

## Transformation of personality features and coping strategies depending on the duration of recurrent depressive disorder

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### Abstract

**Background.** The high prevalence of recurrent depressive disorders and the severity of the medical and social consequences of the depression in the form of chronization, relapse, resistance, disorders of social functioning, quality of life and suicidal behavior place the problem in the rank of the most urgent, requiring study in terms of early diagnosis and assessment of the condition, depending on the duration of the disease.

**Methods.** An integrated approach was used including clinical-psychopathological, psychodiagnostic and statistical methods. 40 patients with recurrent depressive disorders were examined, 35 people without mental disorders were included in the comparison group.

**Results.** The structure of clinical-psychopathological manifestations of the depressive spectrum in patients with the recurrent depressive disorder was characterized by the presence of affective, motivational-will, cognitive, psychomotor and somatic disorders. Among the personality features, patients differed in a more actualization of the non-adaptive copy-strategy and low self-actualization.

**Conclusion.** Data which we received should be considered when conducting diagnostic and psychotherapeutic interventions for patients with the recurrent depressive disorder.

**Keywords:** recurrent depressive disorder, coping strategies, personality features, self-actualization

## 1 Introduction

Over the past few decades, the problem of depressive disorders has been becoming increasingly relevant in the organization of medical care in Ukraine [1], [2]. This relevance is caused by their significant prevalence and severity of consequences [2], [3], [4], [5]. Depressive disorders substantially affect the physical, mental, and social functioning and increase the likelihood of premature death [6], [5]. Depres-

sion impedes the satisfaction of basic human needs and adversely affects individual's everyday life activity, resulting in a significant decline in the quality of life [7].

Depression is a chronic recurrent disease, with relapsing episodes occurring in about 60% of patients [2], [8], [5]. It is known that early detection of depression and timely initiation of treatment significantly improve the outcome of the therapeutic interventions. And, conversely, delayed disease

identification leads to chronization of the pathological process, increases the risk of developing repeated depressive episodes in the future and significantly affects the prognosis of the disease as a whole [8], [5]. In this regard, much attention should be drawn to the identification of prognostic factors, which will allow to anticipate the response to specific treatment and possible outcomes, develop personified therapeutic approaches and reduce the number of forms with a prolonged and chronic course.

In psychiatry and clinical psychology, for many years, there is a tradition that links depression with the psychological characteristics of a person [9], [10], [11]. These data are the basis of the so-called patoplastic model of depression, according to which personality characteristics significantly affect the clinical picture of the disease: the course of the depressive disorder, therapeutic response to the treatment, adherence to therapy, etc. [10], [12]. Personality features can imbue the depressive experience and manifestations with a certain color. In turn, the experience of severe illness with an impairment of the emotional and motivational domains can significantly affect the personal functioning, coping strategies, behavior and cognitive processes, causing fairly stable changes [10].

The mental state of patients with depression, their personality traits, and the ability to withstand the disease affect the treatment process [9],[10]. Under favorable circumstances, these factors may contribute to the psychological comfort of the patient, internal resources to fight against the disease, and willingness to successful treatment [12]. Therefore, the study of the relationship between depression and individual's psychological characteristics will improve the treatment of the recurrent depressive disorder, in particular by providing more precise targets for psychological interventions.

The **current study aimed** to evaluate the clinical and psychological characteristics of patients with the recurrent depressive disorder and to analyze their dynamics, depending on the disease duration.

## 2 Methods

To achieve the goal, we examined 40 patients with recurrent depressive disorders with various degrees of severity (F33.1-F33.2). The comparison group included 35 people without mental illness.

The sophisticated approach was used, which included the following methods: clinical and psychopathological (patient's complaints, symptoms, clinical history, psychopathological condition, and its course); E. Heim's technique [13]; Self-Actualization Test [14]; statistical analysis (Student's t-criterion, exact Fisher method, correlation analysis). As part of the analysis was performed a calculation Kulback's informativeness measure, which is based on the determination of diagnostic coefficients calculated for the main and control groups of patients. The diagnostic coefficient is represented as a logarithm of the probabilities ratio of the characteristic's manifestation in the main and control groups ( $P(x_j / A_1)$  and  $P(x_j / A_2)$ , respectively) and multiplied by 100.

