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The Influence of Aesthetic Surgery on the Profile of Emotion

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A B S T R A C T

In the clinical practise it has been observed that the person changes physically, too, after aesthetic surgery. The aim of this work was to examine, by objective psychological measurements, what changes occur, and what personality features change. Forty six subjects that had an aesthetic surgery were examined; they were tested before, and eighteen month after the surgery by the Profile Index of Emotion (PIE). Before the re-testing the subjects were analyzed by »The Life Events Scale« to exclude the possibility of the influence of new life events on the results of the re-test. The control group of 29 volunteers was tested by the same psychological instruments. The control group never verbalized the wish for an aesthetic surgery; they were never in psychiatric treatment, and the corresponded to the experimental group in the age, sex and education level. Analysis of the data obtained from PIE test before and after the operation shows a statistical significant increase of the adaptability segments and an improvement of capacity for taking and giving. Emotional conflict does not disappear, but a new balance is established, satisfaction is higher, and the identity is more integrated.

Key words*: surgery, aesthetic; emotion, profile index*

Introduction

At the moment of child's birdth, there exists only Id. Id is the container of the instinctive, the drives tending to satisfaction and it is the part of unconscious part of the reality, from the Id Ego arises-conscious part, primarily somatic, with it's functions-attention, memory, reasoning, acting, etc. Superego is the third instance of the psychic apparatus. It develops during psychosexual development as a result of education and acquisition of social rules. It is a basic regulator of person's behaviour. It may be mild or strong, predominantly rewarding or punishing[1,2].

Ideal Ego is the structure inside the Superego, it is what the person would like to be or what the person thinks »important others« would like it to be. The amount of satisfaction or dissatisfaction of a person depends just on this instance, I.E., on what the person think is in relation to what it thinks it should be[1].

Rycroft uses the terms body ego, body scheme and body image, making the firm distinction among them. Body ego is a Freudian term that marks a somatic primary bodily ego, grown out of bodily sensations, stemming out of the depth of body as well as body surface[3]. Body scheme is a neurological term used for the organic representation of the body within the brain, while body image is considered to be psychological representation of a personal experience of one's body, grown out of the primary experience of oneself[4].

Head, the neurologist, was the first to mention body scheme and he described it not only as a result of gradual integration of sensory experiences, but as a unity of all those experiences combined with actually existing sensations that become organized within sensory cortex of the brain[5].

According to Schilder, body image is a picture or a scheme of a body that is being formed in one's thoughts as a three-dimensional image, including intrapersonal, environmental and temporal factors. Body image is being correlated with curiosity, expression of emotions, social

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relations, responsibility, even with morality. Body image was the first to introduce psychological dimension into the neurological concept, stressing the importance of affective experiences that results from interactions with others (postural model). The image of our body that is being created simultaneously with the creation of our personality is the mode in which our body appears within ourselves. It is a libidinal dynamic structure that never stops changing under the influences of environmental stimuli as well as life experiences that are being acquired through interactions with the environment. Thus, the image of our body represents a life process that is in constant inner self-construction and self-destruction, a permanent process of differentiation and integration of life experiences[6].

Current research has mainly been focused on the elements influencing the satisfaction with aesthetic correction[7,8] in persons requesting aesthetic surgery. The results indicate that the overall satisfaction correlates negatively with major mental disorders[7] as well as with certain psychological conditions, such as increased anxiety, depressiveness and marked dissatisfaction with specific areas of the body[8]. Some of the current research investigated the effect of aesthetic surgery on an individual's body image, general self-esteem and psychological problems[9–11].

Participants and Methods

Forty-six subjects were tested who had an aesthetic surgery, aged 16 to 65 years. The most frequent was the age group 22–40 (54.35%), than the group 16–21 (19.57%), followed the 40–50 group (15.21%), and finally 50–65 group (10.87%). There were 86.96% female and 13.04% male subjects. According to somatic localization, 65.92% surgeries were made on the face region, and 34.08% on other parts of the body. Control group (C) consisted of 29 randomly selected subjects, matching in age, gender and education to the test group. Inclusion criteria for control group were: subjects that had never seriously contemplated aesthetic surgery and are free of mental disorders.

