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Original article

Motivational Profiles and Students' Satisfaction and Academic Achievement: A Person centered Analysis

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Abstract

Many factors such as motivation and self-esteem can have an impact on students' learning. Research has indicated that motivation is one of the effective factors in enhancing students' performance. The current study aimed to determine students' motivational profile via a person-centered analysis and to compare academic achievement and academic satisfaction with these profiles. This study had a descriptive causal-comparative design. A total of 237 sixth grade students completed Elliot and McGregor' Achievement Goal Orientation Scale and Lent et al.'s Academic Satisfaction scale?. Data were analyzed via SPSS software with the use of cluster analysis and multivariate analysis of variance. Based on cluster analysis results, four motivational clusters were obtained for students, i.e. amotivation cluster (12.7%), the triple motivation cluster (32.5%), the mastery approach-performance approach cluster (16.9%) and multiple motivation cluster (38%). Academic satisfaction of mastery approach-performance approach and multiple motivation clusters were higher than triple motivation and amotivation clusters. Based on the findings, The findings may help educational decision makers to design effective educational interventions o enhance or maintain student motivation throughout the school year.

Keywords: Academic Achievement, Academic Satisfaction, Cluster Analysis, Motivational Profile.

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INTRODUCTION

Academic satisfaction refers to the subjective evaluation of the whole educational experience. Academic satisfaction has been referred to as the enjoyment of the role or the experience of being a student (Simões, Matos, Tomé, Ferreira, & Chaínho, 2010). Apart from individual outcomes for students themselves, student academic satisfaction can be effective in enhancing the educational system of any society (Baykal, Sorkmen, Kormaz, & Akgun, 2005). Therefore, the academic satisfaction construct can be an indicator of the success of an educational system and at the higher education level, it can be an indicator of how successful universities are. In examining academic satisfaction, previous studies have taken more into account environmental factors including teaching methods, supports, evaluation methods, and learning atmosphere, and to the best of the researchers' knowledge, some studies have scrutinized individual factors like motivation (Umbach & Porter, 2002; El Ansari & Skorchi, 2004; Cravener, 1997). One of the factors associated with academic satisfaction is academic achievement (Debicki, Kellermanns, Allison, Pearson & Pearson, 2016). Reaching academic achievement and improving academic performance is one of the most valuable objectives of any educational system in the world (Premuzic, Furnham, Dissou, & Heaven, 2005). Academic achievement is also importance in terms of negative consequences such that absence of academic achievement or academic failure might result in the loss of educational costs and cause psychological and social problems, drug abuse, depression, and even suicide (Setayeshi Azhari, 2016). Thus far, many efforts have been made to address the issue of academic failure, and certain factors have been identified as accounting for academic achievement. Among a host of factors explored to explain academic achievement, demographic variables (Casanova, García-Linares, de la Torre, & de la Villa Carpi, 2005; Ray, 2010; Carvalho, 2016), economic factors (Nesbitt, Baker-Ward & Willoughby, 2013), early experiences (Chen, et al., 2015), behavioral traits (Ergul, 2004; Lane, Barton-Arwood, Nelson, & Wehby, 2008), environmental factors (Machell, Blalock, Kashdan, & Yuen, 2016), and psychological factors including motivation (Erdogan, Bayram & Deniz, 2008; Olatunde, 2009) can be cited. On the basis of previous research, motivation has proved to be one of factors having an impact on academic achievement (Pintrich & Schunk, 2002) and is likewise one of the factors associated with students' academic satisfaction (Erdogan, et al., 2008; Olatunde, 2009). The term motivation was initially brought up approximately in the 1930s for human behavior, and has been found to have an impact on learning (Saif, 2011). A key aspect of motivation might be related to its varying orientations. Elliot and McGregor (2001) have proposed four types of motivational orientation including mastery approach goals, mastery avoidance goals, performance approach goals, and performance avoidance goals. Mastery approach is characterized by efforts to improve and promote competence, knowledge, skills, and learning. In mastery avoidance students focus on avoiding misunderstanding or lack of mastery over homework. In this kind of motivational orientation, perfectionist students are worried about doing their homework wrong, not because of their superiority over others, but due to the high standards they have for themselves. In performance approach,

there is an attempt to outperform than others. In this type of orientation there is an attempt to make a positive judgment about oneself. In the last motivational orientation type, students make attempts to avoid seeming stupid or incompetent. Among the goals of such students are avoiding a low grade and the worst performance in the classroom. Further, such students set normal criteria for themselves (Elliott, 1999, cited in Pintrich & Schunk, 2002). It should be noted that the four types of motivational orientation may be found in individuals simultaneously (Badri, Mahdavi, & Zarabi, 2011 a; Huang, 2016).

