SUMMARY OF
SPORTS RESEARCH
PROJECTS

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Hong Kong Sports Development Board
Title: Nutrition Survey: Knowledge, Attitudes & Practices of Hong Kong Elite Athletes

Authors: Sham, Mimi, Hong Kong Sports Institute
         Chin, Ming-kai, Hong Kong Sports Institute
         Leung, S, The Chinese University of Hong Kong
         So Chi Hung, Raymond, Hong Kong Sports Institute

Date of Publications: 1992

Summary:

Previous studies of athletes in many countries have indicted low levels of nutrition knowledge among athletes. Since no nutritional observation had been made on the Hong Kong elite athletes, this survey served as a pioneer study to evaluate the knowledge, attitudes and practices of the athletes in Hong Kong.

The subjects consisted of 104 athletes where 90.4% are scholarship athletes, 85.6% have represented Hong Kong internationally, 37.5% are female and represented 12 sports.

It was found that the nutritional knowledge of our athletes was generally poor, especially in the area of nutrient functions and proper food choices. Since athletes relied heavily on books, magazines and newspapers for nutrition information, their incorrect knowledge score reflected the lack of correct/reliable nutrition information from these media.

Studies have shown that athletes cannot be assumed to have diets associated with optimal athletic performance. This study served as a pilot effort in nutrition study in Hong Kong athletes, further research would be needed to make observations of the actual food intake of our athletes. Effort was clearly needed both in counselling and teaching for improving nutritional knowledge in the training programs of our athletes and coaches.

Full Publication Details:
Report available from Hong Kong Sports Development Board.
Title: Physiological profiles of Hong Kong elite soccer player

Authors: Chin Ming-kai, Hong Kong Sports Institute
So Chi Hung, Raymond, Hong Kong Sports Institute
Lo, Y.S.A., Hong Kong Heart Centre
Li, C.T. Raymond, Chinese University of Hong Kong

Date of Publication: 1993

Summary:

The study was conducted in conjunction with the selection of the Hong Kong team before the 1990 Beijing Asian Games. In all, 24 Hong Kong professional soccer players of ethnic Chinese origin were selected from a pool of 180 players as subjects for the study.

The subject was required to perform a maximal-effort standing cycle test over 10 seconds to assess work capacity and peak power. After another 2 minutes rest, the soccer player was required to perform 30 seconds of maximal standing cycle ergometry. The field test evaluation consisted of an endurance run and sit-and-reach test for flexibility.

On average the physical characteristics of Hong Kong soccer players appeared to be shorter and lighter than those found in Europe and lower in body fat compared with US, Canadian, Australian players. Values of selected aerobic capacity, cardiorespiratory fitness and muscle knee strength of Hong Kong players also appear to be lower than those reported for a group of other national teams. These may be the key factors that contribute to the lack of success of Hong Kong soccer teams in international competition. Poor flexibility indicated tight hamstrings which may due to the design of soccer training and the need for specific stretching to increase the range of motion in order to reduce the incidence of soccer injuries.

All tests suggest strongly that if the team wants to achieve reasonable success in international competitions, improvements in physical fitness need to be emphasised in addition to skill training.

Full Publication Details:
Title: Cardiorespiratory fitness and isokinetic muscle strength of elite Asian Junior soccer players

Authors: Chin Ming-kai, Hong Kong Sports Institute  
So Chi Hung, Raymond, Hong Kong Sports Institute  
Yuan Wai Yi, Yvonne, Hong Kong Sports Institute  
Li, C.T. Raymond, The Chinese University of Hong Kong  
Wong, S.K. Alison, Hong Kong Sports Institute

Date of Publication: 1993

Summary:

The purpose of this study was to measure and describe the cardiorespiratory fitness and isokinetic muscle strength of elite junior soccer players in Hong Kong. It was conducted in conjunction with the selection of the Hong Kong team to the 1989 Gothia Cup held in Sweden. 21 top junior soccer players were selected as subjects from a total sample of 3700 school soccer players aged between 16-18 years involved in the Hong Kong Youth Football Promotion Scheme for the study. The selected subjects have a mean of 7 years of soccer playing experience.

The test battery included measures of body composition, pulmonary function, maximal aerobic power, anaerobic threshold (AT), flexibility and isokinetic muscle strength.

Hong Kong players appeared to have comparable aerobic power, light body weight, poor flexibility and above average isokinetic muscle strength. In view of these findings, it was suggested that improved nutritional intake and flexibility are necessary to further enhance force generation and reduce injury rate. Furthermore, training programs to improve the contralateral knee muscle imbalance and to increase the fast speed movement capability of the non-dominant knee flexors were recommended.

