early midlife. This significant relationship was independent on age, education, occupation, and in women also on adult physical activity. Although Type A behaviour component, leadership, seems to explain the relationship between youth physical activity and job strain we conclude that early persistent intensive physical activity may be beneficial for coping with later work stress. Also, the possibility should be taken into account that leadership, which is inversely related to job strain, is developed in persistent intensive physical activity sport training.

Keywords: youth sports activities, work stress, follow-up, chronic job strain

Health-5

Promoting physical activity in diabetic people

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Introduction

According to the Austrian Diabetes Initiative, the number of people suffering from diabetes mellitus is assumed to be more than 600.000 persons in Austria. The national guidelines recommend 150 minutes cardiovascular exercise and 2-3 sessions/week strength training for diabetic people.

"Aktiv Bewegt" initialized exercise programmes, where diabetics could participate in target group specific exercise courses based on the national guidelines. The project was lead by an Austrian sports umbrella organization in cooperation with the Federal Ministry of Health.

Purpose and Scope

The main objective of the project was to initiate the cooperation between the medical and sports sectors to af-

fect the health determinants of non-communicable diseases by promoting physical fitness. The main target group were people suffering from diabetes mellitus. Initially they could take part in special exercise courses for free (8 weeks, two times/week).

Changes in physical activity were requested at the beginning up to 12 months. Upon other terms, outpatient departments focused on enrolling diabetics. The project was realized in 20 cities in Austria. After the first 8 weeks, the exercise programmes were maintained through regional sports clubs and exist beyond the end of the project.

Methods

Improvement in physical activity was checked by a questionnaire at the beginning, and 8 weeks, 6 and 12 months after beginning the exercise programme. To verify an outpatient department as a good place for information and recruitment, people were asked about this.

Results

In the first 2 years, 1 112 persons participated (59.0±9.6 years) in the exercise programme. After 6 months, the weekly physical activity increased in hiking and walking as well as in cardiovascular and strength training. Time spent in traditional sport (cycling, running, ball games or swimming) did not change.

Results in hours/week: (category: begin/8weeks/6months). Hiking and walking:2.5/2.6/2.8; cardiovascular tr.:0.5/2.1/1.0; strength tr.: 0.4/1.6/0.8; running:0.1/0.2/0.2; cycling:1.3/1.7/1.4; swimming:0.3/0.4/0.3; ball games:0.1/0.1/0.1.

Through outpatient departments 11% of all participants were recruited. Questioning was done on 8 days (number of people: 104; sex: 42%w, 58%m; age: 62±14years, duration of known disease 13±12years; Department of Endocrinology and Metabolism, Medical University of Vienna). All in all, 46% were interested in target group specific exercise courses and 22% participated in the programme. 3 of 10 women and 1 of 10 men participated. Age (p* 0,034) and the economic (p* 0,046) situation positively affected the interest in exercise programmes.

Discussion

Providing high-quality exercise programmes for diabetics all over Austria is still a vision. The number of interests and, therefore, the needed capacities for exercise programmes can be estimated through the project. It has been the first time in Austria that the medical and sports sector co-operate in this field. At the moment, further investigations to verify the self-reported data are being conducted.

Acknowledgment: The project was funded by Fonds Gesundes Österreich and Bundeskanzleramt Sport.

Keywords: sport sector, exercise training, diabetes mellitus

Oral

Targets of Sport for All: Adults and elderly 2

Targets: Adults 2-1**International Working Group on Women and Sport**

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Introduction

The International Working Group on Women and Sport is an intercontinental network that aims at globally promoting the equality of girls and women in sports all over the world. To achieve this aim, the IWG acts to create close contacts with different international sport organizations. <http://www.iwg-gti.org/>

IWG was established in 1994 at the 1st World Conference on Women and Sport held in Brighton. The overriding aim of the Brighton declaration adopted by the Conference is to develop a sporting culture that enables and values the full involvement of women in every aspect of sport. To achieve this aim, all the organizations involved committed to the following ten Principles of the Brighton declaration: equity and equality in society and sport, facilities, school and junior sport, developing participation, high performance sport, leadership in sport, education, training and development, sport information and research, resources and domestic and international cooperation. The Principles assume that all organizations are by definition willing to develop appropriate policies, structures and mechanisms as follows: to ensure that all women and girls have the opportunity to participate in sport in a safe and supportive environment, to increase the involvement of women in sport at all levels and in all functions and roles, to ensure that the knowledge, experiences and values of women contribute to the development of sport, to promote the recognition of women's involvement in sport as a contribution to public life, to community development and in building a healthy nation, to promote the recognition by women of the intrinsic value of sport and its contribution to personal development and healthy lifestyle.

Based on the declaration, IWG cooperates with national, regional and global GOs and NGOs with the objective of further developing opportunities to empower girls and women globally through sport and physical activity. The development is reported and discussed at the World Conferences organized every four year. The 55th IWG World Conference in Sydney 20-23 May 2010 will set topical objectives and decide on priorities for 2010-2014. The Finnish Sport Federation has been assigned to chair the IWG from 2010 to 2014 and to arrange the 6th IWG World Conference. The Sydney objectives will be reported at the Sport for All Conference.

http://www.slu.fi/eng/finnish_sports_federation/iwg_international_working_group/.

Conclusions

The aim of the International Working Group on Women and Sport (IWG) is to underline the importance of networking with the national, regional and global sports movement in promoting gender equality in sports. Cooperation with organizations such as the Olympic Movement, Paralympic Movement, international sports feder-

ations, regional and global governmental organizations and with the international sports leaders as well as researchers is vital in order to promote women's participation in sports and their opportunities to obtain leadership positions.

Empower women in sport today: harvest the fruits tomorrow.

Keywords: sport and physical activity, The Brighton declaration, women, gender equality

Targets: Adults 2-2**Development of Masters sport**

Holm Jens V.

(International Masters Games Association, Switzerland)

The objective

The objective of the International Masters Games Association (IMGA) is to support the Olympic movement and promote the Sport for All philosophy of the Olympic Charter by:

- Promoting and encouraging mature athletes from all over the world to practice sports regularly.
- Organizing international multi-sports events for mature sports men and women.
- Promoting friendship and understanding among mature sports people, regardless of age, gender, race, religion, or sport status.

How to reach these objectives.

The World Masters Games (WMG) has, from a difficult beginning 25 years ago, grown into a world class event.

The 7th edition of the event held in Sydney 2009 became the biggest with over 28 000 athletes from more than a hundred countries competing in 28 sports on 71 venues. This outstanding success in the middle of the economical crisis and the H1N1 has underlined the popularity and growth of Masters sport.

The event is now firmly established as the largest multi-sports event in the world (by numbers of participants) and the results of successive economic impact studies provide independent confirmation of the significant benefits to the economies of host cities and regions. The state of New South Wales and Sydney enjoyed direct spending by the participants of 61.5 Million investment of only 8.5 Million.

In addition to the immediate benefits of direct spending and enhanced economic activity around the Games, one must factor in the increased profile of the host city and the long-term impact this is likely to have on tourism.

This success of the summer games encouraged the IMGA to launch the inaugural World Winter Masters Games in January 2010 in Slovenia. 2 800 athletes from 42 different countries proved the need for a multi-sport Winter Masters event. It also illustrated the great difference between winter and summer games in terms of weather dependence, venue proximity, compact sports calendar and safety requirements.

Development in future

In a period when most governments are promoting the benefits of an active and healthy lifestyle, a good deal of attention is focused on children and young people. However, around the developed world, populations are generally ageing and life-expectancies are rising. While the Masters Games competitors are a diverse group, they may be seen as reflective of the changing life attitudes and desires of the mature population.

The IMGGA is using the experience gained from its events to grow the Masters movement further in partnership with the international federations, who have made the execution and development of the games possible. This should result in a working model to perpetuate and inspire other Sport for All initiatives around the world.

Is it worth it?

Around the world, more cities and nations are discovering the value of hosting major sports events. Hosting a Masters event can help a host city to develop best practices in local organisation committees, volunteer programmes and sponsorship seeking in advance of bigger events such as the Olympic Games.

Studies have, furthermore, shown a 60% increase in club membership for athletes over 35 of age in the regions where the Masters Games have been held. To discuss the obvious health benefits of this is a separate topic, but one should never forget that these Masters are parents, family members, teachers and coaches who serve as role models to our youth and their peers. In fact, investing in Masters sport might be a much wiser decision and have much wider benefits than it would appear at a first glance.

Keywords: events, multisport, Masters

Targets: Adults 2-3

An examination of physical activity levels of Turkish academicians with regard to gender and age groups

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Background and purpose: Physical activity is one of the most important factors for health. There is a general lack of information on physical activity trends in most countries. The purpose of this study was to examine the physical activity levels of Turkish academicians with regard to gender and age groups.

Methods

A hundred and fifty eight female and three-hundred and forty male academicians (Mage=36.78, SD=8.74) participated in the present study. The Turkish long form of the International Physical Activity Questionnaire and demographic information sheet were administered to the participants by self-report. Data were collected in Konya, Turkey, in December 2009. Both gender and age group differences on MET-minutes/week values were tested by

using independent sample t test and one-way ANOVA, respectively.

Results

MET-minutes/week values were calculated for work, active transportation, domestic and garden activities, and leisure time domains. Walking, moderate, and vigorous scores were also calculated based on these domains. Gender differences were found on MET-minutes/week values from the domestic and garden activities domain ($p<0.01$) in favor of the females. Differences between age groups were also found only in the total score of walking ($p=0.05$). 31-40-year-old people had lower MET-minutes/week values of walking than both older and younger academicians. Total physical activity scores were examined with regard to gender and age groups. A significant difference was obtained between male and female on total physical activity scores ($p<0.05$). The female academicians had higher total physical activity scores than their male counterparts. No age group differences for the total physical activity scores were found.

Conclusion

The physical activity levels of Turkish academicians were analysed in this study. Consistent with the previous studies (e.g. Monda et al. 2008), MET-minutes/week values of domestic and garden activities in females were significantly higher than in males. Also females had higher scores in almost all activity domains (except leisure time) than males. Total score of walking was lower in 31-40-year-olds age group than in the other age groups. In this study, there were no age group differences in the intensity of physical activity, but both moderate and vigorous physical activity scores were lower with increasing age. Contrary to the earlier studies (Azevedo et al. 2007a; Azevedo et al. 2007b), total physical activity scores of males were lower than those of females.

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Keywords: gender, academicians, age, physical activity level

Targets: Adults 2-4

Effects of intensity of acute endurance exercise sessions on perceived tiredness and sleep quality

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Introduction

Stress-related and sleeping problems are increasingly common in Western societies and have adverse effects on e.g. individual well-being, health, and productivity. Exercising is not only a path for a healthier lifestyle but may also be a non-pharmacological aid for sleeping. The pur-

pose of the present study was to examine the effects of exercise intensity on perceived tiredness and sleep quality.

Methods

Sixteen occasionally physically active male subjects (aged 35.7 ± 4.4 yrs, VO_{2max} 48.9 ± 3.9 ml/kg/min) performed two 30-min running sessions at 6 p.m. separated by one week on a treadmill with moderate (MOD) and vigorous (VIG) intensity corresponding to 60% and 75% of their maximal oxygen uptake, respectively. Blood lactate (BLa) and rating of perceived exertion (RPE) were measured in the context of exercise. Subjective assessments of mental and physical tiredness were measured before and after both exercise sessions with 100mm Visual Analogue Scale (VAS). Subjective sleep quality was also measured by VAS in the morning after night's sleep before (control nights) and after both exercise days. Moreover, the subjects' heart rate (HR) and HR variability (RMSSD) was recorded during each night and analyzed for the 4-hour sleeping period starting 30 min after bed time.

Results

Both exercise sessions elevated BLa compared to pre-exercise values (MOD: 1.4 ± 0.5 vs. 2.1 ± 0.6 , and VIG: 1.3 ± 0.6 vs. 4.8 ± 1.7 mmol/l, $p < 0.01$), and it was higher after VIG than MOD ($p < 0.01$). RPE was lower at the end of MOD than VIG (12.6 ± 1.9 vs. 15.7 ± 1.3 , $p < 0.01$). MOD reduced mental tiredness (36.4 ± 23.9 vs. 24.9 ± 16.6 , $p < 0.05$) but it did not affect physical tiredness. VIG did not affect mental tiredness, but it increased physical tiredness (31.6 ± 18.1 vs. 59.4 ± 19.8 , $p < 0.01$), which was still present when going to bed. HR was greater during sleep after both exercise days compared to control nights (MOD: 50.3 ± 4.2 vs. 52.8 ± 5.7 bpm, and VIG: 52.8 ± 6.0 vs. 56.9 ± 6.8 bpm, $p < 0.01$ for both), and RMSSD was lower after VIG than after control day (65.4 ± 32.7 vs. 59.9 ± 29.4 ms, $p < 0.01$). Subjective sleep quality was better after both exercise days compared to control nights preceding exercise days (MOD: 43.3 ± 23.0 vs. 63.6 ± 21.7 , and VIG: 53.0 ± 23.5 vs. 71.3 ± 18.7 , $p < 0.05$ for both).

Discussion

The results showed that moderate intensity exercise was acutely perceived as mentally refreshing, whereas vigorous intensity exercise was perceived as physically fatiguing. Both exercise sessions caused elevated HR during early sleeping hours, but only vigorous exercise decreased nocturnal HRV that is related to parasympathetic activity. However, both exercise sessions resulted in better subjective sleep quality compared to sleep after control days. Thus, it seems that moderate intensity exercising may be recommended for mood enhancement purposes and even vigorous intensity exercise, although causing physiological stress, may be beneficial for sleeping.

Keywords: recovery, sleep, mood, exercise, cardiac autonomic activity

Targets: Adults 2-5

Health Sport – An effective concept for health promotion in adulthood

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Introduction

As in most industrialized countries, the majority of the German adults (80%-90%) do not follow the recommendation of the American College of Sports Medicine, according to which "every adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week". In order to improve the compliance with these requirements, more intervention strategies that focus not only on health but even more on the behaviour and the external circumstances, are needed – and evaluated with regard to the effectiveness for health and health behaviour.

Development: Since about 1995, Health Sport has been developed in Germany in an interaction between sport federations, health insurance companies and health science institutions, to replenish the established programmes of fitness sport especially with respect to the target groups of sedentary adults and adults with risk factors and special complaints. On the basis of the "New Public Health Concept" for health promotion of the WHO and a four step model for behaviour change (FIT-Model) from inactivity to activity, the German Olympic Sports Federation (DOSB) and the German Gymnastics Federation (DTB) decided that the concept of "Health Sport" should be health- and behaviour-directed and that this field demands – as a "bridge" to the medical system (evidence based approach) – specific qualities, tools and a special quality management (Bös, Breuer, Brehm et al, 2005). The developed quality standards are acknowledged by the German Sports Federation since 2001 and since September 2003 also by all health insurance companies. On the basis of the concept of Health Sport in the last years special Health Sport programmes for specific target groups were developed and integrated in the offers of the sport clubs. Structures, processes and effects of the programmes were evaluated. A special education of instructors and trainers in the sport system was established and additional tools to convince the target groups becoming more active were developed, tested and evaluated (e.g. the "Moving Germany City-Tour").

Results and Conclusions

By 2010, the concept of Health-Sport is established in more than 20 000 German sport clubs. More than 15 000 trainers and instructors have a special education in Health Sport. Ten different health sport programmes are being developed, hand books for instructors are published and evaluations of high quality are carried out. The evaluations are showing that over all a behavioral change could be reached for about three quarters of the participants by the means of the intervention. Participants who were in a

negative fitness and health condition before the intervention, had the greatest benefit from the programme while other participants stabilized their status (Brehm, Wagner, Sygusch et. al., 2005). These results emphasize the importance of a well-structured physical activity programme as a bridge in non-medical therapy and in the prevention of the metabolic syndrome, especially.

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Keywords: health promotion, Health Sport

Oral Policies and sport organizations

Policies, organizations-1

International Tennis Federation: Adult Retention

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INTRODUCTION

In 2007 the International Tennis Federation (ITF) launched 'Tennis... Play and Stay', a campaign to improve the way starter players are introduced to tennis. Fundamental to the campaign is ensuring that all players play the game from the first lesson. To achieve this, 3 types of slower balls and smaller court sizes were promoted.

By 2009, 117 nations were using 2 or more slower balls (Newman, 2009), and US junior racket sales rose 80% from 2003-2008 (Tennis Industry Association, 2008).

The speed of the campaign's success led to a plan for expansion through two supporting initiatives:

* Tennis 10s (tennis for players aged 10 and under using slower balls and scaled courts) was launched in 2009. The ITF plan to introduce a rule from 2012 that will eliminate the use of a traditional, yellow ball in 10&U competition.

* Adult Starter Tennis programme which will be launched in 2011.

Development of the programme: The ITF believes that attracting and retaining adults is vital for the well-being of tennis, especially as tennis is one of few sports that can be played by adults of all ages. In the US in 2006, over 90 million had tried tennis, yet only 22 million continued. In the Netherlands, 90,000 new players start tennis each year, but 52,000 leave within 2 years. In 2008, the ITF formed a group of international experts to focus on adult retention.

Health Benefits: Research performed for the ITF showed that recreational tennis provided significant health benefits including improved aerobic fitness, lower body fat %, and reduced risk of cardiovascular disease (Pluim et al. 2007).

Retention Motives: Investigations in France and the Netherlands identified 5 important factors in retaining adults in tennis:

1. Social – meet new people
2. Learning/Improving – learn new skills and to experience playing and improving their game
3. Health and Fitness – improve health, fitness and well-being
4. Flexibility in when they play the sport – play outside of lessons and have control of organising courts and times
5. Belonging – have a sense of connection and belonging to the place they play, and the other people there

In 2009, the KNLTB (Dutch Federation) introduced 'Tennis.Nonstop', a campaign based on its findings.

ITF Adult Program: Using the 'Play and Stay' philosophy,

health research, and lessons learned from the KNLTB and French Tennis Federation's adult programme; the ITF is developing a training and competition programme to help ITF's member nations better attract and retain adults in tennis.

A key element of the programme will be to provide flexible lesson plans using slower balls and smaller courts, which will ensure starter adults play the game from the start. In addition, a supporting manual, website and promotional material will educate stakeholders about the programme, and the motivational factors highlighted earlier as important retention elements.

CONCLUSION

The ITF aims to introduce a new adult program in 2011. Using slower balls, the programme will seek to increase retention rates by ensuring a more dynamic and positive experience from the start, and a good cardiovascular workout, which will lead to increased adult participation in tennis worldwide.

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Keywords: adult, tennis, retention, development

Policies, organizations-2

International Cycling Federation: Cycling for All and its sub-groups

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Introduction

UCI (International Cycling Union) implemented its CFA (Cycling for All) programme following the IOC (International Olympic Committee) Sport for All philosophy, with the aim of encouraging as many people as possible, regardless of age, gender or social backgrounds, to take on the bike as a healthy activity. Over the years, the UCI amended its policies and regulations to better welcome participants ranging from competitive cycling to the ones using bikes as means of leisure or transport.

With that vision, the UCI put in place coordinative, strategic planning and a commission composed by international members with various fields of expertise, to backup the federation with advising member NFs (National Federations), event organizers and other partners.

Development: There is a lot more to CFA than a sole counterpoint to professional sport. For better understanding, it is indeed necessary to draw a line between professional and amateur sport, and CFA embraces the whole

extension of the second one. But in order to have a successful programme in place, it is a must to consider the sub-groups and their different views and needs. They can be roughly represented as follows:

* Competition Cycling (performance)

* CFA (participation): Sport, Physical Activity and Well-being, Means of Transport

Strategically, two approaches were chosen:

1 To offer guidelines

* Event Organizer's Guide – With safety, visual, tourism, medical and other guidelines

* UCI reCycling Guide – Working tool for the establishment of environmentally-friendly practices in cycling events

2 To develop a series of events focusing on participation groups

* UCI Golden Bike – Cyclo sportive rides, non-timed, non-competitive (an ongoing project since 1999)

* UCI Granfondo – Cyclo sportive competitions, timed, with qualification rounds to The Final (which awards the Masters World Champion Jersey)

* UCI Marathon Series – Timed mountain bike mass participation events, very popular especially in developing countries, where nature is often very close to the cities. Qualification rounds to the Marathon World Championships. A strong link with the environment.

* UCI Bike City – Label awarded to internationally renowned cities wanting to promote cycling as an environmentally-friendly leisure sport and as a gentle means of transport. These cities commit to hosting a number of UCI events during a certain period of time.

Conclusion

Some of the mentioned projects (UCI reCycling, UCI Granfondo and UCI Marathon Series) are still at a very early stage of implementation and should bring tangible results to the UCI in the years to come. However, the lesson learnt with the CFA programme is that the UCI must always look ahead and take the lead in order to protect the evolution of the sport. If we, as the governing body, are prepared to absorb the changes in the sports environment and supply our stakeholders with the necessary knowledge, they will follow us.

Keywords: amateur cycling, cycling, sport environment, UCI

Policies, organizations-3

European Non-Governmental Sports Organisation ENGSO

Pekkola Heidi¹, Kervinen Birgitta²

(Finnish Sports Federation¹, ENGSO², Finland)

ENGSO has been working since the 1960s and it has grown into the pan-European platform that it is today. ENGSO is the parent organisation for 40 national sports umbrella organisations including national Olympic Committees, both in and outside the EU. The members of EN-

GSO represent the national sport in its broadest sense – from children and youth sport, over "Sport for All" activities to elite sports. ENGSO represents the non-profit voluntary sports movement. Grassroots sport is a crucial part of the activities of ENGSO members. ENGSO also co-operates with various other sport stakeholders such as the European Union, the Council of Europe and the European Olympic Committees. In 2010, volunteering and social inclusion are ENGSO's main priorities.

Development: ENGSO Perspectives on EU Sport Program and Communication

With regards to the autonomy of sport organisations and the EU competence in the field of sport, ENGSO wants to stress the importance of the sport's own rules and the autonomy of sport organisations. The legal framework should respect the national legislations, and hence EU-level legislation should be avoided.

From our point of view, the new EU competence for sport creates a good opportunity for incentive measures that are focused on sports. The upcoming EU Sport Program is of utmost importance. That is why the launch of the preparatory actions, mini-programme and a specific sports programme must be realized in the planned schedule. To postpone the EU Sport Mini Program would be the most harmful message to the European sports movement and our members and citizens. Concrete actions for the European sports cooperation are definitely needed – soon.

The upcoming sports programme should be as close to the citizens as possible. The programme should be large enough. The resources should be partly distributed by the National Agencies available in the EU Member States. In this way the funding would reach grassroots sport and benefit citizens' well-being in the most effective way.

We emphasize the importance of considering voluntary sports structures and volunteering in a horizontal fashion in all policies in the European Union.

Our members regard the year of volunteering as an important opportunity for the sport movement. The aim of ENGSO is that every European citizen will have an opportunity to be physically active and to have open access to participate in the various activities of the sports clubs. This can only be guaranteed through strong public funding for sport.

Without volunteering, sport in Europe would become far less accessible, the costs would increase and sports and physical activity would not be available to all citizens. (As also mentioned in the study of volunteering,) It is important to remember that volunteers and voluntary organisations often provide activities and services vital for the community.

The sport clubs are the best examples, as the sports movement mainly relies on volunteers throughout Europe.

Keywords: social inclusion, European Union, voluntariness

Policies, organizations-4**The World Gymnaestrada Lausanne 2011 (WG-2011), 10 to 16 July 2011***Gilliéron Jean-Marc*

(University of Lausanne, Switzerland)

Introduction

Switzerland, a gymnastics nation par excellence, has been the most represented country at previous Gymnaestrada editions. The Swiss Gymnastics Federation (FSG) has more than 400,000 members, and it traditionally supports events where general gymnastics play a key role. The Fêtes Fédérales are held every seven years, and the most recent edition saw 56,000 gymnasts taking part for over 10 days.

Since the Gymnaestrada has never been held in the French-speaking Switzerland, it was logical that Lausanne should be a candidate.

The WG-2011 is synonymous with the following values: sharing, friendship, pleasure, meeting, exchange, beauty and well-being.

Some figures:

7 days of events 23,000 participants

1,800 different performances 4,000 volunteers per day

26,000,000 Swiss francs (budget) 100,000 spectators over one week

"The World Gymnaestrada is the biggest Sport for All event in the world." (J. A. Samaranch)

It comes under the "Gymnastics for All" section of the International Gymnastics Federation. There is no competition. Rather its aims are to:

Encourage everyone to move and enjoy doing so

Offer varied, healthy and safe sporting activities for all ages and all target audiences (for example people with a disability)

Bring together gymnasts from all over the world and bring peoples closer together

Development

The World Gymnaestrada Week:

The Pontaise Stadium will host:

the Opening Ceremony: a show with around 30,000 spectators and 1,000 performers

the Large Group Performances: at least 200 gymnasts

the Closing Ceremony

Beaulieu, the heart of the event, will host:

the Group Performances: reflecting all aspects of gymnastics for all (at least nine gymnasts)

the Education Forum: aimed at gymnasts, coaches, physical education teachers and the general public

The Malley Sports Centre will host:

the National Evenings: enabling the Federations to show their sporting characteristics. Four presentations per evening

The FIG Gala will feature performances from the five continents on the same theme, representing the great diversity of gymnastics.

At Lausanne University:

a multi-sport youth camp

In the city of Lausanne:

Several stages will be set up to enable the gymnasts to perform and bands to provide entertainment during the day and in the evenings.

Conclusion

Lausanne, the Canton of Vaud and the FSG want to encourage gymnastics for all and help to get more Swiss people moving and involved in physical activity.

The WG-2011 promises to be the biggest event ever organised in Lausanne. It will be "the event" in Switzerland in 2011, and should encourage the population to "move" regularly every day.

Getting involved in the WG-2011 means coming into contact with universal and meaningful values, and joining an adventure that will lead us to the heart of sport's values.

Contact us on: www.wg-2011.com / info@wg-2011.com

Keywords: gymnastics for all, World Gymnaestrada, Lausanne

Policies, organizations-5**A global strategy to promote Sport for All: The case of the World Taekwondo Federation (WTF)'s Peace Corps from a pluralist theory perspective***Bahng Chang Ki*

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This study discusses the global strategy of a policy to promote the Sport-for-All initiative through a prism of the World Taekwondo Federation (WTF)'s Peace Corps, viewed from examining the grassroots programme in general and the physical education

curriculum in school in particular. This study derives from theoretical perspectives of the pluralist theory and globalist theory of International Relations (IR) to a practical approach of the WTF's policy in order to critically analyze and to find an effective, systematic, and sustainable global strategy to promote the Sport-for-All initiative. The new initiative of the

WTF's Peace Corps is a retrospective example of over-reaching the underprivileged youth in WTF's member nations around the world. The author argues, as it is challenged, that the overall goal and outcome of the global strategy are to promote the inclusion of the Sport-for-All initiative and to support grassroots sport development in schools, along with decisive supports from all the interested parties involved. The Republic of Korea's (ROK) grassroots taekwondo programme, in conjunction with the introductions of successful stories of Chinese and Canadian schools' inclusion of the sport of taekwondo, will be discussed. The malleable Sport-for-All initiative/policy approaches delineate several social and moral responsibilities. All the concerned and interested entities (state and non-state) involved in this process should

take the responsibility of fortifying the organizational and structural credibility, accountability, and legitimacy. The author argues that a global strategy of theory-to-practice approaches, as mentioned in many policy reports, should err on the side of a comprehensive series of collaboration, evaluations, and negotiations, and should remove as many negative variables and obstructions to global cooperation as possible among all stakeholders involved. Finally, as stated in the World Health Report 2000, under a rational and legitimate approach and a multilateral method of marshalling the collective efforts, intellectual interactions, and intangible assets, are a harbinger of sustained progress and critical changes (p.14). Thus, the study of the WTF's Peace Corps' approach to promote the Sport-for-All initiative can draw a few indications and

recommendations for the long-term future of the initiative: (1) all involved stakeholders should be entitled to a legitimate goal of promoting the initiative without being distracted by distasteful power relations, irrational approaches, and a quagmire of illegitimate influences, and (2) a pluralist perspective provides that a global strategy can be successful when states and non-state actors unilaterally cooperate in a contemporary international system and play a significant role in promoting the Sport-for-All initiative and significantly contributing to the invaluable values sports can offer for all.

Keywords: taekwondo, grassroots programme, international relations, Peace Corps, global strategy

Oral Promotion of Sport for All

Promotion-1

Health-running and marketing strategy

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Introduction

Since 1994, the National Sports Commission issued a "National Fitness Program" approved by the State Council, which has been promoting the development of Sport for All in China. Especially after 1999, various forms of mass sports emerged and achieved remarkable results. In particular, running has been advocated as a healthy activity for fitness, promoting public participation. At the same time, health-running has been supported by the local government and also attracted the participation of many domestic stars. Therefore, with the media attention, more and more people prefer and plunge into health-running to experience the "fitness-entertainment-leisure". This study tracked for eight years a large-scale mass sports activity, the Amway Nutrilite Health Run, and the development of organized mass sports in China, as well as the mutual promotion and marketing roles.

Methods

Literature method, follow-up investigation, expert interviews, etc. were used to collect relevant data of Amway Nutrilite Health Run from 2002 to 2009. All data were analyzed with SPSS.

