

Psychotherapy effectiveness and the possibility of personality traits changes depending on the patients' age

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Summary.

Aim. The aim of this work is to compare personality traits changes and main symptoms changes in patients younger and older than 30 years during intensive, complex, integrative psychotherapy.

Material and methods. Three self-descriptive measures: the 16 PF of R.B.Cattell, the Neurotic Personality Questionnaire KON-2006 and the Symptom Check-list "O" were used in the study. A number of 100 patients, both sexes, aged 20 to 58, performed psychological tests before and after psychotherapy.

Results. Detailed statistical analysis shows that personality traits changes in psychotherapy do not seem to depend on the patients' age. We observe that decrease in global symptoms level is more frequent in the older patients.

Conclusion. Our analysis shows that the KON-2006 is more suitable for research of psychotherapy effectiveness than the 16 PF of R.B.Cattell.

patients age / personality traits changes / psychotherapy effectiveness

INTRODUCTION

Personality traits as basic categories of human description predisposing people to respond in a certain way, appeared at the dawn of the personality psychology [1, 2]. Views concerning the number of fundamental factors are changing (from many factors, extracted by Gordon Allport [3], through the 16-factorial personality model proposed by Raymond B. Cattell [4], three dimensions introduced by Hans J. Eysenck [5] to the model of personality based on the "Big Five" [6]). It is discussed which personality aspects are included by traits (emotions, behavior, thoughts, values) and how to measure the inten-

sity of factors. Experts discuss whether the factor analysis is able to reach the hidden structure of the personality and if the uniqueness of the individual is not lost [7]. There is no doubt, however, that the theory of personality traits is a functional way of categorizing personality, which allows to measure the differences between human beings and enables the multi-dimensional approach to the diagnosis of the personality disorder, recognized as a specific configuration of traits of extreme intensity [8].

The question concerning the personality change is, in fact, the question about the efficiency and the reasonableness of psychotherapy. Watson wrote in 1928 that "the human personality change comes as easily as the change of stripes for a zebra" [9], but both contemporary clinical practice and experimental results seem to be more optimistic about the possibility of the personality change and indicate the desirability of the use of psychotherapy to treat patients with neurotic and personality disorders. The proportions of stability and variability of the

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personality change, depending on the personality area studied, investigator's methods and his attitudes. The change can be presented in different terms: as an absolute or relative, quantitative or qualitative, phenotypic or genotypic (different types of behaviour as different manifestations of the same personality trait), continuous or discontinuous [10]. Since we cannot define the absolute limit in a specific characteristic change or clearly explain the factors affecting its stability or volatility, the issue of change still remains contractual.

Geneticists try to answer the question which traits are genetic and which depend on the environment. It is usually determined that the impact of genes and the environment is as $1/3^{\text{rd}}$ to $2/3^{\text{rd}}$, simplifying somewhat reciprocity of their interaction [11]. It is believed that the persistence of personality corresponds to genes and some environmental factors, such as the closure in certain situations. Factors associated with learning, with insight into one's functioning and the situation and the strong impact of a changing environment belong to factors that generate the change [12]. Therapeutic relationship and psychotherapy can belong to those factors as well. Literature concerning the evolution of personality traits asks about the continuity of personality traits at different stages of the human development and the change of their intensity. In her studies, Coan points out the existence of the same personality traits in children, adolescents and adults [13], while the response to the question about the change in their intensity during the life is not so unequivocal. There are studies showing the considerable consistency and the stability of personality characteristics and the increase in their stability with one's ageing [14]. Loehlin examined the impact of genes on the Big Five Personality Factors and organized them depending on their increasing heritability [15]. These were as follows: openness to experience, extroversion, neuroticism, agreeableness and conscientiousness. It seems that the factors closely related to genes and showing more continuity throughout life will be difficult to change in the process of therapy. The evidence concerning the personality of people between 20 and 30 years of age is scarce. We can intuitively assume that the change in this period of life is more likely than at a later age, due to the continuing, in-

tensive personality development. Research concerning changes in personality is usually carried out after 30 years of age (when the systematic structural changes are likely to end) in order to distinguish between the purely developmental changes from the rest [16]. Costa and McCrae [17] wrote about the personality which is immutable and permanent "as a rigid peg" after 30 years of age, indicating the existence of significant correlations between the factors. In turn, meta analyses of Roberts and Delvecchio [18] point out the existence of a large stability of personality not before the period between 50 and 70 years of age.

