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## Predicting depression based on emotional intelligence and critical thinking in women with narcissistic personality disorder

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### Abstract

Narcissism is a personality disorder that is conceptualized as excessive self-love and manifests as a great sense of self, more entitlement, and superiority. Its prevalence is much higher in women than in men. This study aimed to investigate the prediction of depression based on emotional intelligence and critical thinking in women with a narcissistic personality disorder. The current research is part of applied research in terms of its purpose and correlational studies in terms of method. The statistical population included all women with narcissistic personality disorder referred to Nik Amal Psychotherapy Clinic in Tehran in 2021. 130 people were selected as a sample using the available sampling method. Ames Narcissistic Personality Questionnaire (2006), Beck Depression Questionnaire (1961), Schering Emotional Intelligence Test (1996), and California Critical Thinking Skills Test, Form B (1990) were implemented on them. Data analysis was done with correlation and regression tests using SPSS version 23 software. A significance level of less than 0.05 was considered. The results showed that emotional intelligence and critical thinking have a negative and significant relationship with depression ( $P < 0.01$ ). Also, emotional intelligence explained 62% and critical thinking 45% of the variance of depression scores of women with a narcissistic personality disorder. Therefore, to reduce depression in women with narcissistic personality disorder, it is recommended to increase emotional intelligence and critical thinking.

**Keywords:** *Narcissistic personality disorder, depression, critical thinking, emotional intelligence, women.*

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## Introduction

A personality disorder is a common and treatable mental disorder that has adverse and severe personal, social, and economic consequences, which include persistent functional disability, high pressure on family and caregivers, job separation and unemployment, and physical illness (Brailovskaia et al., 2021). Personality disorder is associated with an almost two-decade decrease in life expectancy; usually women with personality disorder have lower life expectancy than others (Brown, 2017). Narcissism is a personality disorder that is conceptualized as excessive self-love and manifests as a sense of self-importance, entitlement, and superiority. This feeling of being big can be seen in all aspects of one's life, such as relationships with relatives, friends, neighbors, colleagues, and especially one's spouse. The prevalence of this disorder is much higher in women than in men (Maran Jouri & Ali Khani, 2020). Narcissistic women see themselves as better looking, smarter, better leaders, and more creative than others, generally superior to others in the eyes of the narcissist (Buyl, Bowen, & Wade, 2019).

In terms of personal and interpersonal success, narcissistic women see intelligence as a critical factor that mainly affects interpersonal success, a narcissistic person believes that having higher intelligence will attract women to him. Narcissistic women try to impress the person in question by showing their intelligence in relation to emotional issues (Alsawalqa, 2020). Emotional intelligence is a person's response to interpersonal or intrapersonal emotional information that includes identifying, interpreting, expressing, and regulating one's own and other emotions (Gulliford et al., 2019). Emotional

intelligence refers to women's perception of emotional tendencies and the ability to recognize, manage, use and understand their own and others' emotions (Shaheh Hossein, Khan Mohammadi and Mahmoudian, 2019).

One of the characteristics of narcissistic women is that they feel they have a high critical thinking ability. Critical thinking is a way to right thinking that develops the ability to solve problems, self-management, and decision-making (Khojasteh & Riazi, 2021). While a narcissist's primary goal is to maintain self-esteem, grand narcissists achieve this goal through self-aggrandizement and seeking praise. When they fail, they humiliate others to protect their ego. On the other hand, Vulnerable narcissists do this by withdrawing to avoid feelings of shame, pain, or jealousy. These issues expose them to depression (Hassanzadeh & Asgharanjad, 2019). Depression is a common, frequent, and debilitating condition that results in high economic and social costs and is predicted to become the leading cause of disability worldwide by 2020. The lifetime prevalence of depression is estimated at 5-10% (Sandage et al., 2017).

Alsawalqa (2020) showed that women with pleasure disorder experience low emotional intelligence. Arrivillaga, Rey and Extremera (2022), found that there is a negative and significant relationship between emotional intelligence and depression. Grundmann, Smallman and Epstude (2022) showed that critical thinking skills are weak in women with the narcissistic disorder. Barcaccia et al. (2022), found in their study that there is a negative and significant relationship between critical thinking and depression. In their study, Fang et al. (2022) showed a

relationship between narcissistic personality disorder and depression.

