



Correlations of body structure and size indicators with personality indicators of practically healthy women with mesomorphic somatotype

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The category of personality is one of the basic concepts for psychology, but at the same time the most controversial in theoretical and methodological terms. That is why the study of personal characteristics in different populations, ethnicities, ages, professional groups, etc. still does not lose its relevance in the scientific field. Given that certain components of individual personality traits are innate, it is advisable to find connections between them and the characteristics of the human body. The purpose of the work is to determine and analyze the peculiarities of correlations between indicators of body structure and size and personality indicators of practically healthy women with mesomorphic somatotype. Primary anthropo-somatotypological and personality indicators of 33 practically healthy Ukrainian women of the first mature age of mesomorphic somatotype were selected from the data bank of materials of the research center of National Pirogov Memorial Medical University, Vinnytsya. The analysis of correlations between anthropo-somatotypological and indicators of personality traits was performed in the licensed package "Statistica 6.1" using the non-parametric Spearman's method. Multiple, mostly reliable, medium-strength straight lines ($r = -0.35$ to -0.50), Eysenck G. insincerity scales with the majority of girth dimensions, thickness of skin and fat folds, somatotype components, and body weight component composition; multiple, mostly significant medium-strength inverse ($r = -0.37$ to -0.52) correlations of the exaltation character of the exalted type according to Shmishek G. with the majority of girth dimensions, the majority of pelvic sizes, somatotype components and components of body weight composition; multiple significant mean strength inverse ($r = -0.38$ to -0.49) correlations of the extraversion-introversion scale according to Eysenck G. with the thickness of the skin and fat folds of the upper limb and under the shoulder blade. In other cases, single, medium-strength, reliable and unreliable direct and inverse correlations of anthropo-somatotypological indicators with the leading typological characteristics of temperament, psychodynamic features of personality and indicators of severity and features of accentuated personality traits. As a result of quantitative analysis of reliable and unreliable average correlations of anthropo-somatotypological indicators with personality traits of practically healthy women of mesomorphic somatotype, the highest relative percentage of correlations was found between: leading typological characteristics of temperament according to Eysenck G. and somatotype components body weight composition and body girth; psychodynamic personality traits according to Spielberger C. D. and longitudinal body size, thickness of skin and fat folds and components of the somatotype; indicators of severity and features of accentuated personality traits according to Shmishek G. and indicators of the component composition of body weight, somatotype components, body circumference and thickness of skin and fat folds; indicators of the level of subjective control over Rotter J. and the width of the distal epiphyses of the extremities and the transverse dimensions of the body.

Keywords: correlations, anthropometric and somatotypological indicators, indicators of personality traits, practically healthy women, mesomorphic somatotype.

Introduction

Maintaining the psychological health of the population remains a priority in twentieth-century medicine. Due to the changes that humanity has undergone as a result of technological progress, the old structures of society have changed, and with them arose new problems, in the form of an increase in the number of psychological and mental illnesses.

A 2012 analysis of the National Health Interview Survey (USA), which included information on 34,525 adults, found that 61 % of people over the age of 18 were in very good or good health. 4.5 % faced stress almost all the time, 3.2 % felt lonely, 2.2 % felt hopeless, and 1.9 % felt insignificant [3].

The spread of mental illness and its consequences is heterogeneous not only within one historical region, but even among the neighboring countries that make it up. Data on the observation of mentally ill people in the period 1987-2006 in Denmark, Sweden and Finland revealed the existence of sex, age and ethnic characteristics of mortality among the mentally ill population: the death rate per 100,000 population for Denmark, Sweden and Finland was 25.1, 9.3 and 20.6 in 2000-2006 for men and 38.8, 18.8 and 36.6 for women, respectively [31].

However, the primary task of scientists should be to find normative indicators of the psychological state of man, namely indicators of personality traits. Thus, there is a need to identify easily researchable, easy-to-use indicators that could indicate the state of indicators of personality traits.

Anthropometric indicators, such as height, weight, skin pattern of fingers and palms, etc., as evidenced by domestic and international practice [6, 10, 12] fit perfectly into this context.

The aim of the work is to determine and analyze the peculiarities of correlations between indicators of buoy and body size and personality indicators of practically healthy women with mesomorphic somatotype.

Materials and methods

Primary anthropometric and somatotypological indicators, as well as indicators of personality characteristics of practically healthy Ukrainian women of mesomorphic somatotype (n=33) aged 21 to 35 years were selected from the database of materials of the research center of National Pirogov Memorial Medical University, Vinnytsya.

