

Study Skills and Its Related Factors in Jahrom University of Medical Sciences in 2014

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Abstract: Study skills are the hide and reveal in the area of cognitive and emotional behaviors that are associated with individual learning. Do not use principles of study skills are reduced learning and student's progress. So the evaluation of their Study Skills is essential. The aim of this study was to determine study skills in students of In this descriptive-analytical cross-sectional study, 453 students were selected through stratified random sampling. Congos learning skills scale including six subscales (Reading ability of texts 'Taking notes ' Enhance memory 'Preparation for exam 'Increased focus and time management) was employed for gathering data. Data analysis was performed using SPSS-ver.22 and descriptive and analytic statistics including independent t-test and ANOVA, Tukey post hoc, Pearson correlation coefficient and Chi-Square. The mean scores of students' study skills were 2.3 ± 0.5 out of 4. Study skills of 292 (64.5%) of the students was weak, 145 (32%) were moderate and only 16 (3.5%) were in good skills. There were statistically significant differences between study skills and sex and students' Grade Point Mean (GPA) ($p < 0.001$). Significant statistical differences were not found between age, field of study and academic semester with study skills. Considering that study skills in most of students were too weak to moderate, it is recommended to teach study skills to students.

Keywords: Study Skills, Educational, Learning, Student, Medical.

I. Introduction

Learning is a complex activity which is an essential part of the study systems of students. In other words, learning is a mental process with its own particular principles and circumstances [1]. The main principles of learning include the rules by which the learning efficiency is enhanced provided that the principles are perfectly understood and properly applied [2]. The academic success of every student depends on their Mental, Emotional, and Social skills along with encouraging factors such as Interest, Perseverance and Motivation [3].

Different people have different learning styles based on the differences in their learning interests and study habits [4]. A majority of students adopt the same learning style which they were used to study in the high school years even when they enter university to study university courses. Learning course books and information does not imply solely reading the materials, rather, learning implies proper understanding and/or comprehending the studied materials. Efficient learning is influenced by two main factors i.e. interests in the content of the materials as well as the ability to apply learning strategies [5]. The study skills involve Encoding, Storage, Retention and Retrieval of Information in a logical way which are necessary for a more efficient and successful learning. Moreover, the efficient use of these skills can enhance students' motivation and reduce the chance of any probable failure and incompetency in educational contexts [6]. Research has shown that using learning strategies and study skills is emphasized in the process of efficient learning in students [7]. Utilizing learning strategies makes the learning process easier, faster and more enjoyable [1]. Psychologists believe that learning strategies and study skills have the most effect on the learning performance of students during university years [8]. Study skills not only reduce fatigue and stress but also help for a better time management and increase learning motivation for efficient learning and successful educational achievements [9]. On the one hand, in the cognitive sense of learning, study skills are enhanced by facilitating learning processes which in turn enhances students' educational performance; on the other hand, in an emotional sense, using study skills increases motivation [10]. Successful students are more motivated to learn, perform their assignments more seriously and thus they achieve more educational progress whereas unsuccessful students are less motivated and less interested in learning, and take their assignments for granted, and hence they do not achieve any significant educational progress [11]. The students learning success is increased by recognizing their study skills through identifying their strength and weaknesses as well as providing appropriate learning interventions [12].

Incompetency in adopting study skills negatively influences both all the benefits of a favorable

educational environment and students' intellectual ability, mental and physical health; while, it compensates for the negative impacts on the students' mental and emotional health caused by any existing failure and incompetency in educational contexts if it is applied efficiently [5]. Many of the students' educational problems are rooted in the incompetency or the lack of their study skills [13]. MacNamara and Penner (2007) believe that study skills play a critical role in the students' academic success together with the quality of education, students' intelligence, motivation, and emotional traits [6]. Studies have been done in Iran about investigating the study skills in students. Hosseini et al (2008) unveiled that just about more than two thirds of students did not have sufficient skills in their study [14]. In a study on 557 students in Golestan University of Medical Sciences Badeleh et al (2013) found that a majority of students had poor and moderate study skills [13]. In 2011, a study was done on the students of 21 Universities of Medical Sciences; the results indicated the extreme lack of study skills amongst students [15]. The findings of Zare'zadeh and Rasoulabadi (2014) showed that the mean study habits of the students in Kordistan University of Medical Sciences was at a moderate level (45 out of 90); additionally, the GPA of the students was 46.1 and 45.4 for female and male students respectively [16].