## 3 Results

### 3.1 Socio-demographic characteristics

In the main group of patients with recurrent depressive disorders, women dominated (79.55%), most prevalent age group was from 50 to 59 years old (34.09%), higher education was quite prevalent (45.45%), most individuals were living in the city (77.27%), married – 70.45%, and did not have a permanent job (57.50%). It should be noted that among unemployed only 4.4% reached retirement age. The comparison group by age, place of residence, marital status, and social employment rates did not differ from the main one.

### 3.2 Depressive disorder characteristics

The main group included individuals with recurrent depressive disorders without rapid cycles in the medical history and complete remission of previous episodes (Table 1). According to the Table 1, in the vast majority of examined patients, a history of 3 to 5 depressive episodes was recorded, taking into account the current (52.27% of subjects). In 31.82% of this category of patients, this episode was second. In 15.91% of patients, there were more than 5 depressive episodes during the disease's course. The duration of the current depressive episode in the examined patients in the vast majority of cases was from 2 weeks to 6 months (65.91%). In a large number of patients, the duration of the episode was between 6 months and 12 months (25.00%). The duration of the episode more than 12 months was observed in 9.09% of cases.

The duration of the previous remission in 36.36% of patients with recurrent depressive disorders was estimated between 6 and 12 months, 34.09% of patients - between 12 and 24 months and 29.55% of patients - more than 24 months.

The structure of clinical and psychopathological manifestations of the depressive spectrum in patients with recurrent depressive disorders was characterized by the presence of affective, motivational, cognitive, psychomotor and somatic disorders, among which more pronounced were: depressed mood (100%), decreased activity and initiative (88.64%), sense of lack of perspective (84.09%), decreased concentration (86.36%), and mental exhaustion (81.82%). Psychomotor disturbances in recurrent depressive disorders were represented mainly by retardation (56.82%), somatic ones - physical fatigue (84.09%) and sleep disorders (79.55%).

### 3.3 Coping behavior description

The analysis of preferred coping strategies showed that 59.43% of people without mental disorders were inclined to use adaptive coping strategies, 18.81% used relatively adaptive and 20.75% - maladaptive coping strategies (Fig. 1A). In patients with the recurrent depressive disorder, 38.83% of the patients used an adaptive, 27.18% - relatively adaptive and 33.98% - maladaptive coping strategies (Fig. 1B). The statistical analysis of the results showed that individuals without mental disorders were more likely to use adaptive

coping strategies ( $p \leq 0.05$ ,  $DK = 1.72$ ,  $MI = 0.16$ ), while patients with the recurrent depressive disorder - maladaptive coping strategies ( $p < 0.05$ ,  $DC = 1.65$ ,  $IM = 0.23$ ).

A detailed analysis of coping behavior has shown that among the cognitive copings in patients with recurrent depressive disorder the most pronounced were: problem analysis (23.53%), confusion (20.59%) and establishing self-value (14.71%), and in individuals without mental disorders - problem analysis and preservation of self-control (28.57% and 22.86% respectively) (Fig. 2).

Among the emotional coping strategies in patients with the recurrent depressive disorder, passive cooperation (29.41%), inhibition of emotions (23.53%), and self-blame (14.71%) prevailed. In the comparison group, 62.86% of the people were inclined to perceive difficult situations with confidence in their solution optimistically. In the analysis of behavioral responses, it was determined that patients with recurrent depressive disorder tended to use the strategy of cooperation (23.53%), treatment (20.59%) and retreat (20.59%), and healthy - cooperation (31.43%), distraction (22.86%) and constructive activity (11.42%).

Statistical analysis confirmed the obtained data about the predominance of such strategies as retreat ( $p < 0.05$ , Kulback's Diagnostic Coefficient ( $DC$ ) = 4.75, Kulback's informativeness measure ( $IM$ ) = 0.33), confusion ( $p < 0.025$ ,  $DC = 8.58$ ,  $IM = 0.76$ ), passive cooperation ( $p < 0.01$ ,  $DC = 6.30$ ,  $IM = 0.71$ ) and self-excitation ( $p < 0.05$ ) in patients with recurrent depressive disorder and strategies of distraction ( $p$

Table 1: The course of the recurrent depressive disorder.