Full Publication Details:
Journal of Sports Medicine & Physical Fitness 1993
The purpose of this study was to evaluate the physiological profile and sports-specific fitness of Hong Kong elite squash players. It was conducted prior to the selection of the HK national squash team for the 1992 Asian Squash Championship. 10 top squash players were selected as subjected for the study. As a group, they had accumulated a mean of 9 years of playing experience.

Maximum oxygen uptake was measured using a continuous treadmill running test. Sports-specific fitness was measured according to a field test performed in a squash court. Throughout the whole testing period, lactate concentration and heart rate were measured.

Physiological data shows that the players tend to be lean in body weight, average in flexibility, high in aerobic power, anaerobic power, cardiorespiratory and muscle strength compared to other squash teams and Hong Kong elite sportsmen. The test results suggest that one of the important factors contributing to the success of the Hong Kong squash players at the Asian Championship may due to their relatively high level of physical fitness demonstrated both in the laboratory and the squash court.
Success in rowing performance is believed to correlate very highly with high aerobic capacity. This study evaluated the maximal aerobic power of Hong Kong elite lightweight rowers. 9 top lightweight rowers served as subjects for this study prior to the selection of the Hong Kong national rowing team for the 4th Asian Rowing Championship in 1991.

A 6-minute all-out test with a rowing ergometer was used to evaluate physiological performance. Measurements of heart rate, minute ventilation and oxygen consumption were taken every 20 seconds.

Hong Kong rowers appeared to have below average aerobic capacity and power output compared with other international elite lightweight rowers. The maximal oxygen intake for the Hong Kong rowers also appeared to be lower than those reported for US elite lightweight rowers.

It shows that rowers in this study need to generate and maintain a high intensity of work with a high lactate level throughout the maximal exercise, an indication of a significant anaerobic contribution to the overall energy metabolism. The results also provide baseline data against which future studies in team selection and training can be compared.

Full Publication Details:
A comparative study was made of the isokinetic characteristics of the ankle (plantar-flexion and dorsiflexion) in young men. Six cyclists, seven gymnasts, 10 soccer players and 25 non-athletic young men as controls were tested on the Cybex II + dynamometer. Peak torque, torque acceleration energy (TAE), total work and average power were measured.

Cyclists had slightly higher (5%) average plantar flexion measurements than the others, but this was not significant due to the small sample. The situation was reversed for dorsiflexion. Moreover, the average dorsiflexion per unit of plantar flexion was significantly higher in the gymnasts than it was in the cyclists for both torque and work measures. This suggests that at a specific level of plantar flexion, the gymnasts had stronger dorsiflexion compared with the cyclists. It may implies that in sports involving jumping and running, increased attention should be given to strengthening the antagonist muscle groups (dorsiflexors) in order to achieve greater agonist to antagonist muscle balance and thus preventing injury.

The non-athletic subjects had substantially lower endurance capability in both flexors as measured by the endurance ratio. This implies that identifiable specialization in particular muscles results from training or engaging in specialized sports, but such muscular characteristics may expose them to a higher risk of getting injured.
There is a scarcity of descriptive data on the performance capacity of elite badminton players whose fitness requirements are quite specific. The purpose of this work was to investigate the physiological response of the elite badminton players in a sport-specific fitness test.

Twelve Hong Kong national badminton team players performed a field test on a badminton court. Six light bulbs were connected to a programming device causing individual bulbs to light up in a given sequence. The players were instructed to react to the flashes by running towards, and striking shuttles mounted in the vicinity of the bulbs. Exercise intensity was controlled by altering the interval between successive lightings.

A weak relation was found between the results of the field test and the rank-order list of subjects based on an independent, partly subjective estimate of fitness. This may be explained by the requirements of other factors besides physical fitness which contribute to success in elite level badminton competition. These factors may include, for example, technical skill, mental power and aesthetic judgements in the court.

The results also show that an estimate of fitness can be derived from measurements involving exercise closely resembling that which is specific for the sports activity in question. Improved training advice and guidance may result from such studies.
Title: Bilateral isokinetic (parameters) variables of the shoulder - a prediction model for young men

Authors: So, Chi-hung Raymond, Hong Kong Sports Institute
Siu, T.O., City University of Hong Kong
Chin, Ming-kai, Hong Kong Sports Institute
Chan, Kai Ming, Chinese University of Hong Kong

Date of Publication: 1993

Summary of Findings:

Clinicians frequently assumed the strength of the uninjured shoulder were equal to the preinjury strength of the injured shoulder muscles. The purpose of this study was to delineate the differences in bilateral isokinetic peak torque (PT) at 60 deg/sec and 240 deg/sec, and torque acceleration energy (TAE), average power (AP) and total work (TW) at 240 deg/sec during shoulder extension and flexion movements and to develop a method to determine the expected maximal isokinetic parameters of the dominant shoulder based upon isokinetic measurements from the non-dominant shoulder. Shoulder isokinetic measurements were obtained from 30 normal young male adults and national male athletes from the sports of badminton (n=11) and swimming (n=5).