Results

In order to promote the concept of fitness for all, Amway Nutrilite Health Run was carried out first in 2002 and continued to develop until now. In this study, by statistical analysis of the number of participants, cities, and other data, we have the following conclusions: 1. After the 2008 Beijing Olympic Games, in support of the Government's policy of China's National Sports, people's participation in sports activities for their health has become a mainstream concept. Amway group accurately grasps the opportunity to put forward the health-running in China. 2. Because

of the fast-paced social life and intense work, everyone feels a lot of pressure. Thus it becomes an important means to relieve the tension, stress, and feel happy. By the continuous accumulation of 8 years, Amway forms a content-rich run Amway health culture, which is gradually accepted by the public. 3. To meet the needs of the public by sports activity, the idea will dominate the sports marketing direction for a long period of time in China after the 2008 Olympics. Therefore, Amway's brand has been directly associated with health, the market and successful logo through the health run.

Discussion

1. With economic development, people have gradually increased health concerns, but also increasingly have the opportunity to improve health through exercise. Governments and organizations should organize various forms of sports to attract and encourage people to participate. 2. Enterprises can establish a good corporate image through appropriate marketing strategy. By advocating "nutrition + exercise = healthy", the distance is successfully shortened between sports enthusiasts and businesses, which promote healthy lifestyles across the country. At the same time, the health concept makes the Amway brand image closer to the consumers.

3. A successful integration of Sport for All and marketing promotion should pay attention to the following: brand and product characteristics should not only be healthy, nutritional, but also have the ability to combine mass sports, which are easy to participate in and publicly popular, and can accommodate a certain number of people involved in activities. Overall, long-term development is required in order to get better results.

Keywords: marketing strategy, governments, health-running, integration

Promotion-2**Partnerships in action; Community Sport for All Development in Zimbabwe**

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Topic: Zimbabwe's Community Sports Development Programme is an example of how a national initiative and policy and international partnerships enhance local community development.

Background

In line with its mandate to avail opportunities for inclusive participation in sport and recreation in Zimbabwe, the SRC adopted the Community Sport Development Programme (CSDP). The CSDP is a strategy that effectively contributes to meeting the Millennium Development Goals.

The strategy, resulting from 15 years of partnership between the SRC and NIF, now in its second year of operation, has contributed to an organised and integrated community sport delivery system.

Development: Over a four-year period it intends to develop over 15.000 community Sport for All clubs, meaning that 40.000 club executives and approximately 72.000 youth of both genders will be trained as active community leaders. This suggests a reach of approximately 700.000 youth exposed to sports and life skills opportunities.

The creation of partnerships is the key to achieving results. Bringing together various stakeholders and pooling resources ensures the human and financial capacity to achieve a "Sport for All" initiative.

The CSDP consists of two domains, the establishment of community sport clubs in Zimbabwe's ten provinces and of expansion of the youth education through sports programme (YES).

The community Sport for All club is a multi-discipline organisation offering one or more sports to its members. Through sport, the community club provides a venue to instil values, such as teamwork, discipline, fair play, and respect for others.

The YES programme incorporates sport through experiential learning by facilitating life skills training on issues such as HIV and AIDS, substance abuse and other life issues to build youth capacities.

Partnerships: To succeed in the delivery of the CSDP, the SRC works with its key partners such as UNICEF Zimbabwe, national sport associations, Zimbabwe Olympic Committee, Zimbabwe Paralympic Committee, NGOs and local authorities to pool resources and effectively implement the programme.

Of these partnerships, the Zimbabwe Olympic Committee plays a pivotal role in promoting Olympic values and Olympic education at national, provincial and community levels.

Results

Results have been achieved through the training and de-

velopment of SRC staff, partners and community leaders in club development including:

- All provincial SRC Community Sports Development Staff have been trained in club development, organizational capacity, monitoring and evaluation and are implementing the programme.

- National level tutors or master trainers (usually volunteers from partner organizations) minimum of two (2) per province have been trained in club development, monitoring and evaluation and are working with the Provincial SRC staff.

- In each province – club development has been initiated in 10 wards within 2 districts per year over the last 1.5 years – a target of developing 4 clubs per ward has been established.

- Club executive training and club structure development has been started in approximately 4 districts per province.

Keywords: Sport for All, community, Zimbabwe, partnerships, capacity building

Promotion-3**Euro Sport Health Project**

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Introduction

The experience of Barcelona Provincial Council in the coordination of projects focusing in the sport sector, boosted the initiative to develop an ambitious project in the field with an international scope.

Besides, the Festival of Sport held in the province of Barcelona, has also become a catalyser in promoting the establishment of the Day of Sport in Europe, an expected result of the Euro Sport Health project. The Festival of Sport is a popular sporting fest in which everyone may take part and where the activities are adapted to the physical level of the participants.

For these reasons, we have developed the Europe Sport Health project, a model of network to promote health through sport.

Development

The Euro Sport Health project's main objective is to identify and exchange best practices for the health promotion through Sport for All at local levels.

Other specific goals of the project are:

- To promote the health benefits of sport practice and physical activity.
- To encourage the participation of citizens in sport as a regular activity.
- To disseminate the values of sport as a part of an active lifestyle and its benefits for people's health.
- To create a network of territories in order to identify and exchange best practices.
- To implement the Day of Sport in each territory participating in the project.

The leader of the project is the Provincial Council of

Barcelona and the partnership is composed of 5 partners: Cyprus Sports Organisation (Cyprus), University of Castilla-La Mancha (Spain), Budapest Association of Sports Federation (Hungary), Azienda USL della Valle d'Aosta (Italy) and Belfast City Council (North Ireland – United Kingdom).

The project will be implemented until the 31st March 2011 with a total budget of 299.760 Euros.

The expected main products of the project will be the following:

- Edition of a guide of best practices in the field of health promotion through Sport for All at local levels. The assessment tool to collect best practices is based on 21 indicators classified into common aspects and specific aspects, the latter divided into the dimensions of organisation, programme, personal development and repercussion of the programme.
- Creation of a network in the field.
- Implementation of the Day of Sport in several European territories.

Conclusion

It is common to promote sport activities among the population by trying to make its practice easy and by removing barriers. Therefore we consider that the Euro Sport Health project can contribute to an increase in the quality of the sport practices in Europe by providing a common guide on best practices as a reference. Provincial Council of Barcelona is aiming at joining with other territories in Europe and to develop an active network that will have a great impact in all territories. As a final result, we aim to establish the European Day of Sport.

Project co-financed by the European Commission – EAC/21/2009 Preparatory action in the field of sport

Keywords: sport day, health promotion, network, local, best practices

Promotion-4

Physicians and sports organisations – Partners in promoting health-enhancing sports: Description and experiences of a network between physicians and sports organisations in Berlin

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Introduction

Participation in health-enhancing sports is appropriate to reduce the risk for the so-called civilization diseases, and strengthens resources for a good health status. According to the German Federal Centre for Health Education (2006), people can be motivated more effectively for health promoting behaviour, like performing health-enhancing sports, when this is supported by relevant multipliers. Therefore the Land Sports Confederation Berlin (LSB), the umbrella organisation of organized sports in Berlin with roughly 560.000 members, has implemented the campaign 'Berlin komm(t) auf die Beine' (meaning

'Berlin get(s) up'), a campaign to recruit physicians in the region as multipliers to encourage citizens to participate in health-enhancing sports groups.

Development: At first the LSB started cooperation with the Berlin Sports-Physicians Federation, the Berlin Chamber of Physicians and the Association of Statutory Health Insurance Physicians of Berlin, since these are the umbrella organisations of physicians in Berlin. Based on this partnership, practicing physicians were contacted and supplied with relevant information. An important part here is the LSB-brochure about health-enhancing sports; in addition to general information on i.e. health effects of physical activity, this brochure mainly includes contact data of all certified health-enhancing sports groups in Berlin. This provides physicians with a medium to recommend concrete health-enhancing sports groups ideally close to the patient's place of living. Besides, physicians are supplied with the "Green Prescription for Physical Activity" which gives them a tool to prescribe health-enhancing sports like a treatment.

Since the beginning of the campaign the LSB has been able to build up a data bank with roughly 1200 physicians involved in this network. They are regularly supplied with current information and data, and recommend their patients the health-enhancing sports groups of the sports clubs in Berlin.

Conclusion

Permanent demand for the current LSB-brochure about health-enhancing sports and the fact that 83% of the physicians always or mostly recommend their patients physical activity (according to an own survey with 108 physicians in 2007), indicate that the cooperation with physicians and their umbrella organisations can be helpful in recruiting supportive multipliers for health-enhancing sports. Therefore, further efforts in cooperation with the network partners are planned for increasing the number of involved physicians. The campaign might also be an example for sports organisations in other regions, since health care professionals can generally be regarded as effective multipliers for performing physical activity according to Hirvensalo et al (2003).

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Hirvensalo, M. et al. Scand J Med Sci Sports 13. 2003. 231-236.

Keywords: network, health-enhancing sports, physicians, sports organisations, multipliers

Promotion-5

A new governance policy for French sport

Françoise Sauvageot

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Today, in a context where Sport for All is proving to be an excellent way of improving quality of life, preserving health and even preventing certain metabolic illnesses, the French NOC has a new project and a new organisation to promote this area which is still given little support in the Olympic universe.

Some details about the French NOC: Since 1981, it has been the umbrella body of all the national federations, not just the Olympic federations (97 federations + 12 associate members). As a result, the weight of federal sport in France, i.e. 16 million licence holders and just 16,000 of these in the high-level system, is anything but negligible. This choice brings with it the ability to mobilise forces to achieve shared objectives, with meaningful and motivating action programmes, of interest to everyone, whether Olympic or Sport for All federations.

In the French context, following a report presented to the Ministry of Health and Sport in December 2008, a new approach as yet little tried in France is being followed: the sport for health dimension deployed specifically through a national nutrition and health programme. We shall be examining the work which has enabled awareness to be raised considerably, among both public opinion and the sports organisations, and we shall be studying the transformations that have been brought about.

Lastly, President Maseglia, elected in May 2009, wanted to get NOC policy moving in this direction by creating a

"sport and diversity of practice" delegation promoting the sport for health dimension through a dedicated medical commission and policy centred on this issue. The social and psychosocial dimensions consolidate all the physiological data, and the scientific argument is finding a new place in a universe more centred on developing recreational Sport for All. For some months now, the work being done has shown that this willingness can give rise to a major event, a sports movement day united under the banner of "sport – health – well-being", a day open to everyone, as part of a family, with activities offered in all the departments, run by technical staff from all the federations, focusing on the pleasure of these accessible practices, but also, thanks to talks and advice on nutrition, a real opportunity to get the health message across. This day will be held on 25 September 2010, with its own organisation in each department and the support of the Olympic, non-Olympic, school and university sports federations as well as the affinity-based and multi-sports federations.

The aim is to involve the sports movement in an active approach to help all French people combat the new scourges of society such as sedentariness and obesity, especially among children and young people.

Keywords: programme, children, sedentariness

Oral

Social aspects in Sport for All

Social aspects-1

Sport making a difference – delivering social inclusion through the Active After – school communities program

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Introduction

Can sport really make a difference in enhancing and promoting social inclusion? In 2008 delegates at Australia's 20/20 Summit recommended social inclusion be a national priority and that a National Action Plan for Social Inclusion be developed and implemented. Australia's guiding principles for social inclusion include:

- o Building on individual and community strengths
- o Building partnerships with key stakeholders
- o Developing tailored services
- o Giving high priority to early intervention and prevention
- o Building joined – up services and whole of government solutions
- o Using evidence and integrated data to inform policy
- o Using locational approaches
- o Planning for sustainability.

Since 2005 the Australian Sports Commission has successfully coordinated and resourced the Active After – school Communities (AASC) program working through 3250 primary schools and after school care services to provide some 150,000 primary school children with a positive introduction to sport and other structured physical activities each term. The program aims to engage children who are not traditionally active or involved in sport to develop a love of sport through fun, safe and inclusive activities in over 70 different sports to inspire them to join a local club and make sport a regular part of their lives.

Development

With 48 % of sites located in rural and remote communities, 23 % in low socioeconomic communities, 14 % in Indigenous communities and 14 % catering for children with special needs the AASC is ideally placed to deliver outcomes to disadvantaged communities². The AASC provides children in remote Indigenous communities with increased and improved opportunities to participate in a timeslot tailored to meet the needs of individual communities. The AASC is particularly beneficial in providing equipment, resources and training that addresses issues such as poverty, unemployment, poor community facilities and anti-social behaviour. In the Indigenous community context the AASC has created valuable links with other government agencies and national and state sporting organisations to increase the reach and effectiveness of programme outcomes.

In late 2006 the All Australian Sporting Initiative (AASI) was launched to build upon the success of the AASC and

to improve community capacity and involvement, enhancing community understanding and harmony. The AASI, modelled on the AASC, successfully focused on providing opportunities for Australian children and families from culturally diverse and socially disadvantaged communities within selected areas in Sydney to participate in sport within the broader community. Sport was used as a successful vehicle to promote cultural acceptance, inclusion and harmony.

Conclusion

Key research findings and local community – based case studies indicate the AASC, through its achievements and challenges have positively impacted on Australia's guiding principles for social inclusion. Indeed sport does make a difference to social inclusion!

Grant funding: The Australian Government has provided funding (2005 – 2007 \$90 million pa & 2008 – 2010 \$124 million pa) to the Australian Sports Commission to implement the AASC.

1.<http://www.socialinclusion.gov.au/SIAGenda/>

Principle/Documents/SIPrinciples.pdf

2 & 3. Australian Sports Commission. 2009. Review of the Active After – school Communities Program, p. 21.

Keywords: AASC, social inclusion, Australia, sport, children

Social aspects-2

Women walk and bike for health and co-existence

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(IOC Sport for All Commission¹, The Israel Association of Community Centers², Israel)

Introduction

The Israel Ministry of Sports and the Ministry of Health, the Israeli Association of Community Centers, Pfizer, the Israel Heart Society, and the Israel Cycling Federation have launched a joint project to encourage and increase awareness of health and co-existence among women by operating cycling and walking clubs in 48 communities around the country.

Goals of the Program

To encourage women to lead social change for the promotion of a healthy lifestyle and co-existence for themselves, the community and the environment, via physical activity accessible to all – walking and cycling.

Project description:

The programme is based on collaboration of the communities from initial planning to implementation, and aims at responding to the unique cultural and social needs of the various sectors such as walking in traditional clothing and segregate walking in the Arab communities.

The intervention programme offers varied and combined activities for women in each of the target locations, with specific input for the different sectors including Arab Women, Orthodox Jewish Women, Druze, Bedouin and more. Activities include lectures on health promotion as well as organized activity for women, understanding that they are major social agents for change in families and communities. Highlight events include such as the nationwide event "Women building Bridges" and more.

Summary and conclusions

A substantial change is seen in the participation of the Arab women, where walking, a traditional and integral part of everyday life in the past, has become again an acceptable leading activity among women. These activities promote the Arab-Jewish neighbouring communities to interact on an individual and community basis. By walking together, exchanging views, getting to know each others' habits, bridges are being built, and co-existence and a healthy lifestyle are being promoted.

Since the beginning of the intervention programme 5 years ago, and its proven success, the programme was adopted by the Ministry of Sports as a model to be implemented throughout the country.

Keywords: women, co-existence

Social aspects-3

"Opening doors in Finland": The development programme for inclusion in sports in Finland

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Introduction

Today inclusion is defined as a sense of belonging, feeling of equality and respect. It is a shift in organisational culture. The process of inclusion engages each individual and makes people feel valued (Miller & Katz 2002). In sports, inclusion and integration programmes are supporting the sport organisations to develop their own inclusion processes.

Development

Sports Open for All is a development programme in Finnish sports which is based on the model of inclusion. The Finnish inclusion and integration programme has similar a background as programmes in Norway, United Kingdom and Australia which started more than 10 years ago. Because of long-term development work in Europe and in Australia, examples of good practices are available. Sports Open for All is a national framework that helps to develop pathways for people with special needs to get involved in sport. The goal is that the sporting organisations become aware of the benefits of involving people with special needs either as participants, volunteer, coaches or officials.

The goal of the inclusion programme is to promote sporting organisations to develop their sport to be inclusive, open for all. It requires equality of access to all sporting

services, both public and private, and therefore e.g. the accessibility of sports facilities is emphasized.

The methods of Sports Open for All –programme are education, consultation and utilization of networks. Doors Open for All –course helps participants to evaluate their own sporting organisation and start their inclusion process. Good practices are shared during consultation processes. Network of sporting organisations, universities, universities of applied sciences and other schools bring together knowledge of inclusion and sports.

Conclusion

The Finnish sports organisations have experienced the same challenge as the other European countries. The change of society creates the need to change the sporting organisations. Elderly people, women, people with disabilities, ethnic minorities and immigrants are a significant part of our society. Therefore the importance of inclusion process should be understood also in the sporting organisations and the results of development work should be recognized and evaluated in order to improve the effects at national level.

References

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Keywords: sporting organisation, inclusion

Social aspects-4

"With Sports Against Homophobia": Experiences from a 3-year project in the National Olympic Committee

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(The Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), Norway)

Introduction

The project "With Sports Against Homophobia" has been run by The Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF) in partnership with LLH – The Norwegian LGBT Association, and The Norwegian People's Aid (working with anti-racism). The project lasted for 3 years, 2007-2009. The project was partly funded by the Norwegian Ministry of Children and Equality.

The project aimed at promoting sport as an open and secure arena where LGBT (lesbian, gay, bisexual and transgender) persons feel at home as athletes, coaches, referees and fans.

As one of the first larger scale projects by a national mainstream sport organisation addressing sexual orientation and homophobia, the project provides unique experience from a topical area usually avoided or ignored by sport organisations.

Development: The NIF Sport Policy Document 2007-2011 states zero-tolerance for discrimination and harassment regardless of gender, ethnic origin, religion, sexual

orientation and disability. It also specifically mentions that lesbians, gays and bisexuals are – differing from many other minorities – an invisible group, and that it is therefore an extra challenge to contribute to dissemination of knowledge and information in order for this group to be fully accepted within sports.

The strategic aims of the project have been; 1) to increase awareness about discrimination based on sexual orientation; 2) to promote sport politics against discrimination based on sexual orientation; 3) to develop and promote measures hindering homophobia, including raising awareness-raising and attitude-challenging methodology; 4) to promote good role-models and healthy attitudes towards different sexual orientation through sports; and 5) to stimulate a situation in which action against discrimination based on sexual orientation is part of the daily work of sport organisations.

The project has worked closely towards and in cooperation with the national sport federations and regional confederations.

Conclusion

Throughout the project period, there has been a sig-

nificant increase in sport federations/confederations addressing the issue. From being a "taboo" topic within organised sport, the topic is now more easily addressed. The discourse on sexual orientation and sport in the national media has also changed from portraying sport as one of the last "homophobic arenas" in society, to focusing on the positive efforts made by sport federations/confederations.

The project has harvested many experiences and important knowledge on how this topic can be addressed, and what obstacles might occur. It has been important to focus on the responsibility of the sport organisation, and not on the individual gay/lesbian/bisexual athlete. The connection between gender roles and homophobia has been an important conclusion from the project.

After the end of the project period (31/12-09), work on the topic is now integrated in the activities of the NIF secretariat.

Keywords: LGBT, diversity, homophobia, NOC, discrimination

Oral

Targets of Sport for All: Adapted physical activity

Targets: Adapted-1

Sport for people with disabilities and the Sport for All movement: The Copenhagen XIII Olympic Congress Recommendations

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Introduction

In November 2009, the 121st IOC Session and the XIII Olympic Congress were held in Copenhagen. While the immediate news story from the Session was of Rio de Janeiro's selection as the host city for the 2016 Summer Olympic Games, another important pronouncement from the IOC emanated from the Olympic Congress. In the wake of the Congress, the IOC issued the document entitled *The Olympic Movement in Society*, which contained a series of Recommendations for the Olympic Movement to consider, and which are applicable to the notion of Sport for All. The mission of the Sport for All Commission states, "Sport for All is a movement promoting the Olympic ideal that sport is a human right for all individuals regardless of race, social class and sex. The movement encourages sports activities that can be exercised by people of all ages, both sexes and different social and economic conditions" (IOC, 2009, Sport: A Human Right for All section). In addition to the groups listed above, people with disabilities also should be afforded access to sport and physical activity.

Development: One particular passage which relates to

people with disabilities comes from Section 4, Point 39 of the Recommendations, which states:

The relationship between the IOC and the International Paralympic Committee (IPC) should be pursued to the benefit of all areas of mutual interests. Furthermore, cooperation with the International Committee of Sports for the Deaf and Special Olympics is encouraged (XIII Olympic Congress, 2009, p. 14).

At the Closing Ceremonies of the Vancouver 2010 Winter Games, Dr. Jacques Rogge proclaimed, "In two weeks' time, the remarkable Paralympic Games athletes will be able to enjoy your enthusiasm and your support. Cheer them on!" (CTV, 2010, lines 8-9).

The intersection of Section 4, Point 39 and the mission statement of Sport for All is very clear from a theoretical point of view. But from a practitioner's perspective, what would be some tangible ways to put this Recommendation into action with respect to people with disabilities?

Conclusion

This presentation suggests the following Action Steps:

1. Inclusion of disability in Sport for All mission statement
2. Promotion of Article 30.5 in cooperation with the UN
3. Formation of IOC disability in sport commission (similar to IOC women in sport commission)
4. Inclusion of youth with disabilities in the Youth Olympic Games
5. Promotion and encouragement of inclusion of individuals with disabilities at all levels of sport

Each of these suggestions will be discussed in detail in the presentation, including suggestions for implementation.

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- XIII Olympic Congress. 2009. The Olympic movement in society. Copenhagen, Denmark.

Keywords: inclusion, disability sport

Targets: Adapted-2**Inclusion of people with a disability in Norwegian sport – description of a model and lessons learned**

Andreassen Mads

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Introduction

Sport for people with a disability is organised under the umbrella of the Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), with all National Federations (NF) being responsible within their sport. This includes both elite sport and Sport for All.

NIF has 2.1 million memberships and consist of 54 NFs, regional confederations in all 19 counties, 360 sports councils and more than 12.000 clubs. NIF works to provide everyone the opportunity to participate in sport according to their own wishes and requirements, and intends to instil positive values for individuals and communities, thereby strengthening its position as a popular movement and motivation force in society.

Development: To reach organisational inclusion of athletes with a disability, Norwegian sport has gone through a more than 10- year long process. In 1996 NIFs General Assembly voted in favour of inclusion of athletes with a disability and to form a new sport organisation. The Norwegian Sport Organisation for the Disabled (NFI) was established in 1997 through a merging of Norwegian Deaf-Sport Organisation (NDI), Norwegian Sport Organisation for the Disabled (NHIF) and a committee in NIF working with sport for people with an intellectual disability. The purpose of NFI was to increase participation of people with a disability in sport through inclusion and equality. The strategy was to transfer skills, knowledge and advice to NFs, leading to NFs taking the responsibility for athletes with a disability.

By May 2007, all NFs had taken on the responsibility of athletes with a disability, which, for example, means that all football activity is organised through the Football Association of Norway, that all swimming is organised through the Norwegian Swimming Federation and so on. By the end of 2007 NFI terminated their task, and from January 2008, NIF became the Paralympic Committee, the Olympic Committee and the Confederation of sports in one body.

Conclusion

When considering sport for people with a disability, the main goal for NIF is to increase the number of athletes taking part in local sport clubs, built on inclusion and equality. For many NFs this a new focus area, leading to more emphasis overall on sport for people with a disability. Over the years we have seen a positive development in number of athletes with a disability participating in local sport clubs, but the main lesson learned is that the number of sports available for people with a disability have increased. We have also learned that it takes time to change a large organisation and time for good intentions and necessary competence to reach the club level.

Keywords: inclusion, disability, Paralympic, sport

Targets: Adapted-3**Disability and sport: a two years experience from Modena, Italy**

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(Local Health Unit of Modena¹, Centro Sportivo Italiano sez. Modena², Italy)

Introduction

The "Disability and Sport" project has begun in November 2007 at the Service of Sports Medicine of Local Health Unit of Modena. It was created with assistance of institutions from both public and private sectors by using facilities and health personnel of Regional Health Service of Emilia-Romagna. It takes care of disabled people who play sports in sports associations, disabled people involved in physical activities through social services and voluntary associations and disabled that are not yet included in any sport. Physical inactivity is one of the leading causes of illness and death, mainly due to damages of the cardiovascular system. In disabled population, low motor activity and consequent weight gain determines reduction of residual abilities and further compromises autonomy, as has already been reported (Edouard et al, 2007). Sport inappropriate for a disabled person may cause health or psychological problems.

Development

The project consists of a multidisciplinary assessment (sport medicine, rehabilitation, nutrition, cardiology) for people with motor or mental disabilities or a combination of both. The basic objective is to foster the practice of sport safely, according to Pittet et al (2009). The second objective is to create a local network for disabled persons, their families and sports clubs. Finally we wish to prepare health and sports technicians to assist disabled athletes. The experimental phase includes two periods of 18 months each from November 2007 to May 2011. They are wholly funded by private donors and public bodies; the total budget is 100.000 euros. Expenditure control is exercised by the Department of Public Health of

Modena. From November 2007 to November 2009 we performed 196 visits, 131 first visits (male: 101, female 30) and 65 controls. The average age was 31.3 years (maximum 64, minimum 11). Competitive athletes were 37, non-agonists 94. The prevalence group was mentally disabled (70), compared to motor (39) and to mixed disabilities (22). The most represented sport was riding followed by swimming and athletics.

Conclusion

The project allows us to study the correlations between sport, health status and social integration in disabled people, as Wilhelm (2000) has proposed. During the period under review there were 2 cases of abandonment of sport: one for personal problems, one stopped because for health reasons (hypertension not adequately controlled by medication). In seven cases it was necessary to amend or supplement the sport practiced; in spine disorders of the subjects with Down Syndrome, we associated swimming with riding. Particular attention was paid to cardiovascular patients with spinal cord injury practicing handybike. The main line of development involves collaboration with high schools of Modena for disabled students aged between 14 and 19 years. Our goal is to control the safety of sport in schools and ensure the continuation of activity even after the completion of studies.

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- Major funders of the project
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Keywords: disability, sport

Targets: Adapted-4

Disability sport in the UK: The rhetoric and reality of inclusion

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Introduction

Despite its increasing prominence in the world of modern sport, there is currently little literature that has explored the emergence and development of disability sport and the associated policy related issues that surround it. Indeed, until relatively recently, disability sport and disability sport policy, in particular, has been largely ignored in the social scientific study of sport as well as in mainstream disability studies.

This paper builds on some of the central ideas articu-

lated by the authors in their recent text, *Disability, sport and society* (Thomas and Smith, 2009), which examines, amongst other things: theoretical explanations of disability; the emergence and development of disability sport in the UK; disability sport provision in the local community; the policy and practice of mainstreaming in five sports; physical education for young disabled people and those with special educational needs; elite competitive sport and the Paralympic games; and media coverage of disability sport. Based on UK data collected and analysed from interviews with senior officers between 2000 and 2008; surveys of 142 organisations involved in disability sport; documentary analysis of policies, strategies and minutes of meetings from mainstream and disability sport organisations; and a systematic review of literature; this paper discusses some of the main policy themes emerging from this analysis to stimulate future discussion on the current prevailing policies within disability sport and the likely future directions of sport policy for disabled people.

Discussion

The recurring themes that were evident in the analysis indicate: (i) an increasing government interest in disability sport; (ii) that disability sport continues to be largely organized and structured separately from mainstream sport; and (iii) a detachment of disability sport organisations from the organisations and broader political movements of disabled people. Perhaps the most significant and central theme to emerge from this examination of disability sport policy has overwhelmingly been the policy of mainstreaming and inclusion. Notwithstanding its dominance as a key policy issue, it is clear that polarized views on, and variable commitment to, mainstreaming continue to exist, and the benefits of these processes continue to be largely uncritically accepted in much of the available literature, policy documents and conference speeches. There have been few attempts (within policy or existing research) to define what is meant by mainstreaming in disability sport, and how it could or should be interpreted, and how the processes of mainstreaming and inclusion actually operate in reality.

Conclusion

If one of the main aims of mainstreaming and inclusion based policies is to improve the range and quality of sporting opportunities for disabled people and contribute to the achievement of 'sport for all' policy objectives, it may be apposite to debate and clarify what mainstreaming means for those involved in disability sport, where and when it may be appropriate, and how its success can be measured. In this regard, this paper argues that if we are to develop a more adequate understanding of the policy and practice of mainstreaming and inclusion, it is important to examine these processes from a relatively detached, rather than an ideologically-laden and politically-driven perspective.

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- Thomas, N. & Smith, A. 2009. *Disability, sport and society: A student introduction*. London: Routledge.

Keywords: mainstreaming, disability sport, policy, inclusion

Targets: Adapted-5

Apparatus gymnastics is also for all!

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Traditional gymnastics apparatus can be adapted and supplemented by additional apparatus to the ability level of each child with or without disability. The inclusive programme can be also valuable for the elderly people.

The main consideration is ergonomics. The gymnast is like a worker who uses gymnastics equipment as a tool and gymnastics movements as work movements. The cooperation between a gymnast (worker), equipment (tools) and movement (work) will be planned carefully. It is not easy to rapidly modify qualities of the gymnasts (kids or elderly people). It will be easier to modify equip-

ment and movements to be suitable to develop her or his physical capacity.