Estimated value	Absolute quantity, (n = 44)	% $\pm$ m %
The number of episode in anamnesis, including current		
2	14	31.82 $\pm$ 7.10
3-5	23	52.27 $\pm$ 7.62
>5	7	15.91 $\pm$ 5.58
The duration of current episode		
from 2 weeks to 6 months	29	65.91 $\pm$ 7.23
6-12 months	11	25.00 $\pm$ 6.60
>12 months	4	9.09 $\pm$ 4.38
The duration of previous remission		
from 2 weeks to 6 months	16	36.36 $\pm$ 7.34
6-12 months	15	34.09 $\pm$ 7.23
>12 months	13	29.55 $\pm$ 6.96

Figure 1: Leading coping strategies for people without mental disorders (A); leading coping strategies in patients with the recurrent depressive disorder (B).

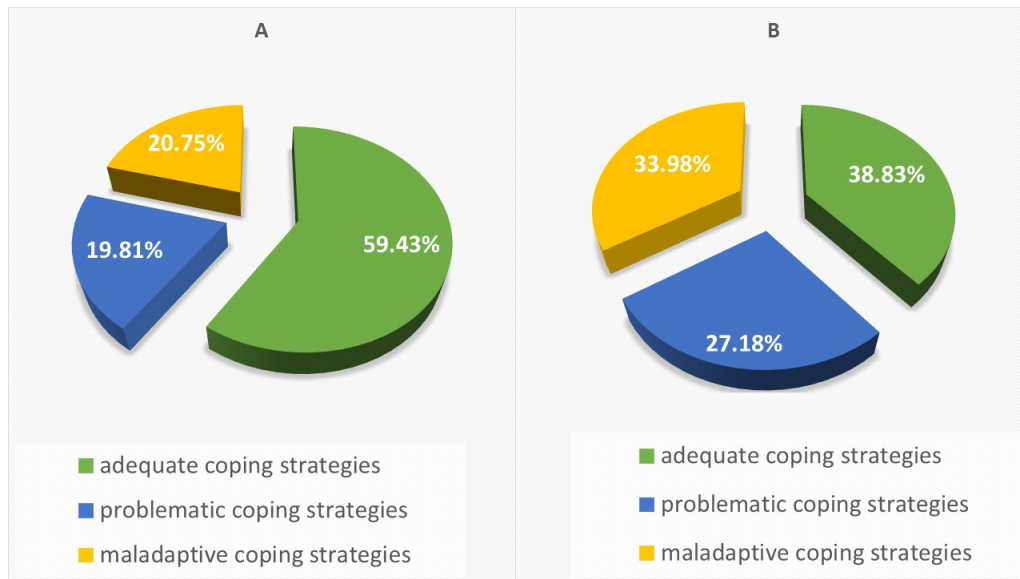
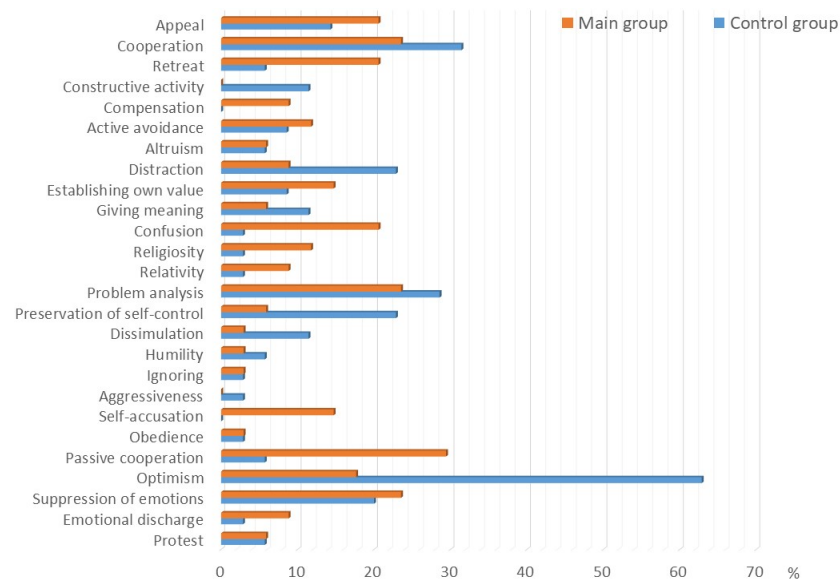


Figure 2: Coping strategies for patients with the recurrent depressive disorder and persons without mental disorders (by E. Heim method).