Results indicated that there were a significant (p<0.05) correlation between the bilateral measurements in both tested movements in normal young adult group only. Moreover, the tested measures in the two movement tests revealed significant (p<0.05) bilateral differences in normal young adult group while part of the tested measures showed such bilateral differences in elite athletic groups. These show that it is inappropriate to use the uninjured extremity to predict the pre-injured strength of the injured side directly. In this investigation, equations were developed (linear regression method) to predict normative isokinetic parameters values for the dominant shoulder based on measurements from the non-dominant shoulder for normal young male adults only.

Full Publication Details:
Accepted for publication, British Journal of Sports Medicine 1994
Title: A Survey on Drug Usage among Hong Kong elite Athletes - Opinion, Understanding and Practice

Authors: Yvonne Yuan, Hong Kong Sports Institute
         Chan, Kai Ming, The Chinese University of Hong Kong
         Chien Ping, Hong Kong Sports Institute
         Y Y Wong, Hong Kong Sports Institute

Date of Publication: 1995

Summary of Findings:

There was a total of 99 Hong Kong elite athletes (56 males and 43 females) responded to this questionnaire survey on opinion on the meaning of competition and the fairness of international competition; attitude and understanding on doping; and practice on ergogenic aids. The questionnaires were sent out under two occasions: (1) in early 1994 and (2) three months before the 1994 Commonwealth Games.

There was no significant difference in the data collected between male and female athletes, between athletes in skilled orientated and those in power orientated sports. Local elite athletes in general had a positive view on their attitude towards competition. Although more than half (65.7%) of the subjects reported that gold medal is the ultimate goal for their participation in a competition, majority of them (85.9%) stated that the aim of competition is to test one's own personal limits against other athletes. Almost all of the subjects (93.9%) reported that they will never take drugs banned by IOC in order to get improvement to their performance. In general, the Hong Kong elite athletes do not have strong confidence in the fairness of competition. One third (31.3%) of subjects felt that international competition is no more a fair game. Only 53.6% claimed that it is still fair. Most of them (63.6%) stated that there is a lot of athletes who have taken drugs or used other illegal ergogenic aids but was not discovered. The knowledge of Hong Kong athletes in doping is in general poor, 61% of them never actively ask their physicians to avoid using banned drug/medicine. This put our athletes in danger of being tested positive through ignorance.

The present survey shows that local athletes on average do not have a clear picture on both legal/illegal ergogenic aids and doping control system. In order to keep the local athletes away from illegal ergogenic aids, a tailored-make education program in doping control is needed. There is also a need to emphasize the importance of out-of-competition testing and using banned substances during training still bears the same risk of being tested positive in doping control, compared with using banned substances during competition. In order to be cost effective, it should be focused on the less experienced athletes and athletes who are about to compete in major games.

Full Publication Details:
Report available from Hong Kong Sports Development Board
Summary of Research Projects

Title: Isokinetic Muscular Performance in Adolescents - the Effect of Programmed Physical Training

Authors: Chien Ping, Hong Kong Sports Institute
         Li Chi Kei, Hong Kong Sports Institute
         Chan, Kai Ming, The Chinese University of Hong Kong
         Yvonne Yuan, Hong Kong Sports Institute
         Luk Man Ting, Hong Kong Sports Institute

Date of Publication: 1995

Summary of Findings:

Isokinetic evaluation is an objective way assessing muscular performances. Since the late 1960's, it has been widely used to measure the correlation between physical training and muscular characteristics including muscular strength, power, or fatigue. Although studies have been concentrated among the adult population, trend is now shifting to younger age. Sport scientists become aware of physical training effects upon muscular performances for early identification and screening of young athletes for elite training. In sports like tennis and gymnastics, screening of potential athletes start at the age from 7 to 10. Normative data is significant to indicate the potentiality and trainability of a young athlete. In addition, it may render important clinical implication for the planning of both habilitation and rehabilitation programmes for the population. The present study is designed to investigate the effect of programmed physical training on isokinetic muscular characteristics of the junior secondary school students in Hong Kong. The information so collected will also found the data bank for the isokinetic profiles of the local adolescents for further study.

The study finds that muscular improvements during adolescence are primarily not the result of programmed physical training but an "age effect" so that an older adolescent will be stronger than a younger regardless of any physical training involved. Regular training does neither effect any fatigue characteristics during adolescence. While programmed training renders minimal effect upon muscular development among the females subjects, the male counterparts dies exhibit a more significant response. Medical implication suggests that knee problems will increase among the Hong Kong adolescents if no concerted effort is tailored to train the back thigh muscles during the pubescent development.