In a study, Ratelle, Guay, Vallerand, Larose & Sene'cal (2007) indicated that students have three motivational clusters including the first cluster (high controlled motivation, and low amotivation and autonomy), the second cluster (controlled motivation and high autonomy as well as low amotivation) and the third cluster (moderate levels of controlled motivation and low autonomy and amotivation). In the study it was likewise found that students belonging to the second cluster, i.e., controlled motivation, and high autonomy as well as low amotivation, had better academic performance than those in the two other clusters; another research that can be considered in line with this research is that of Badri, et al. (2011). In their research entitled 'Students' motivational profiles and burnout: A person-centered analysis, Badri, et al. (2011) indicated that students have four clusters of low achievement goals, mastery avoidance performance approach orientation, multiple motivational orientation, mastery approach performance approach orientation. Based on their findings, students with multiple motivation cluster and mastery approach- performance approach orientations had the least academic burnout. In another study, Badri, Arianpoor, and Farid (2010) identified the four clusters of low achievement goals, mastery approach- performance approach goals, multiple goals, and mastery avoidance goals. Based on the outcomes of the study, compared to the three other clusters, students belonging to the multiple goals cluster are more inclined to the learning-based classroom environment and to do learning activities individually. As it can be seen, there appears be a contradiction between the two studies; that is, in both studies the researchers employed the same instrument to measure motivational orientation and three out of the four clusters in the studies are consistent. However, whereas Badri, et al. (2011) identified the mastery avoidance performance approach cluster, Badri et al. (2010) identified the mastery avoidance cluster, and these two t clusters do not match in the studies. A study on deaf individuals revealed that they varied significantly in the multiple goals cluster compared to the amotivation, mastery approach, and performance approach clusters with respect to meta-cognitive abilities (Badri & Beyrami, 2009). In another study, Badri, Moradi, and Hosseinpoor (2011) found that students have four motivational clusters, including intrinsic motivation orientation, intrinsic and intrinsicated orientation, high multiple motivation orientations, and amotivation orientation cluster. The findings revealed that in comparison to the other three clusters, students with multiple motivations had a more consistent performance from the cognitive, emotional and social perspectives.

In a study, Tuominen-Soini, Salela_Aro, & Niemivirta (2008) found that students have two motivational profiles, i.e. growth and self-improvement goals and avoidance tendencies and self competence related concerns in relation to others. It was likewise found that the motivational profile of growth and self-improvement goals was at a more desirable level than the profile of avoidant tendencies and self-competence validation to others from a mental health perspective (Tuominen-Soini, et al, 2008). Vahedi, Esmaeelpoor, Zamanzade and Ataeezade (2012) found three motivational profiles including low quantity cluster (intrinsic and extrinsic motivation as well as high amotivation cluster), moderate quantity cluster (intermediate levels in three motivational dimensions) and high quantity cluster (high intrinsic and extrinsic motivation and low amotivation). Findings indicated that low quantity clusters had a lower level of academic achievement compared to the other two clusters. Daniels, et al. (2008) identified four clusters of high mastery/performance (ie, multiple goals), dominant mastery, dominant performance, and low mastery/performance (ie, low motivation).In their study the low mastery/performance cluster had a lower adaptive performance on various variables such as enjoyment, reproach, anxiety of perception of success, and classroom scores and the other three clusters had similar performance in terms of these variables.

