

Identifying stressors and reactions to stressors in gifted and non-gifted students

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Using the Student Life Stress Inventory and the Coopersmith Self-Esteem Inventory, stressors and reactions to stressors were identified in gifted high school students and compared with non-gifted students. Altogether, 340 boys and girls (156 gifted and 184 non-gifted students) from four high schools in Shiraz (two high schools for gifted and two for non-gifted students) took part. Although there was no significant difference between gifted and non-gifted students in stressors, gifted students showed significantly more cognitive reactions to stressors. Boys had higher scores in frustration than girls, but their scores on emotional reactions were lower than those of the girls. There was an interaction between sex and type of student (gifted versus non-gifted). Moreover, there was a significant negative relationship between father's education and the experience of frustration in gifted students. Finally, the gifted students showed significantly higher self-esteem than the non-gifted.

Self-esteem, cognitive, emotional, stress, gifted, non-gifted

INTRODUCTION

Reviewing the literature on characteristics of gifted and talented individuals reveals contradictory findings, especially with regarding to their psychological well-being, level of adjustment and coping.

There are two points of view. The first is that gifted student's adjustment level is higher than their non-gifted peers. Because of their cognitive capacities gifted students have better understanding of self, environment and other people, and they can cope well with stress.

Terman (1925) and Terman and Oden (1935; 1947) had conducted longitudinal studies. According to their findings, gifted individuals show lower incidence of mental illness and adjustment problems. Coleman and Fults (1985) suggested that gifted students are happy, popular and healthy. When compared with non-gifted students, they are less vulnerable to mental disorders.

The second point of view is that gifted children are more vulnerable to mental illness and they can not adjust to emotional and social problems, particularly during adolescence and adulthood (Neihart, 1999). Lombroso (1891) initially described high ability persons as weak, unpopular and disturbed. Hollingworth (1942) showed that gifted students (IQ over 180) had some difficulties in educational and social adjustments. The adjustment problems for gifted students have been reported by many researches (Tannenbaum, 1983; Gross, 1993; Gallucci, 1988; Janos, Fung and Robinson, 1985; Janos and Robinson, 1985; Yewchuck and Jobagy, 1991).

Some other researchers focused on self-concept and self-esteem of gifted students. These studies also showed controversial results. There are three points of view that should be considered in this regard:

- a) Gifted comparing to non-gifted students get benefit from better self-concept and therefore a higher self-esteem scores (Lehman and Erdwin, 1981; Ketchman and Snyder, 1977; Olszowski-Kubilius, Kuliekea and Krasney, 1988).
- b) Some researchers reported low self-esteem scores for gifted students (Milgram and Milgram 1977).
- c) Some studies showed no differences between gifted and non-gifted students' self-esteem scores (Kerves and Wherry, 1981; Leo and Jay 1987; Coleman and Fults, 1982, 1985).

With regard to stress, there are some studies which support the notion that gifted students experience different kind of stress, such as unrealistic expectation of their parents and overwhelming expectation of their teachers (Chan, 2003; Kaufman, 1992). Moreover, there are other investigations that emphasise a "special stress" which comes from labelling them gifted (Yewchuk and Jobagy, 1991; Coleman and Cross, 1988; Delisle, 1985; Galbraith, 1985).

Due to the special stress, which gifted students receive from their environments, identifying stressors and the type of reaction to stressors will help the counsellor to improve gifted psychological health (well-being).

However, the finding about gifted students' self-esteem are controversial, but it is important to study the relationship between self-esteem and level of stress in them. This will help the educators, parents, and counsellors to prepare better conditions for gifted students.

The purposes of the present study were as follows:

1. To identify stressors and reaction to stressors in gifted students and compare them to non-gifted students.
2. To compare self-esteem in gifted and non-gifted students.
3. To investigate the relationship between self-esteem and level of stress.
4. To examine gender differences with regard to stressors and reaction to stressors in gifted students.
5. To analyse the stressors and reaction to stressors in relation to some socio-demographic variables.

METHOD

Sample

The study was conducted in four high schools in Shiraz (a city in the south of Iran). Two high schools were special schools for gifted students and the other two were regular schools. The subjects were 340 males and female students (156 gifted and 184 non-gifted) who were studying in the final year of high school (education in all four schools was free of charge).

