Research Article

Social Achievement Goals and Academic Engagement: The Mediating Role of Academic and Social Positive Emotions

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Abstract

Background: Social-cognitive theorists suggest that cognitive-emotional factors play essential roles in academic outputs like academic engagement.

Objectives: The purpose of the present study was to investigate the relationship between social achievement goals and academic engagement by mediating role of academic and social positive emotions.

Methods: The method of present study was descriptive cross-sectional study based on correlational research. Using cluster multistage sampling method, this study included 566 undergraduate students (278 male and 288 female) in the first semester of 2018. The research instruments were Social Achievement Goals scale, Academic Hope scale, Admiration scale, and Academic Engagement inventory. Data were analyzed using correlation matrix and structural equation modeling.

Results: Results of analyzing data showed that social development goal had a positive indirect effect ($\beta = 0.41$, P = 0.01) on academic engagement through academic hope and admiration. Also, social demonstration-approach goal had an indirect and negative effect ($\beta = -0.08$, P = 0.01) on academic engagement by the mediating role of admiration. Finally, the research model was able to explain 31% of the variance of academic engagement with two latent variables of social achievement goals and academic and social positive emotions.

Conclusions: In general, social achievement goals and positive emotions significantly explained the variance of academic engagement. The findings provide supportive evidence for how motivations and emotions can affect academic engagement.

Keywords: Academic Engagement, Academic Hope, Admiration, Social Achievement Goals

1. Background

Academic engagement is considered as a positive and important construct in educational psychology. Salmela-Aro and Upadaya (1) defined academic engagement as vigour, dedication, and absorption. Vigour means having high levels of energy and mental resilience while studying and the willingness to invest effort in studying. Dedication is the sense of significance towards studying. Absorption, is the state of being totally concentrated and flowed in our academic work. The evidence supports the role of academic engagement in achievement and other positive academic outcomes (1).

Based on social-cognitive models, there are different cognitive, motivational, and emotional factors that play essential roles in academic engagement (2-6). Although these models are acknowledged in theoretical level, there are numerous empirical studies verifying the models.

Pekrun's control-value theory of achievement emotions assumes that emotions are amongst the factors influencing academic engagement (7). The theoretical foundations of the present study are based on the model by Pekrun and Linnenbrink-Garcia (4), because it is one of the comprehensive models explaining environmental, cognitive, motivational, and emotional factors related to academic performance. According to the expanded model of achievement emotions (7) proposed by Pekrun and Linnenbrink-Garcia (4), individuals' cognitive/motivational appraisals of the educational environment can lead to the formation of motivational believes and goals in the individuals. These emotional experiences influence various aspects of the individual's academic engagement (8). Based on this model, social achievement goals can be considered as the antecedents of academic engagement. The social achievement goals are the ones selected by the individuals for gaining certain social outcomes (9). In academic context, it refers to the stu-

dent's social reasons for desire to achieve academically (9).

Having various social achievement goals, the university students adopt various approaches in their social relations that would lead to the variegation of their methods of getting socially adapted to the academic environment. Although there is much evidence showing the role of academic achievement goal orientations (like mastery or performance) in human behaviors (7, 10-15), there are very few studies addressing the influences of social achievement goals on academic engagement. Hence, we addressed this issue in the present study.

Using academic achievement goals, Ryan and Shim (16) suggested three types of social achievement goals including social development goal, demonstration-approach goal, and demonstration-avoid goal. The individuals with social development goal try establishing subtle relationship with their friends based on mutual understanding. Such individuals feel more satisfaction in their relations with others (16, 17) and are in constant efforts for satisfying their friends' needs and to seek for ways of assisting them in integrating their friendship (18). These individuals are not worried about the negative judgment of others and, since they feel more positive emotions in respect to their immediate environment, they deal with their homework more happily and show more attention to the positive events (19). Individuals with social demonstration-approach goal have positive social relations and skills for the fact that they are in pursue of achievement and seek attainment of success and, at the same time, are afraid of failure (16). However, the important issue is that these individuals' emotions are always dependent on the others' reactions and they are always found with the fear of others' negative appraisal (9). Finally, individuals with social demonstration-avoid goal always try to retreat from the social relations for their negative understanding of their social skills. Such a concentration on the negative contingencies and fear of the negative judgment would cause incompatibility, negative understanding of social relations, loneliness, worry, and depression; these cause the student fall behind in concentration on his or her academic assignments (9, 16, 17, 19, 20).

