



*Research Paper*

## Academic Motivation in Female Students of Different School Levels in Tehran City

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### Abstract

The present study was conducted to compare the academic motivation of primary school and junior and senior high school female students. The study population included female students in the city of Tehran, of whom 297 students were selected by multistage cluster sampling. The present descriptive survey was conducted by attending the above schools, and the study tool included Harter's academic motivation scale. The validity and reliability of this scale were assessed by Bahrani and Razavieh (2009) with Cronbach's alpha coefficient of 0.85 and 0.69 for intrinsic and extrinsic subscales, respectively. The answers to this questionnaire were analyzed by one-way ANOVA and Scheffe's post hoc test. According to the results, the intrinsic academic motivation was higher in primary school students than that in junior and senior high school students, and conversely, extrinsic motivation was higher in junior and senior high school students than that in primary school students.

**Keywords:** *Academic achievement motivation, Intrinsic and extrinsic motivation, Different school levels*

### Introduction

Academic motivation comprises intrinsic processes that motivate and maintain efforts and activities to achieve academic goals (Areepattamannil, 2011). Intrinsic motivations root within an individual (Shekari, Kashani et al., 2010) while extrinsic motivations are external stimuli that arouse an individual (Parsons et al., 2001).

Harter (1981) reported a decline in intrinsic motivation from primary to junior and senior high schools. Lepper et al. (2005) found that intrinsic

motivation decreases from the third to the eighth grade. Gottfried et al. (2001) found that intrinsic academic motivation decreased from childhood to late adolescence. Bugler et al. (2015) reported that adaptive motivation of girls decreased between the ages of 11 and 16.

The decline in academic motivation in early adolescence is one of the most important issues in educational research (Bugler et al., 2015). As such, in their longitudinal study of 10 to 15 year-old students, Martin and Steinbeck (2017) found a relationship between physical changes in puberty and the decline in academic motivation associated with academic failure.

One of the factors associated with academic achievement is motivation for academic achievement (Tamannaefar and Gandomi, 2011, Noohi et al., 2012; Chowdhury and Shahabuddin, 2007, and Motari et al., 2015). Given its importance and the lack of such a study in the target population (which assessed the decline or increase in academic motivation at different school levels), the present study aims to determine the differences in motivation for academic achievement at different school levels. The study hypotheses were:

- In the intrinsic dimension, academic motivation is greater in primary school students than that in junior and senior high school students.
- In the extrinsic dimension, academic motivation is greater in junior and senior high school students than that in primary school students.

## Methodology

In terms of objective, the present study is an applied one, and in terms of data collection, it is a descriptive survey because it describes the status of variables.

The study population included female students of primary schools and junior and senior high schools of Tehran in academic year 2013-14. One district in Tehran was randomly selected by multistage cluster sampling. Then, using the list of schools in the education department of that district, four primary schools, four junior and four senior high schools were selected, and one class was chosen from each school. A total of 297 fully completed questionnaires were included in the analysis, and incomplete ones were excluded.

Harter's academic motivation scale (AMS) was used. According to Lepper et al. (2005), one of the features of AMS is its use in revealing developmental trends in motivation. In this scale, intrinsic motivation subscale includes challenge, curiosity, and independent mastery, and extrinsic motivation subscale includes easy work, pleasing teacher, and dependence on teacher. The Cronbach's alpha coefficient was 0.81 for intrinsic motivation subscale and 0.83 for extrinsic motivation subscale in primary school students, and 0.84 for intrinsic motivation subscale and 0.72 for extrinsic motivation subscale in junior high school students, and 0.85 for

intrinsic motivation subscale and 0.81 for extrinsic motivation subscale in senior high school students. The validity and reliability of this scale were assessed by Bahrani and Razavieh (2009) with Cronbach's alpha coefficient of 0.85 and 0.69 for intrinsic motivation and extrinsic motivation subscales, respectively. Also, construct validity of this scale was assessed using factor analysis (Bahrani and Razavieh, 2009). Data were analyzed in SPSS-20 using descriptive statistics to find frequency, percentage, mean and standard deviation, skewness and kurtosis, and inferential statistics with one-way ANOVA and Scheffe's *post hoc* test.

