



KNOWLEDGE ATTITUDE AND PRACTICES TOWARDS PRINCIPLES OF RESEARCH AMONG MEDICAL POSTGRADUATES IN A TEACHING TERTIARY CARE CENTRE

Madhavrao C.*, Mythili Bai K.¹, Rema Menon N.², Sharath Babu K.³, Prathab Asir A.⁴

^{*34}Department of Pharmacology, ¹Department of Physiology, Sree Mookambika Institute of Medical Sciences [SMIMS], Kulasekharam, Kanyakumari District, Tamil Nadu-629161, India.

ABSTRACT

Aim and Objectives: To evaluate the KAP towards principles of research in medical postgraduates in a teaching tertiary care centre.

Materials and Methods: After obtaining approval from the IHEC and valid informed consent, the participants were recruited into the study. The study included 26 medical postgraduates from different disciplines and who were asked to fill the pre-validated structured questionnaire on principles of research. The study was conducted during the period of January 2014- March 2015. The collected data from questionnaire forms were entered into Microsoft office excel 2007 and was expressed in frequency and percentage.

Results: It was observed that more than 50% of study participants were able to answer the correct response for questions on knowledge about the principles of research. Majority of the study participants [88.46%] were able to mark the correct response for the definition of research. The study also showed that attitude towards research among medical postgraduates was positive with 92.31% were opined to have or undergo seminars/ workshops/CME to update their knowledge on principles of research periodically. However the practice towards principle of research seems to be not satisfactory. It was noticed that only 7.69% of study participants had experience in sending the manuscript for publication in peer reviewed journals.

Conclusion: There was good knowledge and positive attitude, with poor practices towards principles of research among medical postgraduates.

Key Words: KAP, Research, Postgraduates, Medical, Tertiary care centre

INTRODUCTION

Training in health research area constitutes a very essential part of medical education.¹ It is essential to attract the students' interest towards research, so that in future the good quality of research can be conducted to improve the medical health care system existing in the nation as well as in the world. Knowledge on principles of research is important for health care professionals, so that they can conduct well planned and high quality of research which directly or indirectly contributes for advancement of medical health care system.²

It has been observed, the conflicting and inconsistent reports from different parts of world on Knowledge, Attitude and

Practices [KAP] towards research among various health care professionals.³ The adherence to International Conference on Harmonization [ICH] standard guidelines on Good Clinical Practice [GCP] in research varies among countries⁴ and it is highly essential to understand the awareness about basic principles of GCP while conducting the research and hence its implementation for high quality data generation and applying it to the whole population.

Knowledge, Attitude and Practices [KAP] towards principles of research is an important issue as:

1. KAP towards research varies from place to place and from country to country

Corresponding Author:

Dr. Madhavrao C., Department of Pharmacology, Sree Mookambika Institute of Medical Sciences [SMIMS], Kulasekharam [Kanyakumari District], Tamil Nadu -629161; Email: madhavcon2008@gmail.com

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2. Knowledge on Research principles is not up to the mark among health care professionals in all over the world²
3. There is an indeed to understand the awareness about research principles specially among students, interns and postgraduates as it marks the best physician cum researcher in future⁵

It is essential to understand the KAP towards research principles among medical postgraduates to address the issues if any, so that the in future necessary steps will be taken to tackle these problems.

Hence this study was planned to evaluate the knowledge, attitude and practices towards principles of research among medical postgraduates in a teaching tertiary care centre.

MATERIALS AND METHODS

Study design: Cross sectional survey

Study setting:

Sree Mookambika Institute of Medical Sciences [SMIMS], Kulasekharam [Kanyakumari District], Tamil Nadu [India]

Study participants: Medical postgraduates

Total participants: 26

Time period: January 2014- March 2015

Procedure

After obtaining the approval from the Institutional Review Board [IRB], the participants were recruited into the study. The informed consent was obtained from all the participants of the study before enrolling them into the study. All the national as well as international principles of ethics were followed while carrying out this research.

The modified self structured, pre-validated questionnaire^{1,3,4,6-10} on knowledge, attitude and practices towards principles of research was distributed to medical postgraduates and they were asked to return it after complete filling of these questionnaire forms. Total twenty six medical postgraduates [n =26] participated in this study and who formed the sample size of the study.

Statistical analysis

The collected data was entered into the Microsoft Office Excel 2007 software and was tabulated in percentage and frequency.

