

Relation Between Personality Traits and Academic Achievement Among University Students

Dr. Lama Majed Al-Qaisy

Dr. Seham Rayad Khuffash

*Department of Educational Psychology, Faculty of Educational Sciences,
Tafila Technical University (TTU), P.O. Box (179), Tafila (66110), Jordan.
E-mail lamaqaisy@yahoo.com*

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Abstract *This study aims to determine the significant difference between high and low achievers specific to gender on personality traits factors (A, B, C, and D). Among a sample of 275 adolescents in the age group of 18-22 years studying in the Tafila Technical University are selected as a randomized cluster sample of the study from the population. The results indicate that high achievers are affectothymic than the low achiever; high achieving females are affectothymic than high achieving males, low achieving males and low achieving females. Additionally, the results indicate that high achievers are more intelligent and bright than the low achievers; high achieving females show the highest scholastic capacity than the high achieving males, low achieving males and the low achieving females. It is also indicate that high achievers are more emotionally calm, stable and face reality appropriately than low achievers. But there is no difference between high and low achievers in excitability.*

Keywords: *personality, traits, academic achievement, university, students*

1. Introduction

Education is unique investment and academic achievement is a vital aspect of it. In this world of industrialization and globalization, education has become highly commercial and academic excellence has gained through tough competitions (Woolfolk, 2001). The educational status of an individual is highly depicted through the academic achievement. Academic achievement of students has been a great concern to educationist since time immemorial. Now a day, this trend has been intensively felt by the academicians, parents and students (Anzi, 2005). Strikingly, academic achievement has become a detrimental index in determining a child's future. This speaks a lot about the significance of taking up the present investigation.

Going higher up in the social status of means of academic achievement is universally accepted and the most important determinant of a person's adult status is his career (Eshel & Kohavi, 2003). Academic achievement individual learns to utilize his energies with the given innate potentials and a particular pattern of socializing pressure. Considering the fact that both innate potentials and environmental factors play equally important roles in academic achievement, it is imperative to look into the interplay of both these factors. Innate potentials in terms of academic achievement are exhibited mainly through the intellectual functions, and of course there is a positive correlation between intellectual functions and academic achievement (Best & Khan, 1999).

However, there are certain confounding factors which mask the effect of this innate potential and in turn, hamper the child's academic achievement in the course of his studentship (Hjelle, & Ziegler, 1981). The parents and teachers are also not devoid of this, because in the absence of all external handicaps and with the presence of adequate and required intellectual abilities, they fail to achieve (Albaili, 1997). Low achievement is defined as a discrepancy between the child's actual ability and achievement. It may be related to low self-concept, lack of family involvement and encouragement, damaging peer pressure emotional problems, physical illness, and lack of academic motivation (Pokrajac-Bulian, & Zivcic-Becirevic, 2005).

Absence from college, unfortunate personal circumstances and life events or inadequate environmental conditions further limits their progress. Failure to recognize problems and provide solutions is also reported to

be contributory factors for their continuing backwardness (Albaili, 1997). The low achiever differs from an average youngster in many different ways. In very simple terms, such adolescents may have problems or concerns related to his personality (Conroy, 2004). Personality is the ability to get along in adult situation; it is the person's type of action, reaction, opinion and mood, a set of physical and social traits (Mullanattom, 1993). It is judged as a social character. It is only in relation to others that we are usually judged and our consciousness of ourselves arises only in our interactions with other members of the society (Carson, Butcher & Mineka, 2000). Personality is always striving for goals. Our life and behavior is purposive and we are forever seeking new ends and goals to meet our needs. Our needs define our goals, our interest and desires produce their basis and our behaviors directed towards their attainment. One's behavior is controlled not by the type of person one is, but mainly by personality traits (Shaughnessy, 1993). Personality trait is one particular characteristics of a person. It can be broad characteristic such as the social distress or normally focused character such as fright (Marchiori, Loschi, Marconi, & Mioni, 1999). Personality trait is a generalized and dependable way of thinking, feeling and otherwise reacting. Example of personality traits are extraversion and permissiveness (Russell, Booth, Reed & Laughlin, 1997). Important distinctions among traits are surface traits and source traits. Surface traits are expressive of behavior, source traits on other hand; express an association among behavior (Shaughnessy, 1993).

