

Original Research

Examining the Mediating Role of Mindfulness in the Effect of Perfectionism on Students' Academic Progress

Azam Nazifi^{1*}, Ghobad Bahamin²

1. Master of Educational Psychology, Payam Noor Golpayegan University, Golpayegan, Iran. **Orcid:** 0009-0003-8636-9641

2. PhD in Psychology, Assistant Professor of Payam Noor University, Ilam Branch, Iran. **Orcid:** 0000-0002-0043-6600

***Corresponding Author: Azam Nazifi.** Master of Educational Psychology, Payam Noor Golpayegan University, Golpayegan, Iran. **Email:** Azinazf50567076@gmail.com.

Abstract

Background: The purpose of this research is to investigate the mediating role of Mindfulness in the effect of perfectionism on students' academic progress.

Method: The current research is practical and is carried out by descriptive correlational method. All 12th grade female students in Isfahan city were the statistical population of the research, and using Morgan's table, the sample size was estimated to be 400 people. For this purpose, a simple cluster sampling method is used. The tools used in the research are: Hill et al.'s perfectionism questionnaire (2004), Trier and Rich's multi-factor memory questionnaire (2002), and Pham and Taylor's academic achievement questionnaire (1990). In order to analyze the data, descriptive and inferential statistical methods have been used. Inferential statistics were done through structural equation modeling and path analysis and regression coefficient using SPSS23 software.

Results: The findings of the research indicate that the first hypothesis is confirmed and that perfectionism has an effect on the academic progress of students with the mediating role of memory quality. Also, the second hypothesis was confirmed and perfectionism has an effect on academic progress with the mediating role of Mindfulness ability. In addition, the third hypothesis of the research has also been confirmed and perfectionism has an effect on the academic progress of students with the mediating role of meta-memory strategy.

Conclusion: It is necessary for the education authorities to consider the perfectionism of the students to create solutions such as suitable school facilities, suitable counseling and suitable training.

Keywords: Perfectionism, Academic Progress, Mindfulness, Students.

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Introduction

Academic progress is one of the most fundamental factors that play a significant role in order to complete the education and reach the university level. This factor is considered one of the most important parameters in terms of acquiring scientific and practical qualifications and skills that students need in predicting their future conditions (1). Students are faced with different levels of academic progress factors, they react in completely different ways in their life because of this. In this way, people with a high desire to progress, compared to people who have a lower desire to progress, will seek to obtain high academic degrees, get a higher grade, and extracurricular activities (2). During the academic period, academic progress has been to achieve educational goals. In class and subjects; This term refers to the success of students and its measurement is done by standardized academic tests and it determines the achievement of educational goals to some extent (3).

Many things can be involved in academic progress. Perfectionism, on the other hand, causes students to have high expectations of themselves and to strive for better performance and to regularly consider criticism in their evaluation. In fact, perfectionism can be both constructive and useful (positive) and destructive and destructive (negative). (4) Perfectionism is defined and measured as a three-dimensional structure, which includes self-oriented perfectionism, other-oriented perfectionism, and society-oriented perfectionism. Self-centered perfectionism is a characteristic of people who have a desire to be perfect (5).

Perfectionists are people with firm and honest opinions, and the hardness of opinions and flexibility is one of the first characteristics that was mentioned about perfectionism. Perfectionism is a set of very high standards for performance, which is accompanied by negative self-evaluations, criticism and self-blame (6). Perfectionism is a personality structure that shows the effort to achieve high standards for performance and the tendency to evaluate oneself in a critical manner (7).

Positive perfectionism can motivate a person to make great progress and pay attention to the details necessary for scientific research, but

negative perfectionism causes people to obsessively strive to achieve impossible goals. The goal of positive perfectionism is to achieve positive outcomes and the goal of negative perfectionism is to avoid and escape from negative outcomes (8).

It should be known that there are many factors that affect the students' attitude towards themselves and their family members, the level of Mindfulness can be mentioned among them. The term Mindfulness refers to the knowledge about the memory system and the monitoring and control of individual learning and memory processes (9). Mindfulness makes learners aware of their thinking and performance, evolution, use and capacity of their memory system and how to apply strategies, and use less superficial learning approaches that lack analytical learning and do not include learning (10). Mindfulness is concerned with awareness of individual memory and how memory works in general. Therefore, Mindfulness plays an important role in focusing on important information strategically. Optimal Mindfulness function includes accurate estimation of individual memory abilities and use of memory principles to enhance performance (11). Therefore, the conscious, effective and complete regulation of metacognitive skills related to memory is a determining factor in the successful completion of any cognitive task.

