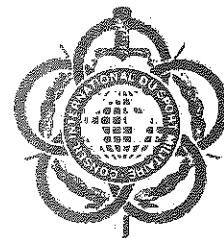


International Symposium
on
Sport for all!



**SPORT FOR ALL: CONCEPTUAL CONSIDERATIONS WITH
SPECIAL REFERENCE TO HEALTH-RELATED PHYSICAL ACTIVITY**

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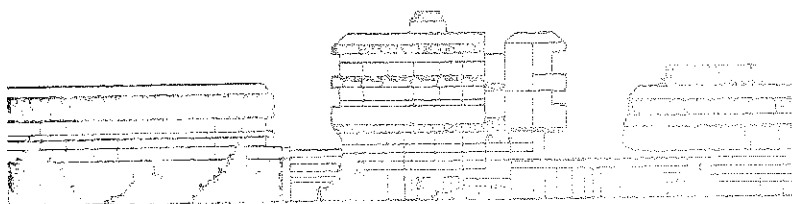
INTRODUCTION

The roots of physical activity as a valued societal activity go all the way to the ancient Greece and even further to the oriental philosophies. In more modern times physical education manifested itself in the beginning of last century, when the idea of sport as a useful educational instrument began to gain ground in England, Scandinavia and in continental Europe.

Sport for all, as we understand it today, was originally thought to be an integral part of the modern olympic movement as witnessed by the statement of baron Pierre de Coubertin who declared that (Brundage 1989):

"For every man, woman or child, (sport) offers an opportunity for self-improvement quite independent of profession or position in life. It is an apantage of all, equally and to the same degree, and nothing can replace it."

However, under the umbrella of olympic movement sport for all did not develop a clear profile of its own. Only from the 1970's it has been recognized as a more or less coherent social movement.



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WHAT IS SPORT FOR ALL?

The Council of Europe's European Sport for All Charter (Council of Europe 1975) provides the first "formal" definition of sport for all. The charter proclaims:

"The aim of sport for all policy must be to bring about optimum conditions in which the broadest possible sections of the population can engage in sport regularly, in accordance with each individual's aptitudes and interests."

The charter includes eight articles. Sport for all is considered everybody's right and an important element in the human development. Promotion of sport for all needs intersectorial planning, national machinery for implementation, public responsibility for the facilities, people's access to open country and water, and qualified personnel.

As the statement of the aim indicates the charter is policy-oriented. Another key characteristic is its focus on "sport". As sport is commonly understood as requiring vigorous bodily exertion practiced according to set of form or rules, and having an intrinsic competitive element in it, it raises a fundamental question whether this kind of sport can really be for all.

Another related statement on sport for all is the International Charter of Physical Education and Sport by UNESCO (1978). It claims that physical education and sport are fundamental human rights and part of lifelong education. Their development requires programs, qualified personnel, facilities and different support activities such as research and international cooperation. As "physical education and sport" is its key substance, this charter too provides rather limited scope from the population point of view.

Despite these conceptual problems sport for all has in many countries been implemented as popular movements consistent with the aim of the Charter by the Council of Europe (De Knop & Oja 1996). "Trim" in the Scandinavian and some continental countries, "Physical Fitness and Sport" in the US, "Come Alive" in New Zealand, "Life Be In It" in Australia, "Exercise For Fitness" in Finland, "Kino" in Canada, and "Zabar" in Israel demonstrate the diversity of approaches that

have been adopted in attempt to reach broad sections of the population. However, many of these endeavors are more of isolated promotion programs than true social movements.

No wonder then that the situation has provoked statements like "the concept of sport for all remains vague and its directions blurred, objectives unspecified, and procedures groping." (Oja and Telama 1991). In other words, in attempting to be an umbrella concept, that covers every form of sport from recreational sport to top level sport and offers something for everyone, sport for all may have offered little for a few. One likely reason for this ambiguousness is that when elite sports are considered part of the sport for all concept it overwhelms the whole phenomena. Elite sports patronize sport for all, which remains an orphan, not a social movement of its own right.