Based on Pekrun's control-value theory (7), the present study supposed that social achievement goals influence academic engagement by provoking two kinds of emotion: academic hope and admiration. Hope is a key academic emotion in Pekrun's model. Based on this model, the individuals not only succeed in acquiring knowledge and cognitive skills during formal education, but also they experience such pleasant emotions as hope (4, 21-23). Since the emotion of hope causes motivation, it is imagined that it is influenced by the goals and influences academic engagement. In the theory proposed by Pekrun and Linnenbrink-

Garcia (24), admiration is considered as one of the social achievement emotions followed by certain outcomes. However, this claim has not been subjected to experimental investigation so far (25-27). Based on the social cognitive perspective, social achievement goals can influence others' admiration in the intra-class social interactions and cause academic engagement by encouraging modeling or paying attention to prominent individuals. Generally, the absence of a systematic study on the pivotal role of the emotions in the academic situations is one of the most important research gaps (3, 28, 29). On the other hand, the research gap is seen about the simultaneous consideration of the role of emotions and social achievement goals in academic engagement. In other words, it is not clear whether academic emotions influence academic engagement via being influenced by social achievement goals or not.

2. Objectives

The present study aimed to investigate the role of social achievement goals in academic engagement with the mediatory role of two emotions, namely academic hope and admiration (Figure 1).

3. Methods

3.1. Design

The method of present study was descriptive cross-sectional study based on correlational research. The research instruments were Social Achievement Goals scale, Academic Hope scale, Admiration scale, and Academic Engagement inventory. Data were analyzed using correlation matrix and structural equation modeling. The current study was extracted from a PhD dissertation on Educational Psychology at Shiraz University, Iran. The Ethics Committee of the Student Research Committee of Shiraz University approved this study and gave permission to collect data in all the faculties.

3.2. Participants

To determine the sample size, ten-to-one rule was applied based on Kline's perspective (30); it means that at least between ten to twenty participants should be selected per each model parameter. Accordingly, the study participants were 566 undergraduate students (278 (49.1%) male and 288 (50.9%) female) in the first semester of 2018, who were selected based on cluster multi-stage sampling. To do so, the sampling was carried out from among all of the faculties in Shiraz University. Two classes from each faculty were randomly selected as the study samples, and all the students of the selected classes were entered into the study
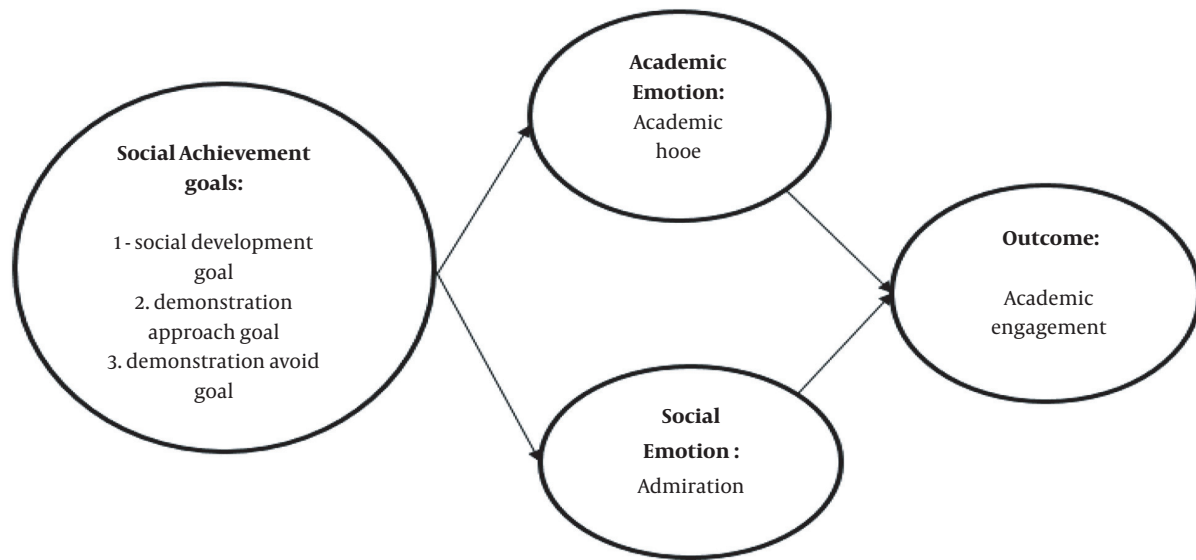
Figure 1. Conceptual model of the study (a structural equation model)

as participants. The participants were selected from nearly all the departments of Shiraz University.

