CHARACTERISTICS OF ANTHROPOSCOPIC FEATURES IN PERSONS WHO HAVE COMMITTED CRIMES AGAINST HUMAN LIFE AND HEALTH

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Summary. Dermatoglyphics is currently a subject of research by specialists in various fields of knowledge. The reason for this is that the study of the comb pattern of the hands and feet is widely used in various medical and non-medical fields, because the dermatoglyphic constitution is a genetically determined trait that remains unchanged throughout life, which closely correlates with other human characteristics, predisposition to certain types of diseases, etc. Also, papillary pattern prints can give us the opportunity to predict deviant processes of personality development.

Aim of the work. To identify factor phenotypic features in individuals prone to crimes against human life and health.

Materials and methods. In the course of this study, anthroposcopic parameters obtained from 50 persons, male and female, aged 18 to 59 years, who were convicted of crimes against human life and health (CGLH) were analysed: intentional murder (Article 115 of the Criminal Code of Ukraine), negligent homicide (Article 119 of the Criminal Code of Ukraine), intentional murder of a mother of her newborn child (Article 117), intentional grievous bodily harm (Article 121 of the Criminal Code of Ukraine), intentional bodily harm of moderate gravity (Article 122 of the Criminal Code of Ukraine), intentional light bodily harm (Article 125 of the Criminal Code of Ukraine). of the Criminal Code of Ukraine), intentional bodily harm of moderate severity (Article 122 of the Criminal Code of Ukraine), intentional light bodily harm (Article 125 of the Criminal Code of Ukraine), torture (Article 127 of the Criminal Code of Ukraine), leaving in danger (Article 135 of the Criminal Code of Ukraine) and 50 persons of the control group (CG).

Anthroposcopic (descriptive) parameters were obtained by means of a verbal description that does not contradict generally accepted standards (Ginzburg V. V., 2000; Kozan N. M., 2018). Statistical calculations were performed using the software package STATISTICA 12 for Windows (licence number ZZS9990000099100363DEMO-L).

Results. It has been established that for the group of premeditated murderers, the following factors are factor: skin colour (p=0,000), hair colour (p=0,017), hair type (p=0,000), facial features (p=0,023), forehead slope (p=0,004) and the shape of the lower jaw (p=0,000) showed statistically significant differences, and for a number of indicators such as forehead height (p=0,072), forehead width (p=0,060) and cheekbone shape (p=0,056), differences were observed at the level of statistical trend.

Conclusion. The presence of factor phenotypic signs indicating a predisposition to criminal acts of varying severity will allow the use of a computer neural network program to predict the propensity to commit offences.

Keywords: forensic medicine, identification, dermatoglyphics, phenotype, psychotype.

Introduction. Dermatoglyphics is currently the subject of research by specialists in various fields of knowledge [1, 2]. The reason for this is that the study of the comb pattern of the hands and feet is

widely used in various medical and non-medical fields, because the dermatoglyphic constitution is a genetically determined trait that remains unchanged throughout life, which closely correlates with other human characteristics, predisposition to certain types of diseases, etc. Also, fingerprints of papillary patterns can give us the opportunity to predict deviant processes of personality development [4, 5].

After analysing the above facts, we can confidently state that the dermatoglyphic method is sufficiently informative, easy to use, and not time-consuming and expensive. These parameters allow it to be widely used in forensic practice to resolve issues related to the identification of a person. This method can complement and, at the same time, confirm the reliability of a number of other methods and thus be included in the complex of identifying methods.

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Research results. The study found that among the representatives of the study groups, the highest rate corresponded to white skin colour – 48,0 % among male murderers and 91,1 % among men of the CG. The second most common colours among intentional killers are yellow (32,0 %) and dark (10,0 %), 8,0 % had brownish-yellow colour and 2,0 % had dark dark colour. 6,7 % of KP men had yellow and 2,2 % had brownish-yellow complexions. There were no persons with dark and dark complexions among the KP representatives.

Premeditated murderers most often have brown hair (40,0 %), equally light brown and black (20,0 % each), dark brown – 18,0 % and ash in 2,0 %.

