

# Direct and Indirect Effect of Personality Traits on Hope: The Mediating Role of Academic Motivation

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## Abstract

**Introduction:** The present study sought to investigate the possible correlation between big five personality traits and hope, considering academic motivation as the mediating variable.

**Method:** This research was a correlation study with a structural equation model design. The population included all bachelor students in Yasouj University, among whom 343 students were chosen (147 male and 196 female), by multi-stage random cluster sampling. The participants filled in three questionnaires as follows: The Big Five Inventory (BFI-44), Situational Motivational Scale and the Hope Scale. Cronbach's alpha was used to check the reliability of the research data. Results showed an appropriate reliability for these scales. The path analysis was run as a statistical technique for analysing a data

**Results:** Path Analysis results suggested that neuroticism had both negative direct and indirect effects on hope. In addition, openness to experience, conscientiousness and extraversion exerted both positive direct and indirect effects on hope through the mediating role of amotivation, integrated and intrinsic motivation. This study indicated that academic motivation plays a mediating role in the relationship between personality traits and hope.

**Conclusion:** The findings indicate that the presented model is appropriate for explaining how personality traits affect hope.

**Keywords:** Extraversion, Neuroticism, Intrinsic Motivation, Hope

## Introduction

During the twentieth century, researchers, in general, and psychologists, in particular, have focused on depression and unhappiness experienced by human beings (e.g., anxiety and depression) and were less concerned with humans' positive strengths and potentialities [1]. In recent years, especially with Martin Seligman's appointment as the president of APA, there has been a shift in research interest in positive psychological constructs of humans [2, 3]. Over the last decade, for instance, scholars in this field have tried to characterize positive psychological constructs such as happiness, well-being, resiliency and hope in new terms. The Snyder's Hope Theory [4] is one of the important psychological theories over the last 20 years [5]. In conceptualization of hope, Snyder [6] defines it as a cognition of a person's expectation and the ability to accomplish important objectives. Although hope and optimism have important conceptual similarities and both of them involve the expectation that goals can be accomplished, hope involves cognition about one's resolve and commitment to accomplish goals and plans [7]. Thus, according to the theory formulated by Snyder, hope consists of two components: 1- agency (goal-directed determination, 2- pathway (planning of ways to achieve goals). He believes that hope reflects two distinct, but related sub-dimensions: the first deals with the determination to attain the goals and the second involves the ways in which one is pursuing his/her goals. Pathways as well as agency thinking is essential in sustaining the successful pursuit of goals [8, 9]. Hope enables individuals to set valued goals, identifies the ways of attaining goals, and finds the determination to pursue goals [10].

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Research evidence has invariably shown that motivational and personality variables are related to such positive outcomes as happiness, hope, satisfaction with life and well-being.

In terms of personality, McCrae start from the assumption that there are five source traits represented in people, namely, neuroticism, extraversion, and openness to experience, agreeableness, and conscientiousness. From the emphasis on the term trait and the examples of the five traits, one may think that the big five refers to the ways of behaving that are learned, but these theorists believe that these traits are actually not learned but are in fact inherited generation after generation. In regards to neuroticism, neuroticism has been defined as the lack of consistency in emotions which could be seen in the form of stress, anxiety, or even depression. Extroversion refers to one's willingness to socialize with other people, to control them and to be positive [11]. Openness has been defined as openness to novel experiences and ideas, creativity, flexibility, curiosity, and being non-conventional [12]. Agreeableness is the willingness to show compassion, kindness, gentleness, trustworthiness and warmth. Thus, agreeable individuals are interested in cooperativeness, team-oriented, and a workplace free of conflict [11]. Conscientious people tend to be self-disciplined, organized, focused on achievements and trusting [13].

The findings of some studies have indicated that both extraversion and being open to experiences are positively related to hope and happiness while neuroticism negatively relates to these same constructs [14-18].

