



Achievement Motivation: A Case Study of the Students of Kermanshah University of Medical Sciences, Iran

Mehdi Mirzaei-Alavijeh ¹, Cyrus Jalili ², Habibolah Khazaie ³, Saba Shahsavari ⁴, Negar Karimi ^{5,6,3}, Seyyed Nasrollah Hosseini ⁷, Lida Memar Eftekhary ⁸ and Farzad Jalilian ^{1,*}

¹Social Development & Health Promotion Research Center, Health Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran

²Fertility and Infertility Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran

³Sleep Disorders Research Center, Health Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran

⁴Faculty of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran

⁵Cognitive Science Research Group, Academic Center for Education, Culture and Research, Alborz Branch, Alborz, Iran

⁶Institute for Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran

⁷Ministry of Health and Medical Sciences, Tehran, Iran

⁸Education Development Center, Kermanshah University of Medical Sciences, Kermanshah, Iran

*Corresponding author: Social Development & Health Promotion Research Center, Health Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran. Email: f_jalilian@yahoo.com

Received 2021 August 15; Revised 2021 October 02; Accepted 2021 October 28.

Abstract

Background: Motivation is defined as the development of an individual's desire to succeed and participate in the activities in which success depends on personal effort and ability.

Objectives: The present study aimed to evaluate the status of achievement motivation in university students.

Methods: This cross-sectional study was conducted on 182 medical, dentistry, and pharmacology students at Kermanshah University of Medical Sciences (KUMS), Iran in 2018. The participants were selected via simple random sampling with a probability appropriate to the selected sample size. Data were collected using a self-report questionnaire. Data analysis was performed in SPSS version 16 using chi-square and *t*-test at the significance level of 95%.

Results: The mean age of the participants was 21.14 ± 1.68 years (age range: 19 - 25 years). The mean score of achievement motivation was 77.64 ± 7.35 , which indicated that the participants obtained 66.93% of the maximum score. In addition, 89.5% and 10.5% of the students had moderate and favorable achievement motivation, respectively. Achievement motivation was significantly correlated with age ($P = 0.031$), male gender ($P = 0.022$), and maternal education level ($P = 0.018$).

Conclusions: According to the results, the achievement motivation of the majority of the KUMS students was moderate. Therefore, proper planning is required to improve the achievement motivation of these students.

Keywords: Achievement Motivation, Student, Medical Sciences, Kermanshah

1. Background

University students are an important community group, and negative life changes lead to their inadequacy and inefficiency (1). Improving and developing the efficiency of students (especially in terms of education) are paramount (2). Evidence suggests that 25% of student communities are at risk of academic failure, which adversely affects students and society (3). Academic achievement or the process of improving students' education (4) is a prominent goal of the education system in every country and has several influential factors (5). Psychological components are considered a major influential factor in the academic achievement of students (6).

Several studies in psychology (especially educational

psychology) have emphasized the importance and influence of psychological components on the academic behaviors of students (7). The theory of motivation is an important psychology theory, which plays a pivotal role in educational psychology and affects students' motivation to progress or their need for progress (8). Motivation is the key component of human personality and prompts the beginning, continuation, and direction of activities. Without an intention or motivation for success, other psychological abilities and characteristics will not have a significant impact on successful performance (9).

The all-encompassing tendency to evaluate one's performance is interpreted as motivating academic achievement in line with the highest goals, criteria, and efforts to

succeed in performance and enjoy the satisfaction that accompanies success in performance (10). Achieving success and the proper performance of students is a major concern of academic organizations and institutions (11). Students have different degrees of motivation for academic achievement, as well as varying levels of effort (12).

According to the literature, students with a higher level of motivation tend to have more academic achievements (13). Several factors affect the development of academic motivation (14). In this regard, Bakhshandeh Bavarsad et al. evaluated the nursing students in Ahvaz Jondishapour University of Medical Sciences (Iran), reporting that the motivation of the students was most significantly influenced by achieving fellowship, opportunities to help their families, and living a dignified life (15). Furthermore, Kashfi et al. stated that extensive research is required to identify the main influential factors in the academic motivation of university students (16).