For apparatus gymnastics for all, the following is of importance: 1. modification of the apparatus, 2. modification of the environment, 3. modification of the tasks and 4. modification of the teaching methodology (instructional modifications).

After this planning process, any gym can be an attractive operational environment for gymnastics, where everyone, including disabled or highly skilled athletes, can develop their physical quality. The scientific results show that power, dynamic balance and body control will improve significantly after a short training period when gymnasts are from 65 to 80 years old.

Also the elderly or disabled people are able to learn difficult gymnastics skills by regular training.

Keywords: apparatus gymnastics, attractive operational environment, ergonomics, modification

Poster**Quality of life, health and prevention of diseases through SFA****Health-1****Effects of exercise on brain functions after traumatic brain injury***Baek Seung-Soo*

(Sangmyung University, Republic of Korea)

Traumatic brain injury (TBI) occurs when an outside force impacts on the brain. The main problem associated with TBI is neuronal cell death of the brain, and the outcome of TBI ranges from complete recovery to permanent disability, and sometimes death. The cerebellum is one of the brain areas which is selectively vulnerable to forebrain TBI. Physical exercise is known to ameliorate neurologic impairment induced by various brain insults. In the present study, we investigated the effects of treadmill exercise on short-term memory and apoptosis in the hippocampus following TBI in rats. We also determined the effects of treadmill exercise on survival of Purkinje neurons and on a population of reactive astrocytes in the gyrus of lobules VIII and IX of the cerebellum after TBI. The rats were divided into four groups: the sham-operation group, the sham-operation with exercise group, the TBI-induction group, and the TBI-induction with exercise group. TBI was induced by an electromagnetic-controlled cortical impact. The rats in the exercise group were forced to run on a treadmill for 30 min once daily for 10 consecutive days, beginning 2 days after induction of TBI. For the current study, a step-down avoidance task, terminal deoxynucleotidyl transferase-mediated dUTP nick end labeling (TUNEL) assay, Western blot for Bcl-2 and Bax, and immunohistochemistry for caspase-3 were conducted. Cell biological changes of Purkinje neurons following indirect cerebellar injury were analysed by immunohistochemistry. The present results revealed that TBI impaired short-term memory, and increased DNA fragmentation and caspase-3 expression in the hippocampus. Induction of TBI also enhanced expression of pro-apoptotic factor Bax protein and suppressed expression of anti-apoptotic factor Bcl-2 protein in the hippocampus. Treadmill exercise alleviated short-term memory impairment and decreased DNA fragmentation and caspase-3 expression in the hippocampus. In addition, treadmill exercise remarkably suppressed expression of Bax protein and slightly increased expression of Bcl-2 protein in TBI-induced rats. TBI induced loss of calbindin-stained Purkinje neurons in the posterior region of the cerebellum and TBI also increased formation of reactive astrocytes in both the granular and molecular layers of the cerebellar posterior region. Treadmill exercise for 10 days after TBI increased the number of calbindin-stained Purkinje neurons and suppressed formation of reactive astrocytes. The present study showed that treadmill exercise might overcome TBI-induced apoptotic neuronal cell death, thus facilitating recovery following TBI.

This study also provides the possibility that treadmill exercise may be an important mediator to enhance the survival of Purkinje neurons in TBI-induced indirect cerebellar injury.

Keywords: cerebellum, hippocampus, traumatic brain injury, brain functions, exercise

Health-2**The investigation of Chinese undergraduates' exercise-induced sudden deaths***Chen Jie, Wang GuoYong, Shao Bin*

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Background

Sudden death has been defined as "an abrupt unexpected death of cardiovascular cause, in which the loss of consciousness occurs within 1 to 12 hours of onset of symptoms" (Myerburg & Castellanos, 1992; Maron et al, 1980). Sudden death during exercise is uncommon, while it could affect the development of Sport for All seriously.

Methods

The retrospective investigation examined Chinese undergraduates during the period 1998-2008. These cases were validated with information from medical records, autopsy reports and insider interviews.

Results & Discussion

29 exercise-induced sudden deaths (25 males, 4 females) were identified, the freshmen and sophomores account for 72.4%, the amount of females (4 cases) was relatively low compared to males (25 cases). Causes of death were myocardial infarction(10), congenital coronary anomaly(5), myocarditis(3), hypertrophic cardiomyopathy(3), conduction abnormalities(3), heat stroke(1). The deaths were distributed across different types of sports activities. The paper (1) put forward the evaluation scheme of exercise-induced sudden death for undergraduates in different health conditions; (2) set up the Internet service platform for following health states; (3) suggested the first aid and the emergency handling method for exercise-induced sudden accidents; and (4) advised setting up the sports accidental injury insurance among the undergraduates.

Conclusion

The study has an important meaning for developing safe Sport for All and realizing early prevention and first aid for the exercise-induced sudden accidents.

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Acknowledgment

Program of Shanghai Municipal Education Commission(China) 2006.

Keywords: undergraduate, exercise-induced sudden death, first aid, prevention

Health-3

Effects of physical activity on happiness in young non-athlete males

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Introduction

Recently the burgeoning field of positive psychology has re-illuminated the need for psychology to address areas associated with optimal functioning and happiness. As Veenhoven (2004) has proposed, in general, happiness is considered to be the ultimate goal of life, or at least desirable. Happiness can be defined as the degree to which people positively evaluate their overall life situation.

On the other hand, the majority of research on the exercise–affect relationship has examined the impact of exercise on negative psychological states (e.g. Gauvin & Spence, 1996). However, health is not merely the absence of disease and negative affect, instead a condition of physical and psychological well-being, as well.

Then, because of poor research concerning the relation between exercise and well-being (especially happiness) in non-athletes, there is a need for research examining the effects of constant physical activity on happiness concerning this group. Therefore, the purpose of this study was to determine the effect of physical activity on young men's happiness.

Methods

62 sedentary young men between the ages 18-25 participated in this study. Participants were randomized into three exercise groups (aerobic, weight training and concurrent) and one control group. The experimental groups took part in an 8-week training with given intensity and duration. The control group was asked to continue their usual daily routines during the 8-week experimental period. The instrument of study was a revised version of Oxford Happiness Questionnaire (OHQ-R) that was measured before and after the exercise programme. Data were analyzed by one way analysis of variance ($P < .05$).

Results

The findings revealed significant differences between the groups. The results showed the effect of exercise participation on improving happiness; the effects were biggest in the concurrent group in relation to the control group.

Discussion

Our study has shown improvements in the parameters of happiness in exercise groups. From the viewpoint that happiness is an important factor in well-being and qual-

ity of life, and that young men must select good ways for increasing the quality of their lives, administration of a regular exercise programme will be beneficial to sedentary young males. It is considered that young men can benefit from all kinds of exercise introduced in this study for increasing efficiency in future society.

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Keywords: physical activity, happiness, young men

Health-4

Self-evaluated effects of the Joe Finn campaign on health behaviour

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Introduction

More than half of the Finnish population do not include enough physical activity in their daily lives. Middle-aged men are among the least active population groups. The Joe Finn campaign launched by Finnish Fit for Life programme in 2008 aimed at improving health behaviour of middle-aged men. The campaign included physical activity and cooking courses, a website providing information and tests, brochures, and lorry tour events around Finland in 18 cities. The tour consisted of day-long events where people undertook various health tests as well as were inspired by a physician's lecture and humorous shows. About 7000 people attended the tests and other events. The aim of the current study was to determine if the campaign affected health behaviour of the people who attended a lorry tour event. It is important to find out if this kind of campaign including health tests, with immediate feedback, as well as advice for a healthier lifestyle, was effective.

Methods

The research was conducted with a mailed questionnaire approximately one year after the lorry tour events took place. Questionnaires were sent to people who had left their contact information for the organisers during the events. The response rate to the questionnaire was 48 % (N=278). The questionnaire included questions of the participants' eating habits and physical activity before and after the event, and what kind of changes they had made due to the campaign with 5-point Likert scales. In addition, the respondents were asked to evaluate the event, campaign material, supplementary programme, and the

fitness tests with 5-level semantic differential scales and open-ended questions.

Results

The results show that the campaign did have a positive effect on the participants' health behaviour. About 37 % of the respondents stated that the event and/or the campaign material had had positive effects on their physical activity, and almost 50 % said that their eating habits had improved since the event. In addition, over 90 % of the respondents thought they understood and were able to use the information they received. When evaluating the event with 5-point semantic differential scales, people felt strongly that the event was encouraging (4.4 ± 0.7) and positive (4.6 ± 0.6).

Conclusions

The results show that the respondents felt the Joe Finn campaign affected their health behaviour positively. The modern approach of combining an event with several other methods of communication proved to be meaningful and helpful for the participants. The health tests with immediate feedback seemed to support the other campaign material and strengthened the message. Therefore, future campaigns should utilise this model as a template and further develop communication strategies.

Keywords: communication, middle-aged men, health campaign, physical activity

Health-5

Sleep habits of young ice hockey players in Finland

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Regular sleep patterns and having enough sleep are essential elements for sport performance and also for overall well-being. Sleep is closely linked with physical and mental recovery processes and with learning new skills and knowledge. The importance of sleep is highlighted in children and adolescents due to rapid maturation processes. Having enough sleep is therefore especially important for young athletes like ice hockey players.

The aim of the study was to investigate sleep habits, perceived tiredness, quality of sleep, as well as self-reported physical and mental strain due to exercising and games of ice hockey, and their associations. The sample consisted of 14-15 year-old Finnish ice hockey players ($n=324$) from 18 teams all over Finland. All the sport clubs that the teams represented were quality certified by the Young Finland Association, which has been found to be more health promoting than non-certified sport clubs (Kokko, 2010). The data were collected by questionnaires and analysed with frequencies and cross-tabulations using SPSS for Windows. Several sum scores were formulated for analytical purposes.

Bedtimes varied in different situations among ice hockey players; e.g. 62% went to bed at 11 pm or later before

a school day if they had no hockey (training or game) the next day. This proportion dropped to 37% if they had school and hockey next day. Accordingly, sleep lengths varied considerably in different situations. The players slept in average 8 hours and 18 minutes if they had school next morning and did not have a training session or game the next day. The sleep duration was about 30 minutes longer if they had school and training or game the next day. The average desired sleep length in order to be alert and function well for the whole day was 9 hours and 16 minutes. Short sleep lengths were significantly associated with lower perceived alertness. The role of parents and coaches in regulating the players' bedtimes were important. If an agreement existed with the coach and parents were aware of it, the sleep lengths were longer than without this agreement. These bedtime agreements also played an important role in relation to perceived alertness and self-reported physical and mental strain.

The results suggest that being a member of an ice hockey team has a positive effect on both bedtimes and sleep lengths of young players. Also, a bedtime agreement between coaches and players had a similar positive impact. Thus, it can be recommended that the importance of sleep should be raised on the agenda of youth sports clubs and in coaching education. Coaches should also make agreements with players about bedtimes and parents should be informed of them.

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Keywords: young Finnish ice hockey players, perceived tiredness, sleep habits, sleep quality, self-reported mental and physical strain

Health-6

Effects of acute exercise on exercise-induced feeling among middle-aged and older adults

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Introduction

The baby boomers who are now turning middle-aged and older adults, are aware of the importance of exercise in order to stay healthy both physically and mentally. A positive feeling response is associated with increased participation in an exercise programme regularly, but subjective states that occur during and following acute exercising are likely predictors of whether individuals are willing to maintain constant exercise and physically active lifestyles (Dishman, 1982). Therefore, this study intended to investigate the effects of acute exercise on exercise-induced

feelings among middle-aged and older adults.

Methods

Twenty three participants 50+ year of age (mean age = 62.3+8.3 years) volunteered to participate in a 60 min of single bout exercise session. The exercise session was structured and led by an experienced instructor, which included 10 min of orientation, 10 min of warm-up, 20 min of cardiovascular training, 10 min of muscular fitness training, and 10 min of cool-down. Exercise-induced feeling was assessed twice, using Exercise-Induced Feeling Inventory-Chinese version (EFI-C), 10 min before and 10 min after the exercise session. EFI-C was originally developed by Gauvin and Rejeski (1993). In order for the investigator to examine the reliability and validity of the test, EFI-C was first conducted by back translation, CFI, item analysis and Cronbach α . The results showed that EFI-C was of good validity and reliability.

Results

The results of the dependent t-test showed that participants had a significant response of exercise-induced feeling on positive engagement/revitalization ($t = -3.38, p < .05$) and tranquility ($t = -2.77, p < .05$) subscale scores, but not on physical exhaustion ($t = -.47, p > .05$) subscale scores.

Discussion

Acute exercise has a positive effect on positive engagement/revitalization and tranquility for middle-aged and older adults. Furthermore, it may be due to the length of intensity physiologically, why the exercise caused no positive effect on the physical exhaustion. Therefore, it is encouraged that they are provided with well-designed exercise sessions. Moreover, follow-up psychological strategies for exercise adherence need to be emphasized.

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Keywords: acute exercise, middle and older adults, exercise-induced feeling

Health-7

Motivation and barriers to physical activity in twin pairs discordant for leisure time physical activity for 30 years

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Introduction

To bestow major health benefits physical activity need to be persistent. However, determinants of persistent long-term physical activity are insufficiently known. The aim of this study was to investigate psychological motivational determinants and barriers to physical activity among 16

middle- and older-aged twin pairs persistently discordant for leisure time physical activity habits. The research question was whether the characteristics of exercise motivation and barriers differ between the active and inactive co-twins of twin pairs.

Methods

The present study is part of the TWINACTIVE study (Leskinen et al. 2009). To evaluate participants' exercise motivation we used the 73-item Recreational Exercise Motivation Measure (REMM), which has been created to measure adults' exercise motivation (Rogers & Morris 2003). The scale of measure consisted of three dimensions; intrinsic motivation, social motivation and body-mind wellbeing factor. Responses were indicated on a 5-point Likert scale. To assess the personal barriers to physical activity, we used a 25-item questionnaire. The total number of same-sex twin pairs analyzed was 7 monozygotic and 9 dizygotic, mean age was 60 years. We analyzed the characteristics of exercise motivation and barriers between the discordant co-twins using the Stata symmetry test. The level of significance was set at $p < .05$.

Results

Motives related to the health reasons, general well-being and mood management were the most important reasons for exercise among twins analyzed. The active co-twins also highlighted enjoyment, fun and challenge aspects to be important. The exercise participation was encumbered mostly with pain and different health problems. When we compared active twins to their inactive co-twins, we noticed that active ones felt exercise participation to be significantly more relaxing than the inactive co-twins ($p = 0.01$). Other differences in motivation factors between the active and inactive subjects were: "to be physically fit" ($p = 0.03$) and "to help improve mental health" ($p = 0.05$). No differences were found between any exercise barrier factors.

Discussion

The key motivation factors for persistent leisure time physical activity compared to inactivity were related to body-mind wellbeing dimension. Regardless of the level of activity the barriers to physical activity were the same. Interestingly, neither social nor environmental aspects were seen to be the important motivation factors for constant physical activity in our study, although many other studies have shown such results. It seems to be a prerequisite for persistent leisure time physical activity that the participants find the activity relaxing and improving both mental and physical health.

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Keywords: physical activity, twins, barrier, persistent, motivation

Health-8**Physical activity and nutrition counselling model for Finnish adults: The experiences from the TELIRANE project**

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The aim of the ongoing TELIRANE project (Health Enhancing Physical Activity and Nutrition Counselling Model) 2008-2010 is to narrow the health differences among the adult population of Kainuu, in Northern Finland. Implementation of the project contains personal physical activity and nutrition counselling with five appointments: 1) interview, goal definition, and basis for the physical activity plan, 2) health measurements and complementing the physical activity plan, 3) nutrition counselling, food diary, and nutrition plan, 4) group counselling and the physical activity plan, 5) health measurements and the physical activity plan. This paper describes the changes in physical activity and fitness during the counselling process and participants' satisfaction with the counselling process. Preliminary results will be discussed.

Health measurements included measures of physical activity, fitness and body composition. Physical activity was self-reported, and cardiorespiratory fitness was measured by the Polar Fitness Test. Muscular fitness of the upper and lower limbs was measured by the hand grip strength test (Saehan Hand Dynamometer), and the repetition squat test or alternatively by the rising from the chair test. Body composition was measured by the Omron BF500 monitor. After the counselling process, the customer satisfaction survey was mailed to all participants.

Self-reported physical activity increased by 360 METminutes per week ($p < 0.001$, $n=57$), but no change was observed in cardiorespiratory fitness ($n=177$). Results of the muscular fitness tests of the lower limbs ($n=173$, $n=95$) improved in both men and women. Hand grip strength improved by 2.5 kg in men ($p < 0.001$, $n=77$) but not in women. Body weight decreased by 0.6 kg in both men and women ($n=312$). Body mass index decreased slightly in women but not in men. Percentage of body fat decreased in men but not in women.

A total of 253 participants responded to the customer satisfaction survey after counselling. Compared to the baseline, 40% of the respondents felt that their state of health was now somewhat better. More than one-third (36%) reported that their exercise habits had improved considerably, and 47% reported some improvement. One-fifth (20%) reported that their nutrition habits were considerably better, and 49% reported that they were somewhat better. Of the respondents, 41% were very content with the nutrition counselling, and 56% were very content with

the physical activity counselling. In the open answers, the respondents reported that their exercise habits had improved and become more diverse. They reported that they had found the joy and enthusiasm to do physical activity. However, they had hoped that the counselling process would have been longer and more regular.

The results of the health measurements improved during the counselling process, as did the self-reported physical activity. The results from the customer satisfaction survey support the positive outcome of the whole process.

Keywords: nutrition counselling, physical activity, customer satisfaction survey, health measurements

Health-9**Effects of regular 8-week Nordic Walking training in the elderly Japanese**

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Introduction

Nordic Walking (NW) is a popular and fast growing type of exercise in Europe. Recently, NW clubs have also been established mainly by seniors in various parts of Japan. Previous studies have already demonstrated that NW has short-term effects on cardiorespiratory performance (e.g. Church et al 2002). However, the knowledge of effective and long-term NW programmes for improving aerobic and functional capacity among elderly is still lacking. Therefore, the aim of the study is to explore the structured 8-week NW exercise program effects on functional capacity of the Japanese elderly.

Methods

Forty participants were recruited and randomized to an exercise group (66.7±4.5 yrs. $n=20$) or control group (68.0±4.6 yrs. $n=20$). Functional measurements included the sit-and-reach test, timed-up and go test (TUGT), isometric knee extensor strength (LEG) assessment, and incremental shuttle walking test (ISWT). Throughout the ISWT, each subject's heart rate (HR) was monitored. Static balance was tested using a balance force platform. The NW group exercised 3 times per week for 8 weeks. The duration of the training session was progressively increased from 40 to 60 minutes and walking distance increased from 1.6 to 5 km. The experienced trainers and community volunteers in NW supervised every exercise in the NW group. After the 8-week NW exercise period, the same measurements were repeated for all the subjects.

Results

Attendance at training sessions for the NW group was 90%. No training-related injuries were reported among the NW group. Although body weight in the NW was

unchanged after the training period, there was a slight but significant increase in the control group ($p < 0.05$). In the NW group, training had positive effects ($p < 0.05$) on TUGT, flexibility, and LEG. In contrast, LEG was decreased in the control group during the follow-up period ($p < 0.05$). There were no statistically significant differences between the first and second ISWT in the number of shuttles completed in NW group. However, the control group performed fewer numbers of shuttles in the second test in comparison to the first test. During the ISWT, NW group walked with significantly lower HR from level 1 to 5 after the 8-week training period ($p < 0.05$). There was no difference for HR in the control group. In the balance measurements, there were no statistically significant changes between the groups in any of the four different balance tests.

Discussion

In the present study, the structured 8-week NW exercise programme was effective on functional capacity of the Japanese elderly. We also confirmed that NW speed was significantly faster after the 11th session of the training, implying the improvement of their poling techniques and walking capacity. The proper poling technique helps to increase the length of steps. Thus, the elderly people can walk faster at a low subjective perception of fatigue. However, further studies are needed to assess the impact of the longer period of NW exercise on both the static and dynamic balance controls in this population.

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Keywords: Nordic walking, elderly

Health-10

The aerobic fitness of 9000 Finnish employees aged 20 to 65 years

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Background: A low level of aerobic fitness is associated with an increased risk of several cardiovascular and metabolic diseases. There is a need for topical data about aerobic fitness at population level.

Purpose: To assess the aerobic fitness of Finnish employees and compare the results with earlier published reference values.

Methods

The aerobic fitness of 4768 males and 4166 females (age 20-65 years) was estimated with a submaximal bicycle ergometer test. The subjects were recruited from Finnish companies in 2002-2008 and they were categorized into tertile groups of fitness according to earlier published age- and gender-specific cut-off values that are commonly used in Finland (Shvartz and Reibold, 1990).

Results

The distributions of employees in the least fit tertile category were 44%, 38%, and 28% among males and 39%, 39%, and 26% among females in the age groups of 20-34, 35-44, and 45-64 years, respectively. The distributions of subjects in the most fit tertile category were 35%, 39%, and 47% among males and 27%, 35%, and 47% among females in the age groups of 20-34, 35-44, and 45-64 years, respectively.

Conclusion

Compared with the normative values of aerobic fitness published 20 years ago, the distribution of least fit employees was now substantially higher among the youngest males and notably lower among the oldest males and females. Results raise concern about the aerobic fitness of young males and their health in future.

Reference: Shvartz E. & Reibold, R.C. *Aviat Space Environ Med*. 1990 Jan;61(1):3-11.

Keywords: physical activity, aerobic fitness, health

Health-11

Leisure-time physical activity and nutrition: a twin study

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Introduction

Both physical activity and healthy nutrition are essential for the maintenance of health and the prevention of cardio-metabolic diseases. The relationship between physical activity habits and healthy eating is insufficiently known. The aim of this study was to determine the association between long-term leisure-time physical activity/inactivity and eating behaviours in twin pairs discordant for physical activity for 30 years.

Methods

Sixteen physical activity discordant same-sex twin pairs (7 monozygotic and 9 dizygotic, mean age 60 yrs), were selected from the Finnish Twin Cohort on the basis of physical activity discordance for 30 years, blinded to their possible differences in eating behaviours (Leskinen et al. 2009). The nutrition data were collected cross-sectionally using a questionnaire on eating habits and a 5-day food diary. Differences in eating behaviours between physically active and inactive co-twins were analyzed with pairwise tests.

Results

The eating habits questionnaire revealed that physically active co-twins more frequently reported that it is easy to eat according to need, whereas overeating and/or restrictive eating was more common among the inactive co-twins ($P = 0.035$). Avoiding calories was more common among the active than inactive co-twins ($P = 0.034$).

Based on the food diaries, the physically active co-twins had on average a 15.5 kJ/kg higher daily energy intake than their inactive co-twins ($P=0.030$). The active co-twins also had a higher intake of vitamin C ($P=0.004$), total water ($P=0.044$), legumes and nuts ($P=0.015$), sweets ($P=0.036$), and a lower energy-adjusted intake of meat ($P=0.013$).

Discussion

The physically active persons seem to eat more but not necessarily healthier foods. However, habitual physical activity may help in eating according to need and in reaching and maintaining a healthy body composition. Therefore, it is necessary to incorporate both dietary and physical activity advice into health counselling which aims at behavioural change towards a healthier lifestyle.

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Keywords: physical activity, nutrition, twin study

Health-12

The impact of recreational physical activities

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Introduction

Physical activities and recreation are practiced by almost all kinds of people, including children, adolescents, adults and particularly seniors of the third age, providing them bio-psycho-social benefits. Our social labour as teachers in the physical education, sport and recreation area, leads us to analyze the behavior pattern carried on by people who develop physical, recreational activities towards a new art of living. The study aimed at analyzing the impact of these activities on the quality of life of seniors in Venezuela. It is based on the satisfactory aging Theory of Beltes (1990).

Methods

The study is based on a qualitative methodology: on the phenomenological knowledge and on the socio-historical, interpretative approach. The data gathering was done with an interview to a focal group who developed physical activities in the area of Naguanagua, Venezuela. To analyze the information obtained, the comparative-continuous method of the Grounded Theory was used (Strauss and Corbin 1998).

Results

As a result obtained from the study, a conditional concuencial matrix with bio-psycho-social categories that relate the impact of the physical activities and the quality of life of the senior to the region mentioned, was elaborated.

Conclusion

Continuous physical activities by the third age people (seniors) were carried on systematically through control. Exercising provides bio-psycho-social benefits like functionality raise; prevents illnesses such as obesity, diabetes, arterial hypertension; reduces falls that are very dangerous at this age, and also diminishes mortality.

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Health-13

Greater prevalence of osteopenia among high-level swimmers

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Aim: The aim of this study is a comparison of the bone mineral density (BMD) and bone mineral content (BMC) between elite swimmers and sedentary subjects.

Materials and Methods: BMD and BMC in 13 elite swimmers (Age: 19.3 ± 1.4 ; Height: 178.4 ± 5.2 ; Weight: 75.9 ± 9.4 ; BMI: 23.9 ± 3.3) and 13 sedentary subjects (Age: 19.4 ± 2.0 ; Height: 174.5 ± 6.1 ; Weight: 69.1 ± 12.4 ; BMI: 22.6 ± 3.2) were measured using dual-energy x-ray absorptiometry (DEXA, Osteocore). The descriptive and analytical statistical calculations were performed using a data processing software tool (Statview 5, SAS Institute Inc. USA). The normality of the distribution was checked by using the Kolmogorov-Smirnov test. The comparison of BMD and BMC was made using the classic Student test. $P < 0.05$ was adopted as the significant threshold.

Results: The main result of this study is that 61.5% of the elite swimmers showed abnormally low bone mineral density values in the lumbar column (osteopenia and osteoporosis), while among the sedentary subjects, this rate was 38.5%. A comparison of the BMD and BMC of the lumbar column between the two groups did not show any significant difference, although there were higher values among the sedentary subjects.

Conclusion and Discussion: Research shows that physical activity as the first stage of preventing osteoporosis is vital. However, it seems that not all physical activity has the same effect on bone tissue. Basically, the mechanical forces exerted on the bones by muscle contractions and the ground shock absorbed by the body play an essential role in increasing BMD, with the second being more important. The swimmers swim between three and three and-a-half hours a day, and are in contact with the ground between three and three and-a-half hours less than the sedentary subjects, so their bodies experience fewer shocks. What is more, it seems that short-term sports are more osteogenic than endurance sports like

swimming and cycling.

Keywords: Osteopenia, DMO, CMO

Health-14

Physically inactive adults in Finland – Identification of the subgroups

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Introduction

Many Finnish adults fail to meet the recommended level of physical activity in order to maintain their health. The reasons for insufficient physical activity have not been specified in detail. It is very difficult to get physically inactive people involved in physical activities. Without knowing the needs and behaviours of physically inactive people, it is impossible to plan effective physical activity programmes in order to support them to get physically more active. The factors or correlates that have been recognised to be associated with physical inactivity at the population level do not necessarily apply to all small inactive groups. The purpose of this study was to examine what different kinds of subgroups can be recognised among physically inactive Finnish adults aged 45 years or less.

Methods

Nationwide data for this study was derived from the annually repeated "Health Behaviour among the Finnish Adult Population" survey for adults aged 15–64 years. This survey is conducted by the National Institute for Health and Welfare, Finland. The response rate, on average, has been 66%. A total of 10,703 men and women aged 45 years or less responded to the surveys in 2003–2008, and 25% (n=2737) of them were classified as physically inactive (exercising 0–1 times a week). The questionnaire also included questions about smoking, alcohol consumption, dietary habits, dental health, perceived general health, use of health services, and questions related to change processes and health campaigns. Among the inactive adults aged 45 years or less, cluster analysis was used to form natural clusters, i.e. different groups in which the individuals have similar profiles of lifestyles and health-related habits.

Results

Based on cluster analyses, eight different subgroups of physically inactive adults were recognised: (1) "young students" (mean age 22 years), (2) "distressed women" (mean age 30 years), (3) "working men" (mean age 33 years), (4) "conventional officials" (mean age 35 years), (5) "ill and single women not at work" (mean age 36 years), (6) "overweight persons with health problems" (mean age 37 years), (7) "healthy mothers" (mean age 37 years) and (8) "proper fathers" (mean age 38 years).

Discussion

In the present study, eight different subgroups of physi-

cally inactive Finnish adults were recognised. The groups differed from each other by their background and lifestyle variables, such as age, gender, work situation, educational level, physical and mental health, obesity level, alcohol consumption and smoking. The identification of the profiles for different physical inactivity subgroups may allow better targeted and tailored interventions to enhance their physical activity.

Keywords: lifestyle, adults, inactivity

Health-15

Physical inactivity among Finnish adults – A subgroup of young students

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Introduction

In Finland, a part of the population does not exercise enough to maintain their health. The reasons for the scarcity of physical activity have not been specified in detail in previous studies. The purpose of this study was to examine what different kinds of subgroups can be recognised among physically inactive Finnish adults aged 45 years or less. In many respects, especially physically, young adults are generally healthy. If, however, a lifestyle that is detrimental to health, such as excessive sitting or remaining physically inactive for most of the day with little or no exercise, becomes a habit, the outcome predicts shorter lives and increased health inequalities.