Among the men of the CCs, dark blond hair was the most common (44,4 %), followed by light blond (26,7 %), brown (15,6 %) and black (13,3 %).

Taking into account the data it can be said that both straight (52,0 %) and wavy (48,0 %) hair is equally characteristic of intentional murderers. No persons with curly hair were found among the study population.

Among the men of the study group, 77,8 % had straight hair, 15,6 % wavy and 6,7 % curly hair.

As for the shape of the face, 54,0 % of intentional murderers have an oval face shape, 42,0 % have a round face shape and 4,0 % have a rectangular face shape. For men of the CG, the most typical face shape is oval (60,0 %), 20,0 % have round, 13,3 % – triangular and 6,7 % – rectangular face shapes.

62,0 % of intentional murderers and 84,4 % of men of the CG had medium facial features, 30,0 % of murderers and only 8,9 % of men of the CG had large facial features, and 8,0 % and 6,7 % of intentional murderers and men of the CG had small facial features, respectively.

As for the frequency distribution of forehead height, 40,0 % of intentional homicide offenders have high foreheads, 52,0 % have medium foreheads and 8,0 % have low foreheads. Approximately the

same distribution is typical for men of the CG: 60,0 % have a high forehead, 33,3 % have a medium forehead and 7,4 % have a low forehead.

As for the distribution of forehead width, 70,0 % of intentional homicide offenders have an average forehead width, 26,0 % have a wide forehead and 4,0 % have a narrow forehead. Among men in the CG, 53,3 % have an average forehead width, 44,4 % have a wide forehead and 2,2 % have a narrow forehead.

As for the vertical profile of the face, 64,0 % of premeditated murderers had a straight profile, 22,0 % had a mesognathic profile, and 14,0 % had a prominent profile. 91,1 % of men in the CG had a straight facial profile and 8,9 % had a prominent profile. As for the frequency distribution of eye colour, it can be argued that dark (28,0 %) and light brown (20,0 %) eye colours, followed by blue (16,0 %) and grey-blue (14,0 %), 10,0 % had black eyes, 8,0 % had green eyes and 2,0 % had grey and grey-green eyes.

Light brown (28,9 %), blue (24,4 %) and green (20,0 %) eye colours predominated in the men of the CG, and no persons with black and grey-green eyes were found among them.

It was found that 38,0 % of intentional homicide victims have oval and round eye incisions, and 24,0 % have almond-shaped incisions. In men of the CG, 55,6 % have oval, 17,8 % – almond-shaped, 13,3 % – round, 6,7 % – triangular, 4,4 % – slit-shaped and 2,2 % – segmental eye incisions.

In terms of nose shape, both narrow and wide flat noses are characteristic of male homicide offenders, as well as of male CGs.

The frequency distribution of lip thickness showed that among male murderers, as well as among men of the CG, medium lip thickness prevailed – 78,0 % and 64,4 % respectively, narrow lips were observed in 14,0 % of premeditated murderers and 24,4 % of men of the CG, the rest had wide lips.

As for the horizontal facial profiling, the percentage of men with protruding cheekbones among murderers is twice as high as among CG men – 38,0 % vs. 20,0 %. A significant difference is also observed in the vertical profiling of the face: 97,8 % of CG men do not have a protruding lower jaw, while among murderers, 54,0 % do.

The Kruskal-Wallis test was used to establish statistically significant differences in the distribution of anthroposcopic indicators between men of the CG and intentional killers. The comparative analysis of anthroposcopic indicators of premeditated murderers and CG men showed that such indicators as skin colour (p=0,000), hair colour (p=0,017), hair type (p=0,000), facial features (p=0,023), forehead slope (p=0,004) and the shape of the lower jaw (p=0,000) showed statistically significant differences, while for a number of indicators such as forehead height (p=0,072), forehead width (p=0,060) and cheekbone shape (p=0,056) differences were observed at the level of statistical trend.

For the initial data on anthropometric indicators of intentional homicide and CG, the type of distribution of the data that the variables take was checked for the purpose of further correct statistical analysis of the data. The Shapiro-Wilk test was used to check for normality, and the Kolmogorov-Smirnov test of consistency and graphical representation were used to clarify the results.

