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SOMATIC AND PSYCHOLOGICAL CHARACTERISTICS OF HUNGARIAN FEMALE DRIVERS

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Abstract. The physique and the psychic characters of 106 Hungarian female drivers working at the Budapest Transport Company as bus-, trolleybus- and underground railway drivers were examined. Somatotypic comparison was made between drivers, and normal fertile women. Psychic characters were examined by the Luscher-, Szondi-, Rotter-, and CPI-tests, and also comparisons between somatic and psychic characters were made.

Key words: physique, psychological characteristics, female drivers, Budapest, Luscher's test, Szondi's test, CPI-test.

Introduction

The steady increase in the number of working women is a characteristic phenomenon of the 20th century.

In societies of mainly agricultural and handicraft character there is no such a marked difference between housewives and females working outside their home, as can be found in industrial countries. It is only in the industrial and servicing branches that female employment, going together with a long absence from home, causes some difficulties in the housekeeping of the family. It can be added that the employment of women in social production widens their social relations, too, giving them an autonomous place and, consequently, a clearer consciousness of their personality.

More and more working places and jobs which were exclusively for men in the recent past have by now been occupied by women, too. For example, in Hungary the first female bus drivers have also began their work this year. This fact gave us the idea to examine some somatic and psychological characteristics of the Hungarian female drivers.

Material and Methods

Our data were collected on 106 Hungarian female drivers working at the Budapest Transport Company as bus-, trolleybus- and underground drivers. The volunteer subjects were of a mean age of 28.3 years, ranging from 18 to 49 years. Somatotyping was made with the Heath—Carter method, while the psychological characters were examined by the Lüscher-, Szondi- and CPI-tests (Lüscher 1969, Furrer 1955, Mérei 1965, Oláh 1979).

Results and Discussion

The Heath—Carter's somatotype describes body morphology as well as body composition, thus it is a very good shorthand description of human physique.

The somatotypes of the Hungarian female drivers are presented in Fig. 1. The majority of the drivers show endomorphy, only some subjects are meso- or ectomorphic. The mean somatotype is not far from the "classic" rate of endomorphy, while the means of the first, second and third components are: 6.83—2.90—1.59, respectively.

The somatotypes of the control fertile women — investigated by EIBEN (EIBEN et al. 1974) — are different from those of the drivers (Fig. 2). Though the majority of the healthy fertile women also show endomorphy, they are next to the border of mesomorphy and several subjects are meso- or ectomorphic. The mean somatotype of the control group is also nearer to mesomorphy. The mean rates of the three components are: 4.73—3.50—1.46, respectively.

Among the psychological tests the results of the Lüscher's test were analysed first. The data of the first subtype of Lüscher's test show that the majority of the female drivers have extrovert personalities because they prefer light shades of colour to dark ones, refusing the latter (Table 1). The rank of the weighted mean of the drivers is different from the Hungarian female standard (RÓKUSFALVY et al. 1971).

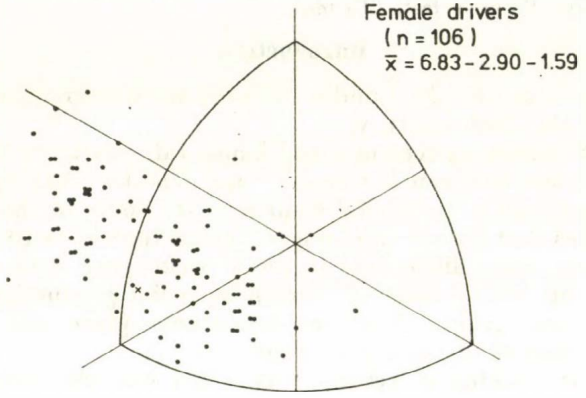

Fig. 1: Somatochart of the Hungarian female drivers

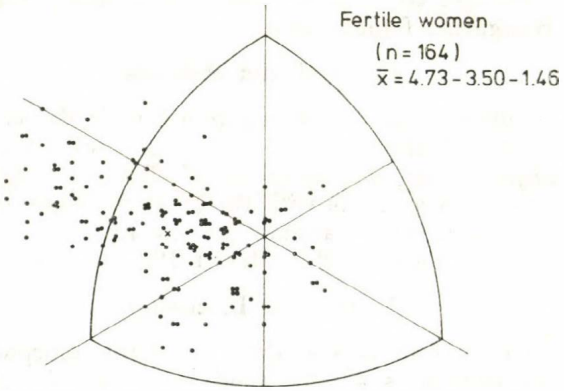

Fig. 2: Somatochart of fertile women (after EIBEN et al. 1974)

