

Aggression as a key pathogenetic factor of depression: an empirical study

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Abstract

Objective: This pilot study aims to empirically investigate aggression as a psychological mechanism involved in the development and persistence of depressive disorders and assess its association with the severity of depressive symptomatology.

Methods: The study involved three groups: patients with depressive disorders (ICD-10 codes F32.00, F33.00, F33.11) receiving only pharmacological treatment (Group 1, N = 30) and receiving only non-pharmacological psychotherapy (Group 2, N = 18); and a control group of conditionally healthy respondents (N = 30). Assessments used the *Beck Depression Inventory–II*, the *L. G. Pochebut Aggressiveness Questionnaire*, and the *C. Ryff Psychological Well-Being Scales*. Statistical analysis included the Mann-Whitney U test, Wilcoxon signed-rank test, Spearman's rank correlation coefficient, and regression analysis.

Results: Patients with depressive disorders demonstrated statistically significantly higher levels of self-directed aggression (auto-aggression) and overall aggressiveness compared to the control group, as well as decreased psychological well-being. Regression analysis showed that the overall level of aggression is statistically significantly associated with the severity of depressive symptomatology and may be considered a potential predictor of depressive symptom intensity. Emotional aggression, in contrast, was negatively associated with depression severity, reflecting affect suppression as the disorder worsens. In the psychotherapy group, a significant reduction in depressive symptoms and improvement in emotional state indicators were observed, with differential effects depending on the level of personality organization (neurotic vs. borderline).

Conclusions: Aggression may be considered one of the key psychological mechanisms involved in the formation and maintenance of depressive disorders and is associated with the severity of cognitive-affective and somatic symptoms. Targeted psychotherapeutic work with suppressed aggression was associated with statistically significant reductions in depressive symptomatology and with improvements in self-regulation and self-attitude indicators. The findings underscore the need to include the diagnosis and processing of self-aggression in depression treatment protocols.

Keywords: depression, self-aggression, Integrative Causal Psychotherapy, suppressed aggression, psychological well-being, psychotherapy for depression.

Introduction

The relationship between depressive symptomatology and various forms of self-aggression is considered within theoretical models in psychodynamic psychotherapy and supported by numerous clinical observations. Even in classic psychoanalytic works, depression was viewed as a result of introjecting a lost or frustrating object and redirecting aggression from the external object onto the self [1–3]. Within

this logic, the depressive state is understood as a form of unconscious self-punishment, where aggressive impulses, finding no outlet in external behavior, turn inward, forming auto-aggressive tendencies.

Self-aggression in depression encompasses a wide spectrum of forms — from cognitive self-deprecation and chronic self-criticism to passive forms of self-destructive behavior (intentional

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neglect of one's own needs, refusal of self-care, chronic self-devaluation) — and is a significant and specific component of depression. The level of passive self-aggression is statistically significantly higher in patients with depressive disorders compared to control groups and partially mediates the link between impaired self-control and the severity of depressive symptomatology. These data allow self-aggression to be considered not merely as a secondary consequence of depression, but as one of its significant psychological mechanisms [4–8].

Several studies indicate that active forms of self-aggression, including non-suicidal self-injury and suicide attempts, are also closely linked to depressive symptomatology. Patients with pronounced auto-aggressive and suicidal tendencies exhibit impairments in serotonergic regulation similar to those observed in severe depressive states. This supports the hypothesis of shared neurobiological mechanisms underlying depression and self-aggression [9–11].

Special attention is paid to the role of early traumatic experiences and emotional regulation disturbances in the formation of self-aggression in depression. Research shows that childhood trauma, chronic stress, and deficits in secure attachment increase the likelihood of developing auto-aggressive strategies as a means of affect regulation, which subsequently contributes to the chronicity of depressive states [12]. In these cases, self-aggression performs a paradoxical regulatory function, reducing the intensity of unbearable emotional states by transferring affect into the bodily or behavioral sphere.

Genetic and behavioral studies also confirm shared mechanisms of depression and self-aggression. Twin studies have shown that inwardly directed aggression and depressive symptoms are partly due to common genetic factors, yet a significant portion of the variability is explained by individual experience and environmental influences [13]. This underscores the importance of psychotherapeutic intervention aimed at reworking auto-aggressive patterns.

Thus, contemporary literature allows viewing self-aggression as a multi-level phenomenon encompassing cognitive, emotional, behavioral, and neurobiological components closely linked to depressive states. Self-aggression in depression manifests both in active forms (self-harm, suicidal behavior) and passive forms (self-devaluation, refusal of self-care, chronic self-punishment), with both forms contributing to the maintenance and worsening of depressive symptomatology. When externally directed aggression is suppressed, it accumulates and may be directed at the self, which typically leads to painful guilt, groundless fear,

neuroses, and in severe cases — to suicidal impulses.