On the whole, studies examining profiles employ a variety of methods, with an important one being personal-centered analysis. In this type of analysis, homogeneous individuals fall into one cluster or group with respect to a certain variable or variables (Vahedi et al., 2012), and since the four types of motivational orientation may exist simultaneously in individuals, it is best to examine these types of motivational orientation while combined with each other. The combination of motivational orientations provides a new insight into student motivation. The review of the research background on academic satisfaction and academic achievement reveals that the two variables can be impacted by motivation. Besides, a majority of the studies have addressed university students, almost overlooking middle school students. In this study, it is assumed that motivational orientation can have an impact on students' academic achievement and academic satisfaction. Since no research has yet examined the direct impact of motivational orientation on academic procrastination in the form of motivational profiles, attention to this issue and the application of a person-centered analysis approach to study these relationships may have important implications for understanding the impact of motivational orientation on academic satisfaction and academic achievement; thus, the fundamental issue in the present research is initially to identify students' motivational profiles using the person-centered analysis and then to compare the identified motivational orientation profiles with respect to academic satisfaction and achievement.

METHOD

This study conducted by causal-comparative method. The population of the study consisted of all sixth grade students of Bihan Shirazi Boys' School and Shahid Alavi Girls' School in Qom. The participants were studying in middle school in 2015-2016. The two schools had 700 students when the

study was being conducted. Based on Krejcie and Morgan's (1970) table, 247 students were selected through simple random sampling, and at the end given the dropouts, 237 students (59.9% male and 40.1% female, with 95 girls and 142 boys) formed the final participants. All students were in the age range of 13 to 16 years with a mean of 13.63 (SD = 0.75). To conduct the study, the researchers personally attended the schools.

This study took place at one of the Qom city in Iran. The researcher chose the students to collect the appropriate data to fulfill the research question. The study started in July 2015 until it finishes. Five classes were selected from Bihan Shirazi Boys' School and 4 classes from Shahid Alavi Girls' School. Both questionnaires (in Persian) were provided to the students simultaneously before the start of the class. Prior to conducting the study, students were informed that they had been selected for academic research. Then, in order to provide the optimum conditions for the implementation of the questionnaires, the researchers guided the respondents with the appropriate manner of sitting for the better and accurate completion of the questionnaires. What is more, the instructions for questionnaires were read to the students after the questionnaires were administered to them.

Measurement

Elliott and McGregor's Achievement Goal Orientation Scale (2001): In this study, Elliott and McGregor's scale was used to measure motivational orientation. The questionnaire was designed by Elliott and McGregor in 2001 to measure four subscales of mastery-approach, mastery avoidance, performance-approach, and performance-avoidance. The respondents rated their agreement on each of the 12 items as self-reported on a 7-point Likert scale (from 1= 'Not at all right about me' to 7='Absolutely right about me'). Eliot and McGregor (2001) reported the reliability of the four subscales of mastery-goal, mastery avoidance, performance-goal, and performance avoidance to be 0.84, 0.88, 0.92, and 0.94, respectively. In Iran Badri, et al (2011) translated this questionnaire and evaluated its validity using confirmatory factor analysis. They reported the CFI and RMSEA indices to be 0.93 and 0.04, respectively, which indicates acceptable validity. Additionally, Cronbach's alpha coefficient was calculated to be 0.66 for the whole test. In this study Cronbach's alpha coefficient was 0.81 and Spearman- Brown's coefficient was 0.79.

Lent et al's (2005) Academic Satisfaction Scale: Lent et al's Scale was employed in this study to measure students' academic satisfaction. The questionnaire was developed in 2005 by Lent et al. to measure students' academic satisfaction.The questionnaire consists of 7 items that respondents rate on a 5-point Likert (from 1= 'Strongly Disagree' to 5= 'Strongly Disagree'). In Iran, in a study Vahedi and Mohebbi (2016) examined the psychometric properties of the academic satisfaction scale in students. The researchers reported the reliability of the academic satisfaction scale by Cronbach's alpha and Spearman-Brown Split Half methods as 0.82 and 0.78, respectively, indicating satisfactory reliability of the scale. Additionally, the results of factor analysis showed that the academic satisfaction scale was

well-suited to the data (AGFI = 0.96). In addition, to evaluate the criterion validity (concurrent type), the items of this scale were correlated with the academic self-efficacy questionnaire. The results of this analysis revealed that the two scales had a positive and significant correlation (r = 0.25) with each other (P<0. 01). Cronbach's alpha coefficient and Spearman-Brown coefficient were calculated 0.81 and 0.8, respectively.

