Schizophrenic disorders – do cognitive dysfunctions relate to course characteristics and the psychopathological picture?

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SUMMARY

Aim: Cognitive dysfunctions are nowadays often considered as fundamental characteristics of schizophrenic disorders essential for pathogenesis and clinical aspects of the disease as well as social functioning of the patients. The aim of the study was to determine the associations between some chosen indicators of disordered cognitive functions and some chosen variables describing the course and the clinical picture of schizophrenic disorders.

Material and method: 69 patients satisfying both DSM-IV and ICD–10 schizophrenia criteria were examined. Two clinical tools were used for the assessment of the clinical state (scales: PANSS and KOSS), and similarly two scales for the assessment of premorbid functioning (scales: GAF and W). Neuropsychological dysfunctions were examined with the help of computer-aided tests from the Vienna Test System including the measures of: reaction time (RT), visual line pursuit (LVT), perseveration (PERSEV), and the capacity of visuospatial memory (CORSI). Simple non-parametric tests and rank correlation coefficients were used in statistical analysis.

Results: The associations between cognitive dysfunctions and: age, social functioning before hospitalisation, duration of the disease and the number of hospitalisations were discovered. The dysfunctions were less pronounced at the time of the first episode than in the relapse phase or the residual phase. The quantitative assessment of disorders’ severity did not correlate with cognitive dysfunctions, but the detailed analysis of the psychopathological picture revealed correlations between some dysfunctions with the dimensions of deficit, disorganisation and dysphoria. The distortion dimension (positive) did not reveal such associations. All the indicators of cognitive dysfunctions correlated with worse results of the current episode treatment. All the significant correlations reached only a weak or moderate level.

Conclusions: Cognitive dysfunctions are associated with rather unfavourable characteristics of the disease course. The results of the psychopathological assessment correlate weakly with the neuropsychological assessment – cognitive dysfunctions are associated with deficit, disorganisation and dysphoria rather than productive symptoms of the disease in question.

schizophrenia / cognitive dysfunctions / course / psychopathological dimensions

INTRODUCTION

From the time of clinical descriptions presented by Kraepelin and Bleuler, abnormalities of cognitive processes related to attention, thought association and will activity are considered to be im-
portant in the psychopathological picture and pathogenesis of schizophrenia. The dysfunctions in question are nowadays reckoned as the basic traits of schizophrenic disorders, fundamental for its pathogenesis, general functioning as well as clinical aspects of the disease (e.g. awareness of the disease, its course and prognosis) [1, 2, 3, 4]. Patients suffering from schizophrenia are characterized by a diversity of deficits of cognitive functions affecting attention, memory, (especially so called working memory), visuospatial functions, language competence, processes of memory and learning, general intelligence [5, 6, 7, 8, 9].

In spite of significant conformity of study results indicating that cognitive dysfunctions are present in a majority of patients (though to a different degree), it is not clear whether they are bound in some specific way with the structure of patients’ mental state and its changes during treatment. Drawing conclusions from the available studies is hampered by significant diversity of methods evaluating dysfunctions of cognitive processes, heterogeneity of terminology and functional interpretation of the applied tests, as well as diverse definitions of other variables, including the clinical ones, correlated with the dysfunctions in question [2, 3, 4, 10].

The question whether there exists (dominates or prevails) one specific type of cognitive dysfunction in patients suffering from schizophrenia or whether the observed dysfunctions have an individual, diverse and multimodal nature has not been settled. However the majority of current study results emphasise the substantial meaning and the presence of specific cognitive disorders, which constitute primary dysfunctions (core) such as working memory and executive functions disorders [11, 12, 13, 14, 15, 16, 17], or attention disorders [5, 18, 19]. Some part of the studies indicates diversity of the profile of the disorders [20, 21] or a generalised, not specific nature of the ascertained deficits of activities [22].

The attempts to find specific associations between indicators of different cognitive dysfunctions assessed with neuropsychological tests and psychopathological dimensions of schizophrenia that are considered to be fundamental (deficitary, disorganised, productive) do not bring unequivocal results. In spite of the fact that the majority of studies affirm some specific associations between them [e.g. 23, 24, 25, 26, 27], others argue that neuropsychological dysfunctions exert rather a general, non-specific and weak influence on psychopathological manifestations evaluated in clinical examination [28, 29, 30, 31, 32]. Many studies conducted in recent years revealed important associations between negative symptoms and cognitive disorders whereas such associations with positive symptoms have not been reported. It has been found that people suffering from schizophrenia with dominating negative symptoms present much more serious cognitive disorders in comparison with those who have a predominance of positive symptoms [33, 34, 35]. What is more, people with more pronounced negative symptoms and cognitive dysfunctions present a poorer social adjustment in comparison with those with a lower level of the symptoms in question [36]. Associations between cognitive dysfunctions, premorbid functioning of the subjects and the course of the treatment have also been assessed and they do not always turn out to be unequivocal [37, 38, 39]. The results of other studies reveal associations between pronounced cognitive deficits and difficulties in social functioning [40, 41], coping with the disease [42] or even worse quality of life [43].

In the circumstances taking up research, that might contribute to clarifying this heterogeneity seemed to be justifiable.

THE AIM OF THE STUDY

The objective of the presented study was to evaluate associations between chosen indicators of disordered cognitive functions (especially attention and working memory) and chosen variables describing the course (familial predispositions, premorbid personality, age at the onset of the disease, duration of the disease, the number of hospitalisations) and the clinical picture of schizophrenic disorders (intensity of disorders, intensity of psychosocial dysfunctions, the level of improvement after current treatment).
**MATERIAL AND METHODS**

**Subjects**

Essential information was collected from 69 people diagnosed with schizophrenic disorders, fulfilling DSM-IV and ICD-10 diagnostic criteria at the same time. All of them were patients hospitalised in different wards of the Psychiatric Department at the time of the study. Basic socio-demographic and clinical characteristics of the group are presented in Table 1.

**Methods**

Apart from the questionnaire prepared specially for the purpose of the study, enabling registration of socio-demographic and clinical data, some standardised tools for the assessment of mental state and psychosocial functioning were used.

**Table 1.** The socio-demographic and clinical profile of the studied group of patients.

<table>
<thead>
<tr>
<th>Analyzed variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>women frequency (%) 39</td>
</tr>
<tr>
<td></td>
<td>men frequency (%) 61</td>
</tr>
<tr>
<td>Age</td>
<td>years mean ± sd (range) 33.8±11 (19–62)</td>
</tr>
<tr>
<td>Education</td>
<td>primary frequency (%) 30</td>
</tr>
<tr>
<td></td>
<td>secondary frequency (%) 55</td>
</tr>
<tr>
<td></td>
<td>higher frequency (%) 15</td>
</tr>
<tr>
<td>Place of residence</td>
<td>village, small town frequency (%) 19</td>
</tr>
<tr>
<td></td>
<td>large city frequency (%) 81</td>
</tr>
<tr>
<td>Premorbid personality</td>
<td>not disturbed frequency (%) 25</td>
</tr>
<tr>
<td></td>
<td>*schizo+ frequency (%) 19</td>
</tr>
<tr>
<td></td>
<td>other frequency (%) 56</td>
</tr>
<tr>
<td>Family history of the disease</td>
<td>none frequency (%) 66</td>
</tr>
<tr>
<td></td>
<td>present frequency (%) 34</td>
</tr>
<tr>
<td>Age at the onset of the disease</td>
<td>years mean ± sd (range) 23.5±7 (13–45)</td>
</tr>
<tr>
<td>Duration of the disease</td>
<td>years mean ± sd (range) 10±10 (0–43)</td>
</tr>
<tr>
<td>Number of hospitalisations</td>
<td>mean ± sd (range) 8±10 (1–42)</td>
</tr>
<tr>
<td>Functioning (according to GAF)</td>
<td>best in the previous year mean ± sd (range) 58.9±17.9 (0–100)</td>
</tr>
<tr>
<td>Functioning according to W scale</td>
<td>best in the previous year mean ± sd (range) 1.7±0.8 (0–3)</td>
</tr>
<tr>
<td>Syndrome</td>
<td>paranoid frequency (%) 82</td>
</tr>
<tr>
<td></td>
<td>delusional frequency (%) 4</td>
</tr>
<tr>
<td></td>
<td>catatonic frequency (%) 6</td>
</tr>
<tr>
<td></td>
<td>depressive frequency (%) 7</td>
</tr>
<tr>
<td>Disorder severity according to KOS-S-C at admission</td>
<td>mean ± sd (range) 2.2±0.7 (0–3)</td>
</tr>
<tr>
<td></td>
<td>at discharge mean ± sd (range) 0.8±0.7 (0–2)</td>
</tr>
<tr>
<td>Disorder severity according to PANSS at admission</td>
<td>mean ± sd (range) 81.5±25 (32–141)</td>
</tr>
<tr>
<td></td>
<td>at discharge mean ± sd (range) 29.5±13 (2–61)</td>
</tr>
<tr>
<td>Clinical improvement assessment</td>
<td>at discharge mean ± sd (range) 1.7±0.6 (0–3)</td>
</tr>
</tbody>
</table>

* schizo+ – (schizoid or schizotypal); sd – standard deviation
Mental state assessment

PANSS – *Positive and Negative Syndrome Scale* [46] is a popular tool for the assessment of schizophrenic syndromes, encompassing 30 items, divided by the authors into groups: 7 positive symptoms, 7 negative symptoms and 16 symptoms belonging to the so-called general psychopathology. According to factor analysis in a large group of patients [proper unpublished study] they might be contributed to 6 dimensions, interpreted as: negative, positive, hostility, cognitive, depression and anxiety dimensions. Mean absolute value sum profile belonging to proper factors and weighted sums in relation to the number of items constituting a given dimension are presented in Fig.1. Such a relative profile illustrates the balance of syndrome dimensions with some domination of negative and positive symptoms over cognitive symptoms and the symptoms associated with hostility/impulsivity, and above all, with the symptoms associated with depression and anxiety.

KOSS – *Clinical evaluation of schizophrenic syndromes* [47] is a tool created and used in the Psychiatric Department. Two versions of the scale were used: KOSS-C – for the global assessment of syndrome severity by the means of one general ordinal scale (from 0 to 3) as well as KOSS-S – for the detailed assessment of symptoms by the means of 31 scales. Parallel presentation (as in Fig. 1) of the profiles of 8 dimensions KOSS is presented in Fig. 2.

Assessment of social functioning

Two tools were used.

*Global Assessment of Functioning* scale (GAF) – simple ordinal scale (0–100) enabling the global assessment of health, interpersonal and occupational aspects of functioning. It defines 10 compartments that can be divided in a more detailed manner by the rater. It belongs to the supplementary tools for the DSM-IV system [44, 48]. *W Scale* – is a more sophisticated tool [48] used in our Psychiatry Department, only a part of the scale – global life adjustment assessment scale was used in the present analysis (0 – not adjusted; 1 – poorly adjusted, 2 – relatively adjusted, 3 – well adjusted).

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**Fig. 1.** The absolute and weighted profiles of schizophrenic syndrome dimensions described according to the PANSS scale. The number of symptoms creating a specific dimension in parenthesis.

**Fig. 2.** The absolute and weighted profiles of schizophrenic syndrome dimensions described according to KOSS. The number of symptoms creating a specific dimension in parenthesis.
The assessment of cognitive dysfunction

For the assessment of cognitive dysfunctions we applied some chosen tests from the computerised battery of psychological tests of the Wien Testsystem [49]. The tests displayed on a monitor screen were completed by means of a light pen and a special keyboard. Visual and auditory stimuli displayed on a monitor screen were used in subtests.

Reaction Time test [RT] is used for measuring reaction time for simple stimuli dependent on efficient attention. Examined subjects were to react (by pressing the proper button) in response to a particular stimulus (visual or auditory) as soon as possible. From the available versions of the test the following were chosen: (1) version S9 – measure of reaction time in response to a simple visual stimulus (yellow light) and (2) version S10 measure of reaction time in response to a simple auditory stimulus (sound), (3) more complex version S3 – measure of reaction time with the choice of a yellow light or a sound as well as (4) the most complex version S5 – measure of reaction time expected after noticing the yellow light accompanied by the sound or the yellow light accompanied by the red light. It has been assumed that reaction time is associated with the ability to focus attention on the performed task. Correct completion of sophisticated versions of the test (3 and 5) requires that the combination of stimuli is kept for a short period of time in two-modal memory (vision, audition) so that it can be compared to a previously remembered pattern and the ability of shifting from one set of stimuli to the other. Medians of reaction time (msec.) were used in the analyses as the basic test result.

Visual Pursuit Test (LVT) – used for directing and focusing attention during the task engaging visual perception. The test encompasses 40 pictures presented successively. Each of them shows 9 long lines crossing each other on the bright background. The subject is to follow the line marked with an upper arrow with his eyes and to mark the number that the line leads to on the keyboard. Correctness and the time spent on following the line is crucial. Test index (the number of correct responses in a period of time) was used as the fundamental result value in the analysis.

Perseveration Test (PERSEV) examines the tendency to perseveration. There are nine circles arranged asymmetrically on the monitor screen, and the subject is to press them in a random manner to the extent possible. The computer calculates the frequency of pressing different circles. Redundancy index is calculated on that basis and it represents the probability of non-random choice (repeating, favouring) certain circles. The higher the redundancy index, the greater tendency to perseveration. The redundancy index of the second degree is considered to be the measure of inflexibility and it reflects the frequency of repeating the choice of different combinations of pairs of circles.

Corsi Test (CORSI) – tests the direct visuo-spatial memory capacity. A few cubes (from 3 to 8) appear on the monitor screen for a while. After the exposition the subject is to point the cubes that appeared on the screen in the right order. The basic value that is being measured is the mean number of cubes that are held in memory (and pointed appropriately), which according to the authors, is associated with the skills of visuo-spatial aspects of working memory.

Statistical analysis

The methods available in the statistical package SPSS PC (version 12 PL) have been used, especially simple measures of statistical description, checking hypotheses by means of non-parametric tests and correlation analysis (Pearson’s correlation coefficients, Spearman’s correlation coefficients).

RESULTS

The extent of dysfunction

As the Table 2. shows and as it has been expected, the more sophisticated reaction is required by the task, the longer time was needed for it’s completion, from 309 msec. for acoustic stimuli (S10) to 622 msec for the alternative choice of combination of double modality stimuli (S5). The average tendency to perseverate came to about 54%. During the time required the patients managed to trace properly the course of about 25 lines and kept in memory the position of 5 cubes approximately. The value of the mean standard error fit in the confidence interval.
Cognitive dysfunctions and variables describing
the course of the disease

Non-parametric analysis of associations between the examined cognitive dysfunctions and analysed nominal variables (Table 3) revealed only single associations reaching the degree of statistical significance. Only the result of measurement of reaction time for the stimulus of the most complex pattern was dependent on education (the higher level of education, the more efficient reaction). Similar association occurred between the time of a simple visual reaction (S9) and the time of the most complex bimodal reaction (S5) on the one hand, on the other hand – the phase of the development of the disease (the most efficient reaction after the first episode of psychosis and distinctly less efficient after the relapse and in the residual phase). Neither of cognitive dysfunction indicators showed significant associations with family history nor with premorbid personality of the patients.

Poor premorbid functioning affects cognitive functioning during hospitalization though to a moderate extent. The dependence is only visible with reference to reaction times (poorer premorbid adjustment, slower reaction), with the tendency to their prolongation together with the degree of stimulus complexity. Moreover, it becomes more evident, when developed GAF scale (100 compartments) is applied for the assessment of functioning than when a simpler scale W (4 compartments) is applied.

The duration of the disease and the number of hospitalizations correlated with all the analysed dysfunctions – while the duration of the disease was longer and the number of hospitalisations was higher, the reaction time was longer, the tendency to perseveration increased, the ability to follow the lines and the number of remembered cubes decreased. Similar associations between cognitive dysfunctions and the age of the patients were found, but for the tendency toward perseveration which didn’t show any association with age. The above-mentioned independent variables (age, duration of the disease, the number of hospitalisations) were strongly intercorrelated, the strongest correlations were found for the age and the duration of the disease (r=0.82), strong correlations were found for the duration of the disease and the number of hospitalisations (r=0.84), moderate correlations were found for the age and the number of hospitalisations (r=0.62). There were no significant correlations between the extent of cognitive dysfunctions and the age at the onset of the disease.

Cognitive dysfunctions and variables describing
the clinical picture

Table 5 shows correlations between cognitive dysfunctions and quantitative characteristics of the variables describing patients’ clinical state – from the evaluation of the severity of the disorders at the beginning and at the end of hospitalisation, to the indicator of improvement achieved after treatment.

The severity of disorders assessed as a whole (KOSS-C) doesn’t reveal any associations with
Table 3. The associations between the examined dysfunctions of cognitive processes and chosen, nominal socio-demographic features and the features of the disease course – rank comparison.

<table>
<thead>
<tr>
<th>Cognitive dysfunction indicator</th>
<th>Qualitative socio-demographic variables and clinical variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>K-W test (p)</td>
</tr>
<tr>
<td>RT s10 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s9 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s3 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s5 median reaction time (msec)</td>
<td>0.045a</td>
</tr>
<tr>
<td>PERSEV redundancy indicator of the 2-nd degree</td>
<td>ns</td>
</tr>
<tr>
<td>LVT general result</td>
<td>ns</td>
</tr>
<tr>
<td>CORSI visual memory capacity</td>
<td>ns</td>
</tr>
</tbody>
</table>

M-W test (Mann-Whitney); K-W test (Kruskal-Wallis)

a primary – 221msek.; secondary – 127msek; higher – 113 msek
b first episode – 228 msek; relapse – 308 msek; residuum – 306 msek.
c first episode – 500 msek; relapse – 638 – msek; residuum – 635 msek.

Table 4. The associations between the examined dysfunctions of cognitive processes and chosen qualitative variables describing the course of the disease – correlations (Pearson’s r).

<table>
<thead>
<tr>
<th>Cognitive dysfunction indicator</th>
<th>Correlations (Pearson’s r) and course indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
</tr>
<tr>
<td>RT s10 median reaction time (msec)</td>
<td>0.42**</td>
</tr>
<tr>
<td>RT s9 median reaction time (msec)</td>
<td>0.41**</td>
</tr>
<tr>
<td>RT s3 median reaction time (msec)</td>
<td>0.38**</td>
</tr>
<tr>
<td>RT s5 median reaction time (msec)</td>
<td>0.54*</td>
</tr>
<tr>
<td>PERSEV redundancy indicator of the 2-nd degree</td>
<td>ns</td>
</tr>
<tr>
<td>LVT general result</td>
<td>−0.43**</td>
</tr>
<tr>
<td>CORSI visual memory capacity</td>
<td>−0.39**</td>
</tr>
</tbody>
</table>

Pearson’s Correlation (two sided test); **p<0.01; *p<0.05 in parenthesis 0.05<p<0.1

the severity of cognitive dysfunction, with the exception of the status at discharge, when a significant negative weak relationship with the visuospatial memory capacity appears (more dysfunctions, less remembered cubes).

The association between cognitive dysfunction and the level of clinical improvement is the most distinct and the most consequent – the faster the reaction, the lesser tendency towards perseveration, the higher efficiency in line tracking and the higher number of remembered cubes, the more pronounced improvement of mental state. The associations with the most simple, uni-modal reaction types turned out to be weak and insignificant (S9, S10).
The following tables show the results of a more precise analysis of correlation associations between cognitive dysfunction indicators and the psychopathologic picture of the schizophrenic syndrome. The analysis making use of factor dimensions of the syndrome according to PANSS (Table 5) shows that the tendency to perseveration was the cognitive dysfunction with the highest number of associations with syndrome dimensions (negative, cognitive and depressive). What is more, only the association of the negative syndrome with the reaction time using the most demanding stimulus (S5) was found. Associations on the level of statistical tendency were found between some sparse dysfunction indicators and anxiety dimension as well as cognitive dimension. The strength of the association between the tendency to perseverate and the deficit dimension was relatively higher in comparison with other associations (p = 0.37).

Using KOSS scale in a parallel analysis (Table 7) leads to the conclusion that there are significant associations between cognitive dysfunctions and dimensions of disorganisation, deficit and dysphoria. The disorganisation dimension turned out to be the one with the most significant level

<table>
<thead>
<tr>
<th>Cognitive dysfunction indicator</th>
<th>Correlations (Spearman’s δ) with KOSS-C at admission</th>
<th>Correlations (Spearman’s δ) with KOSS-C at discharge</th>
<th>clinical improvement (0–3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT s10 median reaction time (msec)</td>
<td>ns</td>
<td>ns</td>
<td>(0.24)</td>
</tr>
<tr>
<td>RT s9 median reaction time (msec)</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>RT s3 median reaction time (msec)</td>
<td>ns</td>
<td>ns</td>
<td>–0.36**</td>
</tr>
<tr>
<td>RT s5 median reaction time (msec)</td>
<td>ns</td>
<td>ns</td>
<td>–0.38**</td>
</tr>
<tr>
<td>PERSEV redundancy indicator of the 2-nd degree</td>
<td>ns</td>
<td>–0.26**</td>
<td></td>
</tr>
<tr>
<td>LVT general result</td>
<td>ns</td>
<td>ns</td>
<td>0.34**</td>
</tr>
<tr>
<td>CORSI visual memory capacity</td>
<td>ns</td>
<td>–0.26*</td>
<td>0.25*</td>
</tr>
</tbody>
</table>

Spearman’s rank correlation (two sided test); **p < 0.01; *p < 0.05; in parenthesis 0.05 < p < 0.1

a 0 – none, 1 – slight, 2 – moderate, 3 – distinct

<table>
<thead>
<tr>
<th>Cognitive dysfunction indicator</th>
<th>Correlations (Spearman’s δ) with PANSS dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>negative</td>
</tr>
<tr>
<td>RT s10 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s9 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s3 median reaction time (msec)</td>
<td>ns</td>
</tr>
<tr>
<td>RT s5 median reaction time (msec)</td>
<td>0.26*</td>
</tr>
<tr>
<td>PERSEV redundancy indicator of the 2-nd degree</td>
<td>0.37**</td>
</tr>
<tr>
<td>LVT general result</td>
<td>ns</td>
</tr>
<tr>
<td>CORSI visual memory capacity</td>
<td>ns</td>
</tr>
</tbody>
</table>

Spearman’s rank correlation (two sided test); **p < 0.01; *p < 0.05; in parenthesis 0.05 < p < 0.1
of correlation with cognitive dysfunctions (two complex reaction time tests, perseveration and line tracking). Other dimensions reveal only single associations on the level of statistical tendency. The complex reaction time for an alternative bimodal stimulus (S3) was the dysfunction showing the highest number of associations with the dimensions (deficit, disorganisation, dysphoria and on the level of statistical tendency – lack of insight). A relatively high level of correlations between perseverative tendencies and deficit dimension is remarkable.

**DISCUSSION**

The results achieved by the examined schizophrenia patients were significantly worse from the results achieved by healthy people composing the control group, which were shown in previously published papers [51, 52]. Schizophrenia patients sample examined in the study was chosen from the same population. The results of the control group were not described here because the fundamental aim of the study was to compare groups of patients differing by clinical characteristics i.e. basic features of the disorder course and a clinical picture of the disorder. It should be stressed however, that the results achieved by the examined patients were significantly worse than the results of healthy subjects, thus confirming the presence of cognitive dysfunctions in schizophrenia patients.

**Cognitive dysfunctions and variables describing the disease course**

The most essential statement coming from the obtained results seems to be the one that says that the duration of the disease and the number of hospitalisations correlates with nearly all the cognitive dysfunctions studied. It suggests a progressive character of cognitive dysfunctions, at least in that part of schizophrenic patients which can be met in a hospital more often. A similar association binds cognitive dysfunctions and the age of the examined subjects. High mutual correlations between these three variables (age, duration of the disease and the number of hospitalisations) suggest that their influence on the level of cognitive disorders is complex. The effects of factors dependent on the disease and natural factors may overlap together with increasing age. The number of subjects within the examined group doesn’t allow for making an analysis which could separate these effects and tell them apart. Summing up the obtained results, the greatest difference of cognitive abilities takes place between the first episode and following phases of the disease (recurrent or residual), which proves that at the time of the first epi-

**Table 7.** The associations between the examined dysfunctions of cognitive processes and factor structure of schizophrenic syndrome – correlations (Spearman’s $\rho$) with psychopathological dimensions of the disorder picture according to KOSS scale.

<table>
<thead>
<tr>
<th>Cognitive dysfunction indicator</th>
<th>Correlations (Spearman’s $\rho$) with KOSS-S dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT s10 median reaction time (msec)</td>
<td>ns (0.22) ns ns ns ns ns ns</td>
</tr>
<tr>
<td>RT s9 median reaction time (msec)</td>
<td>ns (0.21) ns ns ns ns ns ns</td>
</tr>
<tr>
<td>RT s3 median reaction time (msec)</td>
<td>(0.22) ns 0.27* 0.37** ns (0.21) ns ns</td>
</tr>
<tr>
<td>RT s5 median reaction time (msec)</td>
<td>0.24* ns 0.25* 0.31** ns (0.23) ns ns</td>
</tr>
<tr>
<td>PERSEV redundancy indicator of the 2-nd degree</td>
<td>0.44** ns 0.29* ns ns ns ns ns ns</td>
</tr>
<tr>
<td>LVT general result</td>
<td>ns ns 0.28* ns ns ns ns ns ns</td>
</tr>
<tr>
<td>CORSI visual memory capacity</td>
<td>ns ns ns ns ns ns ns ns</td>
</tr>
</tbody>
</table>

Spearman’s rank correlation (two sided test); **p<0.01; *p<0.05; in parenthesis 0.05<p<0.1

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sode mean resources of that ability are relatively the highest. The idea of increasing cognitive dysfunction since the onset of the disease is often represented in literature [e.g. 2, 3]. Current research data emphasise that cognitive dysfunctions are the least pronounced in patients with the first episode of schizophrenia in comparison with patients suffering from psychosis for many years. [52, 53, 54, 55]. Moderate or weak power of correlations found in the study suggests that the above-mentioned tendency remains relative and may apply to some patients, e.g. those with a more recurrent or residual course of the disorder. That is the way that Weickert and Golberg interpreted study results [13], pointing out the heterogeneity of predispositions and the heterogeneity of dynamics of cognitive dysfunctions in patients suffering from schizophrenia. The obtained results suggest that family history of the disease and premorbid personality are not the factors that differentiate cognitive resources of subjects vulnerable to schizophrenia. Moreover, worse social functioning during the year directly preceding the onset of the disease reveals a weak but significant relationship with cognitive dysfunctions discovered later, which may suggest that they had appeared earlier, contributing to life difficulties of the affected subjects. Many studies point to similar associations [e.g. 13, 39, 44]. However, weakness and character of these correlations show at the same time, that the influence of that sort is not common. The results obtained in here, point out that the dysfunctions preceding the onset of the disease relate to the activity of attention (longer reaction time) rather than activities dependent on efficient memory and executive functioning (tendencies to perseveration, capacity of visuospatial memory).

