RESEARCH PAPER

DETERMINATION OF STUDY HABITS PREVALENT AMONG MEDICAL STUDENTS AND FACTORS AFFECTING THEIR CHOICES

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ABSTRACT
Aims and Background: Students in a medical college exhibit a spectrum of academic performances. While a few consistently perform excellently, a few others struggle to obtain passing marks. We designed this study to recognise the prevalent study habits among undergraduate medical students, identify the factors that may influence their behaviour and evaluate whether there is a relationship between the study habits and their academic performance. **Methods:** A cross-sectional study was conducted over six months on MBBS students in a tertiary care medical college in North Karnataka, India. A validated, self-administered questionnaire was distributed, covering demographics, study habits, academic environment, motivational factors, and academic performance. A total of 364 students participated. Data was analyzed using SPSS v20.0. Associations were tested with chi-square/Fisher's exact tests, and p-values ≤0.05 were considered significant. **Results:** More than half (56%) of our participants were in the age group 21-25 years, with a male predominance (60.7%). Nearly half (48.9%) achieved good academic performance (65-74%), while 5.2% scored above 75%. Academic performance showed significant association with age, gender and year of study ($p<0.001$). Preference of students to study in the evening and utilisation of faculty guidance by the students also showed to be significantly linked to better performance ($p<0.05$). While, their residence, access to study resources, and study with companions showed no significant influence. **Conclusion:** The study underlines that consistent study timings, utilisation of faculty support and keeping a structured study habits significantly influence medical students' academic performance.
Keywords: Academic performance, Learning patterns, Medical students, Study habits
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INTRODUCTION
Study Habit of every student is one of the most important factors that affect the understanding regarding a certain subject which are basically moulded during school days. The study habits can be good, or bad and include being organized, keeping good notes, reading one's textbook, listening in class, working every day, skipping class, focusing on other activities instead of studying, and losing your work. These habits partially determine chances of understanding of subject among the students thereby good or poor grades. Habit can be a learned, or fixed way of behaving to satisfy a given motive. Based on this, a person involved in studying forms his own behaviours towards the understanding of the subjects while studying. These behaviours can be affected by various aspects of the student like, environment, attitude, teachers, books, reading materials, place of the study, concentration and discipline.[1]

Medical education is one of the difficult academic quest, which requires students to adapt and hold massive and complex information in a short

period. The academic success of medical students is shaped by a variety of factors, with study habits emerging as one of the most significant predictors of performance.[2] Defined as the combination of techniques and behaviors employed by students to enhance their learning, effective study habits facilitate better comprehension, retention, and application of knowledge.[3] Study habits, encompassing behaviors and techniques employed by students to process and internalize educational material, are recognized as pivotal factors influencing academic outcomes.[4] These habits, as numerous studies suggest, can significantly impact students' academic achievements, particularly in the demanding field of medicine.[5,6]

Research into study habits among medical students highlights both universal practices and unique approaches shaped by cultural, institutional, and personal factors. Effective study habits such as structured time management, active engagement with lecture materials, and consistent review of concepts are positively correlated with academic success. For instance, high-performing medical students often prioritize daily study routines of six to eight hours, make effective use of technology, and balance self-directed learning with peer discussions.[7] Furthermore, reviewing lecture material on the same day is a habit commonly linked to better comprehension and retention, as evidenced by the "forgetting curve" theory and corroborated by studies on memory optimization strategies.[8]

Despite the clear benefits of robust study strategies, research reveals considerable variation in study habits among medical students, often influenced by factors such as gender, educational background, and socio-environmental contexts.[9] Similarly, studies have found that students who integrate effective time management, goal setting, and resource prioritization strategies tend to excel academically.[7,9]