Mullanattom (1993) view that cluster traits are cardinal ones which that dominate one's life and central traits are major characteristics of a person. Secondly traits as tendencies those are of limited importance in behavior.

Traits like stinginess, curiosity, assertiveness or laziness are virtually perfect examples of personality and traits of psychological properties are sociability, loyalty, humor, musical ability and respects for his parents (Robins, & Trzesniewski, 2005). Need for achievement and manifest anxiety can also be considered as trait (Wolters, 2004). Intelligence, interest and aptitude are regarded as traits (Rindermann & Neubauer, 2001). Eysenck (1992) observes that personality traits exist in clusters and not directly observable as they are not active all times. Some traits are clearly motivational such as interest, ambitions, complex and sentiments. McGregor & Elliot (2005) has grouped people into extroverts and introverts. Introverts tend to withdraw be lone, feel shy and avoid people and extroverts respond to stress by trying himself to be active, tend to be an occupation and deal with many people.

Personality traits play important roles in academic achievement. Johnson (1997) reported a study where they examined the relationship between personality traits and academic achievement in gifted students. Results showed that there significant correlation between ten personality traits and academic achievement. According to Panda & Samal (1995) comparative study of personality and academic achievement of adolescent daughters of working and non-working mothers, it was found that working mothers' daughters were more extroverted, independent, aggressive, and confident.

The major objective of the present study is to find out whether there is any difference between high and low achievers in the personality traits. Hope the findings of the study would equip the professionals with the information about the required strategies in alleviating the condition of low achievement. Also will be provide that there significant difference between high and low achievers specific to gender on personality traits factors (A,B,C,D).

2. Hypotheses

The general hypothesis formulated is:

- 1- There will be significant difference between high and low achievers specific to gender on personality traits

3. Sub-Hypothesis:

- a- There will be significant difference between high and low achievers specific to gender on personality trait factor A.
- b- There will be significant difference between high and low achievers specific to gender on personality trait factor B.
- c- There will be significant difference between high and low achievers specific to gender on personality trait factor C.
- d- There will be significant difference between high and low achievers specific to gender on personality trait factor D.

4. Method

4.1 Participants

273 adolescents (about 15% of the total population) in the age group of 18-22 years studying in the Tafila Technical University are selected as a randomized cluster sample of the study from the population. See in table (1)

Table (1) description of the sample

Sample	Male	Female	Total
High	43	47	90
Low	113	72	185
Total	156	119	275

5. Instruments

5.1 Personality Questionnaire

Personality questionnaire of Eysenck (1992) is used. It is containing 60 items for which responses could be yielded through a, b, & c options. A brief description of the 4 personality traits that are assessed in this test are given below.

Factors: A (Schizothymia), B (Scholastic capacity), C (Ego strength), D (Phlegmatic trait).

Low score description: (reserved, detached, critical, aloof), (dull), (emotionally less stable, easily upset), (undemonstrative, deliberate, inactive) respectively.

High score description: (warmhearted, easygoing, participating), (crystallized, bright), (mature, calm, emotionally stable), (excitable, impatient, unrestrained) respectively.

This raw score is then converted into stem score for the meaningful interpretation of the psychological meaning of the personality traits. The scale is meant for the age group of 18-23 years of age. The scale has high reliability and validity ($r = 0,8$) 4 weeks interval .

