

An Investigation of the Study Habits of Students of the Rehabilitation Faculty of an Iranian University of Medical Sciences during a Semester

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ABSTRACT

Several factors influence students' educational status. One of these factors is study skills. Study Skills help improve students' educational abilities by facilitating the learning process. Recognizing these Skills also helps students to achieve success by determining their strengths and weaknesses in studying. The students' study methods have an absolute effect on their learning and therefore on their cognitive skills and finally on their future job. Being unaware of correct study methods can lead to students' confusion and waste their time and energy. The present study aims to investigate the students' study skills and recognizing their related problems, and therefore recommending the educational centers to establish programs to resolve the problems. This is a descriptive study. The subjects include the students of Rehabilitation Faculty of Ahvaz University of Medical Sciences in 2nd Semester of the academic year 2008-2009. The number of subjects was 83. The questionnaire of Sharma Study Habit Inventory (PSSHI) was given to the subjects to be filled out carefully. Then the questionnaires were gathered and analyzed by descriptive statistical methods with SPSS.16 software. There is a significant relationship between note-taking and reading ability. There is also a significant relationship between note-taking and time management. Various parameters can help increase students' success. An increase in motivation can increase their ability to take notes and to manage their time. All these factors improve the memory functions and will finally lead to students' success.

Key words: Study habits- educational success.

INTRODUCTION

Improving the learners' academic performance is one of the main objectives of educational centers, because it is considered the basis of success and progress at any point at every level of education. Learners' academic performance is influenced by different factors one of which is individuals' learning habits or skills¹.

Learning is a continuous process that involves relatively stable changes in one's potential behavior. This process varies from an individual to another and different individuals dedicate different capacities to it. However, one cannot ignore the

effect of environment factor, because learning is affected not only by internal factors such as one's psychological characteristics, motivations, emotions, goals and desires, but also by external factors including educational facilities, study methods, hours of study and stimuli from the surrounding environment². Although various factors such as the general level of intelligence, physical and mental health, motivation and interest in the subject, tranquility and facilities in one's living environment, educational facilities and teaching aids, and cognitive abilities affect one's level of learning the materials and recalling the learned materials, psychologists have observed that the factors that have the greatest influence on students'

academic performance at least during their student life are the general study skills, the learning skills and the skills needed for recalling the learned materials^{2,3}.

In general, study is a mental process with its own special conditions. By study conditions is meant the things that guarantee a more useful and efficient study if they are known and employed by learners and are provided for them^{2,3}.

Educational achievement in universities relies on motivation, effort, time management and awareness of the correct method of efficient study. By efficient study is meant students' awareness and use of a series of techniques while studying their curriculum, which contributes to their learning the materials⁵. Therefore, in order to develop students' learning, it has been recognized necessary to increase their learning skills and techniques as soon as they enter universities⁹. Recognizing these strategies is an essential step for appropriate educational interventions and contributes to students' achievement by determining their strengths and weaknesses in studying and by providing appropriate interventions⁶.

Students' employing an appropriate method of study is a very important factor in enhancing their educational achievement and retention of their learned knowledge, whereas an inappropriate method will limit their acquisition of knowledge and level of perception⁴.

The skills used by learners to help them acquire, organize and store knowledge are referred to as cognitive or learning skills³. Several studies have suggested that insufficiency of learning and study skills can negatively affect all the advantages of a favorable learning environment and students' intellectual and personal capabilities as well as physical and mental health can modify or compensate for the possible insufficiency in educational settings and even any possible shortcomings in their academic motivation and physical and mental health, which can have adverse effects on their academic performance⁷. Study skills or strategies consist of overt and covert thoughts and behaviors that have a lot to do with learning and can be modified through educational interventions⁸.

These skills or strategies have also been defined as cognitive, emotional or behavioral activities that facilitate the process of storing, retrieving and using knowledge⁹. The activities related to the cognitive factor include identification of the cases preferred or liked by learners. The emotional components of the study process involve controlling anxiety and avoiding cunctation or negligence, while taking notes, highlighting the information and reviewing the information are considered behavioral factors¹⁰.