Full Publication Details:
Report available from Hong Kong Sports Development Board
SUMMARY OF RESEARCH PROJECTS

Title: Epidemiological Study on Sports Injury in Hong Kong

Authors: Josephine Yeung, Hong Kong Sports Institute
Chan, Kai Ming, The Chinese University of Hong Kong
Chien Ping, Hong Kong Sports Institute
Li Chi Kei, The Chinese University of Hong Kong
Yvonne Yuan, Hong Kong Sports Institute
Y Y Wong, Hong Kong Sports Institute

Date of Publication: 1995

Summary of Findings:

This epidemiological study reported on (1) the sports injury pattern in relation to the types of sports participation (i.e. practice, stimulated competition, competition and recreation); (2) the relationship between injuries and types of sports; and (3) the level of sports participation in relation to the practice and knowledge of “proper” warm-up among the Hong Kong sport population. It also provided information about the types of injury commonly occurred in various sports. The usual management for the injuries and the limitations caused by the injury were discussed. A total of 309 sports injured patients were included in this study with mean age 22.9 ± 7.8.

The result of this study showed that most sports injuries occurred in the lower limbs (68%) where knee and ankle were the two most vulnerable sites. In addition, knee was the most commonly injured area in this study group (36.2% of all injuries). 59% of knee injuries were ligamentous sprains. It was found that more serious knee injuries, e.g. complete ligament torn plus/minus meniscus injury, occurred more during tournament whilst partial knee ligament injury occurred more during recreational activities. It was statistically significant that fewer recreational players performed regular warm-up and that they usually spent less time in warm-up exercise than the other three groups. Nearly one-third of athletes had sought more than one source for injury management. These included a combination of general physician, massage, bone setter, or others (acupuncture, physiotherapy, chiropractor, etc).

More direct body contact is involved in team sports, especially if there is foul play. This resulted in more serious injuries that required hospitalisation. It is suggested that a strict observation to rules and regulation is important in order to avoid foul play or unnecessary body contact which might result in serious sports injuries. It was found that the function and procedure of a “proper” warm-up has not been fully understood by most athletes especially those recreational athletes. Although the concept of warm-up is somewhat better in elite and professional athletes, it is still inadequate. Education should be provided to coaches as well as to the general sports population. Around one-third of athletes had consulted more than one medical source for treatment of their injury since it usually takes months before they could consult an orthopedic specialist or sports medicine doctor. A better appointment system is needed to help athletes to return to sports more rapidly.

Full Publication Details:
Report available from Hong Kong Sports Development Board
Social Science Research Projects
Title: Sport in Education Questionnaire Survey

Authors: Daniel Li, University of Hong Kong
         Cindy Leung, Hong Kong Sports Development Board
         Malina Ngai, Hong Kong Sports Development Board

Date of Publication: June 1991

Summary:

This questionnaire survey was conducted during the "Sport in Education: The Future Challenge" Physical Education Seminar held on 27 June 1991. It was an exploratory questionnaire survey and its aims were to gather information about (1) training needs of physical education teachers; (2) facility provision for school sports activities; and (3) sport-related extra-curricular activities in schools. It was one of the very few opportunities for physical education teachers to express their ideas in such a collective manner.

The data indicated a strong need for further training opportunities in the profession. Physical education teachers also called for improvements in facility provision for school sports. The low usage rate of public sports facilities by schools was another area worthy of further investigation.

The data also indicated that physical education teachers were generally actively involved in the promotion of extra-curricular sports activities in schools. However, the shortage of manpower in sport in education has put them under a tremendous workload. Increased involvement of non-physical education staff and outside agencies in sports activities may possibly help to reduce the pressure currently experienced by physical education teachers.

Full Publication Details:
Report of the survey was in "Sports in Education - the Future Challenge" - Proceedings of a seminar held at the Hong Kong Convention & Exhibition Centre on 27 June 1991. Published by Hong Kong Sports Development Board. P.65-76
Title: Survey on Career Opportunities in Sport and Recreation in Hong Kong

Author: Ms Malina Ngai, Hong Kong Sports Development Board

Date of Publication: October 1992

Summary:

In this survey, career opportunities in the sport related industry were explored. Questionnaires were sent to a sample of 234 organisations requesting information about (1) the number of employees, (2) difficulties encountered in recruiting employees, (3) areas of knowledge desirable for employees to possess, and (4) in-service training available for employees. The response rate was 56.8%.

The report covered sports administration, recreation management, sport coaching, physical education teaching, sport marketing, sport media, facility management, sports science and sports medicine, sport sales and other support services. Various types of organisations were also covered.

Major findings of this survey were:

(1) Private sports and recreation clubs were the biggest employer in the industry at the time of the research, and the situation was expected to stay the same in 1995, while national sports associations had the least number of employees on average.

(2) There could be an 18.8% increase in employment in the industry between 1992 and 1995.