Anthropometric examination according to the scheme of V. V. Bunak [4] included the definition of: head size (cm) - girth (OB_GL), maximum length (B_DL_GL), smallest width (N_SH_GL), mandibular width (SH_N_CH), sagittal arch (SAG_DUG), maximum width (B_SH_GL) and face width (SH_LICA); body weight (kg) (W); longitudinal body dimensions (cm) - length (H), height of the upper thoracic point (ATND), height of the pubic point (ATL), height of the acromial point (ATPL), height of the finger point (ATP) and height of the acetabulum (ATV); width of the distal epiphyses of the long tubular bones of the limbs (cm) - shoulder

(EPPL), forearm (EPPR); thighs (EPB) and shins (EPG); body circumference (cm) - shoulder in a tense state (OBPL1), shoulder in a relaxed state (OBPL2), forearm in the upper part (OBPR1), forearm in the lower part (OBPR2), thighs (OBB), shins in the upper part (OBG1), lower legs (OBG2), neck (OBSh), waist (OBT), thighs (OBbB), hands (OBK), feet (OBS), chest on inspiration (OBGK1), chest on exhalation (OBGK2) and chest with calm breathing (OBGK3); transverse dimensions (cm) - transverse mid-thoracic (PSG), transverse lower-thoracic (PNG), anterior-posterior chest size (SGK) and shoulder width (ACR), interspinous distance (SPIN), intercrystal distance (CRIS), intertrochanteric distance (TROCH) and only in women, superficial conjugates (CONJ); thickness of skin and fat folds (TSFF) (mm) - on the back surface of the shoulder (GZPL), on the front surface of the shoulder (GPPL), on the forearm (GPR), under the shoulder blade (GL), on the chest (GGR), on the abdomen (GG), on the side (GB), on the thigh (GBD) and on the shin (GGL).

The somatotype calculated according to the mathematical scheme of J. Carter and B. Heath [5] included determinations in points: endomorphic component (FX), mesomorphic component (MX) and ectomorphic component (LX).

Fat, bone and muscle components of body weight (kg) were determined by the formulas of J. Matiegka [17]: muscle mass (MM), bone mass (OM) and fat mass (DM). In addition, the muscle component of body weight (MA) was assessed by the method of the American Institute of Nutrition (AIN) [29].

The study of individual personality traits of the organism was conducted using personality questionnaires [7, 8, 9, 16, 18, 23, 24].

The evaluation of the leading typological characteristics of temperament according to Eysenck G. included the definition (score): indicator on the scale of extraversion-introversion (AZ_E), indicator on the scale of neuroticism (AZ_N) and indicator on the scale of insincerity (AZ_L).

Determination of psychodynamic personality traits by Spielberger C. D. in the modification of Khanin Y. L. included the definition (score): situational (reactive) anxiety (SP_ST) and personal anxiety (SP_LT).

Assessment of the severity and features of accentuated personality traits by Shmishek G. included the definition (scor.): indicator of accentuation of character of hyperthymic type (SH_G), indicator of accentuation of character of stuck type (SH_Z), indicator of accentuation of character of emotional type (SH_EM), indicator of character accentuation (SH_P), anxiety type accentuation index (SH_T), cyclothymic type character accentuation index (SH_C), demonstrative type character accentuation index (SH_DM), excitatory type character accentuation index (SH_V), dysthymic type character accentuation index (SH_T) character accentuations of the exalted type (SH_EK).

Determination of the components of internality by

Rotter J. in the modification of Bazhin E. F., Golinkina S. O. and Etkind O. M. included the definition (stan): the indicator of the scale of general internality of the level of subjective control (USK_1), the level of subjective control in the field of achievements (USK_2), the indicator of the level of subjective control in the field of failures (USK_3), the indicator of the level of subjective control in the field of family relations (USK_4), the indicator of the level of subjective control in the field of educational (professional) relations (USK_5), the indicator of the level of subjective control in the field of interpersonal relations (USK_6) and the indicator of the level of subjective control in the field of health and disease (USK_7).

The analysis of correlations between anthropo-somatotypological and indicators of personality traits was performed in the licensed package "Statistica 6.1" using the non-parametric Spearman's method.

Results

Table 1 presents the results of correlations between anthropo-somatotypological indicators of practically healthy women of mesomorphic somatotype with the leading typological characteristics of temperament according to Eysenck G. and psychodynamic personality traits according to Spielberger C. D. in the modification of Khanin Y. L.

Table 1. Correlations of anthropo-somatotypological indicators with leading typological characteristics of temperament and psychodynamic features of personality of practically healthy women with mesomorphic somatotype (n=32-33).

Body parameters	Characteristics of temperament			Psychodynamic features of personality	
	AZ_E	AZ_N	AZ_L	SP_ST	SP_LT
OB_GL	-0.15	0.16	-0.01	0.12	0.06
B_DL_GL	0.10	-0.15	0.38	-0.11	0.09
N_SH_GL	0.41	0.12	0.00	-0.15	-0.20
SH_N_CH	0.06	0.08	0.11	-0.07	0.00
SAG_DUG	-0.29	0.16	-0.01	-0.14	-0.25
B_SH_GL	-0.36	-0.04	-0.04	-0.01	-0.05
SH_LICA	0.10	-0.03	0.26	0.09	-0.17
W	-0.27	-0.20	0.32	0.08	-0.19
H	-0.21	-0.13	-0.02	-0.08	-0.14
ATND	-0.15	-0.03	-0.06	-0.04	-0.08
ATL	-0.11	-0.07	0.00	-0.06	-0.12
ATPL	-0.14	-0.16	-0.03	-0.14	-0.19
ATP	-0.27	-0.13	0.09	-0.02	-0.30
ATV	-0.12	-0.06	0.09	-0.03	-0.31
EPPL	-0.21	0.00	0.00	0.02	-0.04
EPPR	-0.04	-0.09	0.14	0.08	-0.10
EPB	-0.09	-0.09	0.21	0.31	-0.07
EPG	0.12	-0.16	0.03	-0.04	-0.07
OBPL1	-0.13	-0.16	0.37	-0.06	-0.18

Continuation of table 1.

