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## Structural Model of Adolescent Narcissism Based on Perfectionism: Mediating Role of Alexithymia

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### ABSTRACT

**Objective:** The researches focused on exploring the relationship between personality and its influence on psychological disorders, revealing that diverse personality traits are linked to various types of psychological disturbances, with perfectionism being one of these personality traits. Consequently, the primary objective of this research was to investigate the structural model of adolescent narcissism, using perfectionism as a predictor, and considering the mediating role of alexithymia.

**Methods:** The research approach adopted was descriptive, correlational, and specifically focused on structural equation modeling. The research sample encompassed all high school students within the city of Shiraz, Iran, during the year 2021. A total of 512 students were included in the study, selected through a multi-stage cluster random sampling procedure, and they provided responses to questionnaires measuring narcissism, alexithymia, and perfectionism.

**Results:** The findings of the study revealed significant and positive associations between perfectionism and alexithymia with narcissism. Moreover, perfectionism was found to be positively and significantly associated with alexithymia. In summary, perfectionism can be seen as an indirect and significant predictor of narcissism, mediated through alexithymia. Ultimately, these research outcomes underscore the substantial role of perfectionism in predicting narcissistic tendencies among adolescents, both directly and indirectly through the lens of alexithymia.

**Conclusions:** These insights can serve as a valuable resource for psychologists and counselors working with adolescents.

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## Introduction

Narcissistic individuals have been characterized as those who harbor aspirations such as self-importance, boundless success, influence, astuteness, attractiveness, and a profound sense of belonging. Within the realm of narcissism, one finds an escalating fondness for oneself, wherein an individual is drawn to their own actions and words. This very definition serves as a diagnostic foundation for pathological narcissism or narcissistic personality disorder (Wright & Edershile, 2018). Presently, the concept of narcissism has broadened to encompass healthy narcissism. Narcissism can be viewed as a spectrum, ranging from pathological narcissism to healthy narcissism. Healthy or adaptive narcissism is associated with positive social and psychological attributes such as audacity, autonomy, self-assurance, and robust self-worth (Hart et al., 2020).

Studies on personality and its influence on psychological disorders demonstrate that various personality traits are linked to different manifestations of psychopathology, and one such trait is perfectionism (Flett & Hewitt, 2015). Perfectionism is defined as a cognitive pattern characterized by the establishment of rigid and unwavering performance goals, as well as the establishment of unrealistic and lofty standards (Seong et al., 2020). Adaptive perfectionism includes reasonable and realistic criteria and expectations, as well as goals that are driven by the need for progress and brings high self-esteem and life satisfaction to a person. Maladaptive perfectionism is the tendency to set unrealistically high personal standards in any situation characterized by a strong need to avoid failure (Robinson et al., 2020). Perfectionists need to present a flawless image of themselves in society. This tendency to hide defects and insist on being perfect is due to the inner feeling of inadequacy and sensitivity to rejection.

One of the characteristics of perfectionism is having very high standards, striving to be perfect, having high standards for performance and strict evaluation of others' behavior, and it is related to extreme fear of failure, avoidance and shame (Hasanzadeh & Asghar Nejad, 2018). On a theoretical continuum, one might expect maladaptive perfectionistic patterns to correlate with narcissistic narcissism. In such a way that perfectionism can provide grounds for the growth of narcissism (Wright et al., 2020). Therefore, a review of the research literature on the structure of perfectionism shows that perfectionism is a main feature in the behavior, thinking and relationships of narcissistic people (Farrell & Vaillancourt, 2019). The psyche of the narcissistic person is

integrated into the idealized and perfect image of the object (Smith et al., 2014). Individuals with neurotic perfectionism traits significantly show signs of narcissism and borderline (Chen et al., 2020). Therefore, since perfectionism contributes to the lack of positive reinforcement and lacks professional, social, and recreational activities, as well as social perception as a tool to hide oneself, perfectionism is effective in narcissism (Gholamipour et al., 2017).