Methods

Nationwide data for this study was derived from annually repeated Health Behaviour among the Finnish Adult Population survey for adults aged 15–64 years. This survey is conducted by the National Institute for Health and Welfare, Finland. The response rate has been on average 66%. A total of 10,703 men and women aged 45 years or less responded to the surveys in 2003–2008, and 25% (n=2737) of them were classified as physically inactive (exercising 0–1 times a week). The questionnaire also included questions about smoking, alcohol consumption, dietary habits, dental health, perceived general health, use of health services, and questions related to change processes and health campaigns. Among the inactive adults aged 45 years or less, cluster analysis was used to form natural clusters, i.e. different groups in which the individuals have similar profiles of lifestyles and health-related habits. A group of young students (n=387/14%) was selected as the subject for this study.

Results

The average age in the young students group (n=387/14%) group was 22. The majority (68%) were unmarried, and 56% women. A total of 63% were students, some (16%) were stay-home mothers, and only

a few (4%) worked full-time. Physically and mentally, the respondents in this group were healthy but they had some unhealthy habits concerning eating. For instance, they only ate little vegetables and a lot of ice cream and sweets.

Discussion

In the present study, a group of physically inactive young students were recognised. It seems that physical inactivity was already a part of their lifestyle. Further detailed research information is necessary on what kind of a choice scarce physical activity is in the everyday life of a young person. In future, we should aim at understanding young people's lifestyle-based choices from the viewpoint of their culture by adopting an ethnographic research approach based on participative observation and in-depth interviews.

Keywords: inactivity, lifestyle, students

Health-16

Trying to find a trend for ageing, aerobic capacity and functional mobility in elderly women

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Introduction

Ageing is associated with some predictable functional declines involving the musculoskeletal system. Those declines have the greatest impact on and are most pronounced in women (Seo et al, 2010). This capacity can be improved by physical training (Liu-Ambrose et al, 2010). The relation between aerobic exercise training and health advantages has been demonstrated (Muster et al, 2009). Moreover, the improvement on muscle function related to aerobic training has been studied, too (Harber et al, 2009). As aerobic capacity and functional mobility are lost throughout the lifecourse, the aim of the study was to analyze if there is a clear trend in the loss of aerobic capacity and functional ability as women age or, on the contrary, if there is a certain age from which onwards there is a more pronounced decline in the loss of these functions.

Methods

For this study, 82 Spanish, community-dwelling elderly women without dementia (Age \bar{x} = 71.32, SD=6.74) were assessed by means of different scales in two dimensions: Physical Activity (Yale for Physical Activity Survey, Timed Up-&-Go –TUG– for functional mobility and 2-Minute-Step -2MS- for aerobic capacity) and nutrition (Mini Nutritional Assessment ®). Other variables such as age, marital status, living arrangements with a partner or not, occupational complexity or bilingualism were taken into account. In terms of age, women were classified by quartiles (Q1 from 60 to 66; Q2 from 67 to 71; Q3 from 72 to 74 and Q4 from 75 to 87).

Results

For this sample, women in the fourth quartile (Q4) of age performed the TUG test significantly worse than all other groups (Q1 \bar{x} =8.93, SD=2.41; Q2 \bar{x} =8.56, SD=1.50; Q3 \bar{x} =8.96, SD=1.59; Q4 \bar{x} =13.23, SD=7.36) (Q1 VS Q4 P=0.005; Q2 VS Q4 P=0.006; Q3 VS Q4 P=0.022). Although significant correlation was found between the 2MS test and age (r =-.274; P=0.015), there were no significant differences in the performance of this test among age groups (Q1 \bar{x} =54.52, SD=13.07; Q2 \bar{x} =52.71, SD=12.17; Q3 \bar{x} =53.40, SD=9.80; Q4 \bar{x} =45.52, SD=21.48) (P>0.05 in all groups).

Conclusion

This study suggests that women aged 75 and older, perform the TUG test significantly worse than all other groups, that is, there is an abrupt change with respect to the trend shown by women from 60 to 74 years of age. Regarding the 2MS test, a trend was identified but no abrupt change was found associated with age. These results suggest that aerobic capacity and functional mobility decline throughout the life course and it seems that these declines are more pronounced after the age of 75. Many of the declines in functional mobility and aerobic capacity attributed to ageing can be reduced through regular exercise. Indeed, a needs analysis assessing the physical deficits and exercise limitations of the individual is the first step in constructing an exercise prescription.

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Keywords: women, ageing, physical activity, functional mobility, aerobic capacity

Health-17

Male40: An exercise intervention compared to a health promotion intervention in 35-45-year-old men with an elevated cardiovascular risk

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Background: If cardiovascular risk factors are identified early and modified, cardiovascular disease can be prevented. Exercise is an effective method to control the cardiovascular risk in men and the challenge in primary care is to change and increase the exercise habits, which is also the goal of this study.

Inclusion criteria: At least two cardiovascular risk factors:

- BMI 27.0-34.0
- waist circumference \geq 94 cm
- fasting glucose \leq 6,1 mmHg/l
- total plasma cholesterol \geq 4 mmHg/l
- LDL-cholesterol \geq 3,0 mmHg/l

- triglycerides $\geq 2,0$ mmHg/l
- blood pressure $\leq 140/90$ mm Hg.
- smoking

- cholesterol- or blood pressure-lowering medication

Exclusion criteria: More than 3 times of exercise per week,

BMI ≥ 34 , chronic conditions (alcoholism, arrhythmia, severe mental problems).

Study design: Randomized controlled trial. Sample: 300 men.

Interventions: Exercise intervention (an exercise training course of 12 sessions in a group). Health promotion session by a public health nurse.

Monitoring structure: Web surveys at 0,3,6, and 12 months, lab tests (cholesterol, blood sugar,sCRP) at 0, 3, and 12 months, the UKK-walktest, and sport diary.

Methods: The men are randomized either to health promotion, both health promotion and exercise intervention and control group. We hypothesize that the interventions have effect on the cardiovascular risk level of the men. The follow-up in the study lasts 12 months.

Recognition: 1)An open Web survey "Map your situation" on a communal Website 2)An invitation letter for a health check for men at 40 years of age 3)Targeted invitation for men that use health services

Data analyses will focus on: 1.Cardiovascular risk, exercise habits. 2. Walking test, subjective well-being, use of health services.

Results

During the first study year, 450 men answered the Web survey. 150 of them gave their consent, fulfilled the inclusion criteria and were included in the study. At this point, our finding is that the project services are feasible, practical and doable.

The project has received positive feedback from participants, relatives and press. Exercise course has inspired the men to take care of their health with physical exercise. Multiprofessional cooperation has succeeded well in the project and it has created a possibility for the health centers to guide the men at risk to exercise services.

Health-18

The effect of a walking intervention on the health performance of the type II diabetes patients

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Nowadays, type II diabetes has been in the fourth place among the top ten leading causes of death in Taiwan from 2002 to 2009. According to WHO, the number of type II diabetes patients in the world will be over 324 million in 2025. Many studies have proved that regular exercise can control blood sugar, maintain healthy weight, and promote quality of life. Walking is the safest and most convenient exercise to engage in, especially for the elderly.

The purpose of this study is to investigate the effects

of a walking intervention on health performance for patients with type II diabetes. A sample of 46 men and 24 women with type II diabetes, who have no any exercise habits, in Taipei Jen-Chi Relief Institution, were selected by two senior specialists in internal medicine. Participants were allocated voluntarily to walking (intervention) group or a non-walking behaviour (control) group to record their daily walk steps during the study period. The training programme is 30 minutes at a time, min. 3 times a week. The duration of the intervention is 12 weeks, with a questionnaire, physical fitness test, and clinical physiology tests assessed at baseline and in the third month.

Data collection includes a health performance questionnaire [the MOS 36-item Short Form Health Survey (SF-36)], physical fitness test, and clinical physiology tests. The physical fitness test includes Body Mass Index, Waist/Hip Ratio, the 30-second chair stand test, and the 6-minute walk test. The clinical physiology test includes blood sugar and HbA1c. The descriptive statistics, t test and paired-sample t test are used for data analysis.

After the 12-week walking intervention, the results of this study were as follows:

1. The scores of the aspects of SF-36 were significantly higher after the intervention, including physical function, role function limitation due to physical distribution, bodily pain, general health, vitality, social function, and mental health.
2. The physical fitness tests including BMI, the 30-second chair stand and the 6-minute walking test had improved significantly.
3. The levels of blood glucose were significantly lower after the intervention.

In conclusion, the study has demonstrated that 3 days/week for 3 months was a safe and well accepted amount of activity by older patients in type II diabetes. Walking plays an important role in the management of type II diabetes. Furthermore, regular walking can lower blood glucose, BMI, and improve quality of life and physical fitness. These findings provide strong support for the walking programme in health improvement in type II diabetes patients. Further research is recommended to conduct in-depth interviews to explore patients' psychological struggle while facing the walking intervention.

Health-19

The relations between nutrition, physical activity and the intellectual component throughout life

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Introduction

The association between physical activity and healthy aging has been proved in different researches (Sun et al, 2010; Baker et al, 2009, Peterson et al, 2009). Also the relation between nutrition and healthy aging has been studied (Anderson et al 2010). The aim of this study

was to elucidate if those whose nutrition was healthier were able to perform better a physical task than those with worse nutrition. On the other hand we wanted to examine whether those who, throughout their lives, have performed tasks that required an intellectual component, practice more physical activity than those who have not done this type of tasks.

Methods

For this study, 82 community-dwelling elder women without dementia (Age \bar{x} =71.32, SD=6.74) were assessed by means of different scales including: Physical Activity (Yale and two minutes step), Nutrition (Mini Nutritional Assessment) and a questionnaire from which some items were related to occupational complexity. Other variables such as age, marital status, if living with a partner or not, were taken into account.

Results

For this sample, women who reported a better nutritional status, performed significantly better in ($p=0.021$) the two-minute step test (\bar{x} =60.37 steps SD=13.99) than those who reported worse nutritional status (\bar{x} =50.28 steps, SD=16.15). On the other hand, those who practiced more intense physical activity were the ones who performed tasks that required an intellectual component along life ($p=0.014$). Finally a positive statistically significant correlation has been found between practicing intense physical activity and better performance of the two-minute step test ($r=0.299$, $p=0.008$). No relation has been found between intellectual component and an improved nutritional status ($p=0.483$).

Discussion

This study suggests that an improved nutritional status is associated with a better performance of the two-minute step test. On the other hand, practicing intense physical activity is associated with having performed tasks which require an intellectual component. Interestingly, even if practicing intensive physical activity is related to a better performance of the two-minute step test, no relation has been found between better nutritional status and the intellectual component. These results suggest that both nutritional status and performing tasks with an intellectual component are independently related to having been more physically active.

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Keywords: physical activity, occupational complexity, aging, nutrition

Health-20

Motor performance analysis in male and female medical rescuers

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Introduction

It is unquestionable that there are high physical demands for the career of emergency service personnel. It can be supposed that rescue tasks such as hoisting tasks and saving victims are related to factors such as stature, body mass, body fat, push-up scores, sit-up scores, total hand-grip strength and endurance. It is obvious, regarding the safety of the professional rescuers that they need to be in an excellent physical condition to be able to do such demanding job for a long time. A high level of muscle strength and muscle endurance, mostly of the trunk and lower limbs is necessary to execute the professional tasks easily and prevent injuries of the lower back (Lemon & Hermiston, 1977 in Claessens, A.L. et al., 2003). Increased physical demands of this profession must be taken into account regarding the number of female candidates to this profession as well as the number of women having already executed this job. The purpose of this study is a motor performance analysis of male and female emergency medical rescuers.

Methods

The sample consisted of male and female rescuers (N=56). Physical condition was determined by using the Eurofit test battery (1993); six additional field motor tests (Mekota-Blahu, 1983), and laboratory FiTRO agility check test and FiTRO Sway check test were used to determine the space of coordination motor abilities in more detail. Possible differences between the groups were explored by using t-tests for independent samples.

Results

The analyses of variance demonstrate that there are significant differences between the group of men and women in all examined anthropometric characteristics and in the level of the majority of condition abilities. The results prove a similar level of coordination dimensions. At the same time, a significantly higher level of body fat was noticed in the group of women. It can be supposed that the coordination motor components are not defined by so large distinctions between the group of men and women as condition abilities.

Discussion

Partial scientific studies determining the kinetic particularities of individual professions make it possible to particularize and improve both the profile of profession and professional preparation. In addition, up to this day, the key points for consolidation of essential requirements that concern the optimal level of motor performance in candidates of professional rescuers, have still not been defined.

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Keywords: motor performance, medical rescuers

Health-21

Do people meet the recommended level of physical activity? A new short questionnaire to identify physically active adults – test-retest reliability and comparison to objective measurements

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Introduction

In large health surveys there is a need to evaluate how many people are sufficiently active, i.e. meet the recommended level of physical activity. Physical activity recommendations have changed slightly during recent years. A short physical activity questionnaire was developed to screen adults who meet the recommended level of physical activity (active versus inactive) according to ACSM's and AHA's physical activity recommendations (Haskell et al. 2007). This study evaluated the test-retest reliability of this new instrument and compared the results to objectively measured physical activity.

Methods

The study population consisted of 352 males and females aged 30 to 55 years, who were employees of the city of Espoo and who were selected to participate in a Nuadu health intervention study. Physical activity was self-reported by using three questions describing how many days per week one participated in: 1) moderate to vigorous intensity physical activities (MVPA), 2) vigorous intensity physical activities (VPA), and 3) activities that enhance muscular fitness (MFPA). Questionnaires were filled in twice in order to evaluate test-retest reliability. Being active was defined as participating in MVPA five days a week, or VPA three days a week, or a combination of these two. In addition, physical activity was monitored objectively by ActiGraph accelerometer (GT1M) for seven consecutive days. Being active was defined as accumulating a minimum of 150 minutes of physical activity per week of at least moderate intensity (more or equal to 1952 counts per minute) and in bouts of at least 10 minutes.

Results

The proportion of employees classified as active was 44% according to self-reported questionnaires and 28% according to objective measurements. The test-retest re-

liability of the three questions was moderate: the intraclass correlation coefficient was 0.6 and the proportion of individuals who were classified in exactly the same category or next to the same category in two repetitive tests was 65%, 80%, and 92% for questions evaluating MVPA, VPA, and MFPA, respectively. The proportion of individuals who were similarly classified as active or inactive in two repeated tests was 76%. The values of sensitivity and specificity of this instrument were 58% and 61%, respectively, with objective measurements.

Discussion

A new short screening instrument was introduced for health surveys to identify adults who meet or do not meet the recommended level of physical activity. The proportion of adults meeting the recommendations was higher based on self-reports compared to objective measurements of physical activity. The test-retest reliability of the questionnaire and its ability to identify adults who meet the recommended level of physical activity were reasonable.

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Keywords: recommendations, monitoring, physical activity

Health-22

A new measure: computer assisted video analysis of physical activity on group level (CAVAPA)

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Introduction

Physical activity (PA) can be measured using several methods varying from self-report questionnaires to very accurate doubly labeled water methods. Many measures target PA of individuals. In addition, a few observational methods have been developed to measure PA in groups or certain spaces by summarizing the activity of individuals (SOPLAY, SOPARC, SOCARP). However, these methods are rather expensive and laborious. Consequently, there is a need for new methods which measure PA in large groups. The aim of this study is to introduce and develop a new measure of group level PA through computer assisted video analysis (CAVAPA).

Methods

Video analysis is based on the Lucas-Kanade method (Lucas & Kanade, 1981), calculating the optical flow for determining the motion of the target group. Resulting optical flow is used to track the motion of detectable features of the participants, determined by using the Harris & Stephens feature detector (Harris & Stephens, 1988).

The motion of the resulting movement is transformed to real-world coordinates by applying a perspective projection determined by a method resembling the well known RANSAC model fitting (Fischler & Bolles, 1981). Data collection: 11 students from a secondary school were filmed for a period of 15 minutes. The first five minutes consisted of students standing and listening to instructions as well as warming up. During the second five-minute period all 11 students played floorball. During the last five minutes six of the students played floorball and five of the students were stretching. The aim was to record 1) sedentary behavior, 2) physical activity, and 3) simultaneous sedentary behavior and physical activity.

Results

The group level activity calculated from the video was scaled on a range from 0 to 1. Visual comparison of the video and results of the CAVAPA revealed a similar pattern. The group level activity was lowest in the beginning when the students were standing and listening to instructions and highest during the second five minute period when all the students were playing actively.

Conclusion

CAVAPA is a new method to measure PA from video by using a computer to calculate optical flow from video. The scientific and practical goal is to develop CAVAPA to be a valid, effortless and straightforward method to measure PA on a group level.

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Keywords: measurement, computer vision, physical activity assessment

Health-23

The prevalence of upper and lower-body musculoskeletal abnormalities in active and inactive staff

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Aim: The aim of this study is to compare prevalence of upper and lower-body musculoskeletal abnormalities in active and inactive staff in Islamic Azad University of Kashmar, Iran.

Material and method

40 male subjects, 20 active and 20 inactive, (age: 31/4 -+7/12, high 173/63 -+7/49, wight 77/52 -+ 12/23) and 30 female ones, 15 active and 15 inactive, (age: 28/4 -+6/25, high 163/63 -+9/26, wight 70, 32 -+ 10/22) were selected randomly. Kyphosis, lordosis and scoliosis abnormalities were measured by chess board, New York Test, and vertical line. genu valgum and genu varum abnormalities were measured by caliper, flat foot abnormality by mirror box, and halox valgus abnormality by scaled ruler and specific surface. Data were analyzed using specialized computer software (stat view, version 5, SAS institute Inc., Cary, NC, USA). The normality of distribution was checked with a Kolmogorov- Smirnov test. The percentage of distribution among the staff and to compare each abnormality among active and inactive men and women, were performed with a Test Square (X²). Values of P<0.05 were considered statically significant.

Results

37.1 percent of active men and women and 77.1 percent of inactive men and women had kyphosis abnormality. 34.2 percent of active men and women and 88.6 percent of inactive men and women had lordosis abnormality. 22.8 percent of active men and women and 31.4 percent of inactive men and women had scoliosis abnormality. 51.4 percent of active men and women and 34.3 percent of inactive men and women had genu varum abnormality. 8.6 percent of active men and women and 17.2 percent of inactive men and women had genu valgum abnormality. 14.4 percent of active men and women and 22.8 percent of inactive men and women had flat foot abnormality. 40 percent of active men and women and 45.7 percent of inactive men and women had halox valgus abnormality. So, there is a significant difference between kyphosis and lordosis in active and inactive subjects while there is no significant difference between scoliosis, genu valgum, genu varum, and halox valgus in active and inactive subjects.

Discussion and conclusion

The results showed that the prevalence of musculoskeletal abnormalities in inactive staff is more active. It seems that poor workplace ergonomics and body position abnormal conditions for long-time is the reasons of high prevalence of musculoskeletal abnormalities between active and inactive staff.

Keywords: kyphosis, lordosis, genu varum, genu valgum, scoliosis

Poster

Recreation and Sport for All

Recreation-1**Leisure time physical activity of Greek students**

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Introduction

Greek adults are among the least exercising populations of Europe (Margetts et al 1999). In addition, the Greek children tend to be overweight (Kearney et al 1999). The aim of this study was to evaluate the leisure time physical activity (PA) of Greek students and the stage of change of exercise behavior (Prochaska & DiClemente 1983).

Method

Participants were 1387 students from 4th – 12th grade of 36 randomly selected public schools of Attica. They completed questionnaires evaluating the leisure time PA expenditure in METs through the weekly metabolic equivalence (Leslie et al 1999), PA frequency and preferences, and the stage of change (Marcus et al 1992).

Results: The average weekly METs consumed by PA were 1774 and the PA frequency was 4.2 times. The students of 9th – 12th grade exercised significantly less than the younger ones. The regular PA (3 or more times per week) declined from secondary to lyceum (66.2, 65, & 53,3% of students respectively). A significant difference on stage of change was found between girls and boys. 7% of the boys were qualified as in precontemplation, 6% in contemplation, 19% in preparation, 16% in action and 52% in maintenance stage, while the values for the girls were 10, 9, 25, 17, and 39 respectively. The boys exercised significantly more (expenditure and frequency) than girls. The PA energy expenditure was adequate for boys of all ages, and it declined with age. The frequency was found adequate for secondary school boys but also declined with age and dropped from 5.6 times per week for the secondary male students to 3.9 for the lyceum ones. Concerning girls, only high school PA expenditure was adequate, when secondary and lyceum PA was just over the minimum recommended for physical and mental health maintenance. The PA frequency of secondary female students was just over the minimum recommended, and the PA of the lyceum ones was under that. The favourite sports of the boys were football, basketball, bike and jogging and of the girls were dancing, bike, jogging and volleyball.

Discussion

The average values of Attica students' PA, concerning weekly energy expenditure and frequency, were found satisfying. The PA of the specific sample paralleled or overcame the PA of same age samples from abroad and from Greek province. It is suggested that mostly dietary reasons are responsible to the presence of high obesity among Greek children. The girls traditionally preferred less competitive PA. It seems that reasons related to social and environmental factors, reported in many studies (McMurray et al 2002) also exist in Greece and prevent

girls from exercising as much as boys.

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Keywords: MET, stage of change, physical activity, students, exercise

Recreation-2**Bowls sport as a means of prevention and health promotion**

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The biological aspects of a sport include both those of the physiological/biomechanical nature, allowing to focus on a sport regarding particularly its metabolic demands, functional and mechanical aspects, and those strictly clinical, that, moreover, are unavoidably linked to the firstly mentioned ones. Bowls sport has in recent years established itself in a more sportive manner, especially because of the participation of young players and women. Bowls sport is characterized, above all, by evaluating the "quality" of the sporting gesture, a skill, based on neuromuscular coordination, that is expressed in the ability to perform fine muscular movements with speed and precision, to maintain the static and dynamic balance, and by evaluating the eye-hand coordination that determines the quality of the muscular strength to be used according to the distance and target position to be reached or hit. All this suggests that an adequate and efficient overall muscle tone accompanied by adequate muscle flexibility are very important features in a good athlete but bowls sport could also be an effective method to acquire those features in sedentary people. Classification of bowls between dexterity sports is certainly correct for the specialties of raffle, petanque, Lyonnaise "traditional games" and lawn bowls, but not for the Lyonnaise "throw" specialty, that has features closer to anaerobic-sports massive aerobic (progressive throw) or to aerobic sports-alternate anaerobic (relay race). The evaluation of bowls sport, however, as well as the high level athletes, must also consider the incredibly high number of not so young practitioners, that require different medical, psychological and sociological considerations. The practice of bowls represents an excellent and inexpensive method to maintain and improve the level of physical activity of the general population, particularly with regard to muscular flexibility, the sense of balance and coordination, muscular endowment, strength and aerobic capacity. This concerns espe-

cially those who are already older and are likely to suffer from chronic diseases widespread in Western countries, like overweight, diabetes, metabolic syndrome, hypertension, cardiovascular diseases and musculoskeletal system diseases (osteoporosis, arthrosis). Having an active lifestyle is one of the recommendations that are targeted at the general population, regardless of gender and age, in order to promote psychophysical well-being. Bowls players, therefore, must learn to consider their "hobby" as a real sport, which, if supported by an adequate programme of a general physical preparation, can help people to adopt favourable changes of their lifestyle (proper nutrition, lower consumption of alcohol, absence of smoking, active habits), and to significantly improve the quality of life, when it is correctly practiced.

Keywords: bowls, CMSB

Recreation-3

Understanding the leisure constraints for adolescents in Korea

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Introduction

A number of scholars and researchers (Franklin-Reible, 2006; Thorlindsson & Bernburg, 2006) have characterized engagement in delinquent activities as leisure experiences for the participants. The primary purpose of this study was to explore factors constraining participation in recreational sport activities among adolescents who are involved in delinquent leisure activities in Korea. This study also intended to empirically test Alexandris and Carroll's (1997) and Park's (2004a) modified constraints' model for construct validity.

Methods

Questionnaires were distributed to adolescent motorcycle runners in Seoul, Korea. A purposive sampling strategy was utilized to find study participants (n=158), since the purpose of the study was to understand what factors are perceived as constraints to participate in recreational sport activities among adolescent motorcycle runners. The scale consisted of 23 items and was based on questionnaires previously developed and modified by Alexandris and Carroll (1997). A four-category classification was utilized in the present study by modifying Jackson's (1994) 5-category classification.

Results

The results of the confirmatory factor analysis (CFA) revealed the leisure constraints model achieved a good fit to the data. The comparative fit index (CFI = .920) and the root mean square error of approximation (RMSEA = .062) are both in line with the established criteria (CFI above .90 and RMSEA below .07) (Bollen, 1989). All correla-

tion coefficients were positive and significant at the .05 level. An additional test of discriminant validity was conducted and revealed that the average variance extracted (AVE) for each dimension exceeded the squared correlation between respective dimension (Fornell & Larcker, 1981). The results provide evidence that the constraint dimensions are unique. Cronbach's alphas showed that all factors had good internal consistency (Nunnally & Bernstein, 1994). Composite reliability also had acceptable values (psychological constraints = .89, accessibility constraints = .84, time constraints = .76, and lack of partner constraints = .70) (Bagozzi & Yi, 1988).

Discussion

The current study provided empirical support for the validity of the constraint model for Korean adolescents by measuring the statistical efficiency of multiple relationships simultaneously (Raykov & Marcoulides, 2008). Results revealed that the scales had discriminant validity. Each of the indicators was found to uniquely load on its respective latent factor. The items seem to be good indicators of the constraint dimensions they intended to measure. The results indicated that females scored significantly higher than males on the measure of psychological constraint. Further analysis revealed that the array of perceived constraints varied according to the types of recreational sport activities. Interestingly, the psychological dimension was of greatest relative importance to would-be participants in a team sport activity. Managerial and methodological implications of the study are discussed, and directions for subsequent studies are proposed.

Keywords: leisure constraints, delinquency, adolescents

Recreation-4

Recreation and Sport for All in Turkish local governments: An example of a candidate for European Capital of Culture

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As has already been reported in European Sport for All (SFA) Charter Articles 3&4; Sport, being an aspect of socio-cultural development, shall be related at local, regional and national levels to other areas of policy-making and planning such as education, health, social services, town and country planning, conservation, the arts and leisure services. Each government shall implement permanent and effective cooperation between public authorities and voluntary organisations and shall encourage the establishment of national machinery for the development and coordination of SFA (CE, 1992).

According to Ravenscroft, SFA had six major goals: to increase participation and performance in sport; to have sport treated as a social service; to produce a range of social benefits, such as the maintenance of moral standards and improve social welfare; to produce a range of psychological benefits, such as the enjoyment of leisure

and the advancement of personality; to produce certain physiological benefits, such as improvement on the nation's health and fitness; and to improve the quality of life of the nation (Aman M.S. 2009).

Mobley (2006) defined that recreation is a process of leisure time, including all the things done by individuals, and hence also the wider concept of sport. Recreation programmes not only include talented athletes, instead everyone. Not all are interested in sport, so all local governments should also give importance to people's interests in those recreation activities other than sports.

Government should support recreation and SFA activities. Since municipalities are the main parts of local governments, so the purpose of the study is to focus on the activities for "Recreation and SFA" and an example application in one of Turkey's local governments. For this aim the current written sources and literature are used. In addition, interviews with the administrators were used here.

Today, with a population of over 10 million people, Istanbul is a European Capital of Culture. In this period, it is pointed out that SFA programmes have not seen sport as a cultural activity. Though, sport is a phenomenon of multiculturalism. For this reason, in the process of candidacy, it is an important criteria for the local governments to develop SFA programmes.

An example of Recreation and SFA Programmes of Turkish local governments. The Legacy of Metropolitan Municipality About Sport; Municipalities are obligated to take care of and to operate sport issues; to provide materials to the amateur sports clubs and also support these places.

The Aim: To give poor young people the opportunity for sport; to create new sport fields; to open a new sports courses; to recover young people from bad habits; to do sport to all people at every age.

The Programmes of Local Governments;

- 1.The Free Charge of Sport Schools
- 2.Youth and Sport Clubs
- 3.Recreation areas for the benefit of the people
- 4.Street Games Festivals and Tournaments
- 5.Disabled Festivals

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Keywords: Sport for All, local governments, recreation

Recreation-5

Analysis of male employees' leisure sports patterns

in the city of Ulsan

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Introduction

After reducing the working hours of employees to 45 hours a week (since 15 September 2003, Statistics Korea), Korean cities and society have observed a big change between work and leisure. The industrialization started in the city of Ulsan in 1970, and now it is famous for global companies like SK Petrochemical Industry, Hyundai Shipbuilding Industry, Hyundai Automobile Industry, and Cooperation. The income of the city in terms of GRDP is the highest in Korea (46,248 dollars per person, 2007). It has well-equipped sports facilities strongly supported by the local government. However, in spite of these economic prosperities and modern sports facilities, leisure culture and sports activities of the city Ulsan have been suffering from limited popularity. One of the reasons could be the relative strength of the tendencies to seek familiar and novel forms of leisure throughout the lifespan as outlined by Iso-Ahola, 1980. Thus, the purpose of this study was to analyse the leisure sports patterns of male employees in the city of Ulsan by applying the above mentioned theory by Iso-Ahola.

Methods

The total number of 369 employees participating in this research were from SK Petrochemical Industry, Hyundai Shipbuilding Industry, Hyundai Automobile Industry, and Cooperation Industry in the city of Ulsan. The purposive sampling method and classified leisure sports activities questionnaire were used according to the academic history and stream of time. In addition, we focused on the longitudinal approach and the past retrospective recorded method in the life cycle. Data analyses were frequency analysis of SPSS and association analysis of SAS Enterprise Miner.

