Original Research Article

Assessment of learning skills using Denver congos study scale tool in the first year MBBS students of Andhra Medical College, Visakhapatnam, Andhra Pradesh, India

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ABSTRACT

Background: Though students have been admitted through merit system and are having consistent academic performance in school some are not performing well in the medical education. This may be because college learning skills are different from schooling. This study is taken up to assess the learning skills in the first year MBBS students. The objectives were to study the pattern of learning skills among first year MBBS using DCSSI tool (Denver Congos Study Scale Inventory).

Methods: It was a observational analytical study conducted in June 2016. Study subjects include all first year MBBS students who are willing to participate in the study. DCSSI tool (Denver Congos Study Scale Inventory) was used. Six variables are taken into account to assess their learning skills, they are text book, note taking, memory, test preparation and concentration skills scores. Based on the bench mark scores, each skill is separately assessed. Statistical Analysis: Analyzed using Microsoft excel and SPSS ver 17.

Results: In the present study 76.9% of the students have poor text book reading skills score, 81.7% of students have poor notes taking skills scores, 30.8% of students have poor memory skills scores, 59.6% of students have poor concentration scores and 87.5% of students have poor time management scores.

Conclusions: We observed poor learning skills in students so there is a need to include the learning skills in the curriculum to improve the overall skills so as to improve their overall performance.

Keywords: Andhra medical college, DCSSI tool, Learning skills, Medical students

INTRODUCTION

The medical education system in India is undergoing a transition where there is a shift in teaching-learning from being teacher centric to student centric. The transition from school level learning to college level teaching and the learning from multiple sources and methods is challenging for the student. Though students have been admitted through merit system and are having consistent academic performance in school, some are not performing well in the Medical education assessment.[1] Reasons for the poor performance in the first year of medical studies schools may be many including faulty learning skills.

Estimating the study skills may help the students to improve their academic performance by identifying the weak domains and focus to improve upon them. In this context this study is taken up to assess the study skills in the first year MBBS students.

Objectives

- To study the pattern of learning skills among First year MBBS students using DCSSI tool (Denver Congos Study Scale Inventory).
- To study relationship between the Skill scores with the outcome of the internal assessment exam.

METHODS

It was an observational analytical study conducted in June 2016. Study subjects include all first year MBBS students who are willing to participate in the study. DCSSI tool (Denver Congos Study Scale Inventory) was used as tool. Six variables are taken into account to assess their learning skills, they are text book, note taking, memory, test preparation and concentration skills scores. Based on the bench mark scores, each skill is separately assessed.

Statistical Analysis: Analyzed using Microsoft excel and SPSS ver 17.

The DCSSI is a validated copy righted study skills inventory questionnaire.[2] It consists of six domains namely text book, notes taking, memory, test preparation, concentration and time management. Each of the six domains had 5 to 13 components and each component on a five point rating scale. A prior permission from the Author has been obtained to use the Denver congos study scale inventory tool. First year students have been given the tool and explained them in both languages (english and telugu) before asking them to tick in appropriate cell. Students who are absent and not willing to participate in the study are not included. Six domains are taken into account to assess their learning skills, they are text book, notes taking, memory, test preparation, concentration and time management domains. Based on the bench mark scores, each skill is separately assessed.

RESULTS

A total of 104 students were participated in the study. The mean age of study participants is 18 years. The Measures of all the 6 domains are summarized in the Table 1.

In the present study 76.9% of the students have poor text book reading skills score, 81.7% of students have poor notes taking skills scores, 30.8% of students have poor memory skills scores, 59.6% of students have test preparation, and 38.5% of students have poor concentration scores and 87.5% of students have poor time management scores as shown in Figure 1-6.

Table 1: Analysis of domains.

