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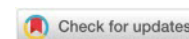
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Personality Traits, Approval Motivation, and Empathy as Predictors of Cognitive Regulation of Emotions and Behavioral Self-Control in Codependent Women

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Abstract: This study examined psychological characteristics and behavioral regulation in codependent women. The study aimed to identify personality traits, approval motivation, and empathy levels as predictors of behavioral regulation in codependent women. A total of 102 women (mean age 30.39 years) in relationships or related to alcohol, drug, or non-chemical addicts participated. Psychological testing and survey were used to assess codependence, aggression, empathy, need for approval, cognitive regulation of emotions, and self-regulation strategies: codependency Self-Inventory scale (CSIS; B. Weinhold, J. Weinhold); questionnaire "Auto- and Aggression to others" (E.P. Ilyin); method "Diagnosis of the level of empathy" (V. V. Boyko); Marlowe-Crowne Social Desirability Scale (adapted by Yu.L.Khanin); The questionnaire of cognitive regulation of emotions (Rasskazova E.I., Leonova A.B., Pluzhnikov I.V.) and the questionnaire "Style of self-regulation of behavior" (Morosanova V.I.). Results suggest that personal characteristics, approval motivation, and empathy can predict the severity of codependence, manifestation of aggressiveness, self-regulation strategies, and cognitive regulation strategies in codependent women.

Keywords: codependency, codependent women, codependent behavior, personality traits, approval motivation, empathy, cognitive regulation of emotions, behavioral self-control.

Introduction

Recent studies of the codependency phenomenon, regardless of the approach, show that codependency can be studied through the specifics of learned behavioral patterns, features of emotional states, adaptation disorders, various personality disorders, etc. (Artemtseva, 2012; Artemtseva and Galkina, 2014; Moskalenko, 2016; Rezvaya, Samsonov and Kutashova, 2019; Askian, et al., 2016; Askian, et al., 2016; Bacon, et al., 2020; Panaghi, et al., 2016; Rozhnova, et al., 2020; etc.). A number of studies, including our previously published works, emphasized a rather high comorbidity with emotional disorders and other forms of addictive behavior (substance abuse, gambling, the Internet, etc.) and show the specifics of codependents psychological characteristics, which manifest themselves in the emotional, behavioral and cognitive aspects (Andronnikova, 2017; Apenok, 2015; Bashmanov and Kalinichenko, 2015; Bereza et al., 2016; Gagai and Selezneva, 2016; Kolenova and Gurtsoy, 2019; Merinov et al., 2015; Perminova, 2017; Pleshakova, 2018; and others).

At the emotional level, the codependency manifestations are closely associated with emotional sensitivity and a high level of empathy, neuroticism, anxiety, externality of control, decreased self-esteem, guilt, and depressive symptoms (Stryapukhina and Posokhova, 2022; Stryapukhina Yu. V., 2021; Shapovalov and Golenischeva, 2022; Orbon M. C. et al., 2021; Kupchenko, 2020; Politica O. I., 2020; Ermakov, Kukulyar and Kolenova, 2018; Tulebaeva, 2017; Kogan, Drozdov and Kardashian, 2012; Moskalenko, 2009). A sample of relatives of drug addicts showed a high level of emotional burnout (Shishkova and Bocharov, 2022). Women in romantic relationships with drug addicts have a low level of

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emotional intelligence, a reduced ability to understand and manage their own emotions (Khazova and Shipova, 2020).

At the cognitive level, codependence is associated with dysfunctional beliefs and certain cognitive errors associated with the need for control and the desire to avoid uncertainty (Artemtseva and Malkina, 2022). It has been shown that codependents have decreased levels of reflection and self-differentiation, emotional reactivity, emotional withdrawal, and merging with others (Lampis, et al., 2017). In addition, features of the time perspective were identified in codependent men and women, which are characterized by an increased focus on the present (Danilova and Gomba, 2021).

