

Beauty and aging: The role of resilience

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Abstract

Background: Beauty of the face agree to geometric figures that have got magnitudes of the gold mask. The resilience is a psychic function to protect against psychological distress.

Purpose: Aging and beauty over time change the self-image and its acceptance depends on level of resiliency. We studied the resilience in subjects with different beauty and age on the face and looked for its mechanism psychodynamics.

Methods: Eight groups (each 40♀, 40♂) were selected with two different range degrees of beauty (1-2 B beauty, 3-4 U ugliness) and skin aging (0-1 Y young aged 20-30 average 24.65 SD 3.08, 2-3 M mature aged 45-55 average 49.85 SD 3.39). YB were control groups. Beauty by golden mask, resilience by CD-RISK, skin aging by Glogau classification and ultrasound test, personality by MMPI-2 and one interview were defined. F, t, W and P tests were assessed in subjects-controls analysis by 14 Windows SPSS and $p < 0.05$ alpha level.

Results: Factors show higher resilience value in U and M groups than in B and Y, lower values in females than in men considering the individual groups BY, BM, UY, UM. F and t tests show high correlation and significance ($0.0006 < p < 0.09$).

Discussion: The lack of beauty and aging produce stressful conditions, traumatic lacerations. The aid application for the discomfort requires an adaptive response. The resilience is the dynamic mechanism of previous response that he subject, through a personal journey, learn to build. The resilience increases in mature age due to the acquisition of a greater experiential baggage and in ugly subjects by the continuous acceptance of their poor aesthetic.

Conclusions: Resilience grows after repeated discomfort as ugly and in progressively and continuous way, while it is low after an acute perception of physical or psychological damage as a wrinkle. A short-term psychotherapy could help subjects to accept aesthetic discomfort.

Introduction

Background

Beauty is a pleasant emotional content. The subject acquires it through senses compare it with a reference inner model acquired by educational process and social custom and he, finally, fix it and compare to concepts and objects, during his experimentation in living and after a quick comparison with a. The objective beauty must be distinguished from the subjective beauty. The last depends on self-aesthetic sense, while the former derives from harmonic properties of the object that induces attraction, affection, pleasure [1,2] in the observer. Harmonic ideal properties of beauty have been identified, throughout the history of aesthetic economic, with geometric figures that have got magnitudes of the golden section. This is defined by the mathematical ratio as described in table 1 and it is present in many works of art. The gold mask or ideal facial proportions are the application of the previous section to skin areas of the face (Table 1) [2-4]. The resilience is a psychic function, it includes: instinctive (survival needs), emotional (mechanisms of social relations), and cognitive (the employment of rational strategies or coping and behavioural techniques as response to stressors) factors [5-7]. It protects against psychological distress or psychophysical traumas of our lives and it increases its factors from living experiences [8].

Purpose

Age and beauty are physiological bodily aspects. They appear or evolve with visible signs on facial skin over time. These can change the physical image of the self, its perception and the acceptance of this new perception. The intensity of this acceptance depends on the level of resiliency acquired. So, we studied the resilience in subjects with different beauty and age and looked for its mechanism psychodynamics.

Materials and methods

Patients

The sample, with higher education (and informed consent), was enrolled among frequenters of penitentiary and university departments (see title). It includes eight groups, each of 40 females and 40 males, and was selected with two different degrees of beauty, named beauty (B) and ugliness (U), and skin aging, named young (Y) and mature (M), on the face, according to clinical background (Tables 1 and 2). Y groups

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Table 1. Ideal facial proportions in the 4 aspects of the golden mask

a ----- 1 b ----- The golden section is the ratio $\phi = 1,6180339887$ between unequal sizes in "ab" segment: "a" long and "b" short. So that $b : a = a : (a + b)$.