Within the context of the presented data, the following research hypothesis was formulated: increased auto-aggressiveness is statistically significantly associated with the severity of depressive symptomatology and may be considered a potential predictor of both cognitive-affective and somatic symptoms and overall depression severity.

Sample and Assessment Methods

The study was conducted from September 2023 to December 2024 and included 3 respondent groups:

- group 1 — patients with diagnosed depression receiving pharmacological treatment;
- group 2 — patients with diagnosed depression receiving non-pharmacological psychotherapeutic treatment, and a control group — respondents not registered with psychiatric services or under psychiatric observation.

Group 1 consisted of 30 patients aged 18 to 63 years receiving inpatient and outpatient pharmacological treatment. The patients were examined at the State Budgetary Clinical Institution of the Yaroslavl Region “Yaroslavl Regional Psychiatric Hospital” (GBKUZ YAO “YORPB”).

Group 2 consisted of 18 patients aged 24 to 76 years. Participants were recruited via an announcement from the Academy of Integral Psychodynamic Psychotherapy (Moscow, Russia). Diagnoses were confirmed by a certified psychiatrist using structured clinical interviews based on ICD-10 criteria. These patients received psychotherapeutic non-pharmacological treatment for depression focused on working with unprocessed aggression, using a method developed within the framework of Integrative Causal Psychotherapy (ICP) at the Academy of Integral Psychodynamic Psychotherapy (AIPP).

The control group consisted of a sample of healthy individuals aged 18 to 51 years, recruited via snowball sampling.

All participants provided informed consent, and the study protocol was approved by the AIPP Ethics Committee.

The main focus of the study was: a) identifying and comparing the level of self-aggression in Group 1 and the control group; b) analyzing the dynamics of self-aggression before and after treatment in Group 2.

Testing utilized standardized psychological scales and questionnaires: the C. Ryff Psychological Well-Being Scales [14], the L. G. Pochebut Aggressiveness Questionnaire [15], the Beck Depression Inventory-II

(BDI-II) [16], and Yu. N. Tor's questionnaire "Satisfaction with the Dynamics of Changes in Key Life Spheres." For statistical processing of results, the Mann-Whitney U test, Wilcoxon signed-rank test, Spearman's rank correlation coefficient, and regression analysis were used.

Results and Discussion

A comparative analysis of data from Group 1 and the control group revealed that indicators of physical aggression*, self-aggression, total aggression score, and depression (cognitive, somatic, and total scores) were higher in Group 1. They were characterized by:

- stable negative beliefs about their own personality, accompanied by a tendency to direct aggression inward — towards the self, as well as destructive attitudes towards the environment;
- marked disturbances in affective state and distorted self-attitude, substantially differing from the indicators of the control group;
- low level of self-acceptance, expectation of punishment, indecisiveness, and subjective experience of social alienation;
- somatic components of depressive symptomatology, including sleep disturbances, increased fatigue, hyper-focus on health status and appearance.

Collectively, these manifestations indicate that individuals with depressive disorders experience existential emptiness and a sense of their own inadequacy, accompanied by a tendency towards auto-aggressive attitudes and behavior.

Comparison of Group 1 and the Control Group

Indicators of psychological well-being and satisfaction in key life spheres were statistically significantly higher in the control group (Table 1). Patients with depressive disorders were characterized by greater social isolation and frustration in interpersonal relationships, fewer trusting connections, difficulties in organizing daily activities, and a subjective sense of inability to influence the circumstances of their own lives. Compared to healthy respondents, they felt less self-actualized and developing. They were characterized by boredom, loss of interest in life, an experience of inability to establish new relationships or change behavioral patterns, reduced purposefulness, and a deficit of life goals and intentions. Furthermore, patients found no meaningful orientation in their

past experience and lacked stable ideas about prospects and values defining the meaning of life; they experienced greater dissatisfaction with themselves and pronounced anxiety regarding their personal qualities.

Regression Analysis: The Relationship Between Aggression and Depression

The results of regression analysis, which assessed the contribution of aggression and psychological well-being indicators to the overall level of depression as well as its cognitive and somatic components, were of substantial importance for understanding the relationship between aggression and depression. Table 2 presents data reflecting the contribution of aggression to depressive symptomatology, as the most significant for psychotherapeutic interpretation. The analysis also used the scales from C. Ryff's methodology.