Cognitive dysfunctions and variables describing the clinical picture of the disease

Basically, the general clinical and psychopathological assessment of disorders’ severity at the stage of developed disorders as well as at the stage of receding disorders does not show correlations with the severity of cognitive functions according to test neuropsychological assessment. It suggests the existence of separate rules that determine recognition and assessment of information associated with patients’ mental state. This fact is known and emphasised by many researchers [e.g. 20, 21, 29]. It should be stressed that even psychopathological expression of the cognitive factor (dimension) in PANSS, bringing together clinical assessment items in principle associated directly with cognitive processes, correlates weakly with standardised measures that are used in the evaluation of cognitive processes in neuropsychological assessment [30, 31, 37]. According to Vadhan et al. [32], the assessment of attention by means of negative symptoms scale devised by Andreasen (SANS, Scale for the Assessment of Negative Symptoms) proves to be better in this respect, the scale demonstrates satisfactory diagnostic convergence with psychological measures. Yet SANS does not define other cognitive dysfunctions.

However there is a definitely more distinct association of cognitive dysfunctions with a degree of clinical improvement achieved during hospital treatment, that is with dynamics of psychopathological symptoms. Their remission is more visible when there are less cognitive dysfunctions – in principle it applies to all the examined indicators of these dysfunctions. Apparently some sort of a potential postponing or reducing the effects of treatment of schizophrenic disorders might be attributed to cognitive dysfunctions. In this respect there are no controversies in the literature [2, 3, 4, 7, 11, 12, 13, 18, 22]. On the other hand it must be stressed that the discovered associations are relatively weak, which shows that the potential is not absolute and requires caution about making predictions.

Deeper and more precise (because referring to factorial dimensions of schizophrenic disorders) analysis of associations between the psychopathological picture and the picture of cognitive dysfunctions reveals sparse and not too strong associations. Irrespective of diagnostic tools used for describing the psychopathological picture (PANSS, KOSS), only the negative (deficit) dimension and the disorganisation dimension showed significant correlations with cognitive dysfunctions – in both cases, perseveration tendency and the most complex way of measuring reaction time (S5) were present, in the case of perseveration the relationship is distinctly stronger. Both tests require efficiency in the field of working memory, executive function-
ing and attention. In the case of KOSS, the dimension of dysphoria also showed significant, moderately strong associations with more complex versions of measuring reaction time (S3, S5). Analogous associations, on the level of statistical tendency, revealed the dimension of hostility/impulsivity according to PANSS, corresponding to dysphoria presented in KOSS. The majority of studies touching the subject of correlations between neurocognitive dysfunctions and the psychopathological picture limits its interest to two (positive, negative) or three (positive, negative, disorganisation) clinical dimensions or their equivalents called otherwise. The studies [16, 17, 18, 19, 20, 21, 22] state, just as the results obtained in here, that the negative dimension and the disorganisation dimension are the ones that enter into some associations with cognitive functioning. The positive dimension (productive, distortion of assessment) does not reveal associations of that sort. The hostility/impulsivity (dysphoria) dimension was not studied from this point of view in the studies available to us by means of the literature. Some of its symptoms might be considered to be behavioural (e.g. excitement, impulsivity) as well as emotional (dysphoric mood, irritability) disorganisation manifestations. It might constitute an explanation for the results obtained in the present study indicating associations with cognitive dysfunctions similar to disorganisation.

It is more difficult to explain the association of perseveration with the depression dimension (according to PANSS but not according to KOSS). It might result from an inaccuracy of psychopathological differentiation between depressed mood symptoms and a reduction of utterances, emotion or behaviour (negative dimension), which is easier in the case of PANSS (only one symptom relates to depression) than in the case of KOSS (three symptoms). Similar doubts concerning differentiation of depression from other components of schizophrenia picture are pointed out by Holthausen et al. [56].

CONCLUSIONS

1. The traditional psychopathological picture of schizophrenic disorders and the description of cognitive dysfunctions stemming from the application of neuropsychological tests are rather difficult to match:
   - the overall assessment of severity of schizophrenic disorders does not correlate with measures of cognitive dysfunctions
   - significant associations of moderate power bind only some of the examined cognitive dysfunctions (especially the more demanding attention tests and perseveration tests) with some psychopathological dimensions (deficit, disorganisation and dysphoria),
   - The dimension of distortion of reality assessment (positive, productive) as well as others isolated dimensions do not show significant associations with cognitive dysfunctions revealed by neuropsychological tests.

2. The occurrence of cognitive dysfunctions correlates moderately with the indicators of a less favourable disease course:
   - worse social functioning before the disease,
   - longer duration of the disease, higher number of hospitalisations and worse results of treatment of the present episode,
   - a significant difference between cognitive dysfunction dimension at the time of the first episode and its dimension in recurrent and residual phase.

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The influence of vascular factors on the psychopathological picture in Alzheimer’s Disease.
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Psychopathology of power
Antoni Kępiński
Social functioning in first-episode schizophrenia. A prospective follow-up study

Krystyna Jaracz, Krystyna Górna, Filip Rybakowski

SUMMARY
Aim: was to compare social functioning of first-admitted schizophrenic patients with healthy controls and evaluate the influence of different variables on social abilities of patients, 1 month (T1), 13 months after hospitalization (T2) and 4–6 years after T1 (T3).

Material and methods: A group of 74 schizophrenic patients: 46 male and 28 female; age 24.7 ± 6.7 and a control group of matched 52 male and 34 female subjects were enrolled. Social Functioning Scale (SFS), Positive and Negative Syndrome Scale (PANSS), Global Assessment Scale (GAS) and socio-demographic questionnaire were used.

Results: In all examinations SFS scores in the patients (T1- 103.5; T2- 104.4; T3- 107.0), were significantly lower than in the healthy controls- 117.0 (p<0.001). In longitudinal analysis, a mild improvement was observed in T3 SFS score and in its three subscales (p<0.05) In cross-sectional analysis, better social functioning was associated with female sex, longer education, activity before admission, and better functioning in the pre-admission period. In regression analyses SFS at T2 was predicted by PANSS total scores at T1 (27% of the variance), and at T3 by PANSS total scores at T1 and duration of psychotic symptoms before the first hospitalization (20% of the variance).

Conclusions: Social functioning in schizophrenia is impaired from the onset of disease and may be mildly improved in intermediate follow-up. Female sex, higher education and pre-admission functioning are correlated with better social outcome, however regression analysis point to the duration of untreated illness and severity of symptoms after the first admission, as important predictors of social functioning in early course of schizophrenia.

social functioning / schizophrenia / first-episode / follow-up study

INTRODUCTION

Both DSM-IV and ICD–10 classifications [1, 2] contain impairment in social functioning, as an essential feature of schizophrenia. Patients with this diagnosis usually are not able to maintain close relationships, occupational functioning, community activity, and self-care. Moreover, introduction of an atypical antipsychotic with a relatively lower number of side-effects does not lead to significant differences in social functioning in schizophrenia patients treated with typical antipsychotic in comparison to those treated with atypical drugs [3].

Patients with long-duration of schizophrenia show significant impairment of social functioning, although in such a group, it is difficult to
differentiate the impact of illness, and concomitant factors such as medications, from a primary dysfunction, which may be associated with the pathogenic process [4, 5]. However, finding significant impairments in first-episode patients may suggest that the deterioration occurs before or at the onset of illness.

Several cross-sectional studies suggest that there are no significant differences in social functioning between first- and multiple-episode schizophrenia patients [6]. However, classical psychopathological descriptions point to the significant clinical deterioration in the first 5 years of schizophrenia [7]. A longitudinal, prospective study design allows observing if there are any changes of social functioning, and this may help in elucidating the above discrepancy.

The severity of current psychopathological symptoms may affect social abilities of patients with schizophrenia [8, 9], and most studies indicate the role of negative symptoms in this regard. Dickerson et al. [4] reported that social functioning is associated both with negative symptoms and poor neurocognitive functions. Other studies point to the role of other socio-demographic and clinical factors, which may also affect the level of social functioning [10, 11].

The purpose of this study was to compare social functioning in first-episode schizophrenia patients, 1 month after a hospitalization, 13 months, and 4–6 years after the first examination. We also evaluated the influence of several factors (basic socio-demographic variables, risk and pre-hospitalization factors, factors connected with the hospitalization period, symptoms and social support) on social functioning of the patients.

MATERIAL AND METHODS

Patients and controls

Ninety six patients were qualified for the study after hospitalization due to the first episode of psychosis. At discharge, all the study subjects met the diagnostic criteria for schizophrenia (ICD–10, F20). The inclusion criteria were: no alcohol or drug abuse, no mental retardation, no organic brain diseases, no severe physical disorders, and an ability to cooperate in a research interview. The diagnosis was made by two clinicians and confirmed by a senior researcher. All the patients signed the informed consent for the study. During the first and third assessment 14 patients dropped out, resulting in the final group of 74 subjects: 46 male and 28 female; age 24.7 ± 6.7 (range 16–47) (Figure 1). Comparison between the 74 patients who participated at the three time points of the study with those who dropped-out between the baseline assessment and Time 3 (n = 22) showed no significant differences with regard to sex, age at first hospitalization, marital status, level of education, duration of psychotic symptoms before the hospitalization, living environment and psychopathological status at Time 1.

A control group comprised 86 psychiatrically healthy subjects: 52 male and 34 female matched according to age.

Psychometric measures

Social Functioning Scale (SFS) is a 79-item questionnaire, developed and validated on out-

![Flowchart of participants](image-url)
patients with schizophrenia [12]. The questionnaire asks the patient about performance in seven areas: Social Engagement (SE), Interpersonal Communication (IC), Recreational Activities (RA), Social Activities (SA), Independence Competence (INC), Independence Performance (IP) and Occupational Activity (OA). The purpose of the scale is to provide an evaluation of strengths and weaknesses of patient functioning, and it may reveal aims for therapeutic intervention. Recently, the scale was also used as an outcome measure in schizophrenia. The self-report questionnaire was administered by the verbal interview to both the patients and the caregivers. Due to lack of significant differences in the patients’ and caregivers’ assessment, in further analyses we used only the patients’ assessment. SFS was previously translated into Polish and validated [13].

Positive and Negative Syndrome Scale (PANSS) includes a structured interview to assess the patients on 30 items covering positive, negative and general symptoms [14]. For each item, ratings are made on a 1–7 scale of symptom severity.

Premorbid functioning was assessed with the Global Assessment Scale (GAS). GAS is the standard method used to assess the clinician’s judgment of a patient’s overall level of functioning [15]. We assessed the most severe disturbances of functioning 1-year before the first admission.

Current social support was assessed with 1 question: “Are you satisfied with social support?” which was rated with the 1–5 Likert scale (1 = not satisfied at all; 5 = very much satisfied).

A structured interview was used to gather information about:

a. Socio-demographic variables: age, sex, activity before onset of illness.

b. Risk factors: family history of psychiatric disturbances in 1st and 2nd degree relatives, comorbid somatic illnesses.

c. Pre-hospitalization factors: age at onset of problems with functioning, duration of psychotic symptoms.

d. Factors connected with the hospitalization period: age at the first hospitalization, duration of first hospitalization.

**Study design**

We performed three assessments of social functioning (SFS) symptoms (PANSS), and social support in patients’ community, 1 month (T1), 13 months (T2) after hospitalization and 4–6 years after T1 (T3). Also at T1, the patients were asked about their socio-demographic and clinical characteristics and then all the information received was verified during the interview with the caregivers and by analysis of the notes included in the patients’ medical records.

The protocol of the study was accepted by the Bioethical Committee of Poznan University of Medical Sciences.

**Statistical analyses**

Student t-test for independent data was used to compare results of the patients and the controls. ANOVA for repeated measures was performed to compare the first, second and third examination of social functioning in the patients. Student t-test for independent groups, ANOVA and Spearman’s rank correlation coefficient was used to assess relationships between socio-demographic, clinical variables and SFS score in T1, T2 and T3. Finally, we performed multiple stepwise forward regression analyses to determine predictive value of the baseline socio-demographic variables (sex, education, activity before onset of illness), risk factors (family history of psychiatric disturbances, comorbid somatic illness), pre-hospitalization factors (age at onset of problems with functioning, duration of psychotic symptoms, pre-hospitalization functioning according to GAS), factors connected with the hospitalization period (age at the first hospitalization, duration of first hospitalization), and PANSS total score at T1. P value <0.05 was accepted as statistically significant.

This study was supported by the State Committee for Scientific Research in Poland (ref. 2 PO5D 089 28).

**RESULTS**

The study sample consisted of predominantly male (62.0 %) and young patients (66.2% were
Female patients at the first admission were older than male (mean difference 3.0 years, p<0.05). The majority of the patients lived in a city (77.0%). Until the first admission 51.4% of the patients had higher education, and 5.4% had academic education. During the observation period the number of the patients with higher and academic education increased by 8% respectively. Until the first admission 12.2% of the patients were married. Between T1 and T3, the number of those married increased by 4%. There was 1 divorcee. Some form of activity was reported by 62.2% of the patients before the admission, 24.3% of the patients worked, 37.7% studied. At T3 the number of active persons decreased; 26% of the subjects quit from their job or school. In T1, T2 and T3 social support was rated as good by 71%, 72% and 72% respectively. The patients were treated under naturalistic conditions. The majority of them received antipsychotic treatment (between T1 – T2: 95.5% and between T2 – T3: 90.5%). Most of the patients were treated with second generation antipsychotic drugs (between T1 – T2: 67.2% and between T2 – T3: 68.9%).

At T1 and T2 SFS assessments, we found similar levels of social functioning (T1 – 103.5; T2 – 104.4), ranges respectively: 70.5 – 126.4; 77.4 – 127.4. In T3, the SFS increased to 107.0 (79.7 – 131.4), which was statistically significant difference (overall ANOVA, p=0.02). Results in subscales of SFS were presented in Table 1. In healthy controls, the SFS score was 117.0 (range 98.6 – 130.1). The difference between the results of patients and healthy controls was significant for global assessment (p<0.001) and each sub-scale of SFS both in T2 and T3, except the SA sub-scale in T3 (results shown in Table 1).

### Relationship between socio-demographic factors and SFS score

**Sex**

Female patients scored significantly higher in IP than male: T1 – 98.5 (±14.9) vs. 90.1 (±14.8), p<0.05; T2 – 99.8 (±13.5) vs. 89.2 (±14.1), p<0.01; T3 – 107.9 (±16.6) vs. 95.8 (±13.8), p<0.001.

**Education**

Education level was divided into 2 categories: category 1: basic (≤8 years) and job-related (8–10 yrs); and category 2: higher (11–13 yrs) and academic (14 and more years). The results for the patients with the two levels of education

<table>
<thead>
<tr>
<th>Sub-scale</th>
<th>SFS T1 Mean (SD)</th>
<th>SFS T2 Mean (SD)</th>
<th>SFS T3 Mean (SD)</th>
<th>F</th>
<th>P</th>
<th>SFS in healthy controls (patients’ T2 vs. controls) t</th>
<th>SFS in healthy controls (patients’ T3 vs. controls) t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFS total</td>
<td>103.5 (11.4)</td>
<td>104.4 (10.6)</td>
<td>107.0 (12.4)</td>
<td>4.3</td>
<td>0.02</td>
<td>117.0 (6.6)</td>
<td>8.9***</td>
</tr>
<tr>
<td>SE</td>
<td>104.0 (11.1)</td>
<td>105.6 (12.3)</td>
<td>106.3 (12.8)</td>
<td>1.0</td>
<td>0.38</td>
<td>114.0 (10.8)</td>
<td>4.7***</td>
</tr>
<tr>
<td>IC</td>
<td>109.2 (19.3)</td>
<td>112.3 (18.6)</td>
<td>116.6 (19.5)</td>
<td>4.7</td>
<td>0.01</td>
<td>130.1 (15.5)</td>
<td>6.6***</td>
</tr>
<tr>
<td>SA</td>
<td>102.8 (15.1)</td>
<td>103.3 (14.0)</td>
<td>107.2 (17.5)</td>
<td>3.6</td>
<td>0.08</td>
<td>119.9 (10.9)</td>
<td>8.5***</td>
</tr>
<tr>
<td>RA</td>
<td>98.8 (15.6)</td>
<td>99.8 (14.0)</td>
<td>107.9 (17.4)</td>
<td>9.4</td>
<td>0.01</td>
<td>111.0 (13.5)</td>
<td>5.1***</td>
</tr>
<tr>
<td>IP</td>
<td>93.3 (15.3)</td>
<td>93.2 (14.8)</td>
<td>100.4 (15.9)</td>
<td>11.3</td>
<td>0.001</td>
<td>106.6 (12.0)</td>
<td>6.1***</td>
</tr>
<tr>
<td>INC</td>
<td>108.3 (14.1)</td>
<td>109.1 (14.2)</td>
<td>108.0 (14.9)</td>
<td>0.2</td>
<td>0.8</td>
<td>116.3 (9.1)</td>
<td>3.8***</td>
</tr>
<tr>
<td>OA</td>
<td>109.1 (13.9)</td>
<td>107.9 (13.4)</td>
<td>103.9 (13.2)</td>
<td>5.2</td>
<td>0.006</td>
<td>122.3 (1.7)</td>
<td>9.2***</td>
</tr>
</tbody>
</table>

*** p < 0.001; ** p < 0.01

Social Functioning Scale (SFS), Sub-scales: Social Engagement (SE), Interpersonal Communication (IC), Recreational Activities (RA), Social Activities (SA), Independence Competence (INC), Independence Performance (IP) and Occupational Activity (OA).
Social functioning in first-episode schizophrenia. A prospective follow-up study

Table 2. Level of education and social functioning in first-episode schizophrenia. Independence performance (IP), Occupational activity (OA), Social engagement (SE), Recreational activity (RA).

<table>
<thead>
<tr>
<th>Level of education</th>
<th>N</th>
<th>T2 Mean (SD)</th>
<th>N</th>
<th>T3 Mean (SD)</th>
<th>Global SFS score</th>
<th>Global SFS score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic/Work-related</td>
<td>30</td>
<td>105.9 (9.9)</td>
<td>26</td>
<td>101.0 (13.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher/Academic</td>
<td>44</td>
<td>106.8 (10.5)</td>
<td>48</td>
<td>110.3 (10.3)</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IP</td>
<td>IP</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>89.7 (16.3)</td>
<td>26</td>
<td>93.8 (16.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher/Academic</td>
<td>44</td>
<td>95.7 (14.2)</td>
<td>48</td>
<td>104.0 (14.6)</td>
<td>p&lt;0.05</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OA</td>
<td>OA</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>103.0 (13.4)</td>
<td>26</td>
<td>103.0 (13.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher/Academic</td>
<td>44</td>
<td>111.3 (12.5)</td>
<td>48</td>
<td>111.3 (12.5)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>SE</td>
<td>SE</td>
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<tr>
<td></td>
<td>30</td>
<td>104.5 (10.0)</td>
<td>26</td>
<td>100.3 (11.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher/Academic</td>
<td>44</td>
<td>106.5 (13.6)</td>
<td>48</td>
<td>109.5 (12.3)</td>
<td>p&lt;0.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>96.6 (14.5)</td>
<td>26</td>
<td>102.2 (18.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher/Academic</td>
<td>44</td>
<td>102.0 (13.4)</td>
<td>48</td>
<td>110.9 (16.3)</td>
<td>p&lt;0.05</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>N.S.</td>
<td></td>
</tr>
</tbody>
</table>

Social functioning differed significantly in T2 and T3. The patients with higher and academic education scored significantly better than the patients with lower level of education (Table 2).

Activity before onset of illness

Patients who were occupationally or educationally active before the hospitalization scored significantly better in Occupational Activity than the subjects who have not engaged in any kind of premorbid activity in T1 – 112.0 (±13.5) vs. 104.2 (±13.2), (p<0.05) and T2 – 110.5 (±13.1) vs. 103.6 (±13.1), p<0.05.

Relationship between risk factors and SFS score

Family history of psychiatric disturbances

Family history was not associated with social functioning. In all examinations, the SFS results were similar both in the group of patients with (n = 34) and without (n = 40) family history.

Comorbid conditions

Patients with comorbid conditions (n = 32) scored significantly lower in global SFS and 4 subscales: SFS global (T2 – 106.5 (±10.8) vs. 101.7 (±9.7) and T3 – 110.0 (±10.1) vs. 103.1 (±14.1), p<0.05); OA (T1 – 112.0 (±13.9) vs. 105.2 (±13.0), T2 – 112.1 (±13.1) vs. 102.3 (±11.8) and T3 – 106.5 (±12.3) vs. 104.4 (±13.3), p<0.05; IP (T3 – 103.6 (±14.8) vs. 96.1 (±16.5), p<0.05; INC (T3 – 112.1 (±12.4) vs. 102.7 (±16.3), p<0.01.)
Relationship between pre-hospitalization factors and SFS score

Age at onset of disturbances of functioning

There was a positive correlation between SFS scores and age at onset of disturbances of functioning. Patients with later onset scored higher in global SFS score at T1 (r = 0.36, p<0.01) and its 3 subscales: RA (T1 – r = 0.24, p<0.05), IP (T1 – r = 0.26, p<0.05), IC (T3 – r = 0.24, p<0.05).

Duration of psychotic symptoms

Longer duration of psychotic symptoms before the first hospitalization was correlated with lower scores in total SFS and subscales: SFS (T1 – r = –0.35, p<0.01; T2 – r = –0.24, p<0.05; T3 – r = –0.47, p<0.01), SE (T1 – r = –0.33, p<0.01; T3 – r = –0.32, p<0.01; T3 – r = –0.33, p<0.01), SA (T1 – r = 0.29, p<0.05; T3 – r = –0.40, p<0.01), RA (T3 – r = –0.32, p<0.01), IP (T3 – r = –0.29, p<0.05), INC (T1 – r = –0.25, p<0.05; T3 – r = –0.44, p<0.01), OA (T1 = –0.37, p<0.01; T2 – r = –0.24, p<0.05; T3 – r = –0.42, p<0.01).

Pre-hospitalization functioning

In all examinations, there was a positive correlation between GAS score, which refers to 1-year before hospitalization, and Occupational Activity: T1 – r = 0.34 (p<0.01), T2 – r = 0.31 (p<0.01), T3 – r = 0.24 (p<0.05). Also, a significant correlation between GAS and SFS 3 total score was observed – r = 0.23 (p<0.05).

Relationship between hospitalization factors and SFS score

Age at the first hospitalization

At T1 patients younger (≤ 20) at the time of first hospitalization scored lower in all SFS subscales, however the difference was insignificant. In Occupational Activity subscale they scored significantly higher: 115.8 (±10.8), p <0.05. The same picture was observed at T2 (lower scores in all SFS subscales vs. higher scores in OA). An opposite trend was noticed at T3. Patients younger at the time of first hospitalization scored higher in all SFS. Statistically significant difference was found in SFS total (112.6, ±13.0 vs. 105.5, ±11.9, p<0.05), SA (116.2, ±17.5 vs. 104.8, ±16.8, p<0.05), RA (115.6, ±19.6 vs. 105.8, ±16.3, p<0.05).

Duration of first hospitalization

Duration of the first hospitalization was significantly related to social functioning. Hospitalization lasting 4 months or less was associated with better score in global SFS (T1: 104.8, ±10.1 vs. 93.5, ±15.1, p<0.05; T2: 105.7, ±9.7 vs. 95.2, ±12.6, p<0.05), and in several subscales (T1: SE, INC, OA; T2: RA, IP, INC, OA).

Factors assessed simultaneously with SFS

Psychopathological symptoms

In all assessments, every SFS subscale and SFS global score was highly negatively correlated with the current PANSS score: T1: r = –0.3, T2: –0.53, T3: –0.74 (p<0.01). Also, the PANSS T1 score was significantly correlated with SFS in T2 (r = –0.53, p<0.01) and T3 (r = –0.40, p<0.01).

Social support

We observed a significant correlation between the rating of social support and the global SFS score and 5 of its subscales. Results were shown in Table 3.

Regression analyses

Results of the regression analysis between SFS and basic socio-demographic factors, risk factors, factors connected with pre-hospitalization and hospitalization, and PANSS at T1 were presented in Table 4. Global SFS at T2 was predicted by PANSS (27% of the variance) and at T3 by PANSS and duration of psychotic symptoms (20% of the variance). The same factors appeared to be the
most important also in the majority of the SFS subscales.

**DISCUSSION AND CONCLUSIONS**

This study is a continuation of longitudinal observation of the first episode schizophrenic patients [16]. The major advantage of this project was to re-assess social functioning in schizophrenia patients 4–6 years after an index episode, which is traditionally considered as a period of significant clinical deterioration [17].

