



Comparative Study to Analyze the Motivational Patterns among Students of a Healthcare University in UAE Using the Achievement Goal Questionnaire (Revised)

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Authors' contributions

This work was carried out in collaboration between both authors. Authors JBK and BKMG carried out all aspects of this study including the designing, data collection and the statistical analysis. Both authors read and approved the final manuscript.

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ABSTRACT

Aims: This cross sectional study was conducted on students at Ras Al Khaimah Medical and Health Sciences University to analyze the motivation patterns in the health sciences university students.

Methodology: Total number of students who participated were 145. Data was entered into SPSS 22 software and analyzed. Student 't' test was used to compare among the groups.

Results: The study results showed that all students exhibited highest scores of Mastery Approach goal motivation $>10.62 \pm 4.24$; but there was a decay in the later years of study and the Mastery Avoidance scores increased. This was more pronounced in the medical students ($P = 0.02$).

Conclusion: This work underscores the notion that health sciences students are highly motivated and strive hard to achieve their goals. This study can be used to develop teaching methodologies and assessments that promote deep approaches to learning.

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1. INTRODUCTION

At any age, students' motivation is the key factor which influences their desire to learn, perform effectively and achieve their goals thereby demonstrating their aptitude and competency [1,2]. Healthcare courses are extremely demanding in terms of volume of information and time constraints. It is mostly assumed that students who pursue Healthcare studies are highly motivated. The admission criteria used in universities and especially medical schools are thought to be generally based on the students' academic competency proven through robust secondary school performances, motivation to become lifelong learners, character and personality traits and strong communication skills [2,3].

Numerous hypothetical models have been proposed to elucidate and comprehend students' achievement motivation. In 2001 Elliot and McGregor designed the Achievement goal theory, a 2x2 framework for conceptualizing students' achievement goal orientations, dividing students into 4 major groups –Mastery approach, Mastery avoidance, Performance approach and Performance avoidance [4]. The mastery group consisted of students who were motivated to understand comprehensively and develop their skills; whereas the performance group was concerned with comparing their skills and knowledge to their peers.

This tool was further refined by Elliot and Murayama in 2008 to give the AGQ (Revised) questionnaire [5].

Advocates of the achievement goal theory believe that students who adopt mastery goals and students who adopt performance goals view ability and define success and failures differently and the addition of approach or avoidance behavior influences intrinsic motivation [6,7].

Students' motivation, especially achievement goal orientation, is related to learning stratagems. It encourages help-seeking behaviors and perseverance and the need to acquire and utilize skills. Students' achievement goal orientation determines how they learn, interpret and respond to their environment [8-11].

This study was undertaken mainly to analyze and compare the students' motivational drives in

various healthcare courses and across the years of study. Comparison was also done between the genders.

2. MATERIALS AND METHODS

The study was a prospective cross sectional study conducted on the healthcare science students both in basic and clinical years belonging to Medical and Pharmacy colleges.

A pre designed pre validated questionnaire – the Achievement Goal Questionnaire-Revised [5] was used with the proper approval and due acknowledgement of the owner. The responses were graded on a 5 point Likert scale ranging from 5=strongly agree to 1= strongly disagree. The questionnaire has 12 items with 3 each for the 4 types of goals, which reflect the four groups of mastery approach, mastery avoidance, performance approach and performance avoidance.

The students who did not wish to participate were excluded from the study.

The total sample size was 200 students in both the groups taking into consideration the confidence level of 95% and confidence interval of 5% and sample population 520 students. This was calculated using the Creative Research Systems online sample size calculator.

The study group was divided into two groups- Preclinical and clinical year students in MBBS, and B Pharmacy courses.

Data was entered into SPSS 22 software and analyzed by descriptive statistics (i.e., mean, SD, frequency). Cronbach alpha coefficients were calculated for each subscale with values between .79 to .89.

Student 't' test was used for the comparison of scores of achievement goal questionnaire. P value less than .05 was considered statistically significant.