The issue of gender cannot be ignored in a study of personality change and development of its particular characteristics. Block [19] reports that there is a decrease in interests and in a sense of humor in men and an increase in interests, ambition and kindness in women [19]. The indicators of the personality change or its continuity showed a wide variation between the examinees, however, showed no difference in the continuity of men's or women's personality. Therefore it seems fair to assume that the natural differences in development trends will not correspond with differences in the effectiveness of psychotherapy depending on gender. As the differences between the intensity of traits in women and men are clear, differences in the possibility of changing the individual factors between women and men also seem to be likely.

It is expected that tools used for the study of the personality and its change are sensitive, objective and cover the large range of phenomena. Since the opinions of the patient and the therapist on the benefits of treatment are the result of the impact of many factors (among which the actual effectiveness of therapy is not decisive [20]), the use of more objective methods, for example the neurotic personality questionnaires or symptom checklists, seem to be more reliable.

AIM OF THE STUDY

The aim of this work was to evaluate the effectiveness of psychotherapy of the younger and older patients, to analyse the personality traits changes after therapy and to compare the 16 PF of R.B. Cattell and the Neurotic Person-

ality Questionnaire (KON-2006)* as therapeutic change tools. There are following research questions posed in the paper: Does it come to a fixation of the personality characteristics with the passage of the time thereby reaching the symptoms decrease and the personality change in older patients is more difficult in the process of psychotherapy? Do the particular personality factors differ in their susceptibility to the treatment? Do women and men differ significantly as for the extreme intensity of personality traits?

MATERIAL

The group of 100 patients (73 women and 27 men, aged from 20 to 58 years) treated for neurotic and personality disorders in the Day Care Centre of the Department of Psychotherapy, Jagiellonian University Medical College in 2004–2005 was analysed. Patients suspected of having psychorganic syndrome (based on Bender and Graham-Kendall test) and those who did not complete the treatment were excluded from the study. Patients were treated with group psychotherapy with elements of individual therapeutic contact, conducted in an integrative approach (mainly psychodynamic with elements of cognitive approach), including ca 180 hours (15 hours of group therapy and one hour of individual therapy per week).

METHODS

Each patient filled out the following tests and questionnaires before and after therapy:

- Polish adaptation of the 16 PF Cattell test [21], describing factors of the personality in 16 bipolar scales. The neurotic personality index (WDN – pol. Wskaźnik Dezintegracji Neurotycznej), corresponding to the level of dysfunction (“disintegration”) of the personality was analysed as well as changes in 13 scales, influencing the value of WDN.
- the Neurotic Personality Questionnaire [22] – a tool consisting of 243 variables (of which 240 creates 24 scales of different length), de-

signed to assess the personality dysfunction associated with the occurrence of neurotic disorders. The change in X-KON (corresponding with the severity of personality disintegration) was analysed as well as change in every scale of the questionnaire.

- the Symptom Check-list “O” [23], which is used to examine the severity of symptoms of functional disorders (of experiencing, behaviour and somatic). Change in the global symptoms level (OWK- pol. Ogólna Wartość Kwestionariusza) was analysed.

The patients population was divided into two groups: A – younger than 30 years and B – older than 30 years. Indexes (WDN, X-KON and OWK) and their changes were compared in groups of patients defined on the basis of their age, gender and both age and gender (the group of older women compared with the group of younger women and the group of older men compared with the group of younger men).