Jafari (2021) investigated the relationship between parents' perfectionism and children's academic progress in a research. The current study was conducted with the aim of investigating the relationship between parents' perfectionism and students' academic progress. Perfectionism, as a personality and motivational trait, affects a person's behavior. Although the concept of perfectionism has attracted the attention of psychologists, it is still defined as an almost unknown and inconsistent phenomenon. The structure of perfectionism can be normal or neurotic. In fact, perfectionism is a set of thought patterns doomed to failure that make you strive to achieve unrealistic goals. If the person's learning is in accordance with her potential ability and talents or there is no gap between the potential ability and the actual ability of the student, we say that academic progress has taken place (12).

Vahadani et al. (2021) investigated the relationship between perfectionism and academic burnout with the academic progress of elementary school students. The present study was conducted in order to investigate the relationship between perfectionism and academic burnout with the academic progress of elementary school students in Chabahar city. Based on the results of this research, no positive and significant relationship was found between the variable of perfectionism and the academic progress of primary school boys in Chabahar city. Also, based on the results of this research, a positive and significant relationship was found between the variable of academic burnout and the academic progress of elementary school boys in Chabahar city (13). Purakbari (2020) investigated the relationship between perfectionism and academic achievement among secondary school students in Yazd city. The stated hypotheses are that there is a relationship between perfectionism and academic progress, and that if perfectionism is controlled, it can be seen to have positive effects on the student's academic progress, as well as lack of control, academic failure and adverse effects including depression and it leads to isolation. The obtained results indicate that there is a significant relationship between perfectionism and students' education, which can lead to academic progress or failure (14). Seong and colleagues (2021) investigated perfectionism and academic burnout in a research: longitudinal expansion of the two-factor model of perfectionism. Perfectionism is a personality tendency that is very relevant in the field of education and is related to various educational and psychological outcomes in students. Because students face challenges and stress in school, academic burnout is also an important phenomenon. The results of confirmatory analysis and longitudinal invariance tests showed that the two-factor model ($S \cdot I-1$) with general perfectionism, defined by an item of concern about making mistakes as the referent, and the perfectionism factor of In particular, it explains the multidimensional structure better. Perfectionism, relative to the two-factor model, specific perfectionistic concerns remained unreliable after controlling for the general

factor, while perfectionistic strivings remained a more reliable factor. Cross-sectional analyzes showed that general perfectionism predicted longitudinal increases in emotional exhaustion and pessimism. Conversely, specific perfectionist efforts do not predict changes in student burnout (15).

Verner-Filion & Gaudreau (2020) examined perfectionism and academic adjustment and the mediating role of achievement goals. This study investigated the mediating role of achievement goals in the relationship between self-oriented perfectionism (SOP) and socially prescribed perfectionism with academic achievement and satisfaction of university students. The results showed that the positive relationship with academic achievement was partially mediated by the performance-approach goal, while the mastery-approach goal acted as a full mediator in the positive relationship between perfectionism and academic satisfaction. Furthermore, the negative relationship between academic adjustment and academic achievement was partially mediated by performance-approach goal, while mastery-approach goal acted as a partial mediator in the negative relationship between academic adjustment and academic satisfaction (16).

Method

The present research is practical and is carried out by the descriptive method of correlation. All 12th grade female students in Isfahan city are the statistical population of this study, which is about 12047 people. The Morgan table method was used to determine the sample size, which was estimated to be 400 people. For this purpose, a simple cluster sampling method is used; because there is not much difference between different classes in the grouping of society, but there is a big difference between people of each class. Each floor is called a cluster here. The tools used in the research are: Perfectionism Questionnaire: This questionnaire was prepared by Hill et al. in 2004 and has 59 questions. Hill et al reported that the internal consistency of the questionnaire ranges from 0.83 to 0.91 for all subscales. In Jamshidi et al.'s study(2009), the reliability coefficient of Hill et al.'s perfectionism questionnaire was 0.89 using Cronbach's alpha method, and factor analysis

with principal components and varimax rotation was used to check the validity of the scale. The results indicated that the mentioned scale consists of 6 factors (17).

Multifactor Memory Questionnaire: This scale was used by Trier and Rich (2002). For the first time, this questionnaire was translated and validated by Abazarian Tehrani and Zare in Iran. This questionnaire measures three dimensions of self-reported memory. These 3 dimensions include memory quality (quality), perception of daily memory ability (memory ability), and use of daily memory strategies and aids (memory strategy). Questions 1 to 18 are related to satisfaction factor, questions 19 to 38 are related to ability, and 39 to 57 are related to strategy. Ability scale (always = 0 and never = 4) strategy (always = 4 and never = 0) in satisfaction factor = questions 2, 4, 5, 7, 8, 10, 11, 14, 15, 16 and 18 like ability (always = 0 and never = 4) and the rest like strategy (always = 4 and never = 0) is scored. The validity index of the scales during 12 measurements of memory skills was 70%. Its reliability is in the article of Elos et al. (2017). Cronbach's alpha coefficient was equal to 0.93. The questionnaire has a very high internal consistency. Re-reliability was performed on 30 women, and the Cronbach's alpha coefficient was 0.906 (18).