In the behavioral aspect, a tendency to obsessions, loss of personal autonomy, a predominance of catastrophizing reactions, a tendency to self-aggression and self-destructive behavior were shown (Stryapukhina, 2021; Kupchenko, 2020; Rozhnova T. M. et al., 2020; Kolenova and Gurtsoy, 2019; Buzik and Efimova, 2019; Perminova, 2017; Merinov et al., 2015). Codependency, as a dysfunctional form of relationships, is significantly associated with negative forms of dyadic adaptation in couples, relationship problems, and reduced life satisfaction (Happ, et al., 2022). There is also evidence of the absence or blurring of psychological boundaries and a tendency to violate them with others, negative attitudes towards their self and others, as well as a lack of personal coping resources (Khazova and Varioshkina, 2022; Kolenova, 2019; Tasheva and Bedredinova, 2016). A decrease in self-regulation at psychological and physiological levels has also been shown (Zielinski, Bradshaw and Mullet, 2019).

Previous studies of the motivational sphere, which are not numerous among codependents, showed a pronounced need for approval and the motive "to be needed" (Stryapukhina, 2021; Vinnikov, 2019). In earlier works, we also managed to establish that the severity of codependency can be determined by deformation of the value-semantic sphere, lack of necessary competencies under the influence of negative experience of dysfunctional relationships with significant others, which is also seen in a number of other codependency studies (Artemtseva and Galkina, 2014; Bereza, et al., 2016; Buzik and Efimova, 2019; Gagai and Selezneva, 2016; Ermakov, Denisova and Kolenova, 2022; Ezin, 2018; Kolenova and Gurtsoy, 2019; Suntsova and Faizova, 2018; Lima, et al., 2019, etc.).

Thus, an analysis of the scientific literature allows us to conclude that the manifestations of codependency are closely associated with early experiences and the emotional and personal characteristics of individuals. Codependents often exhibit specific distortions in the cognitive, emotional, and value-semantic domains, along with distinctive behavioral features. However, despite existing studies on codependent behavior, there is a paucity of empirical research examining the motivational and personal predictors of behavioral regulation in codependent women. Therefore, this article aims to investigate how personality traits, approval motivations, and the level of empathy predict the behavioral regulation of codependent women.

The hypothesis of the study is that personal characteristics, approval motivation, and the level of empathy can determine the characteristics of the manifestation of aggressiveness, the formation of various strategies of self-regulation, and preferences for strategies for cognitive regulation of emotions in codependent women. Additionally, it is assumed that the level of codependency will vary depending on motivational and personal characteristics.

Materials and Methods

Participants

The study involved 102 women aged 18 to 64 years (mean age 30.39 years) who are in a relationship or related to an addict (alcoholism, drug addiction, non-chemical addictions). Including: 52 women who are in a relationship or are related to an alcohol addict; 22 women who are in a relationship or related to a drug addict; 28 women who are in a relationship or are related to non-chemical addicts (gambling, smoking, interpersonal addiction, etc.).

Research methods

In order to study the psychological characteristics of the respondents, psychological testing was carried out using the following methods: codependency Self-Inventory scale (CSIS; B. Weinhold, J. Weinhold); questionnaire "Auto- and Aggression to others" (E.P. Ilyin); method "Diagnosis of the level of empathy" (V. V. Boyko); Marlowe-Crowne Social Desirability Scale (adapted by Yu.L.Khanin); The questionnaire of cognitive regulation of emotions (Rasskazova E.I., Leonova A.B., Pluzhnikov I.V.) and the questionnaire "Style of self-regulation of behavior" (Morosanov V.I.).

In order to collect socio-biographical data, a survey method was used: respondents were asked to

indicate gender, age, describe the type of addiction and their relationship with the addict.

Procedure

The study was conducted in person in online format. Before the start of the study, the purpose of the study was explained to the respondents. Personal data has been anonymized. The participation of respondents was voluntary.

Statistical data analysis

To determine the correspondence of the empirical distribution to the normal law, the Shapiro-Wilk test was used; to divide the sample into subgroups that differ in motivational and personal characteristics, cluster analysis was used (k-means method); to study the significance of differences in the selected subgroups, the nonparametric Kruskal-Wallis test was used (as a posteriori analysis, a pairwise comparison was carried out using the Dunn method). Statistical processing was carried out using the JASP 0.16 software package.