The results of the regression analysis reveal how different indicators of aggression (per the Pochebut questionnaire) influence the severity of depression (per the Beck Scale). The data presented in Table 2 demonstrate that not all types of aggression are equally related to depression, and the role of emotional (often suppressed) aggression is particularly interesting. Key conclusions here can be:

1. The total aggression score is statistically significantly associated with the severity of depressive symptomatology. This applies to both cognitive-affective symptoms (guilt, hopelessness, low self-esteem) and somatic symptoms (fatigue, sleep disturbances, appetite changes). The total aggression score is a cumulative indicator that includes both external and internal manifestations. Its strong association with depression indicates that unexpressed, suppressed aggression may function as a psychological risk factor contributing to the worsening of depressive manifestations. The organism expends enormous resources on restraining aggressive impulses, leading to exhaustion, guilt, and somatization — direct symptoms of depression.
2. The "Emotional Aggression" indicator has a negative association with the total depression score and with depression severity. This indicator in the Pochebut questionnaire reflects emotional alienation in communication with others, accompanied by suspicion, hostility, antipathy, or ill will towards them. The obtained

* The "Physical Aggression" indicator in L. G. Pochebut's questionnaire is a marker of non-integrated aggression, measuring not behavior as such, but affective-motor predisposition and the level of activation of the aggressive-motor system.

Indicator	Mean patients (Group 1)	Mean healthy (Control)	Significance level
Physical aggression	2.53	1.40	p<0.01
Self-aggression	6.63	4.77	p<0.01
Total aggression score	18.87	15.80	p<0.05
Cognitive-affective scale	22.73	9.00	p<0.001
Somatic symptoms scale	10.97	5.90	p<0.001
Total depression score	33.70	14.90	p<0.001
Positive relations	53.63	60.13	p<0.05
Environmental mastery	46.17	52.93	p<0.01
Personal growth	53.77	63.60	p<0.001
Purpose in life	46.60	60.80	p<0.001
Self-acceptance	39.27	55.57	p<0.001
Psychological well-being	290.97	346.33	p<0.001
Mood	-1.03	-0.30	p<0.05
Physical well-being	-0.73	-0.23	p<0.01
Self-confidence	-1.40	-0.10	p<0.001
Relations with partner	-0.63	-0.10	p<0.01
Family relations	-0.57	0.30	p<0.01
Relations with others	-0.47	-0.03	p<0.01
Professional sphere/studies	-0.97	0.00	p<0.001
Income	-1.20	0.03	p<0.001
Life enjoyment	-1.17	-0.13	p<0.001
Future expectations	-1.03	0.17	p<0.001

Table 1. Comparison of scale indicators in patients with depressive disorders and the control group using the Mann-Whitney U Test

Aggressiveness	Depression level	p-value
<i>Total depression score</i>		
Total aggression score	0.615163	0.000086
Emotional aggression	-0.295086	0.033679
p-value of the regression model	0.000000005	
<i>Cognitive-affective scale</i>		
Total aggression score	0.410217	0.044901
p-value of the regression model	0.0000000014	
<i>Depression somatization</i>		
Total aggression score	0.520390	0.000317
p-value of the regression model	0.0000000110	

Table 2. Relationship between aggressiveness indicators (Pochebut Test) and depression level (Beck Scale)

data indicate that a higher level of conscious aggressive emotions (anger, irritation) is associated with less severe depression, and conversely — the more severe the depression, the weaker this type of aggression manifests. This suggests the triggering of an aggression suppression mechanism in severe depression. As depression deepens, apathy, anhedonia, and emotional numbness increase. Aggressive impulses do not disappear but cease to be conscious as anger. They are suppressed — repressed from consciousness and find outlet in other, more destructive forms: auto-aggression and somatization. Thus, in this case, a decrease in conscious aggressive feelings may reflect mechanisms of affective suppression often observed with the worsening of depressive states.

3. Suppressed aggression differentially influences mental and somatic symptoms of depression. The overall level of aggression is statistically significantly associated with depressive symptom severity and may contribute to its cognitive-affective and somatic components. However, the probable different pathogenetic mechanisms of these associations are of interest. Regarding cognitive-affective symptoms (guilt, low self-esteem, pessimism), high aggressiveness presumably acts through the mechanism of internalization and turning aggression against the self. Not being expressed outwardly, aggression transforms into stable negative cognitive schemas and affective experiences characteristic of depressive affect.