The inclusion criteria were being a bachelor student at Shiraz University; having no history of current or past psychopathology; not using psychoactive drugs; and having no history of neurological diseases. There were no potential sources of bias. Incomplete questionnaires with more than 10 unanswered items were excluded from entering the SPSS file. Also, for missing data, the average of individual responses to each scale was placed.

3.3. Measures

3.3.1. Academic Engagement Inventory

Academic Engagement Inventory was developed by Salmela-Aro and Upadyaya (1) in nine items and comprised of three subscales: energy, dedication, and absorption. Salmela-Aro and Upadyaya (1) reported the internal consistency coefficients of the inventory in the range from 0.80 to 0.94. These coefficients were .82 to .95 in the study by Salmela-Aro et al. (31). The validity and reliability of the scale were confirmed in the study by Abdollahpour and Shokri (32). Also, in the research conducted by Kamari et al. (33), the value of Cronbach's alpha was in the range from .66 to .86. Moreover, the results of confirmatory factor analysis (CFA) using AMOS software showed that all the items had factor loadings above .46, and they were loaded on their corresponding factors. In addition, Cronbach's alpha coefficients were found in a range from 0.66 to 0.86, that is indicative of the desired reliability of the inventory.

3.3.2. Social Achievement Goals Scale

Ryan and Shim (17) developed this scale with 18 items. In the study by Ryan and Shim (17), the results of factor analysis on the social achievement goals supported the scale's three-factor structure. Also, Cronbach's alpha coefficients were reported in a range from 0.84 to 0.89 for each subscale. In the research by Saraei (34), the values of internal consistency (Cronbach's alpha coefficients) of the social development goal, demonstration approach goal, and demonstration avoid goal were 0.73, 0.80, and 0.77, respectively. Also, the results of the CFA in AMOS demonstrated that all items had significant factor loadings above .41 (P < 0.001), and they were loaded on their corresponding factors as stated in the original study. Also, the Cronbach's alpha coefficients obtained for the subscales ranged from 0.80 to 0.84.

3.3.3. Academic Hope Scale

The 27-item Academic Hope Scale was constructed by Khormaei and Kamari (35). The scale was completed by 241 high school students. The results of factor analysis were indicative of the existence of four indicators in the subscale of academic hope as follows: hope to gain opportunities, hope to gain life skills, hope in school's usefulness, and hope to gain the competency. Items 6, 9, 10, 11, 13, 21, 24, and 27 are scored inversely. The reliability of the subscales was in a range from 0.76 to 0.94 based on Cronbach's alpha coefficient. In the research by Kamari et al. (33), the value of Cronbach's alpha was in the range from 0.75 to 0.90 in four subscales of academic hope. Moreover, the results of

Academic Hope Scale using AMOS showed that all the items had significant factor loadings above .45, (P < 0.001), and they were loaded on their corresponding factors with the exception for two items that were discarded for their low factor loads as evidenced in the CFA. Cronbach's alpha coefficients for these subscales were found in a range from 0.75 to 0.90.

3.3.4. Admiration and Adoration Scale

This Admiration and Adoration Scale was constructed by Schindler et al. (26) in eight items: four items for admiration and four items for adoration (worship). In the present study, admiration was used as a subscale. In the study by Schindler (25), the admiration scale showed good reliability, and evidence of the criterion validity was also reported. In the research conducted by Kamari et al. (33) and Kamari et al. (36), Cronbach's alpha coefficient the admiration scale were 0.73. and 0.78, respectively. In the present study, the results of CFA using AMOS demonstrated that all the items had factor loadings above 0.41, (P < 0.001) on their corresponding factor. Cronbach's alpha coefficient for the admiration scale was 0.73, that is suggestive of its suitable reliability.

3.4. Procedure

First, all questionnaires were tested in a preliminary and pilot study to ensure proper validity and reliability of all questions. For this reason, to assess the content validity two methods of exploratory factor analysis (EFA) and CFA were used, and low factor loadings (questions under .30) were excluded from the analysis. Afterwards, authorization to distribute the questionnaire among the target population was obtained, and the questionnaires were distributed.