< 0.05, DC = 4.95, IM = 0.46), constructive activity ( $p < 0.05$ ), preservation of self-control ( $p < 0.05$ , DC = 5.89, IM = 0.50), and optimism ( $p < 0.0001$ , DC = 6.33, IM = 1.84) in persons without mental disorders.

### 3.4 SAT results analysis

The analysis of the results obtained from the Self-Actualization Test (SAT) showed relatively low scores in all indicators (Figure 3). Thus, it was determined that patients in the main group were inclined to focus only on one of the segments of the timeline (past, present or future) and to discretely perceive their life path ( $31.16$  (Mean)  $\pm 15.90$  (SD) points).

Low indicators of contact were identified, which was manifested in the tendency to avoid subject-subject communication (27.95 points), as well as low levels on self-esteem and self-acceptance scales (30.21 and 33.87 points, respectively). The score on the support scale can indicate a high degree of dependence, conformality, independence, a prevalence of external locus of patient's control (39.54 points). The patient's ability to spontaneously and directly express their feelings (35.39 points), their own negative emotions (irritation, anger, and aggression) (36.22 points) was combined with a low reflection of their needs and feelings (39.34 points).

Patients with the recurrent depressive disorder were not inclined to seek self-actualization (42.27 points) and were inflexible in realizing their values and behavior, as well as in interactions with others (37.78 points). Also, in this group, low indicators of cognitive needs and creativity were determined in patients with the recurrent depressive disorder (38.02 and 33.83 points, respectively).

Individuals without mental illness were characterized by high scores on such scales as: orientation in time, valuable orientation, flexibility in behavior, self-esteem and self-perception (58.99, 58.38, 59.31, 59.21, and 54.90 points, respectively), which testified to the ability of subjects to live in present, to perceive their own way of life in a holistic manner, the presence of flexibility of behavior and goals of self-actualization, positive qualities of character, to respect and to accept oneself what they are. Also, were established personality features that were in line with the normative level: the prevalence of the internal control locus (52.55 points), adequacy in understanding and manifestation of their own

feelings (46.38 and 49.36 points respectively), the ability to establish deep and emotionally-rich contacts with people (51.32 points), propensity to positive perception of others (48.52 points), and the presence of cognitive needs and creative orientation of the personality (48.39 and 47.26 points, respectively).

The statistical analysis of the results demonstrated and confirmed the described differences between patients with recurrent depressive disorder and the comparison group, which consisted of lower scores for patients on the scale: time Orientation ( $p < 0.0001$ ,  $t = 5.9881$ ), support ( $p < 0.0001$ ,  $t = 5.481$ ), value orientation ( $p < 0.0001$ ,  $t = 4.817$ ), flexibility of behavior ( $p < 0.0001$ ,  $t = 5.921$ ), spontaneity ( $p < 0.002$ ,  $t = 3.274$ ), self-esteem ( $p < 0.0001$ ,  $t = 4.797$ ), self-acceptance ( $p < 0.0001$ ,  $t = 4.881$ ), acceptance of aggression ( $p < 0.006$ ,  $t = 2.818$ ),  $t =$  contact ( $p < 0.0001$ ,  $t = 3.965$ ), cognitive needs ( $p < 0.01$ ,  $t = 2.577$ ) and creativity ( $p < 0.0001$ ,  $t = 3.795$ ).

Also, during the study, a correlation analysis was conducted on the number of episodes depending on the personality traits in patients with the recurrent depressive disorder (Table 2).

