The Effects of Family Income on Test-Anxiety and Academic Achievement among Iranian High School Students

Fayegh Yousefi
Department of Psychiatry, Faculty of Medicine, Kurdistan University of Medical Science
Sanandaj-Iran
E-mail: fyousefi_kms@yahoo.com

Ma' rof Redzuan
Faculty of Human Ecology, University Putra Malaysia
Serdang 43400, Malaysia

Mariani Bte
Faculty of Human Ecology, University Putra Malaysia
Serdang 43400, Malaysia

Rumaya Bte Juhari
Faculty of Human Ecology, University Putra Malaysia
Serdang 43400, Malaysia

Mansor Abu Talib
Faculty of Human Ecology, University Putra Malaysia
Serdang 43400, Malaysia

Abstract

The purpose of this paper is to determine the effect of family income on test-anxiety and academic achievement. The paper is based on a study which was carried out among high school students in Iran. The respondents of the study were 400 high school students (200 males and 200 females) in the age range of 15-19 years old. Instrument used for data collection was Test-Anxiety Inventory (TAI). Statistic analysis of ANOVA was employed to identify the significant differences between family income, test-anxiety and academic achievement. The finding shows that family income significantly affected academic achievement [(F (2) = 19.17, p=.000)] and test-anxiety [(F (2) = 3.92, p=.02)]. Thus, it is recommended that in enhancing academic achievement and test-anxiety in school setting, support strategies such as improve the family income among families by government.

Keywords: Family income, Test-anxiety, Academic achievement, Iranian high school students

1. Introduction

One of the great crises of the educational system in many countries, especially third world countries are the problem of low academic achievement. According to Fouladi (2007), low academic achievement has become the main focus of educational officials. He indicated that academic achievement is the most important issues in education, as many educators, sociologists and psychologists have considered it. Peelo and Wareham (2002), also found that low academic achievement has been identified over time as problematic in terms of social and economic waste, as anti-egalitarian and discriminatory.

One of the factors related to low academic achievement is test-anxiety. Test anxiety includes a number of different symptoms, such as irrelevant thought, awareness of bodily (somatic) sensations and tension, in ability to concentrate and to pay attention (Sena, Lowe, & Lee, 2007, p, 365).

On the other hand, many factors impacted on test-anxiety and academic achievement. One of them is family income. Thomas (2005) indicated that family income affects academic achievement. He indicated that students with low family income had low academic achievement. Also, Mozaffari (2001) pointed out that family income effect test-anxiety and academic achievement among high school students.

2. Literature review

Stober (2004) found that test anxiety can be conceptualized as a situation-specific trait, namely as a disposition to react with heightened anxiety in the face of situations that are specifically related to tests and performance. Whereas, early conceptions viewed test-anxiety to be multidimensional in nature. Also, Stober (2004) indicated that there are two main components of test- anxiety, "worry" that is referred to concerns about being evaluated and the consequences of failure, and second, "emotionally" which is referred to the perception of autonomic reactions evoked by the test situation.

Many studies mentioned that test-anxiety have high prevalence among students. In a local context, Rahimi (1999) found 36.9 % of high school students in Sanandaj, Iran had severe anxiety. In addition, Daskzan (2004) recorded that 37% of male and 53% of female high school students in Saghez city in Kurdistan province had test-anxiety. He found that there was a significant relationship between test-anxiety and academic achievement. On the other hand, Mozafari (2001) found that 60% of Shayeds' high school students and 50 % of non Shayed s' high school students in Sanandaj had test-anxiety.

As noted earlier, many factors affect academic achievement and test-anxiety among respondents. Thus, one of the factors which are impact on them is family income. Amin Far (2002) reported that 65% girls students from rural area and 34% boys students from urban area had low academic achievement. Hamidian (2006) indicated that 50, 000 million Toman (50 millions USD) is needed to solve low academic achievement problems in western Azerbaijan province, Iran. He indicated that after 3.5 years, organization of education can do it.

Dana (2007) showed that 28% of Iranian people are on the poverty line and around (18 % out 70 million people) of young people are jobless. He also indicated that a poverty line for a family with 4 people was USD 450 per month. In addition, Davis -Kean (2005) in their study with 868 respondents 8–12-year-olds (49% non-Hispanic European American and 47% African American) indicated that there was a significant relationship between family income and academic achievement. They found that educational attainment and family income were related indirectly to children's achievement among the African American students. Thomas (2005) indicated that family income affected academic achievement. He indicated that students with low family income had low academic achievement.

