

## Progress Motivation among Baqiyatallah University of Medical Sciences Students and Its Relationship with Academic Achievement

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### Abstract

**Aims:** No matter how talented students may be, their academic success can be affected by achievement motivation. This study assesses the role of achievement motivation on academic success in medical student.

**Methods:** A cross-sectional survey was conducted on 100 students of Baqiyatallah University of Medical Sciences. These included students of medicine, nursing and health management. They filled out an author-made questionnaire and a Hermans questionnaire. Data were analyzed by SPSS using T-Test, ANOVA and Pearson Correlation. P-value less than 0.05 was considered significant.

**Results:** Out of 100 subjects, 83% were male and 17% female, 78% were single and 22% married, 83% were students of medicine and 17% other medical sciences students. The mean age was 24.2±4.7 years, the Hermance mean achievement motivation score was 85.2±8, with 85.4±8.1 for male and 84.2±7.5 for female population, which has a significant correlation with academic success in married students and students of medicine (P<0.05).

**Conclusion:** It seems that achievement motivation can help students gain academic success, particularly in medical students. Further studies with higher numbers of subjects are suggested for investigating factors which may be effective on the relation between academic success and achievement motivation.

Keywords: Academic Success, Progress Motivation, Student, Hermans Questionnaire

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### Introduction

The processes that empower and direct human behavior may be internal or external. Motivation is an internal process of this sort which is defined as a concept explaining the common ground between needs, recognition and excitement [1]. Motivation is itself affected by situations, nature, goals and means [1]. Achievement motivation is especially important for students. It is this sort of motivation that helps them gain enough power to finish their studies successfully [2]. The general socio-cognitive model of motivation consists of three components: expectancy, which is related to the students' beliefs regarding doing their assignments; value, which concerns the learners' reasons for getting involved in certain educational activities; and emotion, which involves the students' stress during examinations [3].

Pintrich's study of Malaysian undergraduate students showed that while self-efficiency has a positive relationship with academic success, this self-efficiency can be itself the result of the students' achievement motivation [4]. In addition, other studies reveal that there is little or no significant

correlation between gender and these factors in students. A study of gender differences with regard to motivational beliefs and self-regulating strategies in the students of a guidance school (a level between primary and high schools in Iran), showed that gender is an effective factor only in examination stress with girls suffering from more stress than boys in exams [5].

The value of the results gained from tasks affects the level of the students' motivation by making them work harder to achieve their goals [6]. Also, studies reveal that education success is affected by the interaction between situational variables such as timetable, teaching methodology, the physical and emotional conditions, students' attitude towards educational issues, and their achievement motivation. A combination of internal and external motivations for achievement helps direct the students' educational behavior and activities [7].

In the beginning of the 1970s, Hermans tried to devise a reliable test for measuring achievement motivation by determining its different factors. Hermans believed that it was possible to establish these factors based on the subjects' answers to the

questions provided in certain questionnaires and also on the basis of other related researches. Thus, he argued that the factors involved in achievement motivation include level of desire, perilous behavior, desire for promotion, sense of responsibility, perseverance, ability to predict, cognitive behavior, choice of friends and successful behavior [8]. Many researches in the west have studied achievement motive, and the same is more or less true of Iran, but few people have studied the effect of this phenomenon on academic achievement in medical and paramedical students. In view of the important role of medical and paramedical staff in protecting and enhancing people's health and also because of the lack of studies in this area, it is necessary to study the relationship between achievement motive and academic success in medical and paramedical students. This research, in particular, is aimed at examining the relationship between achievement motive and academic success in the students of Baqiyatallah University of the Armed Forces.