Results

The initial data analysis revealed that the average indicators for the studied scales do not differ from the average values given in the description of the psychological tests used. At the same time, the standard deviation on some scales of personality traits, empathy, and approval motivation indicated a significant spread of values within the sample. In this regard, at the second stage, the procedure for clustering the sample according to the studied indicators was carried out. To level the differences in scales of different methods, the clustering procedure was preceded by the translation of empirical values of the Big Five questionnaire (B5-10), Social Desirability Scale and the "Diagnostics of the level of empathy" questionnaire into standard z-scores. The number of clusters was chosen based on the results of preliminary calculations. Using cluster analysis (k-means clustering) 4 clusters that differ significantly in the scales of personality traits, empathy, and approval motivation were identified. The first cluster included 21 women (mean age 25.14 years), the second - 11 women (mean age 30.45 years), the third - 35 women (mean age 32.77 years), the fourth - 35 women (mean age 31.14 years).

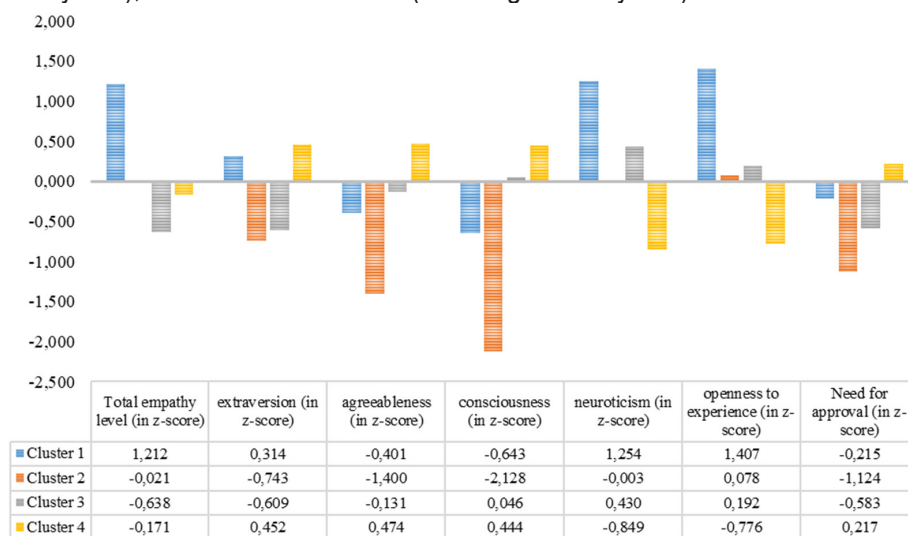


Figure 1. Clusters means for the studied indicators

The analysis revealed significant differences in the average z-scores of the studied indicators among the identified clusters (see Figure 1). Respondents included in cluster 1 exhibit high scores on the scales of neuroticism, openness to experience and demonstrate a high level of empathy. Cluster 2 has low agreeableness and conscientiousness, as well as average indicators of extraversion and need for approval. Cluster 3 respondents are closer to the introversion pole, have reduced levels of empathy, need for approval, and relatively high levels of neuroticism. Cluster 4 showed low values of neuroticism and openness to experience, low empathy, increased values of extraversion, agreeableness, conscientiousness and need for approval.

Analysis of variance (ANOVA) showed that all variables significantly contributed to the clustering of the sample (Table 1).

Table 1
Results of cluster analysis (analysis of variance (ANOVA))

	SS	MS	F	p
Total empathy level (in z-score)	46,776	66,813	23,33707	<0,001
extraversion (in z-score)	28,369	70,974	13,32355	<0,001
agreeableness (in z-score)	32,049	56,344	18,96058	<0,001
consciousness (in z-score)	61,723	52,760	38,99674	<0,001
neuroticism (in z-score)	63,628	46,177	45,93013	<0,001
openness to experience (in z-score)	63,059	40,888	51,40850	<0,001
Need for approval (in z-score)	19,942	75,498	8,80466	<0,001

Legend: SS (Sum of Squares) shows the sum of the squared deviations of the cluster means from the total mean; MS (Mean Square) shows the between-group variance which is equal to the result of division of SS by the degrees of freedom number; as this number is equal to the number of clusters minus 1, in this case SS=MS; Fisher's F-test is the indicator of the correctness of cluster discrimination; p – p-value.