3. Research Methodology

A primary instrument used in the present study was the Test-Anxiety Inventory (TAI). Based on Cronbach's Alpha (1970), the internal consistency for the TAI ranges from 0.94 to 0.95 (Abolghsemi, 1988). TAI has been adapted to Iranian context and were used extensively in Iran. TAI is a self-administered 25-items test which that has been previously used to determine the level of test anxiety among students and takes 15 minutes to complete (Abolghasemi 1988). Each statement on the TAI is followed by a four -point Likert-type scale (never =0, rarely =1, some time =2, and most of the time =3). The minimum score on each of the twenty-five questions is zero and the maximum score for the whole test is seventy- five. TAIs' categories are based on normal distribution, a score M − 1SD (Mean− Standard Deviation) denotes mild test anxiety and a score M +1SD as having high test-anxiety (Chapell, Blanding, & Silverstein, 2005). Cronbach Alpha for the present study was 0.92. High scores indicate higher test anxiety.

The students were asked to provide their last year's Grade Point Average, GPA, which ranges from (0.00–20.00). The rules of the Ministry of Education in Iran, stipulate the effective range of GPA to be from 0 to 20, with four parts: a score from 0 to 9 is considered a fail; 10 to 14.99 is considered weak (classed as a C); 15 to 16.99 is considered moderate (classed as a B) and a score of 17 to 20 is considered excellent (classed as A). High scores indicate higher academic achievement.

The results of the study are presented in the form of descriptive statistics, which include frequency and percentage distributions for level of test-anxiety, family income and academic achievement variables. And also, inferential statistics employed in this study is ANOVA. Because, the independent variable in the present study is a category of family income, which is three levels and their scale is ordinal. In addition, dependent variables are test-anxiety and academic achievement which their scales are interval variables.

4. Results

Table 1 shows students with family income ≥USD301 more than students with family income ≥USD301-500 and ≥USD501 had moderate test-anxiety (69.4 verses 64.0 and 50.9).While, severe test-anxiety among students with family income ≥USD501 was more than students with family income ≥USD301 and USD≥301-500 (30.9 verse 17.7 and 14.7).

Table 2 shows respondents with family income USD≤301 more than respondents with family income USD≤301-500 and ≥USD501 had scored ≤9.99 (5.3% verse .0 % and 1.8 %). While, respondents with family income ≤USD301-500 and ≥USD501 had scored ≤17 more than respondents with family income ≤USD301 (36.8% and 41.8% verse 16.7%).

An ANOVA was run for effect of family income as independent variable on academic achievement and depression as dependent variables. It was stated family income has effect on depression and academic achievement. The results summarizes family income had significant differences on academic achievement [(F (2) = 19.17, p=.000)] and test-anxiety [(F (2) = 3.92, p=.002)].

A Boufeeroni post-hoc analysis was conducted to identify where the differences between the family income levels, depression and academic achievement. Post, hoc analysis specified that for academic achievement the all of three groups exclude (≥USD301-500 and≤ USD501) significantly differences. In addition, Post, hoc analysis revealed for test-anxiety the ≥USD300 group was not significantly difference with ≥USD301-500 and ≥USD301-500 group. While ≥USD301-500 group was marginally significantly difference with ≤USD501.

5. Discussion

Data from the present study shows that 3 % of the respondents, reported their academic achievement was less than≤ 9.99, while 43.8%, 26.2 and 27 % of them reported their academic achievement to be 10- 14.99, 15-16.99 and more than ≥17, respectively, As mentioned earlier, 43.8% of respondents were labeled as weak and 3% of respondents dropped out. These results differed from Daskzan (2005; Mozaffari (2001) and Nosrati Shoar (2003). The disagreement may be related to different sample size, motivation of respondents or school's activities.

Findings showed family income effect test–anxiety and academic achievement among respondents. These results were suported by Hamidian (2005), Dana (2007), Davis -Kean (2005) and Thomas (2005). For example, Dana (2007) showed that 28% of Iranian people are on a poverty line and around 18 %(out 70 million people) of young people are jobless. He also indicated that a poverty line for a family with 4 people was USD 450 per month. In addition, Davis -Kean (2005) indicated that there was a significant relationship between family income and academic achievement. They found that educational attainment and family income were related indirectly to children's achievement among the African American students.

Maybe, this agreement is related to Abraham Maslow's hierarchy of need theory. He explained that physiological factors are a major factor to academic achievement (Halgin et al., 2005). For instance, students in rich families and life services are better than students who live among the poor families. Second reason is that, psychological factors, for example, students in rich families may be taught well and when they have problems, they are supported by their families. These supports increase their motivation, self-concept and self esteem, and also their academic achievement. In addition, it decreases test-anxiety among them.