In medical colleges, students from various parts of the country take graduate and post-graduate education. Even international students do get admissions in our medical colleges. Hence with a lot of diversity among students, we find a lot of variations in their studying and learning patterns.[10] Students commencing their medical training arrive with different educational backgrounds and a diverse range of learning experiences. Consequently, students develop preferred approaches in acquiring and processing information or learning style methods.[11,12] Understanding of insights into this important aspect, the students can be counselled for rectification of their study pattern to cope up more effective understanding of the subjects thereby make them proficient medical graduates. Considering these facts, the present study was planned to identify the common learning behaviours among MBBS students, to understand the factors that influence these behaviours and to examine the relationship between these study habits and academic performance which may provide actionable insights for educators and learners alike with the ultimate goal to foster strategies that support optimal learning, improve academic performance, and promote holistic success in medical education.

MATERIAL AND METHODS

Study design

This cross-sectional survey was carried out for the period of six months from January 2025 to June 2025 in the department of surgery of a tertiary care hospital situated in North Karnataka, South India. Prior to the commencement, ethical clearance was obtained from the Institutional Ethics committee.

Selection and Description of Participants

Based on Cochran's formula $n = Z^2\ pq/d^2$, where, p is the (estimated) proportion of the population which has the attribute in question that is 83%, based on previous study[7] where proportion of students who studied using lecture slides was 83%; d as the margin of error (that is, 5% of q = 100-p that is, (100-83=17) 17, and z score for 95%confidence interval as 1.96, the minimum effect size required was 216.81≈217 students which was rounded off to 220. However, as 360 students expressed their willingness to participate in the study and fulfilled the selection criterion. Hence, a total of 360 students were enrolled based on convenient sampling. Prior to the enrolment, the students fulfilling the selection criteria were briefed about the nature of the study and a written informed consent was obtained from them to participate in the study.

Technical information

The data was collected through a self-administered questionnaire uploaded on the google forms after extensive review of literature. The Questionnaire was divided into six sections viz. Section zero (Consent to participate in the study), section one (Demographic information), section two (primary study habits), section three (academic environment and influences), section four (motivation and personal preferences), section five (academic performance), section six (open-ended questions). Two senior researchers validated the questionnaire. Pilot test was done with five participants for language comprehension and the time taken to complete the questionnaire. Anonymity and confidentiality of the participants was maintained.

The student's responses were ascertained for common learning behaviours, academic performance, factors that influence these behaviours

and an attempt was made to determine the relationship between study habits and academic performance.

Statistical analysis

The data obtained was coded and entered into Microsoft Excel spread sheet and master chart was prepared. The data was analyzed using SPSS statistical software version 20.0. Categorical data was expressed in terms of rates, ratios and percentages. Continuous data was expressed as mean±standard deviation (SD). The comparison of categorical data was done using chi-square test or Fisher's exact test. All tests were two-tailed and at 95% confidence interval (CI), a probability value (p value) of less than or equal to 0.050 was considered to be statistically significant.

RESULTS

The descriptive data including age and year of study are as shown in table 1. Excellent academic performance was noted in 48.90% of the students with 65 to 74% followed by 50 to 64% (32.69%) (Table 2).

Table 1: Descriptive data of the study population

Parameters	Mean (n=150)		Median	IQR	Range	
	Mean	SD			Min	Max
Age (Years)	20.63	1.46	21.00	2.00	18.00	25.00
Year of study	2.40	1.09	2.00	2.00	1.00	4.00

Table 2: Distribution of students according to academic performance during last year

Response	Distribution	
	No	%
<50%	37	10.16
>75%	19	5.22
50 to 64%	119	32.69
65 to 74%	178	48.90
No response	11	3.02
Total	**364**	**100.00**

The demographic characteristics of the students ernrolled are as highlighted in table 2. It was observed that, 364 students, 204 (56.04%) were aged between 21 to 25 years and 60.21% were males with male to female ratio of 1.54:1. With regards to year of study, 29.67% of the students were studying in third year followed by first year (28.30%). Further, 91.21% of the students stayed at hostel. The student's responses towards study patterns and availability of resources are as shown in table two and three. Statistically significant relationship was noted between the availability of faculty for guidance and preferred time for studying with the academic performance of the student during the last year (Table 3 and 4)

