

ŠKERLJ'S STOUTNESS INDEX IN YOUNG MALES IN EAST AFRICA

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ABSTRACT

The research material in this study was male youth in Kenya (n=423), Tanzania (n=153) and the Sudan (n=154). The survey was carried out in 2000 in boarding schools, where students were fed and their time was fully organized for them. These vocational schools, where students learned the professions of a tailor, a joiner, a bricklayer, a car mechanic, a locksmith, a welder and an electrician provided all the students with accommodation in dormitories. The people examined were in the chronological age of between 18 and 30. The calculated Škerlj's Index allows for determining the body stoutness among young men. This study took advantage of people from several different nations and tribes. In all the groups analyzed the dominant levels of stoutness are "average" and "thin".

Keywords: East Africa, Škerlj's Index, the African people, morphological structure.

INTRODUCTION

Morphological characteristics of a number of African countries' populations are not yet well researched. Anthropometric research in this continent is carried out sporadically and fragmentarily. Research is hampered not only due to geographical conditions, but most of all to consequences of the colonisation era. Following several dozen years of independence modern African states are developing dynamically. At the same time Africa is one of the most diversified, both economically and socially, regions in the world. Transformations of political, economic and social structures result in irreversible cultural and ethnic changes on a scale unequaled in any other part of the globe. The pace of all these changes sets up a conflict between reality and the awareness that the native communities have. The anthropometric material collected in East Africa as well as its studies allow for the recording of the natural, but more and more blurred, biocultural images of the continent.

MATERIAL AND METHOD

The research was carried out in the year 2000 on young males, vocational schools students, from Kenya (n=423), Tanzania (n=153) and Sudan (n=154). These young males enjoyed full board offered by their schools. The range of the calendar age was from 18 to

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30. To select students for my study I used the descendency criterium. I gave priority to youth coming from indigent layers of society. The young men might have, in frequent cases, been undernourished before they came to live in school dormitories. Students of three schools based in different countries underwent anthropometric examinations, which brought measurements such as, among others, body height, body mass and thigh circumference.

The aim of this study is to assess the body build of young male Africans in the light of the [kerlj]'s stoutness index $I = [(thigh\ circumference : body\ height) \times 100]$. This index is a simple method of assessing the body build in terms of stoutness (Malinowski & Bożiow 1997). The simplicity of this method and its application are essential in analysing anthropometric material collected in communities other than European ones. The African environment refuses to undergo more complex analyses, that is why the measurements could not interfere with the broadly perceived personal intimacy of Africans. In order to compare the results I used the formula proposed by F. Curtius (Drozdowski 1998), who used the Rohrer's index to describe the type of body build in accordance with the Kretshmer's system.

Material analysis

The Škerlj's stoutness index for Kenyans is contained in the 22, 87-37,17 bracket, for Tanzanians in the 24,37-37,73 bracket and for the Sudanese in the 21,47-33,43 bracket. The lowest arithmetic average equalling 27.15 (with the standard deviation of $\delta=2.38$) is characteristic to the Sudanese group, while the highest one is characteristic to Tanzanians, equalling 31.21 ($\delta=2.43$). Kenyans are between these two, with the arithmetic average higher than that of the Sudanese by 2.64 ($\delta=2.18$) and lower than that of Tanzanians by 1.42. Based on this data we can conclude that the slenderest silhouette is characteristic to the Sudanese. Table 1 presents a collation of percentage results that confirms earlier conclusions.

Table 1: Nationality versus differences between the examined individuals as regards the category of the degree of stoutness (the Škerlj's index)

	thin		average		stout		altogether
	n	%	n	%	n	%	
Kenia	35	8,3	325	76,8	63	14,9	423
Tanzania	6	3,9	93	60,8	54	35,3	153
Sudan	77	50,0	71	46,1	6	3,9	154
altogether	118	16,2	489	67,0	123	16,8	730

Among Kenyans 8.3% of the examined people have a "thin" body build according to the [kerlj]'s index. However, only 3.9% of Tanzanians and as many as 50% of the Sudanese were classified as "thin". As "stout", in the light of the Škerlj's index, can be described 35.3% of Tanzanians, 14.9% of Kenyans and just 3.9% of the Sudanese.

On the basis of the Rohrer's index I assessed types of body build according to the Kretshmer's system, using the formula proposed by Curtius (Drozdowski 1998). This

comparison confirms results obtained by using the Škerlj's index. As Table 2 suggests, males from different countries differ significantly in relation to the degree of their "slenderness".

Table 2: Nationality versus differences between the examined individuals as regards the category of the degree of slenderness (the Rohrer's index)

	slender		medium		stocky		altogether
	n	%	n	%	n	%	
Kenia	34	8,0	331	78,3	58	13,7	423
Tanzania	12	7,8	103	67,3	38	24,8	153
Sudan	80	51,9	70	45,5	4	2,6	154
altogether	126	17,3	504	69	100	13,7	730

Individuals with a slender (leptosomic) body build are most numerous among the Sudanese (51.9%). The average (athletic) type is most frequent among Kenyans (78.3%). The stocky (pyknic) type is most frequent among Tanzanians (24.8%), and least frequent among the Sudanese (2.6%). Such a result confirms a significant slenderness of the Sudanese males and a simultaneous uniqueness of individuals with a stocky, pyknic body build.

CONCLUSIONS

On the basis of the Škerlj's stoutness index it can be concluded that a significant majority of "thin" people is characteristic to the Sudanese, while a large level of stoutness is most frequently presented by Tanzanians who, at the same time, have the lowest number of people with a thin body build (Tab. 1). Apparently, a better morphological construction of Kenyans and Tanzanians is caused by more advantageous socio-economic conditions in those countries. As far as the Sudanese are concerned, however, their weaker build might be a result of harsh natural environmental conditions and the consequences of long years of an ethnic conflict.

The African environment is still attractive to anthropologists. A material analysis can also be conducted when based on basic anthropometric measurements. The use of state-of-the-art research techniques by a European person is frequently impossible due to Africans' social feelings and difficult environmental conditions. Because of that, the Škerlj's index is, among others, a proper tool for assessing the body build.

Cultural transformations, which affect Africa too, cause irreversible changes in these aboriginal communities.

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POVZETEK

Škerljev indeks korpulentnosti pri mladih moških v Vzhodni Afriki

Vzorec predstavlja mlade moške: 423 iz Kenije, 153 iz Tanzanije in 154 iz Sudana. Raziskava je bila izvedena leta 2000 v dijaških domovih, kjer sta prehrana in prenočišče organizirana za vse učence poklicnih šol, kjer se dijaki učijo za poklic krojača, mizarja, zidarja, avtomehanika, ključavničarja, varilca in električarja. Osebe, vključene v raziskavo, so stare od 18 do 30 let, pripadajo pa različnim narodom in plemenom dveh jezikovnih skupin (nilotske in bantu). Na osnovi antropometričnih mer izračunan Škerljev indeks omogoča oceno korpulentnosti telesa. Pri vseh analiziranih skupinah prevladujeta povprečna in »suha« stopnja korpulentnosti.

Ključne besede: Vzhodna Afrika, Škerljev indeks korpulentnosti, Afričani, morfološka struktura