New treatment protocols for narcissistic women should be done because currently, the treatment process for these clients is not successful, and the need for new treatment solutions and newer and more extensive protocols is felt. According to the research literature and studies conducted in this field, it can be concluded that the relationship between emotional intelligence and critical thinking with depression in women with narcissistic disorder has not been established. This study seeks to fill this gap in past studies. Therefore, this research aimed to investigate the prediction of depression based on emotional intelligence and critical thinking in women with a narcissistic personality disorder.

### **Method**

The current research is part of applied research in terms of its purpose and correlational studies in terms of method. Data analysis was done with correlation tests and regression analysis using SPSS version 23 software. A P-value less than 0.05 was considered significant. The statistical population of the current study was all women with narcissistic disorder referred to Nik Amal Psychotherapy Clinic in Tehran in 1400. 130 people were selected as a sample using the available sampling method. The sample size was 130 people, which was done by the available sampling method. In order to estimate the statistical sample size of the present study, we used Tebachnik and Fidel's formula ( $N > 50 + 8m$ ). Using this formula in the multiple regression analysis methods to determine the number of participants needed to conduct scientific research is common. Accordingly, we should have at least eight participants for each predictor variable plus

50. The California critical thinking skill test used in this research has five subscales: interpretive skill, inferential skill, evaluation skill, deductive reasoning, and inductive reasoning. Also, the emotional intelligence test used in this research has five subscales of self-awareness, self-regulation, self-stimulation, empathy, and social skills. Therefore, at the level of predictor variables, we have ten subscales, so our required population is equal to  $(10 \times 8) + 50$ . So, 130 people each scored eight or higher on the Ames personality test and were identified as narcissistic samples. In order to reach this level, we applied the Amaz personality questionnaire from a total of 453 clients to the Nik Amal Psychotherapy Clinic located in Tehran in 1400 until we reached the level of 130 people.

The criteria for entering the research included the following. The minimum education level is a diploma. The person has narcissistic personality disorder. The criteria for leaving the research included not wanting to cooperate and not completing the questionnaires. The ethical considerations of the research were that the participating women first completed the informed consent form. They were assured that the principle of confidentiality would be observed, their psychological health would be prioritized, and they could not continue to cooperate in the research at any stage of the response.

### **Materials**

**Narcissistic personality questionnaire (NPI).** The original version of the Ames Narcissistic Personality Questionnaire was created in 1988. This questionnaire has 16 pairs of "yes" and "no" statements. This tool has no subscale and is single-factor. Its response range is such that it consists of pairs of items that the respondent must

choose one of. A point is given for each question selected from row A and 0 points for each question selected from row B. To get the total score of the questionnaire, add the total scores of all the questions together. This score will have a range from 0 to 16. A higher score indicates a higher level of narcissism and vice versa. As a cut-off point, a score of 8 or above indicates a narcissistic personality (Ames et al., 2006). Mohammadzadeh (2009) tested this questionnaire in a cross-sectional study on 342 students in 2007. The correlation coefficient between the scores of the 16-factor narcissistic personality questionnaire and the narcissism scale of Milon's Clinical Multiaxial Personality Questionnaire was 0.77 and significant. The test-retest reliability coefficient, the correlation coefficient in determining the semi-reliability, and the Cronbach's alpha coefficient in measuring the internal consistency were calculated as 0.84, 0.74, and 0.79, respectively.

#### **Short Back Depression Inventory (BDI).**

The Beck Depression Inventory was first compiled in 1961 by Beck, Steer and Carbin. In the revised form, four items were changed to reflect symptoms associated with more severe depression (such as anxiety, feelings of worthlessness, difficulty concentrating, loss of energy). Also, to show the decrease in appetite and sleep, two of its articles were revised. According to the selected answers for choosing the answer: number zero 0 points, number one 1 point, number two 2 points and number three 3 points were considered. However, the score of question 7 is different from other questions. Then the scores of each column are added to get the total depression score of each person. In the original version, the test retest reliability coefficient was obtained at

0.93 after one week. Various studies have been conducted on the validity of Beck's depression questionnaire. The average correlation of the Beck Depression Questionnaire with the Hamilton Psychiatric Rating Scale, the Zong Self-Assessment Scale, the Depression Scale, the Multiple Emotional Traits Scale of Depression and General Health is more than 0.60 (Beck et al., 1988). In Iran, the reliability rate using Cronbach's alpha method was reported as 0.80. and confirmed its content and form validity (Ghorbani, Jandaghian, Jokar, and Zanjani, 1400).