3.5. Statistical Methods

Descriptive and inferential statistical methods were used in this study. Descriptive methods were used to calculate central indicators and dispersion. The EFA and CFA were used to determine the subscales of the questionnaires and scales. Correlation matrix and structural equation modeling (SEM) were used for inferential statistical section. For the statistical calculations, SPSS software version 22 and AMOS software version 21 were used.

4. Results

4.1. Descriptive Statistics

Table 1 presents demographic information of the participants.

Table 1. Demographic Information of the of the Study Participants

Faculty	No. (%)
Educational Sciences and Psychology	94 (16.6)
Law and Political Sciences	73 (12.9)
Literature and Humanities	47 (8.3)
Theology	30 (5.3)
Economy, Management, and Social Sciences	106 (18.7)
Sciences	79 (14.0)
Electricity and Computer	76 (13.4)
Engineering	61 (10.8)
Total sum	566 (100.0)

The participants were selected from nearly all the departments of Shiraz University including Departments of Educational Sciences and Psychology (n = 94; 16.6%); Law and Political Sciences (n = 73; 12.9%); Literature and Humanities (n = 47; 8.3%); Theology (n = 30; 5.3%); Economy, Management and Social Sciences (n = 106; 18.7%); Sciences (n = 79, 14%); Electricity and Computer (n = 76, 13.4%); and Engineering (n = 61, 10.8%). The age range of participants was 18 to 22 years (mean = 20.7, SD = 2.54).

Table 2 presents a summary of the means, standard deviations, and correlation matrix of the observed variables. The results indicated a significant relationship between most of the variables.

According to correlation matrix, social development goal had a positive correlation (P < 0.01) with all variables, but demonstration-approach goal and demonstration-avoid goal only had positive correlations with academic hope and all of its subscales (P < 0.01), except hope in school's usefulness. Finally, academic hope and all four subscales had a positive correlation with academic engagement and its subscales (P < 0.01).

4.2. Measurement Model

At first, the fundamental assumptions of the structural equation model, including normality, collinearity, and multi-collinearity were investigated, and the evidence was indicative of the normality of the variables' distribution. To investigate the effect of social achievement goals (development goal, demonstration-approach goal, and demonstration-avoid goal) on the academic engagement with the mediating role of academic hope and admiration, structural equation model in AMOS software was used (Figure 2).

In the first place, the overall model fitness was analyzed using the general goodness of fit indices and, in the second place, the weights of the measurement models' regression, and coefficients of the structural relationships

Table 2. Zero Order Correlation Matrix of the Variables[a]

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	23.90	3.85	1												
2	19.19	4.94	0.47**	1											
3	21.73	4.94	0.45**	0.57**	1										
4	29.07	4.25	0.40**	0.22**	0.20**	1									
5	3.28	5.10	0.37**	0.19**	0.15**	0.68**	1								
6	2.91	4.52	0.19**	-0.03	0.07	0.38**	0.37**	1							
7	16.07	2.46	0.41**	0.39**	0.31**	0.67**	0.57**	0.23**	1						
8	96.33	12.91	0.42**	0.21**	0.21**	0.86**	0.86**	0.67**	0.72**	1					
9	15.48	2.26	0.35**	0.09	0.10*	0.25**	0.24**	0.11**	0.18**	0.25**	1				
10	6.40	2.37	0.23**	0.01	-0.03	0.28**	0.29**	0.27**	0.18**	0.34**	0.29**	1			
11	6.05	2.39	0.19**	-0.01	-0.02	0.32**	0.34**	0.30**	0.20**	0.38**	0.23**	0.68**	1		
12	6.07	2.34	0.21**	0.01	-0.02	0.27**	0.27**	0.22**	0.16**	0.31**	0.28**	0.71**	0.66**	1	
13	18.52	6.33	0.24**	-0.01	-0.03	0.33**	0.34**	0.29**	0.20**	0.39**	0.30**	0.89**	0.88**	0.88**	1

[a]Note. 1, Development goal; 2, demonstration-approach goal; 3, demonstration-avoid goal; 4, hope to gain opportunities; 5, hope to gain life skills; 6, hope in school's usefulness; 7, hope to gain competency; 8, academic hope; 9, admiration; 10, energy; 11, commitment; 12, Fascination; 13, academic engagement. **, P < 0.01; * P < 0.05.

between the model's latent variables (direct, indirect, and overall effects) were explored.