Body parameters	Characteristics of temperament			Psychodynamic features of personality	
	AZ_E	AZ_N	AZ_L	SP_ST	SP_LT
OBPL ₂	-0.08	-0.18	0.41	-0.09	-0.27
OBPR ₁	-0.05	-0.36	0.46	-0.08	-0.38
OBPR ₂	-0.15	-0.22	0.11	0.18	-0.11
OBB	-0.12	-0.23	0.40	-0.17	-0.29
OBG ₁	-0.24	-0.16	0.16	-0.14	-0.09
OBG ₂	-0.34	0.10	-0.09	0.06	0.11
OBSH	-0.26	0.01	0.28	-0.07	-0.08
OBT	-0.15	-0.01	0.34	-0.05	-0.09
OBBS	-0.16	-0.08	0.33	0.12	-0.01
OBK	-0.08	-0.13	0.17	-0.03	-0.09
OBS	-0.10	-0.01	-0.05	-0.18	0.12
OBGK ₁	0.20	-0.04	0.36	-0.34	-0.28
OBGK ₂	0.16	-0.11	0.50	-0.25	-0.30
OBGK ₃	0.17	-0.12	0.50	-0.28	-0.33
PSG	-0.14	0.13	0.15	0.04	-0.05
PNG	0.03	-0.11	0.35	0.12	-0.16
SGK	-0.18	-0.13	0.17	-0.10	-0.16
ACR	-0.03	0.02	0.02	-0.03	-0.07
SPIN	-0.15	-0.20	0.02	0.09	-0.09
CRIS	0.06	-0.04	0.20	-0.23	-0.20
TROCH	-0.09	-0.03	0.18	-0.05	-0.05
CONJ	-0.39	-0.13	0.25	0.13	-0.17
GZPL	-0.49	-0.27	0.13	0.12	-0.05
GPPL	-0.46	-0.32	0.09	0.13	-0.07
GPR	-0.39	-0.12	-0.14	0.13	0.10
GL	-0.38	-0.04	0.30	0.21	-0.02
GGR	-0.13	-0.18	-0.06	-0.09	0.10
GG	0.17	-0.06	0.49	-0.08	-0.30
GB	-0.03	-0.36	0.41	-0.32	-0.46
GBD	0.14	-0.18	0.45	-0.20	-0.29
GGL	0.06	-0.18	0.32	-0.14	-0.19
FX	-0.22	-0.33	0.47	-0.13	-0.35
MX	-0.04	-0.14	0.32	-0.07	-0.10
LX	0.16	0.24	-0.45	-0.09	0.23
MM	-0.15	-0.27	0.33	-0.17	-0.26
OM	0.00	0.09	0.08	0.10	-0.09
DM	-0.14	-0.21	0.43	-0.02	-0.29
MA	-0.08	-0.16	0.36	-0.12	-0.21

Notes: here and in the following tables, red background - reliable medium-strength direct correlations; yellow background - unreliable medium-strength direct correlations; blue background - reliable medium-strength feedback correlations; green background - unreliable medium-strength feedback correlations.

Table 2. Correlations of anthropo-somatotypical indicators with indicators of severity and features of accentuated personality traits of practically healthy women with mesomorphic somatotype (n=32-33).