Table 1

Lüscher's test: a list of choices of grey colours
(0 = grey, 1 = greyish-black, 2 = black, 3 = greyish-white, 4 = white)

colours \ list of choices	I	I	III	IV	V
0	16	20	24	13	7
1—2	21	21	30	46	41
3—4	43	39	27	19	32

the rank of the weighted mean:

Female drivers	*Hungarian female standard*
0 3 4 2 1	3 0 2 1 4

The data of the second subtype of Lüscher's test (Table 2) similarly indicate the extrovert personalities of the subjects on the basis of their choosing red and yellow colours. Furthermore, they reflect a large vital- and will power as well as a motor activity. The refusal of the grey colour shows a large stimulus and hunger of adventure. The results of the first and second investigations are very similar, which means small vegetative-affective vacillation of tone in female drivers. The female control (RÓKUSFALVY et al. 1971) is different from our sample.

Table 2

Lüscher's test: the rank of the weighted mean in the choice of 8 colours (0 = grey, 1 = blue, 2 = green, 3 = red, 4 = yellow, 5 = purple, 6 = brown, 7 = black)

a) Female drivers

investigations \ list of choices	I	II	III	IV	V	VI	VII	VIII
First investigation	3	4	2	6	1	5	0	7
Second investigation	3	4	2	6	5	1	0	7

b) Female control
(A = 21—30 years, B = 31—40 years)

	investigations \ list of choices	I	II	III	IV	V	VI	VII	VIII
A	First investigation	3	2	4	5	6	0	1	7
	Second investigation	3	4	2	5	6	0	1	7
B	First investigation	3	2	4	5	0	1	6	7
	Second investigation	3	5	4	0	2	6	1	7

The results of the third subtype of Lüscher's test are very interesting (Table 3). The refusal of the blue and yellow colours is most frequent among the drivers, which reflects a refusal of the heteronomous behaviour.

Table 3

Lüscher's test: the frequency of refused prime-colours

list of choises / prime colours	A_1 (VI)	A_2 (VII)	A_3 (VIII)	Total	
				obs.	%
Blue (1)	8	18	13	39	49.0
Green (2)	3	7	3	13	16.7
Red (3)	6	6	1	13	16.7
Yellow (4)	10	6	4	20	25.0

56.2 per cent of the female drivers refused one prime colour, 22.5 per cent two prime colours and 1.25 percent three such colours.

The values of the vegetative indices (1.66 and 1.50) also show ergotrophic-sympathetic tendencies (Table 4).

Table 4

Lüscher's tests: vegetative indices (o. c. = order of choice)

$$VI_{(8\ colours)} = \frac{\text{o.c. of the red (3) colour} + \text{o.c. of the yellow (4) colour}}{\text{o.c. of the blue (1) colour} + \text{o.c. of the green (2) colour}} = 1.66$$

$$VI_{(columns)} = \frac{\text{score of 0 column } 7.3 + 6.8 \text{ (score of P column)}}{\text{score of I column } 4.4 + 4.9 \text{ (score of D column)}} = 1.50$$

In Table 5 the most frequent constellations of Szondi's test are presented. Of them the *P* and Sch vectors show on the one hand the highest tension of emotionality and on the other the well adjustable function of personality, which is a consequence of the function of the emotional and motoric control.

Table 5

Szondi's test: the most frequent constellations

S			P			Sch			C		
h	s	%	e	hy	%	k	p	%	d	m	%
0	−	22.1	+	−	17.0	−	+	27.3	+	0	15.6
+	−	15.6	+	±	12.0	0	+	14.3	−	+	14.3
−	−	14.3	−	−	10.4	±	0	14.3	0	+	11.7
+	0	9.1	0	−	10.4	±	+	11.7	+	±	7.8

The results of the CPI test of the female drivers (Table 3) fit well into the Hungarian female standard except dominance and femininity which are lower (Figure 3).

