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A Structural Model to Adolescent Narcissism Based on Basic Psychological Needs: Mediating Role of Alexithymia

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ABSTRACT

Objective: Problems related to narcissism can damage a large part of adolescent relationships. At the same time, looking for the prognosis of narcissism can help reduce the risk of developing the disorder. Therefore, the present study aimed to construct a structural model of adolescent narcissism based on basic psychological needs with the mediating role of alexithymia.

Methods: The research method was descriptive-correlational using structural equation modeling. The statistical population included all high school students of Shiraz in 2021. Participants were 512 students who were selected by multi-stage cluster random sampling method. Narcissistic personality scale, alexithymia questionnaire and basic psychological needs scale were used to collect data.

Results: The results indicated that basic psychological needs in a negative and significant way and alexithymia in a positive and significant way predicts narcissism. Also, basic psychological needs positively and significantly predict alexithymia. Finally, basic psychological needs through alexithymia can predict narcissism ($p < 0.01$).

Conclusions: Based on the findings, it can be concluded that narcissism in adolescents is a phenomenon that is directly and indirectly affected by basic psychological needs. The findings have useful implications for counseling with teenagers.

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Introduction

The term "narcissistic" is, in fact, derived from the appellation of one of the figures in Greek mythology known as Narcissus or Narcissus (di Giacomo et al., 2023). Initially, Sigmund Freud, drawing inspiration from this ancient myth, introduced the concept of narcissism into the realm of psychoanalysis. Narcissism, or self-love, denotes the deriving of sexual gratification from oneself. This psychological condition represents an early stage in mental growth and manifests as a form of malady in adulthood (Barnett et al., 2023). As outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the diagnostic criteria for this disorder encompass a pervasive pattern of narcissism in thought or action, a craving for admiration, and a deficiency in empathy (Weinberg & Ronningstam, 2022), requiring the presence of five or more of the following criteria: 1) The individual experiences a profound sense of entitlement, being preoccupied with fantasies related to boundless success, power, intelligence, beauty, or ideal love. They perceive themselves as extraordinary and distinct, believing that only individuals of high status can comprehend them, feeling the necessity to associate with elite individuals (or establishments), seeking excessive admiration, possessing an entitlement mentality with unreasonable expectations, being exploitative in interpersonal relationships, lacking empathy, frequently harboring envy towards others and perceiving others as envious of them, displaying haughty behaviors or attitudes, and exhibiting egocentric tendencies (Seidman et al., 2020).

Conversely, all individuals exhibit neurotic needs to some extent, which represent irrational coping mechanisms for personal issues. The neurotic nature of these needs arises from the intense pursuit and personal fixation on fulfilling them as the sole solution to alleviate underlying anxiety (Ellis et al., 2021). The satisfaction of these needs does not contribute to a sense of security, but merely serves to temporarily alleviate the discomfort stemming from anxiety (Shoshani & Krauskopf, 2021). Furthermore, when an individual endeavors to meet these needs solely to manage anxiety, they tend to fixate on a single need and persistently seek its fulfillment across all circumstances (Lee et al., 2020). Failure to address these needs promptly results in anxiety, and if left unresolved, the individual may view the world as a perilous realm and undergo fundamental anxiety (Sun et al., 2020). Consequently, it appears that the satisfaction or dissatisfaction of fundamental psychological needs may be linked to a proclivity towards narcissism (Yin & Zeng, 2020). In a study conducted by Mazinani et al. (2021), it was deduced that the degree of fulfillment of

fundamental psychological needs may be associated with different types of narcissistic individuals, with elements such as competence, self-esteem, and a sense of belonging serving as significant negative predictors of narcissism.

In the academic exploration conducted by Shoshani and Krauskopf (2021)), it was identified that fundamental needs such as the preservation of dignity and self-respect emerge as significant determinants of empathic behaviors in a positive manner and narcissism in a negative manner. Nevertheless, the intricate nature of the connection between basic psychological needs and narcissism indicates a non-linear relationship, suggesting that certain variables may indeed exert a pivotal influence in this context. Consequently, there arises a possibility to substantiate the pivotal role of emotions through a comparative analysis of the aforementioned variables.

