

## Comparison of Academic Burnout, Mental Health, and Creativity among Students of Exceptional Talents Schools and Ordinary Schools

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### Abstract

*This study compared the academic burnout, creativity, and mental health among students of exceptional talents and ordinary schools of Rasht in academic year of 2014-2015. This is a post-event comparative study. Statistical population consisted of all 11232 female students of second grade in high school, of whom 217 students were selected from exceptional talents schools using the Morgan table and randomized sampling method. Moreover, 373 students were selected from ordinary schools using the Morgan table and multistage cluster sampling method. Data were collected using three academic burnout questionnaires by Bresó et al (1997), Depression, Anxiety and Stress Scale (DASS) (Lovibond and Lovibond, 1995) and Creativity Measurement Test (Abedi, 1991). In order to analyze the data, multivariate analysis of variance was used to compare variables. Findings showed that the score mean of the students of the exceptional talents schools is lower in three variables of academic fatigue (13.28), academic disinterest (9.43) and the academic inefficiency (13.22) rather compared to those of the students of the ordinary schools in these three variables (15.26, 11.34, 14.28, respectively). The mean score of the students of the exceptional talents school in three variables of depression (9.45), anxiety (14.19), and stress (7.96) is lower compared to those of the students of the ordinary schools in these three variables (7.46, 5.88, and 9.17, respectively). The mean score of the subscales of the fluid creativity (29.25), expansion (12.59), innovation (20.44), and flexibility (16) of the students of the exceptional talents schools is higher compared to those of the students of the ordinary schools (26.21, 10.67, and 18.55). As a result, academic burnout and mental health in students of exceptional talents schools is lower compared to those of the students of the ordinary schools, and their creativity is higher than that of the students of the ordinary schools.*

**Keywords:** Academic Burnout, Mental Health, Creativity, Students, Exceptional Talents Schools, Ordinary Students.

## **Introduction**

Academic burnout is one of the most important research in higher education institutions that may be considered as a key to understanding a wide range of behaviors that affect students' academic performance (Celik and Oral, 2013 quoted by Yaghubi, 2012). Students who receive special training, experience reactions in school life like the professionals who work in different fields or encounter with many people, these reactions are mainly revealed as "the school stress", "school fatigue," and "academic burnout." Daily interactions and continuous educational requirements cause the students' stress (Okamet, 2002).

Moreover, findings of an empirical research on academic burnout show that academic burnout is characterized by psychological and behavioral problems such as depression, absenteeism, and academic drop (Conington, 2000, Fiman and Cross, 1989; Fridenberger and Lewis, 2004; Salma et al., 2009, Young 2004, quoted by Parker, 2011, quoted by Azizi Abarghouei, 2011). Furthermore, based on available research, academic burnout can lead to excessive absenteeism, reducing the motivation to carry out the demands of the workplace, increasing the percentage of academic drop in school and so on (Ramist, 1981, quoted by Young, 2005; quoted by Islami, 2011).

Koeske and koeske (1991) showed that academic burnout increases relationship between the school stresses and its consequences such as headaches, fear, and depression. They also showed that by considering the academic burnout, relationship between academic stress and its consequences are significantly increased. Mental health is one of variables that affect academic burnout. In 1984, the World Health Organization defined mental health as a state of complete physical, social, and mental well-being and lack of disease. New definitions of mental health includes feeling and behavior management, realistic assessment of their limitations, autonomy and independence development and ability to cope with stress (Mendershid et al. 2010; quoted by Islami, 2011).

Tanz et al. (2005) noted that burnout leads to mental distress, anxiety, depression, frustration, hostility, failure, lack of motivation to do the task, turnover, excessive absenteeism, and reduced health. Creativity is another variable that is considered in this study with respect to the academic burnout. It has been dealt with and emphasized by the educational organizations in the recent decades, since students spend the most part of their life in educational systems and therefore, educational plans affect them. Moreover, for providing the conditions for the development and promotion of the creativity skills, further studies are needed (Gholtash et al., 2010). Some factors that are mostly studied in respect to the academic burnout include: the indifference and lack of motivation, academic drop and dropout, not doing academic tasks, harassment by students, continuous absences and lack of attendance in the school for illogical reasons, low scores and academic stagnation, rote memorization of the materials, lack of creativity and initiatives, and so on (Yaghubi, 2013).

