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THE PHYSIQUE OF THE STUDENTS APPLYING FOR ADMISSION TO THE UNIVERSITY OF PHYSICAL EDUCATION BUDAPEST IN RESPECT OF THE PARENTS' EDUCATIONAL QUALIFICATION

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Abstract: *The connection between the physique and the educational qualification of the parents in 241 female and 286 male applicants at the University of Physical Education were studied. Educational level was divided into 5 subgroups. The applicants' mean age was 18.69 year. Stature, body mass and the Conrad's growth type described by the metric and plastic indices were analyzed. Body fat content was estimated by Parízková's method and the applicants' vital capacity also was measured. Basic statistics and analysis of variance were used. No significant difference was found in the female subroups but there were two marked differences in the males, namely, in their vital capacity and the plastic index values in connection with parents' educational qualification.*

Key words: *University candidates; Physique; Parents' educational qualification.*

Introduction

Now we try for the first time to report our investigation about one factor of the socio-economical background, namely, the parents' educational qualification, in the candidates at the University of Physical Education, in connection with their physique.

Though we may gain interesting information indirectly about the students' motivation in choosing that profession, and the influence of the parents till this time no reference could be found for this respect of the theme.

There are a great number of publications concerning the body build and motor performance of the university students and especially, physical education students in Hungary, e.g. Farmosi (1985) and Reigl (1983), as well as in the international literature (Bale 1985, Carter et al. 1973, Skibinska et al. 1976). In the two latter reports the physique of physical education students in the several countries also was compared. At an earlier conference, in 1986, we reported on the physique and motor performance scores studied in the applicants at the Hungarian University of Physical Education, Budapest (Farkas et al. 1986).

This time the aim of our study is to answer the questions whether the level of the parents' educational qualification has any influence on the applicants' choosing our university and if the physique of the applicants categorized by this level would differ in this respect.

Material and Methods

The subjects were 241 female and 286 male applicants taking part in the admission procedure in 1986 and 1987. The applicants were divided into five subgroups by their parents' educational qualification. The first group was where both parents had a university-level qualification, while the families where only one of the parents had that degree belonged to the second group. When both parents were skilled workers, they

were assigned to the third group, when only one of them was a skilled worker they belonged to the fourth group. The last was a mixed group in which parental cases we could not range into the above-mentioned groups were placed. When grouping, the higher degree was taken into account in every case in which the parents' qualification differed.

The studied parameters were: decimal age, stature, body mass, body fat content described by Parízková's method, the metric and plastic indices of Conrad's growth type and vital capacity. In taking the body measurements the recommandations of Tanner et al. (see Weiner and Lourie 1969) were observed. In addition to the basic statistics ANOVA was used.

Results and Discussion

Table 1 shows the numbers of the applicants in the five subgroups and also the percentage distribution values. It can be seen that there were more male applicants than females, and there were more applicants in the first plus the second groups than in the other three together. So, we might say that the children of parents with a higher level of education want to graduate in greater number at our university, in both sexes.

Table 1. **The number of the applicants in the subgroups according to the educational level of their parents**

Educational qualification groups		1	2	3	4	5	Altogether
Females	N:	63	58	38	27	55	241
	%	26	24	16	11	23	100
Males	N:	83	79	32	39	53	286
	%	29	28	11	13	19	100

Table 2 contains the means and standard deviations of the studied characteristics in the *girls* and the results of the F-test at the 5% level of significance.

By the decimal age values it may be stated that in all the five subgroups there were more applicants who came to the university for the second or third time, as they were allowed to take part in the admission procedure for the first time when they were 18 years old. The higher the decimal mean age, the more times the applicants have taken part in the admission procedure. As indicated by the abbreviation n.s., there were no significant differences between the subgroups in any of the studied parameters in the girls, in connection with the parents' educational qualification.