Changes in the global symptoms level (OWK), in neurotic personality indexes of the 16 PF Cattell test (WDN) and of the Neurotic Personality Questionnaire (X-KON) were analysed in two ways: as an achievement of the level which is recognized as the cure after therapy and as a change in relation to the initial value (relative changes). Relative changes were assessed according to the criteria proposed by Aleksandrowicz et al [20].

The value of OWK lower than 200 points (for women) and than 190 points (for men) was defined as “symptomatic cure”. The value of WDN below 8 points and the value of X-KON below 14 points** were specified as “personality cure”.

The following values were also compared in the subgroups of patients:

- initial intensity of 13 out of 16 factors of RB Cattell test and 24 scales of the Neurotic Personality Questionnaire
- the percentage of ‘extreme’ intensity of factors (value upper or below the contractual “standards”)

Statistical analysis

Calculations were conducted by the use of Statistica 6.0 and Microsoft Office Excel 2007. Student’s t test for independent samples or U Mann-Whitney test were performed to compare the value of indicators: OWK, WDN, X-KON and the

* see also pp 21–29.

** considered particularly for the aim of this study as a norm.

intensity of traits before therapy. Chi-square test (with the Fisher's amendment in case of expected number in a table's cell < 5) was applied to compare the frequency of the factors' extreme intensity and the frequency of changes of indexes and scales in subgroups of patients. A two-sided test for two structure indicators was conducted (for indicators and factors whose distribution of changes after therapy differed significantly between subgroups) to assess the relevance of the differences between the various categories of results. The differences were considered statistically significant at p value < 0.05 . The differences statistically insignificant ($p > 0.05$) were labelled as "ns".

RESULTS

Patients were divided into two groups: the subgroup A with a population of 58 persons, ranging in age from 20 to 30 years old (mean value: 25.6 ± 2.7) and the subgroup B, with a population of 42 people aged from 31 to 58 years (mean value: $38.5 \pm 7, 1$). Women constituted 77.6% of patients in the younger subgroup and 66.7% in the older one. The initial value of OWK of the Symptom Check-list "O", WDN of the 16 PF Cattell test and X-KON of the Neurotic Personality Questionnaire in the younger and older group and the group of women and men are summarized in Tab. 1.

Changes of indicators: OWK, WDN and X-KON after therapy and the distribution of cure percentage in the group of younger and older and in a group of women and men are presented in Tab. 2, 3 and 4.

The distribution of traits of the 16 PF Cattell test and of the Neurotic Personality Questionnaire with extremely high or low values before therapy (in which significant differences between the analysed groups were stated) is presented in Tab. 5 and 6.

Detailed tables with a statement of the average initial values and changes in particular traits of the 16 PF Cattell test and scales of the Neurotic Personality Questionnaire after therapy are available from the author on request.

DISCUSSION

The analysis did not show differences in the groups defined on the basis of age as for the initial value of the global symptoms level of the Symptom Check-list "O" (OWK), the neurotic personality index of the Neurotic Personality Questionnaire (X-KON) nor neurotic personality index of the 16 PF Cattell test (WDN). There was no relationship between patients' gender and the intensity of symptoms, while the average value of WDN was more than twice higher in the group of women before therapy (Tab. 1). The fact that the Polish version of the 16

Table 1. The average initial values of the global symptoms level (OWK), the neurotic personality index of 16 PF Cattell test (WDN) and the neurotic personality index of the Neurotic Personality Questionnaire (X-KON) in the younger group (A) and older group (B) and in the group of women (W) and men (M) before therapy.

