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Original Research Article

Study on Assessment of Self-Directed Learning Readiness in the First Year MBBS Students

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Abstract

Background & Objectives: Self-directed learning (SDL) is regarded as the main tool which is an integral part of a student-centered medical curriculum. It is the degree to which a student acquires the ability, attitude, and personal characteristics required for self-directed learning. The objective of the present study was to explore the readiness for Self-Directed Learning (SDL) among first-year MBBS students enrolled at Government medical college, Srikakulam.

Methods: 150 first-year MBBS students were recruited to participate in this study. Among 150 students, 126 students participated in the study. Data was collected using Fischers 40-item Self-Directed Learning Readiness Scale (SDLRS). The student's response to each item of the Self-Directed Learning Readiness Scale was obtained on a 5-point Likert scale. Using SPSS 25, the data were analyzed. The Self-Directed Learning readiness was categorized as high (>150 scores) and low (<150 scores).

Results: The mean SDLRS score was 140.87±12.43 with 41 (33%) students scoring more than 150 indicating high readiness. The mean scores of self-controls (SC), self-management (SM), and desire for learning (DL) were 52.30±5.66, 46.03± 6.05, and 42.53± 5.72 respectively. The mean score for self-control was the highest of all the three components of the SDLRS followed by self-management, while the least mean score was for a desire for learning.

Conclusion: The present study revealed that the overall SDL readiness of participants was not up to the mark. Students had the ability for self-control and were motivated to self-management skills. However, they need guidance, and motivation to improve their self-learning skills.

Keywords: Desire for learning, First-year MBBS students, Self-Directed Learning Readiness (SDLR), Self-control, Self-management.

Introduction

For medical students, Self-directed learning (SDL) is regarded as the main tool which is an integral part of student-centered medical curriculum [1,2]. Self-directed learning is

defined as learning with own initiation and having responsibility for planning, implementing, and evaluating the effort [3]. Self-directed learning is the process in which medical students take the initiative to learn, determine their learning needs, set learning goals, identify the resources for learning, choose and implement strategies to gain knowledge, and evaluate their learning outcomes [4]. Self-directed learning readiness (SDLR) helps the student to acquire the ability, attitude, and personal characteristics required for self-directed learning [5].

In the present scenario, self-directed learning helps medical students to develop learning skills independently, being responsible, and being assertive which play an important role in a medical professional's career. Self-directed learning is adopted by medical educators to produce learners who can manage their learning in their profession and have a continuous zeal to acquire knowledge which helps in better decision-making [6]. Self-directed learning helps the health professional to be independent, confident in practice, motivated, self-disciplined, focus on goals, having medical throughout their professional career [7]. Nowadays the curriculum followed by medical institutions is intended to explore self-directed learning readiness in students under the guidance of NMC [8]. There are several aspects in today's medical education curriculum concerning SDL which includes early clinical exposure sessions [9] integrated teaching [10] tutorials, seminars by students, short-term research projects, and prize examination. Recent advances in medical education have focused attention on student-centered methods like problem-based learning which affirms the readiness for SDL [11].

Methods

This is a cross-sectional analytical study that was aimed to assess the self-directed learning readiness in the first-year MBBS students enrolled in Government medical college, Srikakulam. During data collection, verbal permission was taken from all the participants. A self-directed learning readiness scale questionnaire was used to collect the data; the scale was designed by Fishers *et al*., in 2001 [12]. It is a method for evaluating an individual's perception of their skills and attitudes associated with self-directed learning. It is a self-assessment tool that is aimed to assess three important domains: self-control, self-management, and desire for learning.

It includes 40 items grouped under three components: self-control (15 items) with a total score of 75, self-management (13 items) with a total score of 65, and desire for learning with a total score of 60 (12 items). The items were scored on a Likert scale from 1 to 5 and recorded the students' responses to each question were a Likert scale of 1 to 5.