Student's academic failure is one of the main problems with which higher education centers confront which not only results in the waste of time and money expenditure of such centers but also causes many social and emotional problems for students [13]. Considering the fact that students of Medical Sciences are facing with a wide range of course books and materials during their long-term education, they need to be informed about the proper learning strategies and study skills. Since students' insufficient information about the aforementioned skills and strategies can reduce the efficiency of their educational performance, the present study intended to investigate the study skills of the students in Jahrom University of Medical Sciences. It is hoped that the finding of the current research would be guidelines for the university authorities in planning university educational programs.

II. Materials and Methods

This study is a cross-sectional analytical research which was conducted in the affiliated schools of Jahrom University of Medical Science in May and June 2014. The population sample size was estimated as 453 participants through sample-size formula (at 95% confidence level and 0.2% Accuracy). The sampling method was Stratified Random Sampling; to this end the stratified samples consisted of the affiliated field of study including Medicine, Nursing and paramedic, laboratory sciences and Health. A proportion of students were selected as the sample population for the purpose of this study from the total of number of students in each field. So doing, first the list of students in each field was gotten from the university and was numbered accordingly; then, 453 students were selected from different educational disciplines and academic levels in schools using the table of random numbers. The criteria for selecting the sample subjects for this study were that the participants must be the current students of the affiliated schools of Jahrom University of Medical Sciences and that consent must be already reached with the participants to fill out the questionnaire. Data collection tools used in the present study were Congos Study Skill Inventory plus Demographic Information Collection Form (including Age, Sex, Field of Study and the GPA of the previous semester). Congos Study Skill Inventory questionnaire consisted of a total of 50 questions encompassing 6 main subsections as 1. Ability to read course books or Reading Ability (8 questions) 2. Note-taking (5 questions) 3. Memory enhancement (9 questions) 4. Preparation for exam (12 questions) 5. Concentration (10 questions) and 6. Time management (6 questions).

The questions had a 4-point nominal scale including 1. Always 2. Often 3. Sometimes 4. Hardly Ever and were rated accordingly from 1 to 4. The range of scores for each participant is considered from 1 to 4 and the scores are described as 1. Good Study Skill (for 3.21-4) 2. Moderate Study Skill (for 2.41-3.2) and weak Study Skill (for <2.4) [13]. The aforementioned questionnaire was both valid and reliable. The validity was estimated and confirmed by Badeleh et al (2013) while the reliability was estimated through Cronbach Alpha Reliability Estimation the coefficient of which was confirmed as 0.82 [13]. The concurrent validity of the data collection tool i.e. the questionnaire, was again assessed through the content validity measurements. To this end, the questionnaire was given to 12 faculty members of the university and their corrective comments and feedback were considered in revising the questionnaire. To estimate the reliability of the questionnaire Cronbach Alpha Coefficient was used and thus the coefficient indexed 0.84. To collect the data, first, permissions were gotten from the university's department of research and technology and, second, the research participants were selected from the affiliated schools of Jahrom University of Medical Sciences, finally, the questionnaire were distributed among the participants to be filled. In order to analyze the research data, the researcher used descriptive statistics (Frequency distribution, percentage, mean and standard deviation) and analytical statistics including Independent T-test (to compare the degree of study skills on binary variables such as sex vs. marital status and study skills in previous semester vs. the current semester, for instance), One-way ANOVA (to compare means of study skill amongst students), Pearson Correlation Coefficient and Chi-square Test (to determine the correlation between the individual scores and the overall score). Furthermore, the data were analyzed using SPSS₂₂ statistical software. As a consequence, the significance level was indicated as 0.05 in this study.

III. Results

The 453 participants consisted of 271 females (59.8%) and 182 males (40.2%). The maximum and the minimum age range was successively 33 and 18 years old. The point is that a great number of the participants aged below 22 years old including 318 students (70.2%). The mean of the age of the participants was 20.5 ± 1.0 (Table 1).