Results

Our results showed that the first leisure sports pattern of male employees in the city Ulsan was: soccer/reading (elementary school stage)-soccer/basketball/reading (middle school stage)-soccer/basketball/reading (high school stage)-soccer/billiard/reading (college stage)-walking and jogging/mountaineering/soccer (present stage)-golf/community services (future stage). Second, soccer was regarded being the best past experience of leisure sports activities that still has a connection with the present and might be continued among the future sports activities of male employees in their lifecycle (chain length 2 soccer → soccer; support 48.51%, confidence 69.65%, transaction count 179). Third, lack of leisure sports experience in youth was one of the important factors for decreased leisure sports activities in later life (chain length 2 nothing → nothing; support 50.95%, confidence 67.87%, transaction count 188). This also had a significant contribution to the lack of popularity and variety of participation in leisure sports area, especially yachting, scuba diving, windsurfing, MTB, skiing, skating, paragliding and so

forth.

Discussion

In spite of some questions that may arise on the validity and reliability of the retrospectively recorded questionnaire, our results have provided empirical evidence to substantiate the theory by Iso-Ahola. This study confirms that the leisure sports patterns of male employees in the city of Ulsan were in monotonous soccer stages. In

addition, this study might be useful in understanding the leisure sports patterns of male employees and in making policies of leisure sports in Korea.

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Keywords: leisure sports pattern, the city of Ulsan

Poster

Target groups of SFA (children, adults, elderly, handicapped etc.)

Target groups-1

Sports adventure around the world

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Introduction

The idea of the adventure of physical activity is to promote the well-being and joy of living of the younger school children. The main goal is to increase the daily physical activity of the school children, the main point being the children who exercise very little. The daily physical activity is increased both during the school day and at the spare-time. With the campaign we want to fill the everyday life of the school children with a lot of physical activity hoping that exercise will become a daily lifestyle which will support healthy growing.

Development

The main target group are all pupils on the lower school levels (aged 6 – 12) with a special interest in those pupils who exercise too little (about 40 – 50 % of the pupils). The class is the unity for the activity (one goal being to decrease the competition between the individuals). The project is supposed to influence also teachers and parents.

The project was planned by Young Finland Association. The help of experts (University of Jyväskylä), teachers and principals (a work team) and professionals of marketing and advertising was used at the planning stage. During some of the years also different organisations (e.g. Koululiikuntaliitto – an Association for School Sports, OAJ – the Teachers' Union) have taken part in the project. During the first years (2001 – 2006) the project was financed with the support of companies). From the year of 2007 also the Ministry of Education has supported the accomplishment of the project. The estimates of costs per year are about 170 000 e. The budget of the project is reduced by the fact that a part of the costs have been paid directly by the companies.

The project was evaluated in many ways. The pupil's activity card describes the amount of exercise of each pupil. The pupils' activity performances per class are collected every day and Young Finland Association is informed about the result. A Web adventure counts the daily physical activity per pupil. It reaches the pupils that exercise little. After the campaign a questionnaire for feedback is

made for teachers, children and for parents.

Conclusion

About half of the pupils of the lower levels take part in the project every year (participating classes from 2/3 of the lower schools). The goals of the project are being accomplished: the physical activity of the school children increases during the project and influences also the activity after the campaign. Also those doing little exercise get interested in taking part. The basic idea works: 10 minutes of exercise is one cross (x), which is also one kilometre. The collection of kilometres and the adventures in the world are inspiring. The activity card is a crucial motivator and inspirer. The Web adventure gives a real feeling of adventure and supports school work in many ways. The class as the unit of activity decreases the competition between individuals and increases the sense of solidarity.

Target groups-2

Fundamental Motor Skills in 9-10- year-old boys and girls: a cross-sectional study

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INTRODUCTION

Development of fundamental motor skills (FMS) in childhood is considered an important goal during the growing-up process. Until a few years ago it was guaranteed and performed through a natural and active life style and today we can see motor impoverishment related to the principal gross motor abilities. The advent of electronic static games, the diminution of movement opportunities for our children and the progressive reduction of free-time are the causes of this situation. Today the scholastic motor activities (practiced for less than two hours a week) are not enough to guarantee the quantity and quality of motor development in childhood. The study shows how since the late 1980s, one can see an impoverishment in all the considered FMS and particularly in running, high and long jumping and power throwing.

METHODS

In the year 1985 a test battery was submitted to 1233 (620 boys 613 girls) Italian students aged 9 and 10 (GR1). The same test battery was proposed to 985 (472

boys 513 girls) students of the same age in 1996 (GR2) and 988 (502 boys 486 girls) students in 2008 (GR3). The data have been collected through the scholastic system by submitting tests during physical education (PE) lessons after a 20-minute warm-up. Test battery: speed run (mt.40), endurance run (mt.600), long jump, high jump, precision throw (basket drought) and power throw (two hand throwing of a 1 kg medical ball), twine-skip and pole-climb.

RESULTS

In the two periods 1985-1996 (P1) and 1996-2008 (P2) differences can be noticed in the weight, in the height and in the BMI. Today boys and girls are taller and heavier than before. The increase of these two dimensions in the children morphology is predominant for the increase in body mass, therefore we can also notice a marked increase in BMI. All data have been compared with NCHS Growth Charts.

In all tests we noticed a loss of ability in every group (9-10 aged boys and 9-10 aged girls). Gaps are more evident in endurance and power abilities than in precision tasks. Concerning the gender, these differences are more evident in the girls (diminution of success in P1 = 10,34% and in P2 = 7,41%) than in the boys (diminution of success in P1 = 9,77 % and in P2 = 6,47%). Differences among the participants according to their ages and birth dates were analysed with Pearson's Chi-square test, and statistical significance have been confirmed by the O.R. (odds ratio) values.

DISCUSSION

Also for the age 9-10 the increase of static games, the disappearance of the old courtyard games, the reduction of motor activities in scholastic period are the causes that, in our opinion, have led to a reduction of FMS. To solve these problems, the following actions seem mandatory: 1) Increasing the time inside the scholastic system devoted to physical activities; 2) Directing teaching and didactics strategies to activities involving gross-motor abilities; 3) Fostering the promotion of active politics for the safeguard of the natural environment; 4) Supporting a closer interaction and collaboration between the scholastic system, the out-of-school sportive system and families in order to enhance a better lifestyle necessary to preserve children's health.

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Keywords: Fundamental Motor Skills, children

Target groups-3

The management of the Sport Programme for Children and Youth in Finland

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The Sport Programme for Children and Youth started in 1999 and is funded by the Ministry of Education. The purpose of the programme is to increase physical activity among less active children and young people, and to find new ways to do it. The aim of the additional annual funding is to help to create a national programme that covers the whole country. Unlike many governmental programmes, the Sport Programme is not strictly written. It is left very open to allow flexibility and quick reaction based on the feedback and evaluation.

The purpose of the study is to analyse the multidimensional and divided management of the Sport Programme. The study includes semi-structured interviews of 15 people from different organisations involved in the programme: the Ministry of Education, Young Finland Association, State Provincial Offices and the regional organisations of the Finnish Sport Federation. This poster is a part of a larger study.

Research questions:

- * How is the management divided in the programme?
- * How do the participants experience the management of the programme?
- * How do official and unofficial leaderships/management appear in the programme?
- * How has unofficial leadership taken its shape?
- * How has the power vacuum been fulfilled in practice?

There is no official, defined management structure between the organisations participating in the Sport Programme. The organisations have no power over each other, except through money, i.e. by allocating financial resources.

Some participants – even within the same organisation – had different perceptions of the management structure and of the role of their own organisation in the programme.

Keywords: divided, The Sport Programme, the management, multidimensional

Target groups-4

Teenagers' physical activity and health-related physical fitness: A comparative study between China and Portugal

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Background

World Health Report lists physical inactivity among the major causal risk factors in non-communicable diseases which cause nearly 2 million deaths globally every year. Physical activity declines significantly with age from adolescence. Physical activity and physical education are declining in schools (WHO, 2002). Half a century ago, Kraus

and Hirschland (1954) did a famous cross-sectional comparative study which found out that American children were less fit than their European counterparts. Americans were shocked by the results. Nevertheless, there were few comparative reports between China and European countries.

Aims & methods

The aim of this study was to compare the teenagers' physical activity and health-related physical fitness between China and Portugal. 317 Chinese children and 264 Portuguese children aged 10-15 yrs were randomly selected from the metropolitan city. International Physical Activity Questionnaire (Craig et al., 2003) and FITNESSGRAM (CIAR, 1999) were selected to investigate children's physical activity levels and health-related physical fitness.

Results & Discussion

The results showed that the Portuguese teenagers were more active and fit than the Chinese teenagers, and the Chinese teenagers had a lower overweight/obesity rate than the Portuguese. In both countries, most children were not physically active, nearly one-fifth of the children did not participate in any kinds of leisure sports after school, and the girls were less active than the boys. We found that most children failed to meet all 6 minimum standards in FITNESSGRAM that can be regarded as physical fit. A quarter of the children suffered from either overweight or obesity. The low-to-moderate correlations were also found between the children's physical activity and fitness in both countries.

Conclusion

The cross-sectional comparative study indicating that the Chinese metropolitan teenagers were less fit and inactive than the Portuguese confirmed some health problems and sedentary lifestyle of the children. The study strongly suggested that governments, schools, educators and families should work together to help our children lead a healthy lifestyle and to meet the global health challenge of the 21st century.

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Keywords: comparative study, health-related physical fitness, physical activity, teenager

Target groups-5

The current status of physical activity and sport participation among high school male students in Jiangxi province, China

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Introduction

Physical activity has a range of benefits in childhood and adolescence. In recent years in China, with the rapid economic development and changes in lifestyle such as increased energy intake and decreased physical activity, overweight and obesity are an increasing trend among young people. At the end of 2006, the National Sunny-Sport Events were promulgated by the State Council of P. R. China to ensure students to take part in physical activity and sport at least one hour per day. The effects of this project in Jiangxi Province were less known after three years. The purpose of this study, therefore, is to investigate the current status of physical activity and sport participation among high school male students in Jiangxi Province.

Methods

According to the population size and the social economic status, three cities were chosen from Jiangxi Province. One high school was randomly selected from each city. The target population were the male students of 10th grade (15-16 years old) in the sample schools. Finally, the study participants were 800 male students from Nanchang (N=200), Pingxiang (N=300) and Shangrao (N=300). Questionnaire was used during a normal school lesson by one Physical Education teacher. The students' participation in the test was voluntary and they were fully informed of the procedure and purpose of the study. The data were analyzed by Excel 2007.

Results

This study showed that among all three sample schools, 70 % of students have Physical Education weekly. More than half of the students in Nanchang reported they take part in both physical activity and sport during and after the PE course, followed by Pingxiang and Shangrao. In general, the students were significantly less involved in physical activity after the PE course than during the PE course. More than 70 % of the students did not achieve the requirement of exercising at least one hour every day. There was no statistical difference among the three schools. This study also showed that more than two thirds of students think that physical activity benefits their health and academic school achievements.

Discussion

This is the first study to investigate physical activity and sport participation in three cities of Jiangxi Province, China. In terms this study, most students do not have sufficiently physical activity. The PE course is important for students to take part in physical activity and sport. The

PE course in current curriculum is still not enough to meet the requirement of physical activity of young people. Besides the lack of teaching resources, the school principal's perception of the PE course may also influence the allocation of PE courses. Although most students understand the importance and the benefits of physical activity, sedentary behaviour is still dominant in their leisure time. In future, more PE courses and leisure time physical activity should be allocated and encouraged for improving students' health and well-being.

Keywords: school children, sport participation, physical activity, Physical Education

Target groups-6

Influence of age on the sprint running movement in master sprint runners

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Introduction

The ability of the elderly people to perform activities of daily living declines with age. One possible reason for this decline is that from the elderly people it may require a substantially greater effort than from the younger adults to perform a similar exercise (e.g. John EB et al 2009). When considering the relative exercise effort and intensity, the aspect of neuromuscular function may be different between age groups. In the present study, we examined the running movements of 128 sprint master runners across a wide age range. This was done not only to compare these data with those of young world top athletes and to determine the influence of age on the running movements, but also to examine differences of the exercise effort.

Methods

The sprint running movements of 64 male and 64 female master aged sprinters were measured at the 100 m event of the 2009 World Masters Athletics Championships, Lahti, Finland. The number of every age group are as follows (male and female 40-49 yr: n=9 and 12, 50-59 yr: n=13 and 16, 60-69 yr: n=13 and 14, 70-79 yr: n=12 and 11, 80-89 yr: n=12 and 8, >90 yr: n=5 and 3, respectively). The running movements of these subjects were recorded using high-speed video cameras (210 fps) at the 40-50 m point from the start. The peak and mean running velocities, step length, and step frequency were analyzed. These data were compared with those of young world top athletes (n=10, records: 9.85-11.16 sec).

Results and Discussion

There were general declines in sprint performances with

age in both male and female groups, the decreases becoming more evident around 60-70 yr of age as shown by the previous study (Korhonen et al, 2003). The reduction of the peak running velocity with advancing age was mainly related to the reduction of step length but not much to the reduction of the step frequency. The rate of decrease in the running velocity from peak to mean velocities was lower with advancing age. This is in line with the concept of "fatigue resistance in the elderly" that is centered on higher metabolic economy in the elderly neuromuscular system (Kent-Braun JA 2009). However, when we extrapolated the age-associated virtual distance (AAVD) based on the data of 40-49 yr of age which multiply the 100-m by the value divided the mean running velocity of each age group by that of 40-49 yr of age, the AAVD of each male age group to 40-49 yr of age is increased with advancing age (>90 yr: 195.9 m, 80-89 yr: 151.7 m, 70-79 yr: 122.7 m, 60-69 yr: 113.7 m, 50-59 yr 104.4m). Those of the female group showed also a similar trend. These results suggest that the strategy of the 100-m sprint event may be the age-associated virtual distance.

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Keywords: muscle atrophy, aging, veteran athlete, locomotion

Target groups-7

Movement reaction in master sprint athletes

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Introduction

Speed of reaction is a critical aspect of many competitive sports, including the sprint events in athletics. It has been reported that the nerve conduction velocity decreases by 10% with age (Mayer 1963). To the best of our knowledge, few studies have examined the interaction of age and long-term sprint training with the ability of the movement reaction. Many studies have reported that performance is maintained until 35 yr of age, followed by modest increases in running times until 50-60 yr of age, with progressively steeper increases thereafter. These are mainly related to the age-dependent atrophy of type II muscle fiber. The purpose of the present study was to examine the movement reaction to an auditory signal used in the sprint start and to determine the ability to the start reaction with advancing aging.

Methods

The start (from the start to the 4th step) and the full-stride (40-50 m point from the start) phases of 38 male and 40 female master-aged sprinters were measured at the 100 m event of the 2009 World Masters Athletics Championships, Lahti, Finland. The number of every age group are as follows (male and female 40-49 yr: n=7 and 7, 50-59 yr: n=6 and 8, 60-69 yr: n=6 and 7, 70-79 yr: n=7 and 8, 80-89 yr: n=7 and 7, >90 yr: n=5 and 3, respectively). The movements of the start and full-stride phases were recorded by using high-speed video cameras (1000 and 300 fps, respectively). The reaction time of the body movement after start signal was calculated. The phase-averaged running velocity calculated from the center of mass movement was analyzed at each step from the start to 4th step (step velocity) and during the start and full-stride phases. The rates of decline with age relative to 40-49 yr of age were calculated at each parameter.

Results & Discussion

The rates of decline of 100-m records for male and female were 97.9 and 134.5%, respectively from the 40-49 yr of age to the >90 yr of age. Reaction time from the start increased with advancing age (male 40-49 yr: 146 ms, >90 yr: 196 ms, female 40-49yr: 162 ms, >90 yr: 249 ms). The rates of decline of reaction time for males and females from the 40-49 yr of age to the >90 yr of age were 34.8% and 53.8%, respectively. This decline of reaction time was much lower than that of the 100 m record. The velocities of each step and running velocity of the start phase decreased as well as that of the full-stride phase with advancing age. The rate of the decline of the step velocity increased progressively from the 1st to the 4th steps of the start phase (Male: 1st: 30.8%, 2nd: 33.8%, 3rd: 37.1%, 4th: 39.3%). This increase can be related to the faster 4th step movement compared to the 1st step movement and to age-dependent atrophy of type II muscle fiber.

Keywords: veteran athletes, sprint start, reaction time, conduction velocity, speed

Target groups-8

Low-access exercise for all through a global shindo programme

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Shindo Stretch is a multi-well-being activity programme providing relaxation, mobilisation and self-help both for special groups and Olympic level athletes. Shindo has been developed in Japan by Ms Katzuko Kuratomi some 20 years ago. It is a method of constant well-being for people of all ages. Shindo is an effective method, which consists of work in groups, individuals and treatment environments. It is also suitable for those who have limited access to quality sport training. As a former ice skating Olympic level trainer, Ms Katzuko Kuratomi knows

that physical and biomuscular limitations might occur after suddenly dropping out of extensive physical exercise. Shindo is actively practised in Japan, Finland, Estonia, Peru and USA. Finland is a good example of how shindo has become a cost-effective and low-access exercise which improves the quality of life and training. In Finland, 500 shindo assistant instructors have been trained during 14 years. They work for example in rehabilitation centres, gyms, spas and community centres. There are about 100 shindo instructors in Finland who do shindo treatments or train in workplaces. Shindo has also spread among orienteering and golf training in Finland. Shindo Association (located in Jyväskylä) develops the method together with Ms Katzuko Kuratomi and it includes Jomon Stretch. In 2005, trained volunteers introduced Shindo in Special Olympics World Winter Games, Nagano, Japan (27.2.-5.3.2005).

In this poster presentation there will be a demonstration of shindo principles and information about its use for target groups of SFA. There will be a possibility to get shindo treatment during the poster presentation.

Keywords: self-help, relaxation, shindo stretching, target groups of SFA, mobilisation

Target groups-9

Obstacle and improvement factors of women's societal sport participation in Korea

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We invited 72 leaders to a panel representing the sporting world and had them search what is needed for a female athlete to enter the leader class in the sporting world. Their thoughts of the present treatments considering their performances are the inadequacy of social support and the improvement of infrastructure and the system as a whole. They understand that there are not so many positions and roles for female athletes in the sporting world. The qualifications and education that female athlete leaders need, are professional knowledge, devotion to the field, organizational management and performance, the self-confidence to ask for an opportunity and humanity. After answering the 9 disturbance factor questions of the test, there are no gender differences in the male-dominated organizational management and the personnel system, education institutes and lack of educational contents. The rest 7 questions showed that women have more agreement than men regarding the disturbance factors. In the analysis on 'priority', there is no difference between the lack of women's participation as sports-persons and the education institute and lack of educational contents. In the last 7 questions, sports women have higher average points than men. The priority order of the categorized factors from the 9 questions is: the education and insufficient alternatives as the first, followed by social atmosphere as the second, and the male

domination as the third. The 9 questions on the improvement for female athletes to participate in society show a big gender difference between female athletes and male players on average. However, as a priority, both females and males recognize the importance of professional education for female players and of seeking a development

for both male and female sports-persons. The priority order in the categorized factors based on similarity of the questions is listed in order: looking for a win-win strategy, cultivating education and ability and preparing a social system development.

Poster

Role of educational institutions in SFA

Educational institutions-1

The role of school in promoting sport

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The purpose of the study is to collect information on children's and youth participation in sports activities in leisure time in order to learn about the arrangements agreed upon.

Aim: to educate the school children in urban areas on the possibilities to practice sports as an alternative choice of leisure time activity.

The method of data collection: 1200 questionnaires were distributed to students between 8-15 years of age, in Botosani, Romania.

Summary of the results

1. What are your favorite activities? (9% sedentary, active 31%, sports 60%);
2. Do you know the effects of practicing sport? (35% well, 45% to some extent, 20% poorly);
3. In what form would you like to practice? (Organized 69%, 31% unorganized);
4. What determines the choice of a form? (costs 63%, 21% activity fluency and skills, other 16%);
5. How many students practice sports in their leisure time? (Total 32%: 22% boys, 10% girls);
6. Where do they practice? (With friends / alone 60%, with PE teacher at school 15%, at a club 25%);
7. Where would you like to practice sports? (With friends / alone 17% , at school 53% , at a club 30%);
8. Why do not 67% of the respondents practice sports? (lack of free time 30%, 20% do not have enough money, do not know where to practice 25%, not able to 25%).

Discussions and conclusions

Although 60% of the children prefer to practice sports in their leisure time, only 32% do so. Causes of low frequency in sports: Little information on the effects of practicing sport and on the locations; Lack of confidence in their strength, fear of ridicule, (more evident among girls), the busy school schedule (children spend on average 30% of their time on homework), adult prejudices regarding physical effort, economic barriers (63% of the respondents report cost-related fares), insufficient sports facilities and locations related to the people's needs, the existing sports facilities with free access do not offer a specialized coach or organizer for economic reasons. Then again, volunteering is a goal difficult to achieve in a soci-

ety in crisis.

Measures to improve the situation:

School must occupy a central role in children's and families' sports education. 53% of the respondents think so because the schools have adequate equipment used and stored properly, a system of monitoring and well-organized and applied control.

Revitalizing the school sport associations and leisure activities for students would produce a stronger connection between the school and the families, with active participation in the short and long-term programmes regarding health education. Better information on sports education issues and on the benefits of practicing sports is needed. A new criteria for for assessing students' skills achieved during physical education should be established. The school programmes aiming at formative aspects through practical activities should be reviewed. A programme under which to carry out activities on Saturdays with the character of leisure time should be established. Retired teachers could be used as volunteers.

A law should be promoted so that some of the tax revenues from tobacco and alcohol would be allocated to sports activities for the population.

Educational institutions-2

A longitudinal study of pre-service physical education teachers' experiences on gymnastics learning

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This research evaluates physical education (PE) trainee teachers' learning experiences on gymnastics learning in primary and secondary school levels in Hong Kong. The target samples are the PE major students at the Chinese University of Hong Kong. The sample groups replied by using pre- and post-questionnaires related to their gymnastics learning experiences before and at the end of the 13-week PE major, "Teaching Gymnastics course." Approximately 20 students study this course every year. The data were collected for ten years (1998-2007), during which 176 students were involved. The Hong Kong Educational Reform movement commenced in 1999. The first phase of the implementation of the reform was from 2001 to 2006. The findings of this research are beneficial to the design of the PE Gymnastics curriculum during Ed-

educational Reform. Key findings of this research identify that little has changed related to students' learning experiences in gymnastics in the last ten years in secondary and primary schools. The findings show that nearly 60% of the students have experiences in the skills of forward and backward rolls, however, other than these two items, they have few experiences in most other teaching items included in the curriculum of the PE Education Bureau. The findings also indicate a trend that the students' experiences affected their perceptions on their learning competence in gymnastics.

Keywords: gymnastics teaching, self-efficacy, teacher education, physical education curriculum

Educational institutions-3

The role of urban sport education presented to coaches and citizens for improving public sport activities

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Introduction

The citizens referring to the urban sports stations, will not be able to optimize their sport operations without profiting from suitable physical readiness. The correct performance of sport movements for all the individuals will lead to optimization of operation and sport management of a city and will make it possible to promote the level of health of the citizens (1). Correct and continuous training of the work force in public sports shall lead to optimization of urban sports management. Few studies have used physiologic measures to evaluate the effects of intervention programmes on physical fitness (2); most studies have relied on self-reported information on the amount of time spent on moderate to vigorous physical activity (3).

Development

From March 2008 onwards, 44 of the public sports coaches were trained concerning the manner of performance of corrective motions and biomechanical knowledge of the movements. The classes were convened on theoretical and practical bases. Public sports coaches of the sport organization came into contact with sport clubs and sport public stations and suggested they would develop an intervention programme to improve physical fitness and suitable physical readiness in citizens. This includes minimum activity with no weight transfer, weight transfer activities and incorporated dynamic large muscle movements and consists of sports practice. The educational model used in the intervention programme was based on the adult learning approach (4). Having completed a 6-month period, the 400 citizens under estimation filled up the questionnaires for collection of information on the optimization of sport and health operations. On the basis of the results, it seems that the training

presented to the citizens was effective in correcting the sport behaviour and in preventing skeleton muscles injuries and in promoting health.

Conclusion

Correct and continuous training of the work force in public sports shall lead to optimization of urban sports management. The educational reform offers an opportunity to develop interventions that could enhance healthy behaviours in an age group that shows a consistent decline in its level of physical activity (5). Our study shows significant changes in the physical fitness of the participants. Participation and ownership are some of the factors that have been associated with beneficial results in health promotion interventions (6).

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Educational institutions-4

The effect of a creative dance programme on increasing creativity among university students in Korea

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(Chungbuk National University, Republic of Korea)

Purpose: The purpose of this study was to examine the influence of a task-centered creative dance programme on the creativity of university students.

Methods

The subjects were sophomores and juniors (n=53) from physical education department at a university in Korea. The experimental group had 28 students and the control group had 25 students. The experimental group attended a 120-minute creative dance programme once a week for 15 weeks. Our programme was based on Matsumoto's (1997) 'Creative dance classroom program' that consists of tasks on image, movement, group-composition, theme-composition and group creation.

Kim Young-chae's Korean adapted version (2002) of Torrance's Test of Creative Thinking (1990: Thinking Creatively with Pictures, TTCT: Figural) was used to assess the effect of our programme. The variables to assess creativity include the following: fluency, originality, abstractness, elaboration, resistance to impatient finish and the Creativity Index. Paired-samples t-test and independent-samples t-test analysis were utilized.

Results

The experimental group showed a significant improve-

ment in all the indexes of fluency ($p < .05$), originality ($p < .001$), abstractness ($p < .001$), elaboration ($p < .001$), resistance to impatient finish ($p < .001$) and the Creativity Index ($p < .001$). The control group showed a significant change in fluency ($p < .05$) but not in the other factors. Intergroup comparison of post-test scores showed significant differences in originality ($p < .001$), resistance to impatient finish ($p < .05$) and the Creativity Index ($p < .01$).

Conclusion

In conclusion, our results suggest that the task-centered creative dance programme may be effective in increasing creativity among university students in Korea.

Keywords: creativity, TTCT, Task-Centered Creative Dance

Educational institutions-5

Teacher support and psychological needs in physical education: Self-determination perspective

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Introduction

The individual's perceptions of autonomy, competence, and relatedness represent psychological mediators of the impact of social events on motivation (Deci & Ryan, 1985, 1991). Social factors, generally perceived as supportive of one's feeling of autonomy, competence, and relatedness, have a positive impact on one's motivation. Therefore, this study, based on the self-determination theory, was designed to examine university students' motivation in physical education classes.

Methods

Participants were 317 (154 male and 163 female, average age = 20.48 yrs.) university students who enrolled in PE classes from 2 universities in Northern Taiwan. Questionnaires were used to measure perceived teacher autonomy, competence, and support, and students' perceived autonomy, competence, and self-determined motivation in PE classes.

Results

Results of multiple regression analysis showed that (1) Autonomy support positively predicted perceptions of autonomy, competence and relatedness ($Beta = .39/.36/.26$, $p < .05$), the total explained variance was 32%; (2) Competence support positively predicted perceptions of competence ($beta = .63$, $p < .05$), the explained variance was 11%; (3) Relatedness support positively predicted perceptions of relatedness, competence and autonomy ($Beta = .43/.17/.15$, $p < .05$), the total explained variance was 43%; and (4) Self-determined motivation was significantly predicted by perceptions of autonomy, competence and relatedness ($Beta = 1.01/1.03/1.31$, $p < .05$), the total explained variance was 30%, perceived relatedness was the major psychological need.

Discussion

Findings provided strong support for the framework of self-determination theory suggesting that teacher support has a positive impact on students' perceptions of autonomy, competence, and relatedness. Furthermore, students' positive perceptions of autonomy, competence, and relatedness activate higher levels of self-determined motivation. In physical education settings, offering self-determination to students is recommended to fulfill their needs.

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Keywords: self-determination, social support, physical education, psychological needs

Educational institutions-6

Physical activity as an experience in Sport for All at the University of Carabobo, Venezuela

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INTRODUCTION

The physical activity programme of the higher education curriculum is based on vocational training. In the curriculum this area is located in the first semester or in the first year of different studies within the higher education system in Venezuela. The Science Education Faculty at the University of Carabobo (Venezuela), has included a subject called Integral Health Module, which is carried out by physical activities aimed at integrating the university community to promote health through the implementation of various physical activities, sport and recreation. The main objective of this study was to analyze physical activity experiences and the social integration into the university community. The study was based on social learning theory by Bandura (1987) and Vygotsky's sociocultural learning (1966).

METHODS

The study sought to gather information from students' experiences in relation to physical activity and social integration activities during a semester as part of the programming of Sport for All. It was based on qualitative research methodology as the project approach and data collection was conducted through an opinion poll to a selected group of informants, who developed physical activities at the Faculty of Education at the University of Carabobo, during the II 2009 semester.

RESULTS

For the analysis of information, we proceeded to use the strategy of comparing similarities and differences of grounded theory, Strauss and Corbin (1998). The data produced an INFOGRAMA with the formation of categories that are related to experiences of physical activi-

ties in Sport for All and health for the whole student training.

DISCUSSION

Physical activities planned and conducted with a systematic methodology for projects undertaken through the planning stages, action and evaluation, generate interest, participation and social integration of the university community as part of Sport for All. They concluded that these students should not only have health education knowledge and healthy lifestyles, but they should also have health education abilities.