Emotions, within the realm of cognitive science, are recognized as a collection of schemas rooted in information processing mechanisms encompassing both symbolic and non-symbolic processes as well as representations (Choi et al., 2021). A decline in emotional expression essentially signifies a form of emotional deficiency or dysregulation, while impairment in emotional processing capacities stemming from emotional inadequacy may pose a potential risk factor for a range of mental health issues (Morie et al., 2021). Alexithymia, denoting the incapacity to cognitively interpret emotional data and regulate emotions, embodies a crucial aspect in this context. Emotional dysfunction, a multifaceted construct, manifests as challenges in emotion identification, articulation of emotions to others, and an outwardly intellectual orientation (Hébert et al., 2021). The core attributes of emotional inadequacy encompass the incapacity to acknowledge and verbally articulate personal emotions, an acute dearth of symbolic thinking hindering the expression of experiences, sentiments, cravings, and motivations, the failure to utilize emotions as indicators of emotional issues, abstraction from relatively less significant external realities, diminished dream recall, challenges in distinguishing between emotional states and bodily sensations, absence of emotional facial expressions, restricted capacity for empathy and self-awareness (Tombini et al., 2020). Alexithymia involves impairment across the triad of emotion recognition, processing, and expression. The outward manifestations constituting the construct of emotional inadequacy denote deficiencies in cognitive processing and regulation of emotions (Palma-Álvarez et al., 2021). Previous research has highlighted that the incapacity to label or recognize emotions serves as a characteristic trait of individuals with narcissistic

tendencies (Iskric et al., 2020). Hemming et al. (2019) reached the conclusion that individuals displaying narcissistic symptoms exhibit higher levels of emotional dysfunction compared to the general population. Furthermore, Serrani (2014) posited that alexithymia could play a pivotal role in predicting narcissism, with individuals exhibiting symptoms of dysregulation reporting lower levels of emotional expressiveness and heightened incidences of mood disorders. Hence, the primary research inquiry revolves around the suitability of a structural model of adolescent narcissism predicated on fundamental psychological needs with emotional inadequacy serving as a mediating factor.

Material and Methods

The ongoing research project entailed a comprehensive elucidation of the correlation type, focusing specifically on the structural equation modeling approach. The demographic under scrutiny in the current study encompassed all secondary school students enrolled during the second term in Shiraz in the year 2022. The methodology employed to select the statistical sample adhered to Morgan's table, where for communities exceeding a population of ten thousand individuals, 375 students were chosen utilizing the multi-stage cluster random sampling technique to respond to the research questionnaires. To begin with, two out of the four education districts in Shiraz city, namely districts 1 and 4, were selected at random. Subsequently, an additional random selection process was conducted to choose two girls' schools and two boys' schools from the aforementioned districts. Following this, a random selection was made for one grade level (10th, 11th, or 12th) from each of the selected schools. Ultimately, all students within the chosen grade levels partook in the research by completing the provided questionnaires. Prior to distributing the questionnaires to the students, a brief orientation session was held to explain the research objectives and provide guidelines on how to effectively respond to the questions. Subsequently, the data gathered from the participating students were inputted into SPSS software for thorough analysis and interpretation.

Instruments

Narcissistic personality questionnaire 16-item version (NPI-16): This questionnaire was first developed by Raskin and Hall (1981) in 80 and 54-item versions, and then a 40-item version by Raskin and Terry (Ames et al., 2006) were examined in 3 separate studies for validation. 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 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 higher indicates a narcissistic personality. The test-retest reliability coefficients reported by the main creators of the test is 0.85 during five 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 five personality factor scale. These coefficients have been calculated for extroversion indices of 0.32 for openness to new experiences and 0.41. In Mohammadzadeh (2009) research, 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 for all items was 0.88.

The Toronto Alexithymia Scale (TAS-20):: This questionnaire was created by Bagby et al. (2020) 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". Therefore, the subjects' scores should be in the range of 20 to 100, and a higher score indicates more alexithymia. In this scale, items 4, 10, 18 and 19 are scored inversely. In this scale, both the score of each of the three subscales and the total score of Torteno's Alexithymia 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 Alexithymia, Bagby et al. (2020) 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 Alexithymia Scale-20 (Besharat & Ganji, 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 75.85, 0.82, respectively. The retest reliability of the Toronto Alexithymia 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 Alexithymia 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.