As stated before, this study aims to compare the academic burnout, creativity, and mental health among students of exceptional talents and ordinary schools. Thus, the present study seeks to answer the following question: Is there any difference between the students of exceptional talents schools and those of ordinary schools in terms of the academic burnout, mental health, and creativity?

## Method

This is a post-event comparative study. Statistical population consisted of all 11232 female students of second grade in high school of Rasht City in academic year of 2014-2015, of whom 217 students were selected from exceptional talents schools using the Morgan table and randomized sampling method (due to the limited number of 511 students). Moreover, 373 students were selected from ordinary schools using the Morgan table and multistage cluster sampling method.

## Research Instrument

### Academic burnout questionnaire

This questionnaire was developed by Bresó et al (1997) and was firstly used by Noami (2009) for postgraduate students of Shahid Chamran University of Ahvaz. This scale measures three areas of academic burnout including academic fatigue, academic disinterest, and academic inefficiency. This questionnaire has 15 items that are rated based on the five point Likert scale from *strongly disagree* (1) to *strongly agree* (5). Each subject in the study obtains a score between 15 and 175. Noami (2009) reported reliability of this questionnaire using the Cronbach's alpha for academic fatigue as 0.79 and for academic disinterest as 0.82 and for academic inefficiency as 0.75. He also obtained the questionnaire reliability coefficient by correlating this questionnaire and student stressors questionnaires (Pouladi Reyshahri, 1995) for these three variables as 0.38, 0.42, 0.45, respectively that are significant at  $P < 0.05$ .

### Abedi's Creativity Measurement Test

This test is based on the Torrance's theory on creativity (1984) that was developed by Abedi (1993) in Tehran. This questionnaire has 60 items with four subtests including fluidity (items: 1-22, range 22-66), expansion (items: 23-33, range 11-16), innovation (items: 34-49, range 16-48), and flexibility (items: 50-60, range 11-33). Each item has three choices. Choices show the creativity from low to high levels. Each item has scored from zero to two. Each subject in the study received a score of zero to 120 (Daemi and Moghimi, 2004). Using the test-retest, reliability coefficients were obtained as 0.85 for fluidity, 0.82 for initiative, 0.84 for flexibility, and 0.80 for expansion. In addition, Abedi (1984) used the Torrance's creative thinking (1972) for validation of creativity test, and obtained reliability coefficient as 0.46 (Abtahi and Nadri, 2011).

### Depression, Anxiety and Stress Scale (DASS)

This scale was used for measuring the mental (Lovibond and Lovibond, 1995) and consists of three self-report scales that measure the severity of main symptoms of depression, anxiety, and stress. Each subscale consists of seven questions and each question is scored from zero to three. Each subject in this study obtains a score between zero to 63. Anthony et al. (1998) obtained alpha coefficient for these factors as 0.97, 0.92, and 0.95, respectively. Moreover, the results of the calculating the correlation coefficient between the factors showed the correlation coefficient as 0.48 for two factors of depression and stress and correlation coefficient as 0.53 for two factors of anxiety and stress and correlation coefficient as 0.48 for two factors of anxiety and depression. Validity of the questionnaire was studied by Samani and Jokar in Iran. They reported the test-retest validity for the scales of depression, anxiety and stress as 0.81, 0.74 and 0.78 respectively (Ashtiani and Dastani , 2011).

### Findings

Results were reported in the form of hypotheses for 367 students of the ordinary schools and 198 students of the exceptional talents schools. The results showed the highest frequency (240) for 16 years old students and lowest frequency (5) for the 18 years old students. The results also show the highest frequency (345) for the GPa of 18-20 and the lowest frequency (10) for the Gpa of 12-14. Hypotheses are analyzed as follow.

First hypothesis: academic burnout (academic fatigue, academic disinterest and academic inefficiency) of the students in the exceptional talents schools is lower than those of the students in ordinary schools.

Table 1: Results of multivariate analysis of variance to compare the means of academic burnout subscales of the students in the exceptional talents schools and ordinary schools

Test	Value	F	fd	Sig
Pillai's trace	0.06	13.10	3	0.001
Wilks Lambda	0.93	13.10	3	0.001
Hotelling's trace	0.07	13.10	3	0.001
Roy's Largest Root	0.07	13.10	3	0.001

Results of Table 1 shows the difference between the two groups of students in exceptional talents schools and students in ordinary schools is significant ( $p = 0.001$ ).