Poster

Local conditions for SFA (environment, nature, and sport facilities)

Local conditions-1

The current condition and countermeasures of mass fitness activity in Sichuan earthquake-afflicted areas

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As far as the earthquake-afflicted area is concerned, the mass fitness activities not only help people to stay fit and healthy but have the important functions of soothing wounds, rebuilding confidence and inspiring courage. In the context of reconstruction, it is of great practical significance to research the current conditions and development of the activities in Sichuan earthquake-afflicted areas. By means of documentations, questionnaires, expert interviews and statistics, an investigation was conducted on the current condition of mass fitness activities in Sichuan earthquake-afflicted areas. The results indicated that the mass fitness activities are in a state of optimum development: people's understanding of exercise is clear and rational, and consciousness of exercise is rising, patterns of activity are various; fitness activities have been adopted into life as a lifestyle. However, at present, the major exercise pitch is free, simple and crude. The activities' development changed in afflicted areas after earthquake, including three characteristics: the growth of fitness population is fast but not steady; the motive is simple but active; the fitness behavior is typically narrowly targeted and implementations are unscientific. This research reported that there are two problems calling for solutions: one is about strengthening the construction of infrastructural sports facilities to resolve facilities problem of mass fitness activities; and the other is about giving full play to the functions of social sports consultants to resolve scientific fitness problems. Hereby, some recommendations are put forward including increasing government input, intensifying fitness propaganda, appointing professional guidance, creating relaxation aerobics, and so on.

Keywords: countermeasures, earthquake-afflicted areas, current condition, the mass fitness

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Local conditions-2

Community sports clubs in Shanghai, China: An empirical study of the structural factors

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Background :

China is a populous country. With the accelerated process of urbanization in China, popular sport has encountered unprecedented difficulties.

Purpose

Judging from the present research with community sport in China, at least two aspects can be reflected on: (1) most scholars often use qualitative research, while quantitative is very rare; (2) the lack of research from a system point of view of sports clubs growing up.

Scope of the study

(1) An innovative proposal to build a structural framework which affects the development of Chinese urban community sports clubs. With logical analysis to derive community residents to form a strong physical demand (hereafter referred to as RD) is the direct cause of growing advantages of the community sports clubs (hereafter referred to as GA), while RD is again dependent on the management level of community sports clubs (hereafter referred to as ML), sports venues and facilities (hereafter referred to as VF). From the view of the Chinese management system, ML as well as VF rely on government support for community sports (hereinafter referred to as GS). (2) Through structural equation modeling, aiming at finding the relationship between observable variables and latent variables, as well as among the latent variables.

Methods

Questionnaire research method. , A total of 200 questionnaires were distributed to Shanghai's 55 community sports clubs for the staff and community sports volunteers. Using SPSS15.0, the obtained data was processed by Cronbach testing, excluding CITC <0.5 of the four indicators, the overall reliability to reach 0.921, and

the remaining 18 observation variable confirmatory factor analysis, KMO test of sphericity is 0.907, accompanied by the probability of $P < 0.001$. 18 observation variables were further divided among the five latent variables.

Results

1., the structural path coefficient shows that, (1) the impact score between GS and ML, VF, RD, GA is as follows: 0.52,0.46,0.29,0.15; (2) ML and VF, RD, GA as follows: 0.19,0.32,0.13; (3), VF and RD, GA as follows: 0.31,0.21; (4) RD and GA is 0.22. 2. In the structural equation model, using AMOS7.0 (1) the regression coefficient between GS and four observed variables: sports policy, sports capital, sports opinion and the competent leadership as follows 0.84,0.82,0.81,0.70; (2) ML and four observed variables: development goals, perfect organization, a sound regulatory framework, a reasonable evaluation system as follows 0.59,0.45,0.72,0.78; (3) VF and three observed variables: site area, sports equipment, fitness function as follows: 0.57,0.73,0.54; (4) RD and four observed variables: sports products, consumption environment, convenient enter as follows: 0.73,0.84,0.70,0.84; (5) GA and three observed variables: club members and the growth rate, the club brand-building and healthy financial indicators as follows: 0.72,0.73,0.63.

Discussion

1. This paper provides a good example of the systematic study of community sports clubs in China; 2. In the frame of community sports clubs to grow advantages, the path coefficient shows that extent of sports demand for residents and sports facilities construction will be decided by two key factors; 3. We must attach importance to sports policy support, as well as we should strive to create a community sports clubs brand.

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Keywords: Shanghai, empirical study, structural factors, community sports clubs

Local conditions-3

An analysis of service quality and customer satisfaction among users of public sport facilities in Japan

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Introduction

In recent years, the Japanese government has had financial difficulties. The Local Autonomy Law was revised in 2003, and the Designated Manager's System was introduced to reduce administrative costs and to improve service quality. Under the new system, not only public organizations but also companies and non-profit organizations can be the management body for public facilities. Customer satisfaction of public sport facilities in Japan has received significant attention because customer sat-

isfaction was adopted as criteria to evaluate the management body at public sport facilities. Although several studies have been conducted on customer satisfaction in public sport facilities in Japan, not much research has focused on relationships between service quality, customer satisfaction and behavioral intentions in public sport facilities. The purpose of this study was to examine the impact of service quality and customer satisfaction among users of public sport facilities in Japan.

Method

From November 12 to 24 in 2007, a self-administered questionnaire survey was conducted to the users of two public sport facilities managed by private sectors in Hyogo Prefecture. At facility H, the comprehensive community sports club is the designated manager. At facility N, a non-profit organization and the Kobe Sport Association are the designated managers. Data were collected from 745 users of these two facilities; the number of valid responses was 716. The questionnaire included five variables: personal attributes, involvement in facilities, service quality, customer satisfaction and behavioral intentions. Twenty different attributes were included in the scale for measuring service quality, while a six-point Likert-type scale was used. Customer satisfaction was measured by utilizing a single-item scale. This item was scaled on a seven-point Likert-type scale. Behavioral intentions were both willingness to recommend the facility to others and future intentions to continue facility use.

Results

The majority of respondents were females. Regarding age, a number of users were in their 30s. Considering occupation, over a half of the users were homemakers. Factor analysis was employed as the factor selection criteria. The results indicated that service quality was derived from four factors (Core, Personnel, Time, and Value). Multiple regression analysis was performed to test the degree to which customer satisfaction could be predicted by the four factors. The results indicated that Core, Personnel, and Value showed a statistically significant effect on customer satisfaction. Personnel had the strongest influence on customer satisfaction. Additionally, the results of simple regression analysis showed that customer satisfaction significantly influenced the degree of willingness to recommend the facility to others and future intentions to continue facility use.

Keywords: Designated Manager's System, public sport facilities, customer satisfaction, service quality

Local conditions-4

Blending Sport for All into post-games utilization of Beijing Olympic venues – A strategic consideration of the Beijing Olympic heritage

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Introduction

Jacques Rogge praised Beijing Olympic Games as truly exceptional Games. However, after the Games, the attention has been drawn around the world to what can we do with the Olympic venues and how can we sustainably leverage the Beijing Olympic heritage. Beijing Olympic venues operation after the games concludes that blending Sport for All into post-games utilization of Olympic venues approves to be a satisfactory solution.

Methods

Telephone interview and literature review were adopted in the research. 2000 Beijingers were randomly selected and interviewed as samples regarding their sport demand with the Olympic Venues. 30 BOCOG and governmental officials and scholars were also interviewed regarding the general policies and possible strategies for the venues.

Results

People's preference of Olympic venues usage after the Games:

This paper shows that 68.2% of people in Beijing expected that Beijing Olympic venues should be open to the public for sport and recreational activities at a reasonable price. Aquatic sports (53.7%), tennis (35.2%), shooting (23.9%), beach volleyball (13.4%), archery (10.7%) were the most favoured sports that Beijingers desired to participate in.

The Present Operation of Olympic Venues:

Shortly after the Olympic Games, the Beijing municipal government required that the Beijing Olympic Green was to be opened to the public at a very low price. Targeting the common people and promoting Sport for All has been the priority strategy not only for the government, but also for the managers. In the workdays, more than 10 000 people visit the Bird Nest and Water Cube, and 20 000 to 30 000 at the weekends. The two venues had attracted more than 5.76 million people by the end of April 2009. The Olympic venues have also organized very attractive and successful Sport for All programmes. The Bird Nest has organized the Happy Winter Season during the winter and Olympic Day Run in the summer. The Beach Volleyball Venue has dedicated itself to sand sports festival in the summer. For the Water Cube, the swimming pools have been open to the public at a very low price. Six Olympic venues constructed in the universities of Beijing are under renovation in order to make them more practical for recreational activities. The Bird Nest had generated more than 260 million RMB (approx 38.8 mil US dollars) gross revenue until the end of April 2009 and the Water Cube 104 million RMB.

Discussion and Conclusion

Studies show that post-games utilization of the Olympic venues still remains a very complicated problem. Few of the previous host cities have solved it satisfactorily. The experiences from Beijing show that Sport for All should be blended into post-games utilization of the venues, which helps to form a multi-industrial model. Only in this way we can sustainably achieve a social and economic outcome in reality. The following strategies are proposed:

Firstly, Sport for All activities should be melted with arts,

amusements, and other elements to make these activities more attractive and interesting.

Secondly, the Olympic Park should be developed into a new industrial zone where various service industries join together to form a brand new industrial model.

Thirdly, enough attention should be given to the development of community sports centers, which helps to develop a Sport for All service network with the Olympic venues as the service engine.

Keywords: Sport for All, post-games utilization, Olympic venues, Beijing Olympic Games, Olympic heritage

Local conditions-5

Installing sports park models for promoting national participation in sports activities

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Introduction

Building the foundation for expanding national participation of Sport for All was an essential political measure to achieve the ultimate goal of realizing a welfare state (Han Kyu Lee et al. 1990). In order to construct an advanced welfare state with a solid foundation in Sport for All, government investment and support was on urgent demand (Ministry of Culture and Sports, 1994).

This study was conducted to install some Sport-for-All park models from the current issues of existing sports parks in comparison to overseas facilities in advanced countries and to propose a more diverse and sophisticated Sport-for- All model facility.

Methods

In order to achieve the objectives of this study, basic documented research, local and overseas facility on-site research, interviews and a survey on the demand for sports and related facilities of local residents were conducted to derive the study subject. A total of 60 sites were researched in order to analyze the current issue of sports parks, including 20 local facilities and approximately 40 overseas facilities in Japan, Canada, Switzerland, France, Germany, Australia and New Zealand.

The procedure for installing the Sport-for-All park model was based on three key principles: 1) the principle of installing the model; 2) the principle of placing facilities for each model and 3) the principle of the formation for major spaces (Yong Jo Lee, 1996; Seoul Metropolitan City, 1995).

Results & Discussion

The principle of installing the model took into consideration the basic research information on the target local residents' actual time spent on leisure activities and activity trends by using sports parks and other related factors

in order to apply principles of a community park model (Beom Jae Lee, 1999; Gwi Gon Kim, 1997; Byung Tae Oh & Ki Ho Choi, 1996).

Therefore, topographical characteristics and functions were applied to derive various models including 1) the Urban Model, 2) the Hillside Model, and 3) the Riverside Model.

The principle of placing facilities for each model was based on rationality of the people-oriented functions, such as centrally locating multipurpose spaces, blocking noises through landscape gardening, aiming for simplicity and public order (Bale, 1993). Based on the abovementioned principles on installing model Sport-for-All parks, the Urban Model, the Hillside Model and the Riverside Model have been incorporated. The characteristics for each model will be presented in the attached documentation.

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Keywords: hillside model, urban model, sports park, riverside model, local facility

Poster

Sport for All vs. competitive and elite sport

Competitive-1

Sport for All, a lever to encourage budding young athletes and to develop elite sport

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Sport is a decisive and powerful tool for the holistic development (physical, psychological and social) of the "growing human being". Young growing human beings achieve development through practising sport and physical activities. Practising different sports strengthens their ability to adjust to the daily problems in their lives. One example is the efforts made in the tenacious will to complete a long-distance race or finding a weak point in the opponent's guard in a combat sport.

The "social function of sport" is found in the solidarity of actions to help vulnerable and disadvantaged communities. The support of practising sport for all levels of society is vital to the economic and social improvement of developing countries, as in the case of Madagascar. However, it requires massive infrastructure and scientifically and educationally adequate human resources to put in place sport systems and a policy which will give access to sports practice as a lever for all sports performance. This is what is sorely lacking in the government, which recognises that sport is a powerful tool for all forms of economic and social development and, of course, improving the health of the population which can work for development. In its organisational structure, the Sports Ministry implements the national sports policy. The Department for the Promotion of Physical and Sports Activity (DPAPS) is divided into three sections: the Mass Sports Section, the Omnisport and Multisport Federa-

tions Section and the Traditional Sports Section. The related projects are to increase the practice of sport in rural areas by highlighting and encouraging the legacy of traditional sports; and to create standard sports facilities to facilitate access to sport. To develop mass sport in Madagascar, and Sport for All internationally, the DPAPS is planning to produce texts for the Regions to ensure that the ministerial decrees are implemented; and to introduce mass sports leader training to improve the general physical health of those taking moderate exercise. Compared with the economic realities, the expenditure of energy at this intensity can have a positive impact on physical condition linked to health, well-being, quality of life and life expectancy. The decentralised communities are being called upon to build sports facilities for the discipline concerned using the budget allocated to sport. Conferences will be organised to obtain basic data, and every year a national mass sport summit will be held to identify elite athletes: a legitimate complementarity which will serve as a lever to develop high-level sport. The training of activity leaders is a major motivational factor to encourage the involvement of young people, who are estimated to make up 63 per cent of the Malagasy population. The main concern is to avoid young people specialising too early, and to maintain and develop physical and sporting activities in the decentralised communities.

Competitive-2

Ice hockey tactics in the Turin Olympics 2006

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Introduction

Ice hockey is one of the most popular sport events for example in the Winter Olympics. The fans and the media follow the game very passionately. Many times the tactic used by a single team is a subject that gives rise to active discussion and debate. This is interesting since often the fans do not have the capability to solve why the teams are, in fact, winning or losing the games. This study can provide a new way to follow the game.

Many academic studies have been conducted of ice hockey. For example the history, injuries and the characteristics of the players (speed, strength, endurance) have been the main study subjects before. This case study takes a different point of view.

The purpose of this study was to find out what top level ice hockey was like at the beginning of the 21st century. The main research subject were the tactics in the different zones used by six elite ice hockey countries. In this study the offence and defence tactics were described and compared when the teams were playing at full strength. The study material is based on the Olympics in Turin, 2006.

Methods

Twelve games were analysed post-event from the video. Two games from each country were analysed with the help of video observation and ice hockey game analyses. The observation included the playing patterns, for example positions and moves of the players and the puck. The ice hockey game analyses gave information about the game efficiency. One game from each country was also analysed by a notational analysis system (video analysis combined with hand notations). Notational analysis provided information, for example, on the systems that teams used when starting the offence from the defence zone or way the team finished the offence in the offensive zone.

Results

The research shows that the defence systems were quite similar in different countries. 1-2-2-system was the most common system in the offensive and neutral zones. More differences were found in offence. The research shows that, on one hand, there were differences between the countries and, on the other hand, the offence systems of individual countries varied in different games. According to the ice hockey game analyses, some of the countries were able to play more efficiently in a particular phase of offence. On the basis of the video observations, there was a lot of variation in the offence tactics. Although there was variation in the tactics, it is possible to find some typical features in playing the game as far as individual countries were concerned.

Discussion

The fans always hope that their own team would win. If it does not happen, they may think that the reason is in the coach and the teams' tactics. On some level this is true. This study showed that there are some principles that occur in the ice hockey games and that the game events do not happen by accident. On the other hand, the tactics are not the only reason. Other reasons may be for example atmosphere among the team and the level of the

players' skills and commitment.

This study found out that ice hockey has a lot in common with other ball games. The team tactics based on the basic rules like delay, depth and balance in defence and width, depth and breakthroughs in offence. The study showed that teams played their defence very systematically. In offence players had more liberties. They were able to use their strengths and creative solutions in different situations. On the basis of the video observation it is possible to describe different patterns and give concrete examples of the tactics for coaching.

Keywords: defence, tactics, game analysis, offence

Competitive-3

Talent development in sports in Singaporean schools

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Gifts and talents are amongst the most precious and valued resources that are of great interest to governments and education systems around the world. In Singapore, one of the educational objectives is to ensure that all students with talents can realize their potential. The talent development framework through co-curricular activities in place is designed for providing developmental opportunities for talented student athletes.

Development

As a part of the talent development framework, the Junior Sports Academy (JSA) and Youth Sports Academy (YSA) were established. The JSA caters to primary school student athletes while the YSA caters to the youth student athletes. JSA is a two-year long programme with the student athletes starting their training at primary 4. YSA is a six-year long programme over the students' secondary level education with entry and exit points every two years. A multi-dimensional approach is adopted for talent identification. Students were identified based on their National Physical Fitness Assessment results, performance at National Schools Championships and nominations from coaches and teachers. These students are invited for a sports camp where they will undergo a battery of specific tests to evaluate their suitability and potential for high performance training. The top 1% of the cohort will be selected and invited for systematic trainings and programmes at the JSA and YSA.

Conclusion

With the first batch of students graduating from the JSA programme last year, an independent research was carried out to ascertain the effectiveness of its processes and outcomes. Focus group discussions and questionnaires with parents and students found that 90% of the parents were satisfied with the programme and agreed that JSA is effective in grooming young sports talents. 90% of the students agreed that their sports performance has improved since joining JSA. Other key findings from the research supported that the JSA had been successful

and met its objectives.

Keywords: talent development, Singapore

Competitive-4

Pan Oman

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Background

Pan Oman campaign was launched to motivate the community and to make them aware of the importance of the physical activity for their health.

Oman Sports for All committee organized the first campaign in collaboration with the Ministry of Health and the Ministry of Sports Affairs; it was only in Muscat and had only 30 participants.

The second campaign organized in collaboration with the community was based on initiative projects in four regions in Oman with private and public organizations. The campaign was targeting the community in different sectors and was, hence, like a small competition between the government, private sectors and NGOs. Each team consisted of 20 participants presenting the sector which sponsored them.

The third campaign, Individual Traveler, was launched around Oman to make the public aware of the importance of physical activity to reduce the risk of incommunicable diseases.

Methods

The idea of the campaign is to provide the participants with a pedometer that counts their steps and walking distance, while the organization committee registers the daily walk of the participants and calculates them individually and by teams. That makes a competition between the participants as well the groups: they keep walking more to score better. Furthermore, having the pedometer, keeps the person competing with oneself since he/she would like to walk more than the day before. Within the campaign the participants take one's family or friends to walk with them so the benefit of the campaign spreads to the others, as well.

Results

With the first campaign, 4894 kilometers (more than required) were achieved, and with the second campaign 51 744.17 kilometers were achieved.

Keywords: Pan Oman

Competitive-5

Mood responses to winning and losing in a recreational game of soccer

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Korea)

Introduction

Vigorous physical activity programmes do not all affect the mood state of the participants in the same way (Kim, Kim, Chung & Lee, 2004). Berger (1994) indicated that if the goal of participating in exercise is to reduce stress, competition should be avoided. However, Rudolph and Kim (1996) found that competitive recreational sports increased positive well-being. Therefore, these contradictory findings would seem to suggest that the psychological benefits of exercise and sport vary according to different situations, expectations and outcomes. Hence, the purpose of this investigation was to determine how winning and losing at competitive recreational sports influenced changes in mood.

Methods

Korean undergraduate students (n = 40, 40 male) enrolled on a stress management class voluntarily to participate in this study. The ages ranged from 18 to 23 years, with a mean age of 21.7 (SD = 1.65). Mood alteration was measured by using the Subjective Exercise Experiences Scale (SEES), which is a valid and reliable measure (Rudolph and Kim, 1996). A 2 (Groups: winning after playing soccer and losing after playing soccer) x 2 (Tests: pre- and post) ANOVA with repeated measures was conducted to examine the effects of soccer play on mood. The alpha was set at .05.

Results

The findings indicated that the winning group showed a post-match increase in positive well-being, whereas the losing group showed a post-match decrease in positive well-being. With regard to psychological distress, the losing group experienced a significant increase in stress after the game, whereas the winning group showed no change. Finally, the fatigue analysis revealed that the losing group experienced more psychological fatigue after the game than the winning group.

Discussion

Therefore, the results of this study demonstrated that losing a soccer game produced negative feelings, such as tension, depression, anger, and fatigue, while winning produced higher scores of excitement, elation or satisfaction. Thus, it was evident that the result of the recreational game had a significant effect on the emotional condition of the players, as was found in the study by Hassmen and Blomstrand (1995) of professional soccer players. As such, the present data were not in agreement with the general notion that competitive sports generate negative changes in mood. Rather, the effects of competitive recreational activities on mood alteration should be reconsidered in relation to winning and losing, as the mood alteration or benefits after participating in a competitive sport would vary according to success and failure.

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Keywords: winning, soccer, mood, losing

Competitive-6

Differences in speed discrimination between groups of skilled and less-skilled participants

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Introduction

In cases where the psycho-physiological response time does not exceed the motion duration of the object, which, in turn, depends on the distance and velocity of the motions, the only alternative to avoid incorrect timing is based on the cues of the flight of the ball. The main specific cues of the flight of the ball include the discrimination of direction and speed. According to the principle of environment adaptation, it was hypothesized in this study, that skill-based differences would influence the speed discrimination in the ball-flight phase. Moreover, the aim of this study was to compare the speed discrimination ability between the two groups of skilled and less-skilled Ss.

Methods

A total of 130 male participants, aged between 18 and 28 years, completed the test procedure. The sample of skilled persons comprised of 53 premier league volleyball and basketball players in Estonia. The sample of less-skilled participants included 77 soldiers of the Communication Division of the Estonian Defence Force with no top-level experience in ball games.

The test stimuli consisted of four velocities, approaching by the sagittal axis starting from the frontal plane of the PC screen. Due to the four angular velocities, the square's dimensions changed from 0 pixels to 130 pixels every side. The stimuli were red and the background was grey. In this experiment, the stimuli were generated by using a PC P4 1,6 GHz processor and present DELL UltraScan P791 17" flat screen monitor.

The test consisted of a demonstration module and an assessment module. The display was viewed from a distance of 50 cm. During the demonstration module, the task for Ss was to discriminate and encode the velocities based upon added information about the corresponding "Shift" key on the PC keyboard. During the assessment module, the task for Ss was to recognize the differences in velocities based upon the retrieval cues due to different speeds. During the assessment module, the mean decision-making time and accuracy in speed discrimination were taken into consideration.

Standard statistical methods were used to calculate means (M) and standard deviations (SD). Statistical comparisons were conducted by using t tests. Significance

was set at $p < .05$.

Results

The mean values for decision-making time were on average 30 msec or 5% shorter in the experimental group: $M=610$ msec ($SD=0,087$). The decision-making time in the speed discrimination of control group was $M=640$ msec ($SD=0,107$). The mean value of measured decision-making accuracy was on average 1,1 mistake ($SD=0,942$) in control group and 1,0 mistake ($SD=0,72$) in the experimental group. A t-test showed significant differences in decision-making time. No significant differences in decision-making accuracy were observed.

Discussion

In brief, it appears that the experimental group's (skilled) decision-making time is shorter in comparison with similar measures for the control group (less-skilled), whereas it is not true for the accuracy of the decision-making in speed discrimination. Consequently, for avoiding mistakes in timing of tactical combinations and skills, such as catching, blocking, passing, hitting, it is important to turn more attention to the above mentioned phenomenon and to take into consideration the special development of accuracy in speed discrimination during psycho-motor preparation.

Keywords: non-athletes, athletes, speed discrimination

Competitive-7

Evaluation of an instrument to assess sports climbing abilities: The factorial validity of a self-assessment questionnaire

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Introduction

The internal consistency and factorial validity of scores on the Self-assessment for Climbing Abilities Questionnaire (Horst, 2008) were examined in this study. The questionnaire measured self-perceptions of sports climbers' climbing abilities in eight components (40 questions). The eight components target the critical areas of climbing experience, including technical skills, mental skills, general conditioning, sport-specific conditioning, injury risk, nutritional habits, lifestyle, and discipline. The aim of the study was to provide a preliminary examination of the psychometric properties of scores from the questionnaire, using an Asian sample.

Research Methods

The original English questionnaire was translated into Chinese by the research team. Some wordings in the translated version were amended by five sports climbing coaches. The samples included 106 sports climbers from Hong Kong, including members of the Hong Kong Youth team, members of the interschool competition team, and climbing association participants.

Confirmatory factor analysis was used to examine the factorial validity of scores in each component. Some components' scores showed poor model fits, therefore, exploratory factor analyses were also used to identify potentially problematic items in those components.

Results

1) Internal consistencies of component scores were evaluated by using coefficient alpha. Only two components had acceptable internal consistency scores: the components for climbing experience ($r = .77$) and technical skills ($r = .75$).

2) Using confirmatory factor analysis, the scores of climbing experience, technical skills, general conditioning, sport-specific conditioning, nutritional habits, lifestyle, and discipline components showed a good model fit.

3) The mental skills and injury risk components showed an insufficient model fit, therefore, exploratory factor analysis was used. Results suggested that scores from both components contained two latent factors.

4) The questions which related to fact-response have very low factor loading.

Conclusions

This study found that some of the components in the questionnaire may present problems in accurately assessing sports climbers' climbing abilities. However, results from a single study are not conclusive, and future research is suggested in order to investigate other psychometric properties of the questionnaire. Questionnaire modifications were also suggested for future use.

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This study was funded by the Hong Kong Physical Education Assessment Association, Hong Kong SAR.

Keywords: Sport Climbing Abilities, Self-assessment questionnaire

Competitive-8

Sport for All priorities in Iran

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Introduction

Throughout the second half of the twentieth century, the practice of sport has changed its character considerably. People are now being active on their own, taking part in physical activity independent from pyramid-structured club sports organizations. People have increasingly began to practice sports in a more informal, spontaneous and individualized fashion, like jogging in the streets, playing badminton in the parks and volleyball on the beach. This was later followed by fitness and aerobics at home or in the gyms (Anders et al. 2004,

Rader 1991). Participating in sport and physical activity is important in each and every country, and most governments try to increase its citizens' presence in sport activity or recreation (Bottenburg et al 2005). Due to lack of information about participation by Iranian people in sport, this study considers the most popular sports and the rate of participation in sport and exercise in Iran.

Methods

A questionnaire was developed to measure subjects' interest in sports and was randomly distributed to 4206 females and 5245 males of 12 provinces (in North, South, East, West and Center) of Iran. The questionnaire was divided into four major sections. These sections included: 1-sport barriers, Iranian sport interests, sport motivation and physical activity background, 2-Factors affecting sport participation 3-Frequency of subjects' physical activity sessions 4-Physical activity and recreational sports in Iran. Validity and reliability of the research tool was calculated.

Results indicated that the most important reasons for participating in sport and physical activity included "Being healthy" (17.25%). Lack of time was the most important reason (22.56 %) for failing to participate in sport and physical activity. Soccer was the most popular sport among Iranian men, followed by swimming, aquatic sports and indoor. The most practiced sports activities for Iranian women were swimming, aquatic sports, walking and cycling.

Conclusion

Based on this study, it seemed that swimming and water sports, walking and soccer were the main priorities and the most popular participant sports in Iran. The most important conclusion we can extract from the result of present study, is that mainly because of the process of globalization, the interests and sport priorities of Iranian people tend to be close to global trends and priorities. In other words, people like to engage more in recreational and informal activities than in the traditional (competitive) ones. This result can be very important to decision makers and politicians for future strategies.

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Competitive-9

Developing the most inclusive team sport on the planet

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The game of softball was invented in 1887 and by 1952 talks were underway leading to the formation of the world governing body for the sport, the International Softball

Federation. Thirteen years later the first-ever softball world championship took place – an event whose 45-year anniversary is being celebrated in 2010 – and later the game would be chosen (in 1991) by the International Olympic Committee to be added as a medal sport for the 1996 Summer Games in Atlanta.

For decades now softball has continued to grow through numerous disciplines, and in a great number of countries around the world. Today, millions of boys, girls, men, and women are competing in some form of the game, and a portion of that participation is due in large part to development initiatives of the ISF.

Six years after the sport's Olympic debut, softball's world governing body's development department began an aggressive equipment program. Since then there has been softball equipment valued at almost USD 3 million sent to just under 100 countries.

In February of this year an ISF newsletter reported on equipment shipments that had "been sent to the Czech Republic (for their school and club program) and to Croatia (cadette and junior club program)." It went on to mention that "starter kits" had additionally been "packed for shipment to Jordan, Lesotho, and Spain, who all intend to use the gear for their school program."

However, that is not the only means by which the ISF is getting softball equipment such as bats, balls, gloves, helmets, and catching gear into the hands of boys and girls throughout five regions (Africa, Americas, Asia, Europe, and Oceania).

In the latter part of 2009 the ISF signed a memorandum of understanding with Olympafrica to provide equipment and softball coaches to 14 African countries. Earlier in the year the ISF committed USD 100,000 in grants in conjunction with development projects with the African Softball Confederation that include a program at the university level through the International University Sports Federation.

The aid does not end there.