Table 3. Distribution of students according to the demographic data and its association with academic performance during last year

Parameters	Response	Academic performance during last year										Total (n=364)		p value
		>75% (n=19)		65 to 74% (n=178)		50 to 64% (n=119)		<50% (n=37)		No response (n=11)				
		No	%	No	%	No	%	No	%	No	%	No	%	
Age group (Years)	≤20	7	4.38	67	41.88	50	31.25	32	20.00	4	2.50	160	43.96	<0.001
	21 to 25	12	5.88	111	54.41	69	33.82	5	2.45	7	3.43	204	56.04	
Gender	Male	13	5.88	123	55.66	66	29.86	11	4.98	8	3.62	221	60.71	<0.001
	Female	6	4.20	55	38.46	53	37.06	26	18.18	3	2.10	143	39.29	
Year of study	First	5	4.85	27	26.21	36	34.95	30	29.13	5	4.85	103	28.30	<0.001
	Second	5	6.17	43	53.09	28	34.57	5	6.17	0	0.00	81	22.25	*
	Third	3	2.78	53	49.07	46	42.59	1	0.93	5	4.63	108	29.67	

	Fourth	6	8.33	55	76.39	9	12.50	1	1.39	1	1.39	72	19.78		
Living arrangement	Family	2	8.33	6	25.00	11	45.83	3	12.50	2	8.33	24	6.59	0.124	
	Hostel	17	5.12	169	50.90	103	31.02	34	10.24	9	2.71	332	91.21		
	Separate room	0	0.00	3	37.50	5	62.50	0	0.00	0	0.00	8	2.20		

Table 4. Distribution of students according to the study patterns and its association with academic performance during last year

Study pattern	**Response**	**Academic performance during last year**										**Total (n=364)**		**p value**
		>75% (n=19)		**65 to 74% (n=178)**		**50 to 64% (n=119)**		**<50% (n=37)**		**No response (n=11)**				
		No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	
Self study	Always	1	2.44	24	58.54	13	31.71	3	7.32	0	0.00	41	11.26	0.291
	Freq	8	7.02	58	50.	37	32.	6	5.26	5	4.39	114	31.	
	uently				88		46						32	
	Never	2	14.29	6	42.86	4	28.57	1	7.14	1	7.14	14	3.85	
	Rarely	2	3.33	25	41.67	24	40.00	6	10.00	3	5.00	60	16.48	
	Sometimes	6	4.44	65	48.15	41	30.37	21	15.56	2	1.48	135	37.09	
Teacher dependent	Always	2	8.70	7	30.43	9	39.13	4	17.39	1	4.35	23	6.32	0.577
	Frequently	6	5.66	47	44.34	38	35.85	14	13.21	1	0.94	106	29.12	
	Never	2	8.70	12	52.17	7	30.43	2	8.70	0	0.00	23	6.32	
	Rarely	3	3.85	45	57.69	19	24.36	7	8.97	4	5.13	78	21.43	
	Sometimes	6	4.48	67	50.00	46	34.33	10	7.46	5	3.73	134	36.81	

