

Original Research Article**Evaluating the Attitude, Practice and Knowledge of Research in Medical Undergraduates: A Cross Sectional Study****H. Prabhu M.¹, Deepa M.², Singh Aditya V.³**

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Abstract

Background: Research is an essential component of medical education, along with it plays an important role in advancement and improvement of health care services.

Objective: To evaluate and assess the attitude, practice and knowledge of research in undergraduate medical students in S. Nijalingappa Medical College & HSK Research Centre, Bagalkot.

Materials and Methods: A cross sectional, structured, pre-validated and self administered questionnaire was completed by 124 undergraduate students of IInd year MBBS. Quantitative evaluation of collected data was done.

Results: Out of the following 124 students, 79% agreed that they can conduct a research before completion of MBBS. 98.2% stated that research is useful for future in medical profession. 60.9% agreed for a term that there is a lack of knowledge on research conduction. While 95.2% showed a response for encouraging mentored health research.

Conclusion: The undergraduate students in the study empowered a positive response towards conducting a research. The problems faced like lack of guidance, time and having a heavy curriculum are to be solved to ensure quality research activities among medical undergraduates.

Keywords: Attitude; Practice; Knowledge; Research; Undergraduates.

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Introduction

Research is an essential component of medical education, along with it plays an important role in advancement and improvement of health care services. It is expected for a medical college to train the students regarding research to fulfil the standards and to support students' career prospects. Exposure to research training early in academics is an important step for future clinicians to be equipped with adequate training of research and promote critical thinking. There is a dire need of exposing the undergraduates to basics of research activities.

Various gaps in training for undergraduates stands as lack of motivation, shortage of staff, lack of time, interest and also financial or incentives, for a research. This has generated a keen interest in developing a program for early research exposure. However, given the demands and competing interest of formulating and undergraduate medical syllabus, as well as the results of attitudes of other learners during medical training, it appears pivotal to enquire into the experience of research during medical college.

The objective of this study was to evaluate and assess the attitude, practice and knowledge of research in medical undergraduates.

Materials and Methods

It is a cross-sectional study. A structured, pre-validated and self administered questionnaire was given to all IInd year undergraduates of MBBS, who were willing to participate.

124 out of 150 students participated in this study. The data was collected and tabulated. Evaluation of collected data was done quantitatively.

Results

Out of total IInd year students (150), 82.6% (124) participated in this study. 79% (98) agreed that as a medical student they can conduct a research in undergraduation. Majority of students (98.4%) agreed that research is necessary for future in medical profession. 60.9% stated that they have a lack of knowledge on research conduction. Also 95.2% agreed for encouraging the students for mentored health research. (Table 1-5).

Table 1: Response to knowledge about research

	Yes (%)	No (%)	Don't know (%)
1. Can you as a medical student conduct a research before completion of MBBS?	79	13.3	7.7
2. Ethical clearance is not required for conducting a research. It is required only if you want to publish your research material	18.1	63.8	18.1
3. Research topic, research problems research purpose research question hypothesis – is the correct order for development of research idea.	36.2	40	23.8
4. Literature review data collection analyzing and interpreting the data are all required for research contribution.	91.4	4.8	3.8
5. Abstract provides a step by step account of what you did as a researcher during the research study.	53.3	14.3	32.4

Table 2: Response to attitude about research

	Agree (%)	Disagree (%)	Don't know (%)
1. Undergraduates should be compulsorily made to participate in research activities	76.2	20.9	2.9
2. Undergraduate student can plan and conduct a research project.	97.2	0.9	1.9
3. Undergraduate student can write a scientific paper.	54.2	11.4	34.4
4. Research is useful for future in medical profession.	98.2	0.9	0.9
5. Research conduction secures better chances for taking ug programs like thesis etc.	80	2.8	17.2
6. Research conduction is essential for patient care and improvement of health care.	84.8	7.6	7.6
7. Research conduction promotes communication skills.	87.7	5.7	6.6
8. Research conduction promotes independent learning ability.	90.6	4.7	4.7

Table 3: Response to practice of research

	Yes (%)	No (%)
1. Have you participated in a research project?	20	80
2. Have you planned and conducted a research project?	23.8	76.2
3. Have you written any scientific paper?	1.9	98.1
4. Have you attended any research orientation program?	31.4	68.6