Despite this, the results of this study may suggest that social functioning in schizophrenia is relatively stable in 1-year follow-up, and except the occupational activity, may show mild improvement in 4–6 years of observation. The most probable explanation of these results would be a slow and gradual adaptation of the patients to the situation associated with the illness. Several socio-demographic variables showed association with social functioning in both prospective assessments; however the most important determinants of social functioning in 4–6 years of follow-up were severity of symptoms in T1 and duration of psychotic symptoms.

Our previous observation [16] and other studies [6] indicate, that deficits in social functioning are present from the onset of the illness and remain stable in the short-term follow-up, which suggest, that they are not associated with long duration of the illness. This is confirmed by our intermediate follow-up (4–6 years) of the patients with schizophrenia, where we found mild improvement of social functioning.

In cross-sectional analysis we found that females with the first-episode schizophrenia score significantly better in Independence Performance (T1, T2 and T3) than males. This confirms that a favourable outcome in female patients [17, 18] can be observed not only in short, but also in the intermediate follow-up period. Several biological and psychosocial explanations of this phenomenon have been proposed, such as an earlier onset and higher risk of staying single in males, protective effect of oestrogen, and better pharmacotherapeutic outcome in females.

We found the significant relationship between the level of education before admission and social functioning – the patients with longer education scored significantly better than the patients with shorter education in T2 and T3. Better education probably enables the patient to retain some social roles.

Active role fulfilment before hospitalization was associated with better Occupational Activity in T1 and T2. The patients with better functioning one year before hospitalization (GAS score) obtained better results in Occupational Activity score in T2 and T3 than the patients with impaired functioning in the preadmission period. GAS score showed moderate correlation with global SFS score in T3, similarly as in the previous assessments [1]. We cannot exclude that a low GAS score in the preadmission period was caused by the presence of negative symptoms.

Several other factor such as presence of comorbidities, age at onset of disturbed functioning, duration of psychotic symptoms before hospitalization were correlated with social functioning in T3, which essentially confirm our previous results of short term follow-up [16]. The better social outcome in T3 was observed in patients younger at hospitalization, however opposite association was observed in T1 and T2. This difference may be related to the fact, that age at the first hospitalization results from both earlier onset of disorder and shorter duration of untreated illness.

Self-assessment of satisfaction with social support was significantly correlated with social functioning in the patients with schizophrenia in T1 and T2; however this association was not signifi-

---

**Table 3.** Correlation between concurrent social support and social functioning in T1, T2 and T3.

<table>
<thead>
<tr>
<th>Social support</th>
<th>Social support</th>
<th>Social support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
</tr>
<tr>
<td></td>
<td>r</td>
<td>r</td>
</tr>
<tr>
<td>SFS global</td>
<td>0.28*</td>
<td>0.41**</td>
</tr>
<tr>
<td>SE</td>
<td>NS</td>
<td>0.24</td>
</tr>
<tr>
<td>IC</td>
<td>0.29*</td>
<td>0.38**</td>
</tr>
<tr>
<td>SA</td>
<td>0.33**</td>
<td>0.28*</td>
</tr>
<tr>
<td>RA</td>
<td>NS</td>
<td>0.28*</td>
</tr>
<tr>
<td>IP</td>
<td>0.26*</td>
<td>0.39**</td>
</tr>
<tr>
<td>INC</td>
<td>NS</td>
<td>0.29*</td>
</tr>
<tr>
<td>OA</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

**p < 0.01; *p < 0.05**
cant in T3. This may indicate that subjective perception of social support plays an essential role only in first stage of schizophrenia, whereas later more objective predictors, such as severity of symptoms predominate.

In every stage of the assessment (T1, T2 and T3), the SFS score was significantly related to the severity of concurrent psychopathological symptoms (PANSS score). Such an observation was repeatedly reported by others [4, 8, 9, 12]. Moreover, we observed that social functioning in short and intermediate follow-up is related to the severity of schizophrenia symptoms directly after the hospitalization (PANSS – T1).

In multiple regression analysis, which included all the analyzed variables, SFS T2 was predicted only with T1 PANSS score and SFS T3 was predicted with T1 PANSS and duration of psychotic symptoms. These results may suggest that in the 4–6 years follow-up of index episode of schizophrenia, the most important predictive factors are: duration of un- or under-treated psychotic symptoms before hospitalization and presence of psychopathological symptoms after discharge from hospital.

There are some shortcomings in this study. The generalizability of the findings may be limited by the fact that the study sample was obtained primarily from hospitalized patients whose symptoms may have been be more severe than in outpatients, and by a relatively large number of non-participants who might have been more severely ill than the participants.

**Table 4.** Multiple regression analysis of SFS T2 and SFS T3 score with socio-demographic and clinical factors as independent variables. Social engagement (SE), Interpersonal communication (IC), Social activity (SA), Recreational activity (RA), Independence: performance (IP), Independence: competence (INC), Occupational activity (OA)

<table>
<thead>
<tr>
<th>Factor</th>
<th>beta</th>
<th>% of explained variance</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFS T2 Total PANSS T1</td>
<td>-0.52</td>
<td>27</td>
<td>26.4***</td>
</tr>
<tr>
<td>SE Age at the first hospitalization PANSS T1</td>
<td>0.28</td>
<td>13</td>
<td>6.5**</td>
</tr>
<tr>
<td>IC PANSS T1</td>
<td>-0.38</td>
<td>13</td>
<td>12.3***</td>
</tr>
<tr>
<td>SA. PANSS T1</td>
<td>-0.41</td>
<td>16</td>
<td>14.7***</td>
</tr>
<tr>
<td>RA PANSS T1</td>
<td>-0.32</td>
<td>10</td>
<td>8.3**</td>
</tr>
<tr>
<td>IP PANSS T1</td>
<td>-0.36</td>
<td>23</td>
<td>11.9***</td>
</tr>
<tr>
<td>IP Sex</td>
<td>-0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INC PANSS T1</td>
<td>-0.44</td>
<td>18</td>
<td>17.3***</td>
</tr>
<tr>
<td>OA PANSS T1</td>
<td>-0.36</td>
<td>27</td>
<td>10.0***</td>
</tr>
<tr>
<td>INC Comorbidity</td>
<td>-0.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| SFS T3 Total PANSS T1 | -0.31 | | |
| SE PANSS T1 | -0.30 | 20 | 10.5*** |
| IC PANSS T1 | -0.29 | 7 | 6.6* |
| S.A. Duration of psychotic symptoms | -0.33 | 10 | 9.2** |
| RA Duration of psychotic symptoms | -0.35 | 11 | 10.1** |
| RA Duration of psychotic symptoms | -0.34 | 10 | 9.2** |
| IP PANSS T1 | -0.37 | | |
| IP Sex | -0.31 | 25 | 13.1*** |
| INC Duration of psychotic symptoms | -0.30 | 18 | 9.0*** |
| INC PANSS T1 | -0.28 | | |
| OA Duration of psychotic symptoms | -0.36 | 11 | 10.4** |

***p < 0.001; **p < 0.01; *p < 0.05
Nevertheless, this study allows drawing some conclusions. Significant disturbance of social functioning can be observed in schizophrenic patients after 4–6 years of follow-up, however it does not increase from 1-year follow-up and index hospitalization. Some protective role in social functioning may be played in the person being female sex and having higher education, however their importance is limited in regression analyses. Social functioning predominantly depends on the severity of symptoms directly after discharge and duration of untreated psychotic symptoms. These results may indicate that an improvement of social outcome in schizophrenia is possible; however it is associated with accomplishment of two challenging aims. They comprise shortening of a period of untreated psychosis and achieving possibly best remission after the treatment of the first psychotic episode.

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Krzysztof Stachyra

Symbolic function of medication – a case report
Sławomir Murawiec
The defensive role of self-image in the course of schizophrenia

Lucyna Drożdżowicz

SUMMARY
Aim: Prospective study on the self-image of persons suffering from schizophrenia. The observation of the changes in the self-portrait was made over 7 years from the time of first admission to the hospital.
Subjects: 57 patients, who fulfilled the following criteria: (a) diagnosis of schizophrenia according to DSM-III criterium, (b) first admission to mental hospital, (c) living with procreational or generational family in Krakow.
Methods: The Polish version of The Adjective Check List (ACL) of Gough and Heilbrun normalized by M. Matkowski was used.
Results and conclusions: Prove that self-image is not only a dynamic and changing-with-time structure, but plays defensive roles towards the awareness of being mentally ill, as well as towards the feelings associated with this fact. The stronger the patient’s tendency to deny the illness at the beginning, the more pessimistic their self-image is after the 7-year period. Conversely, acceptance of the illness and lack of defensiveness result in greater self-satisfaction and optimism in later life.

schizophrenia / self image

INTRODUCTION
Empirical reports concerning the relation of self-image to schizophrenia are not consistent and seemingly contradictory. This reflects the level of sophistication that we face while researching such an ambiguous and complex structure as the self-image is, particularly when the research concerns an illness in its essence involving a disorder of this very structure. Heterogeneity of views seems to be bound to the instability of self-image in persons with schizophrenia. This is coherent with concepts that attribute the poorly developed and differentiated “self” to schizophrenia [1]. The self – image of such persons is not very stable. It changes in such a way as to protect the deeply hidden and weak self structure. It can be concluded that it serves the self and is in a way a guardian of this structure.

What is subjectively experienced by a person afflicted with schizophrenia is not meaningless. This is attested to by numerous research results, indicating a pessimistic and unfavourable self – image of patients with schizophrenia. In his broad research concerning self – image of psychiatric patients, Fitts [2] found that 87% of patients have an unsettled self – image, which is

Lucyna Drożdżowicz: Family Therapy Institute, Psychiatry Department, The Jagiellonian University Collegium Medicum, Kraków, Poland; Correspondence address: Lucyna Drożdżowicz, Department of Psychiatry, The Jagiellonian University Collegium Medicum, 21a Kopernika St., 31–501 Kraków, Poland, e-mail: mzdrozdz@cyf-kr.edu.pl; It should be stressed that since 1985, when the research program began, other, more precise diagnostic classifications have been created: DSM-III-R, DSM-IV and ICD-10
expressed by misadaption and weak integration of personality.

Czabała [3], based on his research, states that persons suffering from schizophrenia perceive themselves in a different way than their healthy peers. The most poorly expressed needs are those of domination, autonomy and change, and the most strongly expressed are those of abasement and succorance. This is exactly the reverse compared to healthy people. Schizophrenic women showed less intense needs of interpersonal relationships (needs of heterosexual relations, affiliation, domination, changes and self – expression) when compared to other needs. Men, on the other hand, had less intense needs of independent, self – reliable social functioning (autonomy, domination, achievements and affiliation), but more intense needs of succorance and abasement. The self – image of a schizophrenic person is described by Czabała in the following way: “the patient perceives himself as not self-reliant, subordinate, passive and dependent on others, with a relatively low self – esteem; he also discloses a tendency to withdraw from social relations and lack of trust of others” [3, p. 82]. Similar conclusions are phrased by Mroziak [4], who states that the self – image of patients with schizophrenia is lower comparing to the norm, and this concerns mostly task and interpersonal needs.

The research of Steuden [5] also shows a negative self – image of patients afflicted with schizophrenia. This image has a particularly pessimistic expression at the beginning of the illness. Over the course of time, the ill adapt to their condition and accept themselves to a larger degree.

Some studies, however, suggest no difference in terms of self – esteem between schizophrenic and healthy persons. Sometimes even an inflated or grandiose self – image is mentioned in schizophrenics. Balbi [6] believes that psychotic symptoms are a defense mechanism – in psychosis, the inflated (psychotic) self substitutes for the so-called empty self, protecting the ill person from intolerable feelings of shame related to self – image. She also stresses that current rehabilitation programs confront patients with their perception of themselves.

Slightly different conclusions were reached by Garfield, Rogoff and Steinberg [7]. Based on research in which they compared the self – esteem of 15 men suffering from schizophrenia to the self – esteem of an appropriate control group, they found that the general level of self – esteem did not differ in the two groups, whereas there were some differences concerning various aspects of self – image that were evaluated. Patients suffering from schizophrenia, compared to healthy persons, had a significantly lower self – evaluation in terms of sense of competence and causability, on the other hand, their results concerning defensiveness, or so – called defensive self-enhancement, were significantly higher.

Observation of self – image and self – esteem of persons with schizophrenia over the course of time leads to a conclusion that chronically ill patients have a more positive self – esteem in comparison to patients in the initial stage of illness. [2, 4, 8, 9]. These results relate to the changes that appear in the process of the illness. Over time, patients in a sense adapt to their illness, demonstrate higher tolerance to stress factors, and their defense mechanisms become stabilized. [4].

AIM OF THE STUDY

The presented study is an attempt to monitor the dynamics of changes in self – image of patients suffering from schizophrenia during the seven years since their first admission to mental hospital. The attention is focused particularly on the aspect of self – image related to defensive tendencies towards awareness of being ill. The concept of self is formulated in this study in terms of mental needs. It has been assumed that the patient, by choosing adjectives from a list that best suit him or her, reveals the needs that express their self – image.

SUBJECTS

During the period of 1985–1993 in the Psychiatry Department of The Medical Academy (Katedra Psychiatrii Akademii Medycznej) in Krakow, a program “Research of effectiveness of non-specific methods in early schizophrenia treatment” was realized. The research encompassed 80 persons (46 women and 34 men). The patients, in order to be qualified for the program, had to fulfill the following criteria: (a) diagnosis of schizo-
phrenia according to DSM-III criterium, (b) first admission to mental hospital, (c) living with pro-
creational or generational family in Krakow.

The group that eventually underwent statistical analysis encompassed 57 patients (71.25%) of all 80 qualified for the research program. This difference resulted from the fact that during the 7 years that the research was conducted, some patients refused to participate or renounced the psychiatric care that was offered to them within the program’s framework. Persons who participated in only part of the research were also excluded from the group, as information concerning those patients in terms of isolated variables was incomplete. Table 1 presents numbers of subjects in terms of basic characteristics such as sex, age, education and marital status.

Table 1. Group of subjects – demographic variables (N=57)

<table>
<thead>
<tr>
<th>I</th>
<th>Sex:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>women – 36</td>
</tr>
<tr>
<td></td>
<td>men – 21</td>
</tr>
<tr>
<td>II</td>
<td>Age at the moment of I hospitalisation; 19–44 years:</td>
</tr>
<tr>
<td></td>
<td>up to 25 years – 26</td>
</tr>
<tr>
<td></td>
<td>above 25 years – 31</td>
</tr>
<tr>
<td>III</td>
<td>Education:</td>
</tr>
<tr>
<td></td>
<td>university degree – 13</td>
</tr>
<tr>
<td></td>
<td>university, no graduation – 10</td>
</tr>
<tr>
<td></td>
<td>high school – 21</td>
</tr>
<tr>
<td></td>
<td>below high school – 13</td>
</tr>
<tr>
<td>IV</td>
<td>Family status:</td>
</tr>
<tr>
<td></td>
<td>married – 17 (3 husbands, 14 wives)</td>
</tr>
<tr>
<td></td>
<td>single – 40 (18 sons, 22 daughters)</td>
</tr>
</tbody>
</table>

METHODS

In this study, self-image was operationalized in terms of mental needs. To research the self-image, The Adjective Check List (ACL) of Gough and Heilbrun [10] was used, as thanks to its construction it allows for various interpretation possibilities. On one hand, by choosing adjectives describing himself or herself, the subject reveals their own self-image. On the other hand, thanks to the theoretical assumptions of the test and to the construction of the interpretation portion, the researchers are able to reach deeper structures related to the self-portrait.

The Polish version normalized by M. Matkowski [11] was used. This version contains 19 scales. The first four are control scales and the last fifteen relate to mental needs. The names of the scales are as follows:
1. Total number of chosen adjectives;
2. Defensiveness;
3. F scale;
4. Self – acceptance;
5. Achievement need;
6. Dominance need;
7. Endurance need;
8. Order need;
9. Intraception need;
10. Nurturance need;
11. Affiliation need;
12. Heterosexuality need;
13. Exhibition need;
14. Autonomy need;
15. Aggression need;
16. Change need;
17. Succorance need;
18. Abasement need;
19. Deference need.

In the presented research, each person was examined three times, namely one, three and seven years after the first admission to the mental hospital. During each examination, the patient independently chose adjectives from the list, answering the question “What am I like?”.

RESULTS

Using factor analysis for the need scales, three synthetic variables were isolated, characterized by content coherence of the given group of need scales. The following are the variable groups:
1. needs related to task functioning – TF (needs of achievement, endurance, order and intraception);
2. needs related to positive interpersonal relations – PIR (need of nurturance, affiliation, heterosexuality, aggression, succorance, deference);
3. needs related to personality style functioning – PS (need of dominance, autonomy, change and abasement).

Archives of Psychiatry and Psychotherapy, 2007; 4 : 29–36
A detailed description of synthetic variables and list of correlation coefficients for particular scales is placed in Table 2. It is worth noting that two scales, namely those of aggression and abasement, have been corrected to opposing values. The need of exhibition has also been excluded, as it does not correlate strongly enough with particular need groups in all three points in time. Additionally, two control scales of the test have been included: defensiveness and self-acceptance. This procedure organizes the need scales in terms of content and makes the interpretation of performed analyses easier.

In the further part of analysis, the whole group of persons ill with schizophrenia (N=57) was divided based on results of five ACL test scales (three synthetic scales, defensiveness scale and self – acceptance scale), obtained during the first phase of research, into three clusters marked A, B and C. To separate those groups, a non-hierarchical cluster analysis was performed (Procedure Quick Cluster – SPSS/PC+), with Euclid distance as assumed as the measure of distance between those groups. The distances between groups are: A–C=12.5; B–C=14.7; A–B=10.6.

Basic characteristics of those groups are listed in Table 3.

Among the variables cited in Table 3, only education differentiates the separated clusters at a statistically significant level (Chi² test value equals 8.9289 with df = 2 and p = 0.0115). The clusters do not differ in terms of other variables.

The average results of particular ACL scales for isolated clusters are shown in Figure 1.

Cluster A is characterized by a very low level of self – acceptance, although the defensiveness of this group is the highest in comparison with the two other clusters. In effect, the intensity of needs takes rather higher values, especially as far as needs related to task functioning and positive interpersonal relations are concerned. It seems that the relatively high defensiveness of this group protects the self – image related to task and interpersonal functioning, whereas the negative attitude towards oneself (low lev-

Table 2. Reliability analysis – corrected coefficients of need – scale correlation and Cronbach α reliability coefficient

<table>
<thead>
<tr>
<th>Scale</th>
<th>Needs</th>
<th>1 year</th>
<th></th>
<th></th>
<th>3 years</th>
<th></th>
<th></th>
<th>7 years</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TF</td>
<td>PIR</td>
<td>PSF</td>
<td>TF</td>
<td>PIR</td>
<td>PSF</td>
<td>TF</td>
<td>PIR</td>
<td>PSF</td>
</tr>
<tr>
<td>TF</td>
<td>achievement</td>
<td>0.77</td>
<td>0.18</td>
<td>0.51</td>
<td>0.89</td>
<td>0.60</td>
<td>0.76</td>
<td>0.84</td>
<td>0.63</td>
<td>0.78</td>
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<tr>
<td></td>
<td>endurance</td>
<td>0.67</td>
<td>0.33</td>
<td>0.30</td>
<td>0.94</td>
<td>0.60</td>
<td>0.64</td>
<td>0.93</td>
<td>0.74</td>
<td>0.57</td>
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<tr>
<td></td>
<td>order</td>
<td>0.63</td>
<td>0.60</td>
<td>-0.80</td>
<td>0.93</td>
<td>0.65</td>
<td>0.53</td>
<td>0.87</td>
<td>0.70</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>interception</td>
<td>0.63</td>
<td>0.32</td>
<td>0.24</td>
<td>0.86</td>
<td>0.83</td>
<td>0.46</td>
<td>0.86</td>
<td>0.85</td>
<td>0.48</td>
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<tr>
<td>PIR</td>
<td>nurturance</td>
<td>0.51</td>
<td>0.86</td>
<td>-0.22</td>
<td>0.77</td>
<td>0.93</td>
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<td>0.80</td>
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<td>affiliation</td>
<td>0.22</td>
<td>0.58</td>
<td>-0.16</td>
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<td>0.61</td>
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</tr>
<tr>
<td></td>
<td>heterosexuality</td>
<td>0.38</td>
<td>0.36</td>
<td>0.23</td>
<td>0.62</td>
<td>0.77</td>
<td>0.61</td>
<td>0.67</td>
<td>0.74</td>
<td>0.72</td>
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<tr>
<td></td>
<td>aggression *</td>
<td>0.17</td>
<td>0.52</td>
<td>-0.24</td>
<td>0.50</td>
<td>0.71</td>
<td>0.20</td>
<td>0.60</td>
<td>0.80</td>
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<td>succorance</td>
<td>0.26</td>
<td>0.75</td>
<td>-0.43</td>
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<td>0.66</td>
<td>-0.25</td>
<td>0.48</td>
<td>0.72</td>
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</tr>
<tr>
<td></td>
<td>deference</td>
<td>0.45</td>
<td>0.75</td>
<td>-0.34</td>
<td>0.71</td>
<td>0.74</td>
<td>0.12</td>
<td>0.75</td>
<td>0.76</td>
<td>0.12</td>
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<td>PSF</td>
<td>domination</td>
<td>0.49</td>
<td>0.05</td>
<td>0.74</td>
<td>0.73</td>
<td>0.47</td>
<td>0.94</td>
<td>0.64</td>
<td>0.47</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>autonomy</td>
<td>0.21</td>
<td>-0.36</td>
<td>0.64</td>
<td>0.65</td>
<td>0.22</td>
<td>0.81</td>
<td>0.58</td>
<td>0.24</td>
<td>0.79</td>
</tr>
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<td>change</td>
<td>0.36</td>
<td>0.04</td>
<td>0.45</td>
<td>0.52</td>
<td>0.32</td>
<td>0.84</td>
<td>0.54</td>
<td>0.49</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>self-abasement*</td>
<td>-0.07</td>
<td>-0.43</td>
<td>0.44</td>
<td>0.41</td>
<td>0.24</td>
<td>0.79</td>
<td>0.36</td>
<td>0.32</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>exhibition</td>
<td>-0.01</td>
<td>-0.24</td>
<td>0.49</td>
<td>-0.15</td>
<td>-0.29</td>
<td>0.19</td>
<td>0.05</td>
<td>-0.21</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>α-Cronbach factor</td>
<td>0.84</td>
<td>0.84</td>
<td>0.74</td>
<td>0.96</td>
<td>0.90</td>
<td>0.93</td>
<td>0.92</td>
<td>0.95</td>
<td>0.94</td>
</tr>
</tbody>
</table>

* needs of aggression and self-abasement were reversed to the opposed values
el on the self-acceptance scale) is associated with a low intensity of needs related to personality style functioning, namely needs of dominance, autonomy, change and abasement.

Cluster B consists of persons who at the moment of the first test, or one year after the first admission to hospital, had a very low level of defense mechanisms, self-acceptance and intensity of needs. It is a group characterized by a clearly pessimistic self-image, manifested by a high level of criticism, depreciation of own abilities, as well as social withdrawal.

The last group (Cluster C) on the other hand, manifests the most optimism, which is expressed by a relatively high intensity of needs, particularly those related to personality style functioning, task functioning and self-acceptance level. Those persons definitely have a higher level of defensiveness than the previous group. It seems that they are characterized by better efficiency of defense mechanisms, which probably protect their self-image.

A question arises – what happens to those self-images over the course of time? The variance analysis has shown some significant interactions between the following factors: separated cluster, time of investigation and ACL scale in synthetic version. The findings are shown in Table 4.

The self images for the three clusters after a seven-year period are illustrated in Figure 2. The comparison has been limited to two moments of research – one year and seven years after the first admission to mental hospital. Detailed analysis of differences will be performed independently for particular clusters.

### Table 3. Sex. age. education and marital status in the initial stage of the illness – figures for 3 clusters

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Cluster A</th>
<th>Cluster B</th>
<th>Cluster C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women</td>
<td>14</td>
<td>(70)</td>
<td>12</td>
</tr>
<tr>
<td>men</td>
<td>6</td>
<td>(30)</td>
<td>11</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>up to 25 years</td>
<td>10</td>
<td>(50)</td>
<td>11</td>
</tr>
<tr>
<td>above 25 years</td>
<td>10</td>
<td>(50)</td>
<td>12</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least high school</td>
<td>8</td>
<td>(40)</td>
<td>5</td>
</tr>
<tr>
<td>above high school</td>
<td>12</td>
<td>(60)</td>
<td>18</td>
</tr>
<tr>
<td>Family status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>single</td>
<td>12</td>
<td>(60)</td>
<td>17</td>
</tr>
<tr>
<td>married</td>
<td>8</td>
<td>(40)</td>
<td>6</td>
</tr>
</tbody>
</table>

### Table 4. Interactions between factors: cluster. ACL scale and time

<table>
<thead>
<tr>
<th>Factors</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster</td>
<td>2</td>
<td>0.27</td>
<td>0.766</td>
</tr>
<tr>
<td>Time</td>
<td>1</td>
<td>2.78</td>
<td>0.101</td>
</tr>
<tr>
<td>Cluster x time</td>
<td>2</td>
<td>6.08</td>
<td>0.004</td>
</tr>
<tr>
<td>ACL scale</td>
<td>4</td>
<td>14.19</td>
<td>0.000</td>
</tr>
<tr>
<td>Cluster x ACL scale</td>
<td>8</td>
<td>1.83</td>
<td>0.072</td>
</tr>
<tr>
<td>Time x ACL scale</td>
<td>4</td>
<td>20.96</td>
<td>0.000</td>
</tr>
<tr>
<td>Cluster x time x ACL scale</td>
<td>8</td>
<td>5.09</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 5. Cluster A – list of significant differences between two moments of research (1 and 7 years) for particular ACL scales

<table>
<thead>
<tr>
<th>ACL scale</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defensiveness</td>
<td>0.72</td>
<td>0.478</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>-3.31</td>
<td>0.004</td>
</tr>
<tr>
<td>Needs oriented to task functioning</td>
<td>-1.46</td>
<td>0.161</td>
</tr>
<tr>
<td>Needs of positive interpersonal relations</td>
<td>-3.47</td>
<td>0.003</td>
</tr>
<tr>
<td>Needs related to personality style functioning</td>
<td>0.41</td>
<td>0.685</td>
</tr>
</tbody>
</table>

The group that was characterized by a very low self-acceptance level, but also by high defensiveness, one year after the first admission to the hospital (cluster A), had a higher level of self-acceptance and intensity of needs concerning positive interpersonal relations after seven years. The defensiveness and two other groups of needs had not changed. Table 5 shows the results of statistical analysis.