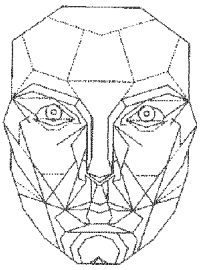

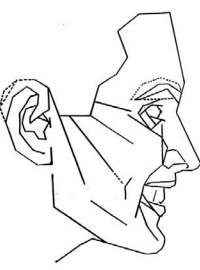
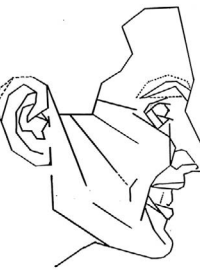
	
normal front mask	smiling front mask
	
normal side mask	smiling side mask
<p>FOREHEAD (F) ↓ TEMPLE (T1) ↔ TEMPLE (T2) EYE (E1) ↔ EYE (E2) CHEEK (C1) ↔ CHEEK (C2) NOSE (N1 ↔ N2) MOUTH (M1 ↔ M2) ↑ CHIN (C)</p>	<p>Ideal Vertical Proportion: if the distance M-C is 1, the M-E is ϕ 1.618, if the N-C is 1, the N-F is ϕ 1.618 Ideal Transversal Proportion If the width N1-N2 is 1, the M1-M2, E1-E2, T1-T2, are ϕ 1.618 Ideal Height and Width If the distance C1-C2 is 1, the F-C is ϕ 1.618</p>
<p>A face more shows a pleasing aesthetic, more it corresponds to golden mask's proportions Likert rating scale: Grade 1: beautiful face Grade 2: pretty face Grade 3: average face Grade 4: unpleasant face Grade 5: very unpleasant face</p>	

Table 2a. Assessment of tests

Skin aging on the face: correlation between Glogau signs and ultrasound findings					
Stage	Glogau classification	echogenicity		thickness in mm	
		D	H	D	H
0	no signs	N	N	2,5±0,5	2,0±0,5
I Mild	mild pigment changes, minimal wrinkles	↑	N	2,0±0,5	2,0±1,5
II Moderate	early brown spots visible, palpable keratosis parallel smile lines, wrinkles in motion	↑↓	N	1,5±0,5	2,0±0,5
III Advanced	obvious discolorations, visible keratosis visible telangiectasias, wrinkles at rest	↓	↓	1,0±0,5	1,5±0,5
IV Severe	yellow-gray skin color prior skin malignancies, only wrinkles	↓↓	↓↓	1,0±0,5	1,0±0,5

D dermis, H Hypodermis, N normal, ↑ increase, ↓ reduction

Table 2b. Likert Scale

Likert scale	very low	low	medium	high	very high	
stages of the golden mask	1	2	3	4	5	
clinical degrees of skin aging	0	1	2	3	4	
CD-RISC Factors	Hardness	0-6	06-12	12-16	17-23	23-28
	Optimism	0-6	06-12	12-16	17-23	23-28
	Resource – Fullness	0-4	04-08	10-12-14	14-19	19-24
	Purpose	0-4	04-08	08-12	12-16	16-20
	total score	0-20	20-40	40-60	60-80	80-100

were 20-30 years old (average 24.65, SD 3.0826) while M groups were 45-55 years old (average 49.85, SD 3.3915). Skin aging was 0-1 grade in Y and 2-3 in M groups, while face's beauty was 1-2 grade in B and 3-4 in U groups (Table 2). YB groups were selected as control groups with a ratio of recruitment 1:3 (Table 3).

Exclusion criteria were dermatological or systemic disease(s), use to smock, alcohol and factors causing, according to DSM-IV, the diagnosis of personality disturb, Post Traumatic Stress Disorder and/or Avoiding and/or Passive-Aggressive Personality, family or occupational distress.