	Gr. A	Gr. B	p	W	M	p	W			M		
							Gr. A	Gr. B	p	Gr. A	Gr. B	p
OWK	352.5 ± 152.6	351.3 ± 141.3	ns	365.5 ± 150.5	315.6 ± 134.0	ns	358.5 ± 157.4	376.6 ± 140.7	ns	331.8 ± 138.4	300.6 ± 133.2	ns
WDN	85.5 ± 87.2	80.4 ± 74.1	ns	98.9 ± 87.3	41.2 ± 41.6	0.001	98.9 ± 91.5	98.9 ± 81.8	ns	39.0 ± 49.0	43.3 ± 35.1	ns
X-KON	37.6 ± 21.2	37.0 ± 22.0	ns	37.4 ± 21.9	37.3 ± 20.5	ns	37.2 ± 21.7	37.8 ± 22.5	ns	39.1 ± 20.1	35.6 ± 21.6	ns

Table 2. The distribution of changes of the global symptoms level (OWK) in the group of younger (A) and older (B) and in the group of women (W) and men (M) after therapy.

		Gr. A	Gr. B	p	W	M	p	W		p	M		p
								Gr. A	Gr. B		Gr. A	Gr. B	
								OWK	Signifant improvement		37.9%	64.3%	
Slight improvement	46.6%	21.4%	0.01	37.0%	33.3%	ns	46.7%		21.4%	0.03	46.2%	21.4%	ns
No significant changes	12.1%	14.3%	ns	15.1%	7.4%	ns	13.3%		17.9%	ns	7.7%	7.1%	ns
Slight deterioration	3.5%	0.0%	ns	1.4%	3.7%	ns	2.2%		0.0%	ns	7.7%	0.0%	ns
Significant deterioration	0.0%	0.0%	ns	0.0%	0.0%	ns	0.0%		0.0%	ns	0.0%	0.0%	ns
Symptomatic cure	46.6%	61.9%	ns	49.3%	63.0%	ns	42.2%		60.7%	ns	61.5%	64.3%	ns

Table 3. The distribution of changes of the neurotic personality index of the 16 PF Cattell test (WDN) in the group of younger (A) and older (B) and in the group of women (W) and men (M) after therapy.

		Gr. A	Gr. B	p	W	M	p	W		p	M		p
								Gr. A	Gr. B		Gr. A	Gr. B	
								WDN	Significant improvement		22.4%	31.0%	
Slight improvement	36.2%	31.0%	ns	31.5%	40.7%	ns	35.6%		25.0%	ns	38.5%	42.9%	ns
No significant changes	27.6%	26.2%	ns	21.9%	40.7%	ns	24.4%		17.9%	ns	38.5%	42.9%	ns
Slight deterioration	10.3%	11.9%	ns	12.3%	7.4%	ns	8.9%		17.9%	ns	15.4%	0.0%	ns
Significant deterioration	3.5%	0.0%	ns	2.7%	0.0%	ns	4.4%		0.0%	ns	0.0%	0.0%	ns
Cure	31.0%	35.7%	ns	28.8%	44.4%	ns	28.9%		28.6%	ns	38.5%	50.0%	ns

Table 4. The distribution of changes of the neurotic personality index of the Neurotic Personality Questionnaire (X-KON) in the group of younger (A) and older (B) and in the group of women (W) and men (M) after therapy.

		Gr. A	Gr. B	p	W	M	p	W		p	M		p
								Gr. A	Gr. B		Gr. A	Gr. B	
								X-KON	Significant improvement		48.3%	50.0%	
Slight improvement	29.3%	33.3%	ns	32.9%	25.9%	ns	31.1%		35.7%	ns	23.1%	28.6%	ns
No significant changes	12.1%	11.9%	ns	12.3%	11.1%	ns	13.3%		10.7%	ns	7.7%	14.3%	ns
Slight deterioration	8.6%	4.8%	ns	6.9%	7.4%	ns	6.7%		7.1%	ns	15.4%	0.0%	ns
Significant deterioration	1.7%	0.0%	ns	1.4%	0.0%	ns	2.2%		0.0%	ns	0.0%	0.0%	ns
Cure	44.8%	45.2%	ns	46.6%	40.7%	ns	44.4%		50.0%	ns	46.2%	35.7%	ns

Table 5. The distribution of traits of the 16 PF Cattell test with extremely high or low values in the group of younger (A) and older (B) and in the group of women (W) and men (M) before therapy.

