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YOUTH SPORT AND EDUCATION FOR ACTIVE LIFESTLE

1. Introduction

Promoting life-long physically active lifestyle is one of the main aims of school physical education in many countries. The rationale for this aim is that physical activity has many health benefits and therefore it is important to create basis for active lifestyle starting from childhood and youth. Actually we know rather little about the impact of physical education on active lifestyle in adulthood. Physical education is given by many institutions, such as family, sport clubs, and schools, either as scheduled PE or extracurricular sport. It is difficult to make distinctions between the impacts of these institutions on the later active lifestyle. In general, the information about the connection between youth physical activity and physical activity in adulthood is rather scare. However some reliable longitudinal studies have shown that there is a statistically significant relationship between childhood and youth physical activity with adult physical activity, and that youth sport participation in particular predicts physical activity in adulthood.

The majority of young people in most Western countries participate in organized sports at some phase of their lives. In many countries the number of participants has increased during recent decades (De Knop et al. 1996). Much research has been done on children and youth sport from the pedagogical, psychological, sociological, pediatric, and even legal, viewpoints but less attention has been paid to how children and youth sport is related to a life-long physically active life style (Cahill & Pearl 1993; Malina 1988; Weiss 1986; Zermatten 1999).

The aim of this paper is to present empirical evidence for the relationship between youth sport participation and active lifestyle in adulthood, to introduce theoretical explanations of this relationship and to discuss features of youth sport system best promoting an active lifestyle.

2. Theoretical approaches to the relationship between youth sport and active lifestyle in adulthood

In principle socialization into sport and into active lifestyle follow the same model. The process is influenced, among other things, by individual attributes, significant

others or socialization agents, and socialization environment. On the other hand, socialization into competitive sport happens mainly in childhood and youth while socialization into active lifestyle is much longer process going on almost during the whole life. How the relationship between youth physical activity and adult active lifestyle can be explained. There are at least three hypotheses.

Carry over hypothesis suggests that people continue to participate in those activities they have participated in childhood and youth. Therefore it is important that children are taught activities which adult people usually like to do (Green 2002; Haywood 1991). A problem of carry over hypothesis is that typical physical activities of children and youth are different from those of adult people. It can be expected that skills learnt in an activity, such as swimming or skiing increases the probability to participate in the same activity in adulthood. Otherwise the empirical findings of longitudinal studies have not given much support to the carry over hypothesis.

Ability and readiness hypothesis suggests that the influence of youth physical activity and youth sport develop motor skills and abilities and give experiences which increases the readiness and willingness to participate in physical activity and also to learn new activities in adulthood. What is important for this hypothesis is that young people have opportunity to learn well some motor skills, and have possibilities to experience different kinds of activities and develop intrinsic motivation for sport participation in childhood and youth. According to ability-readiness hypothesis the type of youth sport is not so important as regular persistent participation and good skills and motivation.

Self-selection hypothesis says that there is no causal relationship between youth sport and adult physical activity but the correlation is explained by a third factor, such as personality, or hereditary disposition to good motor performance. The fact that fitness is rather much determined by genetic factors gives some support to the selection hypothesis (Bouchard et al. 1992; Pancrazi 2000). A dimension of type A behaviour, responsible leadership, has been found to account for physical activity at both youth and adulthood but , however, it did not explain the correlation between youth and adult physical activity (Young et al. 1998; 2000).

3. Empirical findings on the connection between youth sport participation and adult physical activity

Several longitudinal studies have shown that participation in organised sport in childhood and youth predicts adult physical activity (Barnekow-Bergvist et al. 1998; Engström 1991; Malina 2001; Tammelin et al. 2003; Telama et al. 1997). Results obtained from retrospective studies confirm this (Curtis et al. 1999; Frändin et al. 1995; Hirvensalo et al. 2000; Laakso 1981; Paffenberger et al. 1984; Powell & Dysinger 1987). The findings on the relationship between youth sport participation and adult physical activity have been statistically significant but rather weak Thus, we know that youth sport participation may be a good predictor of adult physical activity, but we know less about the specific characteristics of youth sport participation which are important for later active lifestyle. According to recent research results at least the persistence and frequency of youth sport participation and participation in

sport competitions seem to be important elements of youth physical activity from the viewpoint of adult physical activity.