Academic Achievement

In order to measure academic achievement in this study, the grade point average (GPA) of each student reported at the end of the semester was considered as student achievement. GPA gathered at the same time with the previous measurements.

Data Analysis

In the study, cluster analysis was used to determine students' motivational profiles. Moreover, Multivariate analysis of variance and Tukey's test were used to compare clusters of academic achievement and academic satisfaction. The gathered data were analyzed in SPSS software version 21.

Research Ethics

The following ethical guidelines are used during conducting the research: 1. Inform consent to the participant before conducting research that they are involving in the research as the subject. 2. Protection of the research subject from any loss that might occur due to the involving in the research. 3. The confidentiality of the data. library.uns.ac.id digilib.uns.ac.id 26 4. The anonymity of individuals and institutions participating in a research must be kept confidential. The participants' real names are replaced with alias and the name of the chosen institution is not clearly stated.

RESULTS

To determine students' motivational orientation profiles, cluster analysis was employed. Initially, various methods such as the nearest neighbor, farthest neighbor and centroid clustering were used. However, since Ward's method used in multivariate analysis of variance had the most significant results, the method was employed to determine students' motivational orientation profiles, the results of which are presented in Table 1.

Table 1. Students' motivational goal orientation

Clusters	**Motivational Orientation**	**M**	**SD**	**N**	**Percentage**	**Cluster label**
First	Mastery approach	10.76	7.72	30	12.7	Amotivation
	Performance approach	9.9	3.32			
	Mastery avoidance	12.45	5.19			
	Performance avoidance	10.47	3.36			
Second Cluster	Mastery approach	19.75	1.46	77	32.5	Mastery Approach performance Approach mastery avoidance (triple motivation)
	Performance approach	19.07	2.6			
	Mastery avoidance	17.52	2.52			
	Performance avoidance	11.79	2.47			
Third Cluster	Mastery approach	16.83	3.47	40	16.9	mastery approach performance approach
	Performance approach	18.4	2.73			
	Mastery avoidance	12.17	3.31			
	Performance avoidance	72.28	2.91			
Fourth Cluster	Mastery approach	18.8	2.24	90	38	
	Performance approach	18.18	2.84			multiple motivation
	mastery avoidance	17.94	2.16			
	performance avoidance	17.49	4.48			

In the table, a label has been assigned to each student cluster or class of students based on their scores on motivational orientation. In cluster 1 (n = 30 and p = 12.7), students had lower levels of mastery approach, mastery avoidance, performance approach and performance avoidance goals and thus were placed in the cluster labeled 'amotivation'. The students in the second cluster (n = 77 and p = 32.5) had high scores on mastery approach, performance approach and mastery avoidance goals, and thus

were labeled ‘mastery approach-performance approach mastery avoidance (triple motivation)’. The third cluster (n = 40 and p = 16.9) achieved higher scores first in performance approach and then in mastery approach, and for this reason, the label ‘mastery approach-performance approach’ was given to this group. Finally, since the fourth cluster (n = 90 and p = 38) achieved high scores in all types of motivational goal orientations, it was labeled ‘multiple motivations’. To compare students' motivational clusters in terms of academic satisfaction and academic achievement, multivariate analysis of variances was used. However, prior to running this test, initially its assumptions, namely Box's M test and Bartlett’s test were addressed. Box's M test value was found to be 20.4, which was not significant at the level of 0.05, indicating that the covariance matrix of the observed variables was identical for the different groups. Moreover, Bartlett’s test X 2 value was 318.77 and significant at the level of 0.001, indicating that there is a correlation between the two dependent variables and it is sufficient to continue the analysis.

Table 2. Findings of multivariate analysis of variances Test

Source	Dependent Variable	Sum of squares	df	Mean square	F	P
Clusters	Academic satisfaction	1531/49	3	510/49	19/97	0.001
	Academic achievement	27/57	3	19/09	10.25	0.001
Error	Academic satisfaction	5855/88	233	25/56		
	Academic achievement	433/78	233	1/86		
Total	Academic satisfaction	7487/33	237			
	Academic achievement	75701/91	237			

In this analysis, clusters were used as independent variables and academic satisfaction and academic achievement as dependent variables. Results demonstrated that there was a significant difference between four the clusters of students' motivational orientation in terms of academic achievement (F = 10.25 and p <0.001) and academic satisfaction (F = 19.97 and p <0.001). To track the results Tukey's test was used, the results of which are presented in Table 3.