Factors that help facilitate learning include having a plan for study, considering entertainment programs, choosing the right time for study, dividing the study time in hours, considering an appropriate place for study and using the right sources¹¹. Effective study depends on two factors, namely interest in the content and the skilful use of the study skills. Interest in the content leads one to a higher rate of study, which will in turn result in the improved use of the study skills¹². The process of studying and reading is so complicated that not a single component can be conceived of it; rather, experts have considered various aspects for it¹³. In this way, in designing the questionnaires of study habits, different studies have dealt with different components of the study process in the units under study, depending on the tool used by them. Despite these differences in studies, it seems that several components are common to all these tools and most experts have consensus about them. Among these components are note-taking during the reading process, time management, concentration and the ability to read, and motivation for study^{14, 15}.

Researchers believe that the study habits and skills are acquisitive, i.e. they can be taught and learned¹⁶. The effective use of various study methods and skills in students' better learning has been accepted throughout the world¹⁷. The results of a study revealed that students' participation in the university seminars held about the acquisition of study skills will help them learn more scientific contents². Another study showed that having a regular schedule and in-depth study along with concentration is effective in medical students' better learning⁶. Studying the problems that result in students' academic failure and arise from their lack of learning skills and lack of familiarity with the effective and efficient methods of study shows that

there is a direct relationship between the study method and academic performance^{1, 8, 11, 12, 18, 19}. Several studies regarded time management, concentration, the speed of reading, note-taking and comprehension as the students' main problems regarding study habits^{1,6,9,17,18,20-22}. A study conducted on surgery assistants showed that there is a direct and significant relationship between individuals' study habits and their academic performance. This study indicated the existence of a relationship not only between individuals' academic performance and the general score of their study habits, but also between different components of study habits and skills, showing that individuals' academic performance has more to do with skills such as students' memorizing the contents accurately and establishing a relationship between the contents and also with the conditions under which the exams are held and administered^{9, 18}.

Study skills have recently been emphasized in many societies as one of the factors influencing the learners' educational status and measures have been taken to hold workshops and classes to train the study skills hold counseling sessions for individuals, distributing educational pamphlets and booklets among them and holding educational workshops for university professors to help students in this regard. According to experts, recognizing the skills and strategies is an essential step for appropriate educational interventions and contributes to students' achievement by determining their strengths and weaknesses in studying and by providing appropriate interventions^{8, 23}.

The main concern of the present study has not been to investigate the relationship between students' study methods and their academic performance, because, as it was mentioned earlier, such a relationship has already been proven to exist. Therefore, this study mainly aims to identify the students' study skills so that it can provide suggestions for the officials about holding programs to remove any possible shortcomings in students' study methods.

MATERIALS AND METHODS

This is a descriptive cross-sectional study and the research population includes the students

studying in the rehabilitation faculty of a university of medical sciences during the second semester of the academic year 2008-2009. The sample included 90 students of different fields from the rehabilitation faculty, 7 students of whom refused to complete the questionnaire and 83 students including 17 males and 66 females remained in the study as the cooperating sample.

Before implementing the project, we prepared the consent form of participation in the research and gave it to the students who volunteered to participate in the study. The information that was gathered from the questionnaires was analyzed by descriptive statistics method (mean, standard deviation and frequency) and SPSS Software Version 16.

We used PSSHI¹ questionnaire, designed by Avicenna Behavioral Sciences Research Institute, validated with many similar types of foreign questionnaires such as:

1. Study habits Questionnaire- Mukhopadhyay & Sansanwal
2. Study habits and Attitude Test- C.P. Mador
3. Study habits Questionnaires- B.V. Panel
4. Study Involvement- Asha Bhatnagar

This questionnaire had 45 questions in eight parts including division of time, the physical conditions of study, the ability to read, note-taking, motivation to learn, memory, exams and health. The responses to questions were "always", "often", "sometimes", "rarely" and "never", for the first two of which the score 2, for "sometimes" the score 1 and for the last two responses the score 0 were given. However, the scoring weight is reversed in some questions.

