



## The Relationship between Parental Psychological Control and Imposter Syndrome through the Mediation of Academic Procrastination in Gifted Students

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**ABSTRACT:** The present study aimed to investigate the relationship between parental psychological control and imposter syndrome through the mediation of academic procrastination in gifted students of Karaj city in 2019. The research design was causal-correlational and had a field type. The statistical population included 300 girl students of gifted high schools in Karaj city and 169 of which were selected as the sample of the study based on stratified random sampling and using Morgan's sample size table. The research instruments included the Academic Procrastination Scale, the Clance Impostor Phenomenon Scale (CIPS), and Parental Psychological Control Scale. Data were analyzed by descriptive, inferential statistics, and structural equation modeling (SEM). The results showed a significant positive relationship between dependency-oriented psychological control (DPC) and imposter syndrome in gifted students ( $P= 0.0001$ ); however, there was no significant relationship between achievement-oriented psychological control (APC) and imposter syndrome. A significant positive relationship was found between academic procrastination and imposter syndrome ( $P= 0.0001$ ); however, there was no significant relationship between DPC and academic procrastination. Academic procrastination significantly mediated the relationship between APC and imposter syndrome ( $P= 0.0001$ ); however, it had no significant effect on the relationship between DPC and imposter syndrome. The results indicated that parental psychological control and imposter syndrome significantly affects academic procrastination in gifted students.

**Keywords:** Parental psychological control, Imposter syndrome, Procrastination, Gifted students

### Introduction

Gifted students are a distinct group of adolescents who display certain characteristics in cognitive, social, and emotional domains ([Harrison, 2004](#)). Gifted people are better than most people in almost all personality traits. Gifted students are almost superior to others in most cognitive, mental, and emotional areas, and even in personality and physical characteristics ([Eren, Çete, Avcil, & Baykara, 2018](#); [Zainalipour, Mahmoodi, & Raissi Ahvan, 2019](#)). Psychologists have extensively studied effects of giftedness on mental health of gifted people. In this regard, there are two general views. The first view indicates that gifted people can better adapt to changes than ordinary people; hence, giftedness protects people from maladaptation and mental disorders. According to this view, gifted people have greater cognitive abilities, better understanding of themselves and others, and more abilities to cope with tensions and resolve conflicts in comparison with ordinary people. According to the second view, gifted people are more likely to suffer from maladaptation and other socio-emotional problems. They are more sensitive to interpersonal conflicts than others and experience more stress due to their high cognitive abilities and understanding ([Balilashak, Safavi, & Mahmoudi, 2010](#)). In fact, gifted children get anxious

when facing some painful realities of society that their peers cannot understand ([Kaoutari Esfahani, Abedi, & Ghamarani, 2016](#)).

Academic procrastination is an anti-motivational process that results from a lack of desire and satisfaction to perform a task. In other words, it refers to the deliberate delay in completing academic assignments. Procrastination is intentional delay in performing intended tasks and actions despite awareness of relevant negative consequences. In most cases, procrastination leads to dissatisfaction with performance ([Valenzuela, Codina, Castillo, & Pestana, 2020](#)). Academic procrastination is not an unchangeable inherent phenomenon, but it is acquired and can be reduced using counseling techniques and principles of effective behavior change ([Gustavson & Miyake, 2017](#)). Studies indicate high prevalence of procrastination among various groups, especially in students ([Visser, Korthagen, & Schoonenboom, 2018](#)). In a survey on adolescents, 25% of interviewees were indulged in moderate-to-severe procrastination. According to [Ozer, Demir, and Ferrari \(2009\)](#) procrastination is a routine event in about 40% of educational settings. They also found that 38% of students are chronic procrastinators. Imposter syndrome is considered as a personality trait that affects students' performance. This syndrome presents a maladaptive, pervasive social style of interacting with the environment that may restrict students' potentials for academic and occupational success. The word imposter refers to an inauthentic person who tries to hide his/her real face and character. Imposter syndrome presents a maladaptive, pervasive social style of interacting with the environment that may restrict students' academic achievement ([Bravata et al., 2020](#)). [Parkman \(2016\)](#) considered this phenomenon as an obstacle to success. Imposters tend to either over-prepare themselves for a task or procrastinate it, and then attribute their success to luck, other people, etc. ([Ibrahim, Münscher, & Herzberg, 2020](#)). Gifted students with some levels of imposter syndrome may also display signs of procrastination.