Instruments

Connor-Davidson Resilience Scale (CR-RISC) measures the ability to cope with stress and adversity in healthy or pathological population, in anxiety and depression' management, it is indicated in the clinical setting and it is subsequent to the introduction of the DSM diagnostic criteria [9,10]. CD-RISC scale, in individual way, studies 4 factors (Khoshouei's exploratory factor analysis: harness, optimism, resource fullness, purpose) and it is a 25-item scale with 5 respondent rate items (Likert scale) from 0 ("not true at all") to 4 ("true nearly all the time"). So, range is 0-100 and high score lead to high resilience (Table 2). Resilience Scale has got: alpha reliability .69-.80 ranged (xx) and alpha Cronbach .82-.93 ranged, it is positively correlated with hardness (Kobasa's $r = 0.83$ and $p < .001$), social support (Sheehan Social Support Scale's $r = 0.36$, $p < .001$), self-esteem, life-satisfaction and negatively with perceived stress (Perceived Stress Scale's $r = -0.76$, $p < .001$) and vulnerability (Sheehan Stress Vunnerability Scale's $r = -0.32$, $p < .001$) [11,12].

Glogau classification by clinical signs describes the skin aging in 5 stages (Table 2), while findings of the ultrasound test measure the skin aging by the increase or the reduction in echogenicity (qualitative sign) and thickness (quantitative sign) of the dermis and hypodermis [13-15] (Table 2).

Procedure

Face's beauty by Golden mask, resilience by CD-RISK, face's skin aging by Glogau classification and ultrasound test, personality disturb by Minnesota Multiphasic Personality Inventory 2 (MMPI-2) and interview psychologist-subject were defined. CD-RISC was recorded (the first author reads and the latter administers tests) in the random sample (each patient has 2 sealed envelopes with his encrypted data: the former with B or U and Y or M diagnosis and the latter with results of scale). At the end of the study only one interview of 45m' in each subject developed the judgment of the scale allowing us to understand the adaptation's process to the resilience. Results are distributed in 8 groups (BY, BM, UY, UM females and males) (Table 3). The average of 4 resilience factors was calculated in each group to facilitate the statistical correlations.

Statistical analysis

The Statistical Package for Social Sciences software, version 14 for Windows (SPSS, Inc., Chicago, II, USA) in data analysis, the parametric elementary analysis in the evaluation of demographic variables and alpha level of $p < 0.05$ were employed. Comparison among medium by t (Student) test in independent samples, comparison among variances by the F (Fisher) test with one factor, comparison among medians (to study the demographic origin of the sample) by W (Wilcoxon) test (this one united to t test has got a power - efficiency of 95%) and correlations by P (Pearson) coefficient, were assessed in patients-controls analysis (table 3).

Table 3a. Results of 4 factors of the CD-RISC scale

Groups	Hardness		Optimism		Resource-Fullness		Purpose	
	average	DS	average	DS	average	DS	Average	DS
BY ♀	06.05	00.60	05.95	00.60	05.10	00.55	03.35	00.58
BY ♂	08.90	00.64	08.85	00.58	07.35	00.58	05.15	00.67
BM ♀	16.15	00.67	15.95	00.60	13.30	00.65	10.40	00.50
BM ♂	20.50	00.60	20.35	00.48	16.40	00.50	14.50	00.51
UY ♀	10.60	00.50	10.35	00.48	08.40	00.50	07.45	00.51
UY ♂	12.55	00.51	12.30	00.47	09.40	00.50	07.35	00.48
UM ♀	23.45	00.51	23.20	00.41	19.45	00.51	15.50	00.51
UM ♂	24.65	00.48	24.35	00.48	19.60	00.50	17.60	00.50

B beautiful, U ugly, Y young, M mature, ♀ female, ♂ male

Table 3b. Statistical analysis

Groups		t Student test		F Fisher test		W Wilcoxon	
n°	correlation	value	p	value	p	value	p
01	♀ BY-BM	11.96	0.0012	35.29	0.0012	02.16	0.0303
02	♀ BY-UY	14.66	0.0006	17.17	0.0063	01.64	0.1003
03	♀ BY-UM	12.13	0.0012	59.99	0.0003	01.64	0.1003
04	♂ BY-BM	15.22	0.0006	36.00	0.0012	01.64	0.1003
05	♂ BY-UY	06.84	0.0063	03.46	0.1098	01.64	0.1003
06	♂ BY-UM	14.75	0.0006	50.85	0.0005	01.64	0.1003
07	♀- ♂ BY	09.34	0.0026	05.14	0.0625	01.64	0.1003
08	♀- ♂ BM	13.15	0.0009	03.93	0.0926	01.64	0.1003
09	♀- ♂ UY	02.46	0.0908	00.67	0.4461	01.27	0.2012
10	♀- ♂ UM	02.88	0.0632	00.20	0.6702	01.64	0.1003

Results

Resilience

No personality disturbance appeared in subjects by MMPI-2 test. Results are described in table 3.