The maximum score in all parts of the questionnaire is 90 and the higher scores indicate better study habits. The maximum scores in each part are as follow: 10 for division of time, 12 for physical condition, 16 for the reading ability, 6 for note-taking, 12 for motivation to learn, 8 for memory, 18 for exams and 6 for health. A higher score in each part shows one's favorable status in that particular part. The validity of this questionnaire in the past studies was 83 percent, showing that the questionnaire has good validity in comparison with similar questionnaires.

RESULTS

Based on the findings shown in Table 2 and based on the fact that the data with $P < 0.05$ will have significant relationship with one another, it can be concluded that there has been a near-significant relationship between physical condition and motivation to learn among students of speech therapy having entered the university in 2007, while there has been a direct and significant relationship between the ability to study and the ability to take notes. A significant relationship was observed between division of time and reading ability as well as between physical condition and reading ability among the students of occupational therapy in 2008. An appropriate relationship was also observed between these students' reading ability and memory, and also between motivation to learn and note-taking.

However, unlike the students of other fields, no appropriate relationship was found between these students' memory and physical condition as well as between their reading ability and note-taking,

A significant relationship has been observed between physical condition and motivation to learn among the students of occupational therapy in 2007 as well as between their note-taking and memory.

An appropriate relationship was found between these students' reading ability and holding exams, as well as between holding exams and note-taking, whereas no significant relationship was found between holding exams and memory, nor between their motivation to learn and their memory.

There is a significant relationship between division of time and note-taking; between motivation and note-taking; and between reading ability and health among the students of occupational therapy 2006, while no relationship has been found between their physical condition and their motivation to learn.

A significant relationship has been found between the division of time and mental condition

of the students of physiotherapy 2006, but no such relationship has been found between their division of time and their reading ability.

The relationship between these students' note-taking and division of time as well as that between their physical condition and reading ability has been significant.

An appropriate and significant relationship has also been found between these students' physical condition and motivation to learn, and also between their physical condition and memory.

A significant relationship has also been found between their reading ability and note-taking, as well as between their reading ability and memory.

Among all of the students, the relationship between holding exams and division of time and also between holding exams and physical condition and reading ability has been significant. A similar relationship has been found between holding exams and note-taking.

Among these students, the relationship between motivation to learn and health has been significant, while the relationship between holding exams and memory has not been significant. Nor has there been a significant relationship between health and division of time, between health and physical condition, and between health and holding exams.

Among the students majoring physiotherapy and entering the university in 2008, there has been an appropriate relationship between note-taking and division of time, and a significant relationship between note-taking and physical condition.

However, no appropriate relationship has been found between their note-taking and motivation to learn, and also between their health and division of time. However, an appropriate relationship has been found between holding exams and their note-taking, between their physical condition and health, and between their physical condition and holding exams.

Table 1: The mean, standard deviation, minimum score, maximum score and the number of subjects in terms of field of study and the year when they have entered the university

variable	Field of study /	number n	Maximum score Max	Minimum score Min	Standard SD	mean deviation
Time division	speech therapy 2007	13	13	8	1.91	10.15
	Speech therapy 2006	13	14	5	2.18	9.31
	Speech therapy 2007	15	13	7	1.92	9.86
	Occupational therapy 2008	13	13	8	1.85	10.47
	Physiotherapy 2008	14	15	7	2.14	10.86
	Physiotherapy 2008	15	12	8	1.33	10.27
	Physical condition	Speech therapy 2007	13	16	11	1.35
occupational therapy 2006		13	16	11	1.71	13.61
occupational therapy 2007		15	16	9	2.01	12.8
occupational therapy 2008		13	15	9	1.06	12.38
Physiotherapy 2006		14	16	10	1.78	12.35
physiotherapy 2008		15	17	10	1.85	12.8
Reading ability		speech therapy 2007	13	19	13	1.87
	occupational therapy 2006	13	19	13	1.7	15.15
	occupational therapy 2007	15	20	12	2.03	15.47
	occupational therapy 2008	13	20	10	2.61	15.54
	physiotherapy 2006	14	21	11	3.59	16.01
	Physiotherapy 2008	15	18	12	1.79	14.93
	note-taking	Speech therapy 2007	13	7	3	1.31
Occupational therapy 2006		13	9	3	1.89	5.62
Occupational therapy 2007		15	9	3	1.87	5.73
Occupational therapy 2008		13	8	4	1.62	6.15
Physiotherapy		14	8	3	1.51	6.14