	Gr. A	Gr. B	p	W	M	p	W		p	M		p
							Gr. A	Gr. B		Gr. A	Gr. B	
E Dominance	24.1%	42.9%	0.04	37.0%	18.5%	ns	28.9%	50.0%	ns	7.7%	28,6%	ns
M Eccentricity	46.6%	28.6%	ns	41.1%	33.3%	Ns	51.1%	25.0%	0.03	30.8%	35,7%	ns
N Rationalism	29.3%	47.6%	ns	43.8%	18.5%	0.02	35.6%	57.1%	ns	7.7%	28,6%	ns
Q4 Tension	50.0%	45.2%	ns	54.8%	29.6%	0.03	55.6%	53.6%	ns	30.8%	28,6%	ns

Table 6. The distribution of traits of the Neurotic Personality Questionnaire with extremely high or low values in the group of younger (A) and older (B) and in the group of women (W) and men (M) before therapy .

	Gr. A	Gr. B	p	W	M	p	W		p	M		p
							Gr. A	Gr. B		Gr. A	Gr. B	
1 Sense of dependence of others	72.4%	88.1%	ns	72.6%	96.3%	0.01	66.7%	82.1%	ns	92.3%	100%	ns
11 Belief in helplessness	82.8%	83.3%	ns	87.7%	70.4%	0.04	86.7%	89.3%	ns	69.2%	71,4%	ns
21 Irrationality	55.2%	73.8%	ns	72.6%	37.0%	0.00	66.7%	82.1%	ns	15.4%	57,1%	0,03
23 Excessive recollection	81.0%	64.3%	ns	67.1%	92.6%	0.01	75.6%	53.6%	ns	100%	85,7%	ns

PF Cattell test was not standardized for sexes in the field of standards for intensity of individual characteristics [24] is noteworthy. Therefore drawing the conclusion about stronger personality disintegration among women seems doubtful. Significant improvements in the WDN rate were observed among women, while a trend towards more frequent cures after therapy was observed in men (Tab. 3). These differences seem to result from the inadequacy of the measurement tool in this respect (a lower mean value of neurotic personality index in men before therapy, compared with women was observed, so they often achieved a "cure threshold", despite relatively small changes). X-KON of the Neurotic Personality Questionnaire (the tool standardized for sexes) did not reveal differences between women and men in the mean initial value of personality disintegration nor in the frequen-

cy of the obtained improvements or cures (Tab. 1, 4). Most of the analyses in research on the effects of psychotherapy do not confirm the relation between gender and outcomes of treatment [20, pp 105-116].

Older patients more often achieved a significant improvement in the OWK value after therapy (despite the similar initial value of symptoms in both age subgroups), while in the younger group slight symptomatic improvements were more frequent (Tab. 2). There are contradictory reports in the literature concerning the impact of the patients age on treatment effects. There are studies indicating a more effective therapy in children below the age of 12 than youth [25] and metaanalyses proving better effects of psychotherapy in teenagers aged 13-18 years as compared with younger children [26]. Many studies have denied the impact of age on therapeu-

tic change, reporting on the comparative efficacy of psychotherapy in children below 13 years of age and in adults [27], and between adults and geriatric patients [28]. In view of these reports the result of this analysis seems surprising and the question about factors that affect the older patients' ability to obtain a higher percentage of significant improvements remains open. Perhaps these are the experiences and wisdom of life as well as the greater determination to psychotherapy, associated with a longer period of discomfort and suffering caused by the existence of dysfunctional personality characteristics. These hypotheses need to be verified in future studies. Changes in personality disintegration indexes (X-KON, WDN) were comparable in the age groups after therapy (Tab. 3, 4), which also seems to be inconsistent with the hypothesis of reducing the vulnerability to personality change with ageing.