Body parameters	Indicators of severity and features of accentuated personality traits									
	SH_G	SH_Z	SH_EM	SH_P	SH_T	SH_C	SH_DM	SH_V	SH_DC	SH_EK
OB_GL	-0.25	0.25	0.05	0.04	-0.28	0.28	-0.07	0.04	0.05	0.07
B_DL_GL	0.07	0.18	0.19	0.23	-0.09	-0.12	0.08	-0.14	-0.13	-0.15
N_SH_GL	0.21	-0.25	0.19	-0.32	-0.22	0.23	0.37	0.18	-0.31	0.01
SH_N_CH	-0.04	0.07	-0.25	-0.11	-0.44	-0.07	-0.10	0.03	-0.04	0.04
SAG_DUG	-0.36	0.04	0.06	0.03	0.06	0.15	-0.38	-0.23	0.14	-0.32
B_SH_GL	-0.20	0.13	-0.12	0.08	-0.23	0.15	-0.45	-0.12	0.22	-0.09
SH_LICA	0.32	0.21	-0.23	-0.05	-0.25	-0.24	0.10	-0.10	0.02	-0.02
W	0.03	0.24	0.00	-0.08	-0.22	-0.12	-0.25	-0.21	0.14	-0.44
H	-0.10	0.09	-0.22	-0.07	-0.28	-0.07	-0.26	-0.28	0.04	-0.16
ATND	-0.11	0.00	-0.27	-0.14	-0.23	-0.01	-0.26	-0.19	0.05	-0.12
ATL	0.01	0.04	-0.26	-0.14	-0.32	-0.14	-0.22	-0.20	-0.10	-0.05
ATPL	-0.07	0.05	-0.27	-0.16	-0.33	-0.03	-0.18	-0.26	-0.07	-0.10
ATP	-0.24	0.04	-0.34	-0.17	-0.27	0.04	-0.33	-0.22	0.00	-0.18
ATV	-0.01	0.15	-0.17	-0.12	-0.20	-0.13	-0.04	-0.40	-0.10	-0.17
EPPL	-0.25	0.02	0.17	-0.15	-0.20	0.16	-0.19	-0.28	-0.19	-0.28
EPPR	0.01	0.06	0.08	0.00	0.02	-0.11	-0.05	-0.43	-0.15	-0.29
EPB	-0.03	0.08	-0.16	-0.05	-0.06	0.14	-0.21	-0.29	0.07	-0.04
EPG	0.16	-0.05	0.30	-0.08	-0.18	-0.02	0.13	-0.24	-0.26	-0.24
OBPL ₁	0.16	0.36	-0.08	-0.05	-0.33	-0.16	-0.14	-0.10	0.13	-0.38
OBPL ₂	0.19	0.37	-0.05	-0.09	-0.28	-0.18	-0.10	-0.17	0.09	-0.39
OBPR ₁	0.27	0.28	-0.04	-0.13	-0.18	-0.40	-0.01	-0.25	-0.04	-0.51
OBPR ₂	0.22	0.34	-0.02	0.20	-0.08	-0.18	0.13	-0.22	0.14	-0.24
OBB	0.03	0.28	-0.07	-0.33	-0.28	-0.20	-0.22	-0.22	-0.13	-0.47
OBG ₁	0.00	0.21	0.06	-0.16	-0.18	-0.10	-0.17	-0.31	0.00	-0.43
OBG ₂	-0.30	0.16	-0.19	0.08	-0.16	0.07	-0.32	-0.18	0.42	-0.07
OBSH	-0.08	0.25	0.12	-0.01	-0.18	0.02	-0.13	-0.14	0.10	-0.31
OBT	-0.03	0.19	-0.14	-0.15	-0.20	-0.06	-0.11	-0.04	0.08	-0.16
OBBB	0.01	0.27	0.06	-0.13	-0.11	0.04	-0.28	-0.21	0.14	-0.25
OBK	-0.02	0.39	0.10	0.00	-0.11	-0.14	0.05	-0.12	-0.08	-0.31
OBS	-0.10	-0.07	-0.07	0.03	-0.14	-0.01	-0.11	-0.22	0.10	-0.18
OBGK ₁	0.23	0.21	0.17	-0.33	-0.18	-0.20	0.14	-0.20	-0.29	-0.31
OBGK ₂	0.22	0.24	0.15	-0.34	-0.13	-0.23	0.16	-0.27	-0.22	-0.30
OBGK ₃	0.28	0.30	0.11	-0.32	-0.16	-0.27	0.18	-0.21	-0.27	-0.26
PSG	0.04	0.17	-0.22	-0.12	-0.10	-0.01	-0.04	0.15	0.29	0.05
PNG	0.03	0.15	-0.27	-0.12	-0.17	0.04	0.05	-0.16	-0.05	0.06
SGK	-0.07	0.15	-0.01	-0.05	-0.01	-0.08	-0.16	-0.30	0.08	-0.43
ACR	0.19	0.08	0.13	-0.07	-0.15	0.00	0.07	-0.06	0.20	-0.07
SPIN	0.02	-0.18	-0.09	-0.32	-0.06	-0.23	0.06	-0.13	0.03	-0.25
CRIS	0.02	-0.07	0.23	-0.31	0.03	-0.19	0.18	-0.35	-0.30	-0.39
TROCH	-0.01	0.05	0.15	-0.10	-0.18	0.19	-0.06	-0.14	0.09	-0.27

Continuation of table 2.

