

SOCIO-BIOLOGICAL STUDY OF NEW-BORN GYPSY CHILDREN

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In the course of anthropological study of gypsy school children it has been found out that the body weight and height of these individuals are below those of the Czech youth (J. Suchý 1968a, 1968b, H. Malá and J. Suchý 1970). In studying the personal data in the medical material the authors found on rare occasions information about the birth length and weight of some of these children. The authors tried to obtain the maximum of such information, as well as information about mothers, in order to establish a group of individuals that would offer, from the anthropological view, a picture of the physical state of these children at the moment of their birth. To obtain a sample of gypsy new-born children that would be relatively numerous the authors verified the entries informing about body weight and length at birth found in the school health certificates by comparing them with information found in birth medical material. This sample was then supplemented by pre-school gypsy children registered at the children's health centre in the city of Hradec Králové as well as by other new-born children of gypsy mothers who gave birth to several children in this maternity home. In the period from October 1969 to the end of the year 1970 the sample was extended to cover all children and their mothers who, after an agreement with the staff of the hospital, were registered in the medical material as of gypsy stock.

A number of cases that were not quite clear, this concerns both mothers and children—were excluded from the sample. Thus, the sample was considerably reduced. The final number of 116 new-born gypsy children and 64 gypsy mothers was compiled in the period from 1961 to 1970. The authors are well aware of the fact that this sample is not very numerous, that it is not natural, homogeneous, and that its character is influenced by a number of adverse factors.

New-born children are characterized by their sex, date of birth, premature or normal birth, birth weight and length. In case of mothers the authors registered, in addition to their names, also the permanent address at the time of birth (and possible changes registered in the health certificates). Further, the authors registered the occupation of mothers, their family status, body height before birth, blood group of the

ABO system and Rh factor, premature or normal birth (as long as this data was not included in the material available). In registering the numbers of live-born children, or the numbers of miscarriages or abortions this data was studied with great care, because with gypsy mothers the possibility of intentional or unintentional false information is very great.

It is a disadvantage of this sample that we do not know in the individual cases of gestation in which week the gestation began, because the difficulties of finding out the gestation age of a gypsy fetus are especially high. For preliminary orientation it was not even possible to use the method of Jičínský (1957), in order to establish, at least approximately, the week in which gestation started. Also, it was not possible to find out, even approximately, whether in the individual cases the fetus was hypotrophic, normal or hypertrophic (according to the tables compiled by Poláček, 1971).

In view of all the mentioned difficulties and drawback of the sample studied and also in view of the fact that there was a very high percentage of brothers and sisters in the sample, the average birth weight and length of new-born children in the sample were lower than those of the Czech population, if we compare the results with those of other authors found in Table 1. The average birth weight and length of children included in this sample are those of live-born individuals, of whom approximately one half survived until the pre-school and the school age. About the fate of the second half we have no information after they had been permitted to leave the maternity home. This fact is certainly linked up with the continuing migration of the gypsy population.

The World Health Organization recommended to describe new-born children with weight less than 2.500 g as children with low birth weight. This division has a great advantage for the comparison of the individual samples from the statistical viewpoint (Poláček, 1968). The sample studied by the present authors, which is from Hradec Králové from the period 1961 to 1970, included 12.9 % gypsy new-born children with birth weight below 2.500 g. Premature births accounted for 15.5 % and immature fetuses represented 10.3 %. In the Pediatrics Institute in Prague-Krč Zeman (1968) found in the period from