The results suggest that in cluster A we are dealing with persons who during their illness are maintaining a relatively good efficiency of defense mechanisms and over the course of time adapt to the illness. This is reflected by an increase in self-acceptance and intensity of needs for positive interpersonal relations.

Table 6. Cluster B – list of significant differences between two moments of research (1 and 7 years) for particular ACL scales

<table>
<thead>
<tr>
<th>ACL scale</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defensiveness</td>
<td>-4.32</td>
<td>0.000</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>-3.22</td>
<td>0.004</td>
</tr>
<tr>
<td>Needs oriented to task functioning</td>
<td>-3.53</td>
<td>0.002</td>
</tr>
<tr>
<td>Needs of positive interpersonal relations</td>
<td>-4.86</td>
<td>0.000</td>
</tr>
<tr>
<td>Needs related to personality style functioning</td>
<td>0.72</td>
<td>0.480</td>
</tr>
</tbody>
</table>

The group of patients who at the moment of the first research showed the lowest intensity of needs, as well as low self-acceptance and weak defense mechanisms (cluster B), was characterized by a definitely higher intensity on ACL scales after 7 years. It is worth noting that the in-
tensity was also the highest when compared to the two other clusters (Figure 2).

It can be concluded that these patients adapt very well to their illness; their self-acceptance, efficiency of defensive mechanisms and intensity of needs increase. In this cluster, the group of needs related to personality style functioning does not change (see Table 6).

**Cluster C**

**Table 7. Cluster C – list of significant differences between two moments of research (1 and 7 years) for particular ACL scales**

<table>
<thead>
<tr>
<th>ACL scale</th>
<th>t value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defensiveness</td>
<td>0.95</td>
<td>0.359</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>2.22</td>
<td>0.045</td>
</tr>
<tr>
<td>Needs oriented to task functioning</td>
<td>0.51</td>
<td>0.622</td>
</tr>
<tr>
<td>Needs of positive interpersonal relations</td>
<td>-1.42</td>
<td>0.179</td>
</tr>
<tr>
<td>Needs related to personality style functioning</td>
<td>3.31</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Patients in cluster C were characterized by the highest ACL scores in the first study. However, after seven years, their results in all scales were the lowest compared to the other groups of patients. (see Figure 2).

Statistically significant changes occurred in those with lower scores in the level of self-acceptance and needs related to personality style functioning (see Table 7). It can be concluded that in the initial phase of illness, those patients had a more positive attitude towards themselves (self-acceptance scale) and were definitely more dynamic (scale of needs related to personality style functioning, needs of dominance, autonomy, changes and abasement [See table on page 7]). Their strongly expressed expansion and dynamism in life meant a will to fight and to be active despite their illness. However, over the course of time they “surrendered”, which was expressed by significantly lower scores in ACL scales.

**DISCUSSION AND CONCLUSIONS**

Separation of the three clusters allowed for distinguishing between three groups of patients suffering from schizophrenia, who after one year from first admission to hospital showed three different sets of self-image. These differences seem to be related to defense mechanisms used by the patients. Generally speaking, the stronger the defensiveness in the initial phase, the longer it took to adapt and accept the illness. Conversely, if the patients in the initial phase reacted to the illness by somehow giving into it, over the course of time they adapted to this situation, and seven years later their self-image was more beneficial compared to patients who actively opposed the illness. Another focus of interpretation of these results may be the fact that the group of patients reacting with the strongest defensiveness against their illness in the initial phase was the one with a majority of more-educated people (in comparison with two other clusters) (see Table 3). This seems coherent, because for the patients with a university education, becoming ill must have meant a bigger threat – in a way, they had more to lose.

Many reports bring up the question of inadequate self-image in schizophrenia. On one hand, patients with this illness are attributed an unclear and vague self-concept, which is usually related to their low sense of identity and a poorly differentiated and separated “self” [2]. On the other hand, inadequacy in self-perception is related to high level of defensiveness. Byrne [12] writes about a repressive type of self-image, Garfield et al. [7] about defensive self-reinforcement, Rogers [13] about defensive conformity of

The results of this study partially confirm the above reports. Some schizophrenic patients are characterized by defensive tendencies. The more such tendencies they have in the initial phase of the illness, the more pessimistic their self-image is after a few years. Conversely, surrendering to the illness and lack of defensiveness initially, result in higher self – satisfaction and optimism in the later period. In could be said that sooner or later the patients are confronted with the awareness of being ill. In this context, the defensive tendencies seem to be the natural defense against the threat, related to becoming aware of being ill. This is confirmed by research results that report negative effects of identification with the role of a mentally ill person [15, 16].

REFERENCES

Picture of posttraumatic stress disorder among flood victims correlated to scale of sustained loss

Agnieszka Stępień, Krzysztof Małyszczak, Patryk Piotrowski, Andrzej Kiejna

SUMMARY
Aim: The aim of the study was to describe the prevalence and picture of PTSD among eye witnesses of flood, who had neither received any psychiatric treatment previously, nor experienced any other concurrent stressful life events that might have been an independent cause of the PTSD onset.

Material and methods: Flood victim were interviewed between the 60th and 63rd month after the flood by the same psychiatrist using the Composite International Diagnostic Interview (CIDI), section A (concerning demographic data) and section N (referring to PTSD). They were visited at home, by previous appointment over the phone. The course of PTSD was analysed in two groups (of 47 and 50 respondents) distinguished on the ground of flood-related material loss.

Results: The presence of PTSD was more frequent among those who had sustained severe loss due to the natural disaster (N = 30) than among persons who had experienced no significant loss (N = 30), with the PTSD ratios of 23.7 % vs. 7.2 % respectively. An analysis of symptom severity on the three main axes indicated a significantly higher prevalence of such symptoms on each axis in the group of victims who had experienced a permanent loss. In a vast majority of cases PTSD symptoms persevered for over a year, irrespective of the amount of loss.

Conclusions: The higher severity of symptoms in persons who had sustained a permanent loss evidences a relationship between PTSD and prolonged stressful situation due to permanent flood-related loss. The duration of symptoms similar in both compared groups indicates a stronger effect of the major stressor as well as a negative effect of absence of psychological support for the victims.

PTSD / picture / flood / material loss / CIDI

INTRODUCTION
Floods, volcanoes, earthquakes, outbreaks of fire in large parts of forests, hurricanes, cyclones and tornadoes affect a large population and play a big part in psychiatric epidemiological surveys. They cause emotional trauma and could be the cause of psychological distress caused by a real or anticipated fear of death, physical damage, economic loss or death of a close one (family member or relative). PTSD is claimed to be the most often diagnosed disorder related to trauma and it’s thought to be quite persistent because sometimes it holds for many years [1, 2, 3].

Flood is one of these natural disasters which leave behind the largest damages in personal and public property. It endangers the life and health of people, disorganizes everyday life and
is a source of dreadful cognitions which may lead to PTSD occurrence.

The flood Poland suffered in July 1997 was the largest natural catastrophe ever recorded in the history of the country. It occurred in 26 provinces, 6700 km² of arable land and urban area were flooded, that’s about 2 % of Poland’s area. 46,000 flats and households were destroyed causing a great economic and public loss. 55 lives were taken [4].

The middle and upper basin of the Odra River was particularly badly affected. Heavy raining which led to the flood lasted continuously for 5 days (5th – 9th July 1997). The rainfall reached locally up to 500 mm and that was three-four fold as much as the mean monthly sums for the region. As a result the water levels in rivers rose rapidly and that was facilitated by the fact that the ground was already soaked up to its capacity due to the recent rainfalls.

Unexpectedly in just a few night hours 70 % of the mountain terrains of Ziemia Kłodzka were flooded. Almost 80 % of households located there were partially or completely destroyed. The analysis of flows showed that those recorded in 1997 were the highest ever observed in the area. The hydrologic reports on the day before the flood suggested no danger whatsoever. In the Nysa Kłodzka catchment basin the water reservoirs were mainly filled up to their medium capacity. Water levels recorded in Bystrzyca Kłodzka and Kłodzko were in upper part of the medium ranges and in other places were in upper part of low ranges and lower part of middle ranges. Despite this, the water level in Nysa Kłodzka River rose from 100 to 655 cm in five days (between 4th and 8th of July) in Biała Łądecka River it rose even more from 40 to 430 cm in just four days (between 4th and 7th of July) [5]. The utmost threat occurred in Nysa Kłodzka River-basin and according to data obtained from Community Crisis Centre in Bystrzyca Kłodzka 441 households were flooded, a tremendous loss in farming and farm equipment occurred [6].

Such a sudden and huge water level rise, lack of alert, no time for employment of proper preventive measures and complete insufficiency of those already used determined the large extent of catastrophe. The fact that a very small number of the victims had insured their homes or farms must be taken into account. Moreover, the insurance policies did not cover natural disasters. Therefore they received no compensations from insurance companies. Shoestring financial help offered by the authorities couldn’t make up for the loss. Each family received 3000 PLN (regardless to the number of family members) in order to buy the basic necessities and household equipment.

The frequency of PTSD being a psychological reaction to the natural disaster depends on time that has passed since trauma occurred, the extent of the disaster and the methodology employed in the research. It appears that the persistence of symptoms of post-traumatic stress disorder largely depends on the social and psychological support victims receive afterwards. The fully or partially developed PTSD in victims who had not received professional support lasts for longer.

Prolonged exposure to stress and confrontation with physical loss caused by the calamity may play an important part in its chronicity. Literature confirms this hypothesis and results are in close relation to the group of individuals included in the study.

The study analyses the PTSD course amongst the victims of the upper Odra River-basin, the terrain notably affected by the disaster. The analysis consists of two subgroups of patients that strongly differed in loss amounts caused by the flood. The catastrophe extent described by sudden and huge water level rise, lack of alert, no time for employment of proper preventive measures, permanence of disruptions as well as lack of social and psychological support for the victims may influence the severity and persistence of PTSD symptoms.

THE AIM OF THE STUDY

1. Estimation of PTSD incidence in both subgroups.
2. Analysis of PTSD course:
   - detailed description of the most frequent symptoms belonging to three main axes included in diagnostic criteria of modern classification systems – DSM-IV and ICD–10: intense persistent and against one’s will ideation of the trauma, persistent avoidance of
stimuli resembling the trauma, overreactivity not present before trauma;
– the symptoms occurrence frequency comparison in both subgroups: victims who had experienced no significant financial loss caused by the disaster and individuals severely affected (loss of household or damages influencing everyday living until the day of survey).

3. Estimation of the time of symptoms persistence depending on permanence of disruptions.

MATERIAL AND METHODS

Material

The study has been conducted in four villages in the Bystrzyca Kłodzka commune (Goworów, Michałowice, Zabłocie, Wilkanów) in the Nysa Kłodzka River-basin. This river was the one that rose in the quickest and the highest degree out of all rivers of the Odra River mountain tributaries. The villages were flooded all of a sudden during night hours and the disaster struck all the households in the area.

107 adult (≥ 18 years old) direct eyewitnesses of the flood were interviewed (40 men and 67 women). The interviews were performed by one trained psychiatrist in the homes of those who consented to the study after prior phone appointment. Direct contact with the flood victims was made possible by the GPs who were responsible for health care of population living in the regions devastated by the calamity.

The condition stating that only subjects with the same risk of trauma, its severity and duration would be examined has been fully satisfied (villages chosen for the study were flooded to the same extent and in comparably short time).

This condition has been dictated by the fact that PTSD incidence rates largely depend on the characteristics of population examined. The study was performed between July and September 2002, i.e. five years after the flood.

The fact that none of the interviewed subjects received any psychological or psychiatric support after the flood and the availability of such is still poor nowadays, was striking. Also, financial help offered by local authorities was minimal despite the fact it was much desired by the affected who had no chance for compensations from insurance companies because natural disasters were not covered.

The exclusion criteria (at least of the conditions listed below):
– psychiatric treatment before 1997,
– exposure to the traumatic event (other than flood in year 1997) that could be regarded as the independent PTSD cause,
– severe cognitive or memory impairment, delusional disorder, manic syndrome or withdrawal syndrome of any origin diagnosed during the interview.

Finally, 97 individuals were interviewed. In that number were 38 men and 59 women, 39.2% and 0.8% respectively. The age ranged between 24 – 82 years (mean 46.92). Most of the subjects had secondary education (56.7%), 36.1% had only primary education and 7.2% reached the higher level of education. Little more than a half of those examined were unemployed (52.6%), which placed these people in the lowest socioeconomic class.

Two subgroups of victims were compared: 47 individuals severely affected (loss of household or damages influencing everyday living until the day of the survey) and 50 victims who had not experienced significant financial loss caused by the disaster (48.5% and 51.5% respectively).

Methods

The instrument used in the study was the Composite International Diagnostic Interview (CIDI) designed as a cooperative project of WHO (World Health Organization) and ADAMHA (United States Alcohol Drug Abuse and Mental Health Administration). CIDI was designed especially for the purposes of psychiatric epidemiological surveys in different cultural settings. The formula of the instrument allows its application to the individuals with different educational levels (acceptable for illiterates), questions are clear and simple without unnecessary idioms and colloquialisms [7]. Polish version of the CIDI was prepared according to WHO guidelines. The text translation covered back translation and linguistic consults [8]. It is a highly structured interview where all closed questions have been listed and have to be
asked using exact wording. Positive answers to the questions, following the specific algorithm, lead to further questioning ascertaining or omitting additional data. CIDI is widely used in epidemiological studies in psychiatry; its present version has been adjusted to the modern classification systems: DSM-IV and ICD–10 [9, 10].

The instrument used in the study was the Munich version of CIDI covering the whole lifetime of the subject. In the study presented, two sections of CIDI were used: section A of sociodemographic data and section N, dealing with PTSD symptoms. Construction of the latter section allowed not only confirmation of the PTSD presence in the examined individuals but also analysis of the course of syndrome in time. This section contains 19 questions: closed ones, as well as questions concerning the onset of the symptoms, duration of the disorder and the moment symptoms cease.

The most frequent symptoms belonging to three main PTSD symptom axes are reflected in three section parts:

Questions N3 – N7 are useful in evaluation of the symptoms reflecting intense recollection of the stressful event.

- CN3 remembering against will,
- CN4 bad dreams or nightmares about the event,
- CN5 feeling as if the event was happening again,
- CN5A acting as if the event was happening again, even though it wasn’t,
- CN6A getting very upset when the event was reminded,
- CN6B feeling anxious when the event was reminded,
- CN6C feeling helpless when the event was reminded,
- CN7 physiological hyper-reactivity when the event was reminded.

Questions N8 – N14 analyze symptoms from the group of persistent avoidance of stimuli resembling or associated with the stressor.

- CN8 trying not to think or talk about the event,
- CN9 avoiding places, people or activities that might remind the event,
- CN10 memory blank for all or part of the event,
- CN11 loosing of interest in doing things that were once important or enjoyable,
- CN12 isolation or distance from other people,
- CN13 more difficulty experiencing affection towards other people,
- CN14 pessimistic thinking about future.

Question N15 concerns symptoms of increased psychological sensitivity and arousal not present before exposure to the stressor.

- CN15A sleeping disturbances,
- CN15B concentration disturbances,
- CN15C greater carefulness,
- CN15D increased irritability or more frequent losing of temper,
- CN15E increased restlessness or vigilance.

The data obtained were analyzed by Statistica software, version 5.0 developed by StatSoft. The statistical methods used: U-test Mann-Whitney (M-W) – nonparametric test alternative to t-Student test for independent variables, \( \chi^2 \)-test used in distribution comparison of bivalent dependent variables.

RESULTS

Occurrence of PTSD as a result of flood experience was evaluated with section N of the CIDI instrument. Based on the data gathered from 97 persons, PTSD was confirmed in 30 individuals (30.9 % of the whole sample). The PTSD was diagnosed more often among individuals severely affected by the disaster – 23.7 % (n = 30) than victims who did not experience significant financial loss – 7.2 % (n = 30).

The construction of N section allowed the analysis of symptoms severity in three main symptom axes included in diagnostic criteria of modern classifications. The intensity of symptoms was evaluated by the amount of symptoms belonging to each of the main groups (G1, G2, G3), and a total of all diagnosed symptoms (G4 = G1 + G2 + G3).

Intensity comparison of all PTSD symptoms in both subgroups – individuals severely affected by the flood and victims who experienced no significant financial loss – showed greater mean intensity of all symptoms in the first subgroup (Fig. 1) and the difference reached statistical
importance according to M-W test \( (p = 0.00139, Z = -4.34585) \).

Symptoms intensity analysis in three main symptom axes showed their statistically important higher incidence in each of the main axes for individuals persistently affected by the disaster. The highest distinction of distribution was found in the group of overreactivity symptoms not present before trauma (Fig. 2) with statistical importance according to M-W test \( (p = 0.00495, Z = -4.05831) \).

Symptoms distribution in the main axes of intense persistent ideation of the flood (M-W test: \( p = 0.002545, Z = -3.018 \)) and persistent avoidance of stimuli resembling the trauma (M-W test: \( p = 0.000183, Z = -3.742 \)) was not well-defined in both the described subgroups of victims nevertheless the symptoms intensity reached statistical importance amongst individuals persistently affected by the disaster.

Section N of CIDI not only allowed demonstration of intensity distinction between the main PTSD symptom axes but each symptom was assessed as well, even if the diagnosis was not formally justified. The variables in groups were assessed with \( \chi^2 \)-test (Table 1.).

Significantly more symptoms were diagnosed in the subgroup of individuals severely affected by the flood and the significance reached statistical importance. The only symptoms which occurred with similar frequency in both subgroups were: feeling anxious when the flood was reminded (CN6B), feeling helpless when the event was reminded (CN6C) and acting as the event was happening again, even though it wasn’t (CN5A).

The most frequent symptom in both subgroups was increased restlessness or vigilance not present before trauma (CN15E). Remembering against will (CN3), sleeping and concentration disturbances (CN15A and CN15B respectively) were the most frequent consecutive symptoms observed.

The construction of question CN17 allowed the determination of time point of the symptoms onset – answers for the question: “At what time after the flood the symptoms occurred for the first time?” were rated as follows: 1 – “during the same day”, 2 – “during the same week”, 3 – “during the same month”, 4 – “during six months”, 5 – “during one year”, 6 – “after a year”.

Half of the individuals fulfilling the criteria for PTSD defined the onset of symptoms as “during the same week” and 40% as “during the same month”. More than a half of all participants of the project defined the onset of symptoms as “during the same week” but the distribution of further answers was not so unequivocal as in the subgroup of individuals suffering from PTSD.

The distribution differences of onset time point between the group of individuals severely affected and victims who had not experienced significant loss did not reach statistical importance \( (\chi^2 = 3.639, p < 0.45) \).

Symptoms duration analysis was enabled by assignment of the following values to adequate answers: 1 – “less than a week”, 2 – “less than a month”, 3 – “one to six months”, 4 – “six
months to one year”, 5 – “more than a year”. The vast majority of all participants both fulfilling criteria of PTSD and not, defined the period of symptoms persistence as “more than a year”. The distribution of symptoms persistence in the whole group of patients resembled the distribution in the group of victims who experienced no significant loss. Despite the distribution differences in the group of individuals severely affected and victims who did not experience significant loss, the correlation between symptoms duration and the loss extent in the group of respondents suffering from PTSD was not observed ($\chi^2 = 0.976$, $p < 0.80$).

The last occurrence of PTSD symptoms was determined – question CN18AREC encoded following answers and adequate values: 1 – “during two weeks preceding the interview”, 2 – “two to four weeks preceding the interview”, 3 – “one to six months preceding the interview”, 4 – “seven to twelve months preceding the interview”, 5 – “during a year preceding the interview (without precise description)”, 6 – “over a year preceding the interview”. The construction of the question allowed evaluation of present occurrence of fully developed PTSD. The diagnosis was confirmed in 15.5 % of all 97 participants. The analysis of PTSD symptoms persistence in individuals who did not fulfill PTSD criteria showed that victims severely and persistently affected displayed the symptoms until one month before the interview significantly more often than participants with-out significant financial loss ($\chi^2 = 10.878$, $p < 0.012$). The most persistent symptoms had significantly stronger correlation with the diagnosis than loss extent ($\chi^2 = 9.619894$, $p < 0.022$).

Long-lasting and simultaneous persistence of PTSD symptoms among majority of victims

### Table 1. Correlation analysis of PTSD symptoms distribution in the subgroup of individuals severely affected (1) and participants who had not experienced significant financial loss (2). Chi-square test.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Occurrence in subgroup 1</th>
<th>Occurrence in subgroup 2</th>
<th>$\chi^2$-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>present</td>
<td>not present</td>
<td>present</td>
<td>not present</td>
</tr>
<tr>
<td>CN3</td>
<td>33</td>
<td>17</td>
<td>44</td>
<td>3</td>
</tr>
<tr>
<td>CN4</td>
<td>21</td>
<td>29</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td>CN5</td>
<td>20</td>
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induced the analysis of subthreshold PTSD (sPTSD) occurrence. The diagnosis might be based on the fact that at least one symptom in each of three main symptom axes lasts for more than one month [11, 12]. The participants interviewed did not fulfill criteria for developed PTSD. Symptoms of sPTSD were present in 63.9% of the individuals without diagnosis of PTSD (n = 67) and the frequency of its occurrence amongst victims severely affected reached statistical importance ($\chi^2 = 108.389$, $p < 0.0001$).

**DISCUSSION**

The study has been conducted 0 – 3 months after the flood. PTSD was diagnosed in 30.9% of the recruited sample and 15.5% of the group presented fully developed PTSD until one month before study. This result is concordant with outcomes of the other studies reported in literature worldwide. Prospective epidemiological surveys showed that almost 1/3rd of the trauma victims with initially diagnosed PTSD still displayed its symptoms 6 months and more, after the stressful event [13, 14, 15].

Published papers confirm frequent PTSD diagnosis amongst victims suffering from considerable material loss caused by natural disaster [16, 17, 18, 19, 20]. The study corroborates with the results and the PTSD symptoms quantity analysis allowed the confirmation of their higher intensity in that subgroup. The highest disparity relates to the group of symptoms regarding increased psychological sensitivity and arousal not present before exposure to the stressor. It could be assumed that the permanence of property lost due to the flood affects in notable manner the victim’s functioning, moreover daily exposition to conditions reminding the trauma (breakage of the whole or part of the house, incompleted renovations, damages in settled houses, excessive humidity, prolonged living in poorly equipped substitute homes) might be of great importance. The participants associated the symptoms intensity with persistent hardship caused by the catastrophe. None of the victims interviewed, received psychiatric or psychological help after the event due to traffic difficulties caused by the flood (the road to Bystrzyca Klodzka was closed and the victims had no opportunity to receive any help from the psychological help-point located there). In conformity with literature, the lack of such support prolongs PTSD symptoms presence (mean 64 months) [13, 14, 21].

Half of the participants defined the onset of symptoms as “during the same week” and 40% as “during the same month”. The others defined the onset as “during the same day” or “during six months”. The results are concordant with diagnostic criteria of PTSD included in the classification systems. Analysis of the time point of symptoms onset did not show any correlation with loss extent, proving that catastrophe characteristic (sudden and unexpected occurrence, the scale) causes psychological reaction independently from financial consequences.

Despite the lack of significant differences in PTSD symptoms permanence depending on damages extent, further analysis showed that individuals with developed PTSD, presented the symptoms during the interview significantly more often than representatives of the subgroup severely affected by the flood.

The study confirms significantly stronger intensity of subthreshold PTSD symptoms amongst individuals heavily affected by the flood. PTSD occurrence in the whole interviewed group was concordant with literature [12, 22].

Intense and long-lasting presence of fully developed or partial PTSD or particular symptoms, such as anxiety and/or depressive disorder require assurance of professional assistance for the victims of flood. Individuals presenting intense symptoms received information about treatment opportunities.

**CONCLUSIONS**

1. PTSD was diagnosed more frequently amongst victims severely affected by the disaster (23.7%), likewise subthreshold PTSD occurred more often in that subgroup. Intensity of symptoms among victims fulfilling classification criteria for developed as well as partial PTSD was significantly higher in the subgroup of individuals severely affected. The majority of participants (independently from loss extent) presented the symptoms for a period “longer than a year” and none of them defined the symptoms’ persistence as “less than
a month”, that could be due to damages permanence. There was no significant correlation between symptoms duration and damages extent suggesting close relation of psychological reaction to main stressor – the flood, than secondary stressors resulting from damages. Analysis of present PTSD symptoms confirms this thesis.

2. The long-lasting presence of symptoms reflects the need of easier access to psychological and in certain cases psychiatric support. The offer of adequate therapy in Bystrzyca Kłodzka commune was restricted, resulting in persistence of stressors impact.

3. The instrument used in the study – the Composite International Diagnostic Interview (CIDI) is suitable for such surveys. The formula of the instrument is clear and simple for patients and the interviewer. Construction of the sections allowed determination of the PTSD syndrome duration, as well as analysis of particular symptoms included in the criteria of diagnosis and forming a clearer picture of respondents’ emotions.

REFERENCES

The structure of values system after experience of trauma in childhood or adulthood

Krzysztof Rutkowski

SUMMARY

Aim: To show the late effects of early childhood trauma and trauma in adulthood for further development of the personality. The condition was that early childhood trauma is not remembered contrary to the trauma in adulthood.