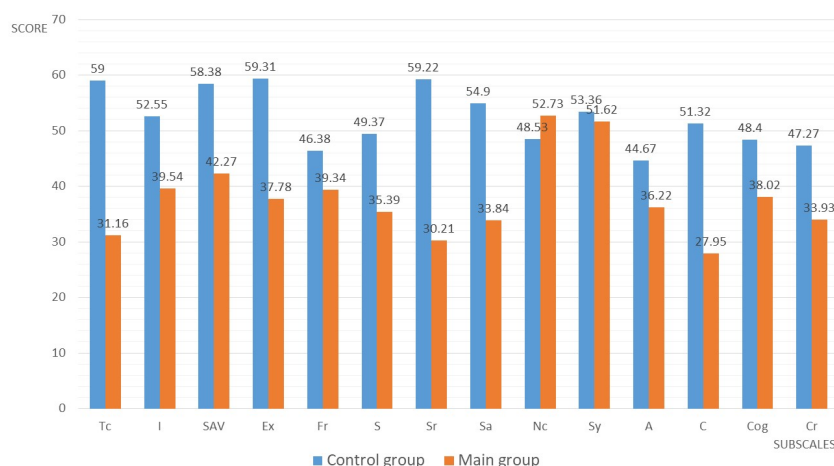
It has been determined that the presence of 2 episodes in the history of patients is related to the time orientation ( $r = 0.457$ ), flexibility of behavior ( $r = 0.467$ ), and contact ( $r = 0.448$ ). The increase in the number of episodes (3-5 episodes) was associated with rigidity ( $r = -0.473$ ), decrease in motivation ( $r = -0.464$ ), discreteness in perception of their own lifestyle ( $r = -0.447$ ), inability to spontaneously manifest their own emotions ( $r = -0.494$ ), low self-admission ( $r = -0.466$ ).

The increase in the number of episodes (more than 5) was due to fixation of attention at one of the time segments (past, present or future) ( $r = -0.626$ ), the devastation of the value-motivational sphere ( $r = -0.572$ ), low self-acceptance indicators ( $r = -0.402$  and  $r = -0.644$  respectively), decrease in contact ( $r = -0.470$ ), difficulties in expressing their own emotions, especially aggression ( $r = -0.405$  and  $r = -0.472$ , respectively).

A correlation analysis between the number of episodes with the peculiarities of the coping strategies of patients with the recurrent depressive disorder was also conducted (Table 3).

In the first episodes, patients were inclined to, on the one hand, to fix difficulties ( $r = -0.549$ ), feel confused ( $r =$

Figure 3: Comparison of self-actualization scores in patients with and without the recurrent depressive disorder (according to SAT).



\*Notes: Tc – time orientation; I- support; Sav- value orientation; Ex - flexibility of behavior; Fr - sensitivity; S- spontaneity; Sr – self-esteem; Sa – self-acceptance; Nc – understanding of human’s nature; Sy - synergy; A – acceptance of aggression; C - contact; Cog – cognitive needs; Cr - creativity.

0.621), were not inclined to accept the prevailing situation from others ( $r = 0.416$ ). In repeat episodes, patients tended ( $r = -0.485$ ), tried to distract ( $r = 0.455$ ) and hoped for help to be locked up in the current situation ( $r = -0.408$ ), tried

Table 2: Correlation between personality characteristics and the number of depressive episodes in patients with the recurrent depressive disorder.

Characteristic	2 episodes	3-5 episodes	More than 5 episodes
Time Orientation	0.457	-0.447	-0.626
Support	0.114	-0.148	0.152
Value Orientation	0.102	-0.464	-0.572
Flexibility of behavior	0.467	-0.473	-0.054
Sensitivity	-0.015	0.059	0.007
Spontaneity	-0.008	-0.494	-0.405
Self-esteem	0.050	0.001	-0.644
Self-acceptance	0.114	-0.466	-0.402
Understanding the human’s nature	-0.165	-0.087	0.257
Synergy	0.225	-0.102	-0.237
Acceptance of aggression	-0.003	0.058	0.472
Contact	0.484	-0.155	-0.470
Cognitive needs	0.124	-0.004	0.144
Creativity	-0.042	-0.059	0.027

to cope with it with religion ( $r = 0.431$ ) or through contact with help from others ( $r = 0.492$ ), as well as through passive co-operation or avoidance of the situation ( $r = 0.479$  and  $r = 0.498$ , respectively).

