RESEARCH ARTICLE

Assessing study skills among university students: an Iranian survey

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Abstract

Purpose: Numerous studies have revealed that study skills have a constructive role on the academic performance of students, in addition to educational quality, students' intelligence, and their affective characteristics. This study aims to examine study skills and the factors influencing them among the health sciences students of Urmia University of Medical Sciences in Iran. **Methods:** This was a cross-sectional study carried out from May to November 2013. A total of 340 Urmia health sciences students were selected using a simple sampling method. Data were collected using the Study Skills Assessment Questionnaire of Counseling Center of Houston University and analyzed with descriptive and analytical statistics. **Results:** The mean and standard deviation of the students' study skills were 172.5 ± 23.2, out of a total score of 240. Around 1.2% of the study skills were weak; 86.8%, moderate; and 12%, good. Among the study skills, the scores of time management, and memory and concentration were better than the others. Also, there was a significant positive correlation between study skills scores and the students' family housing status and academic level ($P < 0.05$). **Conclusion:** Although the majority of the participants had moderate study skills, these were not sufficient and far from good. Improving and promoting the study skills of university students require the designing and implementing of education programs for study strategies. Therefore, decision makers and planners in the educational areas of universities should consider the topic described above.

Key Words: Health sciences; Iran; Student; Study skills

INTRODUCTION

One of the most important necessities in higher education systems is the development and reinforcement of the study skills of students. In recent decades, extensive research has been conducted on students' study skills and strategies, but only in developed countries. Hence, examining the study skills of students who have grown up in different cultures is essential. Accordingly, the present investigation aims to evaluate study skills of health sciences students in Urmia University of Medical Sciences, Iran, and identify the factors influencing them. On the one hand, such research increases the existing knowledge about study skills and helps generalize the findings of other investigators. On the other hand, through a precise understanding of students' study skills, appropriate educational interventions can be designed to address defects in study skills.

METHODS

This project is a descriptive and analytic research design that was carried out from May to November 2013 to examine study skills and related factors among health sciences students in Urmia University of Medical Sciences. A total 340 students were selected and entered in the study using the census method. The subjects were divided into two groups: (1) discontinu-

ous undergraduates, that is, students who already had two years of college teaching experience and were pursuing further university education; and (2) continuous undergraduates, that is, university students who had not yet completed their first degree.

The data-gathering instrument was a two-part questionnaire. The first part was used to obtain the demographic characteristics of the participants and the second part, a Study Skills Assessment Questionnaire of Counseling Center of Houston University (SSAQ-CCHU), was used to measure the students' study skills [1]. The original instrument, which had 64 items, was translated into the Persian language and tested for validity and reliability by a panel of experts. The panel found some items incompatible with Iranian cultural factors; thus, these were either omitted or integrated, bringing down the total to 48. The adjusted SSAQ-CCHU had eight domains: time management and procrastination, concentration and memory, study aids and note taking, test strategies and test anxiety, organizing and processing information, motivation and attitude, reading and selecting the main idea, and writing. Each domain was examined by six items. The study skills instrument employed a five-point Likert scale (always, often, sometimes, rarely, never), and its score range was from 5 to 1. The minimum and maximum scores for the total scale were 48 and 240, and for each domain, 6 and 30. Scoring less than 50% in each domain or less than 120 in all domains indicated poor study skills; 50 to 75% in each domain or 120 to 180 in all domains, moderate study skills; and more than 75% in each domain or more than 180 in all domains, good study skills.

To determine the validity of the study instrument content, we applied the Banville method [2]. The original questionnaire was translated into the Persian language, then evaluated by a panel of experts. Some items in the translated instrument were deleted or merged, in accordance with the experts' opinions. In the item analysis stage, some of questions were restricted because of the decreasing instrument reliability coefficient. Finally, after the required revisions had been applied, the adjusted questionnaire was developed. The Persian questionnaire was then translated back into English by two English language teachers and compared with the original version. The two instruments were similar in content. The internal consistency approach was utilized to evaluate the reliability of the Persian questionnaire. In a pilot study, the instrument was completed by 20 students who were similar to the main research subjects. The questionnaire had a Cronbach's alpha coefficient of 93% and was approved. After obtaining permission from university authorities and the oral consent of the students, and in coordination with the classroom teachers, the questionnaires were filled out by the study subjects. The data were analyzed by descriptive statistics (frequency tables, measures of central tendency and dispersion for displaying frequency, percentage, and mean and standard deviation [SD]) and inferential tests (independent t-test for comparing means) using SPSS ver. 16 (SPSS Inc., Chicago, IL, USA).