Table 2: Analysis of variance of the subscale scores of the academic burnout of the students in exceptional talents schools and students in ordinary schools

Test	Variable	Sum of squares	df	Squares mean	Ratio	Sig
Academic burnout	Academic fatigue	507.74	1	507.74	27.17	0.001
	Academic	467.54	1	467.54	34.99	0.001

	disinterest					
	Academic inefficiency	143.44	1	143.44	11.26	0.001

Results of analysis of variance in Table 2 show that the academic burnout of the students in exceptional talents schools is lower than that of the students in ordinary schools. As shown in Table 9-4, academic burnout (academic fatigue as 28.13, academic disinterest as 43.9 and academic inefficiency as 22.13) of the students in exceptional talents schools is lower than that of the students of the ordinary schools (academic fatigue as 26.153, academic disinterest as 34.11 and academic inefficiency as 28.14). Therefore, the first hypothesis is confirmed. The second hypothesis: mental health (depression, anxiety, and stress) of the students in exceptional talents schools is higher than that of the students in ordinary schools.

Table 3: Results of multivariate analysis of variance to compare the means of subscales of the mental health in students in exceptional talents schools and ordinary schools

Test	Value	F	fd	Sig
Pillai's trace	3	11.88	0.06	0.01
Wilks Lambda	3	11.88	0.94	0.01
Hotelling's trace	3	11.88	0.06	0.01
Roy's Largest Root	3	11.88	0.06	0.01

Results in Table 3 shows the significant difference between the two groups of students in exceptional talents schools and ordinary schools (P=0.001).

Table 4: Analysis of variance of the subscale scores of mental health of the students in exceptional talents schools and ordinary schools

Test	Variable	Sum of squares	df	Squares mean	Ratio	Sig
Mental health	Depression	812.93	1	812.93	32.35	0.001
	Anxiety	370.10	1	370.10	20.01	0.001
	Stress	189.92	1	189.92	9.26	0.001

Results of analysis of variance in Table 2 show that the mental health (depression, anxiety, and stress) of the students in exceptional talents schools is lower than that of the students in ordinary schools. As shown in Table 4, mental health (depression as 4.95, anxiety as 4.19 and stress as 7.96) of the students in exceptional talents schools is lower than that of the students of the ordinary schools (depression as 7.46, anxiety as 5.88 and stress as 9.17). Therefore, the second hypothesis is confirmed.

The third hypothesis: Creativity (fluidity, expansion, innovation, and flexibility) of the students in exceptional talents schools is higher than that of the students in ordinary schools.

Table 5: results of multivariate analysis of variance of the subscale scores of the creativity of the students in exceptional talents schools and students in ordinary schools

Test	Value	F	d.f	Sig
Pillai's trace	4	14.85	0.09	0.01
Wilks Lambda	4	14.85	0.90	0.01
Hotelling's trace	4	14.85	0.10	0.01
Roy's Largest Root	4	14.85	0.10	0.01

Results in Table 5 shows the significant difference between the two groups of students in exceptional talents schools and ordinary schools (P=0.001).

Table 6: Analysis of variance of the subscale scores of the creativity of the students in exceptional talents schools and students in ordinary schools

Test	Variable	Mean squares	df	Sum of squares	Ratio	Sig
creativity	Fluidity	1188.57	1	1188.57	39.82	0.001
	Expansion	472.876	1	472.876	44.12	0.001
	Innovation	461.38	1	461.38	20.97	0.001
	Flexibility	246.27	1	246.27	23.53	0.001

Results of analysis of variance in Table 6 show that the creativity of the students in exceptional talents schools is higher than that of the students in ordinary schools. As shown in Table 9-4, the mean of the subscale scores of creativity of the students of exceptional talents schools (fluidity as 29.25, expansion as 12.59, and innovation as 20.44 and flexibility as 16) is lower than that of the students of the ordinary schools (fluidity as 26.21, expansion as 10.67, innovation as 18.55 and flexibility as 14.62). Therefore, the third hypothesis is confirmed.

## Discussion

In this study, the variables of academic burnout, mental health, and creativity were analyzed. Now, results of the research hypothesis are investigated and concluded.