2. Objectives

Given the importance of achievement motivation in students and the lack of similar studies on the student population of Kermanshah University of Medical Sciences (KUMS), the present study aimed to evaluate the status of achievement motivation in the medical, dentistry, and pharmacology students of KUMS.

3. Methods

3.1. Study Design

This cross-sectional study was conducted on 182 medical, dentistry, and pharmacology students at KUMS, Iran in 2018. For sampling, we initially considered the medical, dentistry, and pharmacology schools of KUMS as clusters, and the participants were selected via simple random sampling with a probability proportional to the sample size in each cluster. Data were collected using a self-report questionnaire. Out of 182 selected students, 171 students participated in the study voluntarily (response rate: 93.9%).

The inclusion criteria of the study were being a medical, dentistry, or pharmacology student at KUMS and having completed a minimum of one semester at the time of the study. The exclusion criterion was unwillingness to continue participation in the research.

3.2. Measures

The questionnaire consisted of two sections; the first section contained demographic data (six items), including age (year), gender (male/female), school (medicine,

dentistry, pharmacology), paternal education level (below diploma, high school diploma, academic), maternal education level (below diploma, high school diploma, academic), living in a dormitory (yes/no), and academic achievements (based on grade point average [GPA]).

The second section of the research instrument was the achievement motivation questionnaire (AMQ), which was developed by Hermans in 1970. Hermans initially prepared 91 items to compile the questionnaire and reduced the number of the items to 35 by researching a sample of first-year students in the fields of psychology, law, mathematics, and biology; the final questionnaire was developed with 29 items in subsequent research (17). The score range of AMQ is 29 - 116, and the achievement motivation scores are 58 - 29 (poor), 87 - 59 (moderate), and 116 - 88 (favorable) (18). In Iran, the reliability coefficient of the AMQ has been confirmed at the Cronbach's alpha of 0.78 (19). In the current research, the reliability coefficient of the questionnaire was confirmed at 0.75, suggesting adequate internal consistency.

3.3. Statistical Analysis

Data analysis was performed in SPSS version 16 using chi-square and *t*-test at the significance level of 95%.

4. Results

The age range of the participants was 19 - 25 years, and their mean age was 21.14 ± 1.68 years. Table 1 shows the background variables of the students in detail.

According to the obtained results, the mean score of achievement motivation was 77.64 ± 7.35 , which indicated that the participants obtained 66.93% of the maximum score. In addition, 89.5% and 10.5% of the students had moderate and favorable achievement motivation, respectively. Table 2 shows the correlation between the background variables and achievement motivation of the KUMS students. Accordingly, achievement motivation was significantly correlated with age ($P = 0.031$), male gender ($P = 0.022$), and maternal education level ($P = 0.018$).

5. Discussion

The present study aimed to evaluate the status of achievement motivation in the medical, dentistry, and pharmacology students of KUMS. According to the findings, the mean score of achievement motivation was 77.64 ± 7.35 , which indicated that the participants could obtain 66.93% of the maximum score. In a similar study, Noohi et

Table 1. Distribution of Background Variables Among KUMS Students

Variables	No. (%)
Gender	
Female	73 (42.7)
Male	98 (57.3)
Marital status	
Married	41 (24)
Single	130 (76)
Faculty	
Medicine	135 (78.9)
Dentistry	18 (10.5)
Pharmacology	18 (10.5)
Job	
Just student	147 (86)
Employed	24 (14)
Living in a dormitory	
Yes	63 (36.8)
No	108 (63.2)
Father's education level	
Under diploma	18 (10.5)
Diploma	68 (39.8)
Academic	85 (49.7)
Mother's education level	
Under diploma	36 (21.1)
Diploma	68 (39.8)
Academic	67 (39.2)

al. assessed the students of Baqiyatallah University of Medical Sciences (Iran), reporting the mean score of achievement motivation to be 85.2 (20). Since achievement motivation plays a key role in predicting the academic and occupational success of students, extensive research is required on the predictors of achievement motivation in the students of KUMS. Such studies should be conducted by the Education Development Center (EDC) to identify the main influential factors in achievement motivation and design psychological interventions aimed at promoting achievement motivation.

