



COMPARISON OF BODY MEASUREMENTS BETWEEN CROATIAN AND HUNGARIAN GIRLS

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Abstract:

The paper is a result of the bilateral cooperation between the Faculty of Textile Technology of University of Zagreb and the Mechanical Engineering Faculty of Budapest University of Technology and Economics. The aim of the research was to investigate regional differences of girls of the same age group between two countries, Croatia and Hungary.

Within the investigation anthropometric measurements were carried out according to ISO standards. Girls aged between 21 and 25 years from each country were measured.

The paper describes the analysis and results of specific body differences between investigated groups (body height, bust girth, waist girth and hip girth).

Keywords:

regional differences, Croatia, Hungary, anthropometric measurements, ISO standards

1 INTRODUCTION

In order to create good clothing and footwear, it is important to know human body and measure the human body properly [1]. Anthropometric measurements started to gain importance from 1901 when the US Government established the National Bureau of Standards (NBS) with the mission of advancing measurement standardization for science and industry. Afterwards many countries conducted comprehensive anthropometric measurements in order to advance garment size systems. The first method for anthropometric measurements was published in the USA, including 10,042 women in order to obtain a women's apparel size system [2].

Over the period from 2004 to 2006 the first comprehensive anthropometric measurement on the sample of 30,866 subjects from birth up to people aged 82 years was made in 20 Croatian counties and in the city of Zagreb [2, 3]. Continuing investigations of the first anthropometric measurements in the Republic of Croatia, 60 trained female volleyball players of the Croatian Academic Sports Club Mladost, Zagreb, were measured [4].

The research was continued through the scientific project Anthropometric Measurements and Adaptation of the Garment Size System and the bilateral cooperation between the Faculty of Textile Technology of University of Zagreb and the Mechanical Engineering Faculty of Budapest University of Technology and Economics.

The aim of the research was to investigate regional differences of girls from 21 to 25 years of age between Croatia and Hungary.



Measurements of the selected sample were carried out using conventional methods of measuring the human population.

2 EXPERIMENTAL

2.1 Subjects

As a result of the bilateral cooperation between the two countries 23 girls aged between 21 and 25 years were measured. The measurements obtained were compared.

2.2 Anthropometry

Besides the recording of general data of each subject (the subject's identification number, age, date of birth, birthplace), 57 anthropometric measurements were measured in conformity with the international standard ISO 8559 and ISO 3635, using a set of anthropometric measurements [3, 4, 5]. Among the measurements several specific ones were selected, showing deviations and differences in the body constitution of female population (body height, bust girth, waist girth and hip girth).

3 RESULTS AND DISCUSSION

Diagrams with comparing results of the average values of body height, waist girth, hip girth and bust girth for Hungarian and Croatian girls are shown in Figures 1, 2, 3 and 4.

