Original Article

The connection between the geographical stratification of athletic club and the effectiveness of child football training

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Abstract:

Football instruction usually starts at the age of 6 or 7 and finishes at the end of adolescence. It is a lengthy process which is influenced by many factors. The aim of the present study is to investigate the factors which influence the learning of football in classes whose aim is to lay down the basic framework of the game in Greece. Particular attention was given to ascertaining whether the geographical stratification of athletic clubs (Urban, Suburban, and Rural) influenced instructional organization and planning. It was found that the instruction offered to children in suburban and urban areas showed differences from that given to their rural counterparts.

Key words: children's football, football instruction, geographical stratification.

Introduction

The production of new players is the motive of many football clubs mainly in Europe, which have set up classes for the identification and instruction of young players. They see the production of young footballers as a fruitful investment for two reasons: a) in a few years some of them will staff their men's teams and b) others will be profitably sold. They aim to incorporate particularly gifted young players into their force and to train them according to their own particular philosophy in order to achieve their maximum level of performance (Reilly, Williams, Nevill, Franks, 2000). The Rules for the Official Approval of Teams adhered to by football federations in member-countries of the European Football Federation (UEFA, 2012) also contribute to this.

The continually increasing demand for footballers creates the need for the carefully planned instruction of players, especially the young (Kock, Krauspe, 1996). Whereas once it was possible for a talented athlete to distinguish himself in any sport in a relatively short time, now it takes many years of systematic, planned training (Avgerinos, 2007). According to Simon & Chase (1973) it requires at least 10 years' preparation to reach the highest level of performance in any sport. This ten-year "golden rule", as it is called, has been applied to football by Helsen, Starkes & Hodges (1988) who seek to identify all of the factors which influence the development of young athletes, with the aim of producing footballers by the safest, least risky methods. According to Bloom (1985) the stimulation received by athletes from the environment in which they grew up, stemming in the main from the urge to train and the skills obtained, leads to differences which can still be observed in maturity. Over the last few decades researchers have been studying the effect that the size of a town has on the development of an athlete and his career. Relative studies have also been carried out by Curtis & Birch (1987) on Canadian ice-hockey players, Carlson (1988) on Swedish professional tennis players, Baker & Logan (2007) on young Canadian hockey players, Cote, MacDonald, Baker, Abernethy (2006) on professional athletes in different fields, Farser-Thomas, Cote, MacDonald, Baker, Abernethy (2006) on adolescent swimmers, Lidor, Cote, Arnon, Zeev, Cohen-Maoz (2010) on team-sportsmen, Bruner, MacDonald, Pickett, Cote (2011) on Swedish, Finnish, American and Canadian athletes. Most of the studies that have been carried out mainly refer to very large countries such as Canada and the United States, the comparison being made between cities with populations greater or lesser than 500,000 inhabitants. Data acquired was mainly from professional or high-level athletes. The conclusions showed that athletes who grew up in cities with fewer than 500,000 inhabitants had a greater chance of reaching a high level of achievement than those who either came from very small towns or very large ones. These areas offer more chances for playing games, easier access to athletic facilities, greater safety, a greater range of choice, more positive social support and better organization (Curtis & Birch, 1987; Cote et al., 2006; Baker & Logan, 2007; MacDonald, King, Cote, Abernathy 2009; Fraser-Thomas, Cote, MacDonald, 2010).

Other researchers maintain that population size isn't on its own advantageous to the development of an athlete and that other parameters, concerned with the social and cultural environment should be taken into

account. Such parameters are the cultural tradition, athletic system and geographical distribution of the population (Baker, Schoner, Cobley, Schimmwer, Nattie, 2009; Lidor et al., 2010; Bruner, Macdonald, Pickett, Cote, 2011).

The geographic stratification of the Greek population

The geographic stratification of the Greek population during the 20th C. underwent significant changes. According to the 1920 census 22.09% of the population lived in urban areas, 15.2% in suburbia and 61.9% in rural areas. But by the time of the 2001 census 72,8% of the population was living in urban and suburban areas, while the rural population had fallen to 27.2%. The 2001 census also showed that the total population of 10,964,020 dwelt in an area of 131,957 square kilometers, with a population density of 83 per square kilometer. About half of the total population lived in two areas: Attiki, with a population of 3,761,810, and Salonika, with a population of 1,057,825. (*Synoptic Statistical List*, 2009). The geographical structure of the population in relation to the degree of urbanization is considered to be the basic indicator of long-term differentiation in the organization and functioning of education (Konstantinakis, 2008).

This population shift led to the anarchic, unplanned expansion of urban areas, without provision for athletic facilities of any kind (Farmer, Gargalianos, Afthinos, 2006). It was common for towns with populations from 3,000 to 120,000 to have football stadiums with the same seating capacity (Gargalianos & Asimakopoulos 2006). Towns are characterized according to the size of their populations as being Urban (100,000+), Suburban (from 10,000 to 100,000) and Rural (less than 10,000). In total Greece has 8 Urban cities and 212 Suburban towns. (Census - ESYE, 2001). The purpose of the present study is to determine whether the geographical stratification (urban, suburban, rural) within which the athletic club operates influences the organization and planning of the football training provided to young athletes.

