SEARCHING THE RESEARCH OR RE-SEARCHING THE SEARCH: WHERE TO START FROM? A POST-GRADUATE MEDICAL TRAINEES PERSPECTIVE FROM RAWALPINDI/ISLAMABAD

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ABSTRACT

Objective: To explore the post-graduate medical trainees perceptions and practices towards research and to investigate potential barriers to perform research.

Study Design: Cross sectional descriptive study.

Place and Duration of Study: Military hospital, Combined Military hospital, Rawalpindi and Pakistan institute of medical sciences Islamabad, from Jan 2013-Dec 2013.

Material and Methods: A pretested, structured and validated questionnaire was used to collect data from 114 final year post-graduate medical trainees (PGMTs). SPSS version 17 was used for descriptive data analysis.

Results: One hundred and fourteen (n=114) final year post-graduate medical trainees (PGMTs) of fellowship program of College of Physician and Surgeons of Pakistan gave their written consent to participate in this study. Among them 68 (59.6%) were males while 46 (40.3%) were female. One hundred and twelve (98.2%) trainees agreed that research is an important and healthy activity and have a great impact on their future carriers. 63 (55.2%) PGMTs had worked as data collector in various studies conducted at their institutions while only 21(18.4%) PGMTs had published their manuscript. Obstacles that prevented the PGMTs from conducting research included: lack of professional supervisors: 103 (90.3%), poor research training: 98 (86.0%), and lack of resources: 84 (73.6%).

Conclusion: Although the majority of the PG trainees believe that research is important in medical field, only about 55.2% of them have participated in the research activities other than mandatory dissertation during their training. Measures should be taken at postgraduate level to involve and support the PGMTs in health research with formal training programs and good mentorship.

Keywords: Dissertation, Journals, Literature, Manuscript, Supervisors, Training.

INTRODUCTION

Research is the intellectual activity of human beings, used to explore, investigate, interpret and review the various facts of scientific world. Nowadays, research has become an imperative part of the medical education and is also playing a key role in the remodeling of clinical practice[1]. Physician-investigators, medical residents and postgraduate medical trainees play a cardinal role in research productivity by revamping the basic scientific knowledge into the modern clinical practice. Studies have shown that involving in a research activity improves the critical thinking process and enhances the ability to evaluate, interpret and communicate the scientific facts[2,3].

Unfortunately, the developing countries are threatened by a shortage of physician-investigators, which could be largely due to the refrainment from the research activities. Multiple factors such as time and financial constraints, inadequate exposure to research methodologies, and lack of motivation and poor guidance from mentors have been postulated for this dwindled research progress[4-6].

Similar trend has also been observed in the Pakistani doctors, who emphasize more on the clinical practice while their input in research work is just a drop in the bucket. To fill this void, a number of efforts have been made in order to engage the medical trainees in various health research activities at postgraduate level. In Pakistan college of physician and surgeon of Pakistan (CPSP) offers fellowship program to doctors in large number of clinical specialties. Among prerequisite of fellowship program by CPSP is submission of research dissertation and

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research methodology workshops, even then the overall research output in Pakistan stands at the lower side as compared to other parts of the world[7,8].

The poor quality of health research in Pakistan is evident from the scientific literature search[8-10]. In the past, numerous studies have shown the level of involvement of post-graduate medical trainees (PGMTs) in health research activities, but only little attention is devoted to identify the obstacles and barriers to perform the research among PGMTs. Therefore this study was designed to explore the factors contributing to lack of research activities among post-graduate medical trainees.

MATERIAL AND METHODS

This cross-sectional descriptive study was conducted on 114 final year post-graduate medical trainees (PGMTs) of CPSP fellowship program working at Military hospital, Rawalpindi, Combined Military hospital, Rawalpindi and Pakistan institute of medical sciences Islamabad, from January 2013 to December 2013, after getting the institutional permission. Stratified sampling technique was used with proportionate representation of each institute.

A pretested and structured, self-administered questionnaire was used to get the response of PGMT. The questionnaire contents were gathered from previous studies assessing the perceptions and practices towards research[2,3,7,8].