It was used Plutchik Index of Emotions (PIE)[12]**.** PIE is the personality test that, in a specific way, gives a series of the data about certain personality features and it's inside conflicts. Relative power of basic personality features is displayed in a circle profile that enables the comparison of personality features, the estimation of their relative signification, and conflicts. The model includes eight basic emotions, set in circle, divided in pairs. The segment »Reproduction«, a part of the reproduction-depression pair, reflects the emotional state of joy, i.e., it denotes the experience of pleasure and satisfaction, after the fulfilment of some wish or need. Basic tone is hedonistic, functionally it presents expansive, embracing behaviour, resulting in sociability, creativity, and a wish for warm, close relations with others. Incorporation is the personality feature reflecting emotional state of accepting as well as the possibility of acceptance at all. Together with the Reproduction it makes the adaptive capacities as a whole. Deprivation, or depression is the opposite to Reproduction. It represents the dimension of sadness or sorrow, and it reflects the retrieval of gratification, deprivation from the source of satisfaction feelings. The main characteristics of sadness are its paralyzing effect on the personality and its freedom. As depression is a part of the pair of adaptive capacities, thus is the Opositionality an opposite of incorporation. It reflects the emotional state of refusal and represents the emotion of sickness. It is the prototype of the releasing reaction as a result of the attempt to get rid of real or imaginative »dangerous« part. The basic tone of the Self-Defence-Aggression pair is anxiety, either in the shape of fear-functioning in order to avoid the danger (self-defence), or in the shape of anger, i.e., an attack on the danger or frustration. Loss of control, the segment of the last pair, expresses the emotional state of impulsiveness, or the need for new experiences. As the opposite, Exploration reflects expectations, explorations, and planning. The higher level of exploration, the more basic, deep uncertainty is.

Bias (socially desirable answers) score indicate tendency socially desirable answers. High bias indicate tendency to pic the more socially desirable of the two items in a pair while low bias scores indicate a tendency of the subject to describe himself/herself in socialy undesirable ways.

In this work we attempted to find out the real effect of aesthetic surgery on quantitative and qualitative changes of quoted structures aspects. Testing was applied before the operation and the data were signed as E1. The same instrument (PIE), together with »Life Events Scale«[13] was applied 18 month after the operation and the obtained data were signed as E2. All the data were manipulated by standard computer statistical methods (SPSS version 16.0) and Statistica for Windows and presented as median value ($\overline{X}$) ± standard deviation.

Results

Before aesthetic surgery the subjects did not express any significant differences on PIE from corresponding control group (Table 1). Namely, the PIE-results show that the experimental group (E1) differ from control (C) statistically significant only in the exploration segment ($\overline{X}$±SD=14.59±4.41:12.03±4.34) (Table1).

Table 2 presents statistical differences in PIE before and 18 months after the operation. There were observed numerous statistically significant changes. Thus, we have found, after the operation, statistically significant increase in the segment of Reproduction ($\overline{X}$±SD=15.93±4.59: 17.60±3.09), and, at the same time, decrease, but statistically unsignificant, in its opposite-Depression ($\overline{X}$±SD = 9.20±3.89:8.27±3.47). Incorporation increases statistically significantly ($\overline{X}$±SD=18.46±5.68:22.07±3.96) which leads to significant decrease of Oppositionality ($\overline{X}$±SD=8.67±4.10: 6.07±2.86). At the same way, statistically significant increase of Selfdefense ($\overline{X}$±SD=13.00±5.14:15.33±3.62) re-

TABLE 1
DIFFERENCES ON PIE BEFORE AESTETIC SURGERY (E1) AND CONTROL GROUP (C)

Segment of PIE	E1 $\overline{X}$±SD	C $\overline{X}$±SD	t-value	Statistical signifficant (p)
Reproduction	16.30±4.75	15.62±5.02	0.59	p>0.05
Incorporation	18.46±5.79	19.45±5.82	–0.72	p>0.05
Orientation	9.52±4.57	9.76±4.21	–0.23	p>0.05
Protection/Self-defance	11.87±4.53	12.55±4.40	–0.64	p>0.05
Deprivation/Depression	9.91±4.21	9.03±3.87	0.91	p>0.05
Rejection/Opositionality	9.11±4.55	9.79±4.01	–0.68	p>0.05
Exploration	14.59±4.41	12.03±4.34	2.46	p<0.05
Aggression	13.59±6.01	15.38±5.82	–1.27	p>0.05
BIAS*	31.04±7.24	31.41±6.88	–0.22	p>0.05

