

BODY COMPOSITION, SOMATOTYPE AND MAXIMUM OXYGEN CONSUMPTION CAPACITY OF JUNIOR CRICKETERS OF BANGLADESH

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ABSTRACT

Aerobic power (VO_{2max}) of 26 junior male cricketer of Bangladesh were measured directly along with their anthropometric parameters. 169.5 cm (± 5.3) average height was observed with an average body mass of 60.2 ± 5.0 kg and body fat% of $9.3 (\pm 2.0)$. Mesomorphic – ectomorph body type ($1.8 \pm 0.4 - 2.8 \pm 0.7 - 3.3 \pm 0.9$) was observed for the junior Cricketers ($18yr \pm 1.0$) with an average Relative Back Strength of $2.14 (\pm 0.21)$ kg per kg body weight. The maximum oxygen consumption capacity of the junior cricketers of Bangladesh was $53.2 (\pm 3.7)$ ml.kg-1.min⁻¹ in average with arrange between 49.7 ml.kg-1.min⁻¹ and 60.1 ml.kg-1.min⁻¹. The present study was aimed to evaluate the aerobic power and body type of the junior cricketers and it could be concluded that Bangladeshi junior cricketers were more mesomorphic - ectomorph with an average aerobic capacity.

Key words: *VO_{2max} , Somatotype, Body composition, Cricket*

DEMOGRAPHIC CHARACTERISTICS AND DIETARY SUPPLEMENTS USE BY MALE RUGBY PLAYERS IN THE 2006 SEASON OF KENYA CUP LEAGUE

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ABSTRACT

The purpose of the study was to establish demographic characteristics and dietary supplements use by Kenya Cup Rugby Players. This study investigated the age, level of education, occupation, experience and club affiliation of players. The study adopted the descriptive survey design. Data were gathered from a sample of 140 respondents obtained through stratified random sampling. The target population included all rugby players who participated in the Kenya Cup Rugby League of the 2006 season. The teams comprised of Kenya Commercial Bank, Harlequins, Nonderscripts, Mwamba, Impala, Mean Machine and United States International University. Questionnaires were used to collect data. Data collected was expressed in terms of frequencies and percentages. The findings revealed that majority (78%) of the players were below the age of 25 years. The largest proportion of the players had attained tertiary/university level of education (65%). A greater number of the players were students (74%). Half of the players had been with their teams for a period of 3-6 years (50%), whereas, a small (12%) proportion of respondents had played for the national team for duration of less than 2 years. The percentages in age declined significantly because the game of rugby is not a professional sport. Most of the players possess high levels of education to enable them have the capacity to assimilate the importance of nutrition for good health. Players tend to play for their teams longer than at the national level since there is high competition at that level which the players may not sustain. The study recommended that youth programmes of the game of rugby should be established to tap talent from the grass root level and it should be made a professional sport. Further research should be conducted on women rugby teams and other variables apart from those in the present study.

Key words: Rugby, League, Demographic Characteristics, Dietary Supplements

SOCIO-ECONOMIC FACTORS INFLUENCING MUSLIM UNIVERSITY STUDENT PARTICIPATION IN SPORTS IN KENYA.

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ABSTRACT

There is a strong theological background supporting sports in Islam (Qur'an, 16:8). However, this is on condition that it is lawful and does not hamper other religious obligations (Qur'an 2: 219, 5: 91-92). Studies validate significant benefits of participating in physical activities. For instance` exercise has been used in prevention and management of Coronary heart disease, Hypertension, Blood lipids and lipoprotein profile, Cardiac function, Bone mineral status, Smoking risks, Body composition and weight control, Blood glucose regulation, Musculoskeletal disorders and Stress management and mental health among others. Despite this, there is still a gap between the theory and practice regarding participation in sports among Muslim students in Kenyan universities. The purpose of this study was to find out what causes the low Muslim students' participation in sports and in which ways Islam influences their participation in sports. The study adopted a survey design. This enabled the researcher to cover a wide area and acquire as much information as possible. This also enabled the researcher get the information about the situation as it is. Factors under investigation were gender as an independent variable while participation and level of performance were the dependent variables. The target population was 920 from the six public universities in Kenya. Under the guidance of the supervisors, a questionnaire was constructed on a five – point likert scale and then used to acquire information. Random sampling was used to select 252 out of the target population of 920. Descriptive statistics were used to describe students' participation levels in sport. ANOVA was used to determine gender differences. Results showed. Three out of five structural factors affecting Muslim student' participation in sports showed significance difference (.047, .000, and .010); two out of seven of socio-economic factors tested showed significance difference (.001, .000). based on the findings of this study the following recommendations are suggested to guide in policy formulation and further research. Games teachers and coaches should be designed to fit various participants without infringement on their faith i.e. programmes that do not segregate on basis of faith. Department in charge of sports and games in institutions like the universities and teacher colleges should expand awareness of benefits of participating in physical activities among the Muslim society to change the generalized misconception in Physical activities. Institutions need to expand sports facilities to help attract and encourage both male and female students to participate in physical activities. Broader studies should be conducted to identify other factors affecting Muslim (and other denominations) students participation in sports at other levels of learning in Kenyan institutions.