On the other hand, one of the variables that seems to be related to narcissism is alexithymia. The human experience of emotion is complex. Often, the words used to express emotions with others seem inadequate. One can imagine how difficult this is for a person who is unable to distinguish between his basic emotional states. Naturally, this problem will negatively affect social relations. The term emotional deficiency was introduced to describe a personality trait with the inability to process and recognize emotions (Bagby et al., 2020a). Alexithymia refers to difficulty in identifying emotions and low ability to distinguish emotions from bodily sensations, difficulty in describing emotions to others, and a thinking style focused on external events (Bagby et al., 2020b). While the intrapersonal effects of emotional distress have been documented, researchers are interested in investigating this condition on interpersonal communication. The inability to describe or characterize emotions is one of the signs of narcissistic people (Iskric et al., 2020). People with narcissistic symptoms have more emotional dysfunction than normal people. There is also a relationship between alexithymia and narcissism (Hemming et al., 2019). People's emotional ability to identify and describe emotions can play a mediating role in the relationship between perfectionism and narcissism. Therefore, the researcher was looking for an answer to this question, whether perfectionism is able to predict the narcissism of teenagers through the mediation of alexithymia.

## **Material and Methods**

The current research was a description of the correlation type and specifically of the structural equation modeling type. The statistical population of the research included all secondary school students of the second period of Shiraz city in the academic year of 2022. The statistical sample of the study was 375 of these students based on Morgan's table, who were selected by multi-stage cluster random sampling method and answered the research questionnaires. In this way, 2 districts (1 and 4) were randomly selected from among the four types of education in Shiraz city. In the

next stage, two girls' schools and two boys' schools were randomly selected from these two districts. Then, one grade (10th, 11th and 12th) was randomly selected from each of the selected schools. At the end, all the students of these classes answered the research questionnaires as a sample group. In this way, after visiting the selected schools and explaining the purpose and method of the research to the school officials and briefly explaining the method of answering the questions of the questionnaires, they were requested to cooperate. After obtaining the consent of the officials of the selected schools, they were asked to put the link of the research questionnaires in the class groups to answer the questions. The researcher was also present in the answering process by placing the phone number and email in the link of the designed questionnaires to answer the possible questions. At the end, questionnaires were collected and data were analyzed.

### Research tools

**Narcissistic personality questionnaire (NPI-16):** This questionnaire was first developed by Raskin and Hall (1988) in 80 and 54-item versions, and then the 40-item version by Raskin and Terry (1998) in 3 separate studies for validation. was investigated. Later, Ames et al. (2006) reduced this questionnaire to 16 items. This questionnaire has 7 subscales that evaluate narcissism based on pairs of items. The respondent must choose one of them. The 7 subscales of this tool are: Authority, Self-Sufficiency, Superiority, Exhibitionism, Vanity, Entitlement and Exploitativeness. The mean obtained from this tool for the general and general population was reported as 15.3 and for narcissistic celebrities as 17.8 (Ames et al., 2006). The reliability coefficients (Cronbach's alpha) reported for the 40-item narcissistic personality questionnaire by Raskin and Terry (1988) were higher than 0.74 for all 7 subscales. Mohammadzadeh (2009) tested this questionnaire in a cross-sectional field study on 342 students. The correlation coefficient between the scores of the NPI-16 narcissistic personality questionnaire and the NPI-40 narcissism scale was 0.77 and significant. In the present study, a 16-item form was used. This questionnaire has no subscales and evaluates narcissism based on a one-dimensional approach. In this version, the score will have a range from 0 to 16. A higher score indicates a higher level of narcissism. As a cut-off point, a score of 8 or above indicates a narcissistic personality. The retest reliability coefficients reported by the main creators of the test is 0.85 during 5 weeks. Convergent validity has been done by calculating the correlation coefficient between the scores of this test and the scores of the extroversion and

openness to new experiences of the big 5 personality factor scale. These coefficients have been calculated for extroversion indices of 0.32 for openness to new experiences and 0.41. In Mohammadzadeh's research (2009), the test-retest reliability coefficient, the correlation coefficient in determining the split reliability, and the Cronbach's alpha coefficient in measuring the internal consistency were calculated as 0.84, 0.74, and 0.79, respectively. In the present study, the reliability coefficient using Cronbach's alpha method was obtained for all items at 0.88.