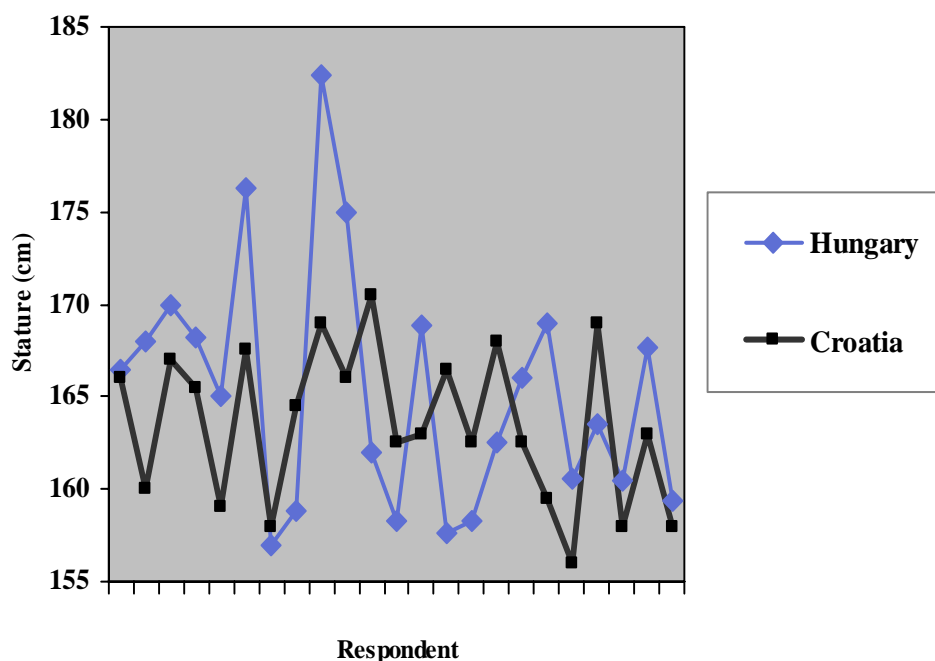


Figure 1: Diagram with body heights for Hungarian and Croatian girls

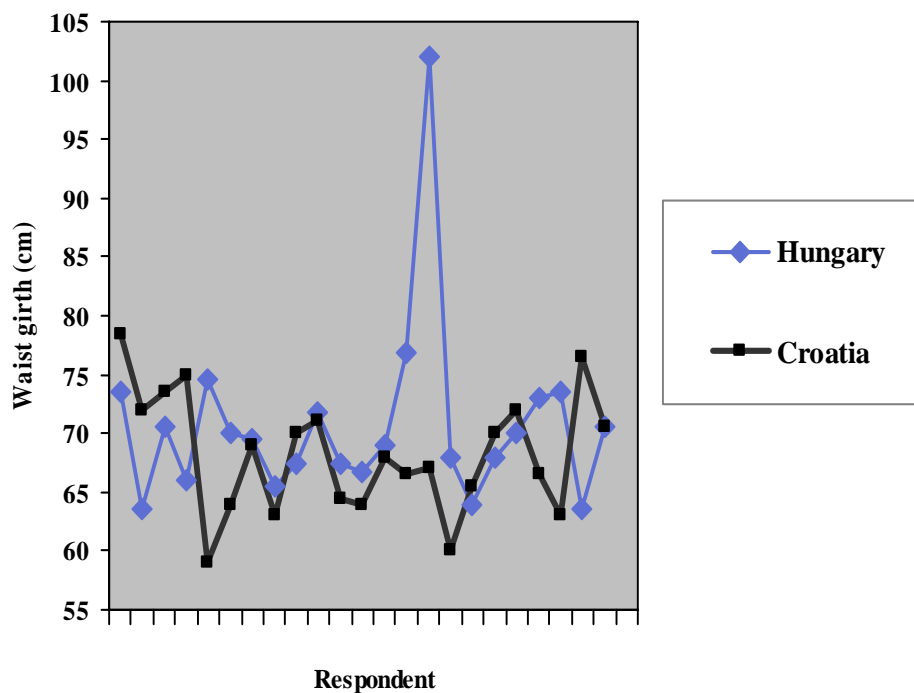


Figure 2: Diagram with waist girths for Hungarian and Croatian girls

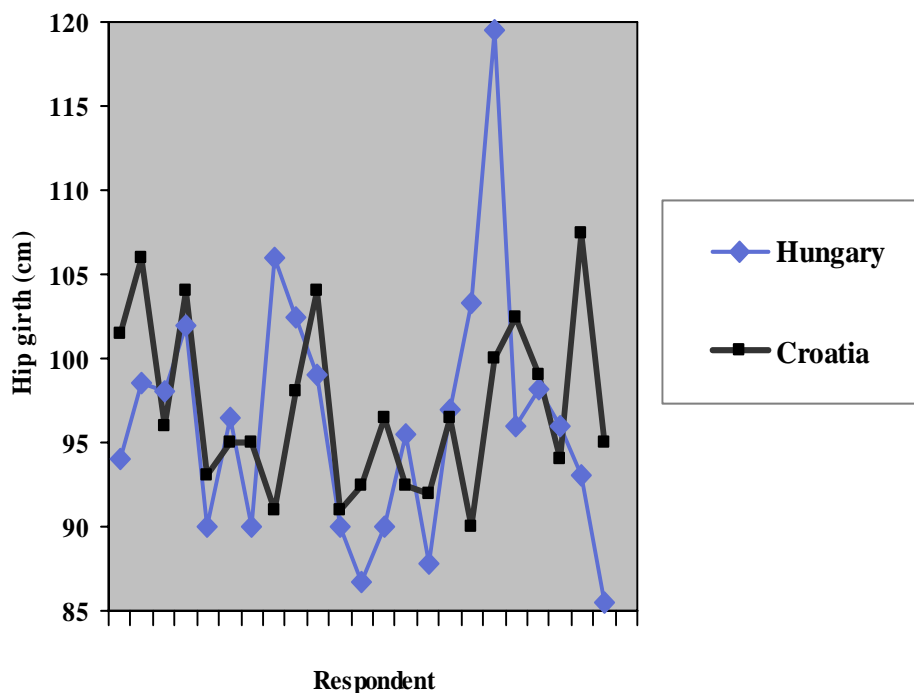


Figure 3: Diagram with hip girths for Hungarian and Croatian girls

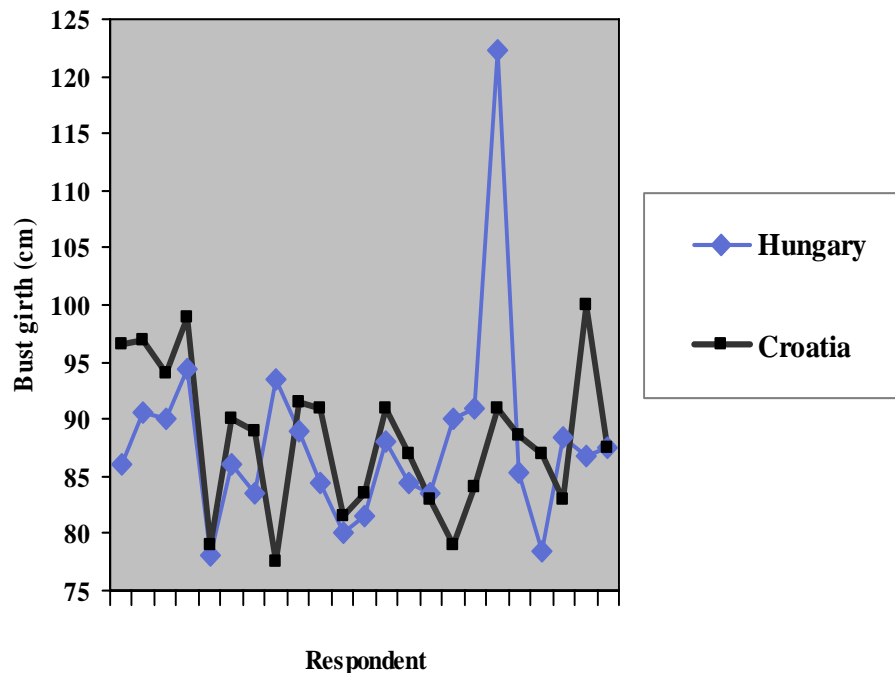


Figure 4: Diagram with bust girths for Hungarian and Croatian girls

The diagrams show the comparison of certain main body measurements of girls of two neighboring countries aged between 21 and 25 years.

The first diagram shows body heights of Hungarian girls between 157 and 182.4 cm and Croatian girls within the range from 158 to 170.5 cm.

The second diagram shows the waist girth of Hungarian girls in the range from 63.6 cm to 102 cm and Croatian girls in the range from 69 cm to 78.5 cm.

The third diagram shows the hip girth of Hungarian girls in the range from 85.5 cm to 119.5, and Croatian girls in the range from 91 cm to 107 cm.

The fourth diagram shows bust girths of Hungarian girls in the range from 78 cm to 122.3 cm and Croatian girls in the range from 77.5 cm to 100 cm.

Based on the data we can conclude that the body measurements shown in all four diagrams differ less in the data for Croatia, girls resemble more each other. Girls of the neighboring country Hungary differ more from each other according to these body measurements.



4 CONCLUSIONS

The paper presents the continued investigation in order to find the body differences between the Croatian and Hungarian girls. Within the investigation anthropometric measurements were carried out according to ISO 8559 and ISO 3635 standards.

If girls of both countries are compared, it can be concluded that the data are similar to each other, girls of both countries have similar physical dimensions as evidenced by numerous factors (climate, diet, lifestyle, etc.).

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