Group 2: Psychotherapy Results

The comparison of psychological indicators in Group 2 before and after psychotherapy focused on integrating suppressed aggression is of no less interest. As a result of psychotherapy, clinical remission was observed in 83% of participants (N=15), with the remaining 17% (N=3) showing a statistically significant reduction in symptom severity. Furthermore, among patients with neurotic personality organization (N=9), complete remission of depressive symptomatology was observed in all cases within this subgroup (100% of patients with neurotic personality organization). Among patients with borderline personality organization, constituting half of the sample (N=9), 67% achieved remission, and 33% showed a reduction in symptom severity [17].

Data in [Tables 3](#) and [4](#) demonstrate a statistically significant positive effect of the conducted psychotherapy in both subgroups: patients with neurotic and borderline personality organization*. In particular, the obtained indicators allow for the following conclusions.

1. *General positive effect observed in both subgroups:* therapy led to a significant reduction in both the cognitive-affective component of depression (guilt, pessimism) and an improvement in the general emotional background, reflected in the positive dynamics of the mood indicator.
2. *Differential effect depending on personality structure:* analysis reveals qualitative differences in therapeutic response, underscoring the importance of considering the level of personality organization. In patients with neurotic personality organization, therapy led to significant positive changes in the sphere of self-attitude and basic affect: the self-confidence indicator increased from a negative value (-0.29) to a positive one (1.00), indicating overcoming the feeling of uncertainty characteristic of depression and the formation of more stable self-esteem. Patients with a more preserved (neurotic) personality structure apparently managed to integrate suppressed aggressive feelings to a greater extent. This directly reflected in the improvement of their self-perception and emotional background. In patients with borderline personality organization, the “Environmental Mastery” indicator increased (from 43.86 to 50.57), indicating that patients began to feel more competent and capable of influencing their lives; the “Self-Acceptance” indicator increased significantly (from 43.29 to 50.14), suggesting a reduction in the intensity of splitting and the formation of a more integrated and less judgmental self-image.
3. The presented data provide empirical support for the clinical effectiveness of psychotherapy focused on processing unprocessed aggression in the treatment of depression. Moreover, in neurotic patients, therapy to a greater extent stabilized self-esteem, while in borderline patients, it additionally strengthened basic Ego functions — the ability to manage one’s life and accept oneself wholly. Thus, the therapy was associated with clinically meaningful improvements in both subgroups but led to somewhat differing, clinically relevant patterns of improvement corresponding to the patients’ initial level of personality functioning.

* Based on the classification of Otto Kernberg [18].

Group with psychotherapy (neurotic)	Mean before	Mean after
Cognitive-affective depression scale	11.00	6.43
Mood	0.00	1.29
Self-confidence	-0.29	1.00

Note: statistical significance was set at $p < 0.05$.

Table 3. Comparison of scale indicators in patients with neurotic personality organization before and after psychotherapy using the Wilcoxon signed-rank test

Group with Psychotherapy (Borderline)	Mean before	Mean after
Environmental mastery	43.86	50.57
Self-acceptance	43.29	50.14
Cognitive-affective depression scale	15.71	9.43
Total depression score	24.86	15.14
Mood	-0.71	0.86

Note: statistical significance was set at $p < 0.05$.

Table 4. Comparison of scale indicators in patients with borderline personality organization before and after psychotherapy using the Wilcoxon signed-rank test

Conclusion

The conducted study demonstrates an association between increased aggressiveness and greater severity of depressive symptomatology. Patients with depressive disorders demonstrate significantly higher levels of auto-aggression, physical aggression, and overall aggression compared to a control group of healthy respondents.

Regression analysis further indicated that the overall level of aggression is significantly associated with depressive symptom severity and may contribute to its intensity. At the same time, emotional aggression showed a negative association with depression severity, reflecting mechanisms of affect suppression in more severe forms of the disorder. Taken together, these findings suggest that depression is accompanied not only by internalized self-blame but also by complex processes of aggressive affect processing and suppression, which may transform into auto-aggression and somatization.

The results of psychotherapeutic intervention showed that psychotherapy aimed at integrating aggression leads to remission in patients with neurotic personality organization and a statistically significant reduction in depressive symptomatology and improvement in emotional state in patients with borderline personality structure. These data suggest that auto-aggression can be considered an important

pathogenetically significant link in depressive disorders. Thus, targeted psychotherapeutic work with aggressive patterns opens the way to mechanism-oriented psychotherapeutic interventions aimed at reducing depressive symptomatology and restoring psychological well-being. Further research may be directed at developing standardized protocols for assessing auto-aggression and evaluating the efficacy of auto-aggression-focused psychotherapy on larger samples of patients with diagnosed depression.

Conflict of Interest Statement

The authors declare no conflict of interest.

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