	2006					
	Physiotherapy	15	8	3	1.43	5.73
	2008					
Motivation	Speech therapy	13	16	11	1.5	13.92
to learn	2007					
	Occupational therapy	13	16	8	2.19	13
	2006					
	Occupational therapy	15	16	12	1.27	14.21
	2007					
	Occupational therapy	13	18	11	2.35	13.29
	2008					
	Physiotherapy	14	16	9	2.03	13.14
	2006					
	Physiotherapy	15	17	9	2.01	14.01
	2008					
memory	Speech therapy	13	10	6	1.55	8.38
	2007					
	Occupational therapy	13	10	4	1.87	8.23
	2006					
	Occupational therapy	15	11	6	1.47	8.8
	2007					
	Occupational therapy	13	11	6	1.6	8.46
	2008					
	Physiotherapy	14	10	7	0.95	8.14
	2006					
	Physiotherapy	15	10	7	1.05	8.61
	2008					
Administering	Speech therapy	13	20	16	1.34	18.15
exams	2007					
	Occupational therapy	13	20	13	2.17	16.69
	2006					
	Occupational therapy	15	23	14	2.42	18.53
	2007					
	Occupational therapy	13	22	17	1.44	19.08
	2008					
	Physiotherapy	14	23	16	2.51	18.42
	2006					
	Physiotherapy	15	22	15	2.29	18.33
	2008					
health	Speech therapy	13	8	4	1.18	6.07
	2007					
	Occupational therapy	13	7	3	1.32	5.62
	2006					
	Occupational therapy	15	8	4	1.34	6.07
	2007					
	Occupational therapy	13	8	4	1.34	5.85
	2008					
	Physiotherapy	14	7	3	1.22	5.36
	2006					
	Physiotherapy	15	8	4	0.96	5.74

Total score	2008					
	Speech therapy	13	101	79	6.6	91.31
	2007					
	Occupational therapy	13	102	69	7.7	87.23
	2006					
	Occupational therapy	15	114	76	9.37	91.47
	2007					
	Occupational therapy	13	107	74	9.65	91.61
	2008					
	Physiotherapy	14	111	71	1.19	90.42
2006						
Physiotherapy	15	102	73	7.81	90.4	
2008						

DISCUSSION

This study investigated different factors affecting the academic achievement of a number of students of different fields having entered the university in different years and dealt with the factors' correlation, the factors that can each affect the students' academic performance, which is the

ultimate goal of the Higher Education System, and can lead to academic achievements and consequently the efficiency of the activities and the financial and human resource investments.

A significant relationship was obtained in this study between motivation and correct study through note-taking, and also between study

Table 2: Correlation coefficient between the research variables

Number	Level of significance	Correlated variables	Correlation coefficient	Input
13	0.06	Physical condition and motivation to learn	0.5	speech therapy
	0.005	The ability to read and take notes	0.73	
13	0.02	Time division and note-taking	0.62	Occupational therapy
	0.03	Time division and motivation to learn	0.61	
15	0.06	Physical condition and motivation to learn	-0.53	Occupational therapy 2006
	0.01	Motivation to learn and note-taking	0.64	
	0.01	Reading ability and health	0.66	
	0.07	time division and mental condition	0.47	
	0.02	physical condition and motivation to learn		
	0.58	note-taking and memory	0.55	
	0.03	Motivation to learn and memory	0.48	
	0.068	Reading ability and holding exams	0.53	
	0.04	Taking notes and holding exams	0.7	
	0.004	Memory and holding exams	0.79	
13	0.000	Time division and reading ability	0.6	Occupational therapy 2007
	0.03	Physical condition and reading ability	0.62	
	0.02	Physical condition and memory	0.51	
	0.069	Reading ability and note-taking	0.53	
	0.062	Reading ability and memory	0.63	
	0.02	note-taking and motivation to learn	0.56	
	0.04	note-taking and memory	0.085	

