

## FACTORS OF PERSONALITY INVOLVED IN ADOLESCENTS' ACADEMIC ACHIEVEMENT

Cristina TULBURE

Transilvania University of Braşov, Romania  
tulburecristina@gmail.com

**Abstract:** *The study aims at identifying the personality factors which associate with the phenomena of academic underachievement and overachievement that the adolescents confront with. The research was performed on a batch of 284 students enlisted in the first year of study, their ages ranging from 18 to 25 years old. The main method of investigation consists on the inquiry based on a questionnaire, with the usage of two questionnaires as research tools. The results of the study have emphasized the fact that underachievement and overachievement associate with those personality traits that belong especially to the area of behavioral disorders and self-image, and are consequences of superficiality, nonconformity and negative self image (underachievement) and of conscientiousness, social conformism and positive self image (academic overachievement). The conclusions of the study may be of real use not only to the researchers in the area of education psychology but also to the practitioners in the domain of education who could improve the quality of the instructional-educational process, by observing the students' personalities and reevaluating the maximum potential of each student.*

**Key words:** *personality factors, academic underachievement, academic overachievement*

### INTRODUCTION

Recent investigations carried out in order to identify the best predictors of academic achievement in higher education aim at investigating that part the non-cognitive factors play in predicting the academic results. A lot of research focuses on the relationship between academic achievement and the personality traits of the students. As the studies are performed upon extremely various populations of students from a social, economic, cultural, ethnical and intellectual point of view, the obtained results are controversial and very often contradictory. For example, conscientiousness is considered to be one of the best predictors of academic achievement, since the results of many research studies bring to light some significant correlations between the two variables (BLICKLE, 1996; BUSATO ET AL., 2000; FARSIDES AND WOODFIELD, 2003; CONARD, 2006). In spite of numerous facts, there are studies showing that an extremely high level of conscientiousness may have a negative impact over the academic results. Thus, an experiment realized by CUCINA AND VASILOPOULOS (2005, APUD O'CONNOR AND PAUNONEN, 2007) has revealed the fact that extremely conscious students obtained academic results that were significantly low in comparison with the students who own a reduced level of this personality factor. Similar contradictions between results communicated by researchers have been also noticed in the case of studies investigating the relationship between the other personality factors and the academic achievement. Thus, a multitude of research inquiries focalized on establishing the relationship between extraversion and academic achievement have underlined the inexistence of a significant correlation between the two variables (KAHN, GAILBREATH AND CHARTRAND, 2002; FARSIDES AND WOODFIELD, 2003; CONARD, 2006). In disagreement with these results, there are studies pointing out at the existence of a negative, powerfully significant correlation between the level of extraversion

and the results received at certain examinations in the university, the extraverted students obtaining significantly lower results as against their introverted colleagues (cf. BUSATO ET AL., 2000).

Within this research we set the aim to compare the underachieved and the overachieved groups of students in order to distinguish the personality variables which make a significant contribution to their differentiation. We hypothesized that underachievement and overachievement will associate with personality traits that belong mainly to the area of behavioral disorders and self-image, and are consequences of superficiality, non-conformity and negative self image (underachievement) and of conscientiousness, social conformism and positive self image (academic overachievement).

## **METHODS**

### *Participants*

The research was performed on a batch of 284 students enlisted in the first year of study, their ages ranging from 18 to 25 years old.

In comparison with the level of academic achievement, the batch of subjects is structured into three categories which will form the target-population within the stating stage:

- *The academic underachieved group (G1)* – comprise 94 subjects representing 33.1% of the whole investigated population; the students whose academic results stand under the level of intellectual possibilities are placed in this category;
- *The academic achieved group (G2)* – include 96 subjects, who represent 33.8% of all the investigated students; this category comprise the students whose academic results are in agreement with their intellectual possibilities;
- *The academic overachieved group (G3)* – comprise 94 subjects, respectively 33.1% of the total number of the investigated subjects; the subjects whose academic results pass beyond their intellectual possibilities belong to this category.

### *Measures*

The investigation of the personality traits and of some Ego manifestations (the Ego force, the feeling of self and the self-esteem) has been realized by the inquiry based on the questionnaire, and as investigation tools there has been used a multiphase personality questionnaire (16PF) to measure more dimensions of personality (sociability/distance, Ego force, Super Ego force, realism/sensibility, ergic tension, extraversion/introversion, anxiety, neuroticism etc.) and a questionnaire uniphase of personality that observes the measuring of the level of self-esteem.

*The 16 Primary Factors Personality Questionnaire (16 PF)* entitled „The Questionnaire of the 16 factors of the personality” was elaborated by R. B. Cattell. Built on the factorial strategy base, the 16 PF questionnaire is a multiphase inventory of personality destined to the simultaneous measurement of 16 first order personality factors and 4 second order factors (extraversion/ introversion, adaptation/anxiety, sensitivity/ dynamism, obedience/ independence) in subjects with ages above 18 years old.