HEALTH-RELATED PHYSICAL ACTIVITY

A new concept, health-related or health-enhancing physical activity, has evolved during the 1990's. It is largely based on the results of two consecutive scientific conferences initiated and organized by Canadian scientists and authorities (Bouchard et al 1990, Bouchard, Shephard and Stephens 1994). The publication of the latter provides a conceptual model of the interplay between physical activity, fitness and health (Figure 1). The model suggests complex interrelationships between the three elements.

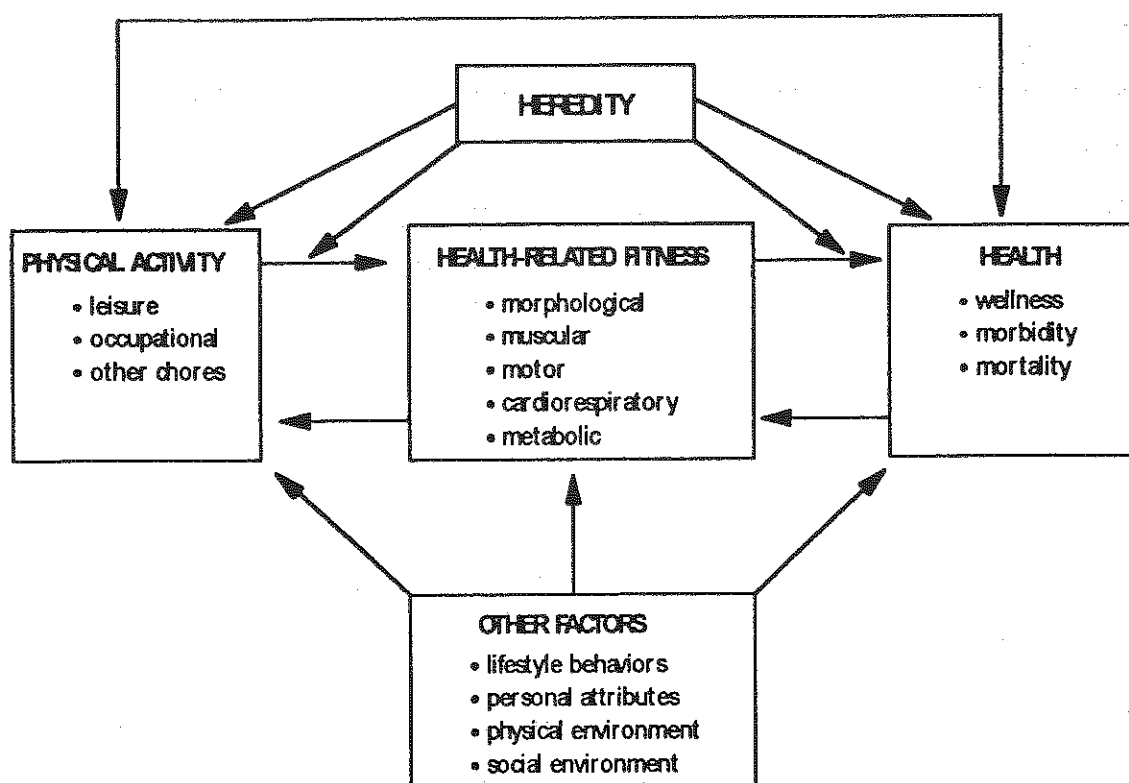


Figure 1. A conceptual model describing the interaction between physical activity, fitness and health (Bouchard, Shephard and Stephens 1994).

The model also provides definitions of the key concepts:

Physical activity: "Comprises any body movement produced by the skeletal muscles that results in a substantial increase over the resting energy expenditure."

Exercise: "Form of leisure-time physical activity that is usually performed on a repeated basis over an extended period of time (exercise training) with a specific external objective such as the improvement of fitness, physical performance, or health."

Health: "Human condition with physical, social and psychological dimensions, each characterized on a continuum with positive and negative poles."

Health-related fitness: "Refers to those components of fitness that are affected favourably or unfavourably by habitual physical activity and relate to health-status."