In order to determine the model's general goodness of fit, nine fit indices were taken into account. To attain a better fit estimation of the model, the correction indices were taken into consideration. Firstly, the insignificant path, including the path of demonstration-approach goal to the academic hope and academic engagement and the path of demonstration-avoidance goal to academic hope and admiration, were eliminated from the model. Then, some corrections suggested by AMOS software, including covariance calculations between the errors of the observed variables, were exerted. The estimated fit indices' values are summarized in Table 3. Following adjustments, the fit indices were reflective of the model's favorable goodness of fit.

The chi-square was 828.37, P < 0.001, and df = 367. The ratio of chi-square over the degree of freedom (2.25) was in an acceptable fit range (30). GFI and AGFI were found both equal to 0.9, with the acceptable range being larger than 0.9 (30). Comparative fit estimation indices, i.e. CFI, NFI, IFI, and TLI, were 0.93, 0.90, 0.93, and 0.91, respectively, with the acceptable amount being larger than 0.90 (30). RMSEA was calculated equal to 0.05, with the acceptable amount being below 0.08 (30), and the confidence level indicated a boundary between 0.04 and 0.05 for it. In addition, PCLOSE value for this index was .48, with the acceptable amount being larger than 0.05 (30). Table 3 shows the direct, indirect, and total effects of all the study model's paths in the structural equation model.

As Table 4 shows, the development goal positively and significantly predicted both the academic hope (β = .53) and admiration (β = .61) (P≤.001). In addition, the demonstration-approach goal made significantly negative prediction of admiration (β = -.25, P≤001). Moreover, demonstration-avoid goal predicted academic engagement (β = -.19) negatively and significantly (P≤001). Furthermore, academic hope positively and significantly predicted academic engagement (β = .42, P≤001). Finally, admiration made positively significant prediction to academic achievement (β = 0.31, P≤001). Based on this pattern of findings, the development goal showed an indirect and significant effect via positive academic i.e., academic hope and social admiration emotions on academic engagement (β = -0.08). In sum, positive academic, namely academic hope and social admiration emotions, play intermediary role in the relationship between the social achievement goals, including development goal and demonstration-approach goal and academic engagement. The model has been was able to explain 31% of the academic engagement variance by two latent variables of social achievement goal and positive academic and social emotions.