Instruments

Student-life Stress Inventory (SSI, Gadzella, 1991) was used for collecting data on stress. SSI has 51 items listed under nine categories and two sections: a) Stressors, and b) type of reaction to stressors. The items in the first section focused on five type of stressors (frustration, conflict, pressure, change and self imposed). The items in the second section focused on the types of reaction to the stressors (physiological, emotional, behavioural and cognitive). To determine the reliability and validity of the SSI in Iranian culture, Cronbach's coefficient alpha was calculated, and the obtained coefficient for total scale was 0.92. The correlations among SSI, Beck

Depression Inventory, and Taylor's Anxiety Scale were all statistically significant at 0.001 (Amini and Yousefi, 2001).

The Cooper-Smith Self-Esteem (SEI) (Cooper-Smith, 1981) was used for collecting data on self-esteem.

RESULTS

With regard to identifying the type of stressors, Table 1 shows that there were no significant differences between gifted and non-gifted students' scores. But the gifted students had significantly high scores in cognitive reaction to stressors than non-gifted students ($p=0.0001$), as presented in Table 1.

Table 1. Means and Standard Deviations of Gifted and Non-gifted Students' Scores on SSI

Categories	Gifted Students (N=156)		Non-gifted Students (N=184)		t
	M	SD	M	SD	
a) Stressors					
1- Frustration	16.07	4.02	16.39	4.03	0.73
2-Conflict	8.45	2.28	8.39	2.34	0.23
3- Pressure	11.62	3.11	10.78	3.28	2.42
4-Change	6.92	2.66	7.51	2.28	1.92
5-Self-imposed	20.73	3.48	21.30	3.73	1.45
b) Reactions to stressors					
1-Physiological	25.81	8.07	27.41	8.92	1.72
2-Emotional	11.58	3.45	12.40	3.72	2.07
3-Behavioral	15.14	4.10	15.75	4.19	1.34
4-Cognitive	7.18	1.66	5.92	2.03	6.18*

* $p < 0.0001$

Analysing the self-esteem scores showed that gifted student had significantly higher scores than non-gifted ($p=0.0001$).

The results, presented in Table 2, showed negative relationship between scores on self-esteem (SEI) inventory and the scores on Student-life Stress Inventory (SSI) ($r = -0.52$, $p=0.0001$).

In relation to sex differences, Table 2 showed that the gifted boys had high scores on frustration compared to gifted girls. But girls showed significantly more emotional reaction to stressors than boys ($p=0.001$).

Table 2. Means and Standard Deviations of Gifted Boys and Girls' Scores on SSI

Categories	Gifted Boys (N=68)		Gifted Girls (N=88)		t
	M	SD	M	SD	
a) Stressors					
1- Frustration	17.44	3.83	15.02	3.86	3.91*
2-Conflict	8.10	2.34	8.72	2.21	1.70
3- Pressure	11.32	3.27	11.86	2.99	1.07
4-Change	6.98	2.44	6.88	2.83	0.22
5-Self-imposed	19.95	3.39	21.34	3.44	2.50
b) Reactions to stressors					
1-Physiological	25.95	9.79	25.70	6.50	0.19
2-Emotional	10.57	3.64	12.37	3.10	3.33*
3-Behavioral	14.38	4.55	15.73	3.63	2.07
4-Cognitive	7.13	1.45	7.22	1.81	0.35

* $p < 0.001$

Although there were no significant relationships between stress and some socio-demographic variables, such as mother's education, father/mother's occupation, the number of siblings and birth order. But there was a significant negative relationship between father's education and the experience of frustration in gifted students.

Finally, there was an interaction effect between sex and the groups of students (gifted versus non-gifted). This interaction effect was significant at $p=0.0001$.

CONCLUSION

Understanding the characteristics of gifted students is highly important, not only for their fulfilment, but for their specific contributions to their societies. Despite all controversy, it seems that gifted students because of higher level of cognition, access better and more sufficient strategies for coping with stress (Zigler and Glick, 1986; Luthar, Zigler, and Goldstein, 1992). Therefore, as Freeman (1991) suggested, there is no scientific evidence showing that gifted students have emotional problems.

Finally, it should be considered that gifted students experience more stress than their non-gifted peers, but they mostly prefer to react to stressors in a cognitive way.

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