The Relationship between Academic Motivation and Academic Performance among Students at Mazandaran University of Medical Sciences in 2014

Atieh Makhlough
Full professor of Nephrology, Gut and liver Research Center, School of Medicine, Mazandaran University of Medical Sciences, Sari, Mazandaran, Iran

Hasan Siamian
Assistant professor of Health Information Technology, Faculty of Allied Medical Sciences, Mazandaran University of Medical Sciences Sari, Mazandaran, Iran.

Fezzeh Naderi Asrami
General Cardiologist, Islamic Azad University, Sari Branch, Sari, Mazandaran, Iran

Mohammad Khademloo
Associate Professor of Social Medicine, School of Medicine, Mazandaran University of Medical Sciences, Sari, Mazandaran, Iran

Hoda Esmaeili
Educational Development Center, School of Medicine, Mazandaran University of Medical Sciences, Sari, Mazandaran, Iran

Abstract

Objective: The present study investigates the relationship between academic motivation and academic performance of students at Mazandaran University of Medical Sciences in 2013

Materials and Methods: In this descriptive, analytical study, data analysis was performed by, descriptive statistics indices (mean and standard deviation), inferential statistics (Pearson correlation coefficient and independent T-test) and using SPSS17 software.

Results: The motivation development in the 280 students under study ranged from minimum of 29 and maximum of 108 and the average and standard deviation was 77.28±15.4. Motivation in the study subjects was as follow: in men 76.51 ± 15.78, in women 78.77 ±14.2, in the singles 77.97 ± 14.8 and married 79.69 ±7.5, in the basic science 77.13 ± 15.7, intrainees 80.38 ±10.5, and in interns 78.86 ± 8.37, p>0.05
Conclusion: The data of the present study showed that, more than half of the study subjects from the viewpoints of academic motivation had the score more than the mean level. In the present investigation, there was insignificant relationship between the academic motivation and academic performance. It is necessary that the educational administrators pay attention to this important issue.

Keywords: Motivation, teaching, Students, Internship and Residency.
1. INTRODUCTION:
Academic motivation (academic motivation) structure is the behavior referring to learning and progress in education(1), and is considered one of the requirements for learning. Therefore gives strength and direction to behavior and gives energy to the learner, in maintaining the energy that directs his activities(2). The self-determination theory is used to understand the behavior of students and to increase their motivation efficiency. In this theory, different forms of motivation are discussed, that includes: external adjustment; when behavior is adjusted through rewards or external pressure. The projection adjustment: the most primitive form of behavioral adjustment in which, the source of motivation is outward of the body. That's why people are not autonomous but are self-inhibited. Accepted adjustment: in this type of behavior, there are protections or greater autonomy, in fact activity is chosen by the individual and valued. Intrinsic motivation: when individuals select the activity for her or his satisfaction, pleasure and is autonomous in performing it, and non-motivation: the absence of intention in acting and performing. Westland & Arche (2006) has noted that academic achievement is the comprehensive tendency in evaluating the self-performance, considering the highest criteria of effort in obtaining success in performance and enjoying the success, which is associated with success and performance(3). Academic motivation has direct relationship with the academic progress of student and it is necessary to have most attention to this important issue in creating a successful educational system(4)(5, 6) in their studies found relationship between motivation and academic achievement in students(5-7) reported that, the motivation of students to choose the education course is intermediate and the intrinsic motivation scores were higher than extrinsic motivation scores(7). However, in the study of Homaei, Bakhtiarpour, & Borna, 2009, the relationship between the academic achievement motivation and demographic variables with academic performance were evaluated. The regression results of academic achievement, marital status, employment status, age, being native and non-native and income, showed insignificant relationship with academic performance(8). The present study, investigates the relationship between academic motivation and academic performance among students at Mazandaran University of Medical Sciences in 2014.

2. MATERIALS AND METHODS:
In this descriptive, analytic study, 350 students of medicine at the basic and clinical sciences level at Mazandaran University of Medical Science in 2013 were selected through convenience sampling method. Some study subjects did not complete the questionnaire properly and excluded from the study. Therefore, the final sample size reached 280 subjects.

To collect information, the questionnaire on demographic data with questions of academic success and the Hemance’s achievement motivation scale questionnaire, containing 29 multiple choice questions were used.

Based on intensity of academic motivation progress, rating was done from high to low or low to high. Some questions were as positive and others as negative, the domain of each question ranged from 1 to 4 and the domain of change of all questions was from 29 to 116.
Interpretation of the test was based on the total score. Therefore, high scores indicated high motivation and low scores indicated low achievement motivation in the study subjects. The Cronbach's alpha of academic progress Motivation Questionnaire of Hermance's scale was 0.803 in previous studies(9).

Academic performance in this study included: the basic science average (first three years), the clinical total average (IV to VII), the basic science and pre-internship comprehensive examination score. Data analysis was performed by descriptive statistics indices (mean and standard deviation) and inferential statistics (Pearson correlation coefficient and independent T-test) using SPSS17 software.

3. RESULTS:
The sample comprised 280 students of medicine studying at the basic and clinical science level at Mazandaran University of Medical Sciences in 2013, that including (female, male, single, married, employed and unemployed). The variables descriptive indices have been presented (table 1).