In the present study, a significant difference was observed in achievement motivation between the male and female students. Psychological and educational evidence attest to the direct impact of gender on motivation for progress throughout history. Furthermore, preliminary studies have been conducted in this regard based on theories of success motivation, clarifying the reasons behind the difference between adult male and female students in

terms of educational and professional efforts. Before the 1970s, more male than female students were able to obtain a college degree and pursue advanced education and high-paid jobs. Today, numerous high school students experience gender gaps in math and science performance (21), and studies show that women are more motivated to progress compared to men (22). Our findings are inconsistent with these studies, and further research is recommended to examine gender differences in terms of achievement motivation.

According to the results of the present study, achievement motivation was significantly correlated with maternal education level, which is consistent with the previous findings confirming the key role of parental education in motivating children's progress (23-25). On the other hand, our findings indicated no significant correlation between the achievement motivation and GPA of the students. This is inconsistent with the studies conducted by Noohi et al. on the students of Baqiyatallah University of Medical Sciences students (20) and Rasoli Khorsidi et al. on the nursing students of Babol University of Medical Sciences (Iran) (26). In another study, Gupta et al. reported that achievement motivation could predict the academic achievement of students (27).

The findings of Garshasbi et al. also demonstrated a correlation between achievement motivation and academic achievement (28). Consistent with the present study, the results obtained by Emmanuel et al. in the students in Ghana indicated that despite the positive correlation between achievement motivation and academic achievement, the correlation was not statistically significant (29). In line with our findings, the study performed by Ergene on 510 high school students in Turkey showed no significant difference between achievement motivation and academic achievement (30). Given the discrepancy between the aforementioned studies, further research is recommended in different cultures and student populations.

One of the limitations of our study was that data were collected in a self-report manner, which might have led to bias and affected the results. Moreover, our findings cannot be generalized to other student populations due to non-probability sampling.

5.1. Conclusions

According to the results, the achievement motivation of the majority of the KUMS students was moderate. Therefore, proper planning is required to improve the achievement motivation of these students.

Table 2. Correlations Between Background Variables and Achievement Motivation

Variables	Achievement Motivation		P-Value
	Moderate, No. (%)	Good, No. (%)	
Age	21.23 (1.66)	20.33 (1.64)	0.031
GPA	17.60 (1.36)	17.32 (1.35)	0.397
Gender			0.022
Female	70 (95.9)	3 (4.1)	
Male	83 (84.7)	15 (15.3)	
Marital status			0.568
Married	38 (92.7)	3 (7.3)	
Single	115 (88.5)	15 (11.5)	
Faculty			0.236
Medicine	120 (88.9)	15 (11.1)	
Dentistry	15 (83.3)	3 (16.7)	
Pharmacology	18 (100)	0 (0)	
Job			0.722
Just student	132 (89.8)	15 (10.2)	
Employed	21 (87.5)	3 (12.5)	
Living in a dormitory			0.301
Yes	54 (85.7)	9 (14.3)	
No	99 (91.7)	9 (8.3)	
Father's education level			0.266
Under diploma	18 (100)	0 (0)	
Diploma	59 (86.8)	9 (13.2)	
Academic	76 (89.4)	9 (10.6)	
Mother's education level			0.018
Under diploma	36 (100)	0 (0)	
Diploma	56 (82.4)	12 (17.6)	
Academic	61 (91)	6 (9)	

Acknowledgments

This article was extracted from a doctoral dissertation in medicine. Hereby, we extend our gratitude to KUMS and all the participants for assisting us in this research project.

Footnotes

Authors' Contribution: MMA, CJ, and FJ designed the research and wrote the manuscript. SS collected data and wrote the manuscript. NK analyzed the data and edited the manuscript. HK, NH, and LMA contributed to this article. All authors read and approved the edited manuscript.

Conflict of Interests: There is no conflict of interest.

Ethical Approval: The research ethics committee of KUMS approved the study protocol (IR.KUMS.REC.1397.140).

Funding/Support: This study was funded by the Kermanshah University of medical sciences (Research Project Code: 97377). The funding organizations have no role in the design of the study, collection, analysis, and interpretation of data and writing the manuscript was the role of authors.