RESULTS

All questionnaires distributed were analyzed; therefore, the response rate was 100%. The responses showed that 66.5% of the subjects were male (226) and 33.5%, female (114). The majority (288, or 84.7%) were single, of whom 259 (76.2%) lived in student dormitories. As to occupation, the fathers of 133 students (39.1%) worked in the government, and the rest had other jobs; the mothers of 324 subjects (95.3%) were housewives. More than half of the parents of samples (54.6%) were illiterate or of low literacy. The mean and SD of the students' age were 22.56 ± 3.9, and ranged from 18 to 41 years. The academic average of the students was 15.15, and their average scores ranged from 10 to 19. The mean and SD score of the students' total study skills were 172.5 ± 23.2. Five of the participants (1.2%) had good study skills; 295 (86.8%), moderate; and 40 (12%), poor. Among the areas of study skills, the highest scores were in time management, and concentration and memory; and those have placed in good, moderate, or weak skill (Table 1).

The findings indicated that there was a significant difference of total skills according to the subjects' family housing. The mean and SD scores of total study skills were 164.00 ± 26.21 for students living in dormitories and 173.36 ± 22.71 for those living in private housing ($t = 2.15$, $P = 0.02$) (Table 2). Also, the results showed that there was a significant difference of total score of the students' study skills according to their academic degree. The discontinuous undergraduates had better scores than the continuous undergraduates ($P < 0.05$). The results showed that students' residence is a significant variable to the reading skill of the participants ($P < 0.01$), and non-significant to the other study skills. Moreover, the students' family housing is a significant variable to the total score of their study skills ($P < 0.05$) (Table 2).

DISCUSSION

The results of the study revealed that the students from Urmia University of Medical Sciences did not possess favorable study skills, as their mean score was merely moderate. This finding is consistent with those of other studies. The study of Fereidouni Moghadam and Cheraghian [3] also concluded that university students had poor-to-moderate study habits. Meanwhile, the study of Hosseini et al. coincides with the present results in that it suggested the importance of organized and continuous educational courses to improve study skills.

Table 1. Frequency, mean, and standard deviation of subcategories of students' study skills

Subcategory	Students with weak skill	Students with moderate skill	Students with good skill	Mean ± SD
Time management	3 (0.9)	173 (51.9)	164 (47.2)	22.74±3.34
Concentration and memory	4 (1.2)	233 (69.8)	103 (29.0)	22.71±3.34
Note taking	12 (3.6)	182 (54.5)	146 (41.9)	22.35±3.96
Readiness to take an exam	18 (5.3)	243 (72.8)	79 (21.9)	21.00±3.66
Organizing information	5 (1.5)	212 (63.7)	123 (34.8)	22.5±3.44
Motivation and attitude	34 (10.2)	248 (74.3)	58 (15.5)	20.23±4.20
Reading skill	14 (4.2)	247 (74)	79 (21.8)	20.78±3.71
Writing skill	17 (5.1)	270 (80.9)	53 (14.0)	20.17±3.55
Total skill	4 (1.2)	322 (86.8)	40 (12.0)	172.50±23.16

Values are presented as number (%).

Table 2. Comparison of the mean score of students' study skills in different areas, according to demographic variables