As regards to motivation, studies into self-determination suggest that people have different motivations for being involved in the workplace, at school, and other places. Review of literature about motivation indicates that humans have four different kinds of motivation, in the form of a continuum [19]. External motivation, which is an aspect of motivation, is about involvement in activities associated with rewards and punishment when the situation dictates it. A type of motivation has also been characterized as the motivation in which people are involved in an activity due to its significance or even the value they attach to their own goals. Intrinsic motivation, which is more autonomous, is about involvement in behavior for the sake of pleasure. The final level of extrinsic motivation is integrated regulation, whereby individuals integrate various internal and external sources of information into their own self-schema and engage in behavior because of its importance of their sense of self. In the end, amotivation is about a condition under which one fails to act, which could be due to the fact that the individual does not attach any significance to it. Amotivated regulation represents the absence of motivation [20-23].

The Self-determination Theory suggests that, to varying

extents, kinds of motivation are associated with different kinds of outcomes. This is due to the fact that such motivations are different in terms of the degree of self-determination. It is also because self-determination is assumed to be related to the enhancement of psychological performance [22]. It is reasonable to expect a correlation between intrinsic motivation and such positive outcomes as persistence, creativity, achievement and hope. On the other hand, the outcomes which are negative such as depression and hopelessness are expected to stem from amotivation followed by external regulation [23, 24]. It must be noted that differences among individuals' motivation are dependent on personality traits and such differences could impact hope [25].

Some researchers indicated that openness, extraversion, and conscientiousness predicted motivation to learn [26, 27].

Saroglou [28] showed that intrinsic motivation is related to low levels of being agreeable, neurotic and open. However, extrinsic motivation is associated with neuroticism. Other findings were indicative of the fact that being agreeable and conscientious is positively associated with intrinsic motivation. On the other hand, being neurotic negatively correlates with intrinsic motivation and positively with a motivation [29-32].

In addition, numerous studies have demonstrated that intrinsic motivation is positively associated with positive outcomes and is negatively associated with depressive symptoms [21, 22, 27, 33-35] and that less autonomous motivation is negatively related to positive functioning [36-38].

The present study purposed to expand upon previous research into the possible relationship between personality traits, motivation and hope. More specifically, it investigated the mediating role that academic motivation plays in the correlation between personality traits and hope.

It is necessary to note that, as suggested by the accounts given of the studies carried out so far, not all the factors which could potentially contribute to hope have been investigated at the same time and have been examined in isolation. Given the multi-causal nature of hope, as suggested by the relevant literature, a major contribution of the current study could be the fact that, a number of variables are investigated at the same time in the current study.

Specifically, the main aim of the current study was to investigate the impacts which personality dimensions could have on hope with considering academic motivation as a mediating variable. Consistent with this objective, a model developed from the relative literature has been taken as the frame of reference (Figure 1). Following the evaluation of the correlations between variables, the respective coefficients will be estimated.

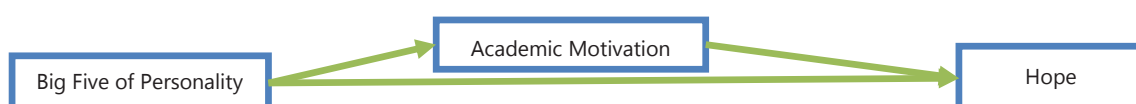


Figure 1. Conceptual Path Model of Personality, Academic Motivation and Hope

In the present study, a qualitative (non-experimental) method and a correlation design were adopted. Correlation analysis was adopted to investigate the nature and degree of the correlation between independent variables and the dependent variable.

The population of the study was comprised of the bachelor students of Yasouj University. The participants consisted of 343 students (147 male and 196 female) with an age range of 18 to 28 years. They were selected through random multistage cluster sampling out of four faculties of Yasouj University. Their mean age was 21.17 years (SD = 2.31). All the participants were informed in class that they would be requested to take part in a research study into personality, academic motivation and hope. The self-reported scales were given to students during the class time, and they had sufficient amount of time to complete them. Before administering the scales, an informed consent was obtained.

Three questionnaires were used in the present study to collect the data:

### The Big Five Personality Traits Questionnaire

Participants completed the Big Five Inventory-44 (FI-44) [13]. The BFI-44 is a 44-item inventory in which ratings are made on a 5-point Likert scale ranging from *completely agree* to *completely disagree*. This self-report scale has five subscales namely, extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The BFI-44 scales have proven to be internally consistent, reliable and with a clear factorial structure. In addition, they have shown considerable convergence and discrimination [13]. For the present study, the coefficients of Cronbach's alpha in each main factor of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness were obtained, which were 0.87, 0.76, 0.81, 0.85, and 0.78, respectively.