(3) A better career structure within the sports industry could increase market interest in sport-related jobs.

(4) As the industry is now growing, there was an implied need for more professional training opportunities in sports administration.

The survey was also able to gather brief information on the posts available in the responding organisations, the corresponding entry requirements and salary ranges. This has been summarised and listed by category in this report.

Full Publication Details:
Report available from the Hong Kong Sports Development Board.
Results also included in “Career in Sport and Recreation in Hong Kong” (In English and Chinese) published by the Hong Kong Sports Development Board 1993.
Summary: In this study, the attitudes of school principals towards physical education and sport in schools were investigated. Questionnaires were sent by mail to 1113 primary and 573 secondary school principals, which cover the whole territory. A total of 815 (48%) were returned. Various statistical analysis (T-test, ANOVA, Chi-square Test) were used to analyse the data in terms of sex, age, primary/secondary, types of schools etc.

Sports facilities in schools were felt to be inadequate by over 50% of the respondents and 55% of them depended on public facilities to support their schools' sports activities. It is no wonder that 80.9% of the respondents considered insufficient space as the major difficulty encountered in organizing sport programmes in schools, followed by 70.3% mentioned insufficient physical education staff.

Nearly 90% of the respondents considered physical education programmes as necessary to attain their educational goals. 85.5% felt that students who participate regularly in sport are generally more satisfied with school life. It was encouraging to note that due to the common recognition of educational goals and values in physical education, attitudes of school principals were not affected by age, sex, or the types of schools (government, government subsidized/aided and private).

The results of the study showed that the principals' attitudes were positive towards physical education and sport. With support from principals, a better physical education and sports programme in Hong Kong schools could be implemented.
This study intended to investigate the problems encountered in the development and promotion of sport culture in Hong Kong by first identifying important factors as perceived by different populations, and second, by identifying their interests, preferences and values, and then finally their recommendations. The survey was conducted in 1988-90 and included some data from China for comparison. A total of over 25,000 subjects (6 to 70 years of age) was involved and the assistance of the Government, the schools, and various associations and institutions was vital to the successful conclusion of the study.

It was found that subjects have a slightly favourable attitude towards physical activities with the exception of female secondary school students, who were neutral. It would be desirable to cultivate a more favourable attitude towards physical activities in both the elderly population and the students, since the latter were influenced by their elders and would eventually become future leaders in society.

The benefits to health were perceived as the most important reason why people participated in sport. People also enjoyed the opportunity to socialize with others and to play in modern facilities. The support of parents, peers, and the public were also perceived as important contributors to sport participation. Football was the most popular sport, followed by badminton, swimming, basketball, volleyball and tennis. Elderly people preferred walking exercises and kung fu.

Availability of quality facilities at affordable cost and the provision of expert coaches and teachers were the major areas which needed improvement. Sport “leaders” felt that the roots of most problems lied with the poor status of sport in society and in education.

The study provided policy-makers with information on various aspects pertaining to the development of sport culture in the Chinese community in the territory. Since the amount of resources would be limited, there was a need to establish criteria for funding sport for the elite
athletes and the masses, e.g. in selecting target sports, data on the cost of participation per person, the number of clubs and players, facility availability, relation to school curriculum, prospect as a lifetime sport, and popularity among the local community must be considered. If sport were to stay out of politics, the role of the Government should be kept at arm's length from the collective leadership of the various national sport bodies and associations. With the approach of 1997, it would be essential to recruit Hong Kong Chinese to assume the leadership role in various institutions entrusted with the development and promotion of sport culture in the territory if convergence were to be achieved.

Full Publication Details:
"The Development of Sport Culture in the Hong Kong Chinese" Published by the Faculty of Social Sciences, Hong Kong Baptist University. February 1993.
Title: An Inventory of Sports Facilities in Hong Kong

Authors: E. M. Jones
         Peter Hills
         E. M. Hastings
         Anthony G. O. Yeh
         Ng Wing Fai
         Centre of Urban Planning & Environmental Management,
         University of Hong Kong

Steering Committee: Robert Robertson, Jackson Ho, Robert Chung

Date of Publications: March 1993

Summary:

As no comprehensive survey of sports facilities has ever been undertaken in Hong Kong, this project commenced in May 1992 and included three phases. The whole project was finished in March 1993.

Phase one established the scale of the inventory. Phase two determined and collected basic information from sports sites identified in Phase one. Phase three compiled all relevant information and commissioned a computer database with a comprehensive guide.

Data was collected through postal surveys and was obtained from Urban Council, Regional Council, schools, tertiary institutes, City and New Territories Administration, Housing Authority, Armed Forces, semi-private and private clubs.

The public sector yielded high response rates of 97% to 100% and the private sector yielded low response rates of 21% to 48%.

