International Journal of Community Medicine and Public Health
Junga T et al. Int J Community Med Public Health. 2024 Mar;11(3):1184-1187
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20240617

Original Research Article

A study on knowledge, attitude and practices towards research among medical post graduate students

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Received: 27 December 2023
Revised: 10 February 2024
Accepted: 12 February 2024

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ABSTRACT

Background: Research is crucial for the scientific progress of the health of individuals and communities. Understanding the concept of evidence-based medicine needs strong research knowledge. Research assures understanding of the subject and improves the knowledge of the students. This study was aimed to assess the level of knowledge, attitude and practices among medical post graduate students and to study the sociodemographic factors. And to determine the association of knowledge with various sociodemographic factors.
Methods: An analytical cross-sectional study conducted during a period of two months among the medical post graduate students studying in a private medical college. Knowledge, attitude and practice were assessed by using self-administered questionnaire among 117 post graduate students. Likert scale was used to assess the knowledge component.
Results: Among 117 study subjects 47% were first year 27.4% were second year and 25.6% were third year among which the overall adequate knowledge was 86.3%, positive attitude was 95.7% and good practices according to the study scale was only 29.1%. Level of knowledge and practices were found to be having significant association with the academic year studying in (p value <0.05).
Conclusions: The post graduate students had adequate knowledge and positive attitude but had poor practices towards research. Adequate research helps to bridge the gaps in research and help the future generations in developing new interventions.

Keywords: Attitude, Knowledge, Postgraduate students, Practices, Research

INTRODUCTION

Research is crucial for the scientific progress of the health of individuals and communities. Understanding the concept of evidence-based medicine needs strong research knowledge.[1] Research assures understanding of the subject and improves the knowledge of the students.[2] It has been documented that research helps in skills like critical thinking, communication critical appraisal of evidence. Research helps to find new information and use it effectively and crucial element for improving the health care and plays a crucial role in the medical development.[3]

The medical students should be aware of the research methods as they will be future specialist doctors who will have to practice evidence-based medicine in patient care. Scientific research is the systematic approach by which theories and hypotheses can be proved or disapproved.[4]

The medical industry is advancing at a rate that has never been seen before, making it essential to stay current with

new developments in the sector.[5] Health research affects disease prevention, diagnosis, and treatment, particularly policy related to health care programs.[6] It is essential to inculcate critical thinking and reasoning skills and to develop positive attitudes towards scientific research amongst medical students from the beginning of their career.[7] To become an efficient researcher, one has to be equipped with ample skills and knowledge about the research methodology. Training in research methodology is an important but neglected part of medical education curriculum, which needs to be paid more attention.[8]

Formulating research training sessions will create interest and increase research-oriented physicians. Keeping this in mind, we assessed the knowledge, attitude and practices towards conducting research among medical postgraduate students.

This study helps to know about the interest in research among post graduate students and motivate them for research study which will provide information about disease trends, further helps for the improvement of patient health care. Hence, this study has been planned to assess the level of knowledge, attitude and practices among medical post graduate students and to study the sociodemographic factors. And to determine the association of knowledge with various sociodemographic factors.

METHODS

Analytical cross-sectional study was done among all 180 post graduate students of which 63 were excluded as per the exclusion criteria, and with sample size of 117 Clinical and Non-Clinical Departments of ASRAM Medical College, Eluru district, Andhra Pradesh for a period of three months (1st February to 31st March 2023). The data was collected using a self-administered questionnaire; students who were absent on the day of study and who were posted in District Residency Programme according to NMC and students who were not willing to participate were excluded from the study. The study tool used for collecting data was four-part questionnaire. Permission from institutional ethics committee was obtained prior to start of the study. Informed consent was taken from study subjects.

The first part aimed to obtain the details about the sociodemographic characteristics of the participants like gender, department, academic year, place of stay. The second part consists of eight questions to assess the knowledge of the participants using Likert scale about research. It consisted of eight questions with each correct answer; with minimum score of zero and maximum score of eight ≥4 considered as adequate knowledge and <4 considered as inadequate knowledge. The third part aimed to assess the attitude of medical students towards research and responses were taken as "Yes and No''. The fourth part of questionnaire consists of the experience of medical post graduates towards research and responses were taken as "Yes and No''.

Microsoft excel 2019 is used for data entry and analysis was done by IBM SPSS 26 software (trail version). Categorical data analysis was done by applying Chi-square test etc., p-value less than 0.05 is considered as statistically significant. The results were presented in the form of charts.

RESULTS

Sociodemographic characteristics of study population

The study subjects, majority were 24-29 years (76%), 30-35 years (16%), 36-41 years (6%). 22% were male, 77% were females. The study subjects, 47% belongs to First year, 27% belongs to Second year, 30% belong to Third year. 90% belong to clinical department, 9% belong to Paraclinical department. 25% belongs to dayscholar, 74% belongs to hostler. 29% were married, 70% were unmarried (Table 1).

Table 1: Sociodemographic characteristics of study population.

