

Body Composition And Somatotype By Sex In Candidates That Apply To Dance And Theater University Degrees

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ABSTRACT:

PURPOSE: To determine and to compare the body composition and somatotype profiles with anthropometric methods by sex in Mexican candidates that apply to dance and theater university degrees at the University of Guadalajara.

METHODS: 264 (95 males, 169 females) Mexican candidates that applied to dance and theater university degrees were evaluated anthropometrically by certified staff by International Society for the Advancement of Kinanthropometry (ISAK). A complete profile anthropometric evaluation according to ISAK methodology was performed for each subject. We estimated body composition by four compartments according to Kerr equations (adipose, muscle, bone, and visceral tissues), and Somatotype was determined by the Heath and Carter method (decimal equations). The sample was divided by sex. Body composition values (adipose tissue, muscle, bone) and the somatotype components were expressed as mean, standard deviation, minimum and maximum. T-test for independent samples was used to compare variables by sex.

RESULTS: Subject's age, weight, height, and body mass index were: 19 ± 3 and 19 ± 2 years, 67 ± 13 and 57 ± 12 kg; 172 ± 8 and 160 ± 6 cm; and 22 ± 4 and 22 ± 4 kg/m², for males and females, respectively. There were significant differences in the three compartments between males and females (percentage and mass). In the case of somatotype, we found that values of Endomorphy were lower and values of Ectomorphy were higher in males than females. Values of Mesomorphy were similar among sex. The mean value for males was Central (4-4-3), while in females was Mesomorphic Endomorph (5-4-2).

CONCLUSIONS: In this study, we found that body composition, as well as somatotype, differs by sex. However, the sample was not divided by performing art (dance and theater), being able to find either similarities or differences with the existing literature.