The database formed the basis from which future research can be built. If integrated with other systems, it can become a valuable planning tool and provide a significant service to other organisations and the public. In essence, the database provided an information system that was flexible enough to accommodate complex queries regarding the provision and nature of sports facilities throughout Hong Kong. It provided comprehensive coverage of public sector facilities, and a significant level of detail on private sector facilities.

The database can facilitate the location of relevant sports sites and the effective use of costly public facilities. It clearly defines the choice of facilities available to the public, and can allow the public to make informed decisions on the basis of this information.

Full Publication Details:
Published by Centre of Urban Planning & Environmental Management, The University of Hong Kong. A directory of sports facilities and a computer aided information retrieval system are being developed by the Hong Kong Sports Development Board.
Title: "Challenger" Readership Survey

Author: Shirley Chu, Hong Kong Sports Development Board
Leung Shing On, Hong Kong Sports Development Board

Date of Publication: June 1994

Summary:

Challenger has been issued quarterly as the official publication of the Hong Kong Sports Development Board since it was launched in May 1991.

The main function of the publication is to cover the latest news in local sport, providing interesting and informative articles for readers with an interest in the development and promotion of local sport.

A readership survey was launched in January 1994 to gauge readers' opinions on the editorial contents of the publication and to collect information about the readers.

25%, 32% and 43% of the readers have respectively secondary, post secondary and university education level. There were 10% in age range 19-24, 43% in age range 25-34, 31% in age range 35-44 and 16% in age range 45-54.

It is encouraging to note that 71% have recommended Challenger to others and 55% had read all ten issues published. 89% found that Challenger useful in promoting sport, 72% found it informative and 50% found it entertaining.

In addition, they found that the design, presentation and contents of the publication are attractive and of high quality.

In the three years since it was first published, Challenger has successfully established a positive image and reputation among a selected pool of readers who have a strong interest in sport, such as teachers, executives, professionals and personnel working in sport and sports-related fields.

Full Publication Details:
Report available from Hong Kong Sports Development Board.
There was no previous comprehensive survey on elite athletes' career expectation and education background. This survey was an exploratory research which was undertaken jointly by Hong Kong Sports Development Board and the Hong Kong Sports Institute to provide an inventory of athlete education standards and career expectations. In addition, athletes' personal information, career plan and opinion were also collected.

Of the 266 listed scholarship holders of the Hong Kong Sports Institute, 241 were interviewed face-to-face during April to July 1994. The survey should be considered as a census of elite athletes rather than a sample survey.

It has revealed that 20% of them were full time athletes, who were without full time studies or full time jobs other than sports, and 41% of the athletes were students under Form 5.

Practical courses such as computer training, English and communication skills were favoured by the athletes.

10% of the athletes have chosen coaching as their career while another 16% have planned to take up sports-related jobs after retirement.

The survey has found that there was harmonious relationships between elite athletes and their families. More than half of the scholarship holders have been given strong support from their parents to pursue sporting excellence and over 80% of the respondents were maintaining good relationships with their families.
SUMMARY OF RESEARCH PROJECTS

Title: Directory of Sports Researcher

Author: Chung Ting Yiu, Robert, The University of Hong Kong

Date of Publication: January 1995

Summary:

The main purpose of compiling this composite directory is to make available to all persons interested in sports research a comprehensive database of information about sports research in Hong Kong.

In the course of compiling this directory, all relevant departments in Hong Kong's tertiary institutions as well as organizations which were likely sources of sports researchers were surveyed by a structured questionnaire. A network of contacts was also established to capture as many researchers as possible. After two separate surveys, 45 researchers and 348 pieces of research publications have been registered in this directory. The directory provided useful information to locate relevant resources in sports research in Hong Kong.

The directory is in two parts:

Part I - each researcher was assigned to a researcher index number followed with his/her contact information, attached institutions/organizations, research interests; and publication index numbers

Part II - listed their publications in alphabetical order of titles for English publications, and by order of submission dates for Chinese publications.

Two parts were linked together by index numbers. Other than the main directories, two indexes were created to facilitate information search, namely, index by researchers, and index by institutions/organizations. A database for sports research and publications was constructed.

Full Publication Details:
Directory available from Hong Kong Sports Development Board.
Background

This survey was designed to provide baseline data on the pattern of sport and leisure activities in Hong Kong. The survey was first conducted in Spring 1993 and repeated in Winter 1994 to assess annual variation in participation patterns.

Methodology

Data were collected by a questionnaire administered to a total of 6,238 Hong Kong residents covering the age cohorts from 6 years through to elderly.