The analysis of traits of the 16 PF Cattell test before therapy showed a significantly lower intensity on the scale of E (dominance) among older patients (especially women). The incidence of extremely low values in this scale was nearly twice as high in the older group and was more than 40% (Tab. 5). As improvements were similarly common in younger and older patients, the distribution of extreme values observed after therapy was alike. There were higher values in the factor O (sense of guilt) observed in women, both before therapy and after its completion. The incidence of improvement in this factor value was comparable in the subgroup of women and men, but deteriorations were more frequent among women. Significantly higher values on scales of sensitivity (I) and tension (Q4) and the lower mean values of factors: C (towards immature ego) and N (towards naivety) were observed in women before therapy. The frequency of extremely low values on a scale of naivety - rationalism (N) and extremely high values of ergic tension (Q4) were also more frequent in women (Tab. 5). As for factor F (eccentricity), its high values were particularly common among younger women (more than 50%), while the frequency of improvements and deteriorations was comparable in the younger and older women.

In the Neurotic Personality Questionnaire men from the tested group were characterized by extreme values on a scale 1 (sense of depend-

ence on others) and 23 (excessive recollection) (Tab. 6). Such a distribution of extreme values was also observed after treatment. In men, the mean values on scale 9 (difficulty in interpersonal relationships) were significantly higher among younger patients. Higher values were observed among women on a scale of exaltation (20). The differences between subgroups were also visible as for the irrationality (scale 21) - the mean value of this scale was significantly higher among older patients and among women. In the group of women the high value on scale 11 (sense of helplessness) was observed. The younger men significantly more often achieved improvement as for the sense of alienation (6) than older ones. Improvements on the scales: 10 (lack of vitality), 12 (Sense of lack of impact) and 19 (sense of threat) were particularly frequent in men. There were frequent improvements as well as deteriorations observed on scale 22 (meticulousness) among older patients after therapy.

The intensity of factors, differing women and men from the tested groups, appears to be consistent with the fairly widespread perception of women as more exalted, submissive, naive, with a greater sensitivity and helplessness. Particularly high values of the irrationality in the older group (especially women) seem to accurately characterise the overall population - not just patients. A high sense of guilt in the women subgroup (despite frequent improvements as for that factor, extremely high values were observed in one third of women after treatment) may be associated with the specific process of education, often creating the strong need to meet others expectations. The high value on a scale of difficulties in interpersonal relations among younger men highlighted in the analysis of results. Younger women were characterized by a high value of eccentricity (according to some psychological approaches that factor is often associated with egotism). It is interesting whether the frequent occurrence of high values of these features is more characteristic for the younger generation or whether extreme values of these factors impede group functioning and forge relationships, which is particularly burdensome for younger patients and becomes a frequent cause of starting psychotherapy. The only traits (among the factors of the Cattell test and the scales of the Neurotic Personality Question-

naire), whose intensity significantly differed the older and younger patients in the tested groups (regardless of sexes) were irrationality and submission. It is worth considering, however, that in cross-sectional studies concentrating on the personality change dependently on age, the differences between age groups may arise not only from the specificity of the development of an individual but also from moral and social changes occurring over the years [29]. Changes in the mean value of the particular factors were comparably often observed in both age subgroups after therapy. Changes in the factors associated with the perception of the relationship between patients and their surrounding environment (a sense of dependence on others, alienation, the lack of impact, sense of threat) were often observed. This raises the question: to what extent did these changes result from unspecified factors of group therapy (support, a sense of acceptance and understanding) and are unstable, and how permanent is the change of the configuration of these traits in the personality of patients. It would be reasonable to conduct a catamnestic study and verify the sustainability of changes.