#### **Emotional Intelligence Test (EIT).**

This test was designed by Schering in 1996. It is one of the used tools that is set in the form of a five-point Likert scale. The main form of this exam has 70 questions and consists of two parts, the first part has 40 questions and the second part has 30 questions. The components of emotional intelligence are self-awareness (8 questions), self-regulation (7 questions), spontaneity (7 questions), empathy (6 questions) and social skills (5 questions). Each subject receives six separate scores, five of which are related to each of the components and one score as a whole. The number of questions related to each dimension of emotional intelligence is given in table 2-3. In some questions, if the subject chooses the first option, he gets a score of one, and if he chooses the fifth option, he gets a score of five. On the contrary, if the subject chooses option A in questions 1, 9, 12, 20, 14, 13, 31, 33, 18, 22, 28, he will get a score of five. If he chooses option B, C, D, E, he will get a lower score respectively. The scoring of other questions is the opposite, the range of scores of this questionnaire was from 33 to 165 (Zarei, Akbarzadeh and Khosravi, 2019). In the study of Mohammadi, Mojtahedzadeh and

Shamsi (2019), the reliability rate according to Cronbach's alpha method was 90%. Its content validity was also reported as favorable.

**California Critical Thinking Skills Test, Form B (CCTST).** In 1990, Peter Facione and Noreen Facione developed the California Test of Critical Thinking Skills in two parallel forms (a) and (b) in order to measure the critical thinking of adults. Form (b) contains 34 multiple choice questions. One mark for each correct answer and a total of 34 marks can be obtained from this test. The higher the test score, the higher a person's critical thinking ability. In the original version, the reliability of this test, which was evaluated using the Kuder-Richardson-20 formula, was reported between 0.78 and 80. and confirmed its validity (Facione & Facione, 1996). Davoodi and Naqshpour (2003) reported the

reliability of the California Critical Thinking Skills Questionnaire as 0.62 using Cronbach's alpha method. The result of the factor analysis in determining the construct validity of the test indicated that the test consists of five factors (analysis, inference, evaluation, inductive reasoning and comparative reasoning) and all five factors had a positive and high correlation with the total score of the test.

**Findings**

In this study, 130 women with narcissistic disorder referred to Nik Amal Psychotherapy Clinic in Tehran in 2021 participated. Of these, 78 people (59 percent) were women and 52 (41 percent) were men. The age range of women was 20-50 years old. Descriptive information related to the research variable is presented in Table 1.

**Table 1. Mean and standard deviation of research variables**

Variable	Mean±SD
depression	41.6±7.78
self-awareness	42.0±26.20
Self-regulatory	37.6±22.43
spontaneity	48.1±23.49
Sympathy	33.0±20.78
Social skills	27.2±10.99
Interpretive skills	17.8±0.46
Deductive skill	17.0±0.70
Evaluation skills	17.6±4.60
Deductive reasoning	17.7±0.91
Inductive reasoning	11.1±4.74

As can be seen in Table 1, the variable mean of obsession severity was 20.57, maternal anxiety was 33.42, and child

separation anxiety disorder was 68.45. In Table 2, the correlation matrix of research variables is reported.