Softball's is the only international federation to attend every Generations For Peace camp since they began in 2007. The ISF has provided both equipment and coaching instructors to these events put on in the Middle East for leaders of youth who then go back to their country and promote softball and other sports in a bid to help use sport to end conflicts.

An additional resource that the ISF has created to further develop the sport is regional training centers. Its own world headquarters complex in Plant City, Florida (USA), has playing facilities, but the organization did not stop there, establishing additional sites in the Dominican Republic, Russia, and Italy, with Asia as its next target (China).

With the ongoing commitment to global growth of the sport, it's clear that the ISF is developing softball as the most inclusive team sport on the planet.

Keywords: development, softball, equipment, Olympic

Poster

Policies, strategies and programmes to promote SFA and future strategies to include SFA in all policies

Policies-1

Volunteers' efficacy at the European Youth Olympic Festival

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Introduction

The European Youth Olympic Festival (EYOF) is a multi-sport competition with 2500 athletes from Europe. For some of the athletes, it is the first of many encounters of international sport in their career. However, large scale events are not possible without volunteers. The world of sports is furthermore troubled, as suggested by Timmer and Aartsen (2003), with a low amount of volunteers in professional sport due to heightened demands for sports events and people having less time for leisure time activities. Doherty (2006) proposes the need for further research in volunteers. In agreement, this study examines the EYOF 2009 general volunteers' self-efficacy and how satisfied they were as volunteers.

Methods

A self-efficacy scale was devised by using various tested instruments. The final instrument was tested with a small

sample, then modified and retested before being administered. It was further translated and then translated back into Finnish before being published over the Internet two weeks after the closing ceremony. Timmer identified low reliability (cronback alpha 0.61-0.65) efficacy scales as predictors of the mastery construct in the self-efficacy theory. These were 'willingness to initiate behaviour', 'persistence in the face of adversity', and 'effort to complete behaviour'. Costa (2006) used the vicarious experiences and verbal persuasion constructs of the theory and generated a hypothesis on a 'sense of community' and 'recognition' respectively.

Responses used a modified 1-5 Likert scale, 1 representing 'strongly disagree' to 5 representing 'strongly agree' across 6 items. Due to the low reliability scores shown in Timmer's study, percentage scores were used to evaluate the volunteers' overall experiences.

Results

56% of general volunteers (n=266) responded to this part of the questionnaire. The responses were strongly favoured towards predictors of mastery; effort to accomplish (92.2%), willingness to initiate behaviour (88.6%) and persistence in the face of adversity (85.6%). Being a part of a community also scored high (80%). How-

ever, the score of recognition was at a slightly lower level (78%).

Discussion

The volunteers at this event were mainly happy with their roles as volunteers and often believed they worked hard, had a pleasant time, were supported and enjoyed being a part of a team. The results suggest that perceived recognition should be examined more for generating more retention. This includes the levels of satisfaction with the recognition received and also the amount of recognition they received while working as a volunteer.

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Keywords: recognition, self-efficacy, Olympic events, mastery, volunteers

Policies-2

Elements of the Finnish programme of direct subsidy to sports clubs

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Introduction

In 2008, a Finnish committee preparing a national programme for sport and physical activity, published a report in which it proposed general lines of action and 43 specific measures. One of the measures was a recommendation that the government should enhance local prerequisites of sport by means of direct subsidies to the sports clubs. The following year, a programme was created where 200 sports clubs were allocated funding to hire an employee specifically to increase the amount of participants in clubs or to develop the quality of club actions. This programme is being evaluated by LIKES – Research Center. The purpose of the current study is to identify and evaluate the key elements of the programme.

Methods

The study is based on thematic interviews of actors in the process, analysis of the official and preparatory documents of the programme, and observations in several meetings during the process. In addition, all the applications of sports clubs and the funding decisions were analysed, and selected employees were interviewed.

Results

On the basis of the evaluation, the following factors have been identified:

1. The programme was based on long-term lobbying, positive experiences of comparable actions in Sweden, and previous projects in Finland. It was seen technically possible and politically favourable.
2. The funding for the programme came from the national lottery. From the point of view of sports organisations it was an extra resource and no re-allocation was needed.

3. The programme was considered so important that the actors regarded the possible gains in co-operation greater than the threats.

4. The participants' experiences on previous, smaller development projects were crucial in achieving the system in a very short time.

5. The economic depression provided clubs enough with suitably priced employees.

Discussion

The beginning of the programme was a window of opportunity where several essential factors were present at the same time. In order to produce successful national programmes and projects, some of the key elements can be planned and constructed and some depend on previous experiences of organisations. However, to some extent, success is based on chance or favourable reactions of uncontrollable parameters.

Keywords: policy evaluation, national sports programme

Policies-3

Training of instructors and sport coaches in sports clubs increases their self-confidence

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Introduction

At the core of the Finnish sports politics are sport clubs. More attention has been paid to the training of instructors and coaches in order to increase physical activity rates of children and young people in sports clubs. The Finnish Ministry of Education has directed financial resources directly to the clubs to improve the training.

Methods

Questionnaires, interviews, and database registers have helped to gather information on the training projects that have been carried out. Based on this information, the current study was conducted in 2009 of the clubs who had received financial support. The aim of the study was, among other things, to clarify training background, purpose of training, and the self-assessed needs of the coaches and instructors.

Results

There were large differences in the training backgrounds of children and youth instructors and coaches who work in sports clubs. Particularly, volunteer-based sports clubs' time and financial resources were limited. From the perspective of instructors and coaches, training is an important factor for building self-confidence and developing oneself. Further training has a positive effect on motivation and managing at work. Due to limited time resources, the training should be of short duration, happen inside their own club, and focus on individual specialist areas.

Conclusion

The views and state of will of the instructors and coaches

working in sports clubs are similar to the current Finnish sports politics trends. The public sector needs to provide enough resources for carrying out the current state of will broadly and take different kinds of sports clubs into consideration.

Keywords: coach, sports politics, training, instructor, sport club

Policies-4

Study on the activation of World Sport for All with the Traditional Archery Festival: A proposal for ITAF (International Traditional Archery Festival)

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Introduction

Traditional national bows in the world are being replaced with the bows made by a new method, organic composite technology (Grozer csaba and Posta Pal, 2009), simply due to their good performance and convenience of use. However, traditional national bows have, more than the performance and convenience, cultural peculiarities of peoples in the world. The peculiarities are supposed to lead to the activation of world Sport for All. To achieve this goal, it is necessary to hold ITAF, in which various peoples take part and various kinds of bows are used.

Effect of WTAF (World Traditional Archery Festival) and a proposal of ITAF for activation of world Sport for All.

Bows have been used in many ways for many centuries. Under the district and the circumstances, their shape and way of use are different respectively. This means that various peoples have their own archery cultures. For example, bows are used for battle in England (Battle of Crécy, 1346), for leisure in China (Analects of Confucius, Shu Er 27), and for hunting by Copper Inuit (Sturtevant, ed. 1991). Participants in the WTAF are not so much interested in the competition for medals, instead in the participation itself in the Festival. Therefore, it is possible to say that WTAF is one of the desirable models for World Sport for All. Peoples of the world have a long history and a tradition of archery. Moreover, they take pride in and have a strong love for their traditional archery. Thus, they have in mind that they introduce their own traditional bow to other peoples, and also they want to know the other peoples' bows. Naturally, WTAF can be a shortcut to the exchange of international friendship, and to the activation of World Sport for All. We Koreans have held WTAF (World Traditional Archery Festival) three times in 2007, 2008, 2009. 500 archers from more than over 50 countries took part in them. WTAF officials expect Sports for All Congress to establish ITAF, and to carry out an archery lover's wishes. Today, Turkey hopes that Sports for All Congress establishes an international traditional archery association (Z. Metin Atas, ed., 2008). Czechoslovakia tries to establish an international archery organization, maintaining a web-site (www.lukostrelec.cz) on archery.

Conclusion

ITAF will serve to the sharing of various traditional cultures, as well as to the preservation of various cultures in the global communities. The archery game will be carried out in a traditional way (with the traditional bow and arrow, traditional clothes, traditional game systems) just like WTAF's way, and thus the Festival will give us many amusements and colorful attractions. The participants in the Festival will take pride in their own traditional national bows and clothes. Their interest is to participate and to see a foreign culture as a tourist. It means that ITAF will be most suitable for the aim of exchange of global friendship, and that will be one of the ideal main events of World Sport for All.

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Keywords: Sport for All, Traditional Archery, ITAF, WTAF

Policies-5

A study on the change of Chinese sport industry structure and employment structure

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Introduction

In the economic globalization today, Chinese sports industry is developing rapidly with the growth of Chinese overall economy especially after the success of the 2008 Olympic Games. However, the growth in total output value of the sports industry does not mean the rationalization of the sports industrial structure, or the optimization of the sport employment structure. As Chinese sports industry come into existence in the initial period after the station established with poor and weak basis, China had to take overtake development strategy which directed the imbalance industrial structure and the irrational employment structure. As the country which has the largest labour resources and the most imperfect social security system in the world, China has a huge employment pressure, and this imbalance in industrial structure and the irrational employment structure will endanger the sustained economic development and social stability. Therefore, the research on the alteration of the sports industry structure and employment structure is particularly

important to promote the sustainable, stable and healthy development of the Chinese sports industry.

Methods

Review of literature and documentation of expert interviews, questionnaires, statistical and logical analysis of data.

Results

After a series of data analyses, the results were as follows: 1. According to the domestic and foreign scholars on the interaction relationship between industrial structure and employment structure, the change of the industrial structure decides the change of the employment structure, and conversely is restricted by the change of the employment structure. 2. At present, Chinese sports industry has been seen as a composite type, the cross-industry of secondary and tertiary industries. Among sports industries, physical-based sports industries, such as sporting goods manufacturing, sports facilities and construction belonging to the second property, sports fitness and entertainment, contest shows how some industries belong to the tertiary industry. The tertiary industry, as a part of sports industry which developed rapidly and strongly, tends to exceed the secondary industry part. 3. [1] Through establishing the single-factor regression, the author studies the primary factors effecting the Chinese sports industry structure and employment structure, and then presents dynamical analyses and tests the effect of factors by constructing the multi-factor model during the transition. The conclusions are: There exists a long-time stable relation between the direction and speed of the Chinese sports employment structure and industry structure.

Discussion

The suggestions for realizing the harmonious development of sports industry structure and employment structure are: 1. We should put the sports employment growth and sports industry structure upgrading on the same important position. 2. We should develop the tertiary leading with the fitness and entertainment industry to absorb labour. 3. We should recognize fully the structural unemployment and improve the overall quality and labour skills of workers. 4. The Government should supply more employment opportunities and promote the marketization process of employment by deepening the reform of the employment system.

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Keywords: Chinese, industry structure, employment structure, change, sports

Policies-6

Sports Officials Singapore

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In meeting the demands of the expanding sports scene, be it at the school level or high performance achievements at international and world-class levels, there exists a vital need to have qualified and competent technical and sports officials. Regardless of the level of competition, it is of paramount importance to have both qualified and competent officials guiding the athletic competition, thereby ensuring greater fair play and consistency. Sports Officials Singapore was thus set up in 2008 to look into the overall and holistic development of sports officials in Singapore.

The roles played by the officials can never be understated. When the intensity and climate of any competition progress and change, the official must frequently assume several other roles. Some of these multifaceted roles include that of an educator to the players on the playing fields by emphasizing courtesy, respect for opponents, fair play, and sportsmanship conduct. This can only be achieved through the demonstration of qualities such as respect, professionalism, knowledge, judgment, poise, consistency, decisiveness, courage, rapport, objectivity, empathy, firmness and encouragement in the official's own behaviour.

Two key areas are crucial to the attainment of qualified and competent officials possessing the capabilities to officiate at international competitions and championships. Firstly, there is a need to develop a structured and well-defined plan for the development of young technical officials. One way to achieve that is to establish and strengthen the collaborative efforts between the schools, tertiary institutions and the National Sports Association towards the development of a Junior Technical Officiating Programme. Such a programme is vital and provides a base towards the long-term development of technical officials.

In collaboration with the Co-Curricular Activities Branch (CCAB) from the Ministry of Education (MOE), secondary school and junior college students who enroll in the Junior Technical Officiating Programme, can look to receive the Sports Umpire Award and bonus CCA leadership points as an incentive. This programme aims at inculcating leadership qualities in these youth as well as providing them with opportunities to officiate at sports carnivals, mini and junior tournaments organized by the National Sports Associations (NSAs).

The second area pertains to the upgrading of our existing National and International Technical Officials' standards and competencies. In this regard, the role of the National Sports Associations (NSAs) is to establish and develop a structured plan towards the upskilling of their respective sports technical officials through the provision of upgrading/refresher courses, seminars, clinics, as well as providing opportunities for officiating at international competitions. Concurrently, the Singapore Sports Council would have to perform an enabling role in the advancement of raising the quality, competencies and standards of these technical officials through the provision of guidelines, tools and other resources for the National Sports

Associations to effectively achieve the desired outcomes.

Keywords: Sports Officials Singapore

Policies-7

First set is mind set: serving the sports consumer

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INTRODUCTION

One third of the Dutch population is a member of one of the 30,000 sports clubs in the Netherlands. This number is under pressure, as it is in many countries. The sports sector wants to maintain or preferably increase its 'market share', an ambition that is supported by the Dutch government, which wants to make sport more accessible and also benefit more from health enhancing physical activity.

DEVELOPMENT

Sport must be offered in new, innovative ways. Therefore, NOC*NSF started two new programmes (2007-2011) with generous support from the Ministry of Sport. One programme consists of 15 pilot projects and is based on the idea that local sports clubs must take the needs and wishes of the sports consumers as their starting point. Another programme supports the development of new promotional concepts by 10 federations to be used at the local level.

A great variety of projects has, meanwhile, been developed at the local level. The common denominator is that the sports club, or a group of sports clubs, is leading. Other stakeholders participating are national federations, municipalities, educational institutes, welfare organisations and the corporate sector. Jointly they offer sport in innovative ways, often, though not exclusively, aimed at groups for whom the sports club is out of reach or out of their immediate interest.

Examples:

- The Pelican project consists of five sports clubs (football, korfbal, equestrian, field hockey, tennis) jointly offering sport for persons with a disability and elderly people;
- The Lisso project gives the sports consumer an introduction to four different water sports: rowing, canoeing, windsurfing and sailing, with 'dry' clinics and clinics on the water;
- 'Moving without limits' is a project of a gymnastics club offering activities for family members at the same time, promoting the whole family doing sport;
- 'Sportplaza' offers a variety of football activities, e.g. in the footballFUNpark (panna, boarding and beach football);
- 'Clubfit' is an introduction to six ball sports (tennis, football, hockey, korfbal, baseball, softball) in a fitness centre kind of setting with tests, conditioning exercises and nutritional advice;
- 'Sport Boulevard' refers to co-operation between 13 sports clubs, 18 primary schools, a health centre and a

municipality, marketing and offering 15 sports all located at the boulevard all year long;

- 'Enjoy endurance' offers courses and flexible membership in running, cycling, speed skating, rollerblading, speed and Nordic walking. Target group are participants in runs and races who often practice more than one sport.

CONCLUSION

With the programme being more than halfway and periodic monitoring taking place, one can already conclude that not so much the number of innovations, but the change of mindset is most remarkable. This leads to more co-operation between sports clubs and other actors and to a customised approach of the sports consumer, creating new, unprecedented opportunities for Sport for All.

Keywords: accessibility, innovation, sports consumer, co-operation, participation

Policies-8

Ethics and health promotion as integrated elements in future (level 1-3) coach education in Finland

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This abstract describes a 5-year (2005-2010) development programme for level 1-3 coach education (VOK) in Finland. It is a collaborative programme of national-level sporting bodies (Finnish Sports Federation, Young Finland Association, Finnish Olympic Committee, Finnish Sport for All Association, Finnish Coaching Association) with its own realization team; it is funded by the Ministry of Education (350.000-400.000 euros annually) and will be externally evaluated by Research Institute for Olympic Sports (Finland).

VOK focuses on the first three levels of coach education, which in Finland is mainly organised by national sport federations, and aims at developing coach education so that the education standards for the organisers, and competency-related outcomes for the participants are standardised for all sports and education levels. Additionally, it is intended that continual development is to become an integral part of sports federation coach education, and co-operation and networking is to increase between different actors.

As one focal tool (and at the same time as an outcome) of the VOK-programme, the framework for level 1-3 coach education was developed (2007) and published (2008). This was developed in cooperation with several experts in the area of sports, but also in research and academia, and the document determines the three main elements for coach education and gives guidelines of the contents of each education level. The elements are: 1) acting as a coach; 2) basis and capacities in physical activity (PA)

and sports; 3) Ethics and health promotion (HP) in coaching. This abstract focuses on the third element, and especially on HP.

The third element concentrated on two comprehensive perspectives that had not been previously seen as important parts of coach education. Thus, it needed to be constructed from the beginning, and grounds for its existence needed to be found. The justification of HP was fairly easily found from the growing amount of evidence linking PA/sports to health benefits, but to motivate the coaches, this reasoning, needed to be expressed from a performance enhancing perspective; healthy athletes are better athletes.

Regarding content; A decision was made to concentrate on level 1 only on a single training session and on current attitudes of the coaches with relation to HP. At level 2; focus is on more comprehensive perspective of health, for example, coaches recognition of their own HP attributes and possibilities during non-performance club time. At level 3; to design an executive plan on health-related matters for the whole season. More of the fundamentals for HP in coach education and detailed contents of different levels of education will be presented in the congress.

To conclude, it can be stated that it has been a challenge to consider these new elements as a part of a traditionally competition-oriented coach education system. However, there are many examples of national sport federations integrating these contents as a part of their level 1-3 coach education.

Policies-9

Sport Non-Profit Organizations (NPOs) and the development of Sport for All in China

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Introduction

The modern Chinese sports system is a typical government-oriented pattern, which originated in the 1950s on the ground of insufficient sports demand and social supply. With the reform of sports management system since the 1990s, China concentrates on seeking systematic methods to solve the developing problem of sports from the social perspective, and discovering out the unique role that non-profit organizations play in the social undertakings (Ma, 2003). Since we lack sport NPOs rooted in society, the government has taken as its responsibility to set up such organizations (Li, 2007). This means that the supply mission of public sport service has turned from the government to non-profit sport associations. This unfolds a new access to the markets for the non-profit organisations.

Sport NPOs will be the supply subject to shoulder the provision of sport services in the future, but their supply capacity is limited (Lu, 2001). The government is changing its focus on the supply of athletic sports, and paying

more attention to the provision of public sport services. That provides an opportunity for the development of sport NPOs.

Methods

This research is based on the statistics from sport NPOs registered in NPO Administration of Ministry of Civil Affairs, and analyses the statistics to find out the relationship among the development of sport NPOs, economic development and the level of athletic sports combined with the regional development of China.

Results

The biggest problem of SFA development lies in the system where the government is the only supply subject and in the fact that it has simplified public sport services. The weak foundation of Chinese NPOs results from the fact that China did not form a mature civic society (Wang, 2003), and the self-governing sport NPOs are too small, since almost all of them are owned by government and run by individuals. This is the main institutional dependence pattern of the sport NPOs in China. It is a basic trend that sport NPOs will undertake the fundamental sport public service supply function, but how to guarantee their independence, is another essential systematic problem to be solved.

Discussion

Sport NPOs in China have unique characters and their future development should be taken into account in the Chinese reality.

China needs the participation of sport NPOs to cultivate people's sports consciousness and to popularize the sports consumption concept. Now is the best time for sport NPOs' development with the ongoing political reform and enlightened enthusiasm for sports after the Beijing Olympics. The relations between government and non-profit organizations need to be clarified and the functions of sports service supply subjects need to be made sure. The legislative and administrative methods are needed to acknowledge the position of sport NPOs in the supply of public sport services and to provide a relatively free environment for their growth.

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Policies-10

A model of Gymnastics for All in the Bolivarian Republic of Venezuela

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Introduction

This research originates from the needs to provide a systematized physical activity adjusted to the free participation of different population strata in a process of inclusion of citizens. The aim of this research is set to build a model of development of the Gymnastics For All in the Bolivarian Republic of Venezuela, addressed to people of all ages without discrimination of race, sex, disabilities, age or physical conditions and to provide opportunities for sharing experiences and to learn new ways of practicing physical activities in an environment of joy, happiness and creative ideas.

Methods

The methodological part of this work was based on the guidelines, techniques and procedures for developing grounded theory of Glaser and Strauss (1967). Data was collected in three different moments (open, axial and selective codification), to develop concepts, categories and properties on the phenomenon of Gymnastics For All. Using theoretical sampling, key informants were selected within ex-gymnasts, gymnastics federation members, trainers, and physical education professors. Multiple sources of data collection were utilized for triangulation. As a basis for later comparison, data obtained in the inductive phase, we used the organizational theory of Licker (1980), as well as the physical education theories presented by Delgado (2002), for the saturation process and development of the model.

Results/ Discussion

Research generated four realities for the development of the model: 1. Communities. 2. Higher Education. 3. Elementary and High School students. 4 Social Clubs and Associations Federated. In addition, it generated three levels of participation: local, national and international. Social participation and health improvement were associated with the practice in Gymnastics for All, during the intervention process. The attached value was the communication within folk groups and the communities. The researchers could see new ways of inclusion for people with a disability in a recreational and sustainable relationship with other groups. Practice of Gymnastic For All helped senior citizens to improve their physical autonomy and social integration.

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Policies-11

Sport, a factor of social integration: The Moroccan example

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1) Decline of sports practice in Morocco

While Morocco has taken advantage of the benefits offered by globalisation and in particular new technologies, it has not escaped the damaging effects, such as a decline in the number of people practising sport; an increase in non-transmissible diseases; the scourge of obesity, affecting mainly children; and stress and sedentariness. An opinion poll conducted in 2008 on people's sports habits showed that one Moroccan in 10 practises sport. This decline is explained by the absence of physical education in primary schools and the low level of intervention by the national sports movement.

2) National sports strategy

The National Conference on Sport held in October 2008 was marked by the reading of the Royal Letter to the participants. Its contents highlighted the role of sport as an essential right of every citizen. Sport is also seen as an important lever of human development and for combating marginalisation and exclusion.

3) Sport, a factor of social integration (NHDI)

To respond to the needs of human development, in 2005 the Moroccan government launched a national project entitled the "National Human Development Initiative" (NHDI), with the aim of improving the situation of the social categories and peripheral areas facing poverty and marginalisation. The actions of the NHDI programme include building new local sports facilities and funding sports projects for disadvantaged groups and those in rural areas.

4) Creation of the Royal Moroccan Sport for All Federation

Morocco took part in the 12th World Sport for All Conference held in Malaysia in October 2008, with the aim of copying best practice in Sport for All. The Ministry of Youth and Sport, in close collaboration with the Moroccan NOC, pledged to launch an academic study on Sport for All in Morocco; encourage the creation of associations in the various towns of the kingdom; and create a multi-sector commission to establish the legal framework for the creation of the Federation. This led to the creation, on 25 October 2009, of the Royal Moroccan Sport for All Federation, combining 30 associations active in Sport for All throughout the kingdom.

5) School sport

Physical education in schools plays an important role for children, helping to actively make young people aware of the importance of certain fundamental values like honesty, fair play, respect for oneself and others and respect for the rules and an awareness of their importance. However, the lack of physical activity in primary schools is a real handicap to the development of national sport. To address this, a partnership agreement was signed on 11 September 2008 between two ministerial departments, stipulating: 1- the shared use of sports facilities; 2- the training of managers; 3- the development of sports practice; and 4- the implementation of awareness-raising programmes and exchanges of experiences.

Poster Country report

Country report-1

The situation of Sport for All in Italy

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Introduction

In order to understand the situation and the evolution of Sport for All in Italy, one needs to keep in mind the scenario that has determined the great increase in the practice of sport. Indeed, since the sixties, the percentage of people involved in sport, has risen from 2.6% to 61.3%. In particular, the approach of new segments of the population, such as women, elderly, disabled and other more recent groups, such as immigrants, appears to be very different.

This report aims to indicate the reasons for the increase in the practice of Sport for All, as well as the reasons at the heart of this change in the life-style of the population and the identification of sport as an essential tool for the attainment of people's physical and psychological well-being.

Methods

The work is based on the acquisition and elaboration of data relative to the current situation of Sport for All in Italy, with an indication of the tendencies that derive from the new needs in terms of quality of life and belief in the utility of physical activity and sport.

A chart of CONI's initiatives in this area, both carried out directly and through the various components of the national Olympic Movement, will also be provided.

Results

Current data of sport in Italy, covering the various activities concerning Sport for All, will be illustrated through the use of graphics and tables. In particular, the differences between the various geographical areas, trends toward new sports and sports linked to natural environments, and also an indication of the level of people's satisfaction and the sharing of the values of sport, will be examined.

Discussion

Italian legislation attributes the role of actor for the promotion of Sport for All to various subjects, both within the world of sport and among public entities.

As far as CONI is concerned, the sports federations, associated disciplines and especially the sports promotion entities are all involved, but in the first place there are numerous clubs and associations that constitute the fundamental basis of the national sports movement.

In the public sector it is more the regions, provinces and municipalities that are the entities charged of dealing with Sport for All, whilst the role of schools is less clear. It has well-defined educational goals but is less involved in the promotion of sport.

Currently, there is a great deal of lively discussion on

initiatives dedicated to Sport for All, especially on who would be competent for what and the possible synergies that might exist.

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Country report-2

Turkish National Olympic Committee's work for Sport for All

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The positive effects of sports towards public health are indicated in all scientific research. Private or public institutions that manage elite sports must arrange various events in order to increase the number of citizens who participate in sports. TNOC also carries out various organizations aimed at increasing the number of people who exercise in Turkey. TNOC achieves this through commissions it forms and the work of volunteers. The major events are those for children who will be adults of the future. These are free sports schools, sports culture and the presentation of Olympic training with the Bosphorus crossing public swimming race, Olympic Day Celebrations and the Aphrodisias Youth Festival where children from all over the world meet.

The free sports schools involve the possibility of sports participation for children and adolescents in the age group of 7-15 years for a period of 10 months in two days a week. At a total of 14 sports schools, thousands of youth can participate in sports.

The TNOC Culture and Olympic Education Commission has been reaching 30 000 children every year since 2005 during the "Sports Culture and Olympic Education" interactive training for the elementary school students of 4th and 5th grade in order to motivate children and adolescents to participate in physical activities, to contribute to their healthy development bodily, emotionally, mentally and socially through sports and to allow them to adopt the basic values of Olympism. During the presentation, a wide range of information is provided to students on the effect of sports on health to the Olympic Games, fair play, environmental awareness to nutrition, up to various cultures and the handicapped. Videos and animated films prepared with the support of academicians and pedagogues are shown, the questions of students are answered and their becoming a good athlete or spectator in the future is ensured.

Organized by the TNOC in 2009 for the 21st time, the traditional Asia to Europe Swimming, Rowing, Sailing and Canoe races are performed on the Bosphorus with the

participation of the public.

The Olympic Day event is carried out on June 13-14 with events such as bicycling, running and water skiing in various sports branches in two days, participated by thousands of individuals.

The Aphrodisias-Laodikeia International Youth, Sports, Culture and Arts Festival joins youth since 6 years through sports, provides them the opportunity to get to know each other and their mutual cultures with the purpose of spreading peace and understanding through sports and to reflect their artistic and cultural dimensions. TNOC promotes sports through projects such as the Olympic Talents Project, Olympic scholarships, fair play, environmental awareness, artistic contests and awards.

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TNOC Activity Report 2007-2009.

Keywords: free sports schools, sports projects, TNOC, culture and Olympic education, the Olympic Day

Country report-3

Sport for All of Viet Nam

Le Anh Tho

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Sport for All of Vietnam are activities in practice, performance, competition of exercises and sports for everyone, regardless of age, gender, occupation, religion, politics, health status and residence. The goals of Sport for All are to strengthen and improve health, physical development, extending life and improving quality of life; to meet the needs concerning activity, having fun, entertainment, and communication of organizations and individuals in society.

10 indicators assess the development of Sport for All in Vietnam:

1. The number of people who practice it regularly. 25.2% of the Vietnamese population practiced it regularly in 2009.
2. The rate of family sports. 18.5% of the Vietnamese households were sport families in 2009.
3. The rate of schools with a successful implementation of physical education. 75.6% of schools met this standard in 2009.
4. Percentage of students meeting the "standard of physical exercise". 75.5% of the pupils and students met this standard in 2009.
5. Percentage of soldiers meeting the "standard of strong soldiers". 95.6% of the troops met this standard in 2009.
6. The number of Sport for All contests annually. In 2009 there were 14,260 communal sport contests, 1662 sport contests at district level and 650 provincial-level sport contests.
7. The number of fitness clubs and associations of Sport for All. There were 45,000 clubs of Sport for All in 2009.
8. The number of collaborators. In 2009, the Ministry of Culture, Sport and Tourism had trained about 5,000 col-

laborators.

9. The number of ethnic sports, folk games and recreation sports have been restored and developed annually. Until now, 9 ethnic sports have been put into the national competition programme and hundreds of folk games are to be held in local festivals.

10. The number of people who meet the "Physical activity standards of Vietnam". (Will be implemented in 2010.)

Two management systems of Sportsfor All in Vietnam: State management and Society management.