Results

This study included twenty six postgraduates from different disciplines of medicine, who formed the sample size of the study [n= 26].

The knowledge, attitude and practices regarding the principles of research among medical postgraduates is displayed in Table 1, 2 and 3 respectively. The majority of study participants opined to do research work on clinical trials in future as displayed in Figure 1. The various obstacles in doing the research work among medical postgraduates is displayed in Figure 2.

DISCUSSION

This study was a questionnaire based survey which included medical postgraduates from different disciplines in a teaching tertiary care centre of Sree Mookambika Institute of Medical Sciences [SMIMS], Tamil Nadu [India]. SMIMS was affiliated to the Tamil Nadu Dr. M.G.R Medical University, India.

In our study it was confirmed that, medical postgraduates had good knowledge about the principles of research, as more than 50% of correct responses was given, for all the questions based on knowledge of principles of research. This could be due to the fact that, Tamil Nadu Dr. M.G.R Medical University enforces the postgraduates to attend the research methodology workshop conducted under its umbrella.

Our study findings were similar to the study carried by Pawar et al.⁹ at Department of Pharmacology, Seth GS Medical College, Mumbai [India] to evaluate the awareness about medical research among resident doctors in tertiary care hospital, which included 100 participants. The above study concluded that 58% of residents had the knowledge about the research hypothesis concept, 76% agreed to have adequate training in research, 98% were aware of obtaining the consent in case of human related research, 4% published the research work in various journals, 50% were engaged in carrying out research other than their dissertation work, 88% opined to carry out research in their future professional period and 28% had presentations at various conferences.

In our study, majority of study participants [73.08%] had strong opinion that, research in their specialty encourages and improves the knowledge in their discipline with better patient care. More than 65% of medical postgraduates had keen interest in carrying out research projects in future mainly in clinical trials. The study also found that half of the medical postgraduates were willing to review the articles in journals as reviewer during their lifetime. It seems that, medical postgraduates had positive attitude towards the principles of research in medical field.

Our study findings were similar to the study⁷ which was done to evaluate the KAP of resident trainees towards health research at Aga Khan University [Pakistan]. The above study was a cross sectional survey in tertiary care hospital setting through the questionnaire. The study showed that resident

trainees participated in basic science research [26.9%], in clinical research [59.6%] and in both basic and clinical research [13.5%]. The study also showed that 47.1% of participants had planned to carry out research in the future.

Our study also highlighted various points as, more than 90% of study participants were not confident of designing the study for their own research work, only 7.69% had experience in submitting the manuscript to the various journals. It was also found that, more than half of the study participants had opined as 'lack of time' as the main obstacle preventing doing research. Other obstacles preventing doing research among medical postgraduates in decreasing order were, personal commitments like family problems, marriage etc, lack of mentors/assistants, lack of research curriculum and lack of interest.

However in our study it was noticed that, more than 60% of medical postgraduates had experience in presenting the research work in the form of poster in various conferences. It was also observed that, all the medical postgraduates in this study were involved in research projects as Principal Investigator [PI], this could be because of the fact that, for the partial fulfillment of either Doctor of Medicine [M.D] or Master of Surgery [M.S] courses, one has to carry the research project and need to submit the same in the form of dissertation to the medical university as per the norms of Medical Council of India [MCI].^{11,12} Our study also showed that only less than 4% of medical postgraduates were carrying the research work as Co-investigator [CI]. The above fact could be because of the lack of time as opined by the study participants, as the MD/MS courses are only limited to the three years, in which one has to complete their dissertation work along with other academic activities as directed by the university and MCI.^{11,12} As in this study, the practices of medical postgraduates towards principles of research looks somewhat unsatisfactory, but it can be well improved by motivation, interventional education strategies, providing the research atmosphere and amendment of regulations as prescribed by the university guidelines/MCI from time to time.

The various pitfalls of our study include, as it was a questionnaire based survey, there is tendency to have recall bias from the study subjects. The study data was also limited to a single centre from the southern part of Tamil Nadu, India, hence the findings can't be made generalized. It need to have further larger data from other centers before it can be made generalized.

CONCLUSION

Our study concluded that there was good knowledge and attitude but with poor practices towards principles of research among medical postgraduates.