Most of previous studies have used only one measurement in childhood and adolescence when comparing youth physical activity with adult physical activity. A recent Finnish study showed that a persistently high level of activity at a young age considerably improved the prediction of adult physical activity as compared with cross-sectional data (Telama et al. 2005). The same strong influence of persistent participation was also found when studying the effect of youth sport participation on adult physical activity (Telama et al. 2006). To study the effect of persistent participation in youth sport on adult physical activity the subjects were divided into those who participated in sport club training in neither 1980 nor 1983 (Outsiders), those who participated in 1980 but not 1983 (Drop-outs), those who did not participate in 1980 but did in 1983 (Beginners), and those who participated in both measurements (Actives). The active males, i.e. persistent sport participants, belonged to the active adult group (third tertile) 9 times more often than the outsiders who did not participate at all in youth sport, but who may have been physically active in other ways. Respectively the active females were 4 times more often active in adulthood as compared to non-participating females. Also a shorter participation (Beginners and Drop outs) increased the probability of adult physical activity as compared with non-participants in males but much less than the persistent participation. In females participation which was ended by drop out did not differ from non-participation.

Also the frequency of participation in sport club training sessions is an important predictor of adult physical activity. Among females participation once a week did not increase the probability for adult physical activity as compared to non-participation but among males those who participated once a week belonged to the active group of adults almost three times more often than non-participants. Participation many times per week raised the respective probability to six in females and five in men. (Telama et al. 2006).

Participation in sport competitions was very powerful predictor in males but less important in females. The probability to be active in adulthood increased with increasing level of competitions. The gender difference was remarkable. Those females who participated in youth sport competitions at national level belonged to active adult group three times more often than non-participants, but national level male competitors belonged to active adult group 12 times more often than non- participants. (Telama et al. 2006).

There is rather little information about the effect of type of organized sport on adult physical activity. In a Finnish study participants were divided in to six groups according to the most favorite type of sport in age-gender groups. There were significant differences in physical activity index between the types of sport in 1980 when the participants were 9 – 18-year-old. However, in follow-up in 2001, only significant difference was among 30- and 33-year-old men. Physical activity was higher among those whose favorite sport had been in 1980 soccer or ice-hockey than among those who participated in running, cycling and other activities (Telama et al. 2005). Also another Finnish study showed that participation in soccer and ice-hockey at age 14 predicted high physical activity at age 31. In the same study also participation in volley ball, cross-country skiing, orienteering, track and field and combat sports predicted

high adult physical activity (Tammelin et al.2003). There was some evidence for the carry over hypothesis. The participation in some endurance sport, such as cross-country skiing, running, or orienteering in youth was related with the participation in endurance sport in adulthood. Females' participation in gymnastics at age 14 was associated with frequent participation aerobics or gymnastics at age 31. (Tammelin et al. 2003). It is possible that an inherited disposition for good endurance performance is at least partly explaining this kind of relationship and thus supporting self-selection hypothesis.

4. Back to the theory

In the light of empirical findings it seems that all the three hypotheses presented above are at least partly supported. According to empirical results, the most powerful predictors of adult physical activity were frequent participation in sport club training, persistent, for example three year long or longer participation in organized youth sport, and particularly among males participation in high level sport competitions. Participation in competitions as such hardly is important for adult physical activity but meaningful is what is behind competitions. A young athlete who is capable to participate in, for instance national competitions, must have trained hard many years. This kind of exercise usually is also vigorous and results in good fitness and high level of skills at least in one sport discipline. Long lasting training provides high intrinsic motivation. Sport participation may also teach goal setting and develop strong mind and determination. All this may help a person to start again exercising in later life even having stopped training earlier. Also experiencing a hard strain of one's body at young age may help a person to start exercise later.

The continuation of some activities, such as female gymnastics, from youth to adulthood may explain a part of the relationship between youth and adult physical activity. Also the association between endurance sport participation in youth and in adulthood may support the carry over hypothesis but may also mean inherited disposition for endurance performance and thus support self-selection hypothesis. Carry over hypothesis does not explain much of the relationship between youth and adult physical activity. For instance, soccer and ice-hockey were among the most common activities among boys and they predicted high activity in adulthood, but rather few men played those team sports as adult. Playing soccer and ice-hockey means usually participation in frequent, regular and intensive training and therefore youth soccer and ice-hockey predict adult physical activity but not so that playing continues to adulthood. Carry over hypothesis cannot be very good explanation for the tracking of physical activity because youth and adult people participate in different kinds of activities.