Table 1. Demographic characteristics of the samples and their correlation with the overall skills of students

According to the classification of scores of students' study skills, the results showed that 292 of the

Demographic Data		Number	Total of study skills (Mean \pm SD)	Result of test
Age	>22	318 (70.2%)	2.3 \pm 0.5	$-z = -1.3$ $P = 0.2$
	<23	135 (29.8%)	2.2 \pm 0.5	
Gender	Boy	271 (59.8)	2.3 \pm 0.4	$z = -2.8$ $P = 0.005$
	Girl	182 (40.2%)	2.2 \pm 0.5	
Field of study	Medicine	153 (33.8)	2.3 \pm 0.5	$\chi = 8.42$ $P = 0.079$
	Nursing	83 (18.3)	2.2 \pm 0.5	
	Para Medicine	154 (34%)	2.3 \pm 0.4	
	Health	41 (9%)	2.2 \pm 0.4	
	Laboratory Sciences	22 (4.9)	2.2 \pm 0.3	
Grade Point Mean (GPA) of Past semester	>18.01	29 (6.4%)	2.7 \pm 0.5	$\chi = 6.42$ $P < 0.001$
	17.01-18	81 (17.9%)	2.4 \pm 0.4	
	16.01-17	195 (43%)	2.3 \pm 0.4	
	>16	148 (32.7%)	2.0 \pm 0.4	

students (64.5%) were weak, 145 students (32%) were moderate and only 16 students (3.5%) were good at their study skills. Additionally the mean and the SD of the scores of the study skills were calculated as 2.3 ± 0.5 (out of 4) among all students. Regarding the 6 subsections of the Congos questionnaire, the subjects (students) had a statistically significant poor performance on the time management section ($P < 0.001$; 2.0 ± 0.7) while they had a significant higher performance on the Preparation for exam ($P < 0.05$; 2.5 ± 0.6) (Table 2).

Table 2. The mean and standard deviation of students' reading skills based on scales in the sample

Subscale	Mean & SD Score of study skills	Category of study skills		
		Weak (< 2.4)	Mean (2.41-3.2)	Good (3.21-4)
Concentration	2.3 \pm 0.5	257 (56.7%)	172 (38%)	24 (5.3%)
Reading Ability Of Texts	2.2 \pm 0.7	311 (68.7%)	113 (24.9%)	29 (6.4%)
Note-Taking	2.3 \pm 0.7	246 (54.3%)	166 (36.6%)	41 (9.1%)
Memory Enhancement	2.2 \pm 0.6	294 (64.9%)	141 (31.1%)	18 (4%)
Preparation For Exam	2.5 \pm 0.6	194 (42.8%)	211 (46.6%)	48 (10.6%)
Time Management	2.0 \pm 0.7	334 (73.7%)	97 (21.4%)	22 (4.9%)
Total Score	2.3 \pm 0.5	292 (64.5%)	145 (32%)	16 (3.5%)

Comparing the study skills of the students, the results of the overall study skills with regard to the GPA of the previous semester yield a different value i.e. it was proposed that the students whose GPA was 16 and above in the previous semester were more skilled ($P < 0.001$; 2.7 ± 0.5) in their learning and study skills having been compared to the students with GPA below 16 (Table 1). In comparing sex with study skills, study skills in female with higher than male (2.3 ± 0.4 in front of 2.2 ± 0.5 , ($p < 0.00$). The findings of the present research displayed that there is not any statistically significant difference between the overall study skills in terms of age, field of study and the academic semester variables. Nonetheless, the results showed that among the 6 subsections of the Congos questionnaire, namely the Ability to read course books (Reading Ability), Note-taking, Memory enhancement, Preparation for exam, Concentration and Time management, the sections 'Memory enhancement' and 'Preparation for exam' showed respectively the most and the lowest correlation with the overall study skills as $P < 0.001$, $R: 0.84$ and $P < 0.001$, $R: 0.73$ in turn.

IV. Discussion

According to the results of this study, more than half of the students were at a poor level in their study skills whereas almost %32 of them had a moderate level. Badeleh et al (2013) concluded that the level of the study skills of the most students was poor and moderate [13]. In the study of Zare'zadeh (2014) the study habits of the students were at a moderate level [16]. Likewise, Fereydouni and Cheraghian (2009) and Hosseini et al (2008) found that the most of the students had bad study habits [14, 17]. The results of the present study were consistent with the results of the aforementioned studies. It is probable that the main reason for the lack of teaching of the study skills or the lack of attention to holding workshops for enhancing the study skills in universities is the fact that study skills such as note-taking, concentration, time management, reading ability and preparation for exam are correctable through training.