Variable	Time management	Concentration and memory	Note taking	Readiness to take an exam	Organizing information	Motivation and attitude	Reading skill	Writing skill	Total skills
Residence									
Urban	22.58±3.37	22.66±3.38	22.17±3.95	20.93±3.62	22.43±3.48	20.15±4.24	20.52±3.74	20.14±3.54	171.59±23.40
Rural	23.52±3.10	22.96±3.14	23.23±3.9	21.46±3.84	22.98±3.26	20.59±4.00	22.09±3.29	20.30±3.64	177.14±21.55
P-value	0.6	0.53	0.07	0.32	0.27	0.48	0.004	0.75	0.10
Housing									
Private (personal)	22.87±3.27	22.39±3.20	22.45±3.89	21.11±3.89	22.61±3.44	20.37±4.14	20.91±3.66	20.27±3.54	173.36±22.71
Dormitory	21.39±3.75	22.10±3.73	21.32±4.54	20.10±4.29	21.65±3.42	18.77±4.57	19.52±4.90	19.16±3.58	164.00±26.21
P-value	0.02	0.28	0.13	0.14	0.14	0.04	0.04	0.10	0.02
Sex									
Male	22.50±3.57	22.74±3.41	22.22±4.16	21.67±3.80	23.14±3.56	20.68±4.24	21.56±3.68	20.30±3.93	174.82±23.89
Female	22.85±3.22	22.69±3.31	22.41±3.87	20.69±3.54	22.21±3.35	20.00±4.14	20.40±3.67	20.10±3.35	171.35±22.76
P-value	0.37	0.33	0.33	0.02	0.32	0.15	0.06	0.62	0.19
Age (yr)									
< 22	22.60±3.56	22.27±3.37	21.74±4.19	20.81±3.85	22.23±3.62	20.11±4.51	20.52±4.00	20.24±3.88	170.53±25.12
≥ 22	23.90±3.00	23.22±3.25	23.00±3.55	21.26±2.41	22.85±3.20	20.37±3.81	21.00±3.30	20.00±3.13	174.83±20.47
P-value	0.41	0.009	0.002	0.25	0.10	0.57	0.16	0.66	0.09
Marital status									
Married	22.78±3.35	22.60±3.35	22.35±4.00	21.00±3.56	22.59±3.47	20.34±4.28	20.83±3.80	20.36±3.58	172.90±23.37
Single	22.48±3.32	23.29±3.26	22.31±3.67	20.87±4.18	22.13±3.31	19.60±3.72	20.54±3.19	19.00±3.22	170.30±22.09
P-value	0.55	0.17	0.93	0.74	0.38	0.24	0.6	0.016	0.45
Academic degree									
Continuous undergraduates	22.53±3.44	22.25±3.35	21.73±4.00	20.82±3.81	22.21±3.56	20.20±4.31	20.55±3.92	20.17±3.86	170.45±24.35
Discontinuous undergraduates	23.00±3.15	23.46±3.20	23.36±3.66	21.34±3.37	23.00±3.20	20.27±4.00	21.16±3.32	20.16±3.00	175.86±20.75
P-value	0.14	0.001	0.001	0.20	0.03	0.87	0.14	0.99	0.03

Values are presented as mean ± SD.

The factors that influenced their studies were time management, readiness to take exams, concentration, reading, and taking notes [4].

Above results showed that among the different subcategories of study skills, the participants were better in time management, and concentration and memory than in the other areas. This means that if students properly manage the time for studying and learning science topics, or concentrate on studying, they will succeed in acquiring information and learning. Some studies reinforce and support this part of the study's findings. Nourian et al. [5] revealed that the mean score for time management was higher than that of other study skills; this was perfectly compatible and consistent with the results of the present investigation.

It revealed that there exists a statistically significant difference of the students' study skills according to their family hous-

ing status and to academic degree. Students with private housing had remarkable study skills compared to those who were living in dormitories or rented housing. It seems that compared to the other participants, students with personal housing had better facilities, greater prosperity, and mental peace, all of which contributed to better study skills. In contrast, those living in dormitories and rented places often found it difficult to concentrate because of the noise, presence of roommates, or an uncomfortable environment. Knowing where to find a quiet, comfortable, and distraction-free place to study in is one of the simplest and most effective means of facilitating concentration. Above findings also indicated that discontinuous undergraduates had better study skills than continuous undergraduate. Although the literature review revealed no study that supported and confirmed this section of the results, educational researchers and specialists in research centers and universities can nevertheless use this as a basis for their studies.

Like other surveys, this project has limitations. First, results cannot be generalized beyond the study sample and, therefore, can be generalized only in populations with similar features. Second, the data of this study were collected using a self-reported questionnaire. Participants may have underestimated or overestimated their study skills behavior, and thus, the findings may have been affected. Third, a cross-sectional design was used to describe the relationship between variables. The main characteristic of cross-sectional design is that all data are collected at one time, thereby limiting the ability to identify cause-and-effect relationships between variables.

From the results above, it was concluded that the total study skills of students of Health Sciences at the Urmia University of Medical Sciences in Iran were moderate, that is, far from good. This trend could jeopardize students' academic performance. It seems that improving the housing status of students, preparing the necessary equipment in their dormitories, and increasing their awareness about study skills and their different domains can be helpful. Therefore, measures such as designing and implementing study skills educational programs for students and considering study skills as a course for them in university educational curriculums are recommended and emphasized.

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CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

SUPPLEMENTARY MATERIAL

Audio recording of the abstract.

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