Academic achievement questionnaire: This questionnaire is adapted from Pham and Taylor's research (1990) and consists of 48 items. Each item in the scoring method has 5 answers, in the categories of none, the score is 1; low, score 2; to some extent, score 3; a lot is given a score of 4 and a very high score is given a score of 5, and the scoring method is the opposite in 11 questions that are negative. The reliability of the subscales in Saber's article (2009) with Cronbach's alpha method are: self-efficacy scale 0.92, emotional effects scale 0.73, planning scale 0.93, lack of outcome control scale 0.64 and motivation scale 0.73 and coefficient The total Cronbach's alpha is 0.74. The validity of this questionnaire has been confirmed by factor analysis method (19). In order to analyze the data, descriptive and inferential statistical methods have been used. Inferential statistics were done through structural equation modeling and path analysis

and regression coefficient using SPSS23 software.

Results

The descriptive findings of the research are presented as follows:

According to the presented table, it can be seen that out of 400 selected samples, 400 people (100 percent), in other words, the entire population were girls.

According to the presented table, it can be seen that out of 400 selected samples, 101 people (25.3 percent) majored in mathematics; 141 people (35.2 percent) majored in **empirical science**, 105 people (26 percent) majored in Humanities, and 54 people (13.5 percent) were from other fields.

According to the results of the table, it can be seen that the lowest average value belongs to the "academic achievement" variable and the highest value belongs to the Mindfulness strategy variable. Also, since the value of skewness is in the range of (-3 , +3), it can be said that the data has a normal distribution.

In the following, the hypotheses are examined: First hypothesis: Perfectionism with the mediating role of memory quality has a direct effect on students' academic progress.

Zero hypothesis: Perfectionism with the mediating role of memory quality does not have a direct effect on students' academic progress.

Opposite hypothesis: Perfectionism has a direct effect on the academic progress of students with the mediating role of memory quality.

In order to calculate the mediating role of memory quality in the first hypothesis, the Sobel test was used, considering that the value of the Sobel test was 10.238 based on the values of the t-statistic of the relationship, and its value is outside the range of 1.96 and -1.96, so It can be said that the first hypothesis is confirmed. Therefore, it can be said that perfectionism with the mediating role of memory quality has a direct effect on the academic progress of students.

Second hypothesis: Perfectionism with the mediating role of Mindfulness ability has a direct effect on students' academic progress.

Zero hypothesis: Perfectionism with the mediating role of Mindfulness ability does not have a direct effect on students' academic progress.

Opposite hypothesis: Perfectionism with the mediating role of Mindfulness ability has a direct effect on students' academic progress.

In order to calculate the mediating role of Mindfulness ability in the second hypothesis, the Sobel test has been used, considering that the Sobel test value is 2.143 based on the t-statistics of the relationships, and its value is outside the range of 1.96 and -1.96, so It can be said that the second hypothesis is confirmed. Therefore, it can be said that perfectionism with the mediating role of Mindfulness has a direct effect on the academic progress of students.

The third hypothesis: Perfectionism with the mediating role of Mindfulness strategy has a direct effect on the academic progress of students.

Null hypothesis: Perfectionism with the mediating role of Mindfulness strategy does not have a direct effect on students' academic progress.

Opposite hypothesis: Perfectionism with the mediating role of Mindfulness strategy has a direct effect on students' academic progress.

In order to calculate the mediating role of Mindfulness ability in the third hypothesis, the Sobel test has been used, considering that the Sobel test value is 6.787 based on the t-statistics of the relationships, and its value is outside the range of 1.96 and -1.96, so It can be said that the third hypothesis is confirmed. Therefore, it can be said that perfectionism with the mediating role of Mindfulness strategy has a direct effect on the academic progress of students.