In this study, the mean of the scores obtained from the section "Preparation for exam" was higher than the other sections while the "Time Management" section has got the lowest mean score. Nourian et al (2010) found that note-taking obtained the lowest score among all [7]. In the studies of both Badeleh et al (2013) and Hosseini et al (2008) the lowest score was for time management study skills [13, 14]. Similarly, Nouhi et al (2008) studied the study skills of the students of Kerman University of Medical Sciences, he concluded that most of the students were poor at time management skills [19]. The results of this study were consistent with results of the aforementioned studies. Time is one of the best capitals students possess, yet it can be one of the useless of all [20]. Regarding time, the results of the study by Ravary et al (2008) revealed that most of the students did not follow a regular program for managing their study time during the semester while they could successfully pass their courses with relatively a good GPA [21]. This finding was proved in the present study as well. The above statement can be better justified proposing that currently the only criterion for evaluating the students' performance is through assessing their obtained scores from exams and students can achieve their desired scores spending the minimum time possible; therefore, there is no point for the students to make excessive efforts in trying to manage their time and to make their most attempts in this regards. Consequently, planning an appropriate weekly schedule and routine daily activities is effective in students' study time management. Findings showed that the students whose GPA was 16 and above in the previous semester were more skilled in their learning and study skills having been compared to the students with GPA below 16.

According to Badeleh et al [2013], there was a statistically significant relationship between students' GPA and their study skills in that the more the study skills, the higher the GPA [13]. In a study in Kerman University of Medical Sciences, it was found that there was a statistically significant positive correlation between students' academic success and their study skills [22]. The results of this study were consistent with results of the aforementioned studies. The significant correlation between the student's study strategies and their GPA of the previous semester is indicative of the effect of applying these strategies on enhancing the learning performance of students. However, this finding was not beyond reach since using and being competent in Study Skills enhance learning performance and academic success. Hence, the purpose of enhancing study skills in students is promoting their academic achievements, one of which is GPA. In the current study, comparing students' study skills in terms of their sex showed high score in female with significant difference than the male's study skills. The results of the studies by Yazdanfar et al [23], Abdekhodae [24] and Smith and Miller [25] displayed that the study skills were higher in girls than in boys; whereas, Nouhi et al (2008) found that male students were more skilled in their study than female students [26]. Maybe can interpret that increase in female student population in recent years can be related with their study skills but it need to more investigation. There was not any statistically significant difference in the study skills between the students in terms of their age, field of study and academic semester. Duff et al (2004) found that only amongst the %24 of the subjects the increase in the age factor enhances academic performance and study skills [26] that means according to Duff the older the students, the better their academic performance and study skills. However, the researchers of the present study proposed that the increase in the age and the academic year of the students did not enhance the study skills; thus, it is recommended that teaching correct study habits and learning strategies to students must be instigated from the early academic semesters. In the present study the subsection "memory enhancement" had the most significant correlation with the overall study skills. In other words, the "memory enhancement" subscale had the most influential impact on enhancing the overall study skills in students in comparison to the other subsections. In study of Sepahvand et al (2014) that is performed on students of Lorestan university of medical sciences, "preparation for exam" had the most correlation with study skills. They suggested with this subscale enhancement can increase study skills [27]. Also we believe that the overall study skills can be enhanced by reinforcing the skill of "memory enhancement" in students compared with other skills. There were some limitations to this study. Due to the fact that the questionnaire was self-responsive, it was not possible to determine the accuracy of the responses given by the participants; this might have influenced the results of this study. The other limitation is that the generalizability of the results would be less probable for the students differ in their skills and talents over the universities in the country. Consequently, further research studies are recommended to be conducted on a greater sample size in other Universities of Medical Sciences.

V. Conclusions

To conclude, the study skills of the most students were at a poor and moderate levels. This finding was consistent with the findings of the other similar studies indicating that there is a common culture of study amongst all the students. It seems that students who had a more efficient academic performance mostly relied on their own intrinsic talents and skills. As a consequence, the importance of teaching the aforementioned study skills to students and its inclusion as a course credit in the curriculum is necessary. It is recommended that the university authorities and educational planners provide necessary solutions such as holding workshops to enhance students' study skills from the early academic semesters.

Acknowledgement

The researchers, hereby, would like to express their gratitude to all the students who participated in this study to provide the context of research.

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