Body parameters	Indicators of severity and features of accentuated personality traits									
	SH_G	SH_Z	SH_EM	SH_P	SH_T	SH_C	SH_DM	SH_V	SH_DC	SH_EK
CONJ	-0.10	0.33	-0.05	-0.09	-0.07	-0.03	-0.22	-0.20	0.32	-0.40
GZPL	-0.19	0.24	0.08	0.05	-0.12	-0.01	-0.41	-0.17	0.32	-0.49
GPPL	-0.15	0.15	-0.02	0.04	-0.06	0.00	-0.36	-0.13	0.37	-0.40
GPR	-0.25	0.17	0.02	0.16	0.08	0.15	-0.21	-0.10	0.34	-0.25
GL	-0.17	0.31	-0.22	0.06	-0.07	-0.07	-0.23	-0.15	0.31	-0.18
GGR	-0.11	-0.04	-0.08	0.07	0.05	0.05	-0.07	-0.23	0.26	-0.16
GG	0.26	0.09	-0.10	-0.30	-0.19	-0.26	0.20	-0.02	-0.21	-0.24
GB	0.14	-0.07	-0.06	-0.47	-0.23	-0.47	0.07	-0.26	-0.18	-0.51
GBD	0.29	0.12	0.13	-0.25	-0.22	-0.12	0.18	-0.16	-0.14	-0.22
GGL	0.15	0.08	0.12	-0.36	-0.25	-0.11	0.09	-0.10	-0.13	-0.21
FX	0.05	0.18	-0.09	-0.28	-0.28	-0.36	-0.08	-0.20	0.02	-0.52
MX	0.10	0.18	0.15	-0.14	-0.24	0.00	0.00	-0.12	-0.06	-0.37
LX	-0.18	-0.31	-0.02	0.10	0.14	0.20	0.07	0.13	-0.13	0.39
MM	0.09	0.31	-0.13	-0.17	-0.33	-0.29	-0.15	-0.25	-0.06	-0.47
OM	-0.08	-0.01	0.17	0.07	-0.01	0.25	-0.21	-0.34	-0.03	-0.26
DM	0.12	0.27	0.05	-0.30	-0.34	-0.15	-0.03	-0.17	0.00	-0.41
MA	0.16	0.35	-0.12	-0.10	-0.32	-0.20	-0.10	-0.13	0.06	-0.36

Table 3. Correlations of anthropo-somatotypical indicators with indicators of the level of subjective control of practically healthy women of mesomorphic somatotype (n=32-33).

Body parameters	Indicators of the level of subjective control according to Rotter						
	USK_1	USK_2	USK_3	USK_4	USK_5	USK_6	USK_7
OB_GL	0.09	0.29	-0.02	0.10	-0.04	-0.09	0.08
B_DL_GL	0.28	0.08	0.17	-0.01	0.06	0.07	-0.14
N_SH_GL	0.10	0.17	0.00	0.11	0.05	0.08	-0.03
SH_N_CH	0.13	0.30	-0.01	-0.06	0.14	0.04	0.02
SAG_DUG	-0.27	0.02	-0.25	0.02	-0.17	-0.33	-0.26
B_SH_GL	-0.11	0.14	-0.10	0.10	0.06	-0.12	0.01
SH_LICA	0.18	0.31	-0.11	0.12	0.32	-0.04	-0.12
W	0.12	0.26	0.17	0.21	-0.03	-0.10	-0.27
H	0.11	0.22	0.29	0.25	0.21	-0.02	-0.01
ATND	0.09	0.21	0.26	0.26	0.16	0.06	0.08
ATL	0.04	0.18	0.13	0.18	0.22	-0.08	-0.13
ATPL	0.11	0.27	0.26	0.27	0.22	0.07	-0.01
ATP	0.16	0.41	0.23	0.24	0.26	0.22	-0.02
ATV	0.09	0.27	0.21	0.24	0.17	-0.05	-0.33
EPPL	0.17	0.45	0.22	0.31	0.02	0.07	0.01
EPPR	0.08	0.30	0.15	0.29	0.10	-0.09	-0.16
EPB	0.06	0.25	0.17	0.00	0.05	0.20	-0.13
EPG	0.23	0.24	0.33	0.28	0.09	0.07	0.14
OBPL ₁	0.12	0.11	-0.03	-0.04	-0.05	-0.20	-0.23
OBPL ₂	0.15	0.13	0.00	0.02	0.00	-0.23	-0.23

Continuation of table 3.