Discussion

The present study was conducted with the aim of investigating the mediating role of Mindfulness in the effect of perfectionism on the academic progress of students. The results of the research showed that the first hypothesis that perfectionism with the mediating role of memory quality has an effect on students' academic progress is confirmed due to having a significance level of less than 0.05. Therefore, it can be said that there is a significant relationship between the variables of the first hypothesis and the first hypothesis is confirmed. Therefore, it can be said that perfectionism has an effect on the academic progress of students with the mediating role of

memory quality. The results of the research showed that the second hypothesis that perfectionism with the mediating role of Mindfulness ability has an effect on the academic progress of students is confirmed due to having a significance level of less than 0.05. Therefore, it can be said that there is a significant relationship between the variables of the second hypothesis and the second hypothesis is confirmed. Therefore, it can be said that perfectionism with the mediating role of Mindfulness has an effect on the academic progress of students. The results of the research showed that the third hypothesis that perfectionism with the mediating role of Mindfulness strategy has an effect on students' academic progress is confirmed due to having a significance level of less than 0.05. Therefore, it can be said that there is a significant relationship between the variables of the third hypothesis and the third hypothesis is confirmed. Therefore, it can be said that perfectionism with the mediating role of Mindfulness strategy has an effect on the academic progress of students. The results of other similar studies and researches are as follows:

Vahdani et al. (2021) concluded that a positive and significant relationship was not found between the variable of perfectionism and the academic achievement of primary school boys in Chabahr city (13). Purakbari (2020) showed in a research that there is a significant relationship between perfectionism and students' education, which can lead to academic progress or failure (14). Safari et al. (2019) showed in a research that the perfectionism dimensions of children and adolescents responded. The results of this research showed that the dimensions of perfectionism directly and indirectly affect academic satisfaction and progress. Progress goals as a mediating variable on satisfaction. Academic progress is effective (20).

Conclusion

Today, the academic progress of students is one of the important indicators in the evaluation of education in today's advanced world, without a doubt, academic progress is one of the signs of individual success, without which the development and progress of any country will not be possible. Examining the impact of

mindfulness and perfectionism is very important in academic progress; Because there is a meaningful relationship between these variables, the guardians of education and also the families will cause them to change their attitude towards education and progress, so that they can strive for the future by teaching students. From this point of view, it is suggested that the education officials consider the perfectionism of students to create solutions such as suitable school facilities, suitable counseling and suitable training. It should be noted that using the questionnaire alone can lead to limitations. Limiting the statistical population to 12th grade female students in Isfahan city is one of the main limitations of the research. For this purpose, in order to conduct future research, it is suggested that a similar research be conducted among the statistical population of boys and its results be compared with the findings of the current research.

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Authors Contributions

The author contributed to the data analysis. Drafting, revising and approving the article, responsible for all aspects of this work.

Ethical Consideration

None

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Tables**Table 1.** Frequency distribution and gender percentage of respondents

		Abundance	percentage	The cumulative percentage
Gender	Girl	400	100	100
	Boy	0	0	100
	Total	400	100	

Table 2. Distribution of the frequency and percentage of respondents' major

		Abundance	percentage	cumulative percentage
Field of Study	Mathematics	101	25.3	25.3
	empirical science	141	35.2	60.5
	Humanities	105	26	86.5
	other	54	13.5	100
	Total	400	100	

Table 3. Description of research variables

	Min	Max	mean	standard deviation	Variance	Skewness	kurtosis
Memory quality	1.94	4.72	3.263	0.513	0.264	0.428	0.054
Mindfulness ability	1.80	4.80	3.460	0.563	0.318	-0.470	-0.401
Mindfulness strategy	2.30	4.90	4.157	0.505	0.256	-1.442	1.916
Achievement	1.88	4.29	3.041	0.484	0.235	-0.398	-0.284
Perfectionism	2.75	3.86	3.306	0.220	0.049	0.163	-0.315

Table 4. Examining the relationships between variables

Relation	correlation coefficient	standard deviation	t-statistic	standard deviation
The effect of perfectionism on the quality of memory	0.395	0.027	4.011	0.000
The effect of memory quality on academic progress	0.364	0.026	3.989	0.01

Table 5. Examining the relationships between variables

Relation	correlation coefficient	standard deviation	t-statistic	standard deviation
The effect of perfectionism on Mindfulness ability	0.781	0.115	12.336	0.000
The effect of Mindfulness ability on academic achievement	0.459	0.045	6.711	0.000

Table 6. Examining the relationships between variables

Relation	The correlation coefficient	standard deviation	t-statistic	standard deviation
The effect of perfectionism on Mindfulness strategy	0.422	0.041	5.011	0.000
The effect of Mindfulness strategy on academic achievement	0.531	0.069	7.656	0.000

Table 7. The summary of findings

Row	hypothesis	Result	Type of impact
1	Perfectionism with the mediating role of memory quality has an effect on students' academic progress.	confirm	Positive
2	Perfectionism with the mediating role of Mindfulness has an effect on students' academic progress.	confirm	Positive
3	Perfectionism with the mediating role of Mindfulness strategy affects the academic progress of students.	confirm	Positive