*BIAS – socially desirable answers

TABLE 2
DIFFERENCES ON PIE BEFORE (E1) AND 18 MONTHS AFTER THE AESTETIC SURGERY (E2)

Segment of PIE	E1 $\overline{X}$±SD	E2. $\overline{X}$±SD	t-value	Statistical signifficant (p)
Reproduction	15.93±4.59	17.60±3.09	–2.16	p<0.05
Incorporation	18.40±5.68	22.07±3.96	–3.99	p<0.001
Orientation	10.07±4.51	10.13±4.10	–0.06	p>0.05
Protection/Self-defance	13.00±5.14	15.33±3.62	–2.35	p<0.05
Deprivation/Depression	9.20±3.89	8.27±3.47	1.28	p>0.05
Rrejection/Opositionality	8.67±4.10	6.07±2.86	2.93	p<0.05
Exploration	16.20±3.63	14.53±4.24	2.03	p>0.05
Aggression	12.27±5.17	10.47±5.19	1.41	p>0.05
BIAS*	32.47±6.91	37.13±5.01	–3.17	p<0.01

*BIAS – socially desirable answers

TABLE 3
DIFFERENCES ON PIE 18 MONTHS AFTER THE AESTETIC SURGERY (E2) AND CONTROL GROUP (C)

Segment of PIE	E2 $\overline{X}$±SD	C $\overline{X}$±SD	t-value	Statistical signifficant (p)
Reproduction	17.60±3.09	15.62±5.02	1.39	p>0.05
Incorporation	22.07±3.96	19.45±5.82	1.56	p>0.05
Orientation	10.13±4.10	9.76±4.21	0.28	p>0.05
Protection/Self-defance	15.33±3.62	12.55±4.40	2.13	p<0.05
Deprivation/Depression	8.27±3.47	9.03±3.87	–0.65	p>0.05
Rrejection/Opositionality	6.07±2.86	9.79±4.01	–3.19	p<0.01
Exploration	14.53±4.24	12.03±4.34	1.82	p>0.05
Aggression	10.47±5.19	15.38±5.82	–2.75	p<0.01
BIAS*	37.13±5.01	31.4±6.88	2.85	p<0.01

*BIAS – socially desirable answers

sulted in the decrease of it's opposite on PIE-aggression ($\overline{X}$±SD=12.27±5.17:10.47±5.19).

Statistical changes observed in the subjects after the aesthetic surgery (E2) resulted, too, in significant changes in aesthetically corrected subjects related to control group (C) (Table 3).

Further, there were noticed statistically signifficant differences in Selfdefence segment that had increased significantly related to control group ($\overline{X}$±SD = 15.33± 3.62:12.55±4.40), while its PIE opposite-Aggression decreased even more significantly ($p<0.01$) in relation to the control group ($\overline{X}$±SD = 10.47±5.19:15.38±5.82). The same statistically significant decrease was noticed in Oppositionality segment after the aesthetic surgery ($\overline{X}$± SD = 6.07±2.86:9.79±4.01).