Family, as a key socio-emotional unit, has a unique role in all stages of human development ([Morris, Silk, Steinberg, Myers, & Robinson, 2007](#); [Mousavi Amjad, Ghazanfari, & Faramarzi, 2020](#)). In fact, family shapes an individual's overall personality, and initiates his/her socialization process. It also plays a major role in shaping one's attitudes, values, and perceptions. Given the important role of family, especially parents, in an adolescent's life, it is necessary to investigate the relationship between parental performance and psychological and educational characteristics of adolescents. In adaptive parenting, parents control the behavior of children by imposing rules and monitoring their behavior. This control leads to higher levels of academic performance and self-esteem ([Bleys, Soenens, Claeys, Vliegen, & Luyten, 2018](#); [Jenaabadi & Ramezani, 2020](#)).

Parental psychological control has been described as a negative style that disrupts emotional and psychological development of children ([León-Del-Barco, Mendo-Lázaro, Polo-Del-Río, & López-Ramos, 2019](#)). This form of parenting behavior forces children to obey parents' instructions through coercive and authoritarian methods (e.g., withdrawing love, inducing guilt, and shaming). These unnecessary interventions decrease children's psychosocial development, and undermine their independence, health, and identity. Safe, stable, and nurturing relationships with parents are prerequisites for high psychological well-being and socialization of children and adolescents. Parental

attitudes and parent-child relationships influence parental psychological control ([Nanda, Kotchick, & Grover, 2012](#)). This construct consists of two components including dependency-oriented psychological control (DPC) and achievement-oriented psychological control (APC). Dependency-oriented psychological control (DPC) is defined as the use of psychological control to create a close parent-child relationship. In this approach, control is applied to keep children within close physical and emotional proximity. achievement-oriented psychological control (APC) is defined as the use of psychological control in the domain of achievement in order to force children to meet high performance criteria established by their parents ([Scharf, Rousseau, & Smith, 2015](#)). From a practical point of view, introducing variables affecting imposter syndrome in gifted students prepares the ground for further research, and raises hopes for provision of better guidance and support for these students. From a theoretical perspective, only a handful of studies have been carried out on the subject, and the present study investigated the effects of the predictor and mediator variables on the criterion variable (imposter syndrome).

Considering on the above-mentioned considerations, we conducted the current study to investigate the relationship between parental psychological control and imposter syndrome through the mediation of academic procrastination in gifted students.

## **Material and Methods**

The research design was causal-correlational and had a field type. The statistical population included 300 girl students of gifted high schools in Karaj city in 2019 and 169 of which were selected as the sample of the study using Morgan's sample size table ( $n = 169$  if  $N > 300$ ). The samples were selected based on stratified random sampling. To select the sample, using simple random sampling one school was selected from among the girl students of gifted high schools in Karaj. Then, seven classes were randomly selected from among the classes of this school. The total number of students in these seven classes was 169 students. To collect the required data, we provided the participants with 169 questionnaires based on the research variables. A total of 158 questionnaires were analyzed following the elimination of incomplete questionnaires. The willingness to participate in the research, information confidentiality (confidentiality principle), and observance of participants' rights were the ethical considerations of the research. The study was approved by the Ethical Committee of Islamic Azad University-Ahvaz Branch (code: IR.IAU.AHVAZ.REC.1399.064).

