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Assessment of Study Skills of Fifth Term Medical Students - an Experience at a Private Medical College

Medical Science

KEYWORDS : Dennis H Congos Study skills Inventory, Medical Students

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ABSTRACT

Introduction: *Transitions from high school to medical education is difficult for students and also sudden increase in the learning content is extremely challenging. Therefore they need to acclimatize new learning skills to restore the learning in the medical education.* ***Objectives:*** *To analyse the study skills of the fifth term students and also to find out reasons for good and poor study skills by individual interviews.* ***Methods:*** *This study is a descriptive cross-sectional research design involving 116 fifth term medical students studying at Kempegowda Institute of Medical Sciences (KIMS) and Research Centre, Bengaluru. Data collected by using personal profile questionnaires and Dennis H Congos Study Skills Inventory (DCSSI)1. Appropriate statistical test were applied. 44 students were selected based on their higher and lower percentage in the first year exams (22 students) and in the study skills inventory (22 students). These students were individually interviewed and their higher and lower performance was identified.* ***Results:*** *A total number of 116 students participated in this study. Among them mean age of boys were 20.56 (n=59), Girls were with the mean age of 21.4 (n=57). The percentage of marks obtained in PU board exam was reflected in the increasing performance of first year MBBS exam.Mean score of note taking, test preparation and time management is significantly different between male and female students where female mean score is higher than male mean scores. The observed means of Text book, note taking, memory, test preparation and time management skills were not statistically significant except concentration skills (P= 0.014) among the categories based on the marks obtained in the first year MBBS examination* ***Conclusion:*** *In the current research, study skills among male and female students were significantly different in the area of note taking, test preparations and time management. Study skills can be improved among students with multimodal learning. Regular study skill training would help them in improving their academic performance.*

Introduction:

Study skills are an important determinant of the students' academic performance. Estimating the study skills should help the students to improve their academic performance by improving their weak domains. Medical curriculum being very vast and volatile, learning is not very easy and just by studying once or adopting a single learning technique, the students cannot easily reproduce during assessments. Besides transitions from high school (pedagogy) to medical school (androgogy) is difficult for students and also sudden increase in the learning content is extremely challenging. Therefore they need to acclimatize new learning skills for learning in medical education. Hence this research was planned to analyse the study skills of the fifth term students and also to find out reasons for good and poor study skills by individual interviews.

Materials and methods:

This study is a descriptive cross-sectional research design and questionnaires were distributed among 116 fifth term medical students studying at Kempegowda Institute of Medical Sciences (KIMS), Bengaluru. They were administered Dennis Congos Study Skills Inventory (DCSSI). The DCSSI is a validated study skills inventory questionnaire. DCSSI hassix domains namely textbook reading, note taking, memory, test preparation, concentration and time management. Five to thirteen components are present in each of these six domains. These domains were assessed using sentences which indicate each component on a five point rating scale. If the individual scores are less than bench marks, those domains need to be improved. Personal profile of the students were collected with formatted schedule which included age, sex, percentage of marks in PUC and first year MBBS, type of seat like CET, COMED-K and Management were assessed. Schedule also had type of stay and study habits.

The data was analysed by using descriptive statistics for percentage. Difference between genders were analysed with t-test.Association between mean scores were done using ANOVA and Correlation matrix. 44 students were selected based on their higher and lower percentage in the first year exams (22 students) and in the study skills inventory (22 students). These students were individually interviewed and the high and low performers were identified.

Results:

Figure 1: First year MBBS marks with marks obtained in PU board examination (%)

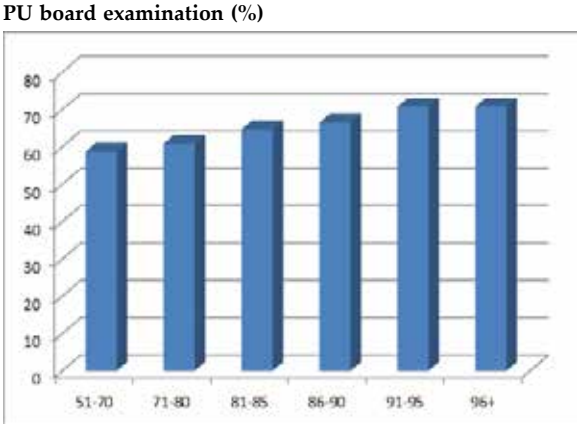

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Figure 2: First year MBBS marks (%) by mode of Admission