The total score ranges from 40 to 200 with a cutoff score of 150, where a score above 150 indicates a high level of SDL readiness while a score below or equal to 150 indicates a low level of SDL readiness [13]. The domain-wise scores (self-control, self-management, desire for learning) were analyzed.

SDLR questionnaire along with demographic data like gender, age, place of stay (hostel/day scholar), presence of a physician in the family, area of residence of parents (rural or urban), and board of pre-university schooling was distributed. Students who were willing to participate were included in the study and those who were not willing to participate were excluded. Out of 150 batch students, 126 students participated in the present study while 24 students were absent. All 126 students were assessed for self-directed learning readiness.

The students were given assurance about the confidentiality of the questionnaire. Data were analyzed using SPSS version 25. An

Independent t-test was used to assess mean, standard deviation, and total SDLR scores. The readiness score was calculated by summing up the component scores. All the scores were calculated as mean+- standard deviation and rounded off.

Results

Out of 150 first-year MBBS students, 126 students participated in the study while 24 were absent. All 126(100%) students were assessed toward self-directed learning readiness.

Table 1: Demographic details of the study participants

Characteristics	No. (%)
Gender	
Boys	71(56%)
Girls	55(43%)
Area of residence of Parents	
Rural	27(21%)
Urban	99(78%)
Place of stay	
Hostellers	91(72%)
Day scholars	35(27%)
Board of pre-university schooling	
State Board	87(69%)
Central Board	39(30%)
Presence of a doctor in the family	
Yes	26(20%)
No	100(79%)

Table 2: Mean scores of self-control, self-management, desire for learning

SDLR components	Mean score (±SD)
self-control	52.30± 5.66
self-management	46.03± 6.05
desire for learning	42.53± 5.72
Overall SDLR score	140.87±12.43

The mean SDRL score was 140.87±12.43 with 85 (67%) students scoring <= 150 which indicates low readiness and 41 (33%) students scoring more than 150 which indicates high readiness as depicted in figure 1.

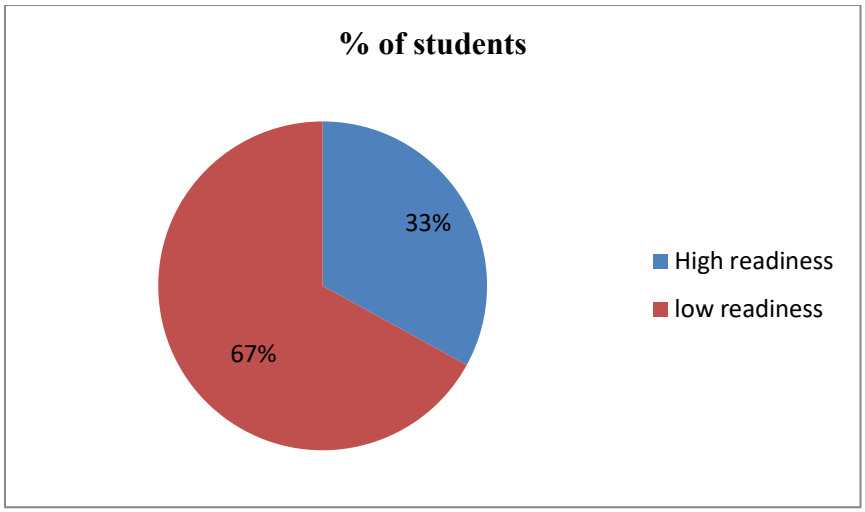

Figure 1: Distribution of students according to SDLRs

Table 3: Self-directed learning readiness scores of the students

Characteristics	Mean score (± SD)	t statistic	P value
Gender			
Boys(71)	139.34±13.43	1.58	0.118
Girls (55)	142.84±10.83		
Area of residence of Parents			
Rural (27)	140.41±10.19	-0.215	0.830
Urban(99)	140.99±13.02		
Place of stay			
Hostellers(91)	140.87±13.27	0.004	0.996
Day scholars(35)	140.86±10.12		
Presence of a doctor in the family			
Yes(26)	143.54±14.03	1.233	0.220
No (100)	140.17±11.96		
State Board(87)	140.24±12.46	-.840	0.403
Central board(39)	142.26±12.41		

It was observed that there was no significant difference in overall SDLR score among male and female students, hostellers and day scholars, rural and urban, presence or absence of physician in the family, state board, and central board which was depicted in Table: 3.