3. RESULTS

Total number of students who returned completed questionnaires were 72.2% (145).

47% (91) Medical students and 90% (54) Pharmacy students completed the survey. The total Number of males were 43 and total number of females 102. Among the medical students

67% (61) students belonged to year one and the rest 33% (30) were in year four and five of their course.

All the students exhibited the highest scores for the Mastery Approach goals as seen in Table 1.

On further analyzing the scores there was a decrease in both the mastery approach and performance approach in the mature students when compared to the freshmen, while the avoidance score became higher. On comparison, fourth and final year students of the medical programs showed a significant increase in the Mastery avoidance scores ($p= 0.02$) when compared to first year students.

Comparison between the genders and the two programs did not yield any significant difference.

4. DISCUSSION

Elliot and McGregor carried out seminal work in arranging the achievement goals into a 2 by 2 framework for a more comprehensive analysis. According to them achievement goals that measure competence have 2 fundamental dimensions – definition and valence. Definition in turn is divided into Mastery Goals where the emphasis is on task mastery; or Performance Goals where the focus is on competence relative to others. Valence also has 2 subdivisions; Approach Goals where the behavior is instigated by positive or desirable event; or Avoidance Goals where behavior is prompted by negative or undesirable event [4].

So the contemporary understanding centers around the four major subtypes of achievement goals: -

4.1 Mastery Approach

The students following this approach try to attain competence relative to the task or personal standards. The students are motivated to learn or develop skills to the best of their ability.

4.2 Mastery Avoidance

These students try to avoid incompetence relative to the task or personal standards and are motivated to avoid failures or become de-skilled.

4.3 Performance Approach

This type of student tries to attain competence relative to one’s peers and are motivated to outdo others.

4.4 Performance Avoidance

Here the students try to avoid incompetence relative to one’s peers. They are motivated to avoid doing worse than others [4,5,7,12].

Generally, students who lean towards mastery goals are inclined to view their abilities as a flexible trait that can be boosted by hard work, persistence, and continuous development of their skills, while students who adopt performance goals view ability as a fixed trait that cannot be improved [13,14].

The Mastery-Approach goal has been associated with a number of positive effects such as using deep learning strategies, maintaining high levels of interest, sustained persistence, and seeking help when needed [15,16]. The Performance Approach goal, on the other hand, is associated with shallow learning strategies such as memorization [17]. Both Performance Avoidance and Mastery-Avoidance goals have been linked with negative effects, such as stress and anxiety, low academic achievement, and low self-motivation [15-18].

In our study most students adopted the Mastery Approach to achieve their goals, very similar to most studies done among healthcare students and is consistent with the chief objective of education in health professions where self-directed lifelong learning is imperative [19,20].

Table 1. AGQ values in the students belonging to different years of study

| Students groups | Mastery approach (Mean ± SD) | Mastery avoidance (Mean ± SD) | Performance approach (Mean ± SD) | Performance avoidance (Mean ± SD) |
|-----------------|------------------------------|-------------------------------|----------------------------------|-----------------------------------|
| MBBS -Year 1 | 12.05± 3.10* | 10.83± 3.28 | 11.27± 3.38 | 10.31± 3.82 |
| MBBS – 4&5 | 13.00± 2.07* | 12.85± 2.57 | 11.36± 2.53 | 12.29± 2.67 |
| B.Pharm Yr 1 | 12.79± 3.37* | 11.37± 3.80 | 11.92± 3.59 | 11.42± 3.59 |
| B Pharm Yr 2 | 10.62±4.24* | 9.75± 4.02 | 9.75± 3.78 | 9.87± 3.67 |

* Highest score for each group

There were no significant differences between the genders or the program in this study. Many studies on health care students also reflect this but have emphasized that female students were more likely to be high performers while males tended to have higher mean scores for work avoidance [21].