The null hypothesis for these criteria is that the distribution of the data differs from the normal distribution. It is generally accepted that the null hypothesis is rejected for the Shapiro-Wilk test at p>0,05 and the Kolmogorov-Smirnov test at p>0,20. The results of the normality assessment were also checked using the graphical method. The p-value for the Shapiro-Wilk test for almost all anthropometric indicators of intentional killers, except for torso length, head circumference and zygomatic diameter, is p<0,05, which means that the null hypothesis of the absence of a normal distribution of data is accepted. The Kolmogorov-Smirnov test confirms our assumption that the distribution of anthropometric indicators deviates from the normal distribution (p<0,20).

Conclusions. Thus, it has been established that for persons who have committed crimes against human life and health, the factor attributes are skin colour (p=0,000), hair colour (p=0,017), hair type (p=0,000), facial features (p=0,023), forehead slope (p=0,004) and the shape of the lower jaw (p=0,000) showed statistically significant differences, and for a number of indicators such as forehead height

(p=0,072), forehead width (p=0,060) and cheekbone shape (p=0,056), differences were observed at the level of statistical trend.

Prospects for further research. In the future, it is planned to study the comb patterns of the distal, middle and proximal phalanges of the fingers of persons who have committed completed suicide.

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ХАРАКТЕРИСТИКА АНТРОПОСКОПІЧНИХ ОЗНАК В ОСІБ, ЯКІ ВЧИНИЛИ ЗЛОЧИНИ ПРОТИ ЖИТТЯ ТА ЗДОРОВ'Я ЛЮДИНИ

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Резюме. Дерматогліфіка нині залишається предметом вивчення фахівців різних галузей знань. Причиною цього є те, що дослідження гребінцевого малюнка кистей рук і стоп широко використовують у різних медичних і немедичних галузях, адже дерматогліфічна конституція є генетично детермінованою ознакою, незмінною впродовж життя, що тісно корелює з іншими ознаками людини, схильністю до певного роду захворювань тощо. Також відбитки папілярних візерунків можуть дати нам можливість прогнозувати девіантні процеси розвитку особистості.

Мета роботи. Встановлення факторних фенотипових ознак в осіб, схильних до злочинів проти життя та здоров'я людини.

Матеріали та методи. Під час виконання даного дослідження були проаналізовані антропоскопічні параметри, отримані від 50 осіб чоловічої та жіночої статей віком від 18 до 59 років, які були засуджені за злочини проти життя та здоров'я людини (ЗПЖЗЛ): умисне вбивство (ст. 115 КК України), вбивство через необережність (ст. 119 КК України), умисне вбивство матір'ю своєї новонародженої дитини (ст. 117), умисне тяжке тілесне ушкодження (ст. 121 КК України), умисне тілесне ушкодження середнього ступеня тяжкості (ст. 122 КК України), умисне легке тілесне ушкодження (ст. 125 КК України), катування (ст. 127 КК України), залишення в небезпеці (ст. 135 КК України); 50 осіб контрольної групи (КГ).

Антропоскопічні (описові) параметри одержували шляхом словесного опису, що не суперечить загальноприйнятим стандартам (Гинзбург В. В., 2000; Козань Н. М., 2018). Статистичні обрахунки проводилися за допомогою програмного пакета STATISTICA 12 for Windows (ліцензія № ZZS9990000099100363DEMO-L).

Результати. Встановлено, що для групи умисних убивць факторними є колір шкіри (p=0,000), колір волосся (p=0,017), тип волосся (p=0,000), риси обличчя (p=0,023), нахил лоба (p=0,004) та форма нижньої щелепи (p=0,000), за ними спостерігалися статистично значущі відмінності, за низкою показників, як-от висота лоба (p=0,072), ширина лоба (p=0,060) і форма вилиць (p=0,056), відмінності відмічалися на рівні статистичної тенденції.

Висновок. Наявність факторних фенотипових ознак, що вказують на схильність до злочинних дій різних ступенів тяжкості, дозволить прогнозувати схильність до правопорушень з використанням комп'ютерної нейромережевої програми.

Ключові слова: судова медицина, ідентифікація особи, дерматогліфіка, фенотип, психотип.

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