Table 3. Findings of Tukey's test

Clusters	Amotivation	Triple Motivation	Mastery approach performance approach	Multiple motivation
Academic satisfaction	21/09c	28/39b	28/65a	27/07a
Academic achievement	16/5b	17/98a	18/06a	17/98a

a, b, c: same letters in the boxes of each row indicate the lack of difference in means, and different letters (a, b, c) indicate the difference in the means of the clusters regarding the variable in question; moreover, the order of the English letters in a row denotes whether the means of the clusters are small or big.

As Table 3 illustrates, there is no significant difference between the mean scores of the multiple motivation clusters and mastery approach-performance approach because the index letters used (a) are the same for both averages; thus, there is no significant difference between the two mentioned clusters in terms of academic satisfaction. However, multiple motivation as well as mastery approach-performance approach clusters have higher academic satisfaction compared to triple motivation and amotivation clusters. Finally, triple motivation cluster indicates higher academic satisfaction than the amotivation cluster. Concerning academic achievement, there is no significant difference between multiple motivation, mastery approach performance approach, and triple motivation clusters as the letters used for the mean of each cluster were identical; moreover, the multiple motivation, mastery goal orientation-performance approach goal and triple motivation experience higher academic achievement than amotivation cluster.

Discussion and Conclusions

The present study was aimed at determining students' motivational profiles and comparing their motivational profiles in terms of academic achievement and their academic satisfaction. Based on the findings, students were classified into four distinct groups using the cluster analysis method. The first cluster comprised students without motivation, labeled amotivation cluster. The second cluster or group was higher in mastery approach goal, performance approach goal, and mastery avoidance goal orientations, thus called triple motivation. The third cluster had higher scores in mastery approach and performance approach goals and was called the mastery approach-performance approach goal. Eventually, the fourth group had the highest scores in all the achievement goal orientations, and was named the multiple motivation cluster. The results indicated that students in the multiple motivation cluster had the highest frequency. The findings of this study are in line with those of Badri et al. (2011). In their study, Badri et al. (2011) identified four groups of students with low achievement goals, mastery avoidance performance approach goals, multiple motivation orientation, and mastery approach-performance approach goals. The findings of the present study are in line with this study in terms of multiple motivation goals, low achievement goals (amotivation), and mastery approach-performance approach goal orientation clusters; still, the findings do not match in groups like mastery avoidance-

performance approach goals. In an earlier study, Badri, et al. (2010) identified four motivational groups namely low achievement goal, mastery approach-performance approach goal, multiple goals, and mastery avoidance goal. All these clusters, i.e. low achievement goal, mastery approach-performance approach goal, and multiple goals, with the exception of mastery avoidance goal, match with the findings of the present study. Likewise, Daniels et al. (2008) identified the four profiles of high performance approach- mastery approach, high performance approach, high mastery approach orientation, and low performance approach -mastery approach. This study is in line with the combination of different types of motivational orientations such as mastery approach orientation, performance approach goal and multiple motivation. These findings can be explained based on Deci and Ryan's (2002) self-determination theory. That is, different motivational orientations are not in conflict with each other, and they are, on the contrary, related to each other. Therefore, students can have a variety of motivational orientations at the same time. Concerning the discrepancies observed in the findings of this study with those of previous ones, it can be argued that the variety of students' motivational orientations might have been? influenced by situational and classroom factors such as learning-related information and teachers' opinions about assignments. Thus, the differences between the motivational profiles obtained from different researches can be due to students' perceptions of the classroom goal structure, as well as parents' and teachers' expectations (Badri, et al, 2011).