However, as the MBBS students progressed through their years of study, the Avoidance scores became higher with significant increase for the Mastery Avoidance Goal. This indicates a significant decay in achievement motivation over the course of the studies. Students become more concerned with losing their learned skills and knowledge rather than imbibing new ones. Such a scenario has been reported in non-medical university courses and medical colleges [22,23,24].

This is a worrying trend and needs to be addressed by curriculum developers and other stakeholders.

Motivation theorists have suggested several practices that have the potential to encourage student adoption of mastery-oriented goals. For example, the students should be given meaningful and challenging tasks and allowed flexibility; risk taking, and creativity should be recognized and promoted; and assessment should be formative using feedback [25,26].

Studies have also compared the academic performance with the goal preference and students who adopted the avoidance goals tend to perform poorer in both examination and clinical rotations when compared to their peers but more conclusive evidence has to be gathered [23].

Achievement goal theory provides academicians and educationists with valuable understanding of how their students respond when they encounter academic activity. By understanding students' achievement goals, academics might try to create an environment that can encourage those beneficial goals and limit the non-beneficial ones and enhance the effectiveness of medical student training [27].

5. CONCLUSION

Majority of the healthcare students in this study were motivated by the Mastery Approach to achieve their goals and adopted an organized approach to studying in order to succeed.

On the other hand, as the medical students progressed, the Mastery Avoidance Goal became the dominant pattern as the students most likely were more apprehensive about losing their learnt skills/knowledge. Medical educationist should devise educational strategies that help to sustain the motivation and interest of the students throughout their course.

Such work is important in understanding student motivation and study skills which appears to influence development of life long skills like self-directed learning skills; critical thinking, intensive studying strategy; flexibility to change learning methods when require; ability to seek additional resources/help when needed all of which are features required of a successful and competent health care provider.

6. STUDY LIMITATIONS AND FUTURE CONSIDERATIONS

The student participant number were small. The presence of self-reported survey bias with students giving socially accepted answer is always present. The academic performance was not mapped to the obtained data.

Achievement goals can be used to develop teaching methodologies to improve course delivery and encourage deep approaches to learning and motivate students to achieve mastery. Assessments should be formulated accordingly to promote and reward mastery approach.