TAB. I
Birth weight and birth length of new-born gypsy children

		Hradec Králové Clinic for Obstetrics and Gynaecology (1961—1970) H. Malá 1973	Prague-Krč Institute for the care of sucklings (1964—1966) L. Zeman 1968	Prekmurje Region (1960—1962) Jugoslavia T. Pogačnik 1968	
Birth weight	♂	<i>n</i>	60	43	35
		\bar{x}	2911.8	2911	3055
		<i>s</i>	492	768	560
		min.—max.	1750—3720	1000—4500	1100—4200
	♀	<i>n</i>	56	44	25
		\bar{x}	2950.4	2680	2700
		<i>s</i>	381	656	565
		min.—max.	1800—3700	1300—3900	995—3350
Birth length	♂	<i>n</i>	60	43	35
		\bar{x}	48.0	48.7	50.5
		<i>s</i>	2.5	3.1	3.7
		min.—max.	41—53	39—55	37—56
	♀	<i>n</i>	56	44	25
		\bar{x}	47.9	47.2	48.8
		<i>s</i>	1.9	3.7	3.4
		min.—max.	42—51	40—52	37—53

1964 to 1966 36.9 % children with the weight below 2.500 g. Bokšajová and others (1967), in the course of medial and sociological study of 139 gypsy families in the district of East Slovakia (carried out in 1964), found even 40% of new-born children with birth weight below 2.500 g. The difference to the detriment of children from the Prague Institute is apparently caused by the negative selection of children at this Institute, where the children are hospitalized for the most part for social reasons. The gypsy families studied by Bokšajová and her co-workers belonged in the region of East Slovakia to socially disadvantaged groups.

The explanations of the low birth weight and birth length of new-born gypsy children may be sought in the following two factors:

1. Social and health factor is certainly linked up with frequent insufficient interest on the part of pregnant gypsy women in health care during pregnancy, that is unconcern for medical and health care, and often even refusal of medical and health care. These women frequently meet a physician after the gestation. In the sample described in this article there were a number of women and children who were treated in the maternity hospital after the

gestation, or in some cases one phase of the gestation took place outside the maternity hospital. Another problem are the very frequently repeated pregnancies and also pregnancy of juveniles. The overall style of life, social conditions, lack of education bordering in some cases upon illiteracy, all these are phenomena that play an important role in the factor just described. Virtually nothing is known about the adverse development and adverse influences upon the fetus by infections, toxic substances, hormones, immunopathological, genetical (partial endogamy with Gypsies), and perhaps also psychological factors, which are transferred from the mother to every fetus, especially in the first weeks and months of the pregnancy (Poláček 1968). This is certainly an aspect that comes very much to the foreground in gypsy fetuses. To establish all factors that influence the weight of fetus, as it has been done for example by Doležal and others (1971), the authors would need an extensive sample and much better and more extensive documentation.

2. The ethnic factor is of course reflected in the intrauterine development, because in studying these children we must always bear in mind their Indian origin. The fact that gypsy population has a number

of different anthropological features has already been established by a number of research works. As far as the body height of the adult gypsy population is concerned we may mention here the results published by J. Beneš (1968), who studied adult gypsy males aged 19 to 21, and found for the group of Hungarian gypsy individuals the average body height of $164.3 \text{ cm} \pm 7.50 \text{ s}$ and for the group of Slovak gypsy individuals $167.1 \text{ cm} \pm 7.25 \text{ s}$. In the sample described in this article, that was not very numerous, the gypsy mothers aged 16 to 20 had an average body height before gestation $154.4 \pm 4.58 \text{ s}$ (14 females), while in the age group 21 to 41 years the average body height was $156.4 \pm 5.82 \text{ s}$ (39 females).

CONCLUSION

The birth weight and length of new-born gypsy children established in the years 1961 to 1970 with 116 children born in the maternity hospital in Hradec Králové are lower than the values established for Czech children. Also the percentage of gypsy children who weighed less than 2.500 g is higher. The average birth weights and lengths are roughly the same as those found out by other authors for gypsy new-born children. The percentage of children with low birth weight from the maternity hospital in Hradec Králové is considerably lower than the values found in other gypsy samples. The body height of mothers of these children before gestation was lower than that of mothers in the whole Czech population. The reasons and explanations of the results described in this article must be sought in the first place in social and health conditions as well as in the specific ethnic character of the gypsy population.

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