Body parameters	Indicators of the level of subjective control according to Rotter						
	USK_1	USK_2	USK_3	USK_4	USK_5	USK_6	USK_7
OBPR ₁	0.19	0.20	0.20	0.13	0.04	-0.23	-0.29
OBPR ₂	0.07	0.35	0.12	0.31	-0.15	-0.12	-0.32
OBB	0.18	0.14	0.21	0.12	0.09	-0.10	-0.18
OBG ₁	0.00	0.13	0.13	0.23	-0.14	-0.26	-0.22
OBG ₂	-0.28	-0.08	-0.01	-0.04	-0.21	-0.20	-0.11
OBSH	0.04	0.16	-0.07	0.17	-0.02	-0.25	-0.28
OBT	-0.04	0.04	-0.06	0.04	-0.13	-0.07	-0.35
OBBS	0.11	0.25	0.12	0.08	0.03	0.02	-0.17
OBK	0.14	0.18	0.19	0.15	0.07	-0.17	-0.13
OBS	-0.05	0.05	0.14	0.00	-0.10	0.03	-0.13
OBGK ₁	0.14	0.01	0.01	-0.04	0.18	-0.41	-0.14
OBGK ₂	0.12	-0.01	0.00	-0.06	0.16	-0.34	-0.21
OBGK ₃	0.14	0.03	-0.07	-0.04	0.15	-0.35	-0.18
PSG	-0.11	0.01	-0.20	0.06	-0.14	-0.14	-0.22
PNG	-0.03	0.26	-0.08	-0.12	-0.14	0.17	-0.30
SGK	-0.23	-0.10	0.10	-0.10	-0.27	-0.17	-0.26
ACR	-0.10	0.04	-0.04	0.06	-0.12	-0.25	-0.09
SPIN	0.16	0.25	0.44	0.35	0.02	0.30	-0.12
CRIS	0.02	0.03	0.25	0.18	-0.05	-0.17	-0.32
TROCH	0.01	0.16	0.12	0.13	-0.08	0.05	-0.14
CONJ	-0.08	0.11	0.07	0.17	-0.19	-0.14	-0.43
GZPL	-0.03	0.29	0.07	0.17	-0.26	0.01	-0.09
GPPL	0.00	0.32	0.13	0.21	-0.20	0.26	0.03
GPR	-0.19	0.10	0.08	0.34	-0.35	0.15	-0.18
GL	-0.10	0.18	-0.13	0.19	-0.22	0.03	-0.35
GGR	-0.28	-0.16	0.00	0.14	-0.30	0.21	-0.08
GG	0.25	0.29	-0.11	0.10	0.11	-0.03	-0.14
GB	0.18	0.16	0.20	0.12	0.02	-0.12	-0.21
GBD	0.23	0.16	-0.01	-0.12	0.08	-0.15	-0.13
GGL	0.20	0.28	-0.01	-0.03	0.08	-0.07	0.05
FX	0.20	0.26	0.11	0.12	0.03	-0.07	-0.23
MX	0.07	0.11	-0.05	-0.01	-0.18	-0.12	-0.16
LX	-0.08	-0.17	0.05	-0.04	0.18	0.11	0.29
MM	0.21	0.17	0.27	0.17	0.15	-0.19	-0.20
OM	0.01	0.30	0.06	0.15	0.03	0.08	-0.14
DM	0.21	0.37	0.07	0.10	-0.02	-0.12	-0.21
MA	0.14	0.08	0.05	0.00	0.01	-0.21	-0.20

Table 2 presents the results of correlations between anthropo-somatotypological indicators of practically healthy women of mesomorphic somatotype with the severity and features of accentuated personality traits according to

Shmishek G.

Table 3 presents the results of correlations between anthropo-somatotypological indicators of practically healthy women of mesomorphic somatotype with indicators of the

level of subjective control according to Rotter J. in the modification of Bazhin E. F., Golinkina S. O. and Etkind O. M.

Discussion

In the analysis of correlations between anthropo-somatotypological indicators and indicators of personality traits of practically healthy Ukrainian women of mesomorphic somatotype, the following was established: multiple mostly reliable medium-strength direct ($r =$ from -0.35 to -0.50) correlations of the indicator on the insincerity scale according to Eysenck G. with most girth size, TSFF, components of the somatotype (except ectomorphic) and indicators of the component composition of body weight; multiple predominantly significant medium-strength inverse ($r =$ from -0.37 to -0.52) correlations of the exalted type of accentuation of the exalted type according to Shmishek G. with the majority of girth sizes, most pelvic sizes, somatotype components (except ectomorphic) and body mass composition; multiple significant mean inverse ($r =$ -0.38 to -0.49) correlations by Eysenck G. extraversion-introversion index with upper extremity and under the scapula TSFF; in other cases, single medium-strength reliable and unreliable (reliable $r =$ from 0.35 to 0.45; unreliable $r =$ from 0.30 to 0.34) and reverse (reliable $r =$ from -0.34 to -0.47; unreliable $r =$ from -0.30 to -0.34) correlations of anthropo-somatotypological indicators with the leading typological characteristics of temperament, psychodynamic features of personality and indicators of expressiveness and features of accentuated personality traits.

In contrast to the qualitative analysis of correlations of anthropo-somatotypological indicators with indicators of personality traits of practically healthy Ukrainian women in general [2], in representatives of mesomorphic somatotype established correlations are stronger and, in most cases, differ in topography of reliable correlations.

Our quantitative analysis of the average strength of reliable and unreliable correlations between body size and personality characteristics of practically healthy women of mesomorphic somatotype revealed the following distribution of relationships:

- with leading typological characteristics of temperament according to Eysenck 33 correlations out of 171 possible (19.29 %), of which, 8.77 % of direct reliable and 4.09 % of direct unreliable and 5.26 % of inverse reliable and 1.17 % of inverse unreliable, among which - with cephalometric indicators 1 direct reliable correlation out of 21 possible (4.76 %); with body weight 1 direct unreliable correlation out of 3 possible (33.33 %); with body circumference 11 correlations out of 45 possible (15.55 % direct reliable, 4.44 % direct unreliable and 4.44 % reverse reliable); with transverse body dimensions 2 correlations out of 24 possible (4.17% direct reliable and 4.17 % inverse reliable); 11 out of 27 possible correlations with TSFF (11.11 % direct reliable, 7.41 % direct unreliable, 18.52 % reverse reliable and 3.70 % reverse unreliable); with

components of somatotype 4 correlations from 9 possible (11.11 % of direct reliable, 11.11 % of direct unreliable, 11.11 % of return reliable and 11.11 % of return unreliable); with indicators of component composition of body weight 3 correlations from 12 possible (16.67 % of direct reliable and 8.33 % of direct unreliable);