Basic Psychological Needs Satisfaction Scale (BNSG-S): Basic Psychological Needs Questionnaire was created by Gagné (2003). This scale includes 21 items that measure three subscales, autonomy, competence and communication, which measure the degree of support for autonomy needs with questions 1, 4a, 8, 11a, 14, 17, 20a, the need to Competence is measured by questions 3, 5, 10, 13, 15, 19 and the need to communicate with others is measured by questions 2, 6, 7, 9, 12, 16, 18, 21. which is graded on a seven-point Likert scale. And the questions marked with A are scored in reverse. A higher score in each scale indicates a higher level of satisfaction of that need. Gagné (2003) have reported the reliability coefficients of its implementation on the subjects' mother, father, romantic partner, and friends as 0.92. Also, this scale has been implemented in samples of Iranian managers and students and has good validity and reliability, so that its Cronbach's alpha fluctuated between 0.76 and 0.79 (Gagné, 2003). The psychometric properties of the basic needs satisfaction scale have been preliminary confirmed in foreign researches at the general level (Jones et al., 2020). Cronbach's alpha coefficients for the subscales of self-following, competence, and belonging were calculated for the general population as 0.87, 0.89, and 0.92 respectively, and for students as 0.89, 0.87, and 0.91 respectively, which are a sign of good internal consistency of the scale. In the present study, the reliability coefficient using Cronbach's alpha method was obtained for all items of 0.89.

In this research, the data was examined at two levels. At the descriptive level, the demographic characteristics, mean and standard deviation, as well as the hypotheses of structural equation

modeling and evaluation of the measurement model and the correlation coefficient between the research variables were investigated. At the inferential level, the structural model was evaluated and the research hypothesis was investigated.

Ethical considerations

The principles of research ethics have been strictly and comprehensively followed. In this study, informed consent forms were completed by all subjects.

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 (total)	5.93	3.34	0.44	-0.33
Difficulty identifying emotions	18.50	6.81	0.35	0.17
Difficulty describing feelings	13.70	4.68	0.25	0.16
Objective thinking	19.89	4.06	0.31	-0.03
Alexithymia (total)	52.10	11.84	0.86	0.03
The need for autonomy	34.38	8.27	0.49	-0.50
The need for competence	30.58	7.01	0.42	-0.44
Need to connect with others (belonging)	40.56	7.56	0.51	-0.48
Basic psychological need (total)	105.52	19.06	0.14	-0.36

Based on the findings of 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 average score of the students' basic needs was 52.105 out of 147, which indicates the high level of satisfaction of the students' needs. The highest average is related to the subscale "need to connect with others" (40.56) and the lowest average is related to "need to be competent" (30.58). 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 is included in Table 2.

Table 2. Correlation matrix of research subscales

Variable	1	2	3	4	5	6	7
Narcissism	1						
Difficulty identifying emotions	0.12*	1					
Difficulty describing feelings	0.14*	0.54**	1				
Objective thinking	0.09*	0.19*	0.24**	1			
The need for autonomy	-0.09*	-0.46**	-0.35**	-0.19*	1		
The need for competence	-0.23**	-0.48**	-0.36**	-0.29**	0.60**	1	
The need to communicate with others	-	-0.44**	-0.43**	-0.27**	0.52**	0.51**	1

*< 0.05, ** < 0.01

The results of the mentioned table show a significant relationship between most of the subscales. Table 2 shows the correlation between research constructs. According to the information in this table, there is a positive and significant correlation between narcissism and alexithymia at the level of 0.01. While there is a negative and significant relationship between narcissism and basic psychological needs at the level of 0.01. In general, a significant relationship was observed between all research variables. More details are given in Table 3.