CD-RISC

The factors show higher resilience values in M groups than in Y groups, in U groups then in B groups - lower values in females than in men considering the individual groups BY, BM, UY and UM. The lowest values are in the BY ♀ group and highest in UM ♂ group (Table 3).

Statistical analysis

T and F tests show correlation and significance - high ($0.0006 < p < 0.0063$) in 1,2,3,4 and 6th groups - sufficient in 7 and 8th groups ($0.0026 < p < 0.09$) - low in 5,9 and 10th groups (Table 3). The effect size of comparisons registers mild-large values (from 0.30 to > 0.50) in 1,2,3,4 and 6th groups. Comparisons between beauty and ugliness, so as young and old show significant differences for each CD-RISC factor: the ugliness and old record higher scores than beauty and young (Table 3). Also, the actual size of these differences records a large value with index $\eta^2 = 1.4$ in all factors. W test show the same values (1.64) in 2,3,4,5,6,7,8,10 groups and similar in 1 and 9 groups, but its specificity is low ($0.03 < p < 0.20$) (Table 3). P test does not show correlation and significance.

Discussion

Statistical observations

Correlations t and F between Y and M groups of the same sex are significant except the correlation ♂ BY-UY (Table 3). Interviews showed young males are not very sensitive to the model of beauty. There is no correlation t and F between sexes in UY and UM groups due to a too high p value (Table 3). Interviews showed similar values, recorded by the CD-RISC, in the both sexes of the U groups, correspond

to overlapping and valid adaptive responses. Values of W and P tests could suggest the independence of each group (Table 3).

Resilience

The "resilient" subject has got an integrated development of instinctive, emotional, affective and cognitive factors and judgment. In the literature, the resilience has been studied in healthy subjects or with various diseases [5,6]. Resilience appears low in acute diseases and high in chronic, where, there is a gradual acquisition of resistance factors. Interviews showed: more a person has skills and functions and less he is exposed to failure (causing frustration and inconvenience) and less he requires protection or resilience and otherwise. The beauty of a body is an important mean of acceptance and relationship. It may satisfy, in an immediate, affective demands and so it stimulates instinctive responses and the search for cognitive ones. An object associated with it needs few defences and so it produces a low resilience. The lack of beauty and, above all, aging produce stressful conditions, traumatic lacerations [16]. The aid application for the discomfort requires an adaptive response. This is into the resulting emotional and cognitive development that enables the psyche to reach a new psychosocial well-being. The resilience is the dynamic mechanism of previous response. The subject, through a personal journey, learn - to build healthy relationships and realistic goals - to do not live crises as insurmountable difficulties - to compensate and to project painful events into the future - to embrace change - to act decisively - to cultivate trust, the spiritual side and rewarding activities [16]. Interview showed resilience is an aspect of character that people can increase. For these reasons, the resilience increases in mature age due to the acquisition of a greater experiential baggage and in ugly subjects by the continuous acceptance of their poor aesthetic. The acquisition and acceptance are cognitive processes that require just the time of aging (age) or the habit to repeated discomfort (ugliness). Resilience is greater in men than in women because in the collective imagination the former is more associated with a model of strength rather than beauty itself.

Conclusions

The aging and beauty - resilience grows after repeated discomfort as ugly and in progressively and continuous way, while it is low after an acute perception of physical or psychical damage as a wrinkle. The habit in the time, in spontaneous way, or a short-term psychotherapy (cognitive or family) could help to overcome distress or traumas and to increase resilience factors.

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