	imes													
Sequentiallearning	Always	7	6.36	43	39.09	43	39.09	15	13.64	2	1.82	110	30.22	0.457
	Frequently	6	5.77	53	50.96	30	28.85	10	9.62	5	4.81	104	28.57	
	Never	1	8.33	8	66.67	2	16.67	1	8.33	0	0.00	12	3.30	
	Rarely	0	0.00	20	54.05	12	32.43	5	13.51	0	0.00	37	10.16	
	Sometimes	5	4.95	54	53.47	32	31.68	6	5.94	4	3.96	101	27.75	
Textbookfirstappr	Always	0	0.00	4	30.77	6	46.15	3	23.08	0	0.00	13	3.57	0.159
	Frequently	2	8.33	16	66.67	5	20.83	1	4.17	0	0.00	24	6.59	
	Ne	4	5.	34	48	23	32	6	8.	3	4.	70	19	
oach	ver		71		.57		.86		57		29		.23	
	Rarely	7	5.38	60	46.15	52	40.00	6	4.62	5	3.85	130	35.71	
	Sometimes	6	4.76	64	50.79	32	25.40	21	16.67	3	2.38	126	34.62	
	No response	0	0.00	0	0.00	1	100.00	0	0.00	0	0.00	1	0.27	
Use ofsupplementarysources	Always	5	5.32	55	58.51	21	22.34	12	12.77	1	1.06	94	25.82	0.306
	Frequently	9	6.00	65	43.33	59	39.33	13	8.67	4	2.67	150	41.21	
	Never	0	0.00	2	50.00	2	50.00	0	0.00	0	0.00	4	1.10	
	Rarely	3	9.68	17	54.84	6	19.35	3	9.68	2	6.45	31	8.52	
	So	2	2.	39	45	31	36	9	10	4	4.	85	23	

	metimes		35		.88		.47		.59		71		.35	
Study environment	Conducive	9	55.81	86	555.48	46	29.68	13	8.39	1	0.65	155	42.58	0.299
	Neutral	4	33.17	54	422.86	45	355.71	16	12.70	7	55.56	126	34.62	
	Unconducive	2	66.25	13	400.63	11	34.38	5	15.63	1	33.13	32	8.79	
	Very conducive	2	77.14	11	399.29	11	39.29	2	7.14	2	77.14	28	7.69	
	Very uncon	2	88.70	14	600.87	6	26.09	1	4.35	0	0.00	23	6.32	

	ducive													
Peer competition	Does not affect	1	55.88	10	588.82	5	29.41	1	55.88	0	0.00	17	4.67	0.646
	Neutral	2	22.35	43	500.59	29	34.12	7	88.24	4	44.71	85	23.35	
	Rarely affects	1	44.00	10	400.00	8	32.00	3	12.00	3	12.00	25	6.87	
	Somewhat affects	10	66.17	74	455.68	57	355.19	17	10.49	4	2.47	162	44.51	
	St	5	66.	40	54	19	26	9	12	0	0.	73	20	

	rongly affects		85		.79		.03		.33		00		.05	
	No response	0	0.00	1	50.00	1	50.00	0	0.00	0	0.00	2	0.55	
Preferred time for study	Afternoon	0	0.00	2	50.00	2	50.00	0	0.00	0	0.00	4	1.10	**0.001**
	Evening	4	2.90	84	60.87	39	28.26	9	6.52	2	1.45	138	37.91	
	Morning	7	7.87	49	55.06	20	22.47	8	8.99	5	5.62	89	24.45	
	Night	8	6.02	43	32.33	58	43.61	20	15.04	4	3.01	133	36.54	

Table 5. Distribution of students according to the availability of resources and its association with academic performance during last year

Study patterns	**Response**	**Academic performance during last year**										**Total (n=364)**		**p value**
		>75% (n=19)		**65 to 74 % (n=178)**		**50 to 64 % (n=119)**		**<50 % (n=37)**		**No response (n=11)**				
		No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	
Use of supplementary sources	Always	5	5.32	55	58.51	21	22.34	12	12.77	1	1.06	94	25.82	0.3006
	Frequentlly	9	6.00	65	43.33	59	39.33	13	8.67	4	2.67	150	41.21	
	Never	0	0.00	2	50.00	2	50.00	0	0.00	0	0.00	4	1.10	
	Rarely	3	9.68	17	54.84	6	19.35	3	9.68	2	6.45	31	8.52	
	Sometimes	2	2.35	39	45.88	31	36.47	9	10.59	4	4.71	85	23.35	
Availability of study companions	Always	4	10.00	19	47.50	11	27.50	6	15.00	0	0.00	40	10.99	0.327
	Frequentlly	5	5.15	47	48.45	33	34.02	10	10.31	2	2.06	97	26.65	
	Never	2	8.70	12	52.17	5	21.74	1	4.35	3	13.04	23	6.32	
	Rarely	3	4.17	37	51.39	25	34.72	4	5.56	3	4.17	72	19.78	