## **Instruments**

**The Academic Procrastination Scale:** This 12-item questionnaire was developed by ([Sevari, 2016](#)). It includes three subscales of intentional procrastination (5 items), procrastination due to fatigue (4 items), and procrastination due to poor planning (3 items), which have Cronbach's alpha coefficients of 0.77, 0.60, and 0.70, respectively. The academic procrastination scale is scored on a five-point Likert scale from never= 0 to always= 4. The total score is obtained by adding the scores of each item ranged between 0 and 48. Higher scores represent high academic procrastination. The reliability of the whole scale was

also measured using Cronbach's alpha (alpha = 0.85) ([Sevari, 2016](#)). In the present study, the Cronbach's alpha coefficient was 0.82 for the questionnaire.

**The Clance Impostor Phenomenon Scale (CIPS):** Clance and Imes designed this 20-item scale in 1987. [Mehrabizadeh Honarmand, Bassaknejad, Shehni Yailagh, Shokrkon, and Haghigi \(2005\)](#) developed the Persian of this tool in 2005. It includes three subscales of fake, discount, and luck. The items are scored on a five-point Likert scale including never (score 1), rarely (score 2), sometimes (score 3), often (score 4), and almost always (score 5). Total scores “<40”, “41-60”, “61-80”, and “>80” indicate “low”, “moderate”, “frequent”, and “intense” imposter feelings, respectively. [Shahani-Yeilaghi and Basaknejad \(2007\)](#) reported Cronbach's alpha coefficient of 0.73 for Persian version of the scale. The Cronbach's alpha coefficient was 0.89 in the present study.

**Parental Psychological Control Scale:** This 16-item tool was developed by [Soenens, Vansteenkiste, and Luyten \(2010\)](#) to assess dependency-oriented and achievement-oriented psychological control in adolescents. It was also validated by [Badanfiroz, Tabatabaee, and Najee \(2017\)](#) in Iran. The items are scored on a five-point Likert scale from strongly disagree= 1 to strongly agree= 5. This is one of the items used in this scale: “My parents show that they are disappointed with me, if I don't rely on them when facing a problem”. [Soenens et al. \(2010\)](#) confirmed the reliability (internal consistency) of subscales of dependency-oriented and achievement-oriented psychological control with Cronbach's alpha values of 0.73 and 0.81, respectively. Studies also confirm the validity of this scale. The reliability of the Persian version of the questionnaire, employing Cronbach's Alpha coefficient, was reported as 0.86 by [Badanfiroz et al. \(2017\)](#). In the present study, the Cronbach's alpha coefficient was 0.79 for the questionnaire.

### Statistical analyses

Data were analyzed by descriptive and inferential statistics such as mean, standard deviation, minimum and maximum scores, and Pearson correlation coefficient. The Kolmogorov-Smirnov Goodness of Fit Test (K-S test) were utilized to specify the data normality, and structural equation modeling (SEM) was used to assess the proposed model. SmartPLS software was further used for analyzing the data.

## Results

Table 1 showed Pearson correlation coefficient and descriptive statistics including mean and standard deviation (SD) of the research variables.

**Table 1.** Mean, standard deviation (SD), and Pearson correlation coefficients of the research variables

Variables	M	SD	1	2	3
1- Parental psychological control	80.02	6.42	1		
2- Academic procrastination	35.23	4.18	-0.342	1	
3- Imposter syndrome	62.78	5.29	-0.286	0.319	1

The data were analyzed using structural equation modeling (SEM). In this method, the model-data fit is first assessed, and then the research hypotheses are tested. The Kolmogorov-Smirnov Goodness of Fit

Test was used to assess the normality of the data distributions. Based on the results, some of the data had non-normal distributions; therefore, the data were analyzed in SmartPLS (Table 2).

**Table 2.** Results of Kolmogorov-Smirnov goodness-of-fit test for data normality (n = 158)

Scale	Subscale	K-S test	P
<b>Parental psychological control</b>	<b>DPC</b>	1.99	0.014
	<b>APC</b>	1.74	0.034
<b>Academic procrastination</b>	<b>Intentional procrastination</b>	1.86	0.038
	<b>Procrastination due to fatigue</b>	1.53	0.045
	<b>Procrastination due to poor planning</b>	0.55	0.627
<b>Imposter syndrome</b>	<b>Fake</b>	1.82	0.023
	<b>Discount</b>	0.85	0.283
	<b>Luck</b>	0.78	0.351

DPC: Dependency-oriented psychological control; APC: Achievement-oriented psychological control

According to Table 3, all average variance extracted (AVE) values were larger than 0.07, thus, the research model had an acceptable convergence validity.