Table 3. Correlation matrix between research constructs

Variable	1	2	3
Narcissism	1		
Alexithymia	0.16*	1	
Basic psychological need	-0.13*	0.58**	1

*< 0.05, ** < 0.01

In order to examine the conceptual model and find out the causal relationships between the narcissism and alexithymia and basic psychological needs, structural equation modeling (SEM) was used using AMOS18 software. The investigated model is a path model, and path models are one of the types of models that can be used to explain and predict various phenomena. As can be seen in Table 4, the proportional values of the modified fit indices of the structural model indicate the appropriate data-model compatibility.

Table 4. Modified fit indices of the structural model of adolescent narcissism

Indices	Value
X^2	960.60
DF	326
$X^{2/}$DF	2.95
RMSEA	0.06
CFI	0.90
IFI	0.90
PCFI	0.85

The findings from Table 4 show the loading of subscales on the relevant constructs. Based on the findings of this table, all the subscales affect their related structures at a significance level of 1%. It should be noted that the standard coefficients show the factor load of each subscale with the corresponding structure.

Table 5. Information on the structural model of the latent variables of the research

Variable	Subscale	Factor loading	Std. error	T value	P
Alexithymia	Difficulty identifying emotions	0.82	-	-	-
	Difficulty describing feelings	0.67	0.04	13.20	0.001
	Objective thinking	0.38	0.04	7.05	0.001
Basic psychological need	The need for autonomy	0.77	0.09	14.26	0.001
	The need for competence	0.78	0.08	14.34	0.001
	The need to communicate with others	0.65	-	-	-

Table 6. Direct and indirect effects and total predictor variables on the dependent variable

Dependent variable	Independent variables	Direct effect	Indirect effect	Total effect
Narcissism	Alexithymia	0.48**	-	0.48**
$R^2 = 0.32$	Basic psychological need	-0.39**	-0.08*	-0.47**

*< 0.05, ** < 0.01

According to able 6, the variable of alexithymia had a positive and significant effect on narcissism (0.48). On the other hand, basic psychological needs had a negative and significant effect on narcissism (-0.39). This means that the more the student's alexithymia increases, the more his narcissism increases, and the more the student's basic psychological needs increase, the more his narcissism decreases and vice versa. The indirect effect of basic psychological needs on narcissism through alexithymia is (-0.08). The total effect of basic needs on narcissism is negative and significant (-0.47). In general, the results show that both independent or predictor variables (basic psychological needs and alexithymia) have an effect on the dependent variable (adolescent narcissism). Therefore, the research hypothesis is confirmed. Finally, according to the results, 32% 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 objective of the present study was to assess the structural framework of adolescent narcissism in relation to fundamental psychological needs, incorporating emotional inadequacy as a mediating factor. Findings from the analysis of the direct impact of the exogenous predictor variable, basic psychological needs, on the endogenous criterion variable, narcissism, revealed that basic

psychological needs serve as a significant negative predictor of narcissism. In a related investigation, Mazinani et al. (2021) inferred that the degree of fulfillment of basic psychological needs could be linked to various types of narcissistic individuals, wherein components such as competence, self-following, and belonging were identified as substantial negative predictors of narcissism. Shoshani and Krauskopf (2021) determined that needs such as a sense of esteem and self-respect rank among the pivotal factors predicting empathic behaviors positively and narcissism negatively. Collectively, these inquiries demonstrate the influence of basic psychological needs on narcissism. Based on the conducted studies and the outcomes of this research, it is plausible to assert that narcissism embodies a personality structure encompassing traits like jealousy, arrogance, exploitation, entitlement, and a deficiency in empathetic abilities, potentially stemming from an inadequate foundation or construal hindering the fulfillment of personal needs (Mazinani et al., 2021).

Authentic communication and reciprocal acceptance foster autonomy, while the sense of autonomy in task performance bolsters competence, and competence, in turn, enhances feelings of acceptance and reliance on the surroundings and individuals. Psychological needs furnish the essential impetus bolstering initiative and cognitive development (Jones et al., 2020). Hence, psychological needs can facilitate constructive person-environment dynamics, contrasting the fallacious beliefs regarding proficiency associated with narcissism. Autonomous behavior denotes a sense of volition and choice in initiating and regulating actions (Lim et al., 2020). Specifically, autonomy as a psychological need transforms the perception of competence into a framework for engaging with the environment, ultimately curtailing narcissism and nurturing a sense of reality (Aelterman et al., 2016). Narcissism may manifest as a coping mechanism, deflecting attention from competency shortcomings (Cheshure et al., 2020).