	Sometimes	5	3.79	63	47.73	45	34.09	16	12.12	3	2.27	132	36.26		
Influence of seniors study habits	No	4	100.00	19	47.50	11	27.50	6	15.00	0	0.00	40	100.99		0.327
	Neutral	5	5.15	47	48.45	33	34.02	10	10.31	2	2.06	97	26.65		
	Rarely	2	8.70	12	52.17	5	21.74	1	4.35	3	13.04	23	6.32		
	Somewhat	3	4.17	37	51.39	25	34.72	4	5.56	3	4.17	72	19.78		
	Strong	5	3.79	63	47.73	45	34.09	16	12.12	3	2.27	132	36.26		
Access to library facilities	Neutral	7	5.79	56	46.28	34	28.10	17	14.05	7	5.79	121	33.24		0.283
	Suitable	4	3.08	64	49.23	54	41.54	7	5.38	1	0.77	130	35.71		
	Unsuitable	2	5.88	16	47.06	9	26.47	5	14.71	2	5.88	34	9.34		
	Very unsuitable	1	3.45	16	55.17	8	27.59	3	10.34	1	3.45	29	7.97		
	Very su	5	10.	25	51.	14	28.	5	10.	0	0.00	49	13.		
	itable		20		02		57		20				46		
	No response	0	0.00	1	100.00	0	0.00	0	0.00	0	0.00	1	0.27		
Availability of Study Resources (Textbooks, Notes, etc.)	Difficult	2	8.70	10	43.48	6	26.09	5	21.74	0	0.00	23	6.32		0.198
	Easy	9	4.62	102	52.31	66	33.85	13	6.67	5	2.56	195	53.57		
	Neutral	4	4.44	40	44.44	30	33.33	13	14.44	3	3.33	90	24.73		
	Very difficult	0	0.00	0	0.00	0	0.00	1	100.00	0	0.00	1	0.27		
	Very easy	4	7.27	26	47.27	17	30.91	5	9.09	3	5.45	55	151.11		
Availability of faculty for guidance	Always	5	8.47	22	37.29	21	35.59	10	16.95	1	1.69	59	16.21		**0.009**
	Frequentlly	4	3.28	65	53.28	39	31.97	12	9.84	2	1.64	122	33.52		
	Never	0	0.00	3	27.27	6	54.55	2	18.18	0	0.00	11	3.02		
	Rarely	4	8.00	23	46.00	16	32.00	3	6.00	4	8.00	50	13.74		

	Sometimes	5	4.13	65	53.72	37	30.58	10	8.26	4	3.31	121	33.24	
	No response	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.27	
Study companions	Always	4	9.30	18	41.86	14	32.56	7	16.28	0	0.00	43	11.81	0.261
	Frequently	3	3.23	46	49.46	32	34.41	10	10.75	2	2.15	93	25.55	
	Never	4	18.18	11	50.00	3	13.64	3	13.64	1	4.55	22	6.04	
	Rarely	2	3.51	30	52.63	19	33.33	3	5.26	3	5.26	57	15.66	
	Sometimes	6	4.03	73	48.99	51	34.23	14	9.40	5	3.36	149	40.93	
Time spent on studying outside the class (hours)	1 to 2	7	3.47	101	50.00	67	33.17	19	9.41	8	3.96	202	55.49	0.415
	3 to 4	9	8.04	57	50.89	32	28.57	12	10.71	2	1.79	112	30.77	
	< 1	2	5.00	15	37.50	17	42.50	6	15.00	0	0.00	40	10.99	
	> 4	1	10.00	5	50.00	3	30.00	0	0.00	1	10.00	10	2.75	