**Table 2. Correlation between research variables**

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Self-awareness	1										
2. Self-regulation	0.423	1									

3. Spontaneity	•/۳۷۸	•/۵۳۵	۱								
4. Empathy	•/۶۲۱	•/۴۵۲	•/۳۳۸	۱							
5. Social skills	•/۵۶۶	•/۴۲۸	•/۲۸۷	•/۶۱۲	۱						
6. Interpretive skills	•/۲۴۱	•/۳۲۹	•/۳۵۰	•/۲۹۲	•/۴۱۳	۱					
7. Inferential skills	•/۲۱۴	•/۱۱۵	•/۲۴۱	•/۲۵۰	•/۱۹۸	•/۲۰۱	۱				
8. Evaluation skills	•/۱۳۴	•/۲۵۴	•/۳۰۱	•/۲۲۳	•/۳۳۷	•/۱۶۵	•/۲۱۴	۱			
9. Deductive reasoning	•/۲۰۸	•/۳۳۱	•/۲۱۸	•/۲۸۶	•/۱۹۷	•/۳۱۲	•/۲۱۰	•/۲۱۲	۱		
10. Inductive reasoning	•/۳۱۸	•/۲۵۱	•/۲۳۹	•/۱۷۷	•/۲۰۶	•/۳۱۴	•/۲۵۵	•/۲۶۸	•/۲۴۰	۱	
11. Depression	•/۶۵۳	•/۵۹۹	•/۷۰۵	•/۵۷۷	•/۴۱۰	•/۳۳۱	•/۴۱۵	•/۲۷۲	•/۳۷۸	•/۳۸۲	۱
	-	-	-	-	-	-	-	-	-	-	

According to the above table, there is a negative and significant relationship between self-awareness and depression ( $p=0.01$ ,  $R=0.653$ ). There is a negative and significant relationship between self-regulation and depression ( $p=0.01$ ,  $R=0.599$ ). There is a negative and significant relationship between spontaneity and depression ( $p=0.012$ ,  $R=0.705$ ). There is a negative and significant relationship between empathy and depression ( $p=0.01$ ,  $R=0.577$ ). There is a negative and significant relationship between social skills and depression ( $p=0.001$ ,  $R=0.410$ ). Also,

there is a negative and significant relationship between interpretation skill and depression ( $p=0.01$ ,  $R=0.331$ ). There is a negative and significant relationship between inferential skill and depression ( $p=0.01$ ,  $R=0.415$ ). There is a negative and significant relationship between evaluation skill and depression ( $p=0.01$ ,  $R=0.272$ ). There is a negative and significant relationship between analogical reasoning and depression ( $p=0.043$ ,  $R=0.178$ ). There is a negative and significant relationship between inductive reasoning and depression ( $p=0.01$ ,  $R=0.382$ ).

**Table 3. Regression test to predict depression based on emotional intelligence and its components**

Predictive variable	Criterion variable: depression						
	R	R <sup>2</sup>	F	P	$\beta$	T	P
Emotional Intelligence	•/۷۸۸	•/۶۲۲	۴۰/۷۳۳	•/۰۰۱	-•/۱۳۲	۱/۵۱۳	•/۰۰۱
self-awareness	•/۶۲۱	•/۴۱۹	۳۷/۲۰۸	•/۰۰۱	-•/۱۸۹	۱/۷۱۶	•/۰۰۸

Self-regulatory	./047	./317	31/369	./001	-./160	2/160	./032
spontaneity	./018	./304	28/660	./001	-./343	3/907	./001
Sympathy	./448	./218	21/040	./001	-./220	3/267	./001
social skills	./612	./431	01/381	./001	-./160	2/708	./007

According to Table 3, as can be seen, the R-value of emotional intelligence is equal to 0.788 and the R<sup>2</sup> value is equal to 0.622. In other words, emotional intelligence explains 62% of the variance of depression scores. Also, the self-awareness component can predict depression negatively and significantly ( $p=0.008$ ,  $\beta=0.189$ ). The self-regulation component can predict

depression negatively and significantly ( $p=0.032$ ,  $\beta=0.165$ ). The spontaneity component can also predict depression negatively and significantly ( $p=0.001$ ,  $\beta=0.343$ ). Empathy can negatively and significantly predict depression ( $p=0.001$ ,  $\beta=0.220$ ). The social skills component is also able to predict depression in a negative and significant way ( $p=0.007$ ,  $\beta=0.165$ ).