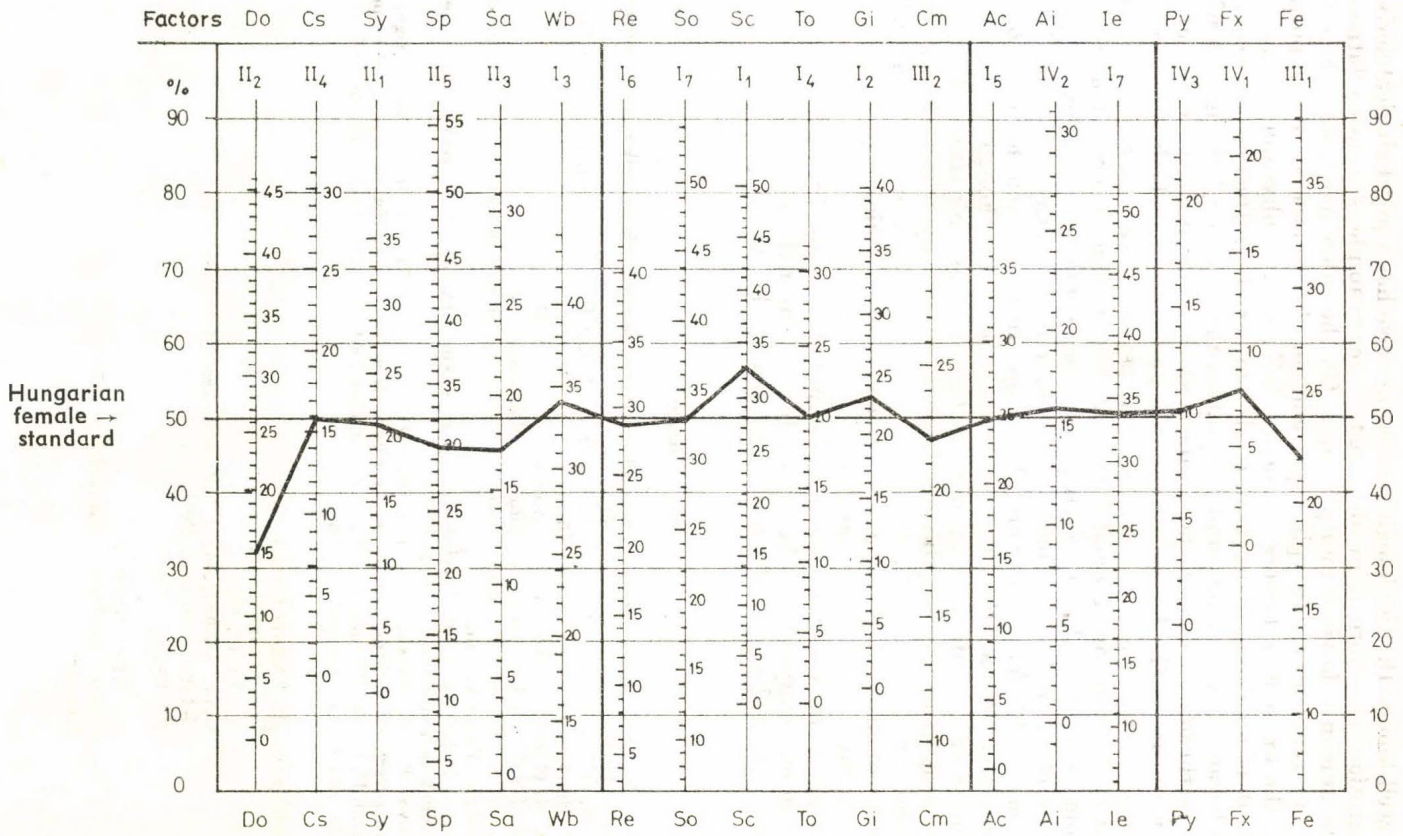

Fig. 3: **The results of the CPI-tests**

It is well-known that a biological structure also has a psychological derivate, or integration. Therefore, there also exists — for example — a close relationship between human behaviour and physique. On the other hand, also the effects of the environment on the physique and on the behaviour are important. Among the exogenous factors — having influence on physique — the most important is nutrition. Behaviour is also under the influence of exogenous factors because it is a function of adaptation the dynamical changes of which depend on the homeostasis of the organism and the effects of the environment.

The majority of the female drivers are endomorphic which indicates that they possess large energy reserves. Our psychological examinations show that indeed their personality and behaviour require much energy. For example, according to FURRER (1955) refusing two prime colours is pathologic, and the frequency of the refusers of one prime-colour in a healthy sample is 7.7 per cent. Among the female drivers this proportion is much higher (56.2%). However, in our opinion these figures do not indicate a pathologic psychological condition of the female drivers, only the large intrapsychic stress which is not equal to a signal of distress. Our opinion is supported by WALLNÖFER's (1968) result who examined his subjects before and after an autogenic training. The rank order of his subjects in choosing colours after training (3 4 2 5 1 6 0 7) is very similar to that of our sample.

Summing it up, we may well assume that it was not by chance that the subjects in our sample have chosen a job requiring rich and adequate models of motion obtained genetically and developed by learning.

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