In order to illustrate what constitutes health-related physical activity, let us examine what is the current understanding of how much and what kind of physical activity is good for health? In 1990 American College of Sports Medicine gave the recommendation on the quantity and quality of exercise for the development and maintenance of cardiorespiratory and muscular fitness of healthy adults (ACSM 1990):

- frequency: 3-5 times per week
- intensity: 60-90 % of maximal heart rate, or 50-85 % of maximal aerobic power
- duration: 20-60 minutes of continuous exercise
- mode: any activity with large muscle groups working continuously, rhythmically and aebonically
- resistance training: strength training of moderate intensity, one set of 8-12 repetitions of 8-10 exercises that conditions the major muscle groups at least two days per week

As indicated by the title, the ACSM's recommendations refer to fitness-related exercise. In line with the then prevalent exercise practice this recommendation is exemplified by jogging. The document also pointed out that the quantity and quality of exercise needed to attain health-related benefits may differ from these in that lower levels of physical activity may reduce the risk for certain chronic diseases and that health benefits may be accrued by exercise performed more frequently and for a longer duration, but at lower intensities.

As epidemiological and experimental research yielded mounting evidence of the dose response of exercise and health, further distinction between fitness- and health-related activity developed. In 1993 the U.S. Center for Disease Control and Prevention and the American College of

Sports Medicine presented a new recommendation for health-enhancing physical activity (CDCP & ACSM 1993). It stated that:

"Every American adult should accumulate 30 minutes or more of moderate-intensity physical activity over the course of most days of the week".

An extension of this recommendation (CDCP & ACSM 1995) specified the frequency to "preferably all" days of the week.

The latter recommendation differs from the fitness-related one in that the activity can be accumulated in two or three daily bouts, it is of moderate intensity, and it is performed (almost) daily. Brisk walking is recommended as one specific activity to meet the standards.

Recent experiments in our laboratory demonstrate how health benefits can be accrued by walking. First we studied the effects of fast walking. Over 100 middle-aged healthy men and women were randomly allocated into a walking and a control group. The walking group trained four times a week, one hour each time for a total of fifteen weeks. Fast walking took place at 75 % intensity relative to the maximal oxygen uptake (VO_2max). VO_2max increased about 10 % on average, total cholesterol decreased, HDL cholesterol increased, and body weight decreased. Thus clear benefits were seen in both fitness and health measures.

The second experiment consisted of moderate intensity walking at 65 % of VO_2max , five times a week, one hour each time for 20 weeks. One-hundred-and-twenty postmenopausal healthy women were randomly divided into three experimental groups: control, one daily exercise session of 60 min duration, two daily exercise sessions for a total of 60 minutes. In comparison to the control group the walking training increased VO_2max nearly 10 %. Other analysis are in progress, but thus far it seems that moderate intensity one hour walking either in one or two bouts in most days of the week yield desirable fitness and health benefits.

In the third experiment we studied the effects of even lower intensity exercise, i.e. work commuting walking and cycling. Previously sedentary healthy middle-aged men and women either walked or cycled to and from work for 10 weeks. They were allocated into walking or cycling group so that one-way trip took about 30 minutes. The walking commuting intensity was measured to be

55 % of VO_2 max, on average, while that of the cycling was 65 %. Systematic improvements, although smaller than in the other two experiments, in fitness and metabolic health measures were seen in the active group, the changes being smaller in walkers than in cyclers. Apparently this kind of exercise is effective, but it approaches the threshold for measurable effects.

These examples demonstrate that the recommended activity dose of moderate intensity exercise such as brisk walking in most days of the week indeed bring about measurable fitness and health benefits.

What are the potential benefits of health-related physical activity, what kind of activity is effective and how active or inactive people are today?