To assess the significance of differences in the severity of behavioral regulation indicators among the selected clusters of codependent women, a comparative analysis was conducted (see Table 2). Prior to the analysis, a preliminary test was conducted to examine the distribution of data on the studied scales in the overall sample and within each cluster. The results indicated that the empirical distribution mostly deviated from normality, necessitating the use of the nonparametric Kruskal-Wallis test to investigate differences between the clusters.

Table 2
Mean scores and the results of the analysis of differences in regulation indicators of the codependent women behavior in clusters

	Cluster 1 (n=21)	Cluster 2 (n=11)	Cluster 3 (n=35)	Cluster 4 (n=35)	Kruskal-Wallis Test	p
Codependency Scale	46,333	44,909	43	38,857	14,142	< 0,003
Self-aggression	5,714	4	3,8	2,486	25,456	< 0,001
Aggression to others	5	4,909	3,543	2,686	13,863	< 0,003
planning	14,81	13,727	16,629	17,571	10,503	< 0,015
modeling	12,095	13,636	14,286	16,686	17,964	< 0,001
programming	16,143	13,727	16,714	18,457	17,586	< 0,001
results rating	16,143	15,636	17,057	17,086	3,745	0,29
flexibility	17,857	16,545	16,457	18,857	5,571	0,134
independence	15,095	16,636	16,229	15,457	2,154	0,541
General level of self-regulation	77,571	75,545	82,571	88,8	18,894	< 0,001
Self-accusation	14,381	12,364	12,371	11,914	7,5	0,058
Acceptance	13,714	14,182	12,229	13,029	4,626	0,201
Ruminations	14,952	13,636	12,657	12,486	8,525	< 0,036
Positive refocus	11,381	11,182	11,257	12,057	1,803	0,614
Focus on planning	14,095	14,273	13,2	14,2	2,47	0,481
Positive reappraisal	14,571	13,818	14,086	16,057	7,71	0,052
Putting into perspective	13,143	13,091	12,229	12	1,996	0,573
Catastrophization	9,714	9,818	9,057	7,4	13,946	< 0,003
Blaming others	8,286	8,636	8,143	7,6	2,795	0,424

Analyzing the average values, it can be observed that within the first cluster, the “flexibility” strategy of self-regulation is most prominent (cluster mean: 17.86). In the second cluster, the most notable strategies are “flexibility” (cluster mean: 16.55) and “independence” (cluster mean: 16.64). The third cluster exhibits a prominent “assessment of results” strategy (cluster mean: 17.06), while the fourth cluster demonstrates a higher emphasis on the “programming” (cluster mean: 18.46) and “flexibility” (cluster mean: 18.46) strategies.

Regarding cognitive emotion regulation strategies, the analysis revealed that the first cluster exhibits pronounced tendencies towards self-blame (cluster mean: 14.38), rumination (cluster mean: 14.95), focus on planning (cluster mean: 14.09), and positive reappraisal (cluster mean: 14.57). In the second cluster, the most prominent strategies are acceptance (cluster mean: 14.18) and focus on planning (cluster mean:

14.27). The third cluster shows a notable inclination towards positive reappraisal (cluster mean: 14.09), while the fourth cluster also demonstrates a higher tendency for positive reappraisal (cluster mean: 16.06).

In analyzing the significance of differences between the identified clusters, it was observed that significant distinctions were found in the scales of codependence, self-aggression, aggression towards others, and strategies of self-regulation such as planning, modeling, and programming. Furthermore, significant differences were observed in the general indicator of self-regulation, as well as in the strategies of rumination and catastrophization (Kruskal-Wallis Test; $p < 0.05$).

Then, for a more detailed analysis of the differences between the selected clusters, a posteriori analysis was carried out by pairwise comparison using the Dunn method.