References

1. Mirzaei-Alavijeh M, Rahimi H, Karami Matin B, Jalilian F. Study habits and associated demographic determinants among students of Kermanshah University of Medical Sciences. *Educ Res Med Sci.* 2017;**6**(1):19–24.

2. Geary DC. Cognitive predictors of achievement growth in mathematics: a 5-year longitudinal study. *Dev Psychol.* 2011;**47**(6):1539. doi: [10.1037/a0025510](https://doi.org/10.1037/a0025510). [PubMed: [21942667](https://pubmed.ncbi.nlm.nih.gov/21942667/)]. [PubMed Central: [PMC3210883](https://pubmed.ncbi.nlm.nih.gov/PMC3210883/)].
3. Saadat S, Asghari F, Jazayeri R. The relationship between academic self-efficacy with perceived stress, coping strategies and perceived social support among students of University of Guilan. *Iran J Med Sci.* 2015;**15**(12):67-78.
4. Pajares F. Gender and Perceived Self-Efficacy in Self-Regulated Learning, theory into practice. *J Educ Psycho.* 2002;**20**(4):116-25. doi: [10.1207/s15430421tip4102_8](https://doi.org/10.1207/s15430421tip4102_8).
5. Hosseini SN, Mirzaei Alavijeh M, Karami Matin B, Hamzeh B, Ashtarian H, Jalilian F. Locus of Control or Self-Esteem; Which One is the Best Predictor of Academic Achievement in Iranian College Students. *Iran J Psychiatry Behav Sci.* 2016;**10**(1). doi: [10.17795/ijpbs-2602](https://doi.org/10.17795/ijpbs-2602).
6. Winne PH, Nesbit JC. The psychology of academic achievement. *Annu Rev Psychol.* 2010;**61**:653-78. doi: [10.1146/annurev.psych.093008.100348](https://doi.org/10.1146/annurev.psych.093008.100348). [PubMed: [19575616](https://pubmed.ncbi.nlm.nih.gov/19575616/)].
7. Mirzaei Alavijeh M, Rajaei N, Rezaei F, Hasanpoor S, Pirouzeh R, Babaei Borzabadi M. Comparison of self-esteem, locus of control and their relationship with university students' educational status at Shahid Sadoughi University of Medical Sciences-Yazd. *J Med Educ Curric Dev.* 2012;**7**(1):58-70.
8. Wang M, Eccles JS. School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learn Instr.* 2013;**28**:12-23. doi: [10.1016/j.learninstruc.2013.04.002](https://doi.org/10.1016/j.learninstruc.2013.04.002).
9. Altiparmak T, Eryilmaz-Mustu Ö. The Effects of SCAMPER Technique Activities in the 8th Grade Simple Machines Unit on Students' Academic Achievement, Motivation and Attitude towards Science Lessons. *Int J Educ Method.* 2021;**7**(1):155-70. doi: [10.12973/ijem.7.1.155](https://doi.org/10.12973/ijem.7.1.155).
10. Muola JM. A study of the relationship between academic achievement motivation and home environment among standard eight pupils. *Educ Res Rev.* 2010;**5**(5):213.
11. Alves H, Raposo M. The influence of university image on student behaviour. *Int J Educ Manag.* 2010;**24**(1):73-85. doi: [10.1108/09513541011013060](https://doi.org/10.1108/09513541011013060).
12. Mega C, Ronconi L, De Beni R. What makes a good student? How emotions, self-regulated learning, and motivation contribute to academic achievement. *J Educ Psychol.* 2014;**106**(1):121. doi: [10.1037/a0033546](https://doi.org/10.1037/a0033546).
13. Yang YC, Wu WI. Digital storytelling for enhancing student academic achievement, critical thinking, and learning motivation: A year-long experimental study. *Comput Educ.* 2012;**59**(2):339-52. doi: [10.1016/j.compedu.2011.12.012](https://doi.org/10.1016/j.compedu.2011.12.012).
14. Marsh HW, Martin AJ. Academic self-concept and academic achievement: relations and causal ordering. *Br J Educ Psychol.* 2011;**81**(1):59-77. doi: [10.1348/000709910X503501](https://doi.org/10.1348/000709910X503501). [PubMed: [21391964](https://pubmed.ncbi.nlm.nih.gov/21391964/)].