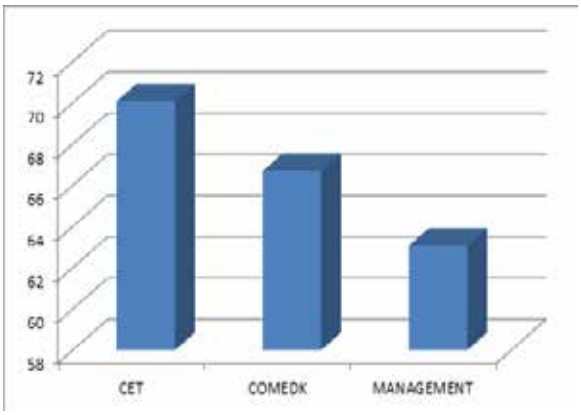

Table 1: Mean scores of Congos study skills factors by Gender

Sex Text books		Domains of Dennis H Congos study skills					
		Note taking	Memory	Test Preparation	Concentration	Time Management	
Female	Mean	23.56	10.42	30.11	36.37	34.91	14.67
	N	57	57	57	57	57	57
	SD	4.480	4.322	5.750	8.918	6.104	5.620
Male	Mean	24.53	8.31	28.39	30.69	33.31	11.85
	N	59	59	59	59	59	59
	SD	5.961	5.835	7.110	9.928	7.447	7.832
Total	Mean	24.05	9.34	29.23	33.48	34.09	13.23
	N	116	116	116	116	116	116
	SD	5.285	5.234	6.507	9.826	6.838	6.951
	P-Value	.328	.029	.157	.002	.207	.028

Table 2: Mean scores of Congos study skills factors by First year MBBS obtained (%)

% of First year MBBS Text books		Domains of Dennis H Congos study skills					
		Note taking	Memory	Test Preparation	Concentration	Time Management	
50-59	Mean	23.45	7.82	28.18	29.55	28.36	12.00
	N	11	11	11	11	11	11
	SD	6.378	5.250	7.666	9.637	9.058	6.372
60-69	Mean	24.53	9.09	29.40	31.95	34.55	12.72
	N	58	58	58	58	58	58
	SD	5.710	5.127	5.724	10.859	6.783	7.684
70-79	Mean	23.29	10.24	28.88	35.73	34.73	13.85
	N	41	41	41	41	41	41
	SD	4.578	5.403	7.339	7.152	5.572	6.015
80+	Mean	25.75	9.50	31.50	36.25	39.00	15.25
	N	4	4	4	4	4	4
	SD	4.113	6.557	7.594	9.639	5.888	8.578
Total	Mean	24.03	9.39	29.17	33.23	34.18	13.15
	N	114	114	114	114	114	114
	SD	5.327	5.266	6.532	9.645	6.832	6.978
	P-Value	.610	.527	.826	.122	.014	.736

Table 3: Correlation matrix for percentage of marks, Text book reading, Note taking, memory, test preparation, concentration and Time management

		PUC%	MBBS 1st year %	Text books	Note taking	Memory	Test Preparation	Concentration	Time Management
PUC%	r	1	.572	-.188	-.054	-.074	-.111	.093	-.124
	P		.000	.044	.567	.431	.236	.318	.185
MBBS 1st year %	r		1	-.059	.133	.091	.244	.260	.116
	P			.534	.157	.338	.009	.005	.221
Text books	r			1	.361	.380	.303	.193	.332
	P				.000	.000	.001	.038	.000
Note taking	r				1	.415	.596	.340	.446
	P					.000	.000	.000	.000
Memory	r					1	.418	.345	.419
	P						.000	.000	.000
Test Preparation	r						1	.451	.573
	P							.000	.000
Concentration	r							1	.413
	P								.000
Time Management	r								1
	P								

A total number of 116 students participated in this study. Among them mean age of boys were 20.56(n=59), girls were with the mean age of 21.4 (n=57). Out of 116 students 42.2% got into CET, 44% through COMED-K and 13.8% were from management seat. The study revealed 52.6% of them stayed in the campus hostel, 40.5% were day's scholars and 6.9% of the students stayed in the PG hostel, relatives and shared rented house. Study habits of the students were observed that 83.6% of them had self- motivation rest of the students had the habit of group studies (5.2%), motivated by parents 9.5% and 1.7% not mentioned their study habit.