**Table 4. Regression test to predict depression based on critical thinking and its components**

Criterion variable: Depression							
predictive variable	R	R <sup>2</sup>	F	P	$\beta$	T	P
Critical Thinking	./671	./401	9/108	./001	-./134	1/319	./002
Interpretive skills	./470	./220	11/924	./001	-./199	1/980	./007
Deductive skill	./368	./130	13/481	./001	-./291	2/070	./011
Evaluation skills	./429	./184	10/032	./001	-./190	2/000	./031
Deductive reasoning	./400	./202	17/102	./001	-./307	2/761	./007
Inductive reasoning	./066	./320	28/169	./001	-./278	3/017	./003

According to table 4, as can be seen, the amount of R of critical thinking is equal to 0.518, and the amount of R<sup>2</sup> is equal to 0.451. In other words, critical thinking explains 45% of the variance of depression scores. Also, the interpretation skill component can predict depression negatively and significantly ( $p=0.007$ ,  $\beta=0.199$ ). The inferential skill component can predict depression negatively and significantly ( $p=0.011$ ,  $\beta=0.291$ ). Evaluation skills can predict depression negatively and significantly ( $p=0.031$ ,  $\beta=0.190$ ). The component of analogical reasoning can predict depression in a negative and significant way ( $p=0.007$ ,  $\beta=0.307$ ). Finally, the component of inductive reasoning can predict depression negatively and significantly ( $p=0.003$ ,  $\beta=0.278$ ).

## Discussion

The present study was conducted to investigate the prediction of depression based on emotional intelligence and critical thinking in women with a narcissistic personality disorder. This research showed that the components of emotional intelligence have a negative and significant relationship with depression. Components of emotional intelligence explain a total of 62% of the variance of depression scores. This finding was consistent with the results of other studies. Alsawalqa (2020), in his study, showed that women with pleasure disorder experience low emotional intelligence. Arrivillaga et al. (2022) found a negative and significant relationship between emotional intelligence and depression. In explaining this result, it can be said that narcissistic women with high emotional intelligence should be able to disclose their emotional experiences. The written

disclosure of emotions and feelings leads to a deep knowledge of oneself and life events, gives rise to thinking about oneself, and causes issues to be approached from a broader perspective. According to the available evidence, women who can skillfully reveal their emotions have more empathy and less depression than those who lack this ability. Emotional intelligence has a negative relationship with personality traits. Narcissistic women with high emotional attention show more emotional similarity in their judgments. Women with high self-awareness are aware of their mental states, are sensitive to their lives, are independent and know their limits, have good mental health, and have a positive attitude towards life. The better women analyze, describe, classify, and explain their experiences and have a clearer awareness of the factors, processes, and consequences of their thoughts, emotions, and actions, the more mental health they experience. As a result, they have less depression and are more effective in successful life (Fang et al., 2021).

Regarding the connection and negative prediction of emotional skill with self-awareness, emotional self-awareness includes strategies. These strategies include positive reappraisal, positive revision, reaching a perspective, acceptance, and planning. Paying attention to the cognitive ways of dealing with emotions when faced with negative life events in this period can be important because there is a strong relationship between internal problems and the process of negative thinking or cognitive distortions of women. Basically, in the skill of emotion, an optimal interaction of cognition and emotion is needed to deal with negative situations. Because humans interpret everything they encounter, and cognitive interpretations determine women's reactions. Modern approaches also attribute the cause of emotional disorders to violations in cognitive controls (Arrivillaga et al., 2022).

In explaining the relationship between empathy and depression, it should be said

that in order to overcome the hardships of life that we are forced to face due to our social nature, we need social support, and one of the most important supports is empathy. When you have a problem (sadness), your friend listens carefully to your words and conveys to you the feeling that he understands you (loves you). When you separate from him, the energy of this sympathy is in you. This energy empowers us to accept ourselves better and to establish better and more pleasant relationships with others (Fang et al., 2021). The level of skill of women among emotions helps to communicate better with others. One of the basic factors in achieving empathy is mastering emotions. In order to establish empathetic relationships, we must know our feelings, take control of them, and not allow our thoughts to be disturbed. Women who have achieved self-esteem know the feelings of others better. The skill of empathy means that a person can understand the lives of others even when they are in that situation so that he can accept and respect other people when they are very different from him. Many violent behaviors in society are caused by lack of It is a skill of empathy (Arivillage et al., 2022).