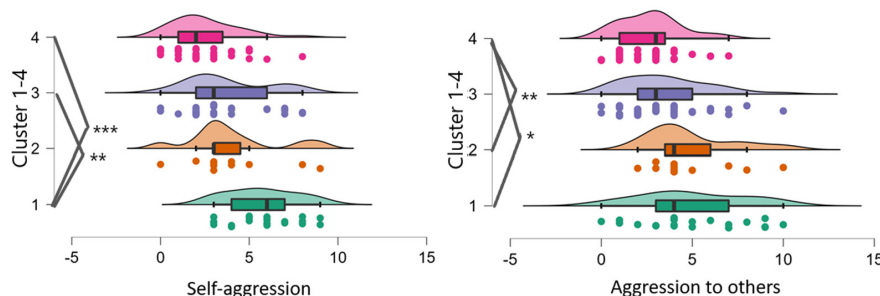


Figure 2. Comparisons of indicators of aggression in codependent women between clusters (Kruskal-Wallis test; $p < 0.003$)

Legend: * indicates the level of significance of the pairwise comparison results according to Dunn's method (* - $\text{pholm} < 0.05$; ** - $\text{pholm} < 0.01$; *** - $\text{pholm} < 0.001$).

Comparison of self-aggression and aggression towards others revealed a consistent pattern of increasing indicators from the fourth cluster to the first (Figure 2). In pairwise comparisons, the level of self-aggression was significantly higher in the first cluster compared to the third ($\text{pholm} < 0.007$) and the fourth ($\text{pholm} < 0.001$) clusters. Similarly, the level of aggression towards others was higher in the first cluster compared to the fourth cluster ($\text{pholm} < 0.004$). Additionally, there were differences in the level of aggression towards others between the second and fourth clusters ($\text{pholm} < 0.017$). These findings indicate that the highest levels of both types of aggression are observed in the first and second clusters.

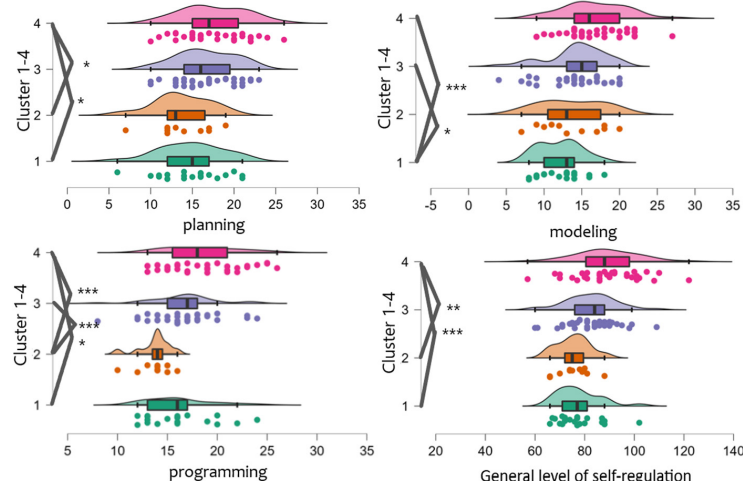


Figure 3. Comparisons of indicators of self-control in codependent women between clusters (Kruskal-Wallis test; $p < 0.015$)

Legend: * indicates the level of significance of the pairwise comparison results according to Dunn's method (* - $\text{pholm} < 0.05$; ** - $\text{pholm} < 0.01$; *** - $\text{pholm} < 0.001$).

Comparison of indicators of behavioral self-control revealed that the highest level of self-regulation is observed in the third and fourth clusters (Figure 3). In pairwise comparisons, significant differences were primarily found between the first and fourth clusters ($\text{pholm} < 0.05$). The second and third clusters showed a significant difference on the programming scale ($\text{pholm} < 0.007$), while the third and first clusters differed significantly on the modeling scale ($\text{pholm} < 0.048$). The second cluster exhibited significant differences

with the fourth cluster in planning ($\text{pholm} < 0.021$), programming ($\text{pholm} < 0.001$), and the general level of self-regulation ($\text{pholm} < 0.002$).