6. Conclusions

The present study attempts to determine the relationship between family income, test-anxiety and academic achievement among Iranian high school students. The finding of this study implies that family income among high school students could affect their learning process and other school activities and test -anxiety. Moreover, family income could affect their learning motivation, and also their ability to pay attention and concentration in learning, and this could lead to academic failure. Thus, authorities that are concerned with the academic achievement of the children should take preventive actions, such as developing programs related to counseling and psychotherapy. To decrease the rate of influence of family income on depression and academic achievement among students, the government should organize practical programs to help families and also students such as food, money and the other supports. These programs could help and support students, where they can increase their abilities to perform better in school.

References

Abbolghasem, A. (1988). *Test-Anxiety Inventory (TAI*). Tehran: Sina s' Behavioral Science and Research Association.

Amin Far, M. (2002). Academic failure among students. *Journal of Educational Psychology*, 2(2), 17-28.

Chapell, M.S., Blanding, Z.B., & Silverstein, M.E. (2005). Test- anxiety and academic achievement in undergraduate and graduate students. *Journal of Education Psychology*, 97(2), 268-278.

Dana, F. R. (2007). Poor, discrimination and human low. *Journal of culture and development, 54, 6-7.*

Daskzan, J. (2004). Prevalence of test-anxiety and its' related to academic problems. *Research center of organization education in Kurdistan province.*

Davis -Kean, P.E. (2005). The influence of parent education and family Income on child achievement: the indirect role of parental expectations and the home environment. *Journal of Family Psychology,* 19(2), 294-304.

Education Organization of Sanandaj. (2007). *Adolescents population at the Kurdistan Province, Sanandaj-Iran.*

Fouladi, M. (2007). Academic achievement. *Journal of Didrare Ashena* (Meet familiar), No, 28. [Online] Available: http://noorportal.net/473-1-noor.aspx.

Gravette, F.J., Forzano, L, B. (2006). *Research methods for the Behavioral Science*. Australia: Thamson and Wadworth.

Halgin, R.P., Krauss, W.&., Bourene, S. (2005). *Abnormality psychology clinical perspective on psychological disorder*. Boston: Mc Grew.

Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-608.

Mozaffari, M. R. (2001). *Rate of affective-family and educational problems between Shaheds' high school students and none Shaheds'high school students* in Sanandaj. Organization Education of Kurdistan.

Peelo, M., & Wareham, T. (2002). *Failing students in higher education*. Philadelphia: Sreh and Open University Press.

Rahimi, F. (1999). *Causing of anxiety among high school students in* Sanandaj. Research center of Organization Education in Kurdistan province, Iran.

Sena, W. J., Lowe, P. & Lee, S. W. (2007). Significant predictors of test anxiety among students with and without learning disabilities. *Journal of Learning Disprfers, 40*(4), 360-376.

Stober, J. (2004). Dimension of test-anxiety: Relations to ways of coping with pre-exam anxiety and uncertainty. *Journal of Anxiety, Stress and Coping,* 17(3), 213-226.

Thomas, R.M. (2005). *Comparing theories of child development.* California: Thomson and Wad worth.

Table 1. Crasstable family income on test-anxiety among respondents (400)

	Depression Levels						
Family income	**Mild test-anxiety (44.72)**		**Moderate test-anxiety (44.73-74.09)**		**Severe test-anxiety (≥74.1)**		**Total**
	n	**%**	**n**	**%**	**n**	**%**	
≤USD301	27	12.9	145	69.4	37	17.7	209
≥USD301-500	29	21.3	87	64.0	20	14.7	136
≥USD501	10	18.2	28	50.9	17	30.9	55
Total	66	16.5	260	65	74	18.5	400

Table 2. Crasstable family income on academic achievement among respondents (400)

Family income	**Academic achievement**								
	≤9.99		10-14.99		15-16.99		≥17		Total
	n	%	n	%	n	%	n	%	
≤USD301	11	5.3	113	54.1	50	23.9	35	16.7	209
≤USD301-500	0	.0	48	35.3	38	27.9	50	36.8	136
≥USD501	1	1.8	14	25.5	17	30.9	23	41.8	55
Total	12	3.0	175	43.8	105	26.2	108	27.0	400

Table 3. ANOVA results for family income, academic achievement and depression (n=400)

Family income	df	F	P
Academic achievement	2	19.17	.000
Test-anxiety	2	3.92	. 02