## Methods

In this cross-sectional study, 100 students of the University (who were registered as active students in the year 2010-11) were composed the sample. The population consisted of the students of medicine, nursing, and hygiene and health management who had submitted an article abstract to the Student Research Festival of the University. Of these, the students who had a history of chronic diseases, severe physical disability, psychiatric disorders or medication were then excluded. The research plan was approved of by the ethics committee of the University and the participants' information was encoded. The participants firstly filled out the Hermans achievement motive questionnaire and the information checklist in the presence of the researcher (to make sure everything was clear to them regarding the questionnaire). Data were gathered using a researcher-made questionnaire including demographic information academic success questions. The validity of the questionnaire was determined through checking content validity and its reliability was checked by Test-Retest, which turned out to be 0.83. Also the Hermans 29 item achievement motive questionnaire was utilized. This questionnaire's validity was checked using

internal consistency and factor analysis, and its reliability was determined to be 0.84 using Cronbach's Alpha and 0.74 using Test-Retest [9]. The students' grades averages, collected from the Office of Educational Deputy-Chancellor, were the criterion for their academic success.

The questions of the questionnaire were all incomplete sentences followed by four choices. These choices were ordered in terms of their value to reveal increasing or decreasing achievement motive. Thus, some questions were positive and others negative while the choices ranged from 1-4. The variation range of the whole questions was 29-116. The test was interpreted based on the total score, with higher scores revealing higher achievement motives and lower scores lower motives. In order to compare the quantitative data of the two groups, a T-Test was applied and the Pearson Correlation was used to check the correlation of data because they were presumed to be normally distributed. P-value less than 0.05 was taken as significant.

## Results

Of the 100 students composing the sample, 83% were male and 17% female; 78% single and 22% married; 31% living in Tehran and 69% living in other provinces; 16% living with parents and 84% in rented residences. The minimum age of the students was 18 and maximum was 44, and the average age was  $24.2 \pm 4.7$ . The minimum diploma grade point average was 14.5 and maximum was 19.8, while the mean average was  $17.9 \pm 1.3$ . The mean of students' averages in the previous semesters was  $15.7 \pm 1.2$ , with a minimum of 11 and maximum of 18.7 (only one student's average was 11 and the rest had an average of higher than 14). The financial situation of the students, based on their own assessment, was good for 23%, average for 74% poor for the other 3%. Of this sample, 83% were students of medicine and the remaining 17% of other fields of study. 7% of the students had scholarships and 93% were self-financed. 56% of the students reported their interest in their field of study to be "very much," 34% "much," 9% "to some extent," 1% "little" or "nothing." Also, 76% said they were most interested in their own subject while 24% said they favored other fields of study (Table 1).

The mean Hermans achievement motive score turned out to be  $85.2 \pm 8$ , with a minimum of 66 and maximum of 109. 25% of the students gained a Hermans mean score of 80 or less, 50% 85 or less and 75% 90 or less.

As regards the relationships between the different factors, the Hermans achievement motive scores and academic achievement, the following results were found. There were significant relationships between the diploma and university grades ( $r=0.2$   $p=0.01$ ), between diploma grades and achievement motive scores ( $r=0.19$   $p=0.04$ ) and between university grades and achievement motive scores ( $r=0.19$   $p=0.04$ ). (Table 2).

The grade point average of diploma was  $17.8 \pm 1.3$  for men and  $18.4 \pm 1$  for women ( $p=0.07$ ). The grade point average of the students in the previous semesters was  $15.5 \pm 1$  for men and  $16.9 \pm 1.1$  for women ( $p=0.001$ ). The Hermans score average was  $85.4 \pm 8.1$  for men and  $84.2 \pm 7.5$  for women ( $p=0.5$ ). No background factor (including marital status, gender, residential status, financial conditions and birthplace) affected the achievement motivation or academic success ( $p>0.05$ ).

## Discussion

The total achievement score of the students revealed that they were well-motivated, and this result goes with other previous results [2 and 10]. While the women's average grade point for the previous semesters was significantly higher than that of the men, there was no significant difference between men and women in terms of their diploma average grade point or the Hermans achievement score average. According to Safdari et al. [11], there was a significantly positive relation between the diploma average and academic success, and this is also supported by our study. It is worth noting that while our sample mostly consisted of male students of medicine, theirs was mostly composed of female nursing students, and this difference may explain the small difference between our results with those of Safdari et al. Also as Win et al. report, there is a relationship between the students' pre-university educational background and their academic success. This agrees with our results for the students of medicine, but not for other students.