Comparison of indicators of cognitive strategies of emotion regulation showed that the highest level of the strategy of rumination and catastrophization was significantly more often observed in the first and second clusters (Figure 4). Cluster four showed most differences in pairwise comparisons. Within this subgroup, the level of self-accusation ($\text{pholm} < 0.05$), rumination ($\text{pholm} < 0.05$), and catastrophization ($\text{pholm} < 0.01$) was significantly lower compared to the first cluster. When compared to the third cluster, significant differences were observed in positive reappraisal ($\text{pholm} < 0.05$) and catastrophization ($\text{pholm} < 0.05$), while in comparison to the second cluster, there was a significant difference in catastrophization ($\text{pholm} < 0.05$). Furthermore, significant differences in the severity of catastrophization were noted between the first and third clusters ($\text{pholm} < 0.05$).

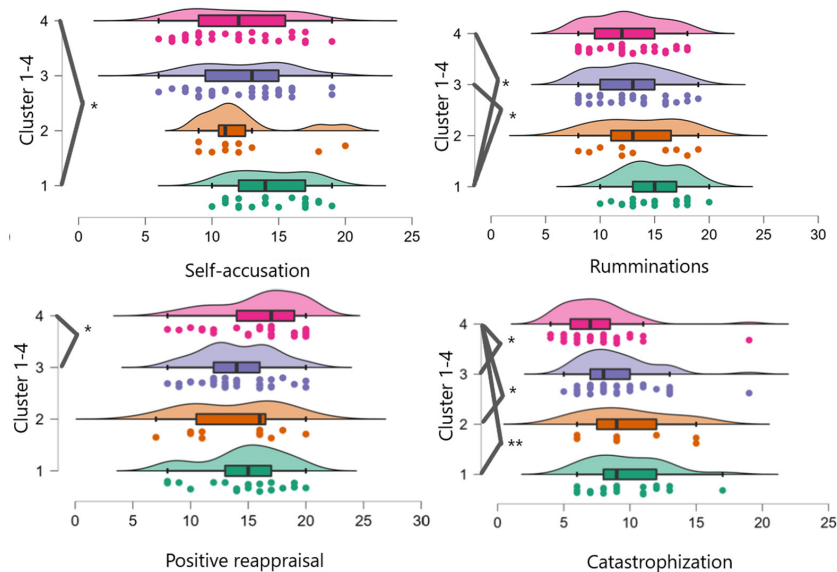


Figure 4. Comparisons of cognitive strategies for emotion regulation in codependent women between clusters (Kruskal-Wallis test; significant differences and trends; $p < 0.05$ and $p < 0.06$)

Legend: * indicates the level of significance of the pairwise comparison results according to Dunn's method (* - $\text{pholm} < 0.05$; ** - $\text{pholm} < 0.01$; *** - $\text{pholm} < 0.001$).

When comparing the levels of codependency, it was observed that there is a consistent pattern of increasing codependence from the fourth cluster to the first (Figure 5). In pairwise comparisons, the fourth cluster exhibited the largest number of differences, including at a trending level, indicating the lowest level of codependency.

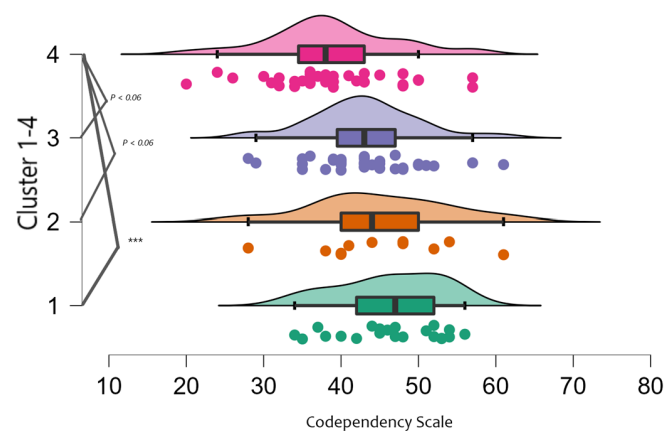


Figure 5. Comparisons of indicators of codependency in codependent women between clusters (Kruskal-Wallis test; $p < 0.003$)

Legend: * indicates the level of significance of the pairwise comparison results according to Dunn's method (* - $\text{pholm} < 0.05$; ** - $\text{pholm} < 0.01$; *** - $\text{pholm} < 0.001$).