*The Self-Perception Questionnaire* was elaborated by A. CLINCIU (2010) through selecting, adapting and assembling items from the questionnaires proposed by Lelord and ANDRÉ (2003), in order to explore the attitude towards the own person, more precisely the level of self-esteem. This questionnaire contains 30 pairs of items, every pair being represented by two personality traits, attitudes or antinomic behaviors.

**RESULTS AND DISCUSSIONS**

In order to test the hypothesis by which we presupposed that underachievement and overachievement associate with personality traits that relate to character and self image we are going to perform a comparative analysis between the underachieved group (G1) and the overachieved group (G3) under the aspect of the differences between the means obtained at the personality traits, by applying the t test and establishing the statistical significance of its value at the thresholds  $p < 0.05$  and  $p < 0.01$  (Table 1).

Table 1.

Differences regarding the personality traits of the academic underachieved and overachieved

Variables	Groups	N	Mean	SD	t	p
A -Openness, cooperation	G1	94	11.28	4.08	-9.43	$p < 0.01$
	G3	94	16.15	2.98		
C – Emotional Stability	G1	94	14.13	4.12	-11.35	$p < 0.01$
	G3	94	19.82	2.57		
G – Conscientiousness, Conformism	G1	94	13.89	3.69	-9.41	$p < 0.01$
	G3	94	19.35	4.23		
Q3 – Self-control	G1	94	11.96	4.26	-8.88	$p < 0.01$
	G3	94	16.71	2.93		
Anxiety	G1	94	15.40	12.14	4.21	$p < 0.01$
	G3	94	8.47	10.35		
Self-esteem	G1	94	17.03	23.56	-9.03	$p < 0.01$
	G3	94	41.92	12.56		

The data in the table indicate the existence of significant differences between the means obtained by the two extreme groups for the personality factors that indicate: openness, cooperation (the A factor of 16 PF); emotional stability (the C factor); conscientiousness, social conformism (the G factor; self-control, the feeling of self (the Q3 factor); anxiety (as a secondary personality factor) and self-esteem. As we would like to be consistent to the previously presented analysis process we will present the analysis and explanation of the results as against three categories of personality factors: *temperamental factors*; *emotional factors*; *factors which relate to the Ego manifestations*.

From the perspective of the temperamental aspect, the obtained results statistically prove the existence of significant differences between the underachieved and the overachieved on the level of the dynamics of conduct (the A factor) and at the level of emotional stability/instability (the C factor and anxiety as a secondary factor of personality). Thus, the overachieved prove to have a behavior that may be described as cooperant, adaptable, sociable, sensitive, dynamic, enterprising and determined and they manifest a higher degree of emotional stability and maturity. We consider that these temperamental manifestations are reflected in these students' attitude towards the instructional-educational process in general and especially towards the processes of learning and assessment, which contribute to getting high academic results. At the opposite pole there are the underachieved who manifest a kind of behavior which is reserved, cold, withdrawn and impersonal and have a high level of emotional instability, manifested by low tolerance at frustration, nervous fatigue and neurotic symptoms (the C factor), traits that may affect unfavorably the obtaining of academic results found in agreement with their intellectual possibilities.

On the whole, we find that for the subjects included in the investigated batch, the phenomenon of academic overachievement associate with specific aspects of the extravert and emotionally stable temperament, while the underachievement manifests mainly with people who present temperamental features corresponding to introversion and emotional instability. Having in view the investigations recorded in the specialty literature, we find again research studies which investigate the relationship between the temperamental aspects and academic achievement (operationalized as a mean of the academic results obtained at the end of the university year). As for the relationship between the temperamental traits afferent to the extraversion-introversion dimension and the academic results, previous studies showed that the introverts tend to obtain better academic results than their extravert colleagues, the first being considered to own a higher capacity to consolidate learning and superior learning habits (cf. CHAMORRO-PREMUZIC & FURNHAM, 2003). In spite of these results, recent studies which analyze extraversion as a predictor of academic achievement for the university education present various results. Thus, although the great part of the research reaches to the conclusion that the extravert students tend to obtain lower academic results in comparison with the introverts (FARSIDES & WOODFIELD, 2003; MCKENZIE, GOW & SCHWEITZER, 2004; CONARD, 2006), there are research studies that contradict those results, concluding that extraversion associate with high academic results (FURNHAM & MEDHURST, 1995, APUD CHAMORRO-PREMUZIC AND FURNHAM, 2003; BUSATO ET AL., 2000).

From the perspective of the relationship between emotional stability and academic results, the specialty studies have revealed the superiority of the academic performances obtained by the emotionally stable students, in comparison with those got by students owning a low level of emotional stability (DE FRUYT AND MERVIELDE, 1995, APUD O'CONNOR AND PAUNONEN, 2007, CHAMORRO-PREMUZIC AND FURNHAM, 2003; DUFF ET AL., 2004). This relationship is most of the times explained by the negative effects of anxiety upon the academic results, the instable students manifesting a high degree of anxiety and stress during the examinations, a fact that has a negative impact over efficiency (CF. O'CONNOR AND PAUNONEN, 2007).