Table 4: Domain-specific scores of students

Components		Self-control	Self-management	Desire for learning
Gender	males	52.10±5.67	45.69±6.26	41.55±6.07
	females	52.56±5.68	46.47±5.79	43.80±5.00
	p-value	0.649	0.474	0.028
Area of residence of Parents	Rural	52.33±4.2	45.96±5.37	42.11 ± 5.15
	Urban	52.29±6.01	46.05±6.25	42.65±5.88
	p-value	0.974	0.947	0.668
	Hostellers	52.67±5.92	45.56±6.13	42.64±5.82

Place of stay	Day scholars	51.34±4.86	47.26±5.76	42.26±5.51
	p-value	0.240	0.160	0.740
Presence of a physician in the family	Yes	53.50±6.85	46.81±5.51	43.23±5.63
	No	51.99±5.30	45.83±6.2	42.35±5.75
	p-value	0.227	0.465	0.486
Board of schooling	State Board	52.02±5.51	46.34±6.18	41.87±5.91
	Central Board	52.92±5.98	45.33±5.77	44.00±5.02
	p-value	0.411	0.388	0.053

In Table 4, concerning gender, female students scored higher in all three domains of SDRL than male students. There was no significant difference in self-control (p=0.649), self-management domains(p=0.474), and readiness score(p=0.118). While there was a significant difference in desire for learning domain (p=0.028). Students from urban areas scored higher in self-management and desire for learning domains than those from rural areas. There was no significant difference in all three domains of SDRL. Hostellers scored higher in self-control, and desire for learning domains than day scholars. There was no significant difference in all three domains of SDRL. Students who had a physician in their family scored higher in all three domains of SDRL There was no significant difference in the domain scores by the presence of a physician in the family. Students who studied in the central board scored higher in self-control, and desire for learning domains compared to students from the state board. There was no significant difference in all three domains of SDRL.The mean overall SDRL score was highest for self-control, followed by self-management while the least score was for a desire for learning.

Discussion

Self-directed learning helps medical students in acquiring learning skills for confidence, motivation, and preparation for lifelong learning in their career [14]. In this study, the mean SDLR score was 140.87±12.43 with 41(33%) students scoring more than 150 which indicates high readiness. This is similar to a south Indian study at JIPMER by Kar *et al*., who reported a mean SDLR score of 140.4±24.4 with 30% of students showing high readiness [8]. Another study by Deyo *et al*. reported a mean SDLR score of 148.6±13.8 among first-year pharmacy students at the university of Maryland [15]. In the present study, a lower proportion of students (33%) showed high readiness toward SDL. Overall results of the present study indicated that less number of students have a positive attitude toward readiness for self-directed learning. Regarding self-control, the mean score was high, indicating the confidence and maturity of our students. In comparison to the encouraging results for self-control and self-management, the mean score of the desire for learning scale was less. This result indicated that students need support in self-learning skills especially in planning, and in systematic methodology for learning. Based on the results of the present study, it is advised that action plans should be taken to improve the self-learning skills of first-year medical students. We can achieve this by conducting student workshops, and seminars about tackling learning and management skills. Furthermore, the low-scored items could be tackled using project-based learning, peer teaching, etc which aims for the students to join proactively and interact with their classmates, and teachers during lessons. It would be a great advantage to encourage research, and improve problem-solving and critical thinking skills for the

students as well as planning for peer feedback during the SDL time.

Conclusion

The present study provides baseline data about the readiness of first-year MBBS students for SDL. Students demonstrated good skills of self-control and self-management skills, yet concerning learning skills, they need further improvement which can be achieved through a multidisciplinary approach.

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