In brief, the fulfillment of fundamental psychological needs diminishes narcissism by fostering the development of competency. Conversely, challenges in meeting these psychological needs can trigger fantasies related to personality narcissism and aspirations for competence.

The outcomes of investigating the direct impact of the exogenous predictor variable of emotional inadequacy on the endogenous criterion variable of narcissism indicated that emotional inadequacy serves as a significant positive predictor of narcissism. In a related study, Iskric et al. (2020) determined that the incapacity to articulate or recognize emotions is a characteristic of individuals

with narcissistic traits. Hemming et al. (2019) established that individuals displaying symptoms of Narcissistic Personality Disorder exhibit more emotional maladjustment compared to the general population. Moreover, a correlation between emotional dyslexia and narcissism was identified. Serrani (2014) suggested that emotional dyslexia plays a crucial role in predicting various personality disorders, including narcissism.

Overall, these research findings illustrate the influence of emotional inadequacy on narcissism. Based on the conducted studies and the outcomes of this particular research, it is plausible to assert that the inability to cognitively process emotional data and regulate emotions, defined as emotional inadequacy, likely represents a pivotal facet of the narcissistic personality. Challenges in recognizing emotions, articulating feelings, and an external thought orientation signify a lack of self-awareness and understanding of others, along with the emotions intertwined in these interpersonal connections. A cursory examination of narcissistic individuals reveals the prevalence of these emotional deficiencies among them. Consequently, many narcissists struggle to form relationships and struggle to cultivate friendships (Faccini & Allely, 2016). The incapacity to acknowledge and verbalize personal emotions, a profound deficiency in symbolic thinking hindering the expression of experiences, emotions, desires, and drives, an inability to utilize emotions as indicators of emotional issues, abstract contemplation of trivial matters. External focus, diminished dream recall, challenges in distinguishing between emotional states and physical sensations, absence of emotional facial expressions, restricted capacity for empathy and self-awareness, as well as an inability to regulate and handle emotions (the process of transitioning from cognition to action) are all hallmark traits of emotional inadequacy (Choi et al., 2021). Aligned with these characteristics, there exist narcissistic individuals lacking a clear perception of their own worth, engaging in various forms of personal illusions.

It appears that the commonality between emotional deficiency and narcissism lies in a diminished emotional perception. Emotional deficiency, as a form of impairment in processing emotions due to insufficient emotional capacity, enables individuals to define themselves distinctly (Morie et al., 2021).

The alexithymia signifies challenges in discerning one's own emotional states. Difficulty in articulating feelings implies a struggle in expressing emotional experiences, while an external thinking orientation indicates a tendency to focus on external factors rather than internal ones

(Hemming et al., 2019). Individuals with dyslexia exhibit constrained imaginative abilities, limited aspirations, and a tendency to direct their thoughts externally rather than interpreting internal events (Bagby et al., 2020). These characteristics manifest in the pursuit of superiority among narcissistic individuals. Thus, behaving impolitely without self-critique highlights the link between alexithymia and narcissism (Hawk et al., 2019).

Overall, emotional inadequacy can impede interpersonal connections that rely on effective emotional regulation. This suggests that a portion of narcissism stems from a lack of comprehension of oneself and others within an emotional framework, consequently exacerbating narcissistic tendencies due to emotional shortcomings.

The findings regarding the direct impact of exogenous predictor variables, such as basic psychological needs, on endogenous criterion variables like emotional distress reveal that basic psychological needs serve as a significant negative predictor of emotional distress. Collectively, these studies underscore the influence of basic psychological needs on emotional deficiency. Based on the research findings, psychological needs (autonomy, competence, relatedness) are interrelated, primarily arising from environmental opportunities and guidance (Jones et al., 2020). Therefore, the provision of opportunities for meeting these needs may mitigate emotional insufficiency by fostering interpersonal relationships. Social beings inherently crave social interaction, warmth, and intimate connections (Kim et al., 2020). Consequently, the need for communication may clash with traits associated with emotional inadequacy, reflecting a desire to engage with others and seek support from significant individuals. Interactions with others create a social context for internalizing external values, transforming them into internalized beliefs. The act of connecting with others embodies the longing for love, support, and reciprocation of these sentiments. Fulfilling the need for communication as a psychological need is thus pivotal in alleviating emotional deficiencies.