Discussion

As we found no work analyzing PIE of the persons after aesthetic surgery, in the literature that was on our disposal, the possibility of direct discussion on our results is narrowed to interpretation of the profiles obtained in the frames of existing standards and psychodynamic explanations and the results of some studies which investigated the effects of the cosmetic surgery on an individual's body image, general self-esteem, psychological problems and/or interpersonal problems. Comparison of the results of the group before surgery (E1) and controls (C) on PIE, showed statistically significant difference only in Exploration segment, which was significantly higher in E1. Adaptive functions, presented through Reproduction and Incorporation, were lower in E1 than in controls. The difference was not statistically significant, but expressed that experimental group, related to controls, was less ready to accept and incorporate (of the objects that make pleasure)[12]. This can be seen in the Incorporation segment and it is narrowly connected with the capacities of nearness, sociability, joy, as well as enjoying and establishing warm emotional associations, visible in Reproduction[12]. These results are lower, too. In both groups Depression is higher with no essential deviations. But, if return to the only statistically significant difference – the segment of Exploration – among experimental group before surgery (E1) and control group (C) rigidity of experimental group can be seen which even after the operation tends to be the same. Let us remind that this segment reflexes emotional state of expectations, hopes, curiosity, anticipation, and explorative behaviour. On the contrary, the loss of control segment, reflecting the dimension of spontaneity, surprise, unexpectedness, non-controlling, and impulsiveness, changes through operation. If we translate the quoted terms to structural personality terms; Loss of control to Id, and Exploration to Super-ego, we can say that experimental group statistically significantly differs from the control only in the stronger, more rigid Super-ego[1].

Analysing the profiles as a whole, there can be noticed that the group E1 achieves lower results in all the segments except the Exploration and Loss of Control. If the Loss of Control represents Id and the Exploration represents Super-ego, all the other segments may be translated as Ego with associated defence mechanisms[1]. Thus, our subjects have lower ability for acceptance (themselves or the environment or themselves in the environment, Incorporation), lower is, too, their ability of experiencing the pleasure, joy, as well as their wish for intimacy. There exists the tendency to introversion, retaining of libido from the environment to one's own person (Reproduction). Just these results, lower values of adaptive segments in our subjects, indicate the model of solving intrapsychic conflicts through the correction of visible body segments (body ego)[14]. Lower values of the aggression-selfdefense segments may be explained by certain inhibition of aggressive pulsions, because of rigid Super-ego that reflects in higher deprivation, i.e. depression segment, too. Pressures of the Id are identical in all the three measured groups. In short, the group E1 profile can be described as a dominant, rigid Super-ego that causes constant dissatisfaction by its own self. Rigid Super-ego causes the inhibition of aggressive and retaining of libidinous pulsions to own self and capturing inside own defence mechanisms.

The look to the results on PIE scale of all the three measurements; before the surgery (E1), after the surgery (E2), and controls (C), gives, inside this homogenous group, the difference in the Reproduction on account of E2. We know that the Reproduction reflectes the pleasure after satisfied need or wish. We can see that E2 has statistically significantly achieved it by operation. This way they have achieved the possibility of higher socability as well as higher ability for warm, intimate relations to the others. Namely, the dimension of sadness and sorrow caused by lack of gratification and deprivation of pleasure is cut of. There is no more paralyzing effect on the personality and its freedom in relation to the others[12]**.** Similar results were obtained in the research on aesthetic correction on psychosocial alteration of the persons undergoing the correction[15–17].

The same result is got in the Incorporation, too. That means that persons can more freely show the acceptance of the others and thus enable »intaking« the objects that make pleasure.

There is the statistically significant difference in the segment of Exploration, but only in relation to control group. The values before and after the operation did not change. Namely, although essentially not changing, it can be said that Super-ego becomes less rigid. It may be presumed that aesthetic correction of (somatic) Ego reduces the gap between Ego and Ideal Ego, which automatically reduces the tension between Ego and Super-ego, so the Super-ego tends to be virtually less rigid[1,14].

Corrective aesthetic operation reduces the feeling of sickness, non-acceptance (of body »failure«), seen in the segment of Opposition. By getting closer to Ideal Ego, inside tension is reducing which results in better accepting of own self. Adaptive capacities increase, too, as well as the capacities for creativity, sociability and love. By the improvement of communications with the environment,

depression, the feeling of sorrow and deprivation decreases. It is obvious that the operation leads to the possibility of better confrontation in every day life. The persons cope better with the fear they are less aggressive than before, owning to milder Ego.

Conclusion

From all the mentioned, it may be concluded that corrective operation does not essentially influence the change in emotional conflict. But, as the satisfaction of an individual depends on the establishment of the harmony of the conflicts. A systematic review of evidence of psychosocial outcomes of aesthetic surgery supported our results[11]. The analysis of the obtained data makes it evident that PIE in the group after operation (E2) is more harmonized**,** that the satisfaction is higher and the identity is more integrated. Aesthetic surgery correction significantly changes intensity of basic emotions. Adaptive mechanisms, capacitiy for joy and acceptance are increased, socibility is improved. Aggression decreases and the need for self protection is appropriate.