15. Bakhshandeh Bavarsad M, Hakim AS, Azimi N, Latifi M, Ghalvandi H. Nursing Students Viewpoints about Educational Motivation and its Related Factors in Ahvaz Jundishapur University of Medical Sciences. *Research in Medical Education. Res Med Educ.* 2015;**7**(1):35-44.
16. Kashfi SM, Khani Jeyhooni A, Yazdankhah M, Sedaghat Z, Hajipour A. Educational motivation and some related factors in students of health and nutrition school in Shiraz university of medical sciences. *Dev Strateg Med Educ.* 2017;**4**(2):50-9.
17. Hermans HJ. A questionnaire measure of achievement motivation. *J Appl Psychol.* 1970;**54**(4):353-63. doi: [10.1037/h0029675](https://doi.org/10.1037/h0029675). [PubMed: [5483811](https://pubmed.ncbi.nlm.nih.gov/5483811/)].
18. Ogden Hamilton J. Validation of the Hermans Questionnaire Measure of Achievement Motivation. *Proc Div Pers Soc Psychol.* 2016;**1**(1):22-4. doi: [10.1177/014616727400100108](https://doi.org/10.1177/014616727400100108).
19. Akbari Balootbangan A. Simple and multiple relationship between self-efficacy, achievement goals, and achievement motivation in predicting academic achievement among students of Semnan University of Medical Sciences. *Iran J Med Educ.* 2014;**14**(9):796-805.
20. Noohi S, Hosseini M, Rokhsarizadeh H, Saburi A, Alishiri GH. Progress motivation among Baqiyatallah university of medical sciences students and its relationship with academic achievement. *Mil Med.* 2012;**14**(3):200-4.
21. Meece JL, Glienke BB, Burg S. Gender and motivation. *J Sch Psychol.* 2006;**44**(5):351-73. doi: [10.1016/j.jsp.2006.04.004](https://doi.org/10.1016/j.jsp.2006.04.004).
22. Sallili F. Achievement Motivation: a cross-cultural comparison of British and Chinese students. *Educ Psychol.* 1996;**16**(3):271-9. doi: [10.1080/0144341960160304](https://doi.org/10.1080/0144341960160304).
23. Acharya N, Joshi S. Influence of parents' education on achievement motivation of adolescents. *Indian J Soc Res.* 2009;**6**(1):72-9.
24. Acharya N, Joshi S. Achievement motivation and parental support to adolescents. *J Indian Acad Appl Psychol.* 2011;**37**(1):132-9.
25. Mansour M, Martin AJ. Home, Parents, and Achievement Motivation: A Study of Key Home and Parental Factors that Predict Student Motivation and Engagement. *Educ Dev Psychol.* 2009;**26**(2):111-26. doi: [10.1375/aedp.26.2.111](https://doi.org/10.1375/aedp.26.2.111).
26. Rasoli Khorsidi F, Sangani A, Jangi P. Correlations of Academic Procrastination and Locus of Control with Academic Achievement in Nursing Students: The Mediating Role of Achievement Motivation. *Sci J Nurs Midwifery Paramedical Faculty.* 2019;**5**(2):57-67.
27. Gupta M, Devi M, Pasrija P. Achievement motivation: A major factor in determining academic achievement. *Asian J Multidiscip Stud.* 2012;**1**(3):131-45.
28. Garshasbi A, khorsand E, Taghizadeh A. The Effect of Self-Regulation Skills Training on Academic Achievement Motivation and Academic Performance of Nursing Students in English lesson. *Res Med Educ.* 2018;**10**(1):9-1. doi: [10.29252/rme.10.1.9](https://doi.org/10.29252/rme.10.1.9).
29. Emmanuel AO, Adom EA, Josephine B, Solomon FK. Achievement motivation, academic self-concept and academic achievement among high school students. *Eur J Res Reflect Educ.* 2014;**2**(2):8-14.
30. Ergene T. The relationships among test anxiety study habits achievement motivation and academic performance among Turkish secondary school students. *Egit ve Bilim.* 2011;**36**(160):320.