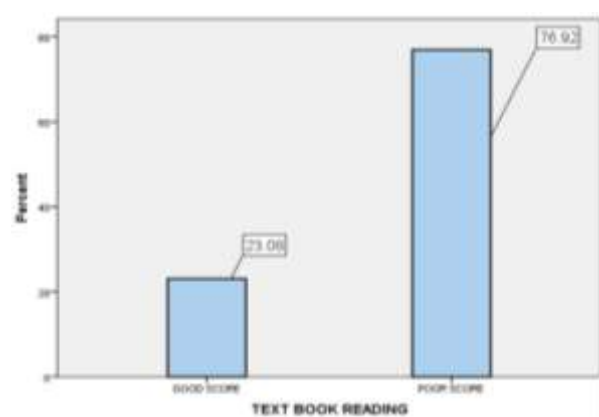|	Text book reading (8Q)	Notes taking (6Q)	Memory (9Q)	Test preparation (13Q)	Concentration (10Q)	Time management (6Q)
Mean	25.95	15.31	31.58	38.16	35.52	14.55
Std. Deviation	3.923	4.565	5.285	7.024	4.091	4.713
Minimum	18	6	18	23	25	6
Maximum	36	28	45	55	45	30

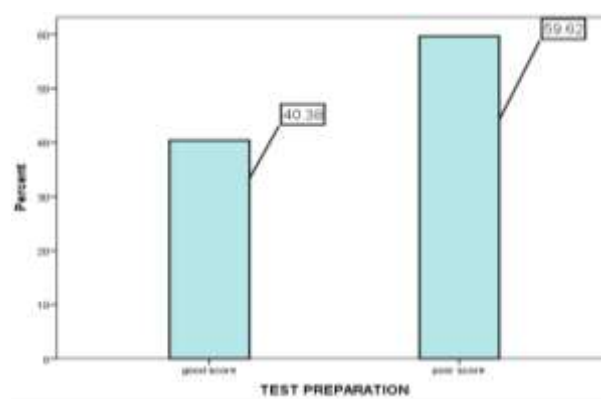**Figure 1: Text book reading skills score.**

Figure 2: Test preparation skills score.

The scores obtained on DCSSI tool were further related to poor performance of the students in their latest internal assessment marks. The results are represented as shown in Table 2.
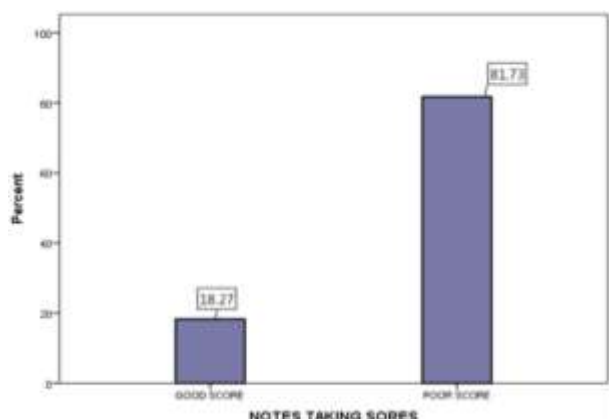

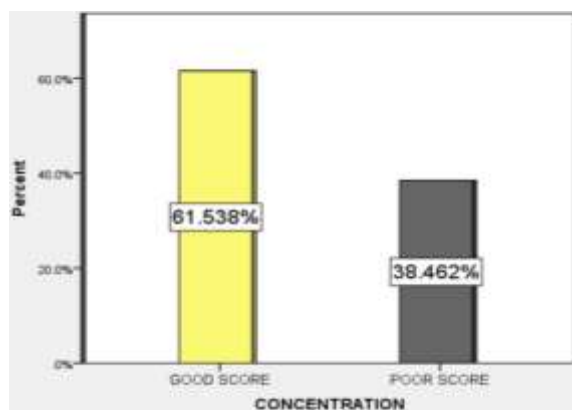**Figure 3: Notes taking skills score.**

Figure 4: Concentration skills score.