**Table 3.** Composite reliability and Cronbach's alpha of the psychological control and imposter syndrome

Scale	Subscale	Cronbach's alpha	Composite reliability	AVE
<b>Parental psychological control</b>	DPC	0.738	0.826	0.510
	APC	0.859	0.898	0.640
<b>Imposter syndrome</b>	Fake	0.903	0.926	0.681
	Discount	0.883	0.916	0.687
	Luck	0.907	0.935	0.749

DPC: Dependency-oriented psychological control; APC: Achievement-oriented psychological control

The Fornell-Larcker criterion was used to assess the divergent (discriminant) validity of the model. According to this criterion, the square root of the AVE of each latent variable must be greater than the correlation coefficient between that latent variable and other latent variables. As shown in Table 4, the square root of the AVE of DPC, APC, and imposter syndrome are greater than their correlation coefficients with other latent variables; hence, the model has a desirable discriminant validity. The research model also fitted the data well.

**Table 4.** Fornell-Larcker criterion analysis for checking discriminant validity

Items	DPC	APC	Intentional procrastination	Procrastination due to fatigue	Procrastination due to poor planning	Fake	Discount	Luck
<b>DPC</b>	1	0.32	0.25	0.19	0.1	0.41	0.20	0.32
<b>APC</b>	0.32	1	0.67	0.74	0.56	0.61	0.68	0.65
<b>Fake</b>	0.45	0.61	0.67	0.65	0.51	1	0.75	0.72
<b>Discount</b>	0.20	0.68	0.73	0.76	0.53	0.75	1	0.75
<b>Luck</b>	0.32	0.65	0.72	0.73	0.47	0.73	0.71	1

The hypothesis testing results showed a significant relationship between DPC and imposter syndrome ( $P= 0.0001$ ). There was no significant relationship between APC and imposter syndrome ( $P= 0.632$ ) (Table 5). The relationship between academic procrastination and imposter syndrome was significant.

DPC had no significant relationship with academic procrastination ( $P= 0.831$ ), while APC was significantly correlated with academic procrastination ( $P= 0.0001$ ).

**Table 5.** Path coefficients and t-statistic of direct effects between research variables

Path	Path type	$\beta$	t	P
<b>DPC to imposter syndrome</b>	Direct	0.240	6.587	0.0001
<b>APC to imposter syndrome</b>	Direct	-0.018	0.516	0.632
<b>DPC to academic procrastination</b>	Direct	0.004	0.135	0.831
<b>APC to academic procrastination</b>	Direct	0.221	4.706	0.0001
<b>Academic procrastination to imposter syndrome</b>	Direct	0.157	0.157	0.0001

Academic procrastination had no significant effect on the relationship between DPC and imposter syndrome; however, it significantly mediated the relationship between APC and imposter syndrome ( $P= 0.0001$ ) (Table 6).

**Table 6.** Path coefficients and z-value of indirect effects between research variables

Predictor variable	Mediator Variable	Criterion variable	$\beta$	z-value	P
<b>DPC</b>	<b>Academic procrastination</b>	<b>Imposter syndrome</b>	0.001	0.136	0.810
<b>APC</b>	<b>Academic procrastination</b>	<b>Imposter syndrome</b>	0.035	2.666	0.0001

## Discussion

The present study aimed to investigate the relationship between parental psychological control and imposter syndrome through the mediation of academic procrastination in gifted students. The results of the present study showed that there was a significant positive relationship between DPC and imposter syndrome in gifted students. In other words, gifted students experiencing higher levels of DPC display more symptoms of imposter syndrome. No significant relationship was observed between APC and syndrome. A significant positive relationship was found between academic procrastination and imposter syndrome. In other words, gifted students with higher levels of procrastination display more symptoms of imposter syndrome. There was a significant negative relationship between APC and academic procrastination. This implies that gifted students experiencing higher levels of APC are less likely to procrastinate their tasks. DPC had no significant relationship with academic procrastination. Academic procrastination had no significant effect on the relationship between DPC and imposter syndrome; however, it significantly mediated the relationship between APC and imposter syndrome. This finding is consistent with the research results of previous studies ([Bahram, 2011](#); [Mehrabizadeh Honarmand et al., 2005](#); [Yaffe, 2020](#); [Zeinvand, Amini Javid, & Morad, 2015](#)).