The fact that frequent, intensive and persistent participation in youth sport best predicts adult physical activity evidently indicates that young people adopt in youth sport emotions, motivation, experiences, and skills which help them to learn new physical activities or start again exercising in adulthood. We cannot totally exclude the explanation that persistent participation in sport training is also influenced by an inherited disposition to sport ability. However, although the carry over theory and

self-selection may explain a part of the relationship between youth sport participation and adult physical activity, the ability and readiness hypothesis is the most probable explanation. This means that the influence of youth sport participation on later active lifestyle depends mainly on the quality of youth sport and characteristics other than just sport discipline. The promotion of active lifestyle is a great challenge for youth sport.

5. Promotion of active lifestyle as a challenge for youth sport

How ready is youth sport system to accept the challenge of promoting active lifestyle? The promotion of healthy lifestyle has been mentioned in public discussions and in ceremonial speeches. However, promotion of active lifestyle has not belonged to the main aims of youth sport. According to ability and readiness hypothesis and to the empirical research results important issues in youth sport are frequent, regular and persistent participation which results in learning motor skills and how to exercise, development of high perceived competence and intrinsic motivation. Keeping this in mind, high drop out rates in youth sport are against promotion of active lifestyle. The empirical results presented above emphasized persistent long lasting participation as predictor of adult physical activity while short experience of participation ending to drop-out had not more effect than staying outside youth sport.

High drop-out rates have been found in youth sport of many countries (DeKnop et al 1996; Telama et al 2002), but they may vary from country to country depending youth sport systems, sport cultures and other factors. In this connection the Finnish youth sport is in the focus. In Finland the main organizers of youth sport are sport clubs which belong to some national sport federation. Also some other organizations offer youth sport opportunities. There is also some sports organized by schools but it has a minor role in youth sport. In 2005 about 50 % of boys participated organized sport at least once a week, 12-year-olds more than 60, 18-year-olds less than 40%. Among girls the rate of participation was about 40%, 12-year-olds over 50% and 18-year-olds less than 30%. In both genders participation in organized sport was increased during 28 years, among girls more than among boys (Laakso et al. 2006).

A majority, about two thirds of boys and more than a half of girls, participate in organized sport at some phase of their childhood or adolescence, but the number of those who continue to be in sport long enough, for instance three years, is much smaller. This means that although youth sport attracts big numbers of young people only minor part of them stay in sport long enough in order to develop their skills, perceived competence and motivation to the degree which can influence their later active lifestyle. Big numbers drop out from sport before getting positive effects regarding active lifestyle.

According to a Finnish longitudinal study 52 % of the girls who participated at age 12 had dropped out at age 15. For the boys the respective percentage was 37 (Telama et al. 2006). Because the participation in organized sport is started very early, in Finland in 1995 at age 8 in average, many have already dropped out at age 12 (Telama et al. 2002) There seems to be cross-cultural differences in drop out rates and in ages of drop out. For instance, in 1995, 24 % of German boys were still playing soccer and 19 %

had stopped playing, whereas in Finland only 10 % were still playing and 30 % had stopped (Telama et al. 2002).

The results of empirical longitudinal tracking studies let suggest that the length of youth sport experience is an important predictor of adult physical activity. Another important factor is the quality of youth sport and evidently the quality of youth sport experience is also associated with the length experience. What are the main factors influencing the quality and length of youth sport experience? Answers can be found from drop out research in one hand, and sport socialization studies on the other hand.

Lindner et al. (1991) have proposed three categories of reasons for drop out: sport related, milieu-related, and developmental. The high drop out rates, in part, are explained by natural psychological development of young people which can be seen as normal trial-and-error sampling procedure that the youngsters employ in trying to find out those activity or achievement domains they enjoy the most (Burton 1988). Typical expressions of the drop out reasons related with development are such as "other things to do", "other interest" or "conflict of interest" (Jons et al 1990; Lindner et al. 1991; Molinero et al. 2006). On the other hand a large number of young people would like to continue competitive sport but do not do so because of many sport related reasons.

The most usual sport related reasons of drop out seems to be connected with self concept and self-perceptions of young athletes, such as perceived competence in relation achievement expectations, or high perceived competitive expectations (Burton 1988) The competence-related reasons have been expressed in statements like "lack of success", "I was not as good as I wanted to be", and "my skills did not improve" (Lindner et al. 1991; Molinero et al. 2006). This kinds of self-perceptions usually lead to loss of enjoyment and "no fun" experiences. Behind these perceptions and feelings are usually certain characteristics of youth sport system and goals or expectation set by adults. Another group of drop out reasons is related with the problems in social interaction and socio-emotional atmosphere of sport illustrated by statements such as "did not like coach", "no team work", and "did not like to compete" (Molinero et al. 2006). Important features of youth sport regarding drop out vs. persistent participation are, among other things, competition system and the role of screening, age of specialization, and the type of motivational climate in coaching.