It is believed that the general methods for assessing personality are less sensitive than tools created specifically to assess neurotic personality and its change [30]. This study seems to confirm that statement: changes in values of traits were observed more often on the scales of the Neurotic Personality Questionnaire than in factors of the 16 PF Cattell test. This may bear witness to a larger sensitivity of the Neurotic Personality Questionnaire in assessing therapeutic changes or to its better illustration of the personality traits that change in the process of psychotherapy.

CONCLUSIONS

The age of patients in the tested groups had no impact on the level of the personality disintegration and the severity of symptoms presented before therapy. Patients in the subgroups defined on the basis of age differed as for the change of few factors after therapy. The benefits achieved by the older and younger patients as for changes in the rate of neurotic disintegration indexes

of the Neurotic Personality Questionnaire or of the 16 PF Cattell test were similar, but symptomatic improvements were significantly more frequent among older patients.

The initial mean value of the global symptoms level and the frequency of symptomatic cures were not related with patients gender. The level of personality disintegration measured by indicator WDN of the 16 PF Cattell test was more than twice as high for women - these differences seem to result from a lack of Polish Cattell's version's standardization with respect to gender. There are many differences in the frequency of the extreme intensity and the improvement of individual characteristics (scales) between the group of women and the group of men.

Changes in the scales of the Neurotic Personality Questionnaire were more frequent than in traits of the 16 PF Cattell test. The Neurotic Personality Questionnaire, as a tool specially designed to assess personality disintegration, appears to be more sensitive for changes in individual factors. Perhaps it better describes the traits of personality which are changing in the process of therapy. It seems to have an advantage over the 16 PF Cattell test because of the standardization for sexes.

REFERENCES

1. Stagner R. Psychology of personality. New York: McGraw-Hill; 1937. p. 12.
2. Gerrig RJ, Zimbardo PG. Psychologia i życie. Warszawa: Wydawnictwo Naukowe PWN; 2006. p. 428–430.
3. Allport GW, Odbert HS. Trait names: A psycho-lexical study. Psychol. Monogr. 1936; 47: 1–211.
4. Cattell RB, Eber HW. Handbook for the Sixteen P. F. Test. Champaign, IL: IPAT; 1962.
5. Eysenck HJ. Biological dimensions of personality. In: Pervin LA, John OP, eds. Handbook of personality: Theory and research. New York: Guilford Press; 1990. p. 244–276.
6. McCrae RR, Costa PT. A five factor theory of personality. In: Pervin LA, John OP, eds. Handbook of personality: Theory and research. New York: Guilford Press; 1990. p. 139–153.
7. Lykken DT. Multiple factor analysis and personality research. J. Exper. Res. Person. 1971, 5: 161–170.
8. Wiggins JS, Pincus AL. Conceptions of personality disorders and dimensions of personality. Psychol. Assessm. 1989; 1: 305–316.