In order to explain the relationship between social skills and depression, it can be said that social skills enable one to accept the responsibilities of a social role. Also, one can effectively deal with daily wishes, expectations, and problems, especially in interpersonal relationships, without harming himself or others. Social skills include a large group of social and interpersonal psychological skills that can help make personal decisions, have effective conversations, develop role models, and develop self-management skills. It may help them lead healthy lives (Zarei et al., 2019).

Another research finding showed that critical thinking significantly negatively correlates with depression. Also, critical thinking components explain 26% of the variance of depression scores. The results



of this study were consistent with other studies. In their study, Grundmann et al. (2022) showed weak critical thinking skills in women with narcissistic disorders. Barcaccia et al. (2022) found in their study that there is a negative and significant relationship between critical thinking and depression.

In the explanation of this finding, it can be said that with the increase of inferential skill, the level of depression also decreases. Inferential skill means a person tends to judge and evaluate women and things. A judgmental person prefers matters in which existing opinions and affairs are analyzed and evaluated. And this issue makes the issues and problems to be solved with tact. A person with this inferential skill enjoys doing things that require analysis, evaluation, and comparison. She prefers assignments or issues where she can evaluate the plan or method used by other women (Rahmanian et al., 2015).

In explaining the relationship between evaluation skills and depression, it should also be said that in evaluation, when a person starts a task, he likes to make a list of things to do and arrange them according to importance. When there are many things to do, he knows how they should be done. In solving problems, he always knows the importance of each of them and in what order he should deal with them. When working on an assignment, he can be aware of the relationship between the components and the overall goal of the assignment. He likes to set priorities for himself before doing the necessary work. Therefore, in all fields, if this logical hierarchy is observed in the face of problems, there will definitely be successes, the result of which is an increase in the feeling of self-efficacy in a person and a decrease in depression (Barcaccia et al., 2022).

Critical thinking or thinking at a higher level means thinking beyond memorizing facts or telling someone exactly as you were told and took thinking to a level beyond reciting facts. For this, we must

understand facts, relate them to each other, classify them, use them in a new way, and find new solutions to problems. Therefore, critical thinking should by no means be thought based on arguments. Critical disbelief allows a person to face his issues and problems better and more efficiently. It should be kept in mind that critical thinking is more than logical and analytical thinking (Davoudi & Naqshpour, 2003).

But there were limitations in this field. The following are the limitations of this study. limiting the statistical population to only one province; Social and economic factors and variables such as mental state, income, culture level, etc. These factors are not at the researcher's disposal; it can affect the relationship between the variables. The biggest limitation of correlation methods is that it does not determine the cause-and-effect relationship between variables, which means that the relationship between two variables is caused by countless variables that cannot be adjusted and controlled. The self-reporting of the measurement tool may cause bias in answering the questionnaire items. According to the present research results, the following suggestions can be made. Teaching critical thinking through distinguishing reality from supposition and distinguishing definitive from indeterminate conclusions can change women's attitude toward their surroundings and increase women's satisfaction and satisfaction, and as a result, hope for the future will increase. On the other hand, teaching critical thinking through increasing the power of analysis and cognition will increase the ability of women to recognize their feelings. Therefore, women can express their emotional state effectively by knowing their feelings better, facing life's problems, and being more successful in adapting to the environment and others. Emotional intelligence plays a significant role in reducing depression. The characteristics of social life and the need to interact with others have overshadowed the use of many emotions that were once one of the best

and most accessible tools of human life. Therefore, it is suggested that narcissistic women participate in educational and therapeutic workshops based on increasing emotional intelligence, self-discipline, and emotion regulation strategies. According to the mentioned limitations, it is suggested to use other methods, such as interviews or conducting qualitative studies in the research about the variables. The positive or negative correlation between variables may be caused by other causes that cannot be understood only through cross-sectional research. In this regard, conducting longitudinal studies can be helpful. It is suggested to investigate the relationship of variables such as family process and content, social dependence, identity crisis, self-impairment and social anxiety with depression and life satisfaction. In the next research, it is possible to use native and standardized questionnaires made by Iranian researchers that are suitable for our culture. This research can be done in other cities and statistical communities.

### **Ethics**

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

### **Acknowledgement**

The cooperation of all participants in the research is thanked and appreciated.

### **Conflict of Interest**

According to the authors, this article has no financial sponsor or conflict of interest.

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