We may conclude that aesthetic correction of body strengthens Ego in somatic part (body Ego). The emotional conflicts do not disappear, but new balance is established and emotional profile is more harmonious..

R E F E R E N C E S

1. FREUD S, 1986, The essentials of psycho-analysis (Hogarth and the Institute of Psycho-Analysis, 1986). — 2. JAKOBSON E, The Self and the object world (International Universities Press, New York,1964). — 3. BRENNER CH, An Elementary Textbook of Psychoanalysis (Revised Anchor Books Edition, 1974). — 4. RYCROFT C, Artical Dictionary of Psychoanalysis (Penguin Books, Cox & Wyman, London, 1988). — 5. HEAD H, Aphasia and kindred disorders of speech (Cambrige University Press, London, 1926). — 6. SCHILDER P, The image and appearance of the human body (London: Kegan Paul, Trench, Trubner, 1935). — 7. JAVO IM, SORLIE T, Plast Reconstr Surg, 124, (2009) 2142. — 8. HONIGMAN RJ, JACKSON A, DOWLING NA, Ann. Plast. Surg, 66 (2011) 16. — 9. SARWER DB, WADDEN TA, PERTSCHUK MJ, Clin Psychol Rev, 18 (1998) 1. — 10. COOK SA, ROSSER R, SALMON P, J Plast Reconstr Aesthet Surg, 59 (2006) 1133. — 11. SOEST T, KVALEM IL, ROALD HE, SKOLLEBORG KC, J Plast Reconstr Aesthet Surg, 62 (2009) 1238. — 12. PLUTCHIK R, The emotions : Facts, Theories, and new Model (Random House, New York, 1962). — 13. DOHRENWEND BS, KRASNOFF L, ASKENASY AR, DOHRENWEND BP, J of Healt and Social Behavior, 19 (1978) 205. — 14. SHILDER P, The Image and Appearance of the Human Body (Kegan Paul, London, 1935). — 15. STEFFEN A, MAYER ZU NATRUP C, KONIG IR, FRENZEL H, ROTTER N, Laryngorhinootologie, 88 (2009) 247. — 16. SOEST T, KVALEM IL, SKOLLEBORG KC, ROALD HE, J of Research in Personality, 43 (2009) 1017. — 17. MENINGAUD JP, BENADIBA L, SERVANT AM, CRISTIAN H, BERTRAND JC, PELICIER Y, J of Cranio-Mascillofacial surgery, 31 (2003) 46.

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UTJECAJ ESTETSKE KIRURGIJE NA PROFIL EMOCIJA

S A Ž E T A K

U kliničkoj praksi uočeno je da se osobe nakon estetskih operacija mijenjaju i psihički. Cilj ovoga rada bio je ispitati, objektivnim psihologijskim mjerenjima, koje se promjene dešavaju i koji segmenti osobnosti su obuhvaćeni promjenama. Ispitano je 46 osoba koje su se podvrgnule jednom od estetskih kiruških zahvata. Testirani su prije i 18 mjeseci nakon kiruškog zahvata testom »Profil indeks emocija« (PIE). Prije retestiranja ispitanici su analizirani »Skalom životnih iskustava« kako bi se isključila mogućnost da nova životna događanja utječu na rezultate retestiranja. Kontrolna grupa 29 volontera testirana je istim psihološkim instrumentarijem. Kontrolna grupa nikada nije verbalizirala želju za estetskim kiruškim zahvatom, nikada nije bila u psihijatrijskom tretmanu i odgovarala je po dobi, spolu i naobrazbi ispitnoj skupini. Analiza dobivenih podataka iz PIE testa prije i poslije operacije pokazuje statistički značajan porast adaptabilnih segmenata i poboljšanje kapaciteta za primanje i davanje. Dobiveni rezultati sugeriraju da emocionalni konflikt ne nestaje, ali je uspostavljen novi balans unutar osobnosti, veći stupanj zadovoljstva, a identitet je više integriran.