Method

The research tool used in the present study was the questionnaire drawn up by Papadopoulos, Mountakis, Stergioulas & Konstantinakis, (2011) comprising questions referring to organization and planning in children's football training. The method of gradual sampling (Cohen, Manion, Morisson, 2000; Kambitsis, 2004) was used for the gathering of data. The population of the study consisted of 806 trainers working in classes giving basic instruction in football, distributed all over the Greek State. The questionnaire was distributed by post.

Results

The distribution of geographical areas in the study was uniform. 33.6% of the trainers who participated in the sample worked in foundation classes based in urban areas, 36.2% in suburban areas and 30.1% in rural ones. With the intention of investigating the relation of instruction planning to the geographical region in which the athletic club was based, a single-direction Analysis of Variance (ANOVA) was employed. The results are presented in table 1.

Table 1. Statistical relation between the instructional plan of the football classes and the geographical area of the club.

Instruction Plan Factors	Geographical area of the athletic Club				ANOVA Test
	Urban	Suburban	Rural	Total	
	Average value (SD)				
1. Duration	2.4 (1.21)	2.3 (1.20)	2.3 (1.15)	2.3 (1.19)	0.73 p>0.482
2. Instructional Aims	4.2 (0.51)	4.0 (0.77)	3.9 (0.76)	4.0 (0.71)	20.41 p<0.001
3 Training Activities	3.3 (0.89)	3.3 (0.93)	2.9 (0.87)	3.2 (0.99)	15.21 p<0.001
4. Scientific Staff	2.6 (0.98)	2.3 (1.06)	1.7 (0.68)	2.2 (0.99)	50.23 p<0.001
5. Athletic facilities	4.0 (0.82)	4.0 (0.82)	4.1 (0.72)	4.0 (0.79)	0.627 p>0.534

With reference to the connection between instructional plans and the geographical area in which the academy is centred, it was ascertained that there is a statistically significant difference in the average values of the following factors: a) "Instructional Aims" in the different areas (ANOVA F= 20,41 & p< 0,001), b) "Training Activities" (ANOVA F= 15,21 & p< 0,001) and c) "Scientific Staff", (ANOVA F= 50,23 & p< 0,001).

With reference to the connection between training planning and the geographical area in which the academy it is centred, it was found that there wasn't a statistically significant difference of either the "Duration" factor or that of the "Athletic facilities" in the different areas in which the academies are centred (ANOVA >p0.5). The criterion of 2 qualitative characteristics χ^2 was employed in the statistical evaluation of the differences in training in different geographical areas. Whenever they didn't fulfill the criteria, the Fisher's Exact Test was employed. Children in urban and suburban areas paid higher instructional fees ($\chi^2= 162,4$, p< 0,001)

than those in the country. Those departments which have many children in the same age category separate them into groups according to their abilities. The best of them constitute the competitive section and the rest the mass section. The number of trainers ($X^2= 321,3$ και $p< 0,001$) in the classes ($X^2= 300,4$, $p< 0,001$), and the number of training sections ($X^2= 27,5$, $p< 0,001$) are greater in urban and suburban sports areas than in the country ($X^2= 82,8$, $p< 0,001$). Rural academies divide their classes according to three age groups ($X^2= 45,2$, $p< 0,001$), they don't keep personal records of individual progress ($X^2= 24,1$, $p< 0,001$), most of them don't have a unified written plan of instruction covering all classes (Fisher's exact test $p<0,001$). Finally, most of the foundation departments in urban and suburban areas evaluate their programmes twice a year ($X^2= 7,9$, $p< 0,05$), table 2.

Table 2. Connection between the geographical area of the football club and the Instructional plan.