Subject and method: The subjects were 329 persons with traumatic experience deportation or imprisonment from political reasons. Value Survey compiled by Milton Rokeach, has been used for the research.

Discussion: In the presentation, emotional reactions of people deported from Poland to former USSR in the 1940s of the 20th century have been presented. Most of them spent several years under deportation; some spent their early childhood there. The fact of spending several years under deportation in severe conditions, seeing people dying, a frequent loss of relatives and a constant feeling of threat left behind a solid trace in their personality. Even after many years after deportation (about 50 and 60 years), it is possible to observe consequences disturbing daily functioning.

Results: They showed statistically important differences between two groups of people traumatised in childhood or adulthood. In declared values consequences of the experienced trauma are traced, they are shown by the fact that people give higher ranks to certain values, which are associated with lost values, such as, freedom.

Conclusion: The study confirmed the importance of the early childhood trauma for the development of the personality even if trauma is not remembered.

trauma / values system / deportation / personality

INTRODUCTION

The following article presents results of the research carried out in a group of traumatized people and it describes the results of observations concerning chronic consequences.

The results confirmed that this experience left consequences for the rest the testees life in a specific way; they were influencing their everyday existence unconsciously. These consequences were different for people who experienced trauma in adult life.

The purpose of the research was to estimate the influence of painful early-childhood experience on further personality development. The importance of emotional situations experienced in the childhood has been known to psychiatry for years, however, there exist few publications and there are few occasions to compile the data statistically and to make conclusions out of the observed facts. The research conducted in the Centre for Victims of Political Persecutions at the Chair of Psychiatry of the Jagiellonian University Collegium Medicum has made it possible to
estimate the influence of early childhood experience on the whole future life.

Among the testees there were prisoners of concentration camps, people deported by the Soviet authorities to Siberia, political prisoners acting in anti-communist underground. People who experienced trauma in childhood include the deportees and concentration camps prisoners. Children were frequently situated in such places together with their parents or without them, or they were sometimes born there and spent their first years of life in such conditions.

During the research, which was carried out in a group of people persecuted for political reasons, a difference in the clinical picture which depended on the moment of trauma was noticed: the earlier the trauma, the more visible withdrawal (estrangement) from the society and difficulties in relations with other people. A later trauma was most often connected with different anxiety and depression symptoms which constituted PTSD.

The confirmation of this observation, carried out by means of modern statistical methods, would provide an excellent proof of the impact of experience and lived through emotions in the early childhood, on the structure and features of the later developed personality.

The research was conducted on people who experienced extreme stressors, nevertheless, the confirmation of such an impact shows in general the influence of early years on later choices, emotions, relations, etc. It seems significant that the period under research refers to the whole life, so the trauma is experienced in its beginning, when the verbal memory is not yet developed and the experience cannot be remembered and then recollected. This has been a considerable methodological challenge, however, when compared with the results obtained from people who experienced similar trauma in later life, the results gathered in this study made it possible to estimate the influence of the traumatic experience from one point of view and also the influence of the early years from the other point of view.

As a limit, the trauma experienced before or after 5 years of life was assumed; this was done to differentiate between the verbal memory and specific relations, as well as social needs. The trauma experienced after 5 years of life is more easily remembered and is associated with the behaviour later on; also, in the development period, it is the time of higher autonomy. Earlier years are characterized by a big dependence on the care received and usually the lack of memories from that time. Even if they appear, they are fragmentary and hesitant, and there still is the lack of proper self-defence mechanisms to manage the experience of the trauma.

The research has its uniqueness and it concerns people who were exposed to severe stress in their early childhood as compared to those who suffered from it in later years. Both groups had never been treated and they lived in the same conditions in their life after the trauma. Those people had never been consulted with a specialist, which excludes the possibility to influence the personality with the use of therapeutic experience. Both groups were gathered at random. It all adds to the uniqueness of the research. It is impossible to imagine nowadays how one could repeat the research on a group of people who are known to have experienced the trauma, especially in the early childhood, and would not undergo any therapy. The data gathered is statistically representative and can be transferred onto other groups, for example, the casualties of accidents or people abused in the childhood. By confirming the influence of the traumatic experience in the early period, one also confirms its importance for the rest of life.

Well-known researchers on the child period (Bowlby, Miller and Winnicott) wrote an open letter to The British Medical Journal in 1939, in which they warned against the dramatic consequences of evacuating children under 5 years of age. The risk connected with separation which would lead to psychical disorders was pointed out. At the same time, the attention was focused on the fact that children older than 5 suffered from the evacuation and the loss of their home less [1].

The same age was assumed for this research. However, the assumption was based on the occurrence of verbal memory and the ability to recall events. The lack of this sort of memory and the lack of full memories (of fragmentary memories) indicate that the experience cannot have a conscious influence on a person. It is also possible that the importance of the age of 5 years is connected with unconscious (non-verbal) liv-
ing and using different mechanisms in relations characteristic of this age.

For the surrounding people, the consciousness of the child’s life begins only with reflecting upon itself and understanding the notion of I [2]. However, this does not mean that earlier experience has no influence. What is more, other observations and the result of the research indicate that the influence is big.

The results univocally confirmed the assumed thesis. The statistical value of the data surmounted the research expectations; the analysis showed a very high statistical validity of the results. This practically proves unbeatably that early life experience has a huge impact on a further consolidating personality structure.

**SUBJECT AND METHODS**

329 people underwent the examination. An average age in the moment of the examination was 68 years and it ranged from 44 to 88 years.

In both groups there was a noticeable difference in sexes. In Group 1, the range was of no big difference though there were more women (55%) than men (45%). In Group 2 there were considerably more men (65%) than women (35%).

The differences result from the social structure: in Group 2 more people were directly involved in conspiracy activity, also in guerrilla squads, and this resulted in a higher number of men in this group. On the other hand, deportations and imprisonments in concentration camps took place irrespective of the sex (especially in the case of children); that is why, the set of sexes is different.

Concluding the description of trauma in both research groups, one can see that in group 1, in which people were exposed to the trauma in early childhood, there are mostly deportees (90%). In group 2 the stay in prison and exile, constitute evenly about 40% and one third constitutes other types of trauma.

The trauma length of time was on average 54.8 months: in Group 1 – 59 months and in Group 2, 52.1 months. About 4.5 years, and 7 years average.

The research directly concerns the functioning after the trauma and the occurring symptoms. The attention was focused on the marital status and number of children, as factors which describe the family functioning of the people examined.

Comparing an average age of the people examined and the first year of their marriage, one can observe that most people got married at about 20–25 years of age. This corresponds with cultural norms of those days. Nowadays a later time of contracting matrimony has been observed.

Percentages of married people are almost identical in both groups, and they are 88%.

A majority of people, more than 1/3rd, had 2 children. However, almost the same number of people did not have children at all, and 1/6th of the people had one or three children.

In conclusion, family functioning in both groups is very similar and the differences are not statistically valid.

All people undergoing examination have been diagnosed with post-traumatic disorders of PTSD type, according to DSM-IVTR (F43.1 or F62.0 acc. to ICD–10).

**Value Survey**

Value Survey was compiled by Milton Rokeach in 1973 and was adopted to use in Poland in early 80’s [3].

The Survey is based on the author’s personality theory which refers to a system of convictions. Nevertheless, although the very theory of personality remains questionable and is not sufficient, it very well refers to the research and provides considerable possibilities for statistical analyses. It has also been chosen bearing in mind the influence of traumatic experience on the values in question. The survey includes two groups of values: 18 terminal and 18 instrumental values. The task of the testee is to rank each value from 1 (the most important) to 18 (the least important) within each group according to its importance.

Ultimate values are the most important suprasituational aims of human life. The values were defined as general ways of behaviour and they are characterized as means which are helpful during realisation of aims, also terminal values.

The fundamental aim of using Value Survey was to assess the values as declared by the test-
Values here are interpreted as a way of expressing one’s personality. They are stable features and undergo slow dynamic changes in the course of time, along with the changing and growing personality. On the other hand, they are stable and not susceptible to changes, for example, those influenced by temporary fear. This causes that the declared values constitute good research data while comparing personality features and they were used accordingly.

RESULTS

Terminal values

Terminal values are the most important supra-situational aims of human life. The values were defined as ways of behaviour and they are characterized as means which are helpful during realisation of aims, also terminal values [3].

The top three most valued features are the following: family security, national security and wisdom (Tab.1). However, the averages analysis indicates considerable differences in applied ranks. Family security is positively distinguished from other values; it is followed by national security and wisdom, the other values are ranked less distinguishably between one another. The last value is an exciting life and it also stands out of other values at the bottom of the list.

Two groups undergoing comparison differ significantly in the position of three values: family security, comfortable life and well-being.

Variation comparison (Fig.1) indicates that views of people exposed to trauma in early childhood in the range of family security, pleasure and exciting life are more differentiated than in the case of people exposed to trauma in later life. It is particularly visible in the family security value. This absence of variation uniformity poses difficulty in interpreting the averages. People from group 1 rank comfortable life and well-being higher.

Placing the values shows the difference between testees in groups as to ranking 4 values. People from group 1 value well-being and comfortable life higher and people from group 2 val-

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Archives of Psychiatry and Psychotherapy, 2007; 4 : 45–51
The structure of values system after experience of trauma in childhood or adulthood

49

Archives of Psychiatry and Psychotherapy, 2007; 4 : 45–51

ue higher their freedom and salvation. Other values remain within the same range, assuming the difference of ± 1.

This vividly brings to an interpretation that people who, in adult life, experienced the loss of freedom and doubts concerning choices made by themselves (for example, whether to engage oneself in the fight for independence) value more freedom and salvation, understood not only from the religious or moral perspective. On the other hand, people traumatised in their childhood, have a higher value for well-being and a comfortable life. These are values experienced in a passive way, which is dependent on the environment and typical of child experiences. Well-being is something which is lived and experienced, freedom is the value which one takes advantage of actively. It is remarkable that the ability to make use of freedom is acquired in adolescence; then, it also becomes a value. In both cases these values, (mainly freedom and a comfortable and happy life) are those situations which were lost in the moment of experiencing the trauma. This explains why the moment of trauma experience differentiates both groups as far as declared values are concerned.

Visible grouping of values different from the average can be easily explained by means of the theory of complexes. This indicates a certain similarity of the acquired data with the data gathered, for example, in the test of verbal associations, in which these contents appear subconsciously and are associated with one another [4]. Here, the binding content is the trauma. A complex, which is created around the trauma, includes values. As it has been mentioned, for people who were exposed to the trauma in early childhood, the values are their well-being and a comfortable life, while for those exposed to the trauma in later life – freedom and salvation (morality).

**Instrumental values**

Instrumental values are a system of moral and competence values, so these convictions which concern the functioning in the society, for example, following the Code of law and competition. For these reasons, the system of instrumental values will take shape mainly in relations and reflections of one’s own activities.

Similarly in this case, one can see that extreme values stand out. The most important value is honesty and, later on, responsibility (Tab.2). Others group themselves in a less distinguishable structure, in which the most vivid is obedience.

Statistical analysis and comparison of both groups by means of the Mann-Whitney test indicate considerable statistical differences in values: loving, happy, self-controlled.

Variation analysis shows that views of people who were exposed to the trauma in early childhood are more differentiated than the ones in the case of people who were exposed to the trauma in later life; it is in accordance with the terminal values analysis (Fig.2).

Placing the values shows the difference between testees in groups as to ranking 8 values, with the condition of ± 1. People exposed to the trauma in early childhood value the following more: independence, courage, broad-mindedness, and helpfulness. People exposed to the trauma in later life value more the following: loving, imaginative, self-controlled and happy.

Instrumental values higher in Group 1 are the features which undergo the biggest disturbances in the process of personality disorders. It is in accordance with high psychopathy in the MMPI–2 test in this group and the diagnosis. Symptoms like: difficulties in building stable relationships with a proper feeling of independence, foreseeing the activities and freedom, are responsible for the clinical picture of personality disorders.
Instrumental values in group 2 may be more connected with active symptoms of PTSD, for example, hypervigilance and irritability.

This points to an interpretation that experiencing the trauma, which can be accompanied by a feeling of loss, for example, the loss of current life, may result in giving higher ranks to instrumental values required in self-functioning.

This indicates that higher ranks are given to more wanted and expected forms of behaviour which are, in a higher degree, handicapped by disorders symptoms. While examining, the results were confronted with another research on the same group, and it was proved that, for people who were exposed to trauma, personality disorders and PTSD are a more frequent and typical reaction.

However, it seems worth turning the attention to the fact that the experience of trauma sometimes results in visible consequences in a completely unconscious way (that is, before the creation of ability to remember and recalling verbal memories). It seems easy to notice that people with such symptoms, complexes focused around the trauma and the ones concerning the values (also, basing on these values) function socially and make choices, for example, while voting. It is visible then, how important the consequences of the trauma are, and also how significant is the fact of not working them over or keeping them unconscious. They influence the whole societies since the results of, for example, polls in

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<td>Loving</td>
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<td>Logical</td>
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<td>Forgiving</td>
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CONCLUSIONS

Concluding the results of the Value Survey, one should note that:
1. in declared values consequences of the experienced trauma are traced,
2. they are shown by the fact that people give higher ranks to certain values, which are associated with lost values, such as, freedom. They are grouped in the way that they form complexes which are shown in Value Survey,
3. people exposed to the trauma in early childhood acquire more differentiated results; the basis of the values is similar in both groups,
4. differences in ranking concern 4 terminal values and 8 instrumental values. Instrumental values depend more on individual experience and the way of functioning than terminal values do,
5. conclusions from the interpretation of the declared values profile are connected with the results of other tests, mainly MMPI–2.

All gathered results are the basis of the research hypothesis confirmation.

The paper concerns the importance of early childhood experience or, to be more precise, the trauma and its influence on the personality. Obviously, the trauma is the extreme, though not the only experience which shapes the personality; one should emphasize that the obtained results concern people for whom treating the consequences of the trauma was seriously limited. Those people lived in an extremely unfriendly environment: they were deprived of medical care and, when the maternal care was possible, mothers were so traumatised that the proper care can’t have been correct [1, 5]. With no similar research, one should hope – based on clinical data – that people with similar experience but growing up in better conditions present a lower pathology or no pathology at all.

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Antidepressant discontinuation syndrome – a problem for the clinician and the patient
Janusz Heitzmann, Magdalena Solak

Lipid peroxidation and Copper-Zinc Superoxide Dismutase activity in patients treated with fluoxetine during the first episode of depression
Piotr Galecki, Józef Kędziora, Antoni Florkowski, Elżbieta Galecka

Can short-term exposure to extremely low temperatures be used as an adjuvant therapy in the treatment of affective and anxiety disorders?
Joanna Rymaszewska, David Ramsey, Sylwia Chładzińska-Kiejna, Andrzej Kiejna

Evaluation of the activity of selected elements of the immune system in depression
Paweł Wójciak, Małgorzata Sobieska, Artur Kostrzewa, Janusz Rybakowski

Social networks of depressed patients
Magdalena Poradowska-Trzos, Dominika Dudek, Monika Rogoż, Andrzej Zięba

Comparison of social networks of patients with unipolar and bipolar disease
Magdalena Poradowska-Trzos, Dominika Dudek, Monika Rogoż, Andrzej Zięba

Depression after myocardial infarction and its psychosocial conditions
Waldemar Krzyżkowiak

Cognitive dysfunctions in patients with alcohol dependence
Katarzyna Nowakowska, Karolina Jabłkowska, Alina Borkowska

Detection of alcohol problems among elderly people
Małgorzata Suwała, Andrzej Gerstenkorn

Impact of alcohol dependence on the course and psychopathology of schizophrenia
Beata Konarzewska, Regina Popławska, Beata Galańska, Agata Szulc, Tomasz Markowski

Treatment program for dual-diagnosis substance abusers
Isack Kandel

A review of the effects of nicotine on schizophrenia
Leszek Bidzan

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Anorexia nervosa among French adolescent females in relation to self-esteem, coping strategies, anger expression and anger control

Anna Brytek-Matera

SUMMARY

Aim: This study sought to determine the dimensions of self-esteem, coping strategies, anger expression and anger control among French women diagnosed with anorexia nervosa.

Material and method: A clinical group of 32 females suffering from anorexia and 57 healthy females completed an anonymous questionnaire form concerning family life, their state of health and/or the course of their illness, the Self Esteem Inventory, the Brief COPE evaluation, and the Self-Expression Control Scale.

Results: Compared with controls, French anorexic adolescents showed low social, familial and general self-esteem. Eating-disordered women used emotional methods of coping more often than the control group and they conceptualised their anger against themselves.

Conclusions: We concluded that anorexia nervosa is inseparably connected with low self-esteem, as well as an inability to cope with one’s own emotions, personal problems and feelings.

anorexia nervosa / self-esteem / coping / anger expression / anger control

INTRODUCTION

Self-esteem is an individual judgement of advantages expressed in attitudes which are affected by humans [1], such as acceptance, love, self-respect, self-confidence and belief in one’s own abilities [2]. Self-esteem defines how a given individual feels and who he or she is. Therefore, it is treated as a key value of personal development, and it plays a fundamental role in how one feels emotionally, mentally and physically. As a result, one increases or decreases one’s value depending on the situation, on one’s own actual self-esteem (“I don’t approve of myself because I am not slim enough”) or the desired self-esteem (“I will be slim enough so I will approve of myself”). The degree of self-acceptance, especially in people with eating disorders, is also affected by the way they are perceived by others. In this approach, self-perception is determined by other people’s opinions.

The specificity of anorexia nervosa is characterised by physical destruction, which for a girl is a condition of her own identity. In the ideal perception of herself (slim figure) the girl feels that it is possible to get to know her own ego and be accepted by others. The feeling of gaining control over eating and her own body is for her a reason to declare specific increasing satisfaction and pride. Destructive activities lead to reinterpretation – the self-esteem of the girl suffering from anorexia increases, however, it does not reach a suitably sufficient level to gain confidence. As a result, she undertakes further sacrifices to prove she can do better. If the self-esteem coefficient was higher, further destructive activi-
ty would not occur since the girl would not need proof for her self-acceptance. An individual suffering from anorexia nervosa is characterised by low self-esteem and problems with self-acceptance [3, 7]. The result of paying full attention to diet is that the question of non-eating becomes most important and other problems which were previously important are no longer noticed. Thus, the disease is a kind of escape from the awareness of not being loved or needed.

Coping with stress is defined by Lazarus and Folkman [8] as cognitive and behavioural processes which facilitate reduction, tolerance of, and coping with internal and external requirements which endanger or exceed the resources of the human being. The authors believe that the evaluation of the event (not the event in itself) connected with the disease causes stress as well as emotional, cognitive, and behavioural consequences. Depending on an individual response there are two kinds of strategies of coping with stress: the first is concentrated on emotions, i.e. responses oriented on emotional reactions (towards person’s internal condition), and the second is concentrated on the problem, i.e. responses focused on the event itself. Girls suffering from anorexia nervosa use more strategies concentrated on emotions in comparison with the control group [9, 12]. Endler and Parker [13] also distinguish categories concentrated on avoidance. They are expressed through tendencies to focus on substitute activities which are meant to eliminate thinking, experiencing and getting involved in a stressful situation (thinking about pleasant situations, dreams).

Difficulties with expressing one’s own emotional states, including anger, coexist with anorexia in girls. As far as negative situations were concerned, patients showed far more internal attribution than the control group.

For many years in both psychological and medical literature many authors presented their research related to eating disorders. The author of this paper has conducted comparative research on the French population. The research concentrated on examination and comparison of self-esteem, as well as strategies of coping with stress and expression of anger in girls suffering from anorexia.

**MATERIAL AND METHODS**

The research group consisted of 32 French female patients suffering from anorexia nervosa who were treated in a full-time ward of St. Cross Hospital in Metz and in the Children and Youth Psychiatry Ward of the Children’s Hospital in Nancy-Brabois, Lotharyngia. The control group consisted of 57 female university students at Metz (table 1).

All the girls gave their consent to participate in the research program. First, the girls completed an anonymous questionnaire concerning their family life, health condition and course of their disease. In addition to this, Coopersmith’s Self-esteem Inventory [1], C.S. Carver’s BRIEF COPE and Self-expression Control Scale by Van Elderen et al. [16] were applied.

The statistical analysis was conducted by means of SPSS software, Version 12.0 (2004) and the Formic software for processing statistical data. For statistical calculations, ANOVA variance analysis was used.

<table>
<thead>
<tr>
<th>Table 1. Subject characteristics</th>
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<tr>
<td></td>
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<tr>
<td>Variable</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Age (in years)</td>
</tr>
<tr>
<td>Body Mass Index (BMI)</td>
</tr>
<tr>
<td>Duration of disease (in months)</td>
</tr>
</tbody>
</table>

*Differences in relation to the control group statistically significant.
RESULTS

In the dimension of self-esteem, strategies of coping with stress and expression of anger, significant statistical differences were observed when comparing the diseased group to the control group. Girls with anorexia nervosa had lower self-esteem in relation to social, family and general “me” areas of their lives (table 2).

In comparison with the control group, the patients with anorexia nervosa used fewer strategies for coping with stress involving behaviour disorganisation, a sense of humour and situation acceptance. These girls less frequently re-interpreted their situation in a positive way or expressed their feelings and emotions (table 3).

Concerning internalization of anger, adolescents with anorexia nervosa achieved higher results than the control group (table 4).

DISCUSSION

The results we achieved concerning self-esteem show that in French girls suffering from anorexia nervosa, the “I-structure” is disturbed. They have low self-esteem in social and family areas. Low “social me” related to considering other people’s

Table 2. Average results of dimensions on Self-Esteem Inventory for individual groups

<table>
<thead>
<tr>
<th>Self-esteem dimension</th>
<th>Patients with anorexia (n = 32)</th>
<th>Healthy subjects (n = 57)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>General self-esteem</td>
<td>10.50</td>
<td>5.63</td>
<td>17.61</td>
</tr>
<tr>
<td>Social self-esteem</td>
<td>4.37</td>
<td>2.01</td>
<td>6.15</td>
</tr>
<tr>
<td>Familial self-esteem</td>
<td>4.15</td>
<td>2.15</td>
<td>6.00</td>
</tr>
<tr>
<td>Professional self-esteem</td>
<td>4.87</td>
<td>1.89</td>
<td>5.52</td>
</tr>
<tr>
<td>Lie scale</td>
<td>2.18</td>
<td>1.20</td>
<td>2.57</td>
</tr>
</tbody>
</table>

Table 3. Average results on Brief COPE scale for individual groups

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>Patients with anorexia (n = 32)</th>
<th>Healthy control (n = 57)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Active coping</td>
<td>2.35</td>
<td>0.61</td>
<td>2.60</td>
</tr>
<tr>
<td>Planning</td>
<td>2.43</td>
<td>0.64</td>
<td>2.56</td>
</tr>
<tr>
<td>Use of emotional support</td>
<td>2.70</td>
<td>0.85</td>
<td>2.73</td>
</tr>
<tr>
<td>Use of instrumental support</td>
<td>2.60</td>
<td>0.82</td>
<td>2.75</td>
</tr>
<tr>
<td>Focus on and venting of emotions</td>
<td>2.29</td>
<td>0.60</td>
<td>2.64</td>
</tr>
<tr>
<td>Behavioural disengagement</td>
<td>1.89</td>
<td>0.75</td>
<td>1.56</td>
</tr>
<tr>
<td>Self-distraction</td>
<td>2.62</td>
<td>0.69</td>
<td>2.72</td>
</tr>
<tr>
<td>Positive reinterpretation</td>
<td>2.10</td>
<td>0.66</td>
<td>2.56</td>
</tr>
<tr>
<td>Humour</td>
<td>1.53</td>
<td>0.60</td>
<td>2.07</td>
</tr>
<tr>
<td>Denial</td>
<td>2.01</td>
<td>0.70</td>
<td>1.84</td>
</tr>
<tr>
<td>Acceptance</td>
<td>2.09</td>
<td>0.60</td>
<td>2.58</td>
</tr>
<tr>
<td>Religion</td>
<td>1.56</td>
<td>0.82</td>
<td>1.61</td>
</tr>
<tr>
<td>Substance use</td>
<td>1.50</td>
<td>0.80</td>
<td>1.44</td>
</tr>
</tbody>
</table>
opinions and adopting their point of view causes the patients to be very much concerned about what people think of their appearance, behaviour, etc. The kind of feedback and the way they are interpreted by others also strongly influences their perception of themselves. Increasing self-consciousness leads to a more critical self-evaluation and, as a result, to a decrease in their own self-esteem. The way patients interacted with their family, or “family–me”, was also evaluated.

Many people believe that the reason for anorexia is an imperfect family life [17, 20]. In this study, it was observed that in France, a girl’s life is completely full and consists of doing her duties (work is treated in the same way as pleasure), therefore there is no time or place for doing what she really wants to do. She feels emptiness in her spiritual life. To fill it, she undertakes many activities, is hyperactive, and attends many different extra classes. Through her lasting resistance, the anorexia manifests its’ existence. By refusing food, the girl declares what she wants, proving her humanity: being a human being with dreams and desires, not only needs. Low self-esteem related to family life may result from a certain type of family (overprotective, reserved, stiff) or stressful family relationships. These may involve overprotection, psychic interference, intensity of being together, inappropriately defined and realised roles (a domineering mother, a weak role of man as a partner with imposed subordination and suppressing individual ambitions), or strong attachment to maintaining the unchanged status quo within the family, which is related to denial and hiding significant conflicts. Low scores in total self-esteem in girls with anorexia nervosa have also been proved by other authors [21, 22].

In comparison with the control group, the French patients less often used a sense of humour as one of the coping strategies. They less frequently interpreted their disease in a positive way and were less likely to accept their reality. In other words, they did not approve of their own condition (a desire to be healthy or even slimmer). These adolescents used fewer coping strategies which were directed at expression of feelings and emotions. Furthermore, they tended not to undertake any activities which may have involved an unpleasant situation and, as a consequence, they were dominated and suppressed by this. Thus it may be assumed that the girls were not able to find an adequate solution. They passively accepted all events and did not believe that they were capable of changing this condition, which could have been achieved through looking at the situation from a less negative perspective.