Findings showed that the score mean of the students of the exceptional talents schools is lower in three variables of academic fatigue (13.28), academic disinterest (9.43) and the academic inefficiency (13.22) rather compared to those of the students of the ordinary schools in these three variables (15.26, 11.34, 13.2, respectively). No study showed the higher academic burnout of the students of exceptional talents schools compared to that of the students of ordinary schools. Zeinali and Aslani (2012) investigated the academic burnout of the male and female students of math and physics in Isfahan and showed that there is a significant difference between the academic burnout of the male and female students. In other words, academic burnout of the male

students was higher than that of the female students. Therefore, it can be said that students of exceptional talents schools due to the characteristics such as fast learning process can understand the materials more than the students of ordinary schools and try more to learn new materials and have a deep understanding of what they learn. These students are more socially compatible, have higher academic performance, obtain higher academic achievements, and experience lower academic burnout compared to the students of ordinary schools.

Other results of this study showed that the mean scores of students of exceptional talents schools in three variables of depression (4.95), anxiety (4.19) and stress (7.96) is lower than that of the students of ordinary schools (depression as 7.46, anxiety as 5.88 and stress as 9.17). Therefore, mental health of the students of exceptional talents schools is higher than that of the students of ordinary schools (as the scores increase, mental health is decreases). This hypothesis was confirmed with respect to the research results. Shahriari Ahmadi et al. (2012) showed that the mental health of talented students is higher than that of the ordinary students and this is consistent with the results of this study. Haghshenas et al. (2006) compared the mental health and personality traits of the students of exceptional talents high schools and students of ordinary high schools and concluded that the mental health of the talented students is higher than that of the ordinary students and this is consistent with the results of this study. Aghabeigi (1992) compared the mental health of the students of the model governmental schools and students of exceptional talents schools with the students of ordinary schools. He found that there is no significant relationship between the mental health of the students of the model governmental schools and students of exceptional talents schools with the students of ordinary schools and this is inconsistent with the results of this study.

Therefore, it can be said that because talented students can predict the events and have traits such as self-image, self-efficacy, self-respect, and self-esteem compared to the ordinary students, they can cope with the problems and are not afraid of failures or punishments due to their self-evaluations. Therefore, they are less depressed or anxious in stressful situations and have higher mental health compared to the ordinary students (Haghshenas et al., 1996).

Other results of this study showed that the mean scores of subscales of creativity including fluid creativity (29.25), expansion (12.59), innovation (20.44), and flexibility (16) of the students of the exceptional talents schools is higher compared to those of the students of the ordinary schools (26.21, 10.67, and 18.55). This hypothesis was confirmed. The results of this study are inconsistent with those of Ghodrati et al. (2010). Ghodrati showed that there is no significant difference between creativity of the students of ordinary schools and students of exceptional talents schools.

The results of this study are consistent with those of Shahriari Ahmadi et al., 2012. They showed that creativity of the students of exceptional talents schools is higher than that of the students of ordinary schools. Ghodrati et al. (2010) showed that female talented students in exceptional talents schools had higher creativity compared to that of the students of ordinary schools and this

was consistent with the results of this study. It can be said that students of exceptional talents schools may prefer to experience new and various phenomena rather than the common and conventional items when encountering the external and internal experiences. Moreover, they have higher intelligent curiosity and enjoy solving the problems. It seems that these students have higher capacity for reviewing the social, political, and religious values and are less conservative. They also are more creative compared to the students of ordinary schools and use their imaginations for creative life. Therefore, they are open to experience new situations. However, students of ordinary schools prefer the conventional behaviors and are more socially and politically conservative than the students of exceptional talents schools. They welcome the common events rather than rare ones and have more limited perspectives. They are closed to experience new situations (Haghshenas, et al., 1996).

### **Conclusion**

The mean score of the creativity of the students of exceptional talents schools is higher than that of the students of ordinary schools. In addition, the mean scores of the academic burnout and mental health in students of ordinary schools is higher than that of the students of exceptional talents schools. Therefore, exceptional talents schools have better performance in preventing the academic burnout, creativity, and promoting the mental health and academic achievement of the students compared to the ordinary schools. Higher academic burnout, mental health, and lower creativity are weak points of the ordinary schools that should be improved. Since the education system is responsible for educating the students as the future labor force, it should provide the grounds for development and promotion of the creativity, innovation, and proper use of the talents and potentials of the students and use creativity and innovation in organizational level to achieve more dynamism. Traditional viewpoint of the teachers and managers, inappropriate environment, content-based approaches, high emphasis on the students' scores as a criterion for success, teacher-oriented traditional teaching methods, lack of teachers' proper understanding on creativity, lack of necessary facilities for creative activities of the students, curriculum and the content of textbooks, heavy tasks will eventually lead to the academic drop, academic burnout and lack of creativity.



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