([Zeinvand et al., 2015](#)) found positive correlations between variables of fear of success, perfectionism, and fear of negative evaluation with imposter syndrome. However, self-esteem was negatively correlated with this syndrome. The parenting style referred to as parental psychological control is a maladaptive parenting style used by parents to make children fulfill their expectations. ([Afshari and Hashemi \(2019\)](#) found a significant positive relationship between metacognitive beliefs and test anxiety. They argued that with regard to the positive relationship between metacognitive beliefs and test anxiety,

counselors and psychologists can organize effective interventions and counseling sessions in order to reduce students' anxiety levels and improve their academic performance. [Bahram \(2011\)](#) investigated the relationships of emotional intelligence and self-esteem with imposter syndrome, and found a significant inverse correlation between self-esteem and imposter syndrome. Furthermore, emotional evaluation, emotional expression and emotional productivity had significant positive relationships with imposter syndrome; however, no significant relationship was observed between emotion regulation and imposter syndrome. [Mehrabizadeh Honarmand et al. \(2005\)](#) investigated simple and multiple relationships of fear of success, self-esteem, perfectionism, and fear of negative evaluation with imposter syndrome in a group of students. They found positive correlations between fear of success, perfectionism, and fear of negative evaluation with imposter syndrome. Self-esteem, on the other hand was negatively correlated with this syndrome. In addition, fear of success, self-esteem, perfectionism, and fear of negative evaluation had multiple correlations with imposter syndrome.

[Yaffe \(2020\)](#) showed that parental care is associated with students' lower imposter feelings through self-esteem, and that parental overprotection is associated with students' higher sense of imposter through self-esteem. Therefore, parental care and overprotection may lower lowers students' self-esteem levels and in turn increase their imposter feelings. According to [Wang, Sheveleva, and Permyakova \(2019\)](#), imposter syndrome fully mediates the relationship between perfectionism and anxiety; however, it acts as a partial mediator between perfectionism and depression. Imposter syndrome also significantly moderated the link between perfectionism and depressive mood. They finally argued that imposter syndrome can be used to prevent depression caused by perfectionism. [Costa, Gugliandolo, Barberis, Cuzzocrea, and Liga \(2018\)](#) showed that frequent use of parental psychological control increases feelings of frustration in adolescents. They also concluded that parents whose basic psychological needs are not met are more likely to use parental psychological control.

[Nanda et al. \(2012\)](#) observed that child perceived control completely mediates the relationship between parental psychological control and child anxiety. In other words, child anxiety is both directly and indirectly (through child perceived control) associated with parental psychological control. In parental psychological control, parents make children obey their instructions through coercive and authoritarian methods. Proper planning is a major determinant of success in education and other life domains. It helps individuals make optimum use of their time and resources. Poor planning wastes considerable amount of time, and reduces the efficiency of studies. Researchers are suggested to investigate the relationships between the research variables using other research models and questionnaires. They are also suggested to increase the scientific value of research using qualitative tools such as interviews, observation, grounded theory, etc. Only some questionnaires were used to collect the data; therefore, some people may have given unreal answers. In addition, due to the cross-sectional nature of the study, one should be careful in drawing casual inferences from the aforementioned relationships.

**Conclusion:** Parental psychological control was found to be associated with imposter syndrome through the mediating role of academic procrastination in gifted students. Therefore, a careful psychological study of gifted students provides a better understanding of imposter syndrome and reduces academic procrastination in these students.

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