5. Discussion

This study proposed the assumption of the mediatory role of positive academic (academic hope) and social (admiration) emotions in relationship between social achievement goals and academic engagement. The results confirmed the model. These findings are consistent with
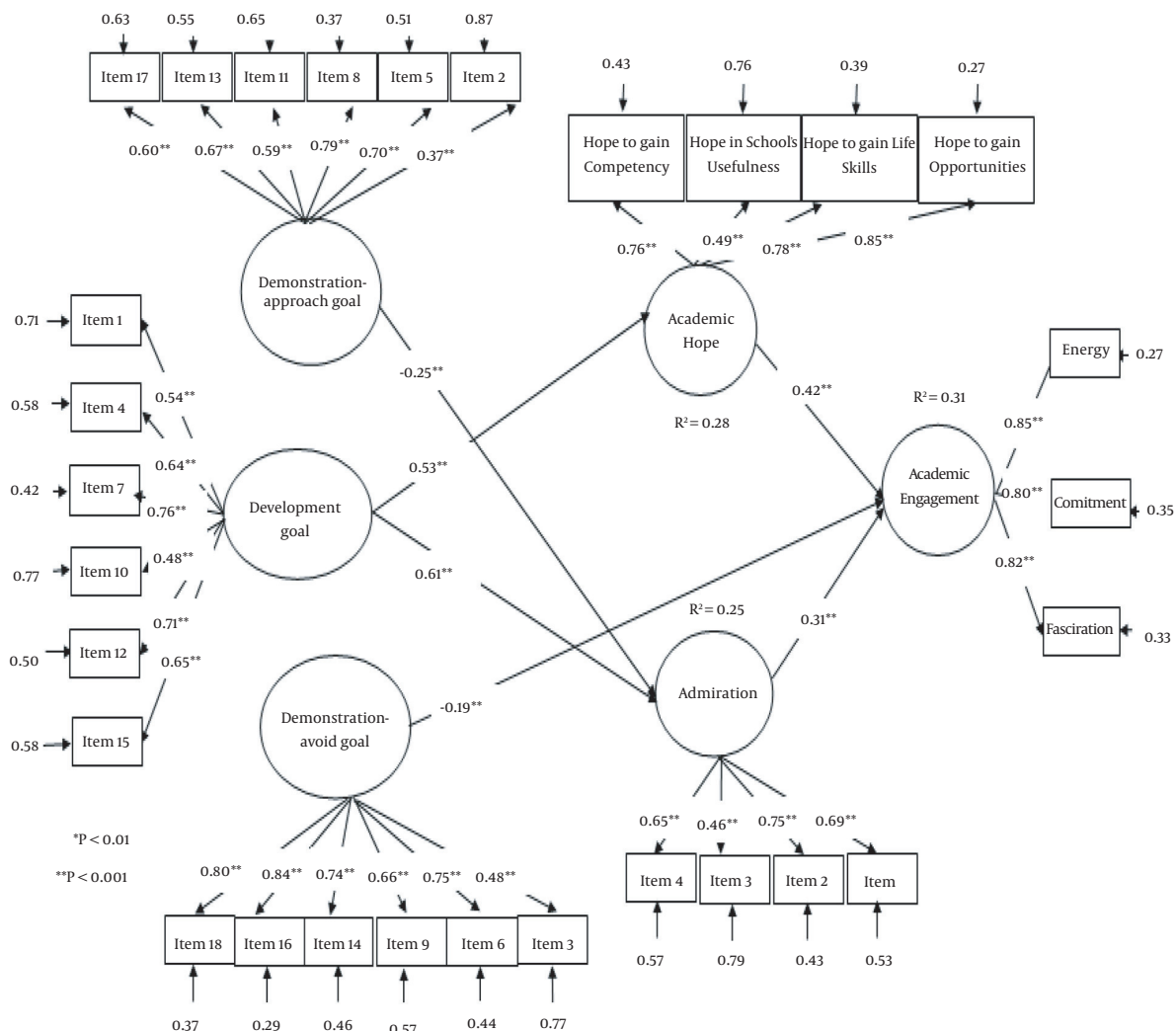
Figure 2. Tested model of the structural relationships between the social achievement goals and academic engagement with the mediatory role of the academic and social positive emotions

Table 3. Goodness of Fit Indices of the Variables

	χ^2	df	χ^2/df	GFI	AGFI	CFI	NFI	IFI	TLI	RMSEA	PCLOSE
Amount	828.37	367	2.25	0.90	0.90	0.93	0.90	0.93	0.91	0.05	0.480

the theory proposed by Pekrun and Linnenbrink-Garcia (24) and some previous studies (2, 5, 37-40), showing that positive and negative achievement emotions play mediating roles in the relationship between the achievement goal orientations and academic well-being. On the other hand, these findings completely fit with Pekrun's model, which explains environmental, cognitive, motivational, and emotional factors can affect academic performance like academic engagement. Based on the control-value theory

of achievement emotion (7), the evaluations made by individuals themselves as well as the educational and academic environment are the close antecedents of the social achievement goals and emotions. In fact, these cognitive appraisals, beliefs, and self-perceptions are amongst very important and essential indicators in the individual's motivational system and followed by academic engagement.

Academic engagement is defined in the form of constructive, active, and voluntary participation based on the

Table 4. Direct, Indirect, and Overall Effects of the Structural Equation Model Related to the Study Variables[a]

Paths (From)	To	Direct Effect	Indirect Effect	Total Effect	Elaborated Variance, %
Development goal	Academic hope	0.53**	-	0.53**	28
Development goal	Admiration	0.61**	-	0.61**	25
Demonstration-approach goal	Admiration	-0.25**	-	-0.25**	
Development goal	Academic engagement	-	0.41**	0.41**	31
Demonstration-approach goal	Academic engagement	-	-0.08**	-0.08**	
Demonstration-avoid goal	Academic Engagement	-0.19**	-	-0.19**	
Academic Hope	Academic Engagement	0.42**	-	0.42**	
Admiration	Academic engagement	0.31**	-	0.31**	

[a] *, $P < 0.01$; **, $P < 0.001$.

learner's recognition of the learning activities and the observable quality of his or her real interactions with the academic assignments (4). This image can be seen in the model proposed by Pekrun and Linnenbrink-Garcia (24) for the elaboration of academic emotions in academic environments. In other words, the learning environment influences the learner's academic emotions by control-value appraisals that, in practice, cause the formation of achievement goal beliefs. Furthermore, the effect of motivational appraisals on the emotions has been confirmed in previous studies (13, 23, 41-45). In fact, the emotions formed in academic situation stem from various individual antecedents that are considered as a type of situation evaluation and the appraisal of an individual of her/his own self, situation control ability, values, goals, activities, and results of them determine the individual's type of emotion (3, 7).