- with psychodynamic personality traits according to Spielberger 11 correlations out of 114 possible (9.65 %), of which, 0.88 % direct unreliable, 2.63 % inverse reliable and 6.14 % inverse unreliable, among which - with longitudinal body size 2 inverse unreliable correlations out of 12 possible (16.67 %); with the width of the distal epiphyses of the extremities 1 direct unreliable correlation out of 8 possible (12.50 %); with body circumference 4 correlations out of 30 possible (3.33 % inverse reliable and 10.00 % inverse unreliable); with TSFF 3 correlations from 18 possible (5.56 % return reliable and 11.11 % return unreliable); with components of somatotype 1 feedback correlation from 6 possible (16.67 %);

- with indicators of severity and features of accentuated personality traits according to Shmishek 80 correlations out of 570 possible (14.04 %), of which, 1.40 % direct reliable and 1.93% direct unreliable and 5.44 % inverse reliable and 5.26 % inverse unreliable, among which - with cephalometric indicators 9 correlations out of 70 possible (1.43 % direct reliable, 1.43 % direct unreliable, 5.71 % inverse reliable and 4.29 % inverse unreliable); with body weight 1 correlation reliable out of 10 possible (10.00 %); with longitudinal body size 5 correlations out of 60 possible (1.67 % reverse reliable and 6.67 % reverse unreliable); with the width of the distal epiphyses of the extremities 2 correlations out of 40 possible (2.50 % direct unreliable and 2.50 % reverse reliable); with body circumference 24 correlations out of 150 possible (2.67 % direct reliable, 1.33 % direct unreliable, 4.00 % inverse reliable and 8.00 % inverse unreliable); with transverse body size 10 correlations out of 80 possible (2.50 % direct unreliable, 5.00 % reverse reliable and 5.00 % reverse unreliable); with TSFF 14 correlations from 90 possible (1.11 % of direct reliable, 4.44 % of direct unreliable, 8.89 % of return reliable and 1.11 % of return unreliable); with somatotype components 5 correlations out of 30 possible (3.33 % direct reliable, 10.00 % inverse reliable and 1.11 % inverse unreliable); with indicators of component composition of body weight 10 correlations from 40 possible (2.50 % of direct reliable, 2.50 % of direct unreliable, 7.50 % of return reliable and 12.50 % of return unreliable);

- with indicators of the level of subjective control by Rotter 30 correlations out of 399 possible (7.52 %), of which, 1.50 % direct reliable and 2.76 % direct unreliable and 1.25 % reverse reliable and 2.01 % reverse unreliable, among which - with cephalometric indicators 4 correlations out of 49 possible (6.12 % of direct unreliable and 2.04 % of reverse unreliable); with longitudinal body size 2 correlations out of 42 possible (2.38 % direct reliable and 2.38 % reverse unreliable); with the width of the distal

epiphyses of the extremities 4 correlations out of 28 possible (3.57 % of direct reliable and 10.71 % of direct unreliable); with a girth body size 7 correlations out of 105 possible (0.95 % direct reliable, 0.95 % direct unreliable, 2.86 % reverse reliable and 1.90 % reverse unreliable); with transverse body size 6 correlations out of 56 possible (3.57 % direct reliable, 1.79 % direct unreliable, 1.79 % inverse reliable and 3.57 % inverse unreliable); with TSFF 5 correlations from 63 possible (3.17 % of direct unreliable, 1.59 % of return reliable and 3.17 % of return unreliable); with indicators of component composition of body weight 2 correlations from 28 possible (3.57 % of direct reliable and 3.57 % of direct unreliable).

In contrast to the quantitative analysis of correlations of anthropo-somatotypological indicators with indicators of personality traits of practically healthy Ukrainian women in general [2], in representatives of mesomorphic somatotype the percentage of such correlations ranges from 7.52 % with indicators of subjective control by Rotter J. to 19.29 % with the leading typological characteristics of temperament according to Eysenck G. (in the general group - from 4.19 % with indicators of the level of subjective control according to Rotter J. to 6.03 % with psychodynamic features of personality according to Spielberger C. D.).

The existence of correlations between anthropometric indicators and indicators of personality traits has been proven by the results of international studies [20, 25].

A group of Iranian researchers, working with a sample of 100 military pilots, found negative correlations of significant strength between body mass index, body weight, waist, thighs, arms in a bent position and lower extremities in the calf circumference ($r=-0.38$, $p=0.001$; $r=-0.36$, $p=0.001$; $r=-0.40$, $p=0.001$; $r=-0.38$, $p=0.001$; $r=-0.28$, $p=0.004$; $r=-0.27$, $p=0.006$ respectively) and results Functional movement screen test and temperament types [1].