**Toronto Emotional Dysfunction Questionnaire (TAS-20):** This questionnaire was created by Bagby et al.(1994) and is a 20-question test in the form of news sentences about the subject. This questionnaire includes three subscales: difficulty in identifying emotions, difficulty in describing emotions, and objective thinking. The options provided for all items are the same and are scored on a 5-point Likert scale from completely disagree to completely agree. In this scale, both the score of each of the three subscales and the total score of Torteno's emotional deficiency scale, which is obtained from the sum of the values of the options chosen by the individual, can be measured. In many researches and clinical activities, usually a total score of 52 and 60 is considered a suitable diagnostic cutoff score. Regarding the reliability of the scale of emotional failure, Taylor et al. (1994) have reported the reliability of this scale by Cronbach's alpha method as 0.81 and by the retest method with a time interval of three weeks as 0.77. In the Farsi version of the Toronto Emotional Dysfunction Scale-20 (Beshart, 2013), Cronbach's alpha coefficients for total emotional dysfunction and three subscales of difficulty in identifying emotions, difficulty in describing emotions and objective thinking are respectively 0.85, 0.82, and 0.75. and 0.72 are reported to be an indication of good internal consistency of the scale. The test-retest reliability of the Toronto Emotional Dysfunction Scale-20 was confirmed in a sample of 67 people on two occasions with an interval of 4 weeks from 0.80 to 0.87 for total emotional dysfunction and different subscales; And the concurrent validity rate of this scale by closing it with emotional intelligence scale is -0.80, psychological well-being is -0.78 and psychological helplessness is reported as -0.44. In the present study, the reliability coefficient using Cronbach's alpha method was obtained for all items at 0.84.

**Frost Multidimensional Perfectionism Scale (FMPS):** Frost Multidimensional Perfectionism Scale (1990) is based on the multidimensional model of perfectionism. It includes 6 subscales and are measured using 35 questions: concern over mistakes, doubts about actions, excessive concern

with parents' expectations and evaluation, excessively high personal standards, concern with precision, order and organization. There are two positive dimensions and four negative dimensions in this questionnaire. The positive dimensions of the questionnaire include personal standards and organization, and the negative dimensions include concern about mistakes, doubt about actions, parental expectations, parental criticism (Stoeber & Stoeber, 2006). In the Iranian version of this questionnaire, the internal consistency coefficient for the entire questionnaire was 0.86. The test-retest coefficient with an interval of one week was also obtained for the entire questionnaire equal to 0.90. Also, the convergent validity of the questionnaire has been reported based on the relationship with the positive and negative perfectionism questionnaire (Bitaraf, 2010). In the present study, the reliability coefficient using Cronbach's alpha method was obtained for all items of 0.91.

In this research, descriptive statistics and inferential statistics methods were used to summarize, organize and interpret the data. Descriptive statistics indicators that were used in this research to explain and express the characteristics and descriptive interpretation of quantitative data were frequency distribution tables, percentage, mean, standard deviation, as well as the tests used in the research including the calculation of correlation between variables and also, the regression equations were in the form of structural analysis using SPSS22 and AMOS21 software. Therefore, the data were analyzed at two levels. At the descriptive level, the demographic characteristics, mean and standard deviation, as well as structural equation modeling hypotheses and evaluation of the measurement model and correlation coefficient between the research variables were investigated. At the inferential level, the structural model was evaluated and the research hypothesis was investigated.

## Results

Table 1 shows the descriptive indicators of research variables in students.

**Table 1.** Descriptive indices of the research variables

Variable	Mean	SD	Skewness	Kurtosis
Narcissism	5.93	3.34	0.44	-0.33
Alexithymia	52.10	8.25	0.51	0.03
Perfectionism	117.41	5.68	0.12	-0.19

Based on the table 1, the average total narcissism score was calculated as 5.93 out of 16, which indicates the low narcissism status of the students. Also, the results showed that the lowest score of the students is zero and the highest score is 16. The average score of the total alexithymia was calculated as 52.10 out of 100, which is higher than the average (50). Also, the results showed that all subscales are above average. This means that students have problems in expressing and recognizing emotions. The total average score of perfectionism was calculated as 117.41 out of 175, which is higher than the average (87.5). In other words, the state of perfectionism of the students was evaluated at a high level. In addition, the results showed that among the subscales, personal standards obtained the highest average (27.92) and doubts about the actions obtained the lowest average (11.51). Also, the normality of the data distribution using the skewness and skewness test showed that all the variables are between +2 and -2. Therefore, it can be concluded that the data distribution is normal. Then the correlation coefficient between the subscales and the main constructs was calculated and the related information indicate all the coefficients are significant ( $p < 0.05$ ).

In order to examine the conceptual model and find out the causal relationships between the narcissism and perfectionism mediated by alexithymia, structural equation modeling (SEM) was used using AMOS18 software. The investigated model is a path analysis model, and path analysis models are one of the types of models that can be used to explain and predict various phenomena. As can be seen in Table 2, the proportional values of the fit indices of the structural model indicate the appropriate data-model compatibility.