There is much strong new evidence to show that proper physical activity can be a powerful health-enhancing behavior. This evidence justifies its inclusion in public health policies together with other life-style modifications such as non-smoking, healthy nutrition and modesty in alcohol use. Based on data of mostly middle-aged adults, several consensus statements and recommendations by international and other expert bodies have been published to this effect recently (CDCP & ACSM 1993 and 1995, Council of Europe 1995, WHO & FIMS 1995). The general characteristics of the amount and type of effective activity are also fairly well known as shown by the American recommendation referred to earlier (CDCP & ACSM 1993, 1995). Research on the activity patterns of industrial populations suggests that in most countries less than 40 % of the adult population is sufficiently active. Thus there is a clear need for more activity.

As for children and adolescents and for elderly people the evidence is not quite as convincing but yet reasonably solid to recommend increased activity in these population segments as well. The functional and health deteriorations due to inactivity begin to manifest themselves already during childhood and adolescence, while inactivity among the elderly leads to limited function and independence for unnecessary long periods of time during the late years of life. The fact that natural physical activity begins to decrease notable already at the age of 13 to 14 years and that only about 1/5 of the elderly people remains active, suggest that promotion of health-enhancing physical activity can be very relevant preventive measure also among these age groups.

As indicated by this sketchy overview, proper physical activity can benefit all sections of populations in a very significant way. The characteristics of effective physical activity, moderate intensity and simple forms that can be incorporated into normal daily routines, allows major proportion of entire populations to adopt such behaviour. Also attitudes towards exercise and physical activity are generally positive or at least non-resistive.

From the perspective of health-enhancing physical activity the umbrella concept should be physical activity rather than sport (figure 2). Under this umbrella are sport, exercise for fitness, exercise/activity for health and daily activities/active lifestyle in increasing order of population applicability. While active lifestyle is essential for all, activity for health is necessary for most and exercise for fitness is desirable for many, sport can be considered optional for selected few only.

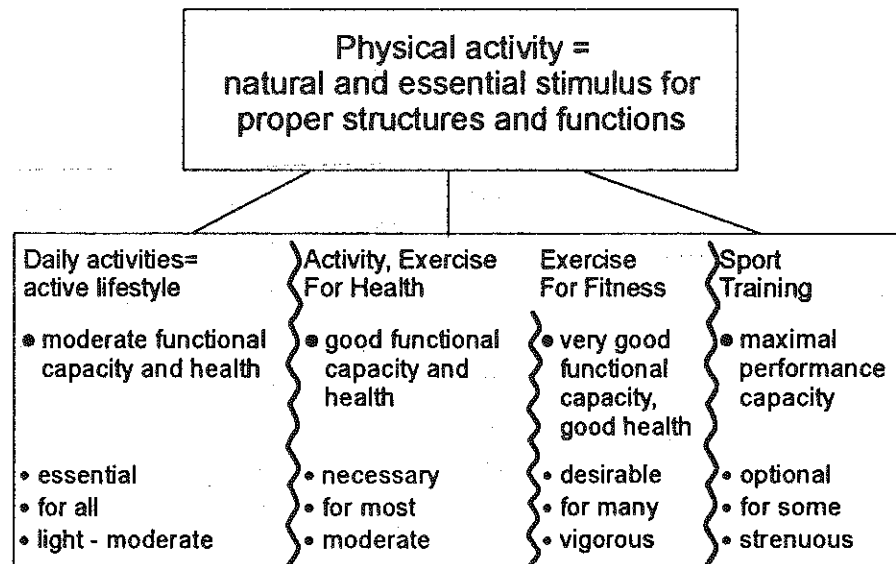


Figure 2. Conceptual structure of physical activity from the health and functional point of view (Vuori 1996).

This concept suggests, that from the population point of view, most functional and health benefits with minimal health risks can be accrued through active lifestyle and activities for health (figure 3). Conversely, exercise for fitness and sport provide little further benefits while health risks and complications increase rapidly.