The state management system of Sport for All in Vietnam: The central Ministry of Culture, Sport and Tourism (The Department of Sport is a specialized agency of the Ministry), Ministry of Education and Training (Department of Pupils, Students Sport), Ministry of Defense (Department of Army Sport); Ministry of Public Security (Department of Police Sport). The local Department of Culture, Sport and Tourism (provincial), Department of Culture and Information (district level), Department of Culture and social (communal).

The social management system of Sport for All in Vietnam: The National Olympic Committee, the National Federation of the individual sports (18 federations available now) the National Sports Associations (5 association available now). In addition, there is the Council of Sport and Sport Departments of each branch.

The policy on Sport for All:

1. Sport socialization and sport professionalism.
2. All four levels of state budget spent on Sport for All.
3. To give priority to areas, domains and specific objects.
4. Supported by the national programme.
5. Domestic and international ethnic sports exchanges.

Country report-4

Blogging Sport for All / for health: connecting local good practices [www.pafes.cat/blog]

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INTRODUCTION

According to the guidelines of the World Health Organisation (WHO 2004) and the European Union (EU 2005) for enhancing health by increasing physical activity (PA) and promoting a healthy eating among the population, the Government of Catalonia established the Plan of Physical Activity, Sport and Health (PAFES) in 2007. This Plan was presented at the 12th World Sport for All Congress (IOC 2008).

The main aim of the PAFES is to encourage changes in lifestyle among the population through motivational interviews, the prescription of PA through primary health-care and the attendance to the PA programmes at public sports facilities during at least 6 months; the minimum period required to change habits (Prochaska, JO et al

1986).

In this matter, the first essential step towards changing habits is to become informed about the benefits of doing daily things in a new way. Hence, one of the main purposes of a new communication tool is to make all information materials available and understandable for all. Development: Web 2.0 philosophy and health literacy concepts have been taken into consideration in designing a website/blog to connect with the citizenship and any organisation interested in sharing good practices at a local level.

All kinds of brochures have been moved from town councils, sport and primary care centres to the website and they can be searched by county/town with the help of a search engine. The platform is available in Catalan, Spanish and English and has several sections that contain information mainly related to healthy PA and exercise as well as some sections that permit users to interact and get some personalised pieces of advice.

Users can also enter the blog where the posts are classified in categories and can be found by keywords, as well. The category "good practises" provides healthy and original examples to follow.

This project is implemented on the basis of the allocation of a specific budget by the PAFES. It is being implemented over a 2-year period when consolidation of the

project is expected. This means getting a significant number of: visits, registered users, posts, towns and countries involved; pagerank enough to consider the platform a reference in health/Sport for All.

CONCLUSION

The Government of Catalonia is working hard on new technologies (it has won one of the three best projects in 2009 on e-government in the category of citizen training at The 4th European eGovernment Awards).

In this way, citizens are learning communication skills through the Internet, and bidirectional flow of information between citizens and government is expected in the long run.

According to this fact, blogging Sport for All/for health is a hopeful action for transmitting information and sharing experiences for learning from others with the final purpose of getting a healthy lifestyle and a better life.

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Keywords: public health, good practises, network, web 2.0, sport

Poster

Physical fitness and Sport for All

Physical fitness-1

An analysis of the factors affecting the optimal frequency of feedback in motor skills learning

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According to the Guidance Hypothesis, feedback can result in both negative and positive effects on motor skill learning. Hence, there is an optimal frequency of feedback during practice, which is effective for motor skill learning. Therefore, this paper aims at analysing the situational factors affecting the optimal frequency of feedback through five experimental studies. Study 1 shows that the task complexity exerts effects on the optimal frequency of feedback and compared with simple tasks, much more frequent feedback is helpful for complex motor skill learning. Study 2 shows that the task character influences the optimal frequency of feedback and compared with closed motor skills, much more frequent feedback is needed for open motor skill learning. Study 3 shows that task-related experience can exert influence on the optimal frequency of feedback. When the performer becomes more skillful, the optimal frequency of feedback is reduced. Study 4 shows that the age of the performer influences the optimal frequency of feedback. Compared with children,

adults require a reduced frequency of feedback in order to learn motor skills. Study 5 shows that vision has an effect on the optimal frequency of feedback. If the performer has the sense of vision, one only needs a reduced frequency of feedback to learn motor skills. To sum up, this paper considers that neither "frequent feedback enhances motor skill learning" nor "reduced frequency of feedback is helpful for learning" are all-inclusive, and puts forward the view that the optimal frequency can enhance motor skill learning only if the nature of situation is taken into consideration. What is more, with the five experiments, this paper proves that the optimal frequency of feedback is not a simple, fixed proportion. It is influenced by many situational factors, and changes with the nature of the situation.

Keywords: the optimal frequency of feedback, pursuit task

Physical fitness-2

Leisure time physical activity and muscle properties: A twin study

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Introduction

Loss of muscle strength should be prevented to maintain physical function and health in old age. Physical activity is potentially a powerful means to do that. The aim of this study was to determine the effects of physically inactive vs active lifestyle on muscle properties and strength. By studying twin pairs we were able to control for childhood environment and partially for genetic liability.

Methods

Sixteen middle-aged and older (range 50–74 yrs) same-sex twin pairs discordant for physical activity for more than 30 years were identified among the 5663 pairs (healthy at baseline) of the original Finnish Twin Cohort (Leskinen et al. 2009). The average follow-up difference in leisure time activity between the co-twins was 8.8 MET h/day ($p < 0.001$) which is the equivalent of, for example, a 2-h walk daily. Maximal isometric left knee extensor strength was measured in a sitting position using an adjustable dynamometer chair (Good Strength, Metitur, Palokka, Finland). The knee was set at an angle of 60° from full extension. Overall four maximal efforts separated with 30 second pause were conducted. The best performance was accepted as the result. The left and right maximal handgrip strengths were measured with elbow flexed at 90° using the same protocol as described above. In addition, nine T1-weighted axial MR-images with a 20 mm slice interval were acquired from both midthighs. MR-images were analyzed using the OsiriX software (OsiriX Foundation, Geneva, Switzerland). Results were analyzed using paired tests.

Results

The physically active members of twin pairs had 20% higher maximal leg extension force than their habitually inactive co-twins (mean difference between co-twins - 82.0 N, 95% CI -136.1 to -27.9, $p = 0.006$). However, we did not find statistically significant differences in grip strengths. The active twins had 4.5% higher (-5.2 cm², 95% CI -10.9 to 0.5, $p = 0.072$) midthigh muscular cross-sectional area than their inactive co-twins. The intramuscular fat area was 54% (4.9 cm², 95% CI 1.9 to 7.9, $p = 0.002$) and the thigh subcutaneous fat area 28% higher (12.7 cm², 95% CI -0.5 to 25.9, $p = 0.047$) among the inactive twins compared to the active co-twins.

Discussion

Physically active lifestyle preserves lower body muscle strength even after controlling for genetic liability and childhood environment. Trained muscles showed better "quality" as the fat area of the midthigh was smaller and the muscle area larger among the active members of twin pairs. Exercise-induced enhancements in muscle properties are known to decrease the risk for cardio-metabolic diseases.

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Leskinen et al. *Twin Res* 2009;12(1):108-117.

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Academy of Finland Center of Excellence in Complex Disease Genetics.

Keywords: muscle, twin study, physical activity

Physical fitness-3

Effects of 12-week aerobic exercise on brain nerve growth factors in children

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Exercise affects the processes that regulate neuronal proliferation, migration, survival, and differentiation. The purpose of this study was to demonstrate the effectiveness of 12 weeks of aerobic exercise on the nerve growth factor and neurotransmitters in children. Twenty female participants in the lower grade elementary school were randomly allocated to exercise group (EG, $n = 10$) and control group (CG, $n = 10$). The EG participated in 60 minutes of modified ballet exercise as aerobic training three days a week for 12 weeks. In the results, aerobic exercise programme reduced weight ($p < .01$), BMI ($p < .01$), total fat mass ($p < .001$), percent of fat mass ($p < .001$) and increased the percent of LBM ($p < .001$). In addition, we detected that the aerobic exercise decreased the level of serotonin ($p < .05$) and increased the level of GH ($p < .05$) and IGF-1 ($p < .05$). These findings suggest that an aerobic exercise programme can be an efficient intervention in the change of body composition, the alleviation of central fatigue, the improvement of brain function, and the induction of brain cell proliferation in children.

Keywords: brain nerve, growth hormone, serotonin, aerobic exercise

Physical fitness-4

Cardiovascular and perceived exertion response to treadmill running and cycle ergometer exercise in responder and nonresponder acute coronary syndrome patients

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The purpose of this study is to investigate the effect of exercise mode and anti-hypertensive drug responding status on the cardiovascular response and perceived exertion in acute coronary syndrome (ACS) patients. Seventy-five patients, who participated in a six-week exercise rehabilitation therapy, performed a treadmill running and a cycle ergometer exercise at intensities of 60%HRR and 85%HRR, respectively. Systolic and diastolic blood pressure, mean arterial blood pressure

(MAP), rate pressure production(RPP), and ratings of perceived exertion(RPE) were measured. The results of cardiovascular response by the different exercise modes with moderate and intensive intensity of anti-hypertensive drug responder and nonresponder ACS patients were the following: First, the cycle ergometer exercise induced significantly higher SBP, DBP, MAP, RPP and MAP values than treadmill running exercise at the intensities of 60%HRR and 85%HRR in both anti-hypertensive responder and nonresponder ACS patients ($p<0.05$). Secondly, anti-hypertensive nonresponder ACS patients had significantly higher DBP and MAP levels than anti-hypertensive responder ACS patients at all the exercise modes ($p<0.05$). Finally, there was no difference of RPP between anti-hypertensive responder and nonresponder ACS patients, although anti-hypertensive nonresponder ACS patients showed higher blood pressure and RPP than anti-hypertensive responder ACS patients. In conclusion, cycle ergometer induced-exercise increased cardiovascular response at same intensities of treadmill running exercise, and anti-hypertensive nonresponder ACS patients had an even more increased cardiovascular response than anti-hypertensive responder ACS patients with no difference in perceived exertion during exercise. These results suggested that cycle ergometer exercises should be conducted very carefully, with the risk of higher blood pressure, especially for those who are patients with hypertensive blood pressure.

Keywords: hypertension, cycle ergometer exercise, myocardial infarction, treadmill running, exercise mode

Physical fitness-5

Effect of taekwondo training on radial pulse wave

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Introduction

The systolic augmentation index (AI) can be obtained from the central arteries and peripheral arteries (O'Rourke MF et al, 2001). It has been proven that the AI in the central arteries, including the aorta and carotid arteries, changes with age. The investigation to find possible usage of AI from radial artery as an index for vascular aging was done (Cohn JN et al, 1995). Measurements of heart disease are needed in ascending aorta blood pressure. It can be obtained from the radial artery. Cycling, weight training and various forms of exercise were reported to have a positive effect on cardiovascular function (Coats AJ et al, 1992). Taekwondo(TKD) training includes a lot of kicks and fast movements. Thus, TKD training can be a useful method for improving cardiovascular function.

Methods

Radial arterial waveforms(RAW) were obtained from 69 subjects(29 TKD athletes aged 20.07 ± 1.03 yrs, height 178.31 ± 4.71 cm, weight 70.98 ± 8.58 kg, BMI

$22.29\pm 2.14\%$, 30 control aged 20.17 ± 2.11 yrs, height 174.93 ± 5.25 cm, weight 69.63 ± 11.13 kg, BMI $22.67\pm 2.91\%$) with no cardiovascular disease, by using radial tonometry.

Results

HR(heart rate) was significantly lower in TKD athletes than in the control group (athletes 65.1 ± 9.66 , control 71.92 ± 9.86 , $p<0.000$). H1 and T1/T is related to contraction of the left ventricle and the elasticity of blood vessels. H1 was significantly higher in TKD athletes than in the control group(athletes 202.11 ± 47.42 , control 179.94 ± 36.14 , $p<0.000$). T1/T was significantly lower in TKD athletes than in the control group (athletes 0.118 ± 0.019 , control 0.127 ± 0.02 , $p<0.000$). T4/T is related to fatigue of myocardium. T4/T was significantly lower in TKD athletes than in the control group (athletes 0.347 ± 0.04 , control 0.376 ± 0.04 , $p<0.000$).

Discussion

These findings indicate that the effect of TKD training improved the elasticity of the blood vessels and can prevent vascular aging.

References

O'Rourke, M.F. et al. 2001.

Cohn, J.N. et al. 1995.

Coats, A.J. et al. 1992.

Keywords: Augmentation Index (AI), radial pulse wave, taekwondo, cardiovascular disease

Physical fitness-6

Age-related differences in tibial bone properties in athletes participating in high-impact sport

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It is well established that regularly performed high-impact exercise (e.g. volleyball, track and field sports) provides a strong stimulus for improving bone mass, geometry and strength in young adult age. However, little is known about the potential of this type of exercise stimulus in preventing the age-related decline in bone properties. Thus, the aim of this study was to examine the association of age with bone mass, geometrical properties and strength indices in chronically impact-trained male sprinters aged 40–85 years ($n=83$). Bone variables were measured at the tibial shaft (50%) and distal tibia (5%) by using pQCT. In the tibial shaft, bone mineral content (BMC), volumetric bone mineral density (vBMD), total cross-sectional area of bone (CSA_{tot}), cortical area (CSA_c), cortical thickness (Thc), and bending strength (BSI_{bend}) correlated negatively with age ($r=-0.23$ to -0.39 , $p<0.05$), whereas no significant association with age was observed in the volumetric cortical mineral density (vBMD_c). In the distal tibia, BMC, volumetric trabecular mineral density (vBMD_t), and compressive strength (BSI_{comp}) were negatively related to age ($r=-0.27$ to -0.34 , $p<0.05$), while there was no age

effect on the geometric properties. The estimated annual decline was approximately 0.1-0.5% for the examined bone measures. On the other hand, after adjustment for body mass and height, the age-related differences in all tibial shaft bone variables disappeared, and in the distal tibia only vBMDt remained significantly associated with age (partial $r = -0.26$, $p < 0.05$). The present study suggests that the effects of age on bone mass, geometry and strength are moderate or even absent as in tibial midshaft vBMDc in systematically impact-trained sprint athletes. In addition, the lack of association of bone variables with age after adjusting for body mass and height indicates that a major factor behind the age-related decline in bone characteristics in these athletes is the different body size rather than age itself.

Keywords: aging, bone, pQCT, exercise, athlete

Physical fitness-7

The effect of tapering periods on the plasma concentrations of IL-1beta and IL-6 in endurance runners

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Introduction

The excessive muscle-skeletal stress associated with insufficient periods of resting and recovery can induce an acute local inflammation which occurs due to the muscular trauma, developing to a chronic inflammation, producing a systemic inflammation involving the activation of the circulating monocytes, and synthesize large amounts of inflammatory cytokines (IL-1beta & IL-6) (Ta-Chuan Tuan et al., 2007 & Giovanni dos Santos Cunha et al., 2006). The purpose of this study was to examine the effect of two different durations of tapering period on the concentration of IL-1beta & IL-6 alteration.

Methods

Twenty four well trained cyclists were divided into two training groups. Control group (VO₂max 66.66 (0.65) ml/kg/min; means (SD)) underwent a progressive endurance exercise training programme for 11 weeks, whereas the tapering group (VO₂max 66.87 (0.66) ml/kg/min) underwent an 8-week progressive endurance exercise training programme (similar to control group 8 week program) followed by 3-week tapering programme (50% decrease in training volume). Immediately after 10 000m time trail test, blood samples were taken at times corresponding to one day before the beginning of the training programme, and after 4, 8, 9, 11 weeks of training. The data of the two groups were compared by using a repeated measures analysis of variance (ANOVA) ($P < 0.05$).

Results

There were significant differences between the two

groups in IL-1beta and IL-6 concentrations during and after 11 weeks training (respectively Wilk's $\lambda = 0.15$, $F_{4,8} = 23.83$, $P \leq 0.01$ and Wilk's $\lambda = 0.068$, $F_{4,8} = 58.43$, $P \leq 0.01$). Groups showed significant changes in the endurance performance during and after the 11 week tapering period (Wilk's $\lambda = 0.077$, $F_{4,8} = 50.59$, $P \leq 0.01$).

Conclusion

Our results indicate that the elite endurance runners who reduce their training volume for 21 days, can enhance endurance performance and decrease their circulating IL-1beta & IL-6 based on the improvement of the immune function. The excessive endurance exercise-induced elevations in pro-inflammatory cytokines (IL-1beta & IL-6) would indicate that athletes are highly susceptible to the muscular trauma and/or infections. To summarize, these results lend support to the immunosuppressive effect of excessive exercise and suggest that a 3-week tapering programme before major sport events is a useful method for athletes (Ta-Chuan Tuan et al., 2007).

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Keywords: endurance training, interleukin-1beta, interleukin-6, immune, performance

Physical fitness-8

The impact of follow-up thyroid hormone alterations and its stimulant after moderate and intense exercise in male athletes

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Introduction

Thyroid hormones are important for maintaining normal physiological function of many body tissues (1). According to a study by Rosolowska et al. (1998), the effects of one week of very intense strength training on the thyroid hormones of male weight lifters showed a significant decrease in TSH, T3 and T4 (2). This research is carried out as a follow-up study of the alterations in Thyroid Stimulating Hormone (TSH), Triiodothyronine (T3) and Thyroxine (T4) hormones.

Methods

In this study, aerobic activities as well as Bruce protocol have been used. To this end, 14 male students attended a stadium for 3 months, 2 sessions a week to do physical activity. In the first session, 5 ml blood sample was taken from the subjects in a fasting state. The subjects warmed up, stretched and conducted different aerobic exercises for 3 months under the supervision of the researchers. Then they took the Bruce aerobic test in the sports test hall. After the 3-month period as well as 24 and 48 hours after the Bruce test, blood samples were taken from the subjects. Paired sample test was used in

order to track changes in TSH, T3, and T4 concentration from one stage to another.

Results

Statistical analysis of the data showed that 3 months of submaximal aerobic sport activities made a significant change in TSH serum concentration of the subjects' blood ($P = 0.011$). Also, exhausting sport activity of the Bruce test caused a significant change in TSH serum of the subjects' blood ($P = 0.003$). When the subjects rested for 24 hours, the TSH serum still remained significant ($P = 0.005$). However, 48 hours of rest caused the TSH serum of the subjects return to its primary mode ($P = 0.356$). After 3 months of training and performing exhausting activities of the Bruce test, T3 serum concentration was significant ($P = 0.013$), ($P = 0.028$). The results showed that 24 hours after the test T3 serum concentration is significant ($P = 0.013$). 48 hours of rest caused T3 serum of the subjects' blood to become non-significant ($P = 0.621$). Three months of aerobic exercise does not bring about a significant change in T4 serum concentration of the blood ($P = 0.58$). However, the exhausting Bruce test brought about extensive and significant changes in T4 serum of the blood even after 24 hours ($P = 0.0001$).

Discussion

In short, it can be said that aerobic and submaximal physical exercise and also exhausting aerobic activities bring about significant changes in the concentrations of TSH, T3, and T4. These changes are more visible in exhausting aerobic activities and may even continue for two more days. Therefore, the changes occurred affect the metabolism of threefold foodstuff and also the performance of athletes.

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Keywords: Triiodothyronine, Bruce test, Thyroxine, Thyroid Stimulating Hormone

Physical fitness-9

A follow-up of the changes in some immunity factors of the body after performing one session of exhausting physical exercise

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Introduction

Regular exercise with moderate impact is known to strengthen the immune system and increase the resistance against stress (1). There are contradictory results

on the effects of acute exercise on the immune system in the literature. According to Nelhsen et al (1991), acute exercise up to 60% of max $\dot{V}O_2$ leads to a temporary increase in IgA, IgG and IgM values (2). According to Hanson and Flaherty (1991), there were no changes in serum immunoglobulins immediately and 24 hours after a 13 km sub maximal exercise (3).

Methods

The current research studies the response of immunoglobulins in blood serum to exhausting aerobic exercise. Twelve male students participated in this study. Blood samples were drawn from the participants in three different stages. In the first stage, blood samples were drawn from the participants in a fasting state. Then, the participants performed Balke's 15-minute run to the point of exhaustion. After the physical exercise, the second blood samples were drawn. The third blood samples were drawn after 24 hours of rest. Blood samples of each stage were transferred to a laboratory. In order to compare concentration mean of A, G, and M immunoglobulins, statistical method of t was utilized in one group.

Results: The comparison of concentration mean of A immunoglobulins in the first and second stages suggested a significant difference ($P = 0.014$). From the comparison of the second stage and the third stage, also a significant difference was noticed ($P = 0.003$). The comparison of concentration mean of G immunoglobulins after exhausting aerobic exercise revealed a significant difference ($P = 0.001$). After 24 hours of the participants' rest, G immunoglobulins of serum revealed a significant difference ($P = 0.014$). Similarly, the comparison of immunoglobulins concentration between the first and second stages and also between the first and third stages suggested a significant difference. It can be said that in the current research, exhausting physical activity did not result only in a decrease in immune system, but it also caused the A, G, and M immunoglobulins concentration to increase significantly. **Discussion**

One session of strenuous physical activity can strengthen the body's immune system. It seems that individual differences, the increase in catecholamin secretion, and also nervous and hormonal responses are some of the reasons behind the change in blood serum's immunoglobulins. On the other hand, the change in the surface of blood plasma after the physical exercise should also be taken into consideration.

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Keywords: physical exercise, exhaustion, immunoglobulin

Poster X-Others

Others-1**Developing sports with and through women in Singapore...the gals have it all!***Lee Peng Hui, Tan Juay Leng*

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Background

Sports participation among women has, traditionally, trailed that of men. In Singapore this has not been different. In the 2001 National Sports Participation Survey (NSPS) conducted with a sample size of about 8000 participants, the percentage of regular sports participation (at least once a week) among females was 32%, compared with a percentage of 45% for males. In subsequent surveys conducted, the gap continues to be significant, although there has been some indication of this gap narrowing. It has been acknowledged that the women segment is a special segment with different, inherent needs. To truly understand the motivations or obstacles underlying sports participation among women, there is a need to understand the role of women in the Singaporean society.

Concept

To further encourage women to engage in sports, as a part of the larger population taking part in sports, the Singapore Sports Council embarked on a series of efforts to focus on women as enablers and not mere participants. This concept was developed based on other findings which suggest the following:

- (i) Women, more so than men, are the key influencers on the affairs of the household regarding leisure time activity and travel plans.
- (ii) Women, more so than men, are involved in parent support groups in schools, this being more apparent in single-gender schools for girls.
- (iii) Girls do not participate in sport and physical activity as much as boys in schools.
- (iv) There are fewer women in key sports leadership positions (administrators, coaches, officials) than there are men, and there is a need for such role models for sport and physical activity to grow.

Several initiatives were launched, including a women-only sporting event called Women's Day Out (WDO), aimed at encouraging females to enjoy a day of sporting fun. WDO is an all-day sports and fitness challenge that takes place in the heart of the shopping belt of Singapore. In addition, in recognition of the woman's role in society as one which carries multiple responsibilities – employee, mother, daughter, confidante and companion – a campaign was launched to focus on the bonding element of sports. Aptly titled A Bond like no other. Sport it!, the campaign was launched to reposition sports as a means through which women could bond with their family and loved ones, directly relevant to their multiple roles.

Conclusion – Results

This presentation will focus on some of the initiatives developed to promote sports with women, and through

women. As a result, there has been an increased interest in women-centric sporting activities, with a corresponding increase in the number of activities offered in a year. These include a few runs in the city such as the Shape Run and the Great Eastern 10k. As an event, WDO also saw an increase in participation, from 870 in 2004, to over 5000 by 2008. Finally, the latest figures from 2008 that assessed the level of sports participation among women, indicate an increased participation rate of 50% (once a week). The success in engaging women in sports and as enablers to sports would be profoundly important for the growth of sports participation for the rest of the population.

Keywords: enablers, women, role models, key influencers, sports participation

Others-2**The study of effective factors on the motivation of tourists participating in sport events***HemmatiNezhad Mehr Ali, RahmaniNia Farhad, Mirzaei Akbar*

(University of Guilan, Islamic Republic of Iran)

Purpose: The aim of this study was to investigate the effective factors on tourist participants' motivation to attend sport events.

Methods

The data was collected with a survey and the research method was descriptive in nature. The sample of the study included 638 tourists (529 from the national team's game and 109 from a super league game) participating in the national and super league football games. The data was collected by using the Wimbledon questionnaire. The validity of this questionnaire was approved by 10 professors of the Guilan University and Allame Tabatabaei University and 10 experts tourists and had, additionally, a previously proven reliability of 86% using the Chronbach's Alpha.

Results

The research data were analyzed by Binomial tests ($P \leq 0.05$). The findings of this study indicate that from the tourists' viewpoint, socialization, entertainment, relaxation (push factors); fan motives, destination (pull factors) and personal problems, risks (deterrent factors) are the most effective factors influencing on the motivation of the tourists to attend to sport events.

Conclusion

The results indicate that the fan motives, destination (pull factors), socialization, relaxation, and entertainment (push factors) are the most effective factors of sport events. In addition, risks, personal problems and competition are the most important deterrent factors. Finally, it is suggested that to enhance the tourists' participation motivation to attend the sport events, their motivational

factors must be identified thoroughly and there must be a good informing system on the attractions of the event and of the destination, whereas financial costs, safety problems, and health problems must be minimized.

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Keywords: sport tourism, tourist, sport event, effective factors, motivation

Others-3

Physical activity, health and sport in the curricula of the Sports University of Tirana

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Introduction

The Academy of Physical Education and Sports in Albania has, so far, been involved in the implementation of two EU Projects focusing in the full restructuring of the institution with respect of new dimensioning of the curricula as well as organizational and administration architecture. The official status of the strategy, policies and procedures of the quality insurance and standards on programmes and diplomas have been elaborated in compliance and harmony with the European curricula models. The most important thing to be stressed is that the institution has been focusing on physical activity and health dimension and promotion.

Development

Labor market survey according to the areas of the curricula. In this purpose, the opinion of about 500 subjects from the private and public sectors was collected and the subjects were classified into three different groups, such as; a) PE teachers (145), b) trainers and instructors at fitness centers (198), c) researchers and sports managers (157). Moreover, the data on employment and socio-economic situation were provided by the National Institution of Statistics.

Information update on the European strategy linkages between the curricula and labour market according to the

AEHESIS standards and experiences from partner EU Universities.

European Master in PA & Health for over 22 professors and students (8 of whom already finished qualification).

Training the professors and administration employees at partner EU Universities.

The transformation and upgrading of the institution from the Academy of PE and Sport with a full University status, whose priority is the research in PA and Health.

Conclusion

Consequently, the changes in the philosophical perception of the Albanian sport as such, as far as the infrastructure, administration, management, marketing and research, are concerned, especially in the field of PA and Health, are being focused on as well as the coherent methodologies are being provided. This success was followed by the announcement of the Sports University of Tirana, a unit which includes a new faculty of Physical Activity, Health and Recreation. Its priority is education through sports and its impact on social cohesion.

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Keywords: health, activity, sport, physical, curricula

Others-4

Ten-year changes (1998-2007) of physical fitness test performances in all 8-9-year-old Greek children by area of living

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Introduction

Background: As has already been reported (Kim, 2005), physical fitness may be a predictive factor of health outcomes and is associated with better health outcomes in children. According to Tomkinson and Olds (2007), there is strong evidence that aerobic fitness shows a precipitous decline in children population all over the world. As Parks et al (2003) have proposed, areas that differ by population size (rural vs urban), can be related with differences in access to sports facilities and opportunities for physical fitness activities.

Purpose: We examined changes (1998-2007) of physical fitness tests performances between rural and urban areas in almost all 8 to 9-year-old children in Greece.

Methods

Epidemiological study. Population data derived from the National Talent Search Program (national school-based health surveys, at years 1998 and 2007) in >80% of all Greek schools. Anthropometric measurements and four physical fitness tests (multistage 20-meter shuttle run

[20m-SRT], vertical jump, small ball throw and 30-meter sprint) from about 65,000 children by year, aged 8 to 9 years (males: 51.2%) were analysed. Distribution between rural and urban areas was based on the Hellenic National Statistics Service criteria (consensus 2001).

Results

Mean values of aerobic performance (20m SRT) decreased from 3.58 ± 1.9 stages in 1998 to 3.02 ± 2.1 in 2007 for boys ($P < 0.001$), and from 2.97 ± 1.5 stages to 2.53 ± 1.7 ($P < 0.001$) for girls, in urban areas. In rural areas, the correspondent values present a slight change from 3.54 ± 2.0 in 1998 to 3.51 ± 2.1 in 2007 for boys ($p = 0.62$), and from 2.98 ± 1.9 stages to 2.99 ± 1.5 ($P = 0.36$) for girls. Inversely, for the same time period the mean values of 30m sprint in boys (6.19 and 6.12sec for urban and rural areas respectively), improved 0.07sec for both ($P < 0.05$). Among girls we incorporated reductions, from 6.47 to 6.34sec ($P < 0.05$) and from 6.45 to 6.26sec ($P < 0.05$) for those of urban and rural areas, respectively. Finally, the mean values in upper body strength (ball

throw) and lower body strength (vertical jump), did not differentiate significantly during the study period.

Conclusion

The presented population-based data revealed that as the prevalence of overweight and obesity among Greek children is enlarged (Tambalis et al, 2010) simultaneously, especially in urban areas a negative trend for aerobic fitness occurs, suggesting a future generation with higher risk for CVDs.

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