Factors	Area where the athletic club is situated				
Organization	Urban	Suburban	Rural	Total	Statistical criterion
Subscription	n=271	n=292	n=243		
Free	20 (13,4)	36 (24,2)	93 (62,4)	149	$X^2= 162,4$ $p< 0,001$
Up to 30 € a month	119 (27,3)	192 (44,0)	125 (28,7)	436	
<30 € a month	132 (59,7)	64 (29,0)	25 (11,3)	221	
Classes					
Competitive	184 (31,9)	203 (35,2)	189 (32,8)	576	$X^2= 11,5$ $p= 0,021$
Mass	15 (26,3)	26 (45,6)	16 (28,1)	57	
Mixed	72 (41,6)	63 (36,4)	38 (22,0)	173	
Number of trainers					
Up to 2	22 (8,5)	70 (26,9)	168 (64,6)	260	$X^2= 321,3$ $p< 0,001$
3 – 4	55 (23,9)	113 (49,1)	62 (27,0)	230	
5 – 8	141 (59,2)	86 (36,1)	11 (4,6)	238	
More than 8	53 (67,9)	23 (29,5)	2 (2,6)	78	
Number of classes					
Up to 2	7 (5,4)	30 (23,3)	92 (71,3)	129	$X^2= 300,4$ $p< 0,001$
3 – 4	27 (12,8)	78 (37,0)	106 (50,2)	211	
5 – 8	111 (41,0)	122 (45,0)	38 (14,0)	271	
More than 8	126 (64,6)	62 (31,8)	7 (3,6)	195	
Children/classes					
Up to 10	5 (33,3)	4 (26,7)	6 (40,0)	15	$X^2= 27,5$ $p< 0,001$
10 – 16	100 (26,4)	141 (37,2)	138 (36,4)	379	
16 – 22	136 (38,2)	131 (36,8)	89 (25,0)	356	
More than 22	30 (53,6)	16 (28,6)	10 (17,9)	56	
Division of classes					
Age/department	67 (36,8)	73 (40,1)	42 (23,1)	182	$X^2= 45,2$ $p< 0,001$
2 ages/class	182 (34,8)	199 (38,0)	142 (27,2)	523	
3 ages/class	14 (20,9)	14 (20,9)	39 (58,2)	67	
Other	8 (23,5)	6 (17,6)	20 (58,8)	34	
Training sessions per week					
Up to 2	38 (20,7)	42 (22,8)	104 (56,5)	184	$X^2= 82,8$ $p< 0,001$
3 – 4	217 (36,7)	239 (40,4)	136 (23,0)	592	
More than 4	16 (53,3)	11 (36,7)	3 (10,0)	30	
Athlete's data card					
Yes	130 (36,4)	149 (41,7)	78 (21,8)	357	$X^2= 24,1$ $p< 0,001$
No	137 (32,0)	133 (31,1)	158 (36,9)	428	
No answer	4 (19,0)	10 (47,6)	7 (33,3)	21	
Unified written plan					
Yes	133 (37,3)	147 (41,2)	77 (21,6)	357	Fisher's exact $p<0,001$
No	134 (30,8)	141 (32,4)	160 (36,8)	435	
No answer	4 (28,6)	4 (28,6)	6 (42,9)	14	
Evaluation					
Yes	163 (35,8)	173 (38,0)	119 (26,2)	455	$X^2= 7,9$ $p= 0,019$
No	107 (30,7)	118 (33,9)	123 (35,3)	348	

Discussion

The foundation classes centred in urban and suburban areas in which the population exceeds 10,000 have the prerequisites for the better organization and planning of football instruction programmes. Children are graded according to age, they have more training sessions per week and more systematic evaluation is made of their progress. These departments also have the possibility of providing the requisite supervision and guidance to

young athletes, which effectively influences their development (Cote et al., 2006; Baker & Logan, 2007; Macdonald et al., 2009; Fraser-Thomas, et al., 2010).

Furthermore, in urban and suburban areas foundation classes have greater opportunities to collaborate with specialists in other areas (e.g. doctors, psychologists, sociologists) and to draw up football instruction programmes suited to the particular abilities and needs of athletes. They are able to create a system of football instruction adapted to the needs of the modern game. Trainers, parents and organizers of athletics are capable of showing a professional approach to instruction (Stratton, Reilly, Mark Williams, Richardson, 2004).

It seems that athletes following athletic programmes in rural areas have less chance of attaining a high standard of performance. Both organization and planning lag behind those of more densely inhabited areas. According to Carlson (1988) rural areas offer fewer opportunities for organized athletics. Curtis and Birch (1987) mention that the lack of peers in low-populated areas hampers the development of the athletic skills that are requisite for top athletes.

Conclusions

Researchers in earlier studies have ascertained that, to a large degree, top athletes are likely to come from cities with populations of over 500,000 (Cote et al., 2006; Baker & Logan, 2007; Macdonald et al., 2009; Fraser-Thomas, et al., 2010). The present study seems to show that large cities with populations over 500,000 like Athens and Thessaloniki are able to offer favorable conditions for youth football training. This fact can be interpreted in the following ways: a) football is traditionally the favored sport in the area that gives priority to the construction of athletic facilities covering the functional needs of foundation departments. b) The training given to younger children, as proposed by the Greek Football Federation, can be carried out in smaller installations than usual (Hellenic Football Organization: Guide for Juvenile Training), c) Greece has a climate that favors open-air training throughout the year. d) A whole range of athletic facilities and installations were created in urban centres in preparation for the Olympic Games in 2004 (for example the Athens underground and trolley services), e) Both the athletic traditions of the country and its football successes at a national level contribute to give special emphasis to the development of the sport in highly-populated areas. In conclusion, the geographical distribution of the population influences the quality of the instruction it receives and contributes positively to the training and development of young football athletes.

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