Table 4: Reasons for non participation

	Yes (%)	No (%)	Don't know (%)
1. Lack of interest in research	7.6	82	10.4
2. Lack of research training	23.8	64.8	11.4
3. Lack of knowledge on research conduction	60.9	28.7	10.4
4. Lack of time	45.7	44.7	9.6
5. Lack of financial help/ incentives for research	34.2	54.2	11.6
6. Heavy load of curriculum studies	57.1	34.2	8.7
7. Lack of mentorship	41.9	44.7	13.4
8. Lack of motivation	43.8	47.6	8.6
9. Lack of interpersonal communication.	28.5	61.9	9.6

Table 5: Methods of improving research participation

		Agree (%)	Disagree (%)	Don't know (%)
1.	Target students to research early in MBBS course	89.5	8.5	2
2.	Conduct mandatory research courses	67.6	28.5	3.9
3.	Provision of more research training	96.1	0.9	3
4.	Make provision for more research projects.	95.2	0.9	3.9
5.	Conduct research methods workshops	95.2	1.9	3.2
6.	Encourage students for mentored health research	95.2	1.9	3.2
7.	By boosting funds for research.	85.7	8.5	5.8
8.	Conduct student conferences.	97.1	0.9	2

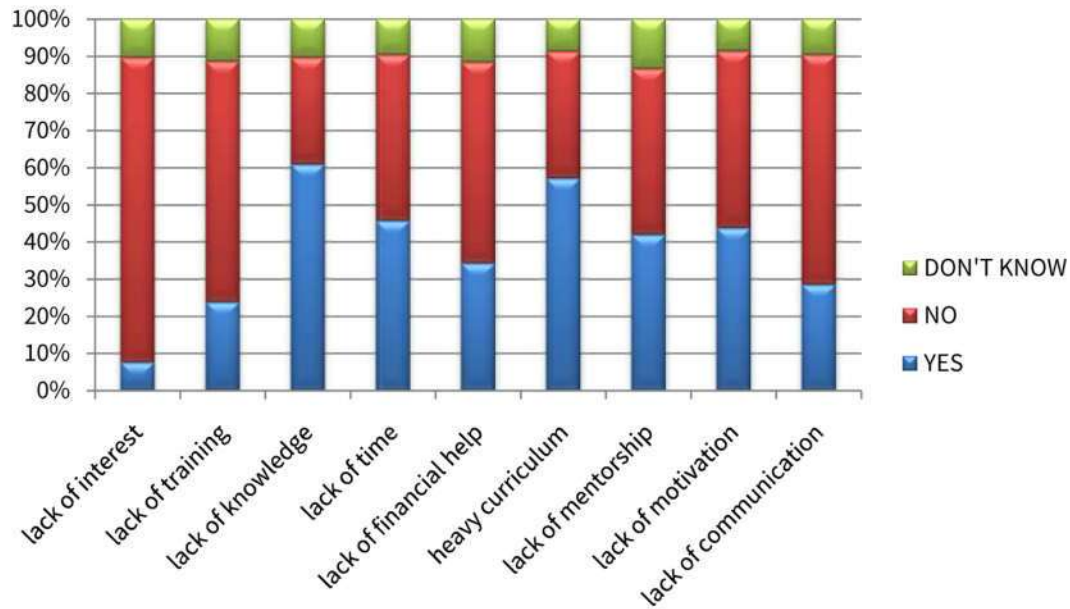


Chart 1: Various reasons for non participation

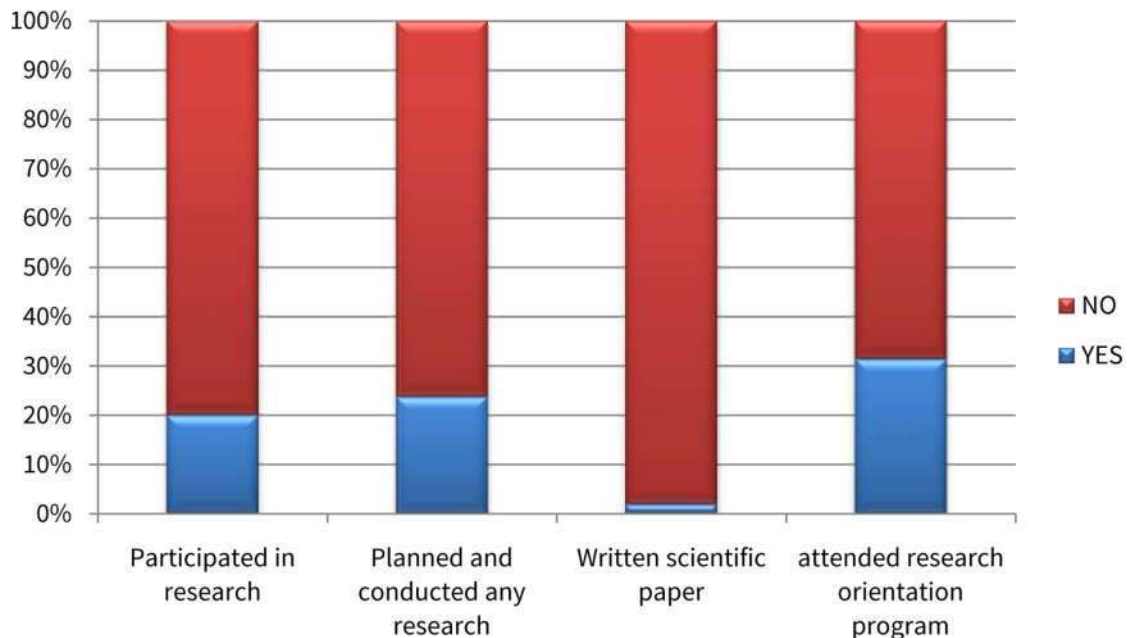


Chart 2: Various response to practice

Discussion

As part of the curriculum formed by Medical Council of India (MCI), a postgraduate student have to carry out a dissertation project. Also to motivate the students to research, it is mandatory to attend an international/national conference; along with submitting a poster, a paper and send an article for publication. However, no such protocol stands for undergraduate medical students. But our study has shown that the undergraduate students have a zeal for research. With increasing infiltration of research into medical fields and newer developments had led to exposing the undergraduates to research, as early as possible. Depending upon the response that we have got by the questionnaire provided and only a few students who didn't participated, it can be represented that they have a good attitude towards research in a medical college.

The mean score of knowledge was 55.6% which were comparable to studies done by Ratnakar et al (51.7%) [1], Khan et al. (49%)[2] and Khamis et al. (49%)[3].