**Table 2.** The fit indices of the adolescent narcissism model

Indices	Value
$\chi^2$	8399.40
DF	4051
$\chi^2/DF$	2.07
RMSEA	0.047
CFI	0.90
IFI	0.90

**Table 3.** Direct and indirect effects of predictor variables on narcissism

Criterion variable	Predictors	Direct effect	Indirect effect	Total effect
Narcissism	Alexithymia	0.48**	-	0.48**
	Perfectionism	0.53**	0.16**	0.69**



According to Table 3, the alexithymia (0.48) and perfectionism (0.53) had a positive and significant effect on narcissism, which means that the higher the alexithymia and perfectionism of a student, the more his narcissism increases. The indirect effect of perfectionism on narcissism is through alexithymia is significant (0.16). The total effect of perfectionism on narcissism is positive and significant (0.69). In general, the results show that both independent or predictor variables (perfectionism and alexithymia) have an effect on the dependent variable (teenagers' narcissism). Therefore, the research hypothesis is confirmed. Finally, according to the results, 36% of the changes in the narcissism variable of teenagers are explained by the mentioned independent variables. According to the general fit indices, it can be said that the model has a good fit.

## Discussion

The purpose of the present study was to evaluate the structural model of adolescent narcissism based on perfectionism needs with the role of alexithymia as a mediator. The results of examining the direct effect of the predictor variable (exogenous) of perfectionism on the criterion variable (endogenous) of narcissism showed that perfectionism is a positive and significant predictor of narcissism. In a similar study, Farrell and Vaillancourt (2019) showed that socially perfectionism predicts narcissism. Chen et al. (2019) have pointed out that people with neurotic perfectionism characteristics significantly show signs of narcissism. Hasanzadeh and AsgharNejad (2018) have also confirmed the relationship between negative perfectionism and narcissism. In general, these studies show the effect of perfectionistic characteristics on narcissism. It can be said that the characteristics of perfectionism can also be effective in personality traits. In such a way that a part of narcissism is probably the result of perfectionistic traits that a person feels in himself and the biased estimation of these traits allows a person to assume that he is different and better (Chen et al., 2019). A look at the dimensions of perfectionism shows that part of narcissism can be developed in the process of perfectionism. Because perfectionism is a motivational component that includes the individual's efforts to achieve the perfect self (Stoeber et al., 2020). These characteristics can define a person as special and distinct. In such a way that a person assumes that having high standards is the same as having high ability. In other words, although a person may have the least merit traits, he has high merit criteria, which in his opinion is a confirmation of his



distinctiveness (Barabadi et al., 2020). This can intensify narcissistic traits and prepare the ground for the growth of grandeur and idealistic talent (Zajenkowski et al., 2020). Finally, the belief that people expect me to be successful in everything confirms the link between perfectionism and narcissism (Pietrabissa et al., 2020). In general, it can be concluded that perfectionistic traits can aggravate narcissistic traits. On the other hand, teenagers, as the sample group of this research, are more ready for narcissism due to age and developmental reasons, which can explain part of the variance related to the results.

The results of examining the direct effect of the predictor variable (exogenous) of alexithymia on the criterion variable (endogenous) of narcissism showed that alexithymia is a positive and significant predictor of narcissism. In a similar study, Iskrice et al. (2020) concluded that the inability to describe or identify emotions is one of the symptoms of narcissistic people. Hemming et al. (2019) concluded that people with narcissistic symptoms have more emotional dysfunction. compared to normal people. There is also a relationship between alexithymia and narcissism. It can be said that the inability to cognitively process emotional information and regulate emotions, which is defined as alexithymia, is probably one of the most important aspects of the personality of narcissists. Difficulty in identifying feelings, difficulty in describing feelings to others, and external thought orientation all indicate that a person does not have a proper understanding of himself and others, as well as the feelings involved in these relationships. A short look at the narcissistic character shows the occurrence of these emotional failures in these people. For this reason, many narcissists are weak in establishing relationships and cannot make friends (Hawk et al., 2020). Inability to recognize and verbally describe personal emotions, extreme poverty of symbolic thinking that limits the disclosure of encounters, feelings, tendencies and drives, inability to use emotions as symptoms of emotional problems, abstract thinking about unimportant facts. Externality, reduced recall of dreams, difficulty in distinguishing between emotional states and bodily sensations, lack of emotional facial expressions, limited capacity for empathy and self-awareness, as well as failure to regulate and manage emotions (transition process from processing to action) are also among the characteristics of It is emotional failure (Choi et al., 2020). In line with these traits, there are narcissistic people who do not have a clear understanding of their own merits and indulge in some kind of personal fantasy. In other words, it seems that the common point of emotional deficiency and narcissism is low emotional perception. A type of lack or