The results largely indicate that the behavior of codependent women is influenced by differences in personality traits, empathy, and motivation.

In Cluster 1, respondents exhibit high scores on the scales of neuroticism and openness to experience, and they demonstrate a high level of empathy. In this cluster, there are elevated levels of self-aggression (above average) and the aggression towards others (both low and high values with a large spread). Autoaggression surpasses the aggression towards others, indicating a prevalence of destructive coping strategies. Furthermore, higher levels of self-accusation and rumination also suggest a predominance of destructive coping mechanisms. The self-regulation strategy flexibility is also notably present, which, in conjunction with reduced self-regulation indicators, may indicate a tendency to conform and adapt to meet other people's expectations or societal stereotypes of "normality." Comparatively, Cluster 1 exhibits higher levels of self-blame, rumination, catastrophization, and codependency. It is possible that having an addict in their lives provides them with a sense of personal significance and necessity, or there may be a pronounced fear of abandonment. Furthermore, it is noteworthy that Cluster 4 comprises the youngest participants, with an average age of 25.14 years. This observation may suggest that their regulatory processes are not yet fully developed or that such behavioral patterns are characteristic of individuals who grew up in families affected by addiction.

Cluster 2 comprises individuals with low agreeableness and conscientiousness, as well as reduced extraversion and need for approval. In this cluster, there are average levels of self-aggression and elevated levels of the aggression towards others. The most prominent self-regulation strategies observed are flexibility and independence, along with acceptance and focus on planning. Compared to other clusters, Cluster 2 exhibits the lowest levels of self-blame and rumination, a relatively high level of codependence, and the lowest level of self-regulation. These characteristics suggest a somewhat self-centered (potentially narcissistic) and highly functional profile, with a tendency for manipulation, impulsiveness, and ambivalent behavior patterns. Maintaining a sense of control may be crucial for individuals in this cluster, and the addict may serve the purpose of preserving their high self-esteem by being easily manipulated and providing emotional validation.

Respondents in Cluster 3 lean towards introversion, display reduced levels of empathy and need for approval, and relatively high levels of neuroticism. They exhibit average levels of autoaggression and elevated levels of aggression towards others. Notably, they demonstrate a reasonably high level of self-regulation in their behavior and display self-assessment skills regarding the outcomes of their actions. In challenging situations, they tend to maintain a positive outlook, even in the face of genuinely negative events. Compared to other clusters, Cluster 3 has an increased level of self-blame and a relatively low level of codependence, suggesting some isolation, passivity, and possibly emotional exhaustion or a lack of resources for more proactive forms of behavior regulation. Given that this cluster has a somewhat older average age (32.77 years) than the others, it can be inferred that this behavior pattern is typical for parents of addicts (where self-accusation prevails) or women who have been in co-dependent relationships for an extended period (in which case, they may lack the resources or may be held back by pronounced self-blame).

Cluster 4 exhibits low values of neuroticism and openness to experience, low empathy levels, and increased levels of extraversion, agreeableness, conscientiousness, and need for approval. Respondents in this group demonstrate quite constructive strategies for self-regulation and regulation of emotions (programming, flexibility, and positive reassessment). They predominantly have low values of autoaggression and aggression towards others. In comparison with other clusters, they have a lower level of self-blame, rumination, and catastrophization, a lower level of codependency, and a high level of self-regulation. This indicates a certain "front" of being, an orientation towards maintaining a certain image, conformity with external norms, and social stereotypes. A high level of self-regulation suggests that they successfully cope with the peculiarities of living with an addict, which makes their perception of a difficult situation less vivid and probably reduces the motivation to leave such a relationship.

Discussions

The described results of the study demonstrate the importance of personal characteristics, motivation, and empathy not only in the severity of codependency but also in the manifestation of aggression and behavior regulation in codependent women.