INTRODUCTION

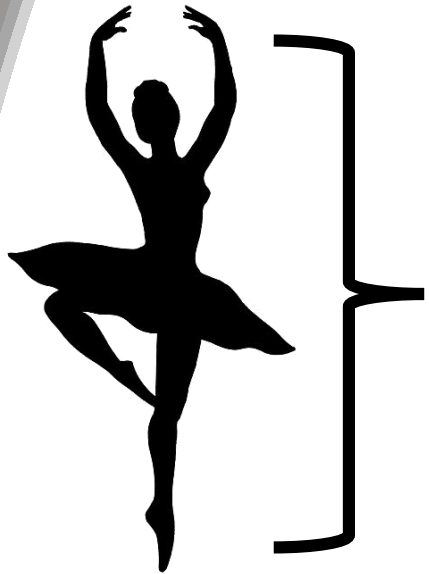
Physique attributes



-Body size
-Shape
-Composition



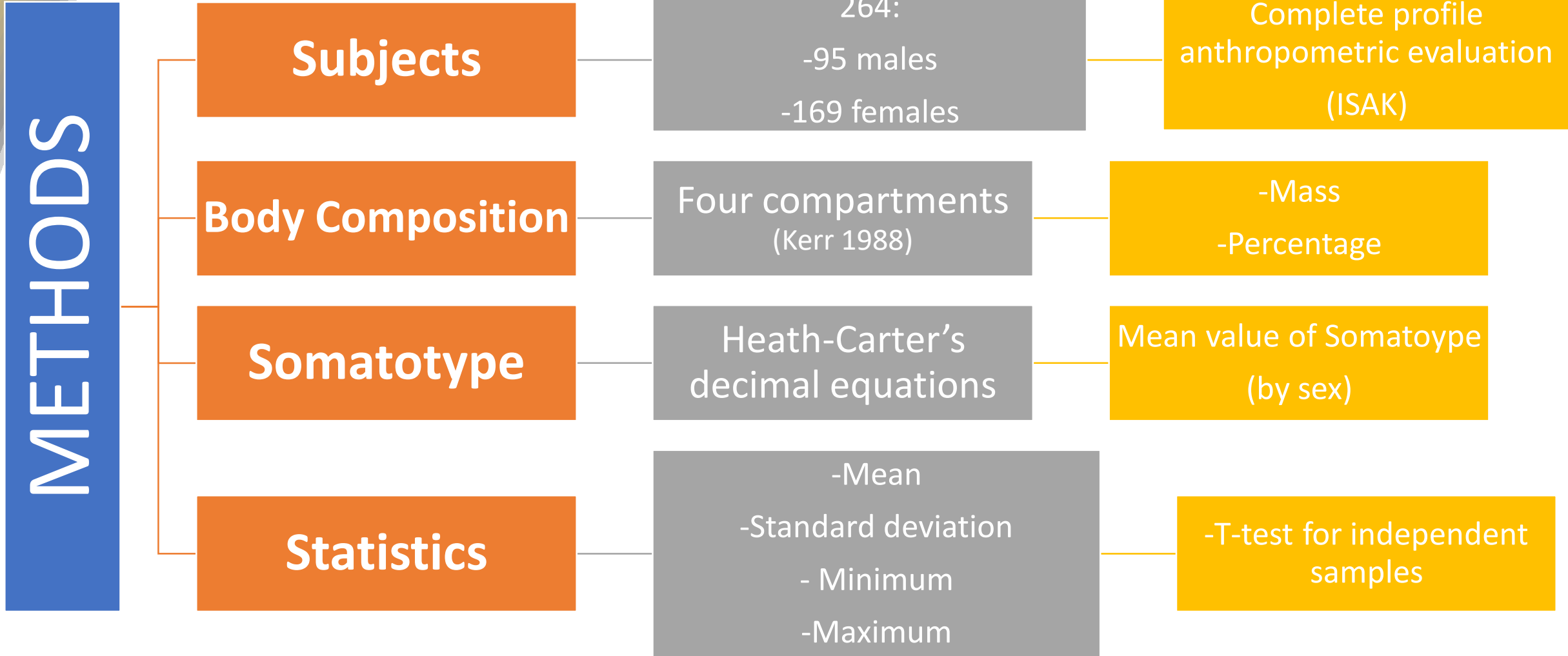
Success
(various sports)



-Anthropometry
-Important role
-Selection and performance criteria

PURPOSE:

To determine and to compare the body composition and somatotype profiles with anthropometric methods by sex in Mexican candidates that apply to dance and theater university degrees at the University of Guadalajara.



RESULTS

Table 1.

Candidates general description (n=264)*			
Variable	Total	Males (n=95)	Females (n=169)
Age (Years)	19 ± 2.3	19 ± 2.6	19 ± 2.0
Weight (kg)	60 ± 13.2	67 ± 13.3	57 ± 11.7
Height (cm)	164 ± 8.8	172 ± 7.7	160 ± 5.9
BMI (kg/m ²) **	22 ± 4.0	22 ± 4.1	22 ± 3.9

*Expressed as mean ± standard deviation

**BMI: Body Mass Index

Table 2.

Body composition and somatotype profile of the evaluated subjects

Variable	Total (n=264)	Males (n=95)	Females (n=169)	p-value
Adipose tissue (%)	27 ± 7.4 (8-40)	20 ± 5.7 (8-32)	31 ± 4.4 (19-40)	<0.001
Adipose tissue (kg)	16 ± 6.2 (3-36)	14 ± 6.2 (3-32)	18 ± 5.7 (7-36)	<0.001
Muscle mass (%)	35 ± 5.1 (25-50)	40 ± 4.6 (29-50)	33 ± 3.4 (25-41)	<0.001
Muscle mass (kg)	21 ± 5.4 (13-43)	26 ± 4.5 (16-43)	18 ± 3.5 (13-40)	<0.001
Bone mass (%)	16 ± 2.1 (10-23)	17 ± 2.3 (10-23)	15 ± 1.8 (10-20)	<0.001
Bone mass (kg)	9 ± 1.7 (7-15)	11 ± 1.5 (7-15)	9 ± 1.1 (7-12)	<0.001
Endomorphy	4 ± 1.6 (1-8)	4 ± 1.5 (1-8)	5 ± 1.4 (2-8)	<0.001
Mesomorphy	4 ± 1.4 (1-11)	4 ± 1.3 (1-9)	4 ± 1.4 (1-11)	1.000
Ectomorphy	2 ± 1.4 (0-8)	3 ± 1.5 (0-8)	2 ± 1.4 (0-6)	<0.001

Data expressed as mean ± standard deviation (min-max)

CONCLUSIONS