AEROBIC CAPACITY AMONG THE RUGBY PLAYERS IN 2005 KENYA CUP LEAGUE

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ABSTRACT

One of the most common measurements of endurance fitness in exercise physiology is maximal oxygen uptake (VO_{2max}), which is an individual's capability for the uptake, transport and utilization of oxygen. The VO_{2max} determines an individual's capacity for work in a whole body activity such as rugby. This study investigated the aerobic capacity of Kenyan rugby players in 2005 Kenya cup league by their positions. The multi stage shuttle run test was used to predict individual players VO_{2max} of 90 players randomly selected from Impala, Harlequin and Nakuru rugby clubs at the beginning of the Kenya cup league competition and after eight weeks of training and competition. The study findings indicated that the backs had significantly higher VO_{2max} (44.4 ml/kg/min at pretest and 43.9ml/kg/mi at posttest) than the forward (40.8ml/kg/min at pretest and 40.9ml/kg/ml at posttest). It is concluded that players in the two playing positions need training programme activities that are relevant to the specific role they play during the match.

PARTICIPATION IN LEISURE ACTIVITIES: THE PROBLEM OF TIME FAMINE

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ABSTRACT

Availability of free time is the most determining factors of people's participation in leisure experiences. However, time famine in the modern world is viewed as one of the most serious constraints to leisure enjoyment. Whereas provisions for accumulation of time for leisure participation are included in most of the obligatory working environments, the pursuits for economic and profit-oriented activities have tended to consume much of what should be free time for leisure experiences. People have tended also to work for extra hours for various reasons, main of which are related to work and other economic activities. The commodification of time has been the main reason for time famine. This paper therefore, reviews the problem of the time famine and ways by which time may be availed for leisure enjoyment.

Key words: *Leisure, Recreation and Time Famine and Works.*

PHYSICAL ACTIVITY PRACTICES AMONG ADULTS WITH DIABETES: A CLINICAL SURVEY ON MANAGEMENT OF DIABETES MELLITUS AT KENYATTA NATIONAL HOSPITAL, KENYA

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ABSTRACT

Diabetes mellitus has become a serious health concern whose prevalence has reached pandemic proportion. Studies have shown that exercise is the single most important factor for successful management among people with Type 1 and Type 2 diabetes. Exercise is seen as a possible yet under-utilized tool in the management of diabetes (Paul and Heerden, 2004). The current study investigated exercise practices in the management of diabetes by adult diabetics at KNH in Nairobi, Kenya. It assessed the diabetic patients' physical activity (PA) level in terms of total MET- minutes/weeks and determined the relationship between the PA level and the diabetics' age, gender, type of diabetes, duration of the condition and knowledge on exercise. The subjects comprised 140 diabetic patients who had been diagnosed to have diabetes mellitus. The results indicated that a large percentage (46.1%) of diabetics are not exercising as required for the management of diabetes mellitus. It was also found that the extent of engagement in exercise/physical activity is highly associated with the diabetics' age. Type of diabetes, duration of the condition and knowledge on exercise. This study recommends that the medical institution and exercise professionals strengthen the existing exercise therapy regime through in –depth patient and medical staff education on exercise. They should also design exercise prescription manuals to be used in this region and programs for each group of diabetics to ensure adherence to exercise protocols and procedure.