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Table 1: Knowledge regarding principles of research in medical postgraduates [n=26]

Sl. No.	Questions	Correct answer [Frequency (%)]	Wrong answer [Frequency (%)]
1	Definition of research	23 (88.46)	3 (11.54)
2	Professional body to which the animal related research proposals has to be submitted for their approval	24 (92.31)	2 (7.69)
3	Clinical trials are conducted in	21 (80.77)	5 (19.23)
4	Official regulatory body governing the IHECs in India	15 (57.69)	11 (42.31)
5	Official regulatory body governing the IAECs in India	14 (53.85)	12 (46.15)
6	Does modification of research protocol requires permission from Ethics committee?	20 (76.92)	6 (23.08)
7	International organization concerned with standard guidelines on GCP is	18 (69.23)	8 (30.77)
8	Reference style recommended by the ICMJE	22 (84.62)	4 (15.38)
9	Commonly set P value in most of the scientifically published articles	16 (61.54)	10 (38.46)
10	Study design with highest scientific evidence	14 (53.85)	12 (46.15)

*IHECs: Institutional Human Ethics Committees; IAECs: Institutional Animal Ethics Committees; GCP: Good Clinical Practice; ICMJE: International Committee of Medical Journal Editors;

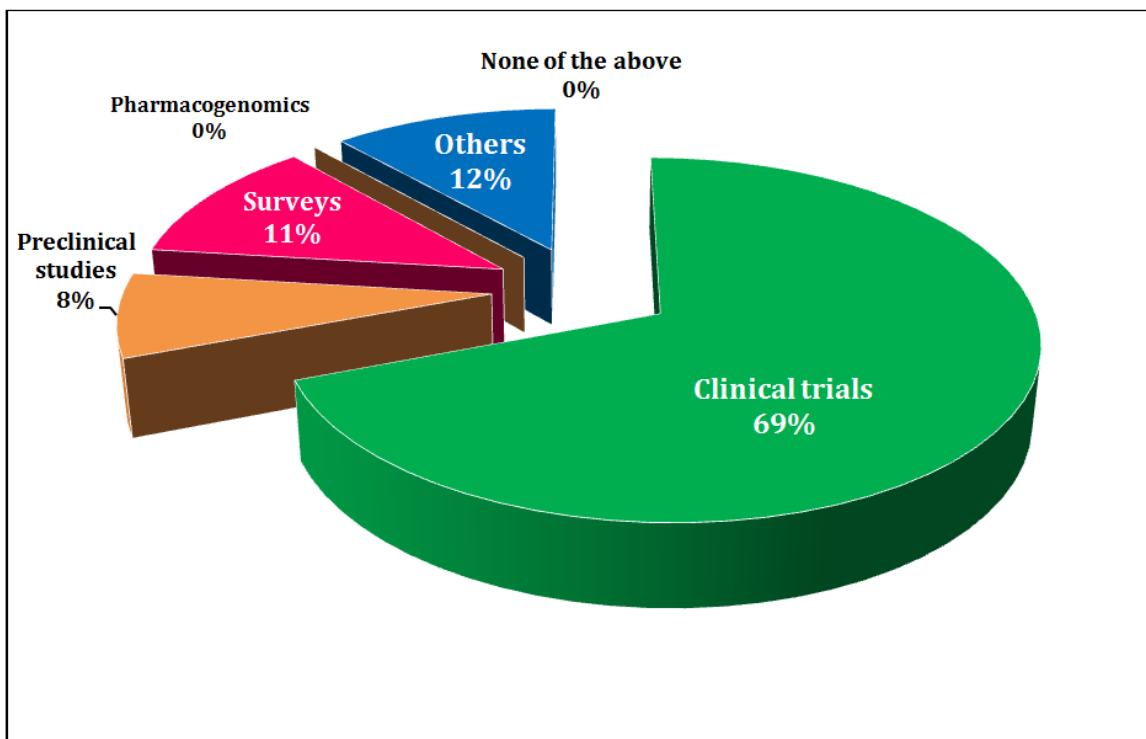
Table 2: Attitude regarding principles of research in medical postgraduates [n=26]

Sl. No.	Questions	Answers	Frequency (%)
1	Have you ever heard the term 'Impact Factor'	Yes	15 (57.69)
		No	11 (42.31)
2	Are you interested in reviewing the articles in journals as reviewer?	Yes	13 (50)
		No	13 (50)
3	Are you interested in doing research in future?	Yes	17 (65.38)
		No	9 (34.62)
4	Research in specific field enhances the knowledge in particular field with better patient care	Strongly agree	19 (73.08)
		Agree	2 (7.69)
		Neutral	1 (3.85)
		Disagree	2 (7.69)
		Strongly disagree	2 (7.69)
5	Do you require Seminars/ Workshops/CME periodically to update the knowledge on research principles	Yes	24 (92.31)
		No	2 (7.69)