### Hope Scale

This scale was first designed by Snyder [4]. The hope scale was utilized to gauge the degree of hope in life. It has 12 items with a five-point Likert scale and the ratings range from *strongly agree* to *strongly disagree*. It comprises two main subscales (i.e., agency and pathway). The pathway items gauge the ability to develop strategies which help accomplish the goals and the agency items tap the degree to which individuals believe that they can accomplish their objectives through the pathways. Agency and pathways have been demonstrated to be related but distinct constructs [39]. These scales have turned out to be internally consistent, reliable and with a

clear factorial structure [5]. For the present study, the obtained values of Cronbach Alpha were 0.88 for agency and 0.85 for pathway.

### Situational Motivation Scale (SIMS)

A 16-item version of the Situational Motivation Scale (SIMS) was used in the current study. This scale was first constructed by Guay et al. [40]. The stem of the item reads "Why are you currently engaged in this activity?" and the measure consists of subscales intended to gauge intrinsic motivation, integrated regulations, external regulation, and amotivation. Ratings are done using a five-point scale, ranging from 1, *Not true at all*, to 5, *Very true*. The SIMS has shown high levels of both construct and concurrent criterion-related along with internal consistency [40]. In the present study, the obtained values of Cronbach Alpha ranged from 0.71 to 0.78.

### Results

The data analysis was divided into two sections. First, the descriptive statistics and correlations between the variables were calculated. Second, the mediating roles of academic motivation in the relationship between personality and hope were tested by using path analyses. All of the analyses were performed with SPSS software, version 19.0 and the Lisrel software.

The descriptive statistics such as, mean, standard deviation, skewness and kurtosis for all of the participants and each variable are shown in Table 1.

Table 1 shows the values of mean and standard deviation of variables. In addition, the indices of skewness and kurtosis in the table above indicate that variables have a normal curve as there is no index above the absolute degree of 1.

A zero-ordered correlation was employed to investigate the possible relationships between and among the independent and dependent variables. The results appear in Table 2.

As the table above suggests, the results suggested that extraversion, openness to experience and conscientiousness positively correlate with hope whereas neuroticism has a negative relationship with it. Moreover, it is negatively related to intrinsic motivation. It could also be seen that openness to experience, conscientiousness and agreeableness negatively correlate with amotivation but positively correlate with intrinsic motivation. Finally, the results are indicative of the fact that intrinsic motivation and integrated motivation are positively related to hope.

**Table 1.** The Descriptive Index of Variables

Variables	Mean	SD	Skewness	Kurtosis
Hope	25/4	7/2	0.16	0.43
Extraversion	26.69	6.8	0.23	0.62
Neuroticism	22.2	6.4	0.25	0.65
Openness	29.23	5.6	0.09	0.67
Conscientiousness	17.21	3.7	0.13	0.81
Agreeableness	31.8	5.2	0.15	0.66
Intrinsic	15.01	5.5	0.073	0.65
Extrinsic	10.7	4.01	0.17	0.38
Integrated	15.9	4.7	0.08	0.52
Amotivation	9.8	3.8	0.52	0.45

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Table 3 depicts the results of path analysis, direct effects, indirect effects and total effects of variables of interest along with their variances.

As seen in Table 2, among personality traits, openness to experience and extraversion have the highest direct and positive impact on hope. In addition, among the variables of personality traits, conscientiousness and openness to experience indirectly impact hope through integrated and intrinsic motivation. In addition, it could be

seen that neuroticism has the highest direct negative effect. Among academic motivation variables, intrinsic motivation has the highest beta coefficient. It is necessary to point out the indirect effects of personality variables on hope through intrinsic, integrated motivation and amotivation.

After the elimination of the relationships which were insignificant, the following final model was obtained, as shown in Figure 2.