The results of Pintrich's study of Malaysian un-

dergraduate students (which showed that self-efficacy has a positive relationship with academic success and is itself the result of students' achievement motivation) are in good agreement with ours, and the little difference between the two sets of results could be explained by the difference in their fields of study [4]. On the other hand, studies carried out in Iran show that little or insignificant difference between male and female students in this regard [13]. However, a study of gender differences in terms of beliefs, motivation and self-regulating strategies of highly intelligent guidance school students showed that gender was mattered for exam stress, where girls suffered more stress than boys. Our results do not agree with these results due to the difference in the proportion of male and female participants in the two studies [5]. French et al., however, claim that women achieved higher scores in situations and motivations related to sexual intercourse and social matters than in those connected to leadership, academic positions or job opportunities [14]. Also, another piece of research on high school students revealed that gender had no role in the relationship between achievement motive and academic success [15]. Former research ascribed an effective role to the gender where they argued that for men there was a stronger relation between achievement motivation and career and academic success [15]. As far as men are concerned, fear of low income has been reported as one of the most important causes of motivational problems such as mental disorders low performance in various activities, including career and education. Other researchers, however, believe that achievement motivation is more affected by people's favor in jobs of higher social status than their interest in higher income [16]. This study, at any rate, did not discover any significant gender variation in terms of achievement motive and academic success.

Similarly, there was no significant variation in the diploma averages, academic grade point averages or Hermans scores proven to be produced by the students' financial status, residential status, being or not being sponsored or the level of their interest in their fields of study. In Rafati et al.'s research, academic success was influenced by timetable, teaching methodology, emotional and physical environment, students' attitude towards educational

issues as well as their achievement motive. But these factors were either not studied here or did not prove effective on students' academic success [7]. Pintrich et al. demonstrated that students with high academic success are often self-regulated learners; that is, these students, compared to students with low academic success, set their learning goals more carefully and assess their achievement more regularly. Also, as Hirsch et al. show, contemplation of future basic needs and making provision for satisfying them highly increases the students' motivation for more activities [18]. There are also other studies that confirm the effect of achievement motivation on the students' proper educational planning for the sake of better academic success, which is also in agreement with our results [19]. There are, however, other researches which reveal that good financial status, marriage and a decent job (which are primary and secondary physiological needs) are among the most important factors in motivating students for higher success, but the role of these factors was not confirmed by the present study [16, 20 and 21].

While the results of the present research point to no significant connection between the students' interest in their fields of study and their achievement motive or academic success, Safdari et al.'s study signals a strong connection between these elements [11] and Okasha et al. [22] demonstrate that there is a strong relationship between the nursing students' interest in their subject and their academic achievement. The difference between the results of this study and those of Okasha et al. could be explained by the difference in the general university conditions considered in these two studies as well as by the fact that the participants studied different fields of study. There are yet other studies suggesting that, in addition to the students' interest and motive, other factors such as the teacher's teaching methodology, educational facilities, homework and studying time can influence the students' success [23 and 24]. Other factors, such as race and religion are also reported to have influenced students' achievement motivation and academic success, but these factors were not considered in the present studied.

### Conclusion

Since higher achievement motivation can lead to

more intensive activity and proper study planning, especially in the students of medicine, and, therefore, to higher academic success [26], it is possible to make for higher academic and career success by enhancing students' achievement motivation, satisfying their basic needs and helping them choose their really favorite subject. Also, as other factors, such as mental [27 and 28] and physiological elements (like hormones) can affect achievement motive [29], it may be possible to make for students' academic success by providing them with mental support and physical health examinations, but this can be made possible through further complementary studies.

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