Key words: *Exercise, Physical activity (PA) level, management, diabetes mellitus.*

A SURVEY OF THE CURRENT STATUS OF PHYSICAL ACTIVITY LEVEL OF STUDENTS WITH DISABILITIES AT KENYATTA UNIVERSITY, KENYA

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ABSTRACT

In this study, a survey of students with disabilities at Kenyatta University was carried out. A total of thirty (30) out of 42 students registered with the Dean of Students as having a physical or visual disability responded to the questionnaire. The results indicated that most of the students were physically inactive. They rarely engaged in any physical activity even though they were aware that exercises were important to them. They wished they could participate in recreational activities to improve their fitness levels and for pleasure. They were not aware of sports opportunities available to them at campus. They perceived a number of factors as barriers to their participation in physical activities. These include inaccessible facilities lack of encouragement, lack of information and inadequate equipment and facilities, not adapted to suit their abilities. Such barriers as physical discomfort or medical problems were not perceived as limitations.

SOME PSYCHO-SOCIAL PREDICTORS OF TEACHING EFFECTIVENESS OF SPORTS SCIENCES TEACHERS IN OGUN STATE, NIGERIA

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ABSTRACT

This study investigated some psycho-social predictors of teaching effectiveness of some sports sciences teachers in Ogun state, Nigeria. The study aimed at determining the potent predictors of teaching effectiveness with the aim of fostering effective teaching of sport sciences in Nigerian Schools. Four research questions were raised and answered in the study. A descriptive research design in form of an ex-post-facto was adopted for the study. The Sports Sciences Psycho-social Questionnaire (SSPQ) and Teachers Teaching Effectiveness Rating Scale (TTERS) were both developed and validated by the researcher for data collection. The SSPQ and TTERS have 0.83 and 0.93 co-efficient of reliability respectively. Data were analyzed using multiple regression analysis. Results revealed significant combined contribution of attitude, interest and self-efficacy to the prediction of sports sciences teachers' effectiveness. The results further revealed that teachers' interest was the most potent predictor of effectiveness of sports sciences teachers ($B=.627$; $t=2.943$; $p< .05$), followed by teachers' attitude ($B= .383$; $t=1.723$; $p> .05$), while teachers' self-efficacy was the least potent predictor ($B= .180$; $t= 2.073$; $p>.05$). It was therefore recommended that, interest, attitudes, aptitudes and other personal factors should be of high priority when selecting sport science teachers. More attention should also be given to children's early interest in sporting and sports education, while teachers should be given regular refresher courses to ensure their teaching effectiveness.

Key words: *sports sciences, teaching effectiveness, attitude, interest and self-efficacy.*

BIOLOGICAL EVALUATION OF PEARL MILLET-CONOPHOR WEANING MIX AS SUPPLEMENTARY FOOD FOR CHILDREN IN NIGERIA

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ABSTRACT

The purpose of this study was to formulate a weaning diet from pearl millet-conophor nut flour that would be a supplementary food and promote growth of children in Nigeria. The proximate composition of the millet and conophor nut was carried out and mixed on the basis of their proximate composition to obtain a 10% level of protein. The same procedure was carried out for the soy-ogi diet. Thin layer chromatography was utilized in determining the amino acid profile of the millet-conophor diet. An animal experiment was carried out whereby the test diets were supplemented with vitamins, minerals and corn oil and fed to twenty female albino weaning rats. The PER, BV, NPU and Td values of the experimental animals were determined. From the animal experiment, it was observed that the conophor-millet diet compared favourably with that of soy-ogi diets both in terms of feed in-take and live weight-gain. For PER, BV, NPU and TD values it was observed that the casein diet was the most superior while millet-conophor diet and soy-ogi compared favourably with each other. However, it is recommended that for adequate growth promotion, a higher level of protein [$>10\%$], which is also high in lysine could be used to improve these diets.

EFFECT OF FERMENTATION ON PROTEIN DIGESTIBILITY OF SOYBEAN AND SWEET POTATO BLENDS: ASPERGILLUS ORYZAE VS. LACTOBACILLUS PLANTARUM