dysregulation of emotions that is the form of damage in emotional processing capacities based on emotional insufficiency that allows a person to define himself in a special way (Morie et al., 2020). Difficulty identifying emotions means that a person has trouble distinguishing between his emotions. Difficulty in describing feelings means that the person cannot express what they have felt emotionally; And external thinking orientation occurs when a person tends to think about things externally and in conflict with internal thinking orientation (Herman et al., 2020).

People with dyslexia have limited imagination in life, poor imagination, limited dreams, and a preference to focus thoughts on an external source instead of interpreting events (Bagby et al., 2020). These traits can show themselves in the form of seeking superiority in narcissistic people. Therefore, acting rudely as if unable to self-criticize indicates the connection between emotional deficiency and narcissism (Hawk et al., 2018). In general, it can be said that emotional failure can block interpersonal relationships that are based on the correct management of emotions. This means that part of narcissism is the result of not understanding oneself and others in an emotional process that leads to the exacerbation of narcissism through emotional failure.

The results of examining the direct effect of the predictor variable (exogenous) of perfectionism on the criterion variable (endogenous) of alexithymia showed that perfectionism is a positive and significant predictor of alexithymia. Perfectionism is actually irrational beliefs that people have about themselves and their surroundings. Perfectionist people believe that themselves and their surroundings should be perfect and any effort in life should be without mistakes and errors (Seong et al., 2020). This means that Hayes' characteristic of perfectionism, such as having ambitious, ambitious, vague and unattainable goals and extreme efforts to achieve goals, can provide the basis for exploiting emotions (Tobin and Dunkley, 2020). In other words, perfectionism can ignore emotions. In the collection of perfectionism, which has been investigated in this research, its negative side can create a favorable environment for ignoring emotions and developing alexithymia. Where objectivity takes precedence over emotions, and in principle, the description or recognition of emotions can act as a kind of anti-objectification. Therefore, with the growth of perfectionism, alexithymia can also increase.

The results related to the investigation of the indirect effect of the predictor variable (exogenous) of perfectionism on the criterion variable (endogenous) of narcissism through alexithymia

(mediator) using the bootstrap test showed that perfectionism through alexithymia can cause narcissism indirectly and meaningfully. Therefore, alexithymia plays a mediating role in the relationship between perfectionism and narcissism. In explaining these results, it can be said that people with this disorder have a great secretive sense of being important. They overestimate their abilities (Cheshure et al., 2020). In other words, an unrealistic understanding of oneself and one's own merits provides the basis for a false self-description. A person seeks perfectionistic standards that he feels match his unique personality. In the sense that the qualities of perfection can significantly increase narcissism. This sense of entitlement combined with a lack of sensitivity to the needs and wants of others (problem in emotional inadequacy) may lead to conscious or unintentional exploitation of others (Hart et al., 2019). Therefore, it has been said that people with narcissistic personality disorder usually lack a sense of empathy and have difficulty recognizing the desires, mental experiences, and feelings of others, which is a sign of alexithymia (Cichock et al., 2019). Therefore, this relationship can be explained that pathological perfectionism is associated with a low understanding of oneself and one's own merits. This can lead to alexithymia. In other words, perfectionism does not allow understanding oneself and others emotionally and cognitively. A person is so involved in unrealistic ideals that he does not care about emotional conditions, and this problem contributes to the development of alexithymia. On the other hand, the development of alexithymia can disrupt interpersonal communication and intensify narcissistic traits. Therefore, perfectionism can communicate with narcissism through alexithymia. Investigating the role of other possible variables influencing narcissism such as personality traits or parenting styles, paying attention to longitudinal studies on how narcissism develops from childhood to adulthood and the traits related to it, investigating narcissism in age groups and comparing these groups in order to prepare suitable educational programs are among the suggestions of this research.

#### **Data availability statement**

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

#### **Ethics statement**

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

#### Author contributions

Z.Y, A.R, M.B and H.B contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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#### Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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