The questionnaire consisted of four sections. First section was based on the demographic data, containing age gender, clinical specialty, and name of the training institute. The second section focused on exploring the perceptions of PGMT regarding research activities. Section three dealt with questions in relation to practicing the research, research experiences, scientific journal reading, and sources of information used while fourth section highlighted the obstacles and potential barriers to conducting research. Research work carried out for mandatory dissertation writing as per requirement of CPSP was excluded while analyzing the research practices of PGMT.

The PGMTs were requested to fill in the questionnaire after getting their written consent.

Table-: Basic demographic data of the study participants (n=114).

Gender	
Male	68 (59.6%)
Female	46 (40.3%)
Age	36.6 ± 5.3
Marital status	
Married	98 (85.9%)
Unmarried	16 (14.0%)
Speciality	
Medicine & allied	37 (32.4%)
Surgery & allied	33 (28.9%)
Obstetrics & gynaecology	21 (18.4%)
Paediatrics	14 (12.2%)
Eye / ENT	4 (3.5%)
Pathology	3 (2.6%)
Radiology	2 (1.7%)

Incomplete questionnaires were excluded out from the study. Statistical Package of Social Sciences (SPSS) version 17 was used for data analysis.

RESULTS

One hundred and fourteen (n=114) PGMTs who gave their written consent to participate in this study, responded with complete filled in questionnaires. Among them 68 (59.6%) were males while 46 (40.3%) were female. Table shows the basic demographic data of the study participants.

Among our study participants, 112 (98.2%) PGMTs had the perception that research is an important and crucial activity in medical profession while 96 (84.2%) PGMTs agreed that all post-graduate trainees should participate in some research activity. 107 (93.8%) were of the opinion that clinical research is essential to improve the quality of health care services. 103 (90.3%) admitted that participating in research activities will help them to excel in their future carriers.

In relation to practices towards research, 89 (78%) PGMTs attended various research methodology workshops, 63 (55.2%) PGMTs had worked as data collector in various studies conducted at their institutions other than mandatory research dissertation, while only

21(18.4%) PGMTs had published their manuscript in a journal. 37 (32.4%) participant knew that how to write an article. Difficulty in interpretation of research material was found in 89 (78%) PGMTs. 45 (39.4%) participants had subscription to print version of medical journals and all of them were as per institutional requirements. None had paid subscription for online medical journals. Frequency distribution of research material reading practices among PGMTs has been shown in fig-1.

The potential barriers and obstacles leading to poor research activity have been illustrated in fig-2.

DISCUSSION

The main focus of our study was to get the perceptions of post-graduate medical trainees (PGMTs) regarding the research activities and most importantly to identify the barriers to conduct the research. The current study found that 98.2% PGMTs were well aware of importance of research in the medical profession, supporting the results of previous studies conducted in Pakistan and other countries[9-11]. However in our study, 84.2% participants agreed that research activities should be obligatory for PGMT which was in contrary to the study conducted by AlGhamdi et al[12] where only 67.4% participants have the

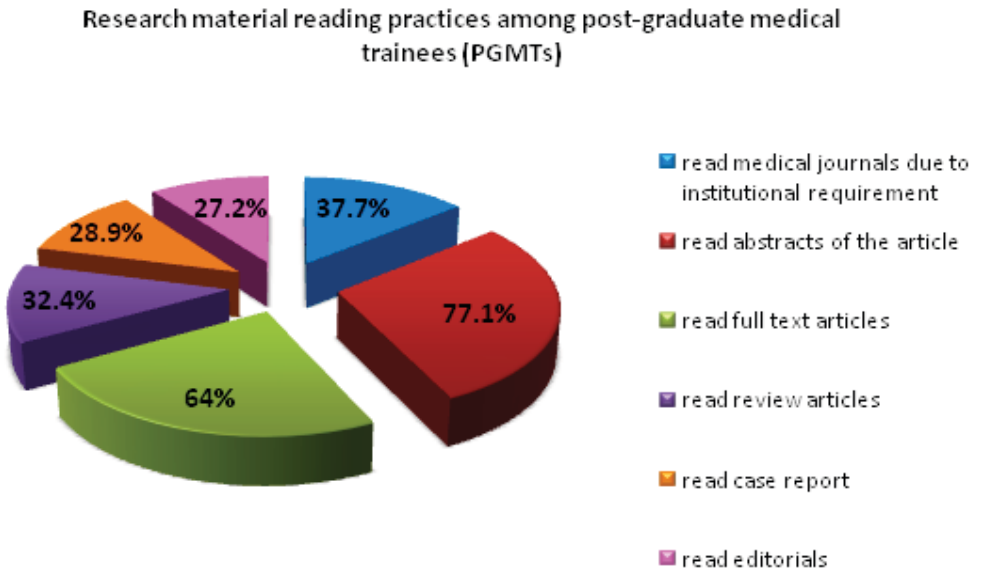

Figure-1: Research material reading practices among post-graduate medical trainees (PGMTs).