Table 3 shows the same characteristics of the *males*. The observed decimal age means and the high values of the standard deviations again were explained by the fact that some of the boys came for the second or third times to gain admission to the university. In contrast with the girls, in the males there were two marked differences in connection with the parents' educational level. Namely, for the plastic index and vital capacity significant F-test values were found, presumably caused by the glaring differences in the

third group applicants. Although they were neither significantly taller, nor heavier than their peers, they had a greater plastic index and vital capacity. Since vital capacity is more explicitly structural than a functional characteristic, there must be some hidden quality in their physique and also some unknown effects that may explain these phenomena in the group where both parents are qualified as skilled workers.

Table 2. **The means and standard deviations of the characteristics in the females***

Educational qualification groups		DA	ST	BM	BF%	MIX	PLX	VC
1	x	18.61	167.52	59.01	18.22	-1.25	78.49	3.76
	s	1.17	5.72	7.62	4.23	0.34	3.80	0.49
2	x	18.49	165.06	56.40	17.57	-1.19	77.86	3.69
	s	0.86	5.95	5.94	4.39	0.46	3.91	0.47
3	x	18.94	166.02	59.24	18.42	-1.11	79.12	3.77
	s	0.92	5.63	6.39	4.83	0.37	2.72	0.50
4	x	18.71	166.81	58.22	16.10	-1.28	78.38	3.79
	s	0.94	8.21	10.58	5.28	0.41	3.95	0.81
5	x	18.71	167.20	59.42	18.51	-1.22	78.91	3.76
	s	1.01	6.27	6.62	4.56	0.42	3.08	0.47
F		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

*Where: DA = decimal age; ST = stature; BM = body mass; BF% = body fat content in per cent of the body mass; MIX = metric index; PLX = plastic index; VC = vital capacity; F-test n.s. = non significant

Table 3. **The means and standard deviations of the characteristics in the males***

Educational qualification groups		DA	ST	BM	BF%	MIX	PLX	VC
1	x	18.61	178.53	70.58	11.02	-1.09	88.25	5.15
	s	0.87	5.56	6.45	3.68	0.38	3.48	0.60
2	x	18.74	176.64	69.81	11.04	-1.11	88.49	4.94
	s	0.98	7.09	7.54	3.54	0.32	3.32	0.55
3	x	19.03	178.91	72.75	10.34	-0.96	90.41	5.31
	s	1.45	7.17	8.62	3.17	0.36	3.69	0.60
4	x	18.69	178.15	70.74	10.32	-1.04	88.53	5.16
	s	0.92	5.93	6.71	3.48	0.34	3.62	0.65
5	x	18.63	177.49	68.98	9.55	-1.16	88.29	4.96
	s	1.00	6.22	7.38	2.66	0.32	3.22	0.54
F		n.s.	n.s.	n.s.	n.s.	n.s.	**	**

*Where: DA = decimal age; ST = stature; BM = body mass; BF% = body fat content in per cent of the body mass; MIX = metric index; PLX = plastic index; VC = vital capacity; F-test n.s. = non significant; ** = significant difference at 5% level

It might be that the boys in that surroundings move much more than the others and the physical activity proper, because of the parents' example still has its deserved honour. Or, are there any other reasons, for this kind of physique? It is not easy to be answered by that one study, so we cannot tell exactly what the real explanation is, at that moment.

In our study the applicants' physique in the five subgroups formed by their parents' educational qualification was described.

We found that in the females there were no significant differences between the subgroups while the male candidates differed in two of the characteristics, i.e. in the plastic index and in vital capacity.

Since the girls did not differ in any case we might say that their physique was the same, statistically, irrespective of whether the parents were high-educated or skilled workers, or belonged to the mixed group.

The highest values of the standard deviations in the chronological age, found in the first group girls and in the third group male candidates, show that they came repeatedly for the admission procedure and tried again and again their luck. We might say they had the will-power to insist for years till they could gain admission, though it was not certain that they finally would succeed.

We are going to repeat the investigation in other groups of applicants in the next years to get more evidence and to gain more information about the connection between the number of the applicants in the subgroups, their physique and the educational qualification of their parents.

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