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9. Watson JB. *The ways of behaviorism*. New York: Harper; 1928. p. 138.
10. Pervin LA. *Psychologia osobowości*. Gdańsk: GWP; 2005. p. 183–185.
11. Dunn J, Plomin R. *Separate lives: Why siblings are so different*. New York: Basic Books; 1990.
12. Baumaister RF. *The crystallization of discontent in the process of major life change*. In: Heatherton TF, Weinberger JL, red. *Can personality change?* Washington D.C.: American Psychological Association; 1994. p. 281–297.
13. Coan RW. *Child personality and developmental psychology*. In: Cattell RB, eds. *Handbook of multivariate experimental psychology*, Chicago: Rand McNally; 1966. p. 732–752.
14. Conley JJ. *Longitudinal stability of personality traits: A multitrait-multimethod-multioccasion analysis*. *J. Person. Soc. Psychol.* 1985; 49: 1266–1282.
15. Loehlin JC. *Genes and environment in personality development*. Newbury Park, CA: Sage; 1992.
16. Niedźwieńska A. *Zmiana osobowości. Wybrane zagadnienia*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego; 2005. p. 17–18.
17. Costa PT, McCrae RR. *Set like plaster? Evidence for stability of adult personality*. In: Heatherton TF, Weinberger JL, red. *Can personality change?* Washington D.C.: American Psychological Association; 1994. p. 21–40.
18. Roberts BW, DelVecchio WF. *The rank-order consistency of personality from childhood to old age: a quantitative review of longitudinal studies*. *Psychol. Bull.* 2000; 126: 3–25.
19. Block J. *Lives through time*. Berkeley, CA: Bancroft; 1971.
20. Aleksandrowicz JW, Sobański JA. *Skuteczność psychoterapii poznawczej i psychodynamicznej*. Kraków: Komitet Redakcyjno-Wydawniczy PTP; 2004. p. 69–72.
21. Nowakowska M. *Polska adaptacja 16-czynnikowego kwestionariusza osobowościowego R.B. Cattella*. *Psychol. Wychowaw.* 1970; 13: 478–500.
22. Aleksandrowicz JW, Klasa K, Sobański JA, Stolarska D. *Kwestionariusz osobowości nerwicowej KON-2006*. Kraków: Biblioteka Psychiatrii Polskiej; 2006.
23. Aleksandrowicz JW, Hamuda G. *Kwestionariusze objawowe w diagnozie i badaniach epidemiologicznych zaburzeń nerwicowych*. *Psychiatr. Pol.* 1994; 28 (6): 667–676.
24. Aleksandrowicz JW, Bierzyński K, Martyniak M. *Zastosowanie testu 16 PF Cattella w ocenie leczenia nerwic*. *Psychoter.* 1985; 1 (52): 47–60.
25. Weisz JR, Weiss B, Alicke MD, Klotz ML. *Effectiveness of psychotherapy with children and adolescents: A meta-analysis for clinicians*. *J. Cons. Clin. Psychol.* 1987; 55: 542–549.
26. Weisz JR, Weiss B, Han SS, Granger DA, Morton T. *Effects of psychotherapy with children and adolescents revisited: A meta-analysis of treatment outcome studies*. *Psychol. Bull.* 1995; 117: 450–468.
27. Casey Rita J, Berman Jeffrey S. *The outcome of psychotherapy with children*. *Psychol. Bull.* 1985; 98 (2): 388–400.
28. Scogin F, McElreath L. *Efficacy of psychosocial treatments for geriatric depression: A quantitative review*. *J. Cons. Clin. Psychol.* 1994; 62: 69–73.
29. Elder GH, Caspi A. *Economic stress: Developmental perspectives*. *J. Soc. Issues* 1988; 44: 25–45.
30. Brzeziński J. *Metodologia badań psychologicznych*. Warszawa: Wydawnictwo Naukowe PWN; 2006. p.172–175.

Appendix I:

Analyzed traits of the 16 PF Cattell test: B — Reasoning, C — Emotional Stability (Ego Maturity), E — Dominance, F — Liveliness, H — Social Boldness, I — Sensitivity, M — Abstractedness (Eccentricity), N — Privatness (Rationalism), O — Sense of guilt, Q1 — Openness to Change, Q3 — Perfectionism, Q4 — Tension

Appendix II:

Scales of the Neurotic Personality Questionnaire: 1 — Sense of dependence on others, 2 — Asthenia, 3 — Negative self-evaluation, 4 — Impulsiveness, 5 — Difficulties in making decisions, 6 — Sense of alienation, 7 — Demobilization, 8 — Tendency to risk, 9 — Difficulty in emotional relationships 10 — Lack of vitality, 11 — Belief in helplessness 12 — Sense of lack of impact, 13 — Ability to guide oneself, 14 — Indulging in fantasies, 15 — Sense of guilt, 16 — Difficulty in interpersonal relationships 17 — Envy, 18 —Narcissism, 19 — Sense of threat, 20 — Exaltation, 21 — Irrationality, 22 — Meticulousness, 23 — Excessive recollection, 24 — Sense of overload



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