In anatomy 45 students have failed (those who got less than 50% of marks) in those students on future analysis 82% of students have poor text book reading skills score, 78% of students have poor notes taking skills scores and 89% of students have poor time management scores.
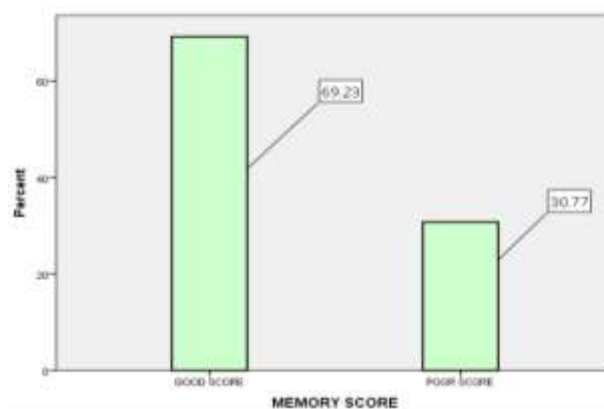

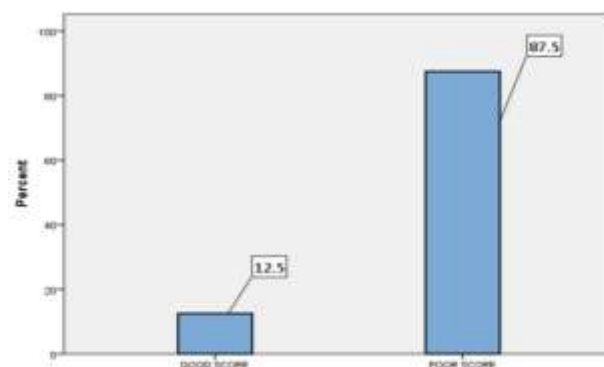**Figure 5: Memory skills score.**

Figure 6: Time management skills score.

In physiology 54 students have failed (those who got less than 50% of marks) in those students on future analysis 76% of students have poor text book reading skills score, 87% of students have poor notes taking skills scores and 87 % of students have poor time management scores.

In biochemistry 20 students have failed (those who got less than 50% of marks) in those students on future analysis 75% of students have poor text book reading skills score, 75% of students have poor notes taking skills scores and 100% of students have poor time management scores.

Table 2: Domains versus subjects among failed students.

Domain	Anatomy (%)		Physiology (%)		Biochemistry (%)		Chi-square value	P value
	Poor	Good	Poor	Good	Poor	Good		
Text book	82	18	76	24	75	25	1.653	P>0.05
Notes taking	78	22	87	13	75	25	4.875	P>0.05
Memory	27	73	32	68	40	60	3.889	P>0.05
Test preparation	58	42	59	41	70	30	3.776	P>0.05
Concentration	42	58	43	57	65	35	13.52	P<0.05
Time management	89	11	87	13	100	0	13.31	P<0.05 *

*Fishers exact probability test value is P=0.00014.

DISCUSSION

Poor learning skills have been observed in students especially in time management, notes taking and text book reading similar findings have been reported in the study conducted by Madhavi S et al where the main problems among students were time management, concentration, note taking and test preparation.[3] Study conducted by Nagaraj C et al revealed that memorizing notes and failure to organize main ideas and details were associated with bad performance of medical students.[4] Nourian et al in their study on evaluation of the study habits and skills in medical students and interns on study skills found that medical students had a problem with time management, concentration, reading speed, note taking, study habits and comprehension.[5] Nouhi *et al* in their study of study habits and skills and academic achievement of students in Kerman University of medical sciences observed that the major defects in the study skills of the students were planning and time management followed by concentration and note taking skills.[6] In study conducted by Reid et al showed that possessing a scheduled plan, profound study along with concentration can improve learning in medical students.[7] Frank PM recommended that conducting study skill classes for the first year medical students would help in improving their academic performance.[8]

CONCLUSION

Poor learning skills have been observed in the first year medical students especially in time management, notes taking and text book reading domains. So there is a need to include the learning skills in the curriculum to improve the overall skills so as to improve their overall performance.

ACKNOWLEDGEMENTS

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