As far as the attitude is concerned, the undergraduates have a great attitude towards research, shown by a mean score of 83.6%. In this study, 76.2% students agreed for making it compulsory for an undergraduate to carry out research work. This was much higher than the studies done by Ratnakar et al. (57.1%) [1] and Jamali et al. (53%) [4]. It was a surprise to see 97.2% of students telling that they can plan and conduct a research project. However, since the knowledge of writing a scientific paper was limited, only 54.2% students agreed that they can write a paper. 98.2% students were aware that research is useful for future in medical profession. Also, 84.8% and 90.6% stated that by research, patient care and health care improvement can be done and it promotes independent learning ability, respectively.

Surprisingly, despite of the high attitude and knowledge towards research, only 20% had participated in any research project. And 68.6% had not attended any research orientation program.

When, it came to the difficulties that they are facing, the major problem appeared to be lack of knowledge on research conduction (60.9%). This was followed by heavy burden of curriculum studies (57.1%), which is thereby causing lack of time for any research projects (45.7%). Similar studies done by Khamis et al. [3] revealed that, there is a lack of research training (76.7%), lack of time (74.3%) and study load (69.5%), as the commonly agreed reasons. We also found out that lack of interest was the least common cause (7.6%). This was as par to studies done by Giri et al. [5] and Ratnakar et al. [1] (19.3%). Giri et al. [5] in a study shown that heavy work load during under graduation (59.5%), as a major problem for non participation of students in research projects.

95.2% students, stated that, research work can be encouraged by providing mentorship and research methods workshops. Conduction of student conferences was stated by 97.1% of undergraduates.

Conclusion

Interestingly, undergraduates had variable perception towards research projects. The students of a medical college have a positive attitude, but there is a lack of good knowledge and practice of research. The heavy curriculum of MBBS, insufficient mentorship for providing adequate knowledge and lack of time were the prominent causes. Various steps can be taken to limit the difficulties, inspire the students and improve the mentorship. Furthermore, a similar survey of the faculty and staff of a medical college, would be highly informative.

Conflict of Interest

Nil

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