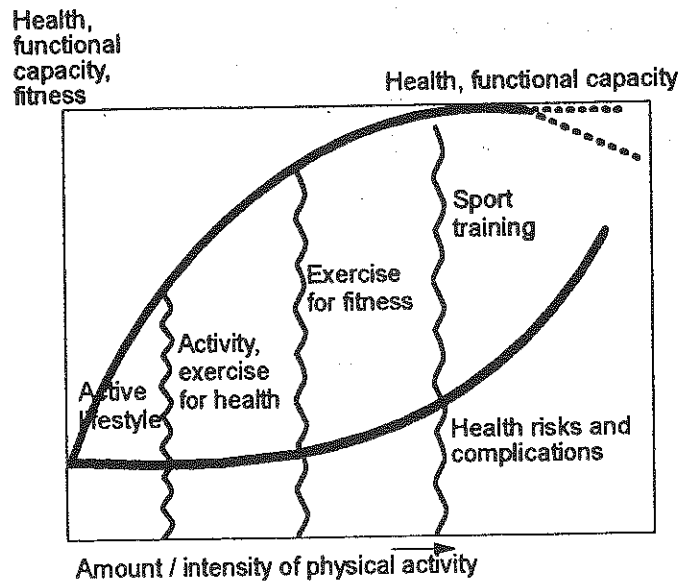


Figure 3. Health and functional benefits vs. health risks and complications of physical activity (Vuori 1996).

CONCLUDING REMARKS

These conceptual considerations can be summarized as follows:

1. The concept of sport for all as an umbrella concept embracing every form of sport from recreational to elite sport can be criticized as not referring truly to all people. This is because of the inherent characteristics of sport: vigour, form, competition. Consequently, attempts to translate the idea of sport for all into coherent social movement have been largely unsuccessful leaving sport for all as an orphan to elite sports.
2. A new concept, that of health-related or health-enhancing physical activity, has recently emerged from the research findings on health benefits of physical activity. It postulates that body movements of almost any kind practiced in sufficient intensity, frequency and duration can promote health of children, adults and the elderly effectively, safely and economically.

3. From the population perspective, physical activity rather than sport serves as a good umbrella concept under which lay sport, exercise for fitness, activity/exercise for health and active lifestyle. According to this concept physical activity can truly be for all.

CITED LITERATURE

American College of Sports Medicine (1990). The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness in healthy adults. *Medicine and Science in Sports and Exercise*, 22:265-274.

Bouchard C, Shephard RJ, Stephens T, Sutton JR, McPherson BD (1990). *Exercise, Fitness, and Health. A Consensus of Current Knowledge*. Human Kinetics Books, Champaign, Illinois.

Bouchard C, Shephard RJ, Stephens T (Eds.) (1994). *Physical Activity, Fitness, and Health. International Proceedings and Consensus Statement*. Human Kinetics Books, Champaign, Illinois.

Brundage A (1989). Principles of the Olympic movement. *JOHPER* 54:25-26.

U.S. Centres for Disease Control and Prevention and American College of Sports Medicine (1993). Summary statement: A workshop on physical activity and public health. *Sports Medicine Bulletin*, 28:7.

U.S. Centres for Disease Control and Prevention and the American College of Sports Medicine (1995). *Physical Activity and Public Health. A Recommendation from the Centres for Disease Control and Prevention and the American College of Sports Medicine*. *JAMA*, 273(5): 402-406.

Council of Europe (1975). *The European Sport for All Charter*.

Council of Europe (1995). 8th Conference of European Ministers responsible for Sport (1995). Strasbourg.

De Knop P, Oja P (1996). Sport for all. In: Halloran JD, Komi PV, Knuttgen HG, Oja P, Roskam F (Eds.) *Current Issues of Sport Science*. *Sport Science studies*; 8. Hofmann, Schorndorf, pp. 15-43.

Oja P, Telama R (1991). *Sport for all*. Elsevier, Amsterdam.

UNESCO (1978). *International Charter of Physical Education and Sport*. NJ: UNESCO, New York.

Vuori I (1996). *Tehokas ja turvallinen terveysliikunta (Effective and safe exercise for health)*. UKK Institute, Tampere, Finland (in Finnish).

World Health Organisation (WHO) and Federation of Sports Medicine (FIMS) Committee on Physical Activity for Health (1995). *Exercise for health*. *Bulletin of the World Health Organisation*, 73:135-136.