6. Result

The general hypothesis formulated was, there would be significant difference between high and low achievers on various personality traits. A total of 4 personality traits were tested under 4 separate minor hypotheses. The traits that were tested are schizothymia, scholastic capacity, ego strength, phlegmatic trait. These traits are

named so when the scores fall lower pole. But when the scores are high the traits change to affectothymia, high scholastic capacity, high ego strength. The means and standard deviations of each of the personality traits factors are given below. Each of it is followed by F table, which gives the statistical details of the respective personality trait that was tested.

Table 2. The mean and SD values of high and low achievers in the personality traits factor A (schizothymia) with respect to gender.

Academic achievement level / Gender	High			Low			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.55	2.52	43	9.54	2.49	113	9.54	2.49	156
Female	11.51	2.56	47	10.14	2.65	72	10.69	2.69	119
Total	10.58	2.71	90	9.77	2.56	185	10.04	2.63	275

The mean values on table (2) show that the high achievers have a greater mean value than the low achievers in factor (A). a high score in factor (A) indicates affectothymic (A+) personality, which is characterized as an outgoing, warmhearted, easy going, and participating nature. Where as a low score in factor (A) indicates schizothymia (A-) personality. This leads to the conclusion that the high achievers have a more outgoing, easy going, and participating nature compared to the latter. The second main effect, gender is also statistically significant at .001 level. This means that there exists a statistically significant difference between male students and female students in factor (A).

Table 3. Two way ANOVA of high and low achievers in the personality traits factor A (schizothymia) with respect to gender.

Source	DF	Sum of squares	Mean squares	F value	P value
Achievement	1	27.90	27.90	4.30	0.04
Gender	1	96.65	96.65	14.90	0.00
Interaction	1	27.27	27.27	4.21	0.04
Within Groups	269	1744.81	6.49		
Total	275	29386.0			

Table (3) shows that the obtained F value for the level of achievement is statistically significant at .05 level. This means that there is a significant difference between high achievers and low achievers on the personality factor (A). The F value obtained for the interaction effect is also significant at .05 level.

Table 4. The mean and SD values of high and low achievers in the personality traits factor B (scholastic capacity) with respect to gender

Academic achievement level Gender	High			Low			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.86	2.14	43	9.57	2.8	113	9.67	2.54	156
Female	11.06	2.67	47	10.00	2.43	72	10.47	2.56	119
Total	10.5	2.49	90	9.76	2.59	185	10.00	2.58	275

Table (4) shows that the high achieving group has a greater mean score as compared to low achieving group which means that the high achieving group has more intelligence when compared to low achieving group.

Table 5. Two way ANOVA of high and low achievers in the personality traits factor B (scholastic capacity) with respect to gender.

Source	DF	Sum of squares	Mean squares	F value	P value
Achievement	1	24.24	24.24	4.30	0.04
Gender	1	43.03	43.03	14.90	0.00
Interaction	1	7.26	7.26	4.2	0.04
Within Groups	269	1730.35	6.43		
Total	275	29106.0			

Table (5) shows that the F value for the effect of achievement groups is significant at .05 level which means that there is a statistically significant difference between high and low achievers on the personality factor B. a high score in factor B indicates a higher scholastic mental capacity (B+), which is characterized as a more intelligent and bright personality. Whereas a low score in factor B indicates lower scholastic mental capacity (B-). The second main effect, gender is also statistically significant at .001 level.

Table 6. The mean and SD values of high and low achievers in the personality traits factor C (Ego strength) with respect to gender

Academic achievement level Gender	High			Low			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	14.12	2.65	43	12.17	3.00	113	12.67	3.03	156
Female	13.51	2.39	47	12.93	3.04	72	13.16	2.81	119
Total	13.78	2.52	90	12.46	3.03	185	12.90	2.94	275

Table (6) shows that the high achieving group has a greater mean score value than the low achievers.

Table 7. Two way ANOVA of high and low achievers in the personality traits factor C (Ego strength) with respect to gender.