Overall, the behavioral regulation features observed in the clusters align with existing concepts and classifications of codependent behavior found in professional literature, including the Sharon Wegscheider-Cruze classification ([Stryapukhina, 2021](#); [Kupchenko, 2020](#); [Rozhnova, et al., 2020](#); [Kolenova and](#)

Gurtsey, 2019; Tasheva and Bedredinova, 2016; Artemtseva, 2012). However, the identified clusters offer a fresh perspective on the relationship between personal characteristics and behavioral regulation, as well as provide insights into the role of motivation and empathy in the adaptation mechanism within codependent relationships.

A comparative analysis of the selected clusters revealed significant differences in self-aggression and aggression towards others, which somewhat contradicts previous findings that suggest a strong association between codependency severity and self-aggression (Buzik and Efimova, 2019; Perminova, 2017; Merinov, et al., 2015). Our study shows that auto-aggression is not a universal descriptive characteristic of codependent behavior and it is not present in some specific groups of codependents.

Studies on coping mechanisms of codependents emphasize the prevalence of dysfunctional attitudes, including catastrophizing and self-blaming responses (Happ, et al., 2022; Kupchenko, 2020; Politika, 2020). However, our findings reveal a variety of coping strategies, indicating a more diverse coping mechanisms. Strategies such as self-blame, rumination, and catastrophization are not present in all clusters, with some clusters predominantly exhibiting strategies considered constructive in the literature. The level of self-regulation also varies and is not universally reduced across all groups.

The limitation of this study is in the sample size, which restricts further differentiation and clarification of the effects of age factors and the nature of the relationship with the addict. Future research should aim to expand the sample size and consider the nature of the relationship with the addict, as well as factors such as self-relationship, basic beliefs, and the severity of depressive symptoms in codependent women.

Conclusions

The objective of this study was to comprehensively examine the influence of personality traits, approval motivation, and empathy level on the behavioral regulation of codependent women.

The analysis of the obtained results leads to the conclusion that personal characteristics, approval motivation, and empathy level can serve as predictors of codependency severity, aggressiveness manifestation, formation of self-regulation strategies, and preference for cognitive emotion regulation strategies in codependent women. Specifically, it was observed that codependent women in Cluster 1, characterized by high levels of neuroticism, openness to experience, and empathy, exhibit the highest levels of auto-aggression. They also demonstrate a high degree of regulatory flexibility, although their overall level of self-regulation is reduced. Furthermore, a wide range of emotion regulation strategies was observed within this cluster. In comparison with other clusters, these individuals exhibit higher levels of self-blame, rumination, catastrophization, and codependence. Codependent women in Cluster 2, characterized by low levels of friendliness, conscientiousness, and need for approval, also display a variety of regulatory mechanisms. However, their behavior tends to be more manipulative and shows aggressive tendencies. Cluster 3 comprises introverted codependent women with reduced levels of empathy, need for approval, and relatively high neuroticism. They demonstrate a fairly high level of self-regulation in their behavior and possess the ability to accurately assess the discrepancy between their goals and the obtained results. They employ both constructive and destructive strategies for emotion regulation. Codependents in Cluster 4, characterized by elevated levels of extraversion, agreeableness, conscientiousness, and need for approval, demonstrate the most constructive strategies for self-regulation and emotion regulation. They possess a high overall level of self-regulation and exhibit less propensity for auto-aggression and self-blame.

The findings of this study have practical implications in psychological practice, particularly in the development of effective intervention strategies and individualized programs aimed at assisting codependents. Furthermore, these results can be utilized to identify risk factors associated with maladaptation in codependents and to develop educational and outreach programs that increase awareness of codependency and foster the development of behavior and emotion regulation skills.

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Author Contributions

A. K. conceived of the idea, determined and verified the research methods, managed the data collection, reviewed and edited the final version of the manuscript. E. D. conducted a theoretical analysis of the problem, performed statistical analysis, translated and edited the final version of the manuscript. A. K. participated a theoretical analysis of the problem, participated in the data collection and discussion the results. P.E. participated a theoretical analysis of the problem, oversaw the organization of the study, reviewed and edited the final version of the manuscript. All authors discussed the results and contributed to the final manuscript. All authors have read and agreed to the published version of the manuscript.

Conflict of interests

The authors declare no conflict of interest.

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