Table 2. Zero-ordered Correlations among the Variables

	1	2	3	4	5	6	7	8	9	10	11
Hope	1										
Extraversion	.37**	1									
Neuroticism	-.29**	-.25**	1								
Openness	.39**	.44**	-.09	1							
Conscientiousness	.25**	.27**	-.33**	.31**	1						
Agreeableness	.19*	.56**	-.33**	.26**	.25**	1					
Intrinsic	.47**	.12*	-.45	.12*	.24	.11	1				
Extrinsic	-.08	-.12	.17*	-.07	-.19*	-.17*	-.28**	1			
Integrated	.29**	.13*	-.32**	.26**	.25**	.31**	.45**	.36**	1		
A motivation agency pathway	-.24**	-.21	.31**	-.31**	-.19*	-.11*	-.41**	-.39**	-.28**	1	
	.52**	.31**	-.26**	.33**	.16*	.27**	.41**	.09	.31**	-.23**	1
	.47**	.39**	-.24**	.28**	.21*	.22**	.43**	.07	.24**	-.21**	.56**

\*\*P<0.001, \*P<0.05

Table 3. Direct Effects, Indirect Effects and Total Effects of the Variables of Interest

variables	direct effects	indirect effects	total effects	R <sup>2</sup>
Extraversion	0.33**	0.06**	0.39**	0.38
Conscientiousness	0.23**	0.30**	0.53**	
Neuroticism	-0.26**	-0.20**	-0.46**	
Agreeableness	0.09	0.018	0.10*	
Openness to Experience	0.34**	0.21**	0.54**	
Intrinsic Motivation	0.43**	----	0.41**	
Integrated Motivation	0.27**	-----	0.22**	
External Motivation	-0.09	-----	-0.09	
Amotivation	-0.19*	-----	-0.19**	

\*\*P<0.001, \*P<0.05

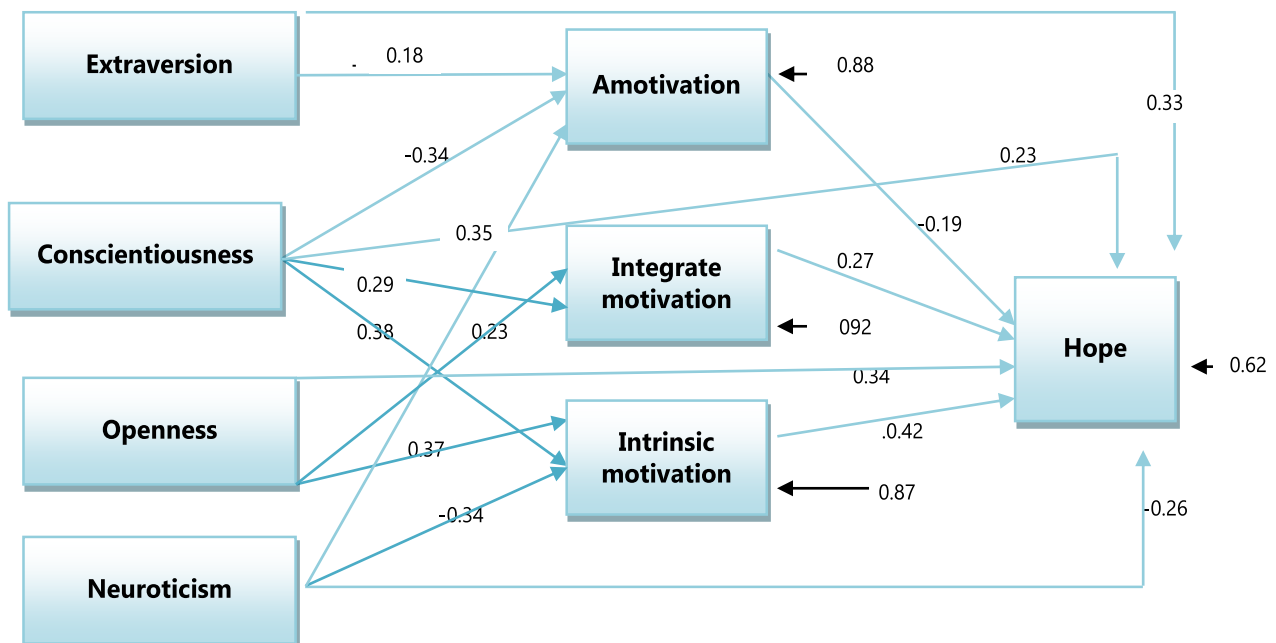


Figure 2. Final Model of the Research Variables

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For the purposes of the fitness of the model, use was made of several indexes such as GFI=0.97, AGFI=0.93, RFI=0.95 and RMSEA=0.04, which clearly provide evidence of the good fitness for the model.