Analysis of the data of the biobank of the United Kingdom, which contains data of 155,961 individuals (persons aged 40 to 69 years) allowed to confirm the theory of changes in the composition of the human body in the presence of a mental disorder. Thus, the researchers found two patterns: that schizophrenia, obsessive-compulsive disorder and anorexia nervosa correlate with fat content in the human body and human body weight without fat, and that anorexia nervosa shows stronger correlations with fat content in body of women than men [13].

Japanese researchers using a genetic method of analysis tested the accuracy of historical concepts proposed by Kretschmer and Sheldon, regarding the compliance of somatotypes with certain mental illnesses. There is a significant correlation between the risk of schizophrenia and a low human body mass index, a positive correlation between the human body mass index and the risk of depressive disorders, and the lack of association between bipolar disorder and body mass index [14].

Analysis of data on body weight and personality

indicators of 14,366 people allowed to establish a stable relationship only between indicators of good faith and body weight (including body mass index). An increase in integrity was observed with a decrease in body mass index. A stronger connection was observed among women and members of the Latin American ethnic group [15].

233 participants were asked to complete the UPPS-P Impulsiveness Scale to assess impulsive personality traits and the Yale Food Addiction Scale (YFAS), in order to assess the patterns of addiction to food consumption. Participants were also determined for length, weight and body mass index. Statistical analysis of the data revealed that the tendency to irrational behavior and low level of persistence in performing tasks are associated with food dependence and body mass index [19].

Asuka Nishida and co-authors [21] found that there was correlation between adolescents' body weight and the number of their proxies. After analyzing data from 15,279 pupils, the authors found that both overweight boys and girls were much more likely to have a small number of proxies. In addition, a similar pattern was found in boys with excessively low body weight.

It was found that agoraphobia and panic may be indirectly associated with joint hypermobility and ectomorphic somatotype (OR=3.25, 95 % CI 1.35-7.8, $p=0.008$) [22].

Sutin A. R. and Terracciano A. [28, 29] proved that high levels of neuroticism are associated with high body mass index, especially in women and the elderly. Similar results were also obtained as a result of an extensive study (involving 14,848 people) conducted by Vainik U. and co-authors [30].

The results of the quantitative analysis of correlations revealed the inverse relationships between the indicators of finger dermatoglyphics and indicators of personality traits according to Eysenck and Luscher, direct according to Spielberger, Schmishek and Rotter. In the analysis of palmar indicators of dermatoglyphics - feedback correlations with personality indicators according to Spielberger and Luscher and direct with indicators according to Eysenck, Schmishek and Rotter [11, 26].

Thus, the results of our study are fully consistent with the trends of foreign and domestic researchers, which encourages further study of the data on the relationship of anthropometric indicators and indicators of personality in the Ukrainian population of healthy individuals.

Conclusions

1. In practically healthy Ukrainian women of mesomorphic somatotype the following multiple, mostly reliable average strength correlations is established: direct ($r =$ from -0.35 to -0.50) - an indicator on the scale of insincerity according to Eysenck G. with the majority of girth sizes, TSFF, somatotype components and indicators of the component composition of body weight; inverse ($r =$ from -0.37 to -0.52) - an indicator of the accentuation of the

character of the exalted type according to Shmishek G. with the majority of the girth sizes, the majority of the sizes of a pelvis, components of a somatotype and indicators of component structure of body weight; ($r =$ from -0.38 to -0.49) - an indicator on the scale of extraversion-introversion according to Eysenck G. with TSFF of the upper extremity and under the shoulder blade. In other cases, single, medium-strength, reliable and unreliable direct and inverse correlations of anthropo-somatotypological indicators with indicators of personality traits have been established.

2. As a result of quantitative analysis of reliable and unreliable average correlations of anthropo-somatotypological indicators with indicators of personality traits of practically healthy women of mesomorphic somatotype, it was found that the percentage of such correlations ranges from 7.52 % with the level of subjective control for Rotter J. to 19.29 % with leading typological characteristics of temperament according to Eysenck G.

3. In women of mesomorphic somatotype the largest relative percentage of significant correlations between groups of anthropo-somatotypological indicators with indicators of personality traits were found: leading typological characteristics of temperament according to Eysenck G. - with components of somatotype (44.44 %), TSFF (40.74 %), with components body weight (25.00 %) and body circumference (24.44 %); psychodynamic personality traits according to Spielberger C. D. - with longitudinal body size, TSFF and somatotype components (16.67 % each); indicators of severity and features of accentuated personality traits according to Shmishek G. - with indicators of component composition of body weight (25.00 %), components of somatotype (16.67 %), girth body size (16.00 %) and TSFF (15.56 %); indicators of the level of subjective control by Rotter J. - with the width of the distal epiphyses of the extremities (14.29 %) and transverse body size (10.71 %).

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