As can be observed from this research, French girls suffering from anorexia nervosa do not attempt to cope with stressful situations through active strategies, i.e. by focusing on finding a solution or planning the next stages of problem solving. They make use of coping strategies focused on emotions (positive reinterpretation, expressing of feelings and emotions, behaviour disorganisation). The patients typically react in this way, avoiding situations which lead to emotional tension.

The patients with anorexia nervosa were more likely to internalize their anger than the control group. They believed they were more annoyed than normal, and therefore became more reserved. They did not blame others and became “enraged” inside but did not show it. In the existing research [23], authors confirm the presence

| Table 4. Average results on Self-Expression Control Scale for individual groups |
|-----------------|-----------------|-----------------|
| Anger           | Patients with anorexia | Healthy control |
|                 | n = 32           | n = 57          | p    |
|                 | M     | SD    | M     | SD    |     |
| Anger-out       | 2.23  | 0.86  | 2.19  | 0.73  | NS   |
| Anger-in        | 2.81  | 0.85  | 2.08  | 0.68  | 0.001 |
| Control anger-out | 2.57  | 0.84  | 2.67  | 0.76  | NS   |
| Control anger-in | 2.76  | 0.76  | 2.81  | 0.76  | NS   |
of anger-internalization in patients with anorexia nervosa.

The results prove the role of factors causing and maintaining anorexia in the examined French group. In therapy, the role of low self-esteem especially in family and social areas as well as maladaptive strategies of coping with stress (but not avoidance of expressing anger) should be taken into account. These activities may play the role of defense mechanisms against reactions to conflicts and unpleasant situations a human being cannot cope with. Therefore, attempts should be made to change this behaviour and direct it towards solution instead of avoidance.

CONCLUSIONS

Anorexia nervosa is inseparably connected with low self-esteem, the need of acceptance, as well as an inability to cope with one’s own emotions, personal problems and feelings, as evidenced by limited adaptation strategies of coping with stress and anger-internalization.

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Anorexia nervosa and oligonucleotide microarray technique – pilot study

Małgorzata Janas-Kozik, Irena Krupka-Matuszczyk, Małgorzata Stachowicz, Urszula Mazurek

SUMMARY

Aim: Evaluation of the transcript expression profile of selected genes encoding leptin and orexin A and B receptors with the oligonucleotide microarray technique (Affymetrix, HG-U133A).

Material and method: Peripheral blood mononuclear cells (PBMC) of 4 patients suffering from AN and fulfilling all criteria according to ICD–10 and DSM IV [14, 15] were analyzed. Two of these patients suffered from the restrictive form of AN (AN-R) and the remaining two suffered from the binge eating/purging form (AN-BP). The control group consisted of 4 patients not suffering from any eating disorders. The studied material consisted of RNA isolated from patients’ PBMC. Obtained RNA was used to study the expression profile of selected genes at the transcript level with the oligonucleotide microarray technique (Affymetrix, HG-U133A). Hierarchical clustering (Cluster v 3.0) for six and then eight oligonucleotide microarrays was used to analyze the results.

Results and conclusions: Hierarchical clustering singled out two clusters for AN-R, AN-BP and control group patients. Based on the results of hierarchical clustering performed for six and then eight oligonucleotide microarrays showing different expression profiles for genes coding selected orexigenic (OXA and OXB) and anorexigenic (LEP) proteins, we may assume that this technique differentiates the two forms of AN: restrictive (AN-R) and binge eating/purging (AN-BP).

INTRODUCTION

In the past, the oligonucleotide microarray technique has mainly been used to study genes’ expression profiles at the transcript level in tumor cells. However, this technique may also be used to study the expression profile of an isolated group of genes characteristic for a given type of cell or tissue. DNA microarrays, a.k.a. DNA chips, consist of an arranged number of probes in the form of single-strand DNA (cDNA microarray) or nucleotides (oligonucleotide microarrays) placed in a particular order on nylon membranes or glass or nylon slides. These cDNA microarrays may be used to study the expression of genes if one has the proper DNA clones multiplied through Reverse Transcriptase – Polymerase Chain Reaction and mRNA isolated from cells [1]. Oligonucleotide microarrays (DNA chips) were introduced by Affymetrix manufac-
turing through photolithography. Microarrays make it possible to study the expression of thousands of genes at the same time. The DNA microarray technique makes it possible to obtain in-comparably more information on the transcriptional expression of genes than any other method. It evaluates the presence of gene transcripts in the studied material. Data obtained with the microarray technique provides information on expression of genes in the studied cells, therefore one can determine whether the transcription of a given gene was intensive, i.e. whether the gene was active or whether its expression was inhibited. Leptin (LEP) is one of the anorexigenic peptides produced by the fat tissue. LEP plays an important role in the regulation of energy expenditure, appetite and body mass [2]. The discovery of LEP found the missing link connecting functional energy storage (fat tissue) and the hypothalamus area regulating the amount of energy available to the organism. Leptin, apart from the role it plays in organism homeostasis, also interacts with the autonomic system [3]. Leptin is present in the human organism in two forms playing different functions: free and bound to plasma proteins [4]. Free circulating leptin controls the level of fat tissue, while when bound with a soluble form of the receptor, it controls energy expenditure [5].

The leptin receptor (OB-R) is one of the class I cytokine receptors. A few OB-R isoforms have been identified (created as a result of alternative transcript splicing [6]): Ob-Ra, Ob-Rb, Ob-Rc, Ob-Rd and Ob-Re [7]. There is a relationship between a mutation in a leptin coding gene in mice and humans and obesity. Orexins, a.k.a. hypocretins, are orexigenic peptides. Orexins A and B (OXA and OXB) were first identified in a rat brain in 1998 by two independent scientists: de Lece and Sakurai [8,9]. Orexins are created when their common precursor – preproorexin – breaks down [10,11]. Its name derives from the Greek word orexis meaning “appetite”. Orexins are mainly produced in two hypothalamic nuclei: the perifornical nucleus (PFN) and dorsomedial nucleus (DMN). Orexins are produced in these nuclei not only in amphibians, rodents and cattle, but also in humans. From these nuclei, the orexin fibers are connected to other areas of the brain: olfactory bulbs, cerebral cortex, thalamus, hypothalamus, brain stem and all levels of the spinal cord. Sakurai identified the orexin receptors OX-R1 and OX-R2, which are coded by two separate genes [9,12]. Studies performed mainly on the animal models showed that Orexin A (OXA) increases appetite [13,14,15,16] and plays a role in maintaining organism homeostasis [13,14,15,16]. OXA increases appetite 100 times more than OXB, this resulting from the fact that OXA acts through the OX-R1 receptor, stimulating orexigenic peptide activity in the hypothalamus [10]. OXA seems to play a more important role in the organism and therefore is better known than OXB, including its’ molecular level activity.

Both peripheral and central mechanisms are active in maintaining organism homeostasis. Orexigenic peptides, i.e. OXA and OXB, and the anorexigenic peptide LEP play a role in maintaining homeostasis mainly by controlling appetite.

MATERIAL AND METHODS

The studied material consisted of RNA isolated from peripheral blood mononuclear cells (PBMC) (Total RNA Prep Plus kit, A&A Biotechnology) [17] of patients suffering from AN. PBMC of 4 patients suffering from AN and fulfilling all criteria according to ICD–10 and DSM IV [14, 15] were analyzed; two of these patients suffered from the restrictive form of AN (AN-R) and the remaining two suffered from the binge eating/purging form (AN-BP). The control group consisted of 4 patients not suffering from any eating disorders. The study was approved by the Bioethical Committee of the Silesian Medical University in Katowice, Poland. Written consent was obtained from all patients and/or their parents or legal guardians as well as the control group. Table 1 presents the patients’ data.

The study evaluated the gene coding two isoforms of the leptin receptor (OB-Ra and Ob-Rb) as well as the genes coding the OXA and OXB receptors. Table 2 presents descriptions of particular transcripts evaluated with the oligonucleotide microarray technique (HGU–133A). Data comes from the Affymetrix database [20].

In order to evaluate the transcript expression profile for selected genes coding the anorexigenic (LEP) and orexigenic (OXA and OXB) proteins.
in patients suffering from AN, one 20 ml sample of blood was collected with Vacutainer tubes from each of the patients. RNA was isolated from PBMC (Total RNA Prep Plus kit, A&A Biotechnology) [17]. The material was purified with RNeasy Total RNA Mini Kit (Qiagen) and treated with DNasis I. Obtained RNA was used for the synthesis of double-stranded cDNA (Gibco BRL SuperScript Choice system) which became the array for the synthesis of biotinylated cRNA. Marked cRNA was purified with RNeasy Mini Kit (Qiagen), fragmentized and hybridized with a test array (Test 3), and then with Human Genome Arrays U133A (Affymetrix). Hybridized with arrays, cRNA was then marked with the streptavidin-phycocerythrin complex. Fluorescence intensity was evaluated with GeneArray Scanner G2500A. Obtained results were normalized with the RMAExpress software and then hierarchically clustered with Cluster v 3.0., which makes it possible to combine genes of a similar expression profile and create the so-called clusters.

RESULTS

Fig. 1 shows the results of hierarchical clustering for 6 oligonucleotide microarrays for the expression profile of transcripts of the gene coding the LEP receptor; Fig. 2 shows the results of hierarchical clustering for 8 oligonucleotide microarrays for the expression profile of transcripts of

<table>
<thead>
<tr>
<th>Table 1. Patients’ characteristics.</th>
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<tr>
<td>Patients’ initials</td>
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<tr>
<td>Characteristics of AN patients</td>
</tr>
<tr>
<td>N.P.</td>
</tr>
<tr>
<td>N.M.</td>
</tr>
<tr>
<td>T.S.</td>
</tr>
<tr>
<td>H.P.</td>
</tr>
<tr>
<td>Characteristics of control group patients</td>
</tr>
<tr>
<td>A.S.</td>
</tr>
<tr>
<td>B.K.</td>
</tr>
<tr>
<td>K.W.</td>
</tr>
<tr>
<td>M.P.</td>
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</tbody>
</table>

<table>
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<tr>
<th>Table 2. Characteristics of analyzed transcripts.</th>
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Archives of Psychiatry and Psychotherapy, 2007; 4 : 59–64
the gene coding the LEP receptor; Fig. 3 shows the results of hierarchical clustering for 8 oligonucleotide microarrays for the expression profile of transcripts of the genes coding the LEP and orexin receptors.

**DISCUSSION**

The present study used the oligonucleotide microarray technique (HG-U 133A, Affymetrix) to analyze the expression profile of gene transcripts whose products are responsible for organism homeostasis by controlling hunger and satiety. Patients representing both the restrictive form of AN (AN-R) and the binge eating/purging form of AN (AN-BP) participated in the study. The oligonucleotide microarray technique (HG-U133A, Affymetrix) was used to evaluate the expression profiles of gene transcripts coding leptin and orexin receptors. In the initial tests, two isoforms of the LEP receptor were studied (Ob.-Ra and Ob.-Rb); their reference sequences were located in the National Center for Biotechnology Information (NCBI) database [21]. These sequences were used by Affymetrix to design probes for particular genes on the HG-U133A (Affymetrix) microarray, on which 7 transcripts of the gene coding LEP are present. Hierarchical clustering groups together genes’ transcripts of a similar expression profile. All transcripts create the so-called “hierarchical tree” on which transcripts of a similar expression are located close to each other. The length of the “tree branches” determines the similarity of transcript expression profiles of studied genes – the shorter the branch the more similar the studied elements.

Initially, 3 AN patients (2–AN-R and 1 AN-BP) and 3 control group girls participated in the study and oligonucleotide microarrays were completed for all of them. The expression pro-
file for 7 transcripts of the gene coding LEP was analyzed. Hierarchical clustering resulted in 3 groups constituting separate clusters (Fig. 1). Patients belonging to cluster I (N.M. and T.S.) suffered from AN-R. Two control group patients not suffering from any eating disorders (A.S. and K.W.) belonged to cluster II, while the AN-BP patient (N.P.) and one control group patient not suffering from any eating disorders (B.K.) belonged to cluster III. Based on these results one could assume that the expression profile of transcripts of the gene coding leptin differentiates the two forms of AN: AN-R and AN-BP [22]. However, a question arose: why did B.K. – a control group patient not suffering from any eating disorders – belong to the same cluster as N.P. who suffered from AN-BP? Hierarchical clustering results allowed the assumption that the transcript expression profile of the gene coding the LEP receptor was similar for both patients. A few months after completion of therapy, B.K. was admitted to the Developmental Age Psychiatry and Psychotherapy Ward of the Pediatric Center in Sosnowiec, Poland for the second time – this time with a diagnosis of the binge eating/purging form of AN (AN-BP).

Additionally, two microarrays were completed for the gene coding different isoforms of LEP for additional patients: H.P. suffering from AN-BP and M.P., a control group patient not suffering from any eating disorders. Hierarchical clustering analysis for eight oligonucleotide microarrays resulted in four separate clusters (Fig. 2). H.P. suffering from AN-BP and M.P. from the control group belonged to cluster I. N.M. and T.S. – both suffering from AN-R – belonged to cluster II; A.S. and K.W. from the control group belonged to cluster III, while B.K. (control group) and N.P. (AN-BP) belonged to cluster IV. Hierarchical clustering for eight microarrays, similarly as in the case of six microarrays, grouped N.P. and B.K. in the same cluster, which allowed the assumption that molecular level changes may precede clinical symptoms of AN. However, it is important to bear in mind that there are other factors which may influence the clinical picture of AN, e.g. family, environment or personality.

The next study consisted of hierarchical clustering for eight oligonucleotide microarrays (HG-U133A, Affymetrix) for genes coding selected receptors (LEP receptor and OXA and OXB receptors) showed that AN-R and AN-BP patients are grouped in different clusters.

CONCLUSIONS

Based on the results of hierarchical clustering performed for six and eight oligonucleotide microarrays presenting different expression profiles of genes coding selected orexigenic (OXA and OXB) and anorexigenic (LEP) peptides at the transcript level, we may assume that this method differentiates the two forms of anorexia nervosa: the restrictive form (AN-R) and the binge eating/purging form (AN-BP).

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Archives of Psychiatry and Psychotherapy, 2007; 4 : 59–64


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Problems occurring in the psychotherapy of adolescent patients with symptoms of pathological personality development

Paweł Glita

SUMMARY
The aim of the article is to discuss, from the psychodynamic point of view, some of the problems that appear during individual and out-patient-facility-located therapies of adolescents with varied symptoms that give rise to the anticipation that their development may be directed towards pathological personality formation. The symptoms are often dangerous for their health or life (suicidal thoughts and attempts, self-injuries, eating disorders), or create severe conflict with their natural environment (social isolation, abandoned education, antisocial tendencies, etc.).

Based on the presented cases, diagnostic issues are discussed, for example: to what extent does the diagnosis of personality disorder make sense in the developmental age? What arguments can be used for and against the use of this category in a developmental age? To what extent is an adolescent’s personality type determined in the period of adolescence? How can one understand and diagnose the presence of often dramatic symptoms in adolescents using psychodynamic categories? The aim of the author is to indicate the usefulness of describing difficulties appearing in the adolescence period, in the developmental categories.

Another area that is discussed describes difficulties appearing during the therapeutic process. The examples of such difficulties involve: connecting and maintaining a relation, lack of motivation for therapy, counter-transference phenomenon, and dangers presented by teenagers’ destructive acting out to themselves.

adolescents / personality / psychodynamic psychotherapy

INTRODUCTION
The aim of my lecture is to discuss the specificity of work with, and of understanding of, patients that I wish to describe in this introduction, i.e., persons revealing signs of abnormal personality development. By this I mean adolescents who function, from a psychological perspective, in a manner dominated by affective mechanisms; thus their functioning in a natural context, i.e., in a family, in school, in a peer group and in intimate relations, is significantly disturbed. My main interest here is to describe their difficulties in psychodynamic categories, mainly from the perspective of the anxiety experienced, defensive mechanisms used, ways of relating, and relationship perception. Addressing a well-known psychodynamic method of disorder classification, one might say that these problems are “tougher” than the neurotic ones, but not as “tough” as
the psychotic ones; these patients – were they adults – would be said to have personality disorders. They might also give us reasons to believe, perhaps incorrectly, that if no personal, emotional resources are utilized, if no favourable influences are present in life, or no therapy is started, such patients may present personality disorders in adult life. These patients manifest a range of symptoms. They involve, for example, a significant level of social isolation, poor peer functioning, and, frequently, eating disorders. The most noticeable, however, are the teenagers who, in various situations, rigidly hold onto high-risk, self-destructive behaviours (e.g. suicide attempts, self-mutilation), and marked antisocial and other tendencies. Some of these patients manifest such spectacular symptoms that they are identified not only by their therapist, but also by other persons from the Centre’s staff. They include such behaviours as: pouring water on therapists present in the reception area, threatening suicide after leaving the centre, or uncontrolled screaming for many minutes in the office in a manner that disturbs other therapists at work and “scare” somewhat “healthier” patients. One might say that their social/emotional development occurred in such a direction that their difficulties and emotional distress are expressed by acting out, so that inevitably they are condemned to conflicts with their environment. In other words, they are patients who may still benefit from therapy set in an out-patient facility; most frequently they do not require long-term hospitalization at an Adolescent Ward, although they are often directed to therapy from such a place.

I would like to describe difficulties present in working with such adolescents in the following order: first, I will present brief case illustrations, and, later, using them as examples, I will discuss difficulties associated with their understanding (therapeutic diagnosis) in a developmental context, and characteristic difficulties present in the process of individual therapy.

ILLUSTRATIONS OF THE THERAPEUTIC PROCESSES

Case illustrations will only be presented with regard to the symptoms reported, shape of the therapeutic relation, understanding (therapeutic diagnosis), and improvement or deterioration occurring in therapy.

Case illustration I:

Parents and their 13 years-old son came in for therapy due to complaints from teachers and fellow students and due to the son’s “unbearable” behaviour in the house. Robert had a tendency toward extremely provocative and arrogant behaviours, was detested by everyone in his class, and nearly all the teachers. He treated his peers from an attitude of superiority and said that they could be his servants. Robert didn’t exhibit any planned cruelty, but he also saw no reason to apologize, when, for example, he unintentionally broke someone else’s property. He could also painfully mock vices of others (including his parents and his brother); he insulted them in an impulsive, but not vulgar, manner. On a few occasions the enraged patient destroyed some objects, for example, broke a window. He was oversensitive with regard to his health, and his appearance (for example, an individual detail could embarrass him greatly and make him hide). He was successful in sciences, yet when he was not the best, when he didn’t win competitions, and in a given area proved weaker than his brother, he would lose heart and state that it doesn’t interest him any more. Right from the very beginning, a strong, though denied anxiety could be felt in the boy. It manifested, for example, in his inability to fall asleep without his bedside lamp turned on. Right away, from his first visit, Robert had difficulties in enduring the stay in the office. He cried with rage, screamed, strongly stamped on the floor. He said that: this visit is a disaster, that it ruins my life. The therapist understood that the patient, despite his young age, manifested a number of features characteristic for a Narcissistic Personality Disorder: grandiose fantasies, coldness, arrogance, superiority, difficulties in relating, and desire to exercise omnipotent control. In response to the therapist’s attempts to connect, Robert would say that the therapist was a moron and that, should he force him to come to the office, he will throw himself under a car. For example, he would say to the therapist “It’s a shame that Hitler persisted in prosecuting Jews not psychologists – you
 wouldn’t be here then.” In the first stage of contact, the therapist felt a great deal of helplessness and confusion, which required supportive supervision consultations. When the boy’s rage did not recede despite the attempts to calm him down, the therapist stated that such behaviour was disturbing and, in accordance with his evaluation, he must consider the boy’s hospitalization. He explained to the patient, which of his behaviours he found disturbing, shared his belief that they result from intense distress and anxiety, and added that a possible transfer to an inpatient facility would result from the boy’s inability to control his reactions of rage and aggression. In the blink of an eye the behaviour changed. The patient stated that it was not true that he could not control himself and that he was able to prove it. From this moment on, despite experiencing intense anger, the patient was indeed capable of distancing from it; eventually a similar change occurred in his relations with the environment.

The course of therapy – which was very difficult for the therapist, and was based on detailed discussions with the boy about his behaviour and by confronting him with his pathological behaviours – went in multiple directions. The patient exercised grandiose fantasies about being a great leader, glorified the USA because of its superpower status, and dreamed of a political career, best in the role of a dictator. In his experience the world was divided into his environment that did not understand him (e.g. school, family, therapist, psychiatrist), and into the idealized, imaginary realm of historical leaders, great politics, business and career. He claimed that there was nothing good in his present life and he agreed with the therapist only in stating that his world vision was a vision of “everyone being at war for survival” – and therefore that one must be on the winners’ and leaders’ side. He did not comply with the statement that this was only his way of experiencing relations with other people and not the “objective reality.” The therapist understood that the dominant anxiety experienced by the patient at the moment was annihilation anxiety (associated with a high hostility level). The main defensive mechanisms were: splitting, projection (the creation of persecutory objects) and also intellectualization. The symptoms were ego-syntonic.

After two years of therapy, there is a marked change present. Robert is now very liked by his classmates, he has colleagues – it is a result of his unique ability to argue with teachers on behalf of other students. He started to manifest interest in the opposite sex, he states that his school is generally quite good, most of his teachers and classmates are okay, also that his parents have some advantages. Yet, still, his “therapist might be a bit more competent.” His affective expression changed, so did his tension level, he started falling asleep without a lamp on. Distinct narcissistic traits are still perceptible, his behaviour, however, resembles more an adolescent’s rebellion than a furious attack. The most negated figures at the moment are: one of his teachers, the therapist, and his mother.

Case illustration II:

A mother came for therapy along with her 16 year-old son, who was diagnosed with micro-damages present in the CNS. He presented many problems in functioning both in school and with peers. His behaviour distinguished him from the rest of his class; occasionally he got attacked, but he did not want to defend himself. He would say that he despised aggression, even if it was of a defensive and harmless type. When he was asked about his attitude towards very difficult situations in the peer group described by him, he was disoriented, tense, and finally replied that he was neutral towards them. During the early stage of therapy, the therapist was very concerned about the inadequacy of the boy’s functioning, the odd emotional colour of his relationships, and the religious, apocalyptic – specifically metaphysical – and other themes that were brought up by the patient. Only after the first few months of therapy did the patient’s mother inform the therapist that she had been hospitalized in an inpatient clinic for “emotional problems” and she still is seeing a psychiatrist for her problems. As it showed, she suffers from a chronic delusional-hallucinatory disorder with a fluctuating course, and one that stays relatively resistant to pharmacotherapy. This knowledge, provided the therapist with an understanding of the patient’s functioning, not only in terms of the results of his CNS micro-damages, but also
in the perspective of the mother-son psychotic symbiosis. The patient was incapable of separating his mom’s experiences and beliefs from his own convictions, thus he was unable to construct his own, separate identity. The therapist concentrated on the difficulties mentioned above. For example, after the patient finished “reporting his/his mother’s” visions of the world coming to an end, the therapist would provide an intervention: “I understand that this is your mom’s belief, that you heard it from her, and that you discuss it with her quite often, but what is your opinion on it?” After a while this tactic resulted in a gradual separation from his mother and the creation of the patient’s own world. The therapist’s suggestion, given to both the mother and the patient, also contributed to it. He suggested that the patient should keep the content of his therapeutic discourse confidential. Before that, the mother controlled the therapist–patient relation, gently persuading her son to share everything that was said in the office. As expected, after a while, the mother started giving signals depreciating the therapy and the therapist; the patient himself also had more doubts. He didn’t know if the therapy made sense, and he was late for meetings more often than before. Eventually the patient declared his will to continue therapy, and for the first time started discussing his mother’s illness, keeping distance; at the same time the mother’s condition improved and she supported the therapy. After a while, a very disturbing period of social withdrawal followed; the patient first changed his class and then quit two schools in a row. He fantasized about becoming a hermit, claiming that the therapy made no sense, was of no help, that he and the therapist differed in too many issues, and above all, that he did not want to change his way of life and his customs. He started planning how to gain a state pension. These notions caused a bitter, emotional reaction in the therapist, who indicated that, by planning this, the patient was abandoning all hope to live an adult, relatively independent life, to have the once-dreamed-of relationship with a girl, to gain education, occupation, his own money, and many other things. The patient did not break the relationship; his life however, acquired an exceedingly solitary and ritualized character. At the time he had no other social contacts, just his relation with the therapist.

Yet, after a length of time, he started his schooling again, made contact with peers (although he obviously “differs” from them), and became more independent with regard to personal hygiene. Approximately every six months the patient enters the office with a plan to abandon the therapy; he repeats the same motives, i.e., “I don’t want to change anything, I don’t need a girlfriend, I can masturbate”. That is when the therapist repeats the statement that in this way he abandons himself and his hopes for development. The therapist recognizes that the patient is developing in a schizoid direction, and that his experience of the world and himself is determined by splitting and very strong detachment from emotions. One might say, from the perspective of time, that two interwoven attitudes were manifested in the course of the therapy: negation of the therapist’s position and his relation to the patient, followed by engagement into a relationship and improvements in the patient’s functioning—and, after another six months, another negation and attempts to abandon contact. The patient either says that the therapy is pointless or claims that he has plans for attending it for ten more years, or at least until the end of decade.