### Discussion

The purpose of this study was to investigate the mediating role of the academic motivation in the relationship between personality traits and hope. Path analysis results suggested that the proposed model fits the research data quite well. In addition, it was shown that personality traits and academic motivation explained 38% of the variance of hope. This suggests that there are other variables which are also involved and should be investigated in future studies.

In the study undertaken here, extraversion, openness to experience and conscientiousness had a direct and positive effect on hope. This finding is consistent with the results of a sizable number of studies carried out in the same vein [1, 3, 9, 20, 41, 42]. In these studies, it has been invariably shown that extraversion and openness to experience have a direct impact on such positive psychological constructs as happiness and well-being. In addition, it was revealed that neuroticism had both a direct and indirect but negative effect on hope through amotivation.

The findings of the present study are also consistent with the results of previous studies [2, 36, 37]. Previous studies have revealed that psychoticism and neuroticism negatively correlate with happiness and hope.

The findings also showed that academic motivation depends on personality. Personality traits of interest, openness to experience and conscientiousness most closely correlated with autonomous motivation. These factors may be of high importance since students with high degrees of openness to experience and conscientiousness tend to be more curious and are more likely to be self-motivated and engage more often in academic tasks. Neuroticism negatively correlated with intrinsic and integrated motivation and could positively predict amotivation. The results showed that motivation had a mediational role between personality traits and hope. This finding is consistent with the results of previous research [26, 37, 43]. These researchers obtained similar results and showed that motivation is related to both happiness and well-being. Komarraju and Karau [44] suggest that matching educational contexts to students' personality characteristics may lead to improvements in academic motivation. Similarly, Eysenck [45] suggested that children perform better through teaching methods that are in line with their personality traits. Therefore, it is suggested that students should be encouraged to develop those personality traits or make better use of those traits which are conducive. For instance, it may be possible to promote autonomous motivation through enhancing their intellectual curiosity. Alternatively, teachers can reward them for exhibiting behaviours related to such positive personality traits as intellectual curiosity or conscientiousness. Thus, for promoting openness to experiences, teachers should encourage adolescent students to spend more time on learning

about new things, or share their own expertise with each other. Providing greater choices of activities can reduce neuroticism and win respect for students' different perspectives. Interests may also support openness to experiences [46].

This finding suggests that motivation may be quite stable. This is because personality traits are considered to be relatively stable and consistent [12]. Thus, it could be stated that as personality traits are relatively stable, teachers should have realistic expectations about the extent to which personality traits can be encouraged for the purpose of enhancing academic motivation [47].

### Conclusion

To sum up, the present study contributed to the accumulating body of literature on personality and its outcomes. It demonstrated that each of the components of motivation has a unique impact on hope and that motivation depends on personality. In order to raise the level of hope in people with neuroticism, it seems that by increasing intrinsic motivation, intervention is quite effective.

The findings of the present study have some implications. First, the fact that three components of personality traits (i.e., openness to experience, conscientiousness and extraversion) have an impact on hope gives us a clear understanding of the functioning of these components as compared with Neuroticism. Second, the findings indicate that an individual's hope is, to some extent, affected by his/her motivational beliefs. Individuals with an intrinsic motivation are more hopeful than those with an extrinsic motivation. Therefore, it is recommended that some opportunities be provided for students to experience more intrinsic motivation and those students are actively encouraged to do so.

Due to the limited scope of the participants in this research in terms of age and geographical distribution, it is necessary to take caution in generalizing the findings of this study to other geographic areas and age groups. Finally, it is suggested that future researchers use measures (questionnaires) with less questions or statements, so that the subjects can answer the questions faster and more accurately.

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