Results of the current study also demonstrated that students in the multiple motivational goals and triple motivation clusters had higher levels of academic satisfaction compared to the two other clusters of amotivation and mastery approach-performance approach goals. Additionally, students in the amotivation cluster achieved the lowest level of academic achievement compared to the other three clusters. In other words, students who have different motivational orientations at school such as learning new things, outperforming others, worrying about not learning new things, as well as worrying about poor performance, are less dissatisfied with a large volume of schoolwork and are less indifferent toward school assignments (Badri et al., 2011). In their study, Badri et al. (2011) also found that academic burnout is lower among students belonging to multiple motivation and mastery approach-performance approach goal clusters in comparison to the low achievement goals and mastery avoidance-performance approach goal clusters, which is in line with the findings of the present study. The findings are also consistent with those reported by Rattele et al. (2007), Vahedi, et al (2012), Badri and Beyrami (2009), Badri, et al (2011) and Tuominen-Soini, et al (2008). According to Monta (2011; as cited in Badri et al., 2011), it can be argued that the developmental needs result in positive emotions, greater energy to do homework, and a sense of self-efficacy in students, thus this urges students to choose more challenging assignments and thereby experience more progress and higher satisfaction as they study. Taking this into account, it is obvious that students in the multiple or triple motivation clusters are more likely to engage in academic activities, and feel good about their progress, achievement and satisfaction in their studies. On the whole, this study suffers from some limitations that should not be overlooked. One of

the limitations of this study is that the results can only be generalized to two schools, Bihan Shirazi Boys' School and Shahid Alavi Girls' School, care must be taken in generalizing the results. Another limitation is the employment of self-report instruments, one of the major disadvantages of which is social desirability. The findings of the research were obtained through correlation method. Therefore, causal inference about academic satisfaction and academic achievement might be unlikely. Future researchers may need to employ larger societies to be able to provide more generalizable results. They are also suggested to obtain profiles of other variables such as emotion regulation styles and similar ones. It is hoped that the findings of this study can help educational authorities to take effective measures during academic years by designing educational intervention programs to promote or maintain students' motivation.

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REFERENCES

Badri, R, & Beyrami, N. (2009), Goal achievement orientation of deaf students: a person centered analysis, *Journal of psychological university of Tabriz, 15*(3), 1-22. [In Persian]

Badri, R, Mahdavi, A, & Zarabi, M (2011). Motivational Profiles and academic burnout in students: a person-centered analysis, *Journal of psychological achievement*,4(2), 45-62.[In

Badri, R, Moradi, S, & Hosseinpoor, H (2011). Motivational Profiles of university students: Comparing of cognitive, emotional and social performance, *Journal of Modern Psychological Studies*, 6(21), 20-42. [In Persian]

Bari, R, Arianpoor, E, & Farid, A (2009), Profiles of Students foal achievement orientation and preferring learning atmosphere. Journal of Pedagogy, 2(3), 143-162. [In Persian]

Baykal, U., Sokmen, S., Korkmaz, S., & Akgun, E. (2005). Determining student satisfaction in a nursing college. *Nurse Education Today*, *25*(4), 255-262.

Carvalho, R. G. G. (2016). Gender differences in academic achievement: The mediating role of personality. *Personality and Individual Differences*, *94*, 54-58.

Casanova, P. F., García-Linares, M. C., de la Torre, M. J., & de la Villa Carpi, M., (2005). Influence of Family and Socio-Demographic Variables on Students with Low Academic Achievement, *Educational Psychology*, 25 (4), 2005 423–43.

Chen, S. H., Main, A., Zhou, Q., Bunge, S. A., Lau, N., & Chu, K. (2015). Effortful control and early academic achievement of Chinese American children in immigrant families. *Early Childhood Research Quarterly*, *30*, 45-56.

Cravener, P. A. (1997). Promoting active learning in large lecture classes. *Nurse educator*, 22(3), 21-26.

Daniels, L, Haynes, T, Stupnisky, R, Perry, R, Newall, N, & Pekrun, R (2008). Individual differences in achievement goals: a longitudinal study of cognitive, emotional, and achievement outcomes, *Contemporary Educational Psychology*, 33. 584-608.

Deary, I. J., Strand, S., Smith, P., & Fernandes, C. (2007). Intelligence and educational achievement. *Intelligence*, *35*(1), 13-21.

Deci, E. L., & Ryan, R. M. (Eds). (2002). *Handbook of self-determination research. Rochester,* NY: University of Rochester Press.

Debicki, B, Kellermanns, F, Allison, B, Pearson. A, & Pearson, R, (2016). Beyond the Big Five: The mediating role of goal orientation in the relationship between core self-evaluations and academic, *The International Journal of Management Education, 14* (2) 273-285.