Characteristics		Frequency	Percentage
Age (years)	24-29	90	76
	30-35	19	16
	36-41	8	6
Gender	Male	26	22
	Female	91	77
Study year	First year	55	47
	Second year	32	27
	Third year	30	25
Department	Clinical	106	90
	Para clinical	11	9
Stay	Day scholar	30	25
	Hostler	87	74
Marital status	Married	35	29
	Unmarried	82	70

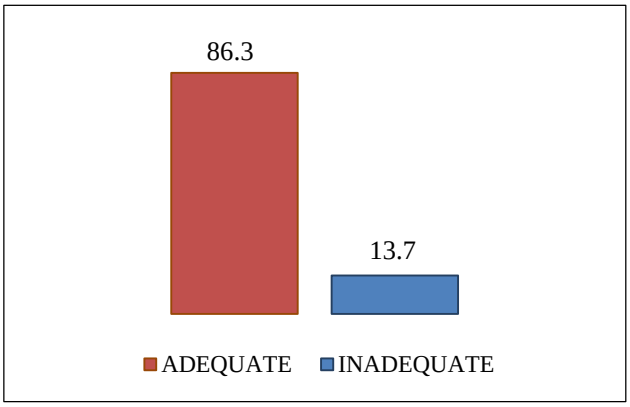

Figure 1: Showing distribution of study subjects based on knowledge.

Distribution of study subjects based on knowledge

Among study subjects 86.3% had adequate knowledge and 13.7% had inadequate knowledge (Figure 1).

Attitude questions towards conducting research

Majority of the study subjects have positive attitude towards conducting research (Table 2).

Table 2: Attitude questions towards conducting research (n=117).

Attitude questions	Yes (%)	No (%)
Are you interested in research	94 (80.3)	23 (19.7)
Do you feel conducting research work increase your knowledge	112 (95.7)	5 (4.3)
Do you think BCBR training helps in your research work	7 (6.0)	110 (94.0)
Do you think research is mandatory for ongoing post graduate trainees	94 (80.3)	23 (19.7)
Do you have any interest in publishing a scientific paper or poster	103 (88.0)	14 (12.0)
Do you think use of scientific methodology is the basis of medical progress	108 (92.3)	9 (7.7)

Practices questions towards conducting research

Most of the study participants have poor practices towards conducting research (Table 3).

Association between knowledge and socio-demographic variables

Level of knowledge had significant association with the academic year ($p<0.005$) (Table 4).

Table 3: Practices questions towards conducting research (n=117).

Practice questions	Yes (%)	No (%)
Do you attend any research course	60 (51.3)	57 (48.7)
Did you submit a research proposal (other than dissertation)	36 (30.8)	81 (69.2)
Have you submitted your BCBR Assignments	52 (44.4)	65 (55.6)
Have you cleared your BCBR examination	40 (34.2)	77 (65.8)
Did you participate in research as data collector	40 (34.2)	77 (65.8)
Did you participate in research before your post-graduation	18 (15.4)	99 (84.6)
Do you have scientific publication(s) that was/were published or submitted for publication	29 (24.8)	88 (75.2)
Did you present more than 1 poster/ paper in a scientific conference	26 (22.2)	91 (77.8)

Table 4: Association between knowledge and socio demographic variables (n=117).

Variables		Knowledge		P value
		Adequate (%)	Inadequate (%)	
Age (years)	24-29	78 (86.7)	12 (13.3)	0.341
	30-35	15 (78.9)	4 (21.1)	
	36-41	8 (100.0)	0 (0.0)	
Gender	Male	23 (88.5)	3 (11.5)	0.504
	Female	78 (85.7)	13 (14.3)	
Study year	First year	41 (74.5)	14 (25.5)	0.000
	Second year	30 (93.8)	2 (6.3)	
	Third year	30 (100.0)	0 (0.0)	
Department	Clinical	92 (86.8)	14 (13.2)	0.463
	Para clinical	9 (81.8)	2 (18.2)	
Stay	Day scholar	27 (90.0)	3 (10.0)	0.368
	Hostler	74 (85.1)	13 (14.9)	
Marital status	Married	32 (91.4)	3 (8.6)	0.229
	Unmarried	69 (84.1)	13 (15.9)	

DISCUSSION

This study intended to assess the knowledge, attitude and practice towards research among medical postgraduate students from clinical and para clinical departments with age ranging from 21years to 41years. The study subjects, majority were 24-29 years (76%), 30-35 years (16%), 36-41 years (6%). 22% were male, 77% were females. The

study subjects, 47% belongs to first year, 27% belongs to second year, 30% belong to third year. 90% belong to clinical department, 9% belong to paraclinical department. 25% belongs to dayscholar, 74% belongs to hostler. 29% were married, 70% were unmarried.

In the study conducted by Roy et al, majority of the study subjects were between 26-30 years (57.9%), 31-35 (28.9%), 41-45 (2.6%) which were almost similar to this study.[9] Males were 76.3% which was not similar with this study. Study subjects belong to preclinical were 22.4% and paraclinical were 14.5% which were not similar to this study may be due to the post graduate admission criteria of the institution.

In the present study, many students have positive attitude same as the study done by Roy et al, in a tertiary care hospital in West Bengal.[4]

Study conducted by Kancharla et al, have good practices towards research while in this study participants have poor practices which is not similar due to difference in study population and had adequate exposure towards research since undergraduate level.[10]

In this study level of knowledge has significant association with the academic year ($p<0.005$) while in the study conducted by Vairamani et al, showed that there was a significant relationship between knowledge and conducting research this was not similar to this study may be due to difference in the education curriculum.[8]

In this study marital status, stay, department did not show any significant association with level of knowledge which was similar to the study conducted by Moges et al.[11]

This study has some limitations. Small sample size and only confined to institution results cannot be generalized, barriers are not studied to know the difficulties faced by the students.

CONCLUSION

The post graduate students had adequate knowledge and positive attitude but have poor practices towards research. Sufficient training in research methods and institution mentorship program can boost participation in research. Adequate research helps to bridge the gaps in research and help the future generations in developing new interventions.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Junga T, Naidana PS. A study on knowledge, attitude and practices towards research among medical post graduate students. Int J Community Med Public Health 2024;11:1184-7.