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ABSTRACT

*The improvement of nutritional quality of foods through fermentation has been practiced for long. Fermentation imparts desirable characteristics to products and makes them more utilizable nutrient sources than the unfermented products. Sweet potatoes have been under utilized industrially and are mainly used at household level. Soybeans are rich in proteins but their full utilization has been hampered by their anti-nutritional properties which are destroyed by heating and fermentation. The purpose of this study was to produce suitable blends of soybean and sweet potato flours targeted at alleviating protein related malnutrition. The quality characteristics of the fermented and unfermented soybean and sweet potato composite flours were compared. The fermentation with *Lactobacillus plantarum* was at 37°C for 168 hours with sampling every 24 hours. The *Aspergillus oryzae* fermentation was performed at 25°C for six weeks with samples taken weekly for laboratory analysis. In-vitro protein digestibility was determined enzymatically. The data obtained was subjected to General Linear Model (GLM) of the Statistical Analysis System (SAS). Protein digestibility was improved by an average 4% ($p < 0.05$) in the bacterial fermented composites and by an average of 5.5% ($p < 0.05$) in the composite flours fermented with the mould. The composite containing 50% soybean and 50% sweet potato reflected higher protein digestibility than the composite with 25% soybean and 75% sweet potato. Fermentation significantly increased protein digestibility but an initial drop was observed in the higher (50% soybean and 50% sweet potato) protein composite for both bacterial and mould fermentations. Optimum protein digestibility improvement was achieved thus a baseline for development of suitable blends targeting protein malnutrition.*

FOOD ADDITIVES – SAFE BUT MUST BE USED WITHIN SAFETY LIMITS

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ABSTRACT

This review is in response to recent concerns expressed in local press about safety of chemicals used in food processing (Daily Nation of October 6th, 2007) and MS Ndong' (on KTN 9.00 PM News Bulletin, May 4th 2008). We decided to publish this article to educate the Kenyan public on food additives in general and benzoic acid in particular. This article highlights use and misuse of additives. Some incomplete data about food poisoning in Kenya are presented to show how important food additives may be in terms of food poisoning in the country'. More accurate and complete data from European Union and United States of America (where accurate records exist) are presented to illustrate the magnitude of risks posed by use of additives as compared to other consumer concerns regarding food safety'. Chemicals used in food processing are safe as long as their safety margins are observed. In Kenya the safety margins of food additives are very clearly controlled under the Food Drugs and Chemical Substances Act Cap 254. 1992 of the Laws of Kenya while Codex Alimentarius Commission, FDA Grass List regulate the quality of foods that may be imported into the country from outside. Kenya Bureau of Standards monitors very closely the quality and chemical composition of any food imported into the country. The same applies to foods processed within the country. Consumers of food in Kenya can rest assured that the quality of any foods imported into the country are very strictly evaluated for any toxicities. In any case there are very few cases of intoxication by food additives in Kenya or even in the European Union and the United States of America. In all these countries food additives are responsible for less than 5 per cent of all food poisonings at any given time. It must be stressed that there is no absolute safety with any chemical used in food processing, hence the safety limits must be observed at all times.

Key words: *additives, preservation, fortification, supplementation, safety' margin*

A CRITICAL OUTLOOK OF TOURISM SECTOR PERFORMANCE MANAGEMENT REFORMS IN KENYA-: (RESULTS OR VALUE BASED MANAGEMENT?)

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ABSTRACT

Tourism in Kenya is a key driver towards the attainment of the socio-economic blueprint, which is achieving the goals of Vision 2030. In the recent past, such were achieved with sector reforms that critically assessed the roles and functions of public servants where performance would be used as the sole indicator for resource allocation and usage. This was perceived as a means for conditioning reinforcement; therefore creating a result based philosophy in public sector management strategies. However, this is contrary to the thesis that when public sector management emphasizes exclusively on results, attention to socio-cultural, environmental and economic values is reduced by default. Therefore requiring a fundamental understanding on the sectoral values and attributes, before customizing a performance management strategy. This paper, seeks to advance such dialogue further by assessing the dynamics involved in tourism organizational settings qualified according to the needs and demands of the Tourism industry.

Keywords: *Performance management, Sector reforms, Vision 2030, Results-based management.*

EVALUATION OF DIFFERENT COCOON STIFLING METHODS ON RAW SILK QUALITY

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ABSTRACT

*The effects of three silk cocoon-stifling processes on the reeling performance and quality of raw silk of the silkworm *Bombyx mori* were studied. Sun drying killed the pupae but showed inferior reeling performance and raw silk quality compared with hot water stifling and oven drying. Cocoons dried using hot water stifling and the oven had improved reelability and raw silk percentage. Raw silk elongation was highest in hot water stifled cocoons, whereas neatness and cleanliness was high in cocoons dried using hot water stifling and oven. All treatments were significantly different.*

Keywords: *Bombyx mori, cocoon stifling, reelability, neatness, cleanliness, elongation*