CONSENT AND ETHICAL APPROVAL

All authors declare that written informed consent was obtained from the participants and the study was approved by the institutional ethical committee. The Achievement Goal Questionnaire Revised was used with the proper approval by the Ras Al Khaimah Medical and Health Sciences University research ethics committee and due acknowledgement of the owner. Convenient random sampling was done in this study. All the students of constituent colleges were approached by the investigators and were given the consent form. Students who consented to be a part of the study were given the questionnaire to be completed and the data collected on the same day.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Dweck CS. Motivational processes affecting learning. *Am Psychol.* 1986; 41(10):1040-1048.
2. Archer J. Achievement goals as a measure of motivation in University students. *Contemp Educ Psychol.* 1994;19(4):430-446.
3. Nicholls JG. Achievement motivation: Conceptions of ability, subjective experience, task choice and performance. *Psychol. Rev.* 1984;91(3):328-346.
4. Elliot AJ, McGregor HA. A 2 X 2 achievement goal framework. *J Pers Soc Psychol.* 2001;80(3):501-519.
5. Elliot AJ, Murayama K. On the measurement of achievement goals: Critique, illustration, and application. *J. Educ. Psychol.* 2008;100(3):613-628.
6. Van Yperen NW, Elliot AJ, Anseel F. The influence of mastery avoidance goals on performance improvement. *Eur J Soc Psychol.* 2009;39(6):932-943.
7. Elliot AJ, Harackiewicz JM. Approach and Avoidance Achievement Goals and Intrinsic Motivation: A Mediational Analysis. *J Pers Soc Psychol.* 1996;70(3): 461-475.
8. Putwain DW, Symes W. Achievement goals as mediators of the relationship between competence beliefs and test anxiety. *Br J Educ Psychol.* 2012;82(2): 207-224.
9. Elliot AJ, Pekrun R. Emotion in the hierarchical model of approach-avoidance achievement motivation. In: Schutz PA, Pekrun R, eds. *Emotion in Education.* San Diego, CA: Elsevier Academic Press; 2007;57-73.
10. Sideridis GD. The regulation of affect, anxiety, and stressful arousal from adopting mastery-avoidance goal orientations. *Stress Health.* 2008;24(1): 55-69.
11. Murayama K, Elliot AJ. The competition-performance relation: A meta-analytic review and test of the opposing processes model of competition and performance. *Psychol Bull.* 2012;138(6): 1035-1070.
12. Elliot AJ. Approach and avoidance motivation and achievement goals. *Educ Psychol.* 1999;34(3):169-189.
13. Linnenbrink-Garcia L, Middleton MJ, Ciani KD, Easter MA, O'Keefe PA, Zusho A. The strength of the relation between performance-approach and performance-avoidance goal orientations: Theoretical, methodological, and instructional implications. *Educ Psychol.* 2012;47(4): 281-301.
14. Van Yperen NW. A novel approach to assessing achievement goals in the context of the 2 x 2 framework: Identifying distinct profiles of individuals with different dominant achievement goals. *Pers Soc Psychol Bull.* 2006;32(11):1432-1445.
15. Diseth A. Self-efficacy, goal orientations and learning strategies as mediators between preceding and subsequent academic achievement. *Learn Individ Differ.* 2011;21(2):191-195.
16. Wolters CA. Advancing achievement goal theory: using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *J Educ Psychol.* 2004;96(2):236-250.
17. Roussel P, Elliot AJ, Feltman R. The influence of achievement goals and social goals on help-seeking from peers in an academic context. *Learn Instr.* 2011;21(3): 394-402.
18. Harackiewicz JM, Barron KE, Tauer JM, Elliot AJ. Predicting success in college: a longitudinal study of achievement goals and ability measures as predictors of interest and performance from freshman year through graduation. *J Educ Psychol.* 2002;94(3):562-575.
19. Perrot LJ, Deloney LA, Hastings JK, Savell S, Savidge S. Measuring Student Motivation in Health Professions' Colleges. *Adv Health Sci Educ.* 2001;6:193-203.
20. Alrakaf S, Abdelmageed A, Kiersma M, Coulman SA, Dai N John DN, Tordoff J, Anderson C, Noreddin A, Sainsbury E, Rose G, Smith L. An international validation study of two achievement goal measures in a pharmacy education context. *Adv Med Educ Pract* 2014;5:339-345.
21. Hall M, Hanna LA, Hanna A, Hall K. Associations between achievement goal orientations and academic performance among students at a UK pharmacy school. *Am. J. Pharm. Educ.* 2015;79(5). Article 64.

22. Dresel M, Grassinger R. Changes in Achievement Motivation among University Freshmen. *J Educ Train Studies*. 2013; 1(2).
23. Artino AR, Dong T, DeZee KJ, Gilliland WR, Waechter DM, Cruess D, Durning SJ. Achievement goal structures and self-regulated learning: Relationships and changes in medical school. *Acad Med*. 2012; 87:1375–1381.
24. Babenko O, Daniels LM, White J, Oswald A, Ross S. Achievement goals of medical students and physicians. *Educ. Res. Rev*. 2018;13(2):74-80.
25. Karabenick SA. Perceived achievement goal structure and college student help seeking. *J Educ Psych*. 2004;96:569–581.
26. Meece JL, Anderman EM, Anderman LH. Classroom goal structure, student motivation, and academic achievement. *Annu Rev Psychol*. 2006;57:487–503.
27. Madjar N, Bachner YG, Kushnir T. Can achievement goal theory provide a useful, motivational perspective for explaining psychosocial attributes of medical students? *BMC Med. Educ*. 2012;12:4.

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