Regarding the difference between the social achievement goals, namely social development goal versus social demonstration-approach goal, in predicting the academic and social emotions, it can be pointed out that some individuals try to focus more on their social development ability in confrontation with a social situation (16, 18). For instance, they (social development goal) try improving their social skills, depending on their relations and getting better acquainted with their friends, whereas some others (demonstration-approach goal), in a similar situation, concentrate on acquiring proper social prestige and becoming popular amongst the others. Also, students with social demonstration-avoid goals have fear of the others' negative judgment. Further studies indicated that the objective in social development is related to positive emotions like love and pleasure and the objective in social demonstration-avoid is connected with abnormal patterns, low levels of pleasure, high levels of fear, shyness, and (18, 20). In fact, as the results of the studies indicated, the more fascinating and useful the achievement goals to the university students, the more positive emo-

tions are aroused, after which students will make great efforts to regulate and strengthen academic activities (28, 45-47). The results of the present study showed that the social development goal is a strong predictor of the academic hope and admiration, and such a goal is capable of forecasting the academic engagement via influencing academic hope and admiration.

On the other hand, the important role of the positive emotions and the influence on academic engagement have been confirmed in theory proposed by Pekrun and Linnenbrink-Garcia (24) and some previous studies (37, 40, 41, 44). Positive academic emotions are not solely a valuable outcome in the academic environment, rather they are important facilitators of the academic engagement (48). Experiencing the positive social emotions like admiration enhances the learners' concentration of their cognitive resources and their attention to the homework, and experiencing activator emotions like hope leads to the expansion of efforts and use of effective, holistic, and flexible cognitive strategies.

In addition, since learning is an interactive process in academic environments and academic engagement is defined as the interaction between the individual properties with the environmental characteristics, the sympathetic relations and experiencing the social emotions like admiration cause a motivational force resulting in the individual's more engagement and engagement with the environment (24). Positive academic emotions increase the learner's engagement by expanding his or her personal-momentary resources (thought-action) and corroborate the individual's resilience and resistance in the future, and such an ability can per se lead to more engagement in the prospective learning situations as a result of which the individual's academic burn-out is prevented (49). In fact, positive emotions widen the domain of instantaneous thought-action that results in a vast domain of actions and thoughts possibly pursued by the individual. Experiencing such positive emotions as consent or interestingness,

we may possibly increase our creativities, see greater opportunities, establish better relations with others, become more flexible, and gain a wider viewpoint towards the issues, all of which lead to more academic engagement in the academic environments (49).

5.1. Limitations and Suggestions for Further Research

Since the present study was a cross-sectional and correlational research, caution should be exercised in designing causal inferences based on its findings. Also, due to the fact that the sample was selected only from undergraduate students, caution must be exercised in extending the results to other academic levels. Accordingly, it is suggested that in future research, the relationships between research variables be examined experimentally to confirm causal inferences with more strength. Also, the present study had a quantitative design. It is suggested that further quantitative-qualitative research be designed to have a comprehensive and complete knowledge of the variables. Finally, future research may study the antecedent factors affecting academic well-being as well as the consequences of this structure in the academic health of students and other educational groups of the society.

5.2. Conclusions

As the effect of academic and social emotions on academic areas like academic engagement has not been investigated, it can be pointed out that academic hope and admiration is amongst the most important academic and social emotions that can influence students' engagement (39). Additionally, admiration enables individuals to learn skills and exhibit their talents. Moreover, admiration energizes individuals for improving and developing their learning (27). Theoretically, these emotions preserve the individuals' ideals and values and are attainable as guides for behavior as well as participation in adaptation and internalization of values, ideals, and goals (27, 50). The results of the present study were in line with previous research on the effect of motivational and emotional variables on academic outcomes. One of the new aspects of the present study was that it investigated the role of social emotion of admiration in relation to academic variables because previous studies only examined the role of academic emotions. Therefore, individuals with such emotions more rigorously participate and engage in academic activities due to the energy and force provided by social development goals and academic and social emotions.

Footnotes

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