On the contrary, the sensation of agency and volition, viewed as an intrinsic craving for behavioral and affective encounters that the individual himself has orchestrated, has the potential to diminish instances of failure (Aelterman et al., 2016). Autonomy is delineated as the perception held by an individual that he is the instigator and active participant in the outcomes of his labor. As an individual increasingly attributes the causation of his actions to internal sources, he perceives a heightened capacity to select from multiple options, free from external coercion, thus acting out of

volition, thereby cultivating greater autonomy. This suggests an intimate connection between individuals' actions and emotions. It is plausible that a segment of emotional inadequacy may stem from circumstances where adverse developmental conditions have impeded an individual's ability to articulate and comprehend his emotions. Essentially, an individual's upbringing may instill doubt regarding emotions, hindering their ability to identify and articulate emotions in adulthood. Consequently, emotional inadequacy may be linked to psychological requisites like autonomy, which have been withheld from the individual. Ultimately, engaging with optimal challenges and investing effort in mastering developmental tasks establishes the foundation for a nuanced comprehension of emotions in individuals. In situations where opportunities for competence development are scarce, the capacity to perceive oneself as an emotional being is compromised.

The findings pertaining to the exploration of the indirect impact of the predictor variable (exogenous) of fundamental psychological needs on the criterion variable (endogenous) of narcissism through emotional deficiency (mediator) utilizing the bootstrap method revealed that fundamental psychological needs, via emotional deficiency, can indirectly and significantly anticipate narcissism. Hence, emotional deficiency assumes a mediating role in the association between fundamental psychological needs and narcissism. To elucidate these findings, it can be contended that narcissism manifests as a consequence of various elements, one of which includes the failure to fulfill fundamental psychological needs. The deficiency in shaping personality traits can be detrimental in this context and may impede the discernment and acknowledgment of emotions. Therefore, a comprehensive evaluation of the status of each of these variables facilitates a deeper comprehension of this correlation. Essentially, individuals, as biological entities, harbor a set of fundamental physiological needs that necessitate fulfillment for their sustenance and existence.

The needs, such as the requirement for water and sustenance, share a common origin and essence among both humans and animals. The behavior of humans exhibits a vast array of variability, diversity, and adaptability. Individuals are incentivized by a series of secondary needs (i.e., needs of a psychological nature), which are shaped by society and exhibit significant variation from one individual to another. Upon activation of our psychological needs by an activity, our interest in said activity is piqued. The fulfillment of our psychological needs through an activity result in a sense of contentment. Consequently, we are cognizant of our feelings of interest and contentment;

however, the driving force behind our engagement with the environment lies in the activation and fulfillment of our psychological needs. Hence, the optimal satisfaction of these needs can contribute to psychological and personality well-being. This, in turn, can directly mitigate narcissism, a condition stemming from the unhealthy development of personality traits, while also indirectly alleviating emotional distress. Adequately meeting one's needs empowers an individual to cultivate mental well-being, a crucial factor in recognizing and articulating emotions. Thus, the fulfillment of these needs' leads to a decrease in emotional deficiencies, which in turn can significantly mitigate narcissistic tendencies. Evidently, a substantial portion of narcissism arises from the inability to accurately interpret one's own and others' emotions, as corroborated by this study.

The descriptive, cross-sectional nature of the study, coupled with the absence of other subject groups, constrains the capacity to compare and extrapolate the findings. Therefore, exploring the influence of other potential variables impacting narcissism, such as personality traits or parental approaches, and emphasizing longitudinal inquiries into the developmental trajectory of narcissism from childhood to adulthood, alongside associated traits, can provide valuable insights for clinical studies concerning narcissism.

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.

Author contributions

All authors 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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