Case illustration III:

Parents of a 15 year-old boy with symptoms of conduct disorder came in for therapy. The boy had changed his school three times already, but everywhere there were complaints about his behaviour. He also had significant difficulties in learning, and already had contacts with the judicial system. Throughout the first session the boy behaved in a provocative, almost nonchalant, manner, and saw no reason for the therapy. During a discussion with the boy’s parents, it turned out that they had not had contact with the school for six months because, as the boy’s father put it: “we feel ashamed to show up there, every time hearing what he does in there.” Additionally the boy’s mother, in his presence, subtly devalued all fundamental social institutions (meaning school, the police, the courts), suggesting that these institutions were unjust in her son’s valuation, as “he’s really a good boy.” Other information provided by the parents indicated that the son’s behaviour might be associated with the family’s in-
ternal functioning. The therapist also sensed that the boy was left alone to cope with the trouble he made. Thus, the therapist decided to refer the parents along with their son to family therapy. The therapist also felt that he had no real control over the boy's behaviours, which, when accompanied with the boy's lack of motivation, gave way to a belief that individual therapy made no sense. He informed the parent's about all this, but they strongly insisted on getting help. Then the therapist decided to impose conditions: the parents were to re-establish contact with school, and to control the boy's, and own attendance, in therapy. Furthermore, when he called the mother's attention to the mentioned devaluation of social institutions, she accepted the notion. The therapist also attempted to support the parents in fulfilling parental duties, and they reacted well to it. As a result, two simultaneous therapeutic processes took place, and the therapist felt that, as time passed by, he established contact with the boy and that his behaviour improved. After a while the therapist found out from external sources that the putatively manifested improvement did not exist, and that the patient was holding back many facts during the therapy. The boy yet again started causing trouble at school, he joined an unfavourable peer group, avoided sessions. The therapy was aborted, also by the boy’s parents. After six months, the therapist was asked to write a psychological opinion for another of the boy’s trials.

PROBLEMS RELATED WITH THE THERAPY OF SUCH ADOLESCENTS

Difficulties related with the psychotherapeutic diagnosis

Both in the title and in the introduction, I use such terms as “pathologically developed personality” or “abnormal personality development”, because I agree with the opinion that using the term “personality disorder” with regard to adolescents is premature. On the other hand, the therapists who work with adolescents often use the term as an analogy to adult patients. It is an outcome of a situation where the majority of psychotherapeutic trainings teach a therapeutic diagnosis, therapy, and other professional rules only with regard to work with adult patients. It seems, however, that another reason is the existence of a specific theoretical (diagnostic) void in the realm of such specifically disturbed youth. Certainly the therapists, especially the ones who care for the therapeutic diagnosis in terms of defensive mechanisms and object relations, are not helped by psychiatric classifications that strive to create atheoretical systematics. For example, the category of “conduct disorder” raises controversies among the psychiatrists themselves. Both clinical literature and therapeutic experiences indicate that a variety of affective mechanisms can lie beneath antisocial behaviour. They can, for example, include depressive mechanisms masked by anti-social acting-out or abnormal development in a sociopathic direction. The first group of teenagers, despite their difficulties, can, in the course of therapy, create a good relation and a warm emotional atmosphere – the prognoses are good for them. The other group shows difficulties in emphatic relating, with dominating coldness and absence of motivation to change. After reaching a certain age the prognoses are poor for them [1, 2]. The issue of using the category of “personality disorder” in adolescent patients has been widely discussed. Now I would like to take a moment to present pros and cons for such use and its importance, from my perspective, for conducting therapy.

The main argument against it is the fact that adolescence is by definition a period of time when the personality is shaped, when it is flexible and incoherent. Thus, one can hardly discuss lasting, pathological personality patterns, and the presence of such patterns is a condition for giving such a diagnosis. Making reference to the DSM-IV personality disorder definition, Efrein Bleiberg [3] says: “Ultimately, personality disorders are defined as relatively lasting and strongly disadaptive patterns of experiencing, relating and coping. Children and adolescents participate in a very fluent developmental process, where each bodily and personality aspect constantly undergoes transformation, at different paces, creating new states of balance and imbalance in themselves and in their relations to the environment. Maturing and experiencing provides children with constantly changing tools for coping with, perception and organization of their experience, and for relating with other people thus rendering a ruling on the presence...
of “rigid and lasting patterns” difficult, if not impossible” [3].

Mechanisms that characterize adult personality disorders, such as splitting, dissociation, denial, intense projection and others, from the analytical perspective constitute the chaos of the adolescence period. To a significant degree they are a part of a normal development, especially of the recrudescent separation-individuation process [4]. Anna Freud described the adolescence period as a time of “normal abnormalness”; when she was asked if the emotional disturbances of that time are inevitable she replied that maybe they are not, but it is better for them to occur [then] as that makes a better prognosis for a mature individual [5]. There are also data indicating that a certain degree of opposition expressed by, for example, reaching for such “forbidden fruit” as alcohol, or by a passing contact with less dangerous drugs, may in consequence lead to better social adaptation in adulthood – unlike excessive anxiety and inhibition [2].

What we deal with here, is the issue of developmental and mental health norms in the period of adolescence. From the psychodynamic perspective, elements that are considered pathological in an adolescent’s experience often depend not so much on the types of defensive mechanisms used, but on their domination and the degree of their intensity. If they reflect negatively on the ability to self-regulate, threaten health or life, isolate from peers, then we move in our evaluation along the health-disorder continuum towards the category of developmental crisis. Such a crisis can recede with little or no help at all or, when there are unfavourable conditions present, it can lead to pathology. In order to make this issue more distinct I will provide a few examples of teenagers’ behaviour that in our opinion fit the norm, but which would be considered disturbing for us, the therapists, were they to be present in an adult’s functioning.

1. Usually, analytical concepts that are directly or implicitly different, assume that ordinarily during the adolescence period, one can experience to some extent a separation anxiety (associated with uncertainty about own self-dependence, ability to cope, own competence, etc.). The anxiety is caused by the recrudescent process of separation-individuation. Depressive anxieties appear – they are associat-
ed with the child imagining that being angry with its parents will cause their anger, i.e., the withdrawal of their love. There are also neurotic anxieties associated with developing impulses. Occasionally, the persecutory anxiety might appear when the world experiences by the adolescent becomes hostile or at least abandoning for a while.

2. To some extent, and to a certain age, it is considered normal to use acting out as one of the many mechanisms for coping with stress. Colloquially, it is said that an adolescent needs to get “his/her stride”; sometimes, however, an excessive self-control, or unnatural “maturity” is disturbing.

3. We also tolerate adolescents’ oversensitivity, self-concentration, or living in a fantasy realm, which constitute reactions to developmental dilemmas – in other words we tolerate adolescents’ narcissism.

Now let’s see the arguments for using the diagnosis of personality disorder in the developmental age. Most frequently, the category of personality disorder used with regard to children and adolescents can be noticed in writings of authors with a psychoanalytic background. For example, Paulina Kernberg [6] does not hesitate to diagnose “narcissistic personality disorder” in children (which she confirmed during her visit in Krakow). I located such a claim in Polish literature, in writings of, for example, Katarzyna Schier. These are the arguments:

According to psychoanalytic theory, and a number of research results on the development of young children, the basic frameworks of personality, meaning the type of object relations – the way of relating; the person’s primary identity, the so-called self-image; primary pattern of impulsive reaction; and others, develop by the time child reaches age of six or seven. Naturally, modifications can occur in a later time, especially, it seems, in the adolescence period, but often they do not take place at all. Thus, since our personality develops in an early stage, it can also develop in a pathological way. Bleiberg, quoted before, states elsewhere:

“Can a child’s personality fixate in such a rigid way on the disadaptive patterns of coping, experiencing and relating, that it can be qualified as referring to a “personality disorder”? (…) During the last fifteen
Problems occurring in the psychotherapy of adolescent patients with symptoms... 71

years, developmental research and prospective development studies provided more and more accurate, empirically-tested grounds for understanding the interaction of the genetic and developmental elements in generating, organizing, and structuring a child’s subjective experience, coping mechanisms and patterns of relating. These studies confirm Paulina Kernberg’s opinion that children manifest distinctive features and patterns of cognition, relation to, and thinking about, their environment and themselves – including such features as egocentrism, inhibition, socializing, activity and many others. Kernberg adds that these features and patterns last over time and in a variety of situations and allow us to use the term “personality disorder” regardless of a child’s age, when: (1) they become rigid, disadaptive and chronic; (2) cause substantial decrease in functioning; and (3) cause intense subjective suffering.” [8].

In a review paper about the pathology of personality, Western and Chang [2] describe a number of research studies supporting the thesis that, although an adolescent’s personality is not fully developed and stable, it still manifests a significant continuity starting at the age of 3, through the adolescence years, and beyond. For example, little children who are shy and inhibited are more likely to be anxious and inhibited in the adolescence period. Infants who do not possess a stable and reliable attachment between the 12th and 24 months of their life are more likely than their safely-attached peers to manifest interpersonal difficulties in childhood, and to have lower indicators of emotional health, self-esteem, ego flexibility and peer competence in the adolescence period. Boys who are aggressive in childhood are more likely to be anti-social, or otherwise dysfunctional, adults.

One might add in passing that the image of adolescence, seen as a period of constant “stormy weather”, that emerges from clinical practice and research associated with it, differs completely from the image that emerges from the research of developmental psychologists, insofar as the latter concentrate on other areas than the conditioning of pathology. It is sometimes said that only 20% of teenagers from the USA who experience such turmoil during the adolescence period require therapeutic intervention.

There are also suggestions that this area should contain diagnostic categories that would be used with regard to adolescents only. Westen and Chang made an attempt to form a classification of adolescent personality disorders based on research, in order to avoid inevitable mistakes that occur when extrapolating from personality disorder categories for adults. They say: “…personality pathology may be less differential or may have other features at the age of fourteen or fifteen than in adulthood, therefore it may require other categories or criteria” [2]. They propose six types of pathological personality development that they designate as personality styles and disorders of the adolescence: the self-critical dysphoric style; the oppositional dysphoric personality style; the anti-social-psychopathic personality disorder; the emotionally dysregulated personality disorder (similar to borderline); the schizoid personality disorder; the narcissistic personality disorder; and the histrionic personality disorder.

This may seem to be only a conceptual struggle, but indeed it is not. Its’ substance seems to address the question of the persistence of certain personality predispositions and their susceptibility to modification, including by the means of therapy. From the perspective of time, looking at the first therapy described above (the “narcissistic” boy), one might say that the changes in the boy’s functioning appeared relatively quickly, and that they would not be possible in an adult patient with similar symptoms. Therefore, it is doubtful that the case described was a type of personality disorder. When we look at the second therapy (the patient with schizoid mechanism), we may see how the patient oscillates between fixation and fossilization, in a certain way of lifestyle that can deprive him of social life, and in the undertaking of developmental challenges. Undoubtedly, yet another factor that hampers the development here, other than obvious psychological conditions, consists of organic deficits. I believe that every therapist working with adolescents could describe numerous therapies similar to the third case (the patient with antisocial tendencies). These are therapies that are unsuccessful; they occur when an adolescent and his/her family cease their struggle for development and, as a result, manifest no internal motivation to change. As a result, a more or less pathological pattern of behaviour and experience becomes fixed until adulthood, when a person once again notices that his/her functioning causes un-
wanted suffering. Sometimes, however, the pathology stays preserved, for example, when anti-social behaviour becomes a part of one’s identity, of character, when it brings secondary gains (e.g., financial ones, which help to define identity). Consequently, the internal conflict and feeling of suffering dissolve; internal doubts, self-reflection and the need of change fade away.

Where lies the pathology in the cases described above? From the psychodynamic point of view, one might answer that it lies in the immaturity of the utilized defensive mechanisms (splitting, projection, dissociation, acting out, isolation). These mechanisms are inadequate when compared with the person’s age and developmental challenges – they are used for coping with anxiety. Such situations either cause the prevalence of the archaic, psychotic anxieties (in cases one and two), or precludes proper socialization (case three). This description requires supplementary developmental categories. In my opinion, the crucial element is a certain emotional flexibility, a potential for a change, openness to modifications of experiencing and relating. To what extent is this a temporary situation and to what extent a permanent fixation, retention or regression of the development? To what extent have the pathological patterns become a part of identity (self) that remains unchangeable? Deliberating on the issue I turned to the category of “developmental foreclosure” used by two British psychoanalysts Moses and Eagle Laufer [9]. In their theory, which is overly occupied with sexuality, this category was mainly used for describing a premature consolidation of perverse structure in teenagers – a consolidation that brought the therapy process to an end. Still, it seems to fit well with a loss of a tendency of practicing various solutions by adolescents. In the case of the first boy, the foreclosure did not take place, in the second case the therapy was a struggle against its occurrence or scope, in the third boy’s case that is the process that took place.

Difficulties emerging in a therapeutic process

Difficulties emerging in the process of therapy with a patient exhibiting an abnormal personality development resemble difficulties appearing in the therapy of adult patients with personality disorders [10]. There are, however, a few additional elements resulting from the specificity of age.

The main problem is merely to connect and keep the therapeutic relation. An early relationship disorder lies beneath this difficulty. Therefore, a person who experienced an early trauma in a relation with a caregiver, will perceive immaturity with severe anxiety, will fantasize about the therapist’s hostile intentions, etc. At times, the therapist – along with the parents – must himself make the decision about starting therapy. Each time when there are dangerous behaviours present – such as suicidal thoughts, self-injuries – one may need to reconsider the decision about conducting the therapy in an out-patient facility, at least at the beginning of the process. As a result, there is the necessity of imposing a distinct therapeutic frame, of setting conditions in which the therapy can take place. I wish to point out that the above means not only holding the frame, but, occasionally, it also means a contract to control weight (when there is anorexia present), agreement on being informed about increasing suicidal thoughts, expressing consent to a temporary hospitalization or at least simultaneous psychiatric consultations. At times, it may be necessary for parents to take action or participate in the therapeutic process. It is not sufficient simply to discuss and interpret a strong charge of aggression that these patients may bring in, it is also necessary to set some safety conditions. Now and then one may need to confront and explicitly name what he/she finds disturbing or pathological; most often we are the ones seeing the need for therapy of a patient, not the other way around. Such an approach, which may seem a bit aggressive on the therapist’s part, will obviously cause the conscious opposition of adolescents. Simultaneously, however, on a different, preconscious or unconscious level, it is received in a positive manner, as it makes them feel that there is someone who can set boundaries, explain what is happening to them, introduce order, perhaps with some authority, into the previously chaotic world of their experiences. The moment when a teenager feels that the therapist knows what he/she is doing, and feels that it brings relief, is a moment in which the therapeutic relation gets stabilized.
What is crucial in the therapy of adolescents in general, and these adolescents in particular, is handling the defensive mechanism used by them – the destructive acting out. An adolescent acts instead of talking. For example, he/she starts a fight instead of an argument, abandons school (sensing that it will cause their parents’ great distress) instead of starting a quarrel with parents or instead of telling them that he/she is afraid of failing. A teenager inflicts self-injuries, or does not eat, or vomits instead of trying to cope with the separation anxiety, with anxieties resulting from such impulses as the feeling of guilt, internal hostility, desire for revenge and other difficult ones. Most frequently, they cannot access these feelings; a therapist can rather suspect their presence, than find them in an adolescent’s statements. Many theoreticians indicate that the reason for this disorder lies in an insufficiently developed psychological mindedness, in a disability to name one’s affective states, resulting either from psychic reasons or from being brought up in a culture where emotions are released by acting out rather than by talking about them. In such a situation, therapy supplements an adolescent’s development with precisely that aspect.

All the elements mentioned above clearly demonstrate that one should embrace a notion of therapy as a specific support for emotional development and a notion that such help needs to continue for a long time in order for its effects to be lasting. The main therapeutic elements here are the therapeutic relationship itself and what is known as a “corrective emotional experience”. The latter includes, for example, the ability to withstand a patient’s aggression, care for the patient, patience, empathic naming of the patient’s condition, behaving in such a manner that does not confirm a patient’s worst anxieties about the important adult figure’s behaviour – meaning not abandoning them, showing interest in them, providing them with emotional exchanges rather than intellectualizations, etc.

Another group of problems result from a therapist’s emotional reaction to such patients, i.e., from countertransference. They often cause strong anger, sometimes also sadistic impulses, reluctance to work, as well as anxiety. Still, work with them also gives way to positive feelings, especially during its later stages. Such therapies are sometimes described using the “re-parenting” metaphor, which means a renewed, corrective experience of the parental relation. Thus, these cause reactions similar to the reactions present in a parental dyad: care, the will to battle for them, strong identification with one’s “own” patients, feelings of omnipotence, grief when they give up therapy and a specific pride when they change and adapt socially. Naturally, the transference is not a worrying phenomenon by itself, although in this type of therapy it can be so intense that it may cause the therapist to take some not-well-thought-out actions.

What I wanted to communicate through this lecture is the thought that the basic problem, but also the task, for a therapist working with patients with abnormally developing personalities is preventing any developmental foreclosure, attempting to maintain flexibility typical for the adolescence period, giving support for their testing of various solutions and integrating developmental failures, and making sure that the latter do not cause excessive developmental disturbances.

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Differential response of neurotic symptoms

Jerzy A Sobański

SUMMARY
Aim: The paper reports symptom improvement during intensive psychotherapy in a day hospital at the Wojewódzki Ośrodek Leczenia Nerwic.
Material: 3509 symptom checklists KO “0”, filled-in by 319 patients treated in day hospital in 1990–1998. The group consisted of 235 females and 84 males, with diagnoses of somatization disorder, generalised anxiety disorder, dissociative motor and sensory disorders and with comorbid diagnoses.
Method: Symptom checklists KO “0”, filled out weekly by patients were examined. For 10 selected symptoms, differential treatment-induced improvement rates were searched for.
Results: Particular symptoms disappeared with different velocity during intensive psychotherapy. In subgroups of patients with different psychotherapy outcomes, during subsequent 9 weeks of treatment, different rates of selected 10 neurotic disorders’ symptoms improvement were found.
Conclusion: During psychotherapy processes with beneficial final results, a higher improvement speed for selected symptoms was observed. However, significant differences in particular symptom improvement rates make treatment monitoring more complicated.

INTRODUCTION
Variations of symptom intensity are phenomena frequently observed during psychotherapy and well known to clinicians. However, some psychotherapy researchers (e.g. Lambert, Tang, Martinovich) focused on them only in the very last decades. They analyse courses of particular symptom change during treatment. Such studies are based mainly on frequent measurements of symptoms occurrence with symptom checklists filled by patients. A broader review of relevant literature is presented in a separate publication [1].

AIM OF THE STUDY
The aim of this study was an analysis of change of ICD–10 neurotic disorder symptoms occurrence during intensive complex psychotherapy (group therapy with elements of individual therapy) and relation of those changes to the treatment outcome.

MATERIAL AND METHODS
Material for analysis was a set of 3509 symptom checklists, filled-in in by 319 patients treated at the day-hospital of the Wojewódzki Ośrodek
Leczenia Nerwic in Cracow, Poland in 1990–1998. The sample consisted of 235 women and 84 men, including 103 patients with somatoform disorders (F45), mostly somatization disorders (F45.0) without hypochondria (F45.2), 82 patients with diagnosis of “other anxiety disorders” (F41), mostly generalised anxiety disorders (F41.1) without panic disorders (F41.0), and 63 patients suffering from conversion disorders (F44), mostly dissociative motor disorders (F44.4) and dissociative sensory disorders (F44.6), 71 patients with a diagnosis combined of elements of anxiety, conversion and somatoform disorders. In all the patients, the GSI value of symptom checklists KO “0” filled at intake, was above 165 points in men and above 200 points in women. Complete documentation of symptom intensity in subsequent weeks was accessible. Patients’ age was between 18–56 years (mean = 35.8 years, median = 36, standard deviation = 8.16).

The subject of analysis was data from symptom checklists KO “0”, filled out by patients before treatment (at initial interview), on the day of admission to the ward, every week (on Mondays) and on the day of therapy completion.

The symptom checklists filled out during intake examination and at outcome served only to assess treatment effects, others pictured the course of symptom change along intensive psychotherapy based on an integrative approach.

Assessment of treatment results was limited to symptom change, inferred from comparison of global symptom level (GSL) at pre- and post-therapy according to the rules described earlier [2]. In this paper, symptom change was categorized differently to clinical everyday practice [2], assuming as “symptom improvement” – result between <0.1 and 1> (i.e. “major improvement”), as “no symptom change” – result between <-0.1 and 0.1> (including clinical everyday category of “non-changed” as well as “minor improvement” and “minor deterioration”), and as “symptom deterioration” a result between <-1 and –0.1> (“major deterioration”). “Improvement” with outcome below 100 points (for women), and below 82 points (for men), was considered as “symptom cured” (enhancing two times the clinical criteria resulting from the “cut-off point” of GSL “O” [3]).

Setting these criteria, 319 patients whose questionnaires were analysed, fell into three groups: A – improvement with disappearance of symptoms (129 cases – 40.4%), B – improvement without full symptom remission (100 cases – 31.3%) and C – “no symptom changes” (87 cases – 27.3%). Group C consisted of patients with results indicating, according to clinical criteria, minor improvement (n=59), no change (n=23) and minor deterioration (n=5). Two patients with an initial low intensity of symptoms who completed therapy with insignificant changes of global symptom level (GSL) and simultaneously acquired the category of “symptom cure” were excluded from further analyses. The only case of “major deterioration” was also omitted.

Frequencies of symptoms reported by the patients in the first (intake) questionnaire were analysed and in the next step, 10 symptoms (dissatisfaction with sexual life, lowered mood, obsessive thoughts, words and imaginations, problems with falling asleep, hypochondriac fear, dryness in mouth, free-floating anxiety, internal tension, uneasiness, muscular tremor) were chosen – symptoms most frequent in 8 scales of the checklist [4], and 2 symptoms of commonly respected importance in the domain of neurotic disorders: uneasiness (item 4 in the checklist KO “0”) and non-directed anxiety (item 4). Separately for each group (A, B and C), for each of those 10 symptoms, rates of patients reporting a particular symptom in question, were calculated in the 10 subsequent weeks (only occurrence of a particular symptom was calculated, its intensity was omitted). Significance of differences between paired rates was statistically tested with two-tailed test for fractions (Statistica).

RESULTS

Dissatisfaction with sexual life

In all the groups the symptom, “dissatisfaction with sexual life”, was present at the first day of treatment with a similar frequency. A significant decrease of that symptom occurred first in group A (at the beginning of the second week of therapy, @), in group B later (@); however group C reported significant fluctuations of frequency (@@). After the 9th week of therapy, dissatisfaction with sexual life was found in 21% of patients from group A, in 41% in group B, and in 40% in group C (Table 1).
Occurrence of lowered mood

Larger differences between groups A vs. B and C were observed for frequency of “occurrence of lowered mood”. – It decreased significantly in group A just after 1 week of therapy while in group B, after the 5th week, and in the group C, finally after the 9th week.

In all three groups, lowered mood was present in almost every patient (97–99%) on the first day of therapy. A significant decrease of occurrence of that symptom happened very early in group A (1), markedly later in group B (2), but in group C only by the end of therapy (3). It appears striking, that the difference between frequency of that symptom on the first day in a day hospital and its occurrence at the beginning of the 10th week of treatment was (statistically significant) many times larger in group A (51%) than in groups B (11%) and C (11%), where it was still reported by many patients (86–88%). In the group A, lowered mood was present after 9 weeks of therapy in less than 50% of patients (Table 2).

Table 2. Frequency of occurrence of lowered mood and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1st day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>98%</td>
<td>88%</td>
<td>91%</td>
<td>91%</td>
<td>84%</td>
<td>78%</td>
<td>76%</td>
<td>65%</td>
<td>64%</td>
<td>47%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>99%</td>
<td>96%</td>
<td>97%</td>
<td>95%</td>
<td>97%</td>
<td>89%</td>
<td>92%</td>
<td>87%</td>
<td>85%</td>
<td>88%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>97%</td>
<td>94%</td>
<td>93%</td>
<td>97%</td>
<td>95%</td>
<td>92%</td>
<td>94%</td>
<td>90%</td>
<td>93%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with 1<0.005; 2<0.05.
Paired rates significantly different (vertically), p<0.05, were marked with *, p<0.01 ** or ++.
Initially occurrence of obsessive thoughts in all three groups was frequent (81 – 89 – 71%). A significant decrease of frequency of these symptoms was observed in groups A and B at the same time (i ii); in seven weeks group C (iii) followed. In group A, after 9 weeks of therapy, obsessive thoughts were reported only by 2% of the patients, and the difference between incidence of that symptom on the first day in the day-hospital and after 9 weeks of therapy was significantly larger in group A (55%) than in B (40%). It was also much bigger than that of group C (14%) (Table 3).

### Obsessive thoughts, words and imaginations

On the first day in the day-hospital, sleep disorders occurred with the same frequency in groups A and B, but were a bit more frequent in group C. A significant decrease of its frequency occurred a bit earlier in group A (i), than in groups B and C (ii i iii). In group A, this particular symptom occurred after the 9th week of therapy only in 30% of patients, while in group C its final level was above 60% and was significantly – but not very much – lower than its initial level (Table 4).

### Problems with falling asleep

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>68%</td>
<td>60%</td>
<td>59%</td>
<td>55%</td>
<td>47%</td>
<td>43%</td>
<td>39%</td>
<td>29%</td>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>65%</td>
<td>75%</td>
<td>67%</td>
<td>69%</td>
<td>60%</td>
<td>53%</td>
<td>43%</td>
<td>43%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>77%</td>
<td>71%</td>
<td>68%</td>
<td>70%</td>
<td>67%</td>
<td>61%</td>
<td>64%</td>
<td>64%</td>
<td>62%</td>
<td></td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with i ii iii <0.05.
Paired rates significantly different (vertically), p<0.05, were marked with * or +, p<0.01 ** or ++, p<0.001 ***.