Table 1. Descriptive indices of different variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Score</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Motivation</td>
<td>29</td>
<td>108</td>
<td>77.28</td>
<td>15.04</td>
</tr>
<tr>
<td>Diploma average</td>
<td>15</td>
<td>20</td>
<td>18.81</td>
<td>0.86</td>
</tr>
<tr>
<td>Total average</td>
<td>13</td>
<td>20</td>
<td>18</td>
<td>1.62</td>
</tr>
<tr>
<td>The comprehensive basic science exam</td>
<td>101</td>
<td>157</td>
<td>126.40</td>
<td>15.44</td>
</tr>
<tr>
<td>The score of pre-internship</td>
<td>103</td>
<td>158</td>
<td>138.07</td>
<td>17.33</td>
</tr>
</tbody>
</table>

The minimum and maximum motivation progress among the 280 study subjects was 29 and 108 respectively, and the mean and standard deviation was 77.28. Motivation in men was ±76.51± 15.78, in women 78.77 ±14.2 the singles 77.97± 14.8, in married 97.69 ± 7.5, basic Science 77.13 ± 15.7, trainee 80.38 ± 10.5 and in the intern 78.86 ± 8.37, (P>0.05).
Table 2: The correlation between the average and academic motivations’ score in the study subjects

<table>
<thead>
<tr>
<th>Average</th>
<th>Correlation</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>0.094</td>
<td>0.8</td>
</tr>
<tr>
<td>Basic sciences</td>
<td>0.14</td>
<td>0.2</td>
</tr>
<tr>
<td>Preinternship</td>
<td>0.40</td>
<td>0.09</td>
</tr>
<tr>
<td>Total average</td>
<td>-0.081</td>
<td>0.3</td>
</tr>
</tbody>
</table>

4. DISCUSSION AND CONCLUSION:
This study aimed to investigate the relationship between academic motivation and academic performance of the students at Mazandaran University of Medical Sciences. It was found that in 8.61% of the study subjects, motivation scores were higher than the average, which agrees with the data given by Bahrani (10), Roohi and Asayesh (11). It could be due to lack of coordination, sample, tools and other uncontrolled factors.

In this study, there was insignificant relationship between motivation and academic performance, which agrees with the data given Khodapanahi, Baezat, Heidari, & Shahidi (12), Talebpoor, Nori, & Molavi (13) and Adhami, Javari, & Haggadist (14).

In general, studies that have been done on the relationship between the academic achievement motivation and gender are divided into two categories that have been conducted in pre- and post-2000s. Researches that have been done after 2000s, rejected the relationship between achievement motivation and gender. Perhaps such findings are attributed to the limitations of the research tools. Förster, J., & Liberman, N.in their study expresses the gender differences under the influence of cultural factors (15). Insignificant difference was observed regarding the academic motivation between the boys and the girls (16).

Also Molavi and Rostami, Fdaei Naeini, Mohammadnia, and Rasoulzadeh (17), in their study concluded that gender has no effect on academic motivation. Cerezo & Casanova (18) and Pokay & Blumenfeld (19), showed that the extrinsic motivation of the girls is lower than in the boys, but there was no difference between the sexes regarding intrinsic motivation. But Homan and Asgari showed that girls have more motivation of progress than the boys. Bahrani and Roohi & Asayesh 2012 found that educational motivation in girls (total score and intrinsic motivation) is higher than boys (20, 21). As Rogers and colleagues in their study said that 66 percent of girls versus 49 percent of boys were successful in obtaining a passing grade and gender differences are evident in the field of high school graduate.
They believe that girls learn to pay attention and try to understand what they are doing for their development. On the other hand, boys tend to appear better than others(22). In this study, there was insignificant relationship between age and academic incentives, which is consistent with the data of Ogundokun & Adeyemo (23). Also with increase of the academic year at the University, motivation in students was reduced, which agrees with the results of Gottfried et al. (24). Although the study of Tamannaeifar & Gandomi (6) students who were younger and in school age, had greater academic achievement that is not consistent with the results of our research.

As Lumsden states that, with increase of academic years, tendency of learning declines, and many students only have a physical presence in the class(25). Therefore, according to the studies and the present research which conform the reduction of motivation with increase of academic years, significance of having preventive programmer in order to decline the school failure will be more.

**5. ACKNOWLEDGEMENTS**

Finally, we express our gratitude from the Deputy for Research and Technology of Mazandaran University of Medical Sciences for financial support of this proposal.

**Author's contribution:** Atieh Makhlough, Fezzeh Naderi Asrami, Mohammad Khademloo, Hoda Esmaeili made considerable contribution to the conception, data collection, design, drafting the article and critical revision. **Hasan Siamian,** second author (ORCID ID - 0000-0002-3542-5995) made considerable contribution to the conception, drafting the article and translation from Persian language to English language, translation of citations and Critical revision.

**Conflict of interest:** The authors stated that there are no conflicts of interest regarding the publication of this article.
References
5. Firooznia S, Yousefi A, Ghassemi G. The Relationship between Academic Motivation and Academic Achievement in Medical Students of Isfahan University of Medical Sciences. Iranian Journal of Medical Education. 2009;9(1):79-84.
8. Homaei R, Bakhtiarpour S, Borna M. The relationship between achievement motivation, cognitive intelligence, emotional intelligence, educational background and demographic variables and academic performance. New findings in psychology. 2009(49-63 (Persian)).