Findings Highlight

- Of the 35 sports activities, the ten with the highest rate of participation are:

<table>
<thead>
<tr>
<th>Sport</th>
<th>PHASE I</th>
<th>%</th>
<th>Sport</th>
<th>PHASE II</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badminton</td>
<td>51.6</td>
<td></td>
<td>Badminton</td>
<td>48.4</td>
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</tr>
<tr>
<td>Cycling</td>
<td>41.5</td>
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<td>Cycling</td>
<td>40.7</td>
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<tr>
<td>Basketball</td>
<td>36.8</td>
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<td>Basketball</td>
<td>37.5</td>
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<tr>
<td>Swimming</td>
<td>31.8</td>
<td></td>
<td>Table Tennis</td>
<td>31.4</td>
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<tr>
<td>Table Tennis</td>
<td>30.7</td>
<td></td>
<td>Jogging</td>
<td>27.9</td>
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<tr>
<td>Jogging</td>
<td>25.4</td>
<td></td>
<td>Playground Games</td>
<td>24.8</td>
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<tr>
<td>Playground Games</td>
<td>21.4</td>
<td></td>
<td>Swimming</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td>Soccer</td>
<td>19.2</td>
<td></td>
<td>Soccer</td>
<td>18.3</td>
<td></td>
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<tr>
<td>Volleyball</td>
<td>18.8</td>
<td></td>
<td>Hiking</td>
<td>17.1</td>
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<tr>
<td>Hiking</td>
<td>16.2</td>
<td></td>
<td>Volleyball</td>
<td>14.5</td>
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</table>

- More males than females participate in basketball, table tennis and soccer. More females than males participate in badminton, jogging and volleyball.

- On average, 20% of the top ten sports activities are organized by government and its proportion increased to 47% in Phase II survey.

- The top ten sports activities that the respondents wanted to do but had not done are:

<table>
<thead>
<tr>
<th>Sport</th>
<th>PHASE I</th>
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<th>PHASE II</th>
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<tbody>
<tr>
<td>Swimming</td>
<td>29.8</td>
<td></td>
<td>Swimming</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td>Cycling</td>
<td>24.9</td>
<td></td>
<td>Cycling</td>
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<td></td>
<td>Horse-riding</td>
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<td>19.7</td>
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<td>Hiking</td>
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<td>Tenpin Bowling</td>
<td>18.8</td>
<td></td>
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<td>17.9</td>
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<tr>
<td>Squash</td>
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<td></td>
<td>Badminton</td>
<td>17.8</td>
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<tr>
<td>Badminton</td>
<td>16.8</td>
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<td>Ice-skating</td>
<td>16.0</td>
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<tr>
<td>Boating/Sailing/Windsurfing</td>
<td>15.7</td>
<td></td>
<td>Basketball</td>
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<tr>
<td>Ice-skating</td>
<td>15.4</td>
<td></td>
<td>Squash</td>
<td>15.1</td>
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- Lack of time (60%) and lack of companions (32%) are the main reasons for non participation. Respondents also mention distance (28%) and inadequacies (14%) of facilities.
<table>
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<th>状态</th>
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<td>19.4</td>
<td>完成</td>
</tr>
<tr>
<td>B</td>
<td>项目2</td>
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<td>待办</td>
</tr>
<tr>
<td>C</td>
<td>项目3</td>
<td>19.6</td>
<td>进行中</td>
</tr>
</tbody>
</table>

请注意，这张表格展示了一些地点和项目的状态，日期为虚幻的19.4、19.5、19.6等，实际应用时应使用真实数据。
Title: Characteristics and Motivation of Volunteers in Sport

Author: Cheung Siu Yin, Hong Kong Baptist University

Date of Publication: March 1995

Summary:

This project is to find out what are the characteristics of volunteers in sport and to investigate the volunteers' motivation in sport. Moreover, to find out whether there is a relationship between certain demographic variables and reasons for volunteering.

306 helpers, coaches, executive committee members of the Hong Kong National Sports Associations and the Regional Council sport programmes were asked to complete a questionnaire. Over 50% of them were between 30-44 years old. 63% of the volunteers had completed secondary or matriculation education, 29% had post secondary or university level.

It is encouraging that many of the volunteers had engaged in volunteer sports work for more than five years. On average, most of the volunteers provided more than 4 hours of voluntary services per week. One-fourth of the volunteers even worked for 10 hours per week.

The most highly rated motive for volunteering was to contribute themselves in promoting sport. This was true for both male and female volunteers. Materialistic returns ranked lowest among the other 24 motives.

Generally, it is recommended by the researcher that it is important to provide a good environment for the volunteers and create sense of belonging by keeping them informed of the development of the organization or sports they attached to. The organizers should develop and maintain good relationships and ready to communicate, give feedback and listen to the volunteers. By then, we may be able to retain the interests of the volunteers in providing their valuable services to the development of sports in Hong Kong.