El Ansari, W., & Oskrochi, R. (2004). What 'really' affects health professions students' satisfaction with their educational experience? Implications for practice and research. *Nurse Education Today*, 24(8), 644-655.

Elliot, A & McGregor, H (2001). A 2*2 achievement goal framework*, Journal of Personality and social Psychology*, 30, 951-971.

Erdogan, Y., Bayram, S., and Deniz, L. (2008). Factors that Influence Academic Achievement and Attitudes in Web Based Education, *International Journal of Instruction, 1* (1), 31-48.

Ergul, H. (2004). Relationship between Student Characteristics and Academic Achievement in Distance Education and Application on Students of Anadolu University. *Turkish Online Journal of Distance Education*, 5(2).

Huang, C. (2016). Achievement goals and self-efficacy: A meta-analysis. *Educational Research Review*, *19*, 119-137.

Lane, K. L., Barton-Arwood, S. M., Nelson, J. R., & Wehby, J. (2008). Academic performance of students with emotional and behavioral disorders served in a self-contained setting. *Journal of Behavioral Education*, *17*(1), 43-62.

Lent, R. W., Singley, D., Sheu, H., Gainor, K.A., Brenner, B.R., Treistman, D., & Ades, L. (2005). Social cognitive predictors of domain and life satisfaction: Exploring the theoretical precursors of subjective well-being. *Journal of Counseling Psychology, 52*, 429-442.

Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational And Psychological Measurement, 30*, 607-610.

Machell, K. A., Blalock, D. V., Kashdan, T. B., & Yuen, M. (2016). Academic achievement at the cost of ambition: The mixed results of a supportive, interactive environment on socially anxious teenagers. *Personality and Individual Differences*, *89*, 166-171.

Nesbitt, K. T., Baker-Ward, L., & Willoughby, M. T. (2013). Executive function mediates socioeconomic and racial differences in early academic achievement. *Early Childhood Research Quarterly*, *28*(4), 774-783.

Olatunde, P. (2009). Students Attitude towards Mathematics and Academic Achievement in Some Selected Secondary Schools in Southwestern Nigeria. *European Journal of Scientific Research, 36* (3), 336-341.

Pintrich, P.R. & Schunk, D.H. (2002). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Prentice-Hall.

Premuzic, T., Furnham, A., Dissou, G., & Heaven, P. (2005). Personality and preference for academic assessment: A study with Australian University students. *Learning and Individual Difference, 15*, 247-256.

Ratelle, F, Guay, F, & Vallerand, Larose, J & Sene'cal, C. (2007). Autonomus, Controlled, and Amotivated Types of academic Motivation: A person-oriented Analysis, *Journal of educational psychology*, 99, 734-746.

Ray, B. D. (2010). Academic achievement and demographic traits of homeschool students A nationwide study. *Academic Leadership: The Online Journal*, *8*, 1-31.

Saif, A (2012). *Modern educational psychology*, Tehran: Doran [In Persian].

Setayeshi Azhari, M. (2016). The structural relationship between early maladaptive schemas and academic achievement in students: The mediating role of the academic procrastination and perfectionism (Unpublished MA Thesis). University of Tabriz, Tabriz. [In Persian]

Simões, C., Matos, M. G., Tomé, G., Ferreira, M., & Chaínho, H. (2010). School satisfaction and academic achievement: the effect of school and internal assets as moderators of this relation in adolescents with special needs. *Procedia-Social and Behavioral Sciences*, *9*, 1177-1181.

Tuominen-Soini, H, Salela_Aro, K, & Niemivirta, M. (2008). Achievement goal orientation and subjective well-being: A person-centred analysis, *Learning and Instruction*, 18, 251-226.

Umbach, P. D., & Porter, S. R. (2002). How do academic departments impact student satisfaction? Understanding the contextual effects of departments. *Research in Higher Education*, *43*(2), 209-234.

Vahedi, S, Esmaeelpoor, Kh, Zamanzade, V, & Ataeezade, A. (2012). The nursing students' motivational profile and its relationship to their academic achievement: A person-oriented approach, *Journal of Nursing Vision*, 1(1), 37-46.

Vahedi, Sh, & Mohebbi, M. (2016). Psychometric futures of academic satisfaction scale, second conference of school psychology, May 23th.