The percentage of marks obtained in the PUC board exam is directly associated with the first year examination. It is statistically significant (p-0.000). Figure one depicts that higher the percentage of marks obtained in the board exam higher is the marks in first year MBBS exam.

Figure 2 reveals CET students who got the MBBS seat performed better than the students who got into COMED K and Management. The difference is statistically significant (p-0.000). The students who got the COMEDK seat also performed better than those who got management seats.

Table 1 depicts that Mean score of note taking, test preparation and time management is significantly different between male and female students where female mean score is higher than male mean scores and the P-value is shown in the table.

Table 2 shows that study skills factors were cross classified by marks obtained in the first year MBBS examination. No clear-cut increasing trend is observed with the percentage of marks obtained and the study skill factors. The observed means of Text book, note taking, memory, test preparation and time management were not statistically significant among the different categories made based on marks obtained in the first year MBBS examination. It was observed that Concentration skill was statistically significant (P= 0.014).

Table 3 results show the correlation of study skills factors, like memory, test preparation, concentration, time management, text book reading and notes taking with the marks obtained in the first year MBBS and one percentage in PU is also included.

The study skills factors were not significantly correlated with the first year MBBS percentage of marks except text book reading. However the memory is correlated with the test preparation (0.418), concentration (0.345) and time management (0.419), it shows that memory is having significant moderate correlation with the rest of the study skills factors. Text book reading and PU% of mark is meagrely correlated, Text book reading is positively correlated with habit of note taking (0.361). PUC% of mark and MBBS 1st year is highly positively correlated.

The test preparation is correlated with concentration (0.451) and with Time management (0.573). Here also we have observed test preparation have moderate significant correlation with concentration, time management. Similar trend continued in the correlation between concentration and time management (0.413) and it is significant.

Based on the research result 44 students were selected with high and low performance in First year MBBS and who had scored greater and lesser in study skills. Students were interviewed individually and reasons were identified. Almost all the students expressed that they had lack of seriousness and focus on their part, irregular study habits and poor motivation, difficulty in understanding the subjects, poor planning and time management and adjustment issues with family and friends.

Discussion:

As we age our reading habits and study skills improve. Each individual learns through different pattern and adopt new techniques to remember. Smith and Dalton reports a learning style as a unique and habitual behaviour of acquiring knowledge and skills through everyday study or experience2.It is observed in the present study that majority of the students were self-directed learners but had difficulty in planning the study habits in the initial three months i.e. till the first internals. Similarly Nourian et al and Nagaraj and Pradeep study reveal that the most marked problems were in the areas of time management, concentration, reading speed, note taking, study habits and comprehension.3,4 In the present study results indicate in terms of gender,mean score is not significantly different between male and female students, but in note taking, test preparations, and time management mean scores were higher among females than males which was similar to other studies. {Madhavi et al and Nourian et al }3,5

In the personal interview students identified following issues for poor academic performance - Lack of seriousness and focus on their part, irregular study habits and poor motivation, difficulty in understanding the subjects, poor planning and time management and adjustment issues with family and friends. Students wanted early clinical exposure in the preclinical years and also learning through unimodal, multimodal, trimodal and quadrimodal preferences. There were no gender difference observed in selecting learning preferences, similar was found in the studies of Zeynep and Melis and Shah et al6,7.

Conclusion:

Learning is a process which needs acquiring new study skills and learning style to pursue consistent academic achievement. Our study identified medical students' need to be strengthened with regular study habits. Interview also revealed that students prefer multimodal method hence the teaching should be altered to suit the need of the medical student. Exposing the students to various aspects of study skills at the start of medical school would help them to adopt the good practices and achieve better academic performance.

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