DISCUSSION

This study on South Indian medical students demonstrates various study patterns were along with academic performance. Regarding academic performance, it was observed that, slightly less than half of the students (48.90%) had good scoring that is, between 65 to 74% while excellent scoring was noted in few students (5.22%). The pattern of academic performance noted in the present study was comparable with a study by Rajendra R. et al.[13] from Mumbai (2019) where, high, average and low achievers were 18.64%, 63.55% and 17.79% respectively.

In the present study the age of the students ranged from 18 to 25 years with mean and median age of 20.63±1.46 and 21 (IQR 2.00) years and most of the students (56.04%) were aged from 21 to 25 years. The academic performance of the students aged from 21 to 25 years was significantly better compared to those who were aged ≤ 20 years that is, excellent score (>75%) (5.88% vs 4.38%) good scores (65 to 74%) (54.41% vs 41.88%) and average scores (50 to 64%) (33.82% vs 31.25%) while, poor performance scores (< 50%) were significantly high among those who were aged ≤ 20 years compared to those who were aged from 21 to 25 years (20% vs 2.45%) ($p<0.001$). These observations suggest significant association between age and academic performance especially better academic performance associated with higher age. The age distribution pattern of the medical students noted in the present study sharply corroborated with a cross-sectional survey by Baothman A. et al.[14] (2018) to determine the preferences of medical and health science students about various study habits and to evaluate the effect of study habits on academic performance on a total of 150 undergraduate, medical and health science, male students where, the mean age of the students was 20.2±1.73 years. The mean age of the students noted in the present study was also, comparable with a prospective interventional study reported by Sunil Kumar D. et al.[15] (2016) from Karnataka, India where, mean age of students in private college was 20.7±1.3 years and Government College was 21.13±0.51 years. In contrast Alireza Didarloo et al.[16] (2014) showed slightly higher mean age of medical students 22.56±3.9 years compared to the present study. In contrast to the significant association noted in the present study between higher age and academic performance, a cross-sectional survey by Baothman A. et al.[14] (2018) found an inverse correlation between the student average GPA and their age, as older age leads to less average GPA ($p=<0.01$, $r = -0.439$).

In this study majority of the students (60.71%) were males with male to female ratio of

1.54:1. Further, the academic performance of the males was significantly better than females that is, excellent score (>75%) (5.88% vs 4.20%) good scores (65 to 74%) (55.66% vs 38.46%) but average scores (50 to 64%) (37.06% vs 29.86%) and poor performance scores (< 50%) (18.18% vs 4.98%) were significantly high among females compared to males ($p<0.001$). These observations demonstrate significant association between gender and academic performance. Alireza Didarloo et al.[15] (2014) also reported majority of the male students (66.5%) which was consistent with the present study. More recently, Dyavarishetty PV, Pol AA.[17] (2025) in their study to understand the various learning methods adopted by undergraduate medical students in the city of Mumbai, India also reported male preponderance (62.20%) which was consistent with the present study. In contrast, a study by Sunil Kumar SD. et al.[18] (2016) reported maximum number of female students (61.50%) than males (38.5%) in their study. The gender bias noted with respect to academic performance in the present study seems to be novel finding from the present study and requires further validation due lack of similar data in the literature.

In the current study, most of the students were studying in third year (29.67%). Further, significant association was also noted with respect to year of study that is, excellent and good academic scores were significantly high among those who were studying in fourth year than those who were studying in first, second and third year. Similarly, significantly lower number of students with average and poor academic performance score were noted in fourth years compared to first, second and third year ($p<0.001$). Again, these observations hypothesize strong association between year of study and academic performance.