Source	DF	Sum of squares	Mean squares	F value	P value
Achievement	1	94.25	94.25	11.47	0.001
Gender	1	0.34	0.34	0.04	0.84
Interaction	1	27.59	27.59	3.36	0.07
Within Groups	269	2210.60	8.22		
Total	275	47763.0			

Table (7) shows that the obtained F value between the achievement groups is statically significant at 0.001 level. A high score in factor C indicates higher ego strength (C+) personality, which is characterized as an emotionally stable and calm personality. Where as a low score in factor C indicates lower ego strength (C-).

Table 8. The mean and SD values of high and low achievers in the personality traits factor D (phlegmatic trait) with respect to gender

Academic achievement level / Gender	High			Low			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9.31	2.61	43	8.73	2.57	113	8.89	2.56	156
Female	8.64	2.57	47	8.44	2.14	72	8.46	2.32	119
Total	8.96	2.59	90	8.58	2.42	185	8.70	2.48	275

Table 9. Two way ANOVA of high and low achievers in the personality traits factor D (phlegmatic trait) with respect to gender.

Source	DF	Sum of squares	Mean squares	F value	P value
Achievement	1	11.26	11.26	1.84	0.18
Gender	1	16.76	16.76	2.74	0.10
Interaction	1	1.11	1.11	0.18	0.67
Within Groups	269	1643.75	6.11		
Total	275	22348.0			

Table (9) shows that the F values for the achievement groups, gender and interaction effect are not statistically significant for factor D. a high score in factor D indicates an excitable (D+) personality, which is characterized as an excitable, impatient, demanding and overactive nature, where as a low score in factor D indicates a phlegmatic temperament (D-).

7. Discussion

The objective of the study is to find out whether there is any difference between high and low achievers in the personality traits. The results obtained that there was significant difference between high and low achievers specific to gender in factor (A) affectohymia / schizothymia this leads to conclusion that the high achievers have a more outgoing, warmhearted, easygoing and participating nature compared to the latter. The second main effect gender is also statistically significant; this means that the high achieving females are found to be significantly more affectohymia than their male counterpart, while such gender difference is not pronounced in the low achievement group. According to the study of Shaughnessy (1993) reported that A+ is a significant predictor of success, which goes in favor of the present finding. The result of this study shows that there was

significant difference between high and low achievers specific to gender in factor (B) high scholastic ability / low scholastic ability this means that there exist a statically significant difference between male students and female students in factor B. here female are found to have a higher mean score indicating that they have more scholastic capacity than the male student. The finding of the study is consistent with the finding of the earlier reports. Trivedi, Sinha & Sinha (1989) have reported that B+ characteristic is more associated to high educational attainment. In addition, the results shows that there was significant difference between high and low achievers specific to gender in factor (C) high ego strength / low ego strength but there is no significant difference between gender groups in factor C. This leads to conclusion that the high achievers are more emotionally calm, stable and faces reality appropriately than the low achievers. Findings regarding the achievement groups are supported by the earlier studies. A study by Russell et al (1997) also concluded that factor C is a significant discriminator between high achievers and low achievers. On other hand the result shows no significant difference between high and low achievers specific to gender in factor (D) excitability / phlegmatic trait. This means that a high score in factor D indicates an excitable (D+) personality, which is characterized as an excitable, impatient, demanding and overactive nature, where as a low score in factor D indicates a phlegmatic temperament (D-) According to the study of (McGrego & Elliot, 2005).

8. Conclusion

From the conclusion it is seen that the high achievers have scored more in personality factors (A, B, C). This indicates that personality variable has an important role to play in the academic achievement. This point needs considering the personality of the students while planning any kind of educational intervention program in colleges and schools. In addition must be organized service of the psychologists, special educators and social workers must be availed by college authorities to render a professional help to the academic low achievers. Research should be conducted on the efficacy of the counseling and awareness program in helping the teachers, parents and the students to handle the issues related to low achievement.

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