As for character, consciousness and social conformism (measured by the G factor) those very significantly differentiate the underachieved students from the overachieved ones ( $t = -9.41$ ;  $p < 0.01$ ). Thus, students with a mainly positive attitude towards the academic activity in general manifest a behavior characterized by perseverance, responsibility, a strong sense of duty and a high level of conscientiousness, aspects that encourage high level academic results. Their colleagues at the opposite pole tend to obtain significantly lower results which may be due to the weak force of the Superego, manifested by superficiality, nonconformism and instability regarding the aims. The relation between conscientiousness and academic achievement may be explained also by referring to the motivational aspects. Thus, conscientious students are considered to have a stronger motivation to learn comparing to other students, and that may favor the obtaining of results that pass over their actual intellectual level. Also, it is often thought that there is a logical relation between certain facets of conscientiousness manifested through behavior and academic results. For example, it looks natural that the organized, conscientious students who are oriented towards self-realization obtain superior results in comparison with students who express opposed emotional traits. (cf. O'CONNOR AND PAUNONEN, 2007).

At the level of the international research aiming at the issues of academic achievement, the factor of conscientiousness appears highly frequently, and it is considered one of the best predictors of academic achievement at the level of high education. Numerous empirical studies have underlined a positive, significant correlation between that factor and

various indicators of performances on the university plan: the mean of academic results for a university year, the results obtained at the semestrial examinations, results obtained at seminars and laboratory activities, results obtained at the entrance or final examinations (BLICKLE, 1996; BUSATO ET AL., 2000; MCILROY AND BUNTING, 2002; CHAMORRO-PREMUZIC AND FURNHAM, 2003; FARSIDES AND WOODFIELD, 2003; MCKENZIE, GOW AND SCHWEITZER, 2004; CONARD, 2006). If we refer to those studies which underline strictly the relation between underachievement and conscientiousness, we may see that the results of our study stands in disagreement with the study performed by PRECKEL, HOLLING AND VOCK (2006) on a batch of 93 pre-adolescent and adolescent students. The conclusions have emphasized a lack of significant differences between the academic underachieved and those achieved from the point of view of the level of conscientiousness, in the circumstances where this factor is not considered a predictor of academic underachievement on the level of gymnasial and secondary-school education. From the perspective of self-attitude, some obtained results have revealed the existence of some strongly significant differences between the underachieved and the overachieved on the level of the feeling of self (the Q3 factor of 16PF) and of self-esteem (measured by The Self-Perception Questionnaire). According to the results in Table 1, students proving a strong feeling of self tend to obtain much higher results academically, in comparison with the students who express a low felling of self ( $t = -8.88$ ;  $p < 0.01$ ). Thus, we consider that in the case of the academically overachieved students the powerful control of emotions and high expectations towards oneself, along with a light tendency towards perfectionism stand as favorable premises for the high level academic achievement. In contradiction with this category of students, the underachieved prove some low control of will and the low interest towards the social requirements, so they are considered to be maladaptive most of the times, aspects that may affect them unfavorably especially in the case of formative and summative assessments at the seminar and laboratory activities. Similar results regarding the impact of this personality factor upon the academic achievement are recorded in the specialty literature (MCKENZIE, GOW AND SCHWEITZER, 2004).

The comparative analysis of the average scores obtained by the underachieved and the overachieved students regarding self-esteem indicate strongly significant differences between the two categories ( $t = -9.03$ ;  $p < 0.01$ ) in the overachievers' favor who express a higher level of this variable. Thus self-esteem is outlined as an independent variable which makes the clear-cut differentiation between the groups that are subjected to investigation, and it confirms our research hypothesis by which we have presupposed that underachievement associates with the negative self-image and, implicitly, with a low level of self-esteem. We think that a possible explanation of the underachievement phenomenon could be represented by deep feelings of inferiority, uncertainty and lack of trust that the academic underachieved students face, their self image being preponderantly negative and having repercussions over their academic results. The specialty literature comprises numerous studies indicating the association of academic underachievement with a low level of self image indicators: the feeling of self, self-esteem, self-efficiency, self-trust etc. (MCCOACH AND SIEGLE, 2001). These results suggest the impact of self-image upon the learning activity, upon the degree of task involvement, and also upon the perseverance in accomplishing the proposed targets. We consider that a low self esteem may disfavor the voluntary adjustment and motivation towards the learning task, thus bringing its contribution to obtaining low academic results, despite the intellectual potential relatively high, specific to the academic underachieved. Also, low level academic results may determine a more dark vision over the own person, so there may exist the risk of progressive deterioration of self esteem and, implicitly, of self image, on the whole.

### CONCLUSIONS

The results revealed after carrying out this study allow us to reject the null hypothesis and to accept the specific assumption by which we presupposed that underachievement and overachievement associate with personality traits that belong mainly to the area of behavioral disorders and self-image, and are consequences of superficiality, nonconformity and negative self image (underachievement) and of conscientiousness, social conformism and positive self image (academic overachievement).

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