## Results

**Table 1:** Mean and standard deviation of students' academic motivation (intrinsic and extrinsic motivations) by school level.

Academic motivation	Mean	Standard deviation	Minimum	Maximum	Number	Kurtosis	Skewness
<b>Intrinsic motivation</b>							
Primary school	71.08	10	34	85	97	0.99	-0.88
Junior high school	61.87	10.9	29	84	97	-0.27	-0.24
Senior high school	63	10.27	36	82	88	0.21	-0.50
Total	65.39	11.16	29	85	282	-0.12	-0.43
<b>Extrinsic motivation</b>							
Primary school	37.46	11.54	16	76	99	0.30	0.44
Junior high school	49.82	9.56	24	72	95	-0.061	-0.17
Senior high school	47.54	10.16	18	66	87	-0.24	-0.44
Total	44.76	11.87	16	76	281	-0.39	-0.21

According to Table 1, the mean of intrinsic motivation in primary school students ( $m = 7.08$ ) was higher than that in junior and senior high school students. The mean of extrinsic motivation in primary school students ( $m=37.46$ ) was also less than that in junior and senior high school students.

**Table 2:** ANOVA test results to compare academic motivation at different school levels.

Sources of change	Sum of squares	Degree of freedom	Mean squares	F	Sig.
Intrinsic motivation					
Intergroup	4534843	2	2421.726	22.366	0
Intragroup	30209.856	279	108.279		
Total	35053.309	281			
Extrinsic motivation					
Intergroup	8374.832	2	4187.416	38.152	0
Intragroup	30534.193	278	109.853		
Total	38909.025	280			

According to Table 2, there was a significant difference among the three school levels in intrinsic motivation ( $F=22.366$ ;  $P\leq 0.05$ ). There was also a significant difference among the three school levels in extrinsic motivation ( $F=38.152$ ;  $P\leq 0.05$ ).

**Table 3:** The results of Scheffe's test; differences in mean intrinsic and extrinsic motivation at different school levels

	School level	School level	Difference of means	Standard error	Sig.
Intrinsic motivation	Primary	Junior	9.206*	1.494	0
		Senior	8.082*	1.531	0
	Junior	Primary	-9.206*	1.494	0
		Senior	-1.123	1.531	0.764
	Senior	Primary	-8.082*	1.531	0
		Junior	1.123	1.531	0.764
Extrinsic motivation	Primary	Junior	-12.326*	1.505	0
		Senior	-10.057*	1.540	0
	Junior	Primary	12.356*	1.505	0
		Senior	2.280	1.555	0.343
	Senior	Primary	10.057*	1.540	0
		Junior	-2.280	1.555	0.343

The results of Scheffe's test show that mean intrinsic motivation in primary school students ( $m=71.08$ ) was significantly higher than that in junior ( $m=61.87$ ) and senior ( $M=63$ ) high school students. Also, mean extrinsic motivation in primary school students ( $m = 37.46$ ) was significantly lower than that in junior ( $m=49.82$ ) and senior high school students ( $m=47.54$ ).

## Discussion and conclusion

The mean intrinsic academic motivation was higher in primary school students than that in junior and senior high school students, which agrees with the results obtained by Gottfried et al. (2001), Lepper et al. (2005), Martin (2005), Bugler et al. (2015), and Martin and Steinbeck (2017). The mean extrinsic academic motivation was higher in junior and senior high school students than that in primary school students, which agrees with the results obtained by Dekker & Fischer (2008).

The decline in intrinsic motivation can be due to teachers' lack of attention to individual's progress (Pintrich and Schunk, 2002), primary schools' scoring system and formal and cold conditions (Santrock, 2008), parents' lack of involvement in children's assignments (Spera, 2005), and puberty-induced physical and psychological changes in adolescence (Martin and Steinbeck, 2017). Improving parents' upbringing styles, psychological education and strengthening cognitive and social skills, more pleasant school atmosphere, and reasonable academic expectations of students can be helpful.

The study recommendations include finding factors that reduce academic motivation and developing ways to improve motivation. Limitations included single sex participants and use of a questionnaire alone as the study tool.

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