Regarding persistent participation or drop out in one hand and screening and early specializing on the other hand, the socialization model presented by Coté and Hay (2002) is interesting. The model describing the progress in sport socialization consists of three phases: a sampling phase, specializing phase and investment / recreational phase. The main features of sampling phase are that children participate in many sports, that their main motivation is fun and enjoyment, and that the emphasis is on structured or deliberate play rather than training or deliberate practice. In this connection deliberate play means activities providing enjoyment through active and pleasurable participation. From the sampling phase, or sampling years, young people may move to the second phase, specializing years. Specializing phase involves more deliberate practice and a reduction in the range of sport activities fun and enjoyment still being central elements of sport experience. Deliberate practice means the development of sport specific skills specifically designed to improve current levels of performance.

Specializing phase (approximately 13 years of age) also includes encouragement to work harder and more seriously than at the sampling phase. Regarding sport career young people may move from specializing phase to investment phase or investment years. Entry into the investment phase usually means focusing on one activity and a commitment to intensive training and competitive success. (Coté & Hay 2002)

The model also includes the fourth key concept, recreational years, which means regular sport participation without aspiring to reach an elite level of performance. Thus, in addition to moving ahead on competitive career from sampling years to specializing years and further to investment years, young people has at each phase two other options. She can drop out of sport or move to recreational years in order to continue sport participation without any achievement expectations.

From the viewpoint of a sport career or an active lifestyle the sampling years are interesting in particular. In order to know which sport activities are really interesting and in which sports a child feels that she can develop her skills, it is necessary to have experiences in many sport disciplines. If a child is offered an opportunity to participate in one sport discipline only, the probability for drop out is high if she feels that this particular sport is not good for her. In Finland, and perhaps also in other countries often parents take a child to sport club, for instance, to play ice-hockey or to train figure skating only, not other sports. Therefore a multi-sport club is better regarding a longer sport career or participation in recreational sports. The younger children are taken to the sport clubs, the more important it is to guarantee good opportunities for sampling years. The sampling years also must last longer if children are very young when starting to participate. It has been found that parents may have important role concerning the transition from sampling years to specializing years or to recreational sport (Macphail & Kirk 2006). On the other hand it is important that children themselves are able and capable to make decisions on those transitions. In order to be capable to make those decisions children should understand, among other things, that abilities, effort, and practice affect the results of their own and others. The level of understanding is reached at age of about 12 (Lintunen 1999).

In Finland where high rates of drop out have been reported the main aim of youth sport system widely started on 1960's was searching athletic talents. On 1960's majority of sport clubs, and in particular the clubs under Workers' Sport Federation, were multi-sport clubs thus being able to offer to young people opportunity to participate in more than one sport at the same time without a rivalry between clubs. Already on 1980´s majority (60 to 70%) of sport clubs were specialized in Finland (Heinilä & Koski 1991, 66; Vuolle 1986, 137). Nowadays most sport clubs are focused only one sport discipline and the clubs are jealous to each others if children want to participate also in other sport in some other club. Kirk (2005) has proposed that the multi-sports club already common in German and other continental countries may be a means of facilitating young people's sampling behavior.

In addition to providing opportunities for multi-sport experiences for children psychological and social atmosphere is important in sampling phase in order to prevent early drop out. Fun and enjoyment in children sport are based on activities where challenge and ability are in balance, effort and learning are emphasized more than outcome or winning.

6. Conclusions

In the light of empirical research results the participation in youth sport seems to be beneficial for an active lifestyle in adulthood provided that participation is frequent, intensive and persistent lasting at least some years. A short experience of youth sport ending in early drop out does not predict physical activity in adulthood. A part of the relationship between youth sport participation and adult physical activity may be explained by self-selection, in other words, those who has an inherited disposition to good sport performance participate in sport both in youth and in adulthood. However, because the most adult physical activity is recreational and fitness-health-oriented, and not focusing to competitive performance, the self-selection cannot be the main explanation for the association between youth sport and adult physical activity. Thus it can be concluded that persistent youth sport participation really affects young people in a way which is beneficial for an active life style in later life.

Important issues in youth sport regarding active life style are long time for sampling and having experiences of different sport activities, not too much emphasis on competition and winning too early, and possibilities for good social relationships and interaction. It seems that in multi-sport club these aspects can be better taken into account than in specialized club. In multi-sport club it is easy for a young people to change from a sport discipline to another during sampling years.

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