Input	Correlated variables	Correlation coefficient	Level of significance	number
Physiotherapy 2006	Division of time and mental condition	0.64	0.01	14
	Division of time and reading ability	0.48	0.08	
	Division of time and note-taking	0.74	0.002	
	Mental condition and reading ability	0.52	0.05	
	Mental condition and motivation to learn	0.61	0.02	
	Physical condition and memory	0.61	0.02	
	Reading ability and note-taking	0.54	0.04	
	Reading ability and memory	0.52	0.05	
	Division of time and holding exams	0.7	0.005	
	Physical condition and holding exams	0.67	0.009	
	Reading ability and holding exams	0.73	0.003	
	note-taking and holding exams	0.74	0.003	
	Memory and holding exams	0.49	0.07	
	Division of time and health	0.47	0.09	
	Physical condition and health	0.47	0.09	
	Motivation to learn and health	0.54	0.04	
Physiotherapy2008	Holding exams and health	0.47	0.08	15
	Division of time and note-taking	0.56	0.03	
	Physical condition and note-taking	0.51	0.05	
	note-taking and motivation to learn	0.47	0.07	
	Physical condition and holding exams	0.69	0.005	
	note-taking and holding exams	0.51	0.05	
	Division of time and health	0.45	0.09	
Physical condition and health	0.53	0.04		

method and time management, which will each be effective in improving students' success and academic achievement.

This study has emphasized the role of motivation in making students interested in the subject and the tendency to the accurate way of division of time. Like other studies, the present study has also stressed the impact of division of time and appropriate physical condition on improvement of the study status^{4, 5, 13}.

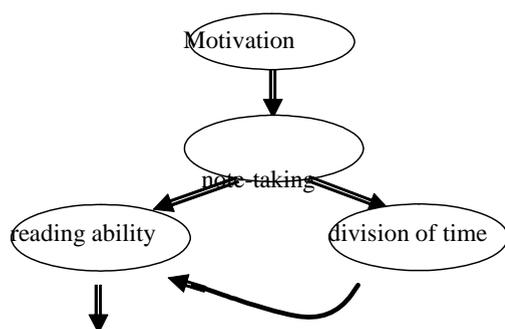
An overview of Table 2 shows that there is an appropriate relationship between note-taking and reading ability. Therefore, appropriate educational programs and actions for teaching students how to take notes and summarize the main points of lessons can lead to their success in summarizing the contents appropriately.

Since an appropriate relationship has

been found between students' ability in summarizing the lessons and contents and their memory status, an improvement in their way of taking notes can play an effective part in their ability to memorize the contents and they will thus have a more effective understanding of the lessons. The results indicating the existence of a significant relationship between note-taking and division of time among students of different fields in different academic years showed that reinforcing one will influence the other, so that accurate division of time will make it possible for students to take notes. Generally, an effective relationship was found between motivation to learn and note-taking among a larger number of students (occupational therapy 2006 and occupational therapy 2008, with 26 students of the research population. while such a relationship was not found among a smaller number of students (physiotherapy 2008, with 15 students of the research population). Therefore, it can be concluded that there is an effective

relationship between students' motivation and note-taking, and that an increase in their motivation will indirectly affect other parameters that are effective in students' success such as note-taking, division of time and reading ability.

A general overview of the findings shows that the different parameters of success act as an interconnected chain and continuously help enhance students' achievements, in such a way



that students' increased motivation will stimulate them to take notes and note-taking will in turn improve their division of time and reading ability. All these factors will lead to an increase in their memory performance and thus in their academic achievement.

Based on these findings, it is recommended that sufficient studies be done about the effective factors that increase students' motivation as one of the main parameters that affect their academic achievement, because research works in this field can have a considerable effect in improving the conditions of the other parameters that affect students' success.

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