---

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1st day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>81%</td>
<td>71%</td>
<td>68%</td>
<td>70%</td>
<td>55%</td>
<td>50%</td>
<td>46%</td>
<td>40%</td>
<td>35%</td>
<td>26%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>89%</td>
<td>85%</td>
<td>78%</td>
<td>77%</td>
<td>72%</td>
<td>68%</td>
<td>65%</td>
<td>55%</td>
<td>54%</td>
<td>49%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>77%</td>
<td>70%</td>
<td>71%</td>
<td>71%</td>
<td>67%</td>
<td>68%</td>
<td>67%</td>
<td>64%</td>
<td>63%</td>
<td></td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with i ii iii <0.05.
Paired rates significantly different (vertically), p<0.05, were marked with * or +, p<0.01 ** or ++, p<0.001 ***.

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**Table 3.** Frequency of occurrence of obsessive thoughts, words and imaginations and therapy results in the global symptom level domain

**Table 4.** Frequency of occurrence of problems with falling asleep and therapy results in the global symptom level domain
Differential response of neurotic symptoms

Archives of Psychiatry and Psychotherapy, 2007; 4 : 75–84

On the first day of treatment, “hypochondriac fear” was reported significantly more frequent by patients from group B as compared to group A. Significant decrease of that symptom was observed only in groups A and B – in the fourth – fifth week of therapy (\(\text{and}\) \(\text{and}\)). In group A, hypochondriac fear occurred after 9\(\text{th}\) week in ca. 30\% of patients, in group B in ca. 50\% (Table 5).

On the first day of therapy “dryness in mouth” was present in patients from group B insignificantly more frequently than in the other two groups. A significant decrease of frequency of that symptom was observed in groups A and B markedly earlier (\(\text{and}\) \(\text{and}\)) than in group C (\(\text{and}\)). In group A, dryness in the mouth was present after the 9\(\text{th}\) week of treatment only in one third of the patients, in group B in 38\%, and in group C in 46\% of the patients (Table 6).

Table 5. Frequency of occurrence of hypochondriac fear and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>66%</td>
<td>61%</td>
<td>62%</td>
<td>56%</td>
<td>50%</td>
<td>44%</td>
<td>41%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>78%</td>
<td>73%</td>
<td>76%</td>
<td>73%</td>
<td>66%</td>
<td>60%</td>
<td>58%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>70%</td>
<td>68%</td>
<td>61%</td>
<td>67%</td>
<td>67%</td>
<td>59%</td>
<td>68%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with \(\text{and}\) \(\text{and}\). Paired rates significantly different (vertically), \(p<0.05\), were marked with \(\text{or}\) +, \(p<0.01\) ++ or + +, \(p<0.001\) ***.

Table 6. Frequency of occurrence of dryness in mouth and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>67%</td>
<td>62%</td>
<td>59%</td>
<td>59%</td>
<td>52%</td>
<td>46%</td>
<td>44%</td>
<td>43%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>76%</td>
<td>73%</td>
<td>69%</td>
<td>61%</td>
<td>57%</td>
<td>54%</td>
<td>54%</td>
<td>45%</td>
<td>44%</td>
<td>38%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>63%</td>
<td>54%</td>
<td>66%</td>
<td>60%</td>
<td>56%</td>
<td>54%</td>
<td>54%</td>
<td>51%</td>
<td>49%</td>
<td>46%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with \(\text{and}\) \(\text{and}\). Paired rates significantly different (vertically), \(p<0.05\), were marked with *, \(p<0.01\) **.
On the first day in the day-hospital, “free-floating anxiety” was observed in all the three groups with a similar frequency (more than 80%). A significant decrease of occurrence of that symptom took place only in group A (in 4th week of therapy) and B (in 7th week). In group A, free-floating anxiety was present by the end of therapy in 37% of the patients. As for group C – in subsequent measurements, especially large fluctuations of frequency of that symptom were observed (Table 7).

Internal tension and uneasiness are symptoms whose frequency of occurrence was decreasing much later than that of the seven symptoms described above.

On the first day of treatment, symptom of tension was present in almost all the patients (more than 97%), in all the groups. Significant decrease of its occurrence was observed in group A two weeks earlier (①) than in groups B (②) and C (③). In that group (A), frequency of occurrence of tension after initial insignificant fluctuations, started to decrease markedly after five weeks of treatment, but it was still reported after the ninth week of therapy by as many as ca. 70%

Table 7. Frequency of occurrence of free-floating anxiety and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Begin-ning of 2nd week</th>
<th>Begin-ning of 3rd week</th>
<th>Begin-ning of 4th week</th>
<th>Begin-ning of 5th week</th>
<th>Begin-ning of 6th week</th>
<th>Begin-ning of 7th week</th>
<th>Begin-ning of 8th week</th>
<th>Begin-ning of 9th week</th>
<th>Begin-ning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>82%</td>
<td>78%</td>
<td>77%</td>
<td>74%</td>
<td>67%</td>
<td>67%</td>
<td>52%</td>
<td>54%</td>
<td>47%</td>
<td>37%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>90%</td>
<td>91%</td>
<td>87%</td>
<td>82%</td>
<td>83%</td>
<td>84%</td>
<td>77%</td>
<td>83%</td>
<td>83%</td>
<td>69%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>85%</td>
<td>79%</td>
<td>87%</td>
<td>90%</td>
<td>83%</td>
<td>86%</td>
<td>87%</td>
<td>78%</td>
<td>83%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with ①<0.01; ②<0.05.
Paired rates significantly different (vertically), p<0.05, were marked with *, p<0.01 ** or + +, p<0.001 *** or +++.  

Table 8. Frequency of occurrence of tension and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Begin-ning of 2nd week</th>
<th>Begin-ning of 3rd week</th>
<th>Begin-ning of 4th week</th>
<th>Begin-ning of 5th week</th>
<th>Begin-ning of 6th week</th>
<th>Begin-ning of 7th week</th>
<th>Begin-ning of 8th week</th>
<th>Begin-ning of 9th week</th>
<th>Begin-ning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>97%</td>
<td>95%</td>
<td>95%</td>
<td>96%</td>
<td>92%</td>
<td>92%</td>
<td>88%</td>
<td>84%</td>
<td>78%</td>
<td>71%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>98%</td>
<td>100%</td>
<td>97%</td>
<td>98%</td>
<td>96%</td>
<td>96%</td>
<td>96%</td>
<td>95%</td>
<td>89%</td>
<td>87%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>99%</td>
<td>99%</td>
<td>100%</td>
<td>98%</td>
<td>97%</td>
<td>97%</td>
<td>98%</td>
<td>94%</td>
<td>91%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with ①<0.01; ②<0.05.
Paired rates significantly different (vertically), p<0.05, were marked with * or +, p<0.01 ** or + +, p<0.001 ***.
of the patients. In group B, the frequency of tension increased after the first week of therapy (to 100%), then subsequently, its step-by-step, slow decrease, was observed. In group C, periods of small fluctuations of tension and its stabilization (of a bit lowered incidence) occurred, only by the end of therapy (Table 8).

In all three groups uneasiness on the first day of treatment was reported by almost all the patients (97–98%). Significant decrease of frequency of incidence of that symptom took place only in group A and only in the second half of therapy (1). Still, by the end of therapy, it was present in ca. 75% of patients. Frequency of that symptom was still very high (94%) in the other two groups (B and C) (Table 9).

### Table 9. Frequency of occurrence of uneasiness and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>97%</td>
<td>98%</td>
<td>98%</td>
<td>96%</td>
<td>95%</td>
<td>95%</td>
<td>91%</td>
<td>87%</td>
<td>82%</td>
<td>76%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>98%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>98%</td>
<td>97%</td>
<td>94%</td>
<td>98%</td>
<td>95%</td>
<td>94%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>98%</td>
<td>99%</td>
<td>98%</td>
<td>98%</td>
<td>97%</td>
<td>99%</td>
<td>95%</td>
<td>95%</td>
<td>97%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with 1 < 0.05.
Paired rates significantly different (vertically), p<0.005 were marked with * or +, p<0.001 **, p<0.001 +++.

### Table 10. Frequency of occurrence of muscular tremor and therapy results in the global symptom level domain

<table>
<thead>
<tr>
<th>Therapy results</th>
<th>1 day of therapy</th>
<th>Beginning of 2nd week</th>
<th>Beginning of 3rd week</th>
<th>Beginning of 4th week</th>
<th>Beginning of 5th week</th>
<th>Beginning of 6th week</th>
<th>Beginning of 7th week</th>
<th>Beginning of 8th week</th>
<th>Beginning of 9th week</th>
<th>Beginning of 10th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (n=129)</td>
<td>69%</td>
<td>70%</td>
<td>74%</td>
<td>66%</td>
<td>66%</td>
<td>58%</td>
<td>59%</td>
<td>59%</td>
<td>52%</td>
<td>44%</td>
</tr>
<tr>
<td>Group B (n=100)</td>
<td>83%</td>
<td>82%</td>
<td>85%</td>
<td>83%</td>
<td>79%</td>
<td>72%</td>
<td>72%</td>
<td>67%</td>
<td>64%</td>
<td>69%</td>
</tr>
<tr>
<td>Group C (n=87)</td>
<td>77%</td>
<td>64%</td>
<td>72%</td>
<td>72%</td>
<td>75%</td>
<td>80%</td>
<td>71%</td>
<td>72%</td>
<td>72%</td>
<td>72%</td>
</tr>
</tbody>
</table>

Rates significantly lower than the rate from the first measurement were marked with 1, 2 < 0.01.
Paired rates significantly different (vertically), p<0.05 were marked with * or +, p<0.01 **, p<0.001 *** or +++.

### Muscle tremor

Muscle tremor was present on the first day of therapy, most frequently in patients from group B (significantly more frequent than in A). Significant decrease of frequency of occurrence of that symptom took place only in groups A and B – by the end of therapy (1 and 2). In group A, muscular tremor was still present after the 9th week of therapy in 44% of patients (Table 10).

Fig.1–3 show that however a selected single symptom decrease is more frequent and an earlier phenomenon in the group of patients with the best results (A), in this group of subjects, symptoms reaction to treatment follow different patterns e.g. lowered mood responds earlier than tension.
In group A, frequencies of all 10 analysed symptoms decrease step-by-step and reach lower values earlier than in the other two groups. Occurrence of some symptom decrease was markedly faster, e.g. dissatisfaction with sexual life and lowered mood as soon as in two weeks time (Tables 1 and 2) and in some it was very slowly – e.g. muscle tremor as late as after seven weeks of treatment (Table 10). In group B, the frequency of symptoms predominantly decreases in a slower and less monotonic manner than in group A, and – usually from the very beginning of the stay in the day-hospital, it is higher than in group A, sometimes even higher than in group C. Frequency of symptoms in that group (C) changes irregularly only in the late treatment, increasing or decreasing usually by a few percent fluctuations (Tables 1–10).

Two symptoms: tension and uneasiness, very frequently reported by patients, disappear rather late in the course of treatment and in a small rate of patients, but it is higher in group A, than in the other two groups. It seems striking, that even in patients who were categorized as group A (best results), tension and uneasiness after the ninth week of therapy still occurred in 70–75% of the group (Tables 8 and 9). Two symptoms – lowered mood and muscle tremor – occurred after the 9th week of therapy in circa half of the patients from group A (Tables 2 and 10). Simultaneously, they differed significantly in speed of decrease of incidence in the period of subsequent weeks – which was significantly higher for lowered mood. Frequency of occurrence of the remaining six symptoms (dissatisfaction with sexual life, obsessions, problems with falling asleep, hypochondriac fear, dryness in mouth, and free-floating anxiety) decreased after the ninth week of therapy to ca. 30% (Tables 1, 3, 4, 5, 6 and 7).

A generalization of the presented results of the analyses of most frequent symptoms decrease would be unjustified because of a limitation of this study to patients suffering from selected disorders (generalized anxiety disorder, somatization and dissociative) and the fact that, as is commonly known [5] symptom dynamics depend on the form of therapy, theoretical approach, and even the individual therapy programme. Fluctuations of frequency of occurrence of symp-
Differential response of neurotic symptoms

Some of the results of this study seem to be surprising, e.g. persisting high frequency of tension and uneasiness even in patients who completed therapy with best results (A). Also other symptoms, e.g. hypochondriac fear and obsessive thoughts, withdraw fast and in large number of patients from group A, despite their initially high incidence (and rather common view on their "resistance to treatment"). Stay in a day hospital seems to be one of possible factors contributing to the removal of hypochondriac fear – contact with many patients with similar complaints, information from medical staff finally excluding diseases, other than neurotic disorder etc. – yet such a connection is not expected for obsessions. Here it may by important to instruct and inform patients about symptoms, specific interventions (e.g. related to symptom), "life events” taking place inside and outside the ward, unfortunately the last information is not collected as a routine practice, what increases difficulties with interpretation of symptom dynamics [9, 10, 11, 12].

In the group of patients completing therapy with symptom cure (group A) especially the fast “disappearance” of majority of the analysed symptoms may mean that those patients met with especially good conditions for their treatment (interventions adequate to their individual concept of disorder and with proper timing, causing insight and working-through, change in cognitive schemata and behavioural changes). Such an assumption may be supported by e.g. the fact that decreases of incidence of free-floating anxiety were visible only after the fourth week of treatment of that population (what seems discordant with the common view on special compliance of that particular symptom to non-specific therapeutic factors [13, 14]). Frequent decrease of free-floating anxiety in the population of best therapy results may-be because "discovering" by patients the initially unclear causes of that given symptom and gaining hope for cure is crucial for obtaining symptom cure. Why it is not happening in the case of tension and uneasiness – it is not known.

Easiness of decrease of lowered mood – especially fast and high in the group of symptom cure – may be caused by the reactivity to group influences as well as by experiencing treatment benefits and “remoralisation”. It seems also connected with compliance of that particular symptom to treatment typical for neurotic disorders (dysthymia or mixed anxiety and depressive disorder, and not for affective disorders), with characteristics of that particular symptom.

It is difficult to explain clearly why some symptoms respond to treating influences earlier (e.g. sexual dissatisfaction or lowered mood), and other later (e.g. tension, uneasiness, muscle tremor).

A similar observation was also made by other researchers [e.g. 15, 16, 17, 18, 19]. However, some rules in the dynamics of the analysed symptoms were observed. For example in the group of those improved and cured, rates of patients reporting occurrence of analysed symptoms decrease usually faster (i.e. in earlier weeks of stay) than in the other two groups without symptom cure. Those observations are consistent with literature data [e.g. 17, 20, 21], however in this analysis the most numerous differences between groups are observed just after several weeks of therapy.

Description of neurotic disorders symptom dynamics is complicated by the differentiation of the process of changes of each particular single symptom and effect of summing and “hiding” their different courses. On the one hand some symptoms decrease generally faster, independently to final therapy effects (assessed in the domain of global symptom level pre-post-therapy change), on the other hand in groups of patients with different therapy results, one can observe different patterns of decreasing of particular symptoms. Because of that, global dynamics of symptoms in terms of GSL [5] may be completely discordant with changes of particular, single symptoms of different courses.

On the one hand, phenomena of symptom dynamics are signs of nonspecific therapeutic factors’ influences – if yes, then as it is proposed in literature [e.g. 22, 23], considering them as outcome predictors seems doubtful. On the other hand, phenomena of symptom dynamics provide information that is interpreted in everyday clinical practice – they are understood and considered in the “individual context” of a particular patient, course of specific processes during psychotherapy, which may bring beneficial changes as well as failure of treatment. Then, no trait of neurotic disorders symptom dynamics may serve as
a background to automated consideration of further treatment as purposeless [e.g. 17, 24].

Probably analysis of dynamics of particular single symptoms creates an opportunity to understand mechanisms leading to cure or being obstacles in the process of obtaining it. More thorough analysis of the causes of the described phenomena of symptom occurrence dynamics without rich information on therapy sessions content is very difficult, if at all possible.

CONCLUSIONS

1. Particular single symptoms of the neurotic disorder occur during treatment with varying frequency.
2. Decrease of frequency of occurrence of selected symptoms during intensive psychotherapy is the fastest in the group of patients completing therapy with “symptom cure” and slowest in the “not improved” patients.
3. The picture of a global dynamics of symptoms is the sum of processes of changes in particular single symptoms and results from summing and “masking” their different courses.

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“Anus Mundi”

Antoni Kępiński

What a monster is man? What a celebrity, what a beast, what a chaos, what a confluence of oppositions, what an amazing thing! A judge of everything – a mindless earthly worm; a guardian of the truth – a sewer of uncertainty and mistakes; glory and disgrace of the universe.

Blaise Pascal, Pensées

Heinz Thilo, a physician in the Auschwitz SS unit, in conversation with Kremer, described the camp as ‘anus mundi’. Weighty description, as one can assume was an expression of repulsion and horror the camp aroused in every observer, and at the same time legitimated its existence with necessity to purify the world. Problem of purification – catharsis, important in everyone’s life, is also meaningful for the life of societies.

In the concept of Nazi extermination camps, besides immediate political and economical tasks, which were the most effective and cheapest annihilation of the enemy, they had also a deeper sense. That was the purification of the German race from that all, which was incongruent with the ideals of German Übermenschen. A distant goal, was a vision of the world of beautiful, strong, healthy people, a world with no place for the ill, disabled, mentally abnormal, infected with Jewish or Gipsy blood.

This “beautiful” world could be reached via the distasteful horror of the concentration camps. So it is not surprising that a service in concentration camp was treated as front service, even if SS-men preferred to be heroes in concentration camps then in a battlefield. The life preservation law is usually stronger then ideology; it helps when ideology can be used as an excuse for ones cowardice. However there were few that could not stand the camp service and had chosen the front or suicide. Majority were sedating themselves with alcohol and a feeling of well-performed duty for the goodness of motherland and grand idea.

The ability to transform the surrounding world, one can regard as a specifically human feature, one that contains the largest span of human nature contradictions. This ability gives birth to heroism, dedication, arts, science, but also cruelty, abuse and killing. To change the shape of the world, wars have been carried, people have been victimized in camps and prisons. What does not fit to the structure to be enforced, becomes strange and hostile, and as such, has to be destroyed.

A mechanism of implantation of a foreign structure is known in biology. A virus can attack a bacterium. Virus genetic material – its DNA reaches the bacterium interior, subdues its biochemical “apparatus” in such a way that in a minute the bacterium starts to produce millions of new viruses identical with the invader. The bacterium continues to live, but its structure has been changed: instead of its specific DNA, its biochemical processes are run by viral DNA. Seemingly the same, in reality it loses its specific structure, loses then its identity.

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A similar process, but on an incomparably higher level, may be encountered in human life; when a person is dominated by an idea, strange at the beginning, but with time ones own. One does not see anything besides, is ready to sacrifice the life – ones own and other persons lives (usually other's is easier to sacrifice). As a bacterium mentioned above, a person loses his/her identity; his/her thoughts, emotions and doings are no longer an expression of his/her personality, but become a reflection of the structure accepted from the outside. People possessed by the same idea become identical as twins; social differentiation diminishes, but effectiveness (understood as aiming the same tasks, postponing everything else) increases. A human being who has not a stigma of the same idea, in consequence, becomes an obstruction in its realisation, an enemy, an obstacle, and has to be eliminated. Grandiosity of an idea, importance of its goals – assessed subjectively by those overwhelmed – justifies the rule: the goal is more important than the measures. One who sacrificed everything to the idea is deeply convinced that everything around has to be sacrificed too.

“Chaos”, “confluence of oppositions”, “mindless earthly worm”, “sink for uncertainty and mistake”, allowing an idea to possess him or her, and in consequence losing itself, gains an order, congruence, clarity and confidence. The bigger the inner disorganization, feeling of being weak, unsure and fearful, the stronger is the longing for something integrating again, something that will bring self-confidence (as a matter of fact not self-confidence, but confidence in the idea which replaces the self). Self-repulsion is being compensated by self-image as a hero – follower of the idea. Group belonging and feeling of group bonds and enhances the attractive powers of such a false model. A person is confronted with an alternative: to be as the others or not to be. Not fitting to the ideology standards – means to put oneself in a position of the enemy of the idea, hence to be exterminated. Among the followers of the idea, there develops a specific rivalry: not to be worse than the others. To be worse, means to be excluded from the group. Depending of ideology characteristics – merits or crimes can be a field of rivalry.

It is not my goal to analyse Nazi ideology, its shallowness, naivety and arrogance are evident. That it was accepted by the German community can be explained only if one takes into account a specific atmosphere of the time between the two World Wars. Its characteristic was an exaggerated and kindled feeling of the national grief. Breakdown of ideological structures, feeling of dullness, lack of sense, economical depression, war traumas, etc., all created a good soil for every ideology, providing it would offer the perspective for a better future.

Ideology is dangerous, separately from its inner contents, as a structure enforced from outside; it blocks the developmental process. Tensions between opposing structures – of which ones are being born, the other die; new things appear and the human being develops – become replaced by the alien structure subduing everything. The human being does not grow; she/he changes into a blind tool in the service of an idea; blind – as she/he is capable to see only the tasks; above all is unable to see the other human beings, seeing instead comrades of common confession or an obstacle in goal achievement, a subject which must be eliminated, destroyed.

Claude Eatherly, Air Force Major performed a flight checking weather conditions and air defence measures over Hiroshima, on the morning August 6th, 1945. Then he gave a signal for atomic attack: go ahead. Recognising that the explosion burnt 200 000 people he developed growing moral conflict between a glory of hero, which surrounded him, and sense of participation in a crime with the need for expiation. “The complex of guilt” led him even to episodes of severe depression with anxiety, hallucinations and suicidal attempt. Eatherly volunteered to hard physical work and supported Hiroshima victims financially. His letter exchange with the eminent philosopher and active pacifist Günther Anders, persecuted by Nazis during the war, can be found in the book No more Hiroshima.

Among Germans, especially those who were active in the great industry of extermination, there is no Major Eatherly. Those few, who were put under judiciary procedures, usually had no feelings of guilt, but rather a strong grief of being punished for their blind obedience. For fulfilling their duties. Liberation from the guilty feelings, which is often much harder than any punishment a society can execute, they owe to ideology. They were not guilty, it was an alien struc-

Archives of Psychiatry and Psychotherapy, 2007; 4 : 85–87
ture, enforced, blinding them, replacing feeling, thinking and pushing to activity. Without ideology they are “serene people” again, coming to money in an honest way, and maybe secretly recollecting the great days of “heroic” past.

Those who were the impediments, the material which was decided to be exterminated, to prevent infection of the new world; they were meeting their fate in differentiated ways. Some had no time to get out of shock resulting from being thrown suddenly into the hell of a camp. Their life end was coming soon. The others were meeting their death with fatalistic conviction of irreversible fate. Yet others wanted to survive at every cost. As in the extermination camps convenient life was reserved for those only who were killing others, those who were lords – so some tried to follow their example. There were also those who in spite of hunger, thirst, cold, pain and humiliation were able to distance themselves from their suffering and avoid thinking only about finding something to eat, to stop the cold or heat, to stop pains in the body. The biological imperative is powerful and an enormous power of will is needed to stop thinking about bread, being hungry, about water, being thirsty, or about a sore place in pain. This effort, however, was necessary for preserving inner freedom – free space for free thinking, dreaming, deciding and to free oneself from a nightmare of the present time. If in camp life itself, in this anus mundi, there was so much sacrifice, courage, love towards other people, the phenomena which were – one could suppose – in such conditions almost impossible, that was just due to this inner freedom.

For those who survived, concentration camp memories from that time are not only the nightmares; they are also the proof, that in the most terrifying conditions they were capable to preserve their humanity. That they had stood the true question: “what am I like, truly”. And often they feel the best among those who were there with them; they knew what their former co-prisoners are like truly.

One could suppose that in conditions of maximal slavery, humiliation and persecutions of other human beings heroism is not possible. To get heroism out of oneself, the minimal free space and strength is necessary. But, even in such conditions heroism was possible. In the hell of the concentration camp, the greatness of man appeared.

Nazis did not achieve their goal. In spite of millions of victims they failed to clean the world of that, which did not fit to their Herrenvolk ideal. They showed instead, to the whole world, where delirious, unreasonable ideology could lead to. The Auschwitz smokes, let us hope, for a long time still, will be a warning of sightlessness, hatred and disregard towards the other. Ready forms of thinking and acting, blind following of commands can be dangerous in effects. That is why it is necessary to carry the burden of responsibility for one’s thoughts, feelings and doings. Claude Eatherley expressed this in his letter to Günther Anders:

“There were periods in the past allowing a man to live his life through without engaging his conscience in problems of thought habits and norms of acting. Our times, obviously, do not belong to those epochs. Contrary, I believe, we are approaching rapidly the situation forcing us to think again whether we are ready to give away responsibility for our thoughts and doings. Claude Eatherley expressed this in his letter to Günther Anders:

“Anus mundi” showed the world the human being in all his nature diapason: besides terrible bestiality – heroism, sacrifice and love. Seeing this, one can say, following Pascal: “Be humble weak mind; be silent stupid nature; know that man limitlessly overgrows a man”.

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Regulations on the papers accepted to “Archives of Psychiatry and Psychotherapy”

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Archives of Psychiatry and Psychotherapy accept experimental, clinical, theoretical papers, case reports and studies, which have not been published previously in other publications as well as specially selected and invited papers firstly published in Polish, that have been translated and suitably adapted. The editors accept also a) letters to the editor, concerning the articles printed in the journal as well as letters on important issues connected with the theme of the journal and, b) book reviews.

The papers should be submitted in 1 copy, printed one sided on the A4 paper size along with the file on a CD or sent by e-mail. The submitted paper written in English should not exceed 15 standard pages (1800 signs per page, spacing included), including illustrations and tables.

The first page should contain: the title (very brief, if necessary a subtitle may be used), name(s) of the author(s), their affiliation(s), correspondence address, address of the author to whom correspondence should be sent, telephone and fax number, and e-mail address, if possible) key words (3-5) and structured summary up to 100 words and any acknowledgements. The authors are obliged to mention also here if they have been supported by any grant in their research.

The length of the letters to the editor should not exceed 5 pages of normalized text, whilst the book reviews should not exceed 2 pages. The paper should contain a short introduction, subject and material and methods, results, discussion, conclusions and references (not necessary in case reports).

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