Full Publication Details:
Report available from Hong Kong Sports Development Board.
SUMMARY REPORT ON
SPORTS SPONSORSHIP SURVEY (PHASE I & II)

BACKGROUND OF THE SURVEYS AND COMPANIES

PHASE I

1. In 1993, a postal questionnaire was sent to about 1,300 companies in Hong Kong. The main objective was to gather a general picture of sponsorship, and sports sponsorship in particular, in Hong Kong. About a quarter, 418, replied.

PHASE II

2. Face to face interviews were conducted in 1994 with 43 companies (43 out of the 99 companies who have sponsored sport in the past) to understand their sports sponsorship interest, management and behaviour.
SPONSORSHIP - GENERAL

WHO IS INVOLVED IN SPONSORSHIP?

3. Nearly half the companies (43%) responding to our survey had been involved in some kind of sponsorship (not just sport) in 1992.

WHY ARE THESE COMPANIES INVOLVED IN SPONSORSHIP?

4. The principal reason quoted by companies for selecting certain events for sponsorship is "to enhance corporate image" (83%). Other reasons include to gain advertising and media coverage (52%), to increase brand awareness (47%), to enhance customer/staff relations (37%), to generate sales (15%) and to create opportunities for product sampling and demonstration (13%).

WHAT DO THESE COMPANIES INVEST IN SPONSORSHIP?

5. In total, the responding companies involved in sponsorship had marketing budgets of about HK$1,300 million, with an average per company of just under HK$10 million.

6. A relatively small proportion of these budgets was invested in sponsorship - an average of about 6%.

DO THE COMPANIES GET VALUE FOR MONEY?

7. 90% of those responding indicated that they were satisfied with the results of their sponsorship.
SPORT - A POPULAR SPONSORSHIP MEDIUM

8. Among companies who have been involved in any form of sponsorship, sport (60%) was considered the most preferred medium over charity (57%), academic (35%), cultural (30%) and other activities.

WHO IS INVOLVED?

9. All industries were involved but companies having marketing budgets more than HK$10m. especially in the manufacturing sector, and the food and beverages industry, spent most on sports sponsorship.

HOW ARE THESE COMPANIES APPROACHED FOR SPONSORSHIP?

10. Usual approach methods were through phone calls (71%), by mail (74%), fax (35%) and office visits (30%).

11. Most approaches were considered “professional” with 60% providing adequate information, 35% being polite, presentable and knowledgeable about sport, and 16% being well organised.

WHO MAKES THE DECISIONS TO SPONSOR?

12. Decision makers were mostly Chairmen/Directors (21%), followed by Marketing/Public Affairs Managers (16%) and General/Senior Managers (16%).

WHO MANAGES THE SPONSORSHIP?

13. Marketing Departments (44%) constitute the majority. Others were Public/Community Relations Departments (26%), Personnel Departments (12%) and Social/Recreation Sports Clubs (7%).
What is invested in sports sponsorship?

14. The average expenditure of those involved in sports sponsorship is about HK$10,000, ie an average of 54% of their total sponsorship budget. Again the range is wide, from less than HK$50,000 to more than HK$1 million. The average cost per event is HK$100,000.

15. 65% provided both money and in-kind support (company product/services/others), 28% contributed money only while the remaining 7% gave in-kind support only.

16. Majority of those involved in sports sponsorship were satisfied with their sponsorships. Major reasons given were wide media coverage, publicity and exposure (23%), positive response from staff (14%), good reach and cost effectiveness (9%) and able to achieve objectives (9%).

17. 21% raised concerns over the difficulty to measure the cost effectiveness and the value derived from multi-sponsored events.

Do sponsors evaluate their sponsorship?

18. 40% of the companies evaluated their sports sponsorship against objectives by media coverage (65%), number of spectators (29%) and responses from customers and staff (29%).

What are companies' future interests in sports sponsorship?

19. Although many of those wishing to become sponsors had no specific area of interest in mind, the majority of those expressing a view would prefer to support competitions and tournaments.

20. About 40% of those interested in future sponsorship indicated that they had a specific sport in mind. Although about 30 different sports were mentioned, the clear favourites, in order, were tennis, golf, soccer, badminton and squash.
SPORTS SPONSORSHIP - THE GROWING TREND

21. **More companies are involved in sports sponsorship**

42% of the responding companies indicated their interest in sponsoring sport in future, reflecting a 19% increase over the number of existing sports sponsors.

22. **More sports activities are being sponsored**

The average number of sports activities sponsored by each company has grown by 1-2 events from a basis 2-3 events last year.

23. **Higher amount of investment in sports sponsorship**

A quarter of those sponsors who are satisfied with their sports sponsorships will increase their budget mainly by between 6-30% while majority of the sport sponsors still plan to keep their sports sponsorship budget at least at the same level.

(Note: Answers to point 4, 8, 10, 11, 13, 16 and 18 are multiple response)

ISSUED ON 16 MAY 1995
BY THE HONG KONG SPORTS DEVELOPMENT BOARD