In repeat episodes, patients experienced confusion ( $r = 0.487$ ), obedience ( $r = 0.637$ ), tended to retreat from difficulties because they did not feel their strength to master the situation ( $r = 0.420$ ) and were inclined not to share their expe-

riences with others ( $r = -0.587$ ).

## 4 Conclusions

As a result of the study, the clinical picture of recurrent depressive disorders, which has a specific syndromic structure including affective (100.00%), motivational-volitional (90.91%), cognitive (88.64%), psychomotor (56.82%) and somatic manifestations, i.e. impairment of the vital tone regulation (physical fatigue, lethargy, and energy loss) (84.09%), impairment of basic functions (sleep disturbances, appetite disturbances, weight loss, decreased sexual desire) (79.55%), unpleasant bodily sensations (65.91%) and visceral symptoms (56.82%).

Also, were established typical psychological features of patients with the recurrent depressive disorder, including coping strategies, time perception, and personality characteristics, namely:

- Among the leading coping strategies: the use of cognitive coping "confusion" (DC = 8.58); use of emotional coping "passive cooperation" (DC = 6.30); use of behavioral copings "retreat" (DC = 4.75); actualization of maladaptive coping strategies (DC = 4.75).
- Among the peculiarities of the personality: the discrete perception of the way of life (DC = 13.01); decrease of motivational-behavioral sphere (DC = 6.61); predominance of external control locus (DC = 6.73); negative attitude towards oneself and others (DC = 4.84 and DC = 3.26, respectively); isolation and apathy (DC = 7.29 and DC = 3.01, respectively).
- In the mechanisms of the formation of recurrent depressive disorders, there was seen an association between specific coping strategies and personality traits and the number of depressed episodes.
- With the disease course was seen transformation in used coping strategies, from confusion ( $r = 0.621$ ) and difficulty recording ( $r = -0.549$ ) due to waiting for help ( $r = 0.492$ ) and passive cooperation ( $r = 0.479$ ) to restraint ( $r = -0.587$ ) and retreat ( $r = 0.420$ ). In the field of personality characteristics: from maintaining the flexibility of behavior ( $r = 0.467$ ) and contact ( $r = 0.448$ ) due to rigidity increase ( $r = -0.473$ ), decrease in motivation

Table 3: Correlation between the coping strategies and the number of episodes in patients with the recurrent depressive disorder.

Characteristic	2 episodes	3-5 episodes	More than 5 episodes
Ignoring	-0.549	-0.408	-0.094
Humility	-0.104	0.145	-0.066
Dissimulation	-0.104	0.145	-0.066
Preservation of self-control	-0.149	-0.009	0.203
Problem analysis	0.016	0.033	0.087
Relativity	0.062	-0.087	0.040
Religiosity	0.170	0.431	-0.155
Confusion	0.621	-0.024	0.487
Giving meaning	0.008	0.077	-0.117
Establishing own value	-0.129	-0.018	0.189
Protest	0.485	-0.009	0.203
Emotional discharge	-0.037	0.115	-0.110
Suppression of emotions	-0.104	-0.079	0.441
Optimism	0.057	0.096	-0.205
Passive cooperation	0.199	0.479	-0.009
Obedience	-0.216	0.143	0.637
Self-accusation	-0.090	0.055	0.140
Distraction	0.455	-0.283	0.008
Altruism	-0.149	0.208	-0.094
Active avoidance	-0.244	0.498	0.040
Compensation	-0.046	0.202	-0.137
Retreat	0.016	0.146	0.420
Cooperation	0.137	-0.192	-0.587
Appeal	0.416	0.492	0.241

( $r = -0.464$ ) and negative self-perception ( $r = -0.466$ ) to avoidance of interpersonal contacts ( $r = -0.470$ ), devastation of value-motivational sphere ( $r = 0.572$ ) and decrease self-esteem ( $r = -0.644$ ).

Thus, the obtained data should be taken into account when conducting diagnostic and providing psychotherapeutic interventions for patients with the recurrent depressive disorder.

## 5 Additional information

### 5.1 Competing interests

The authors declare that no competing interests exist.

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