In the present study majority of the students resided in hostel (91.21%) but the academic performance was independent of living arrangement ($p=0.124$). Similar observations were reported in a study by Shetty S. et al.[19] (2021) where, majority of the students (70%) resided in the hostel.

Further, specific study patterns and requirement of specific resources were observed in the present study among the medical students that is, slightly less than one third of the students frequently adopted self-study (31.32%), teacher dependent (29.12%) and always sequential learning (30.22%). More than one third of the students prompted use of supplementary sources (41.21%), sometimes textbook approach first (34.62%), conducive study environment (42.58%), somewhat effect of peer competition (44.51%), evening studies (37.91%), availability of faculty for guidance (33.52%), sometimes availability of study companions (36.26%), strong influence of senior study habits (36.26% each), suitable access to library facilities (35.71%), sometimes availability of study companions (40.93%) and more than half of the students spent one to two hours outside the class (55.49%). However, Dyavarishetty PV and Pol AA.[17] (2025) in their study reported that, on the regular days 71.2% studied for a duration of three to six hours, while 7.2% studied seven or more hours and another 19.8% reported studying one to two hours which quite different from the present study also, majority of the students mainly studied from standard textbooks (80.2%) which was comparable with the present study.

In the present study among the study patterns, the preferred time for studying and availability of faculty for guidance significantly influenced the academic performance that is, majority of the study who studied during the evening (60.87%) had good academic score and significantly higher number of students who studied in the morning had excellent score (7.87%) while, maximum students who studies in the afternoon and night had average (50%) and poor score (15.04%). Surprisingly, this observation was statistically significant ($p<0.001$).

Another important observation worth discussion is that availability of faulty for guidance. In the present study it was observed that, maximum students who studied with always availability of faulty for guidance had score suggestive of excellent academic performance (8.47%). Also, among those with frequent availability of faulty for guidance had score suggestive of good academic performance (53.28%). On the contrary, maximum students who never had availability of faulty for guidance had scores suggestive of average and poor academic performance (54.55% and 18.18% respectively). This observation was statistically significant ($p=0.009$) suggesting that, evening study pattern and availability of faulty for guidance significantly influenced academic performance of the students. A study by Rajendran R. et al.[13] (2019) also reported that, the teacher of the undergraduate medical student has an important role to play in the development of these skills. Study strategies that are effective in high school may not be as effective in college. At-risk medical students entering medical school plan to increase their number of study hours in the first year of medical school. However, given the busy schedules required of a modern medical student, these expectations may not be congruent with a realistic study schedule. Students must learn to master complex subject material in an efficient and long-lasting manner.[13] the findings of the present study are strongly in agreement with the observations reported by Rajendran R. et al.[13] (2019). Another study by Shanmugananda P and Padma L.[20] (2013) concluded that high achievers

approach their teachers when in doubt a finding which was partly in agreement with the present study. Shetty S. et al.[19] in their study from Mangalore, India found no significant relationship found between study habits and academic performance. In addition, there was a significant association found between gender and study habits.

Overall, the present study highlights the spectrum of different study patterns followed by medical students and factors influencing the academic performance. It was observed that, most of the medical students are males and lie in the age band between 21 to 25 years with significant effect on academic performance. Further, frequent self-study, sometimes teacher dependent, always sequential learning, use of supplementary sources, textbook approach first, conducive study environment, somewhat effect of peer competition, evening studies, availability of faculty for guidance and availability of study companions sometimes, strong influence of senior study habits, suitable access to library facilities, studies duration of one to two hours outside the class were the important study patterns and resources utilised by the medical students in the study area. Not all but, preferred time for studying and availability of faculty for guidance had significant impact on the academic performance. The results of this study were based on various study habits that were not considered in previous studies and also, detailed analysis on the relationship between these habits and academic performance make the results of this study highly valid and reliable. However, the results of this study were based on relatively smaller sample size enrolled from single institute was an important limitation of the study.

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