*CME: Continued Medical Education;

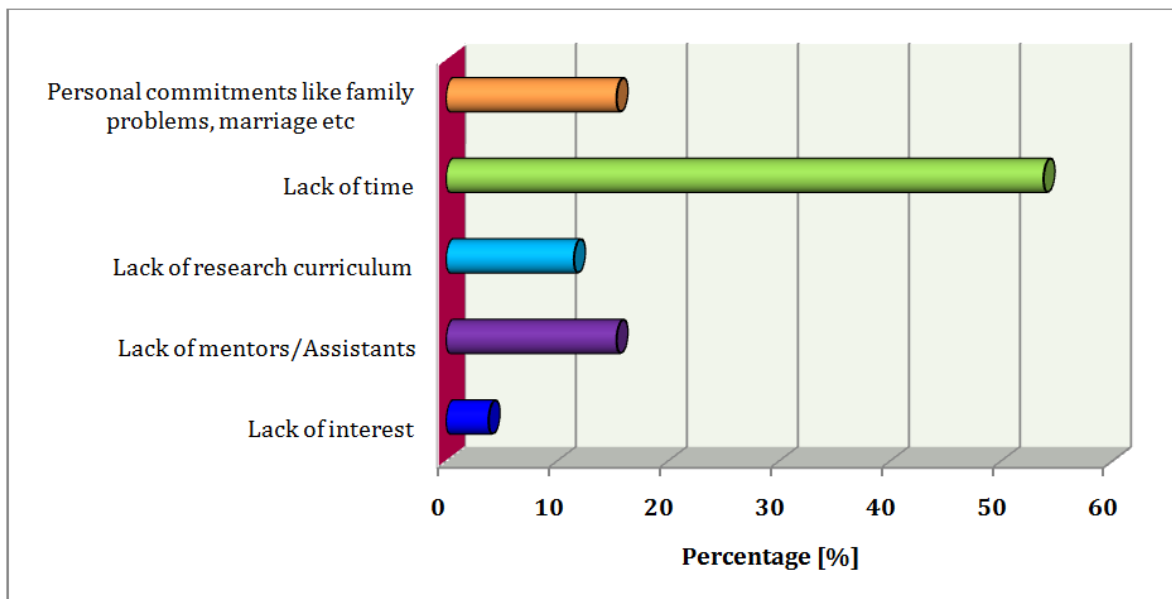
Table 3: Practices regarding principles of research in medical postgraduates [n=26]

Sl. No.	Questions	Answers	Frequency (%)
1	Are you confident in designing the study for your own research work?	Yes	1 (3.85)
		Depend upon epidemiologist	25 (96.15)
2	Have you experienced with sending the manuscript for publication in peer reviewed journals?	Yes	2 (7.69)
		No	24 (92.31)
3	Have you experienced with presenting the posters in conferences?	Yes	16 (61.54)
		No	10 (38.46)
4	Have you experienced with presenting the oral papers in conferences?	Yes	5 (19.23)
		No	21 (80.77)
5	How many poster presentations you have been made in the conferences?	1	14 (53.85)
		2	2 (7.69)
		More than 2	0 (0.0)
		None	10 (38.46)
6	How many oral presentations you have been made in the conferences?	1	5 (19.23)
		2	0 (0.0)
		More than 2	0 (0.0)
		None	21 (80.77)
7	How many original articles you have been published in the journals?	1	2 (7.69)
		2	0 (0.0)
		More than 2	0 (0.0)
		None	24 (92.31)
8	How many review articles you have been published in the journals?	1	0 (0.0)
		2	0 (0.0)
		More than 2	0 (0.0)
		None	26 (100)
9	Are you currently involved in any research projects as Principal Investigator?	Yes	26 (100)
		No	0 (0.0)
10	Are you currently involved in any research projects as Co-Investigator?	Yes	1 (3.85)
		No	25 (96.15)



n=26; Data is represented in percentage (%)

Figure 1: Pie diagram depicting the primary area of interest in future research work in medical postgraduates



n=26; Data is represented in percentage (%)

Figure 2: Bar diagram depicting the obstacles in doing the research work in medical postgraduates