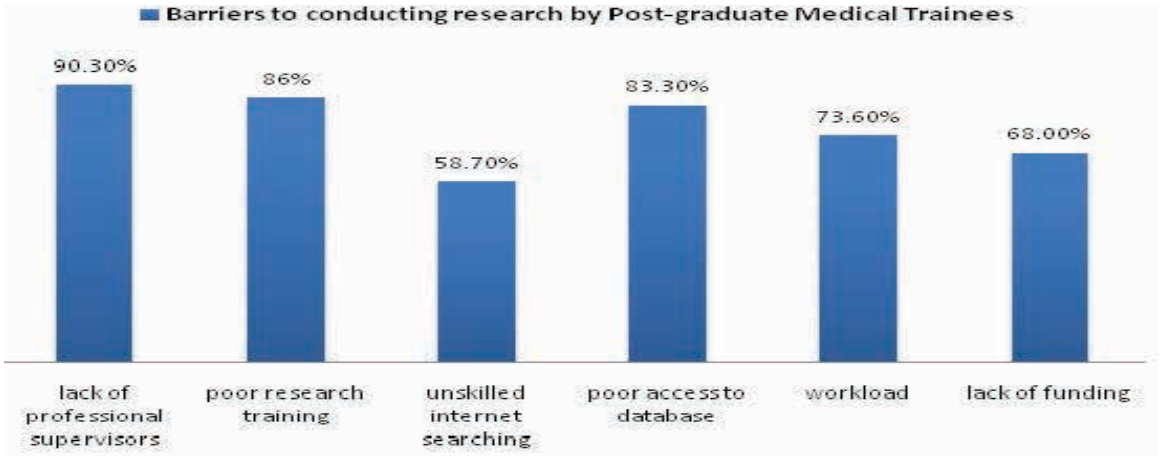

Figure-2: Barriers to conducting research by post-graduate medical trainees.

perception that medical research should be mandatory for all medical trainees.

Although, a majority of the study participants (93.8%) acknowledged the importance of research practice in improving the quality of health care services, only few of them (37.7%) read the medical journals to keep abreast with latest developments in medical sciences. Another study from Pakistan revealed that only 20% PGMTs read the medical journals[10]. These findings are different from the western studies' result, where the journal reading is the major practice among senior medical trainees[13,14].

In relation with reading the research material, findings of the current study are consistent with the results of a study conducted at Karachi, Pakistan[15]. Reading article from e-journals was the common source of acquiring knowledge seen in 66% participants. Studies have also shown that consulting electronic journals was much more convenient and practical then using print journals because of the ease of searching or relevant article through different search engines[16,17]. As far as reading journal components was concerned, most of our study participants (77.1%) read only abstract of the articles. This was in contrast to other studies where full text article were the most commonly studied component[15]. It was found in studies that consulting full text articles give better understanding on the issue of clinical importance[9]. The reason behind most of our participants avoiding reading full text article is that 73% of them could not interpret the content of article.

In our study, 78% PGMT attended compulsory research methodology workshops. This high percentage of attendance in research methodology workshop by PGMT is purely due to prerequisite of fellowship program. Thus universities/institutional promotion and implementation of research play a vital role in promoting research among doctors[18]. In our study low percentage of published article (18.4%) by PGMTs does not coincides with the high percentage of PGMTs attendance at research methodology workshop. The reason might be the fact that at research methodology workshops students are familiarized with biostatistics and epidemiology and manuscript writing, but PGMTs are more dissertation oriented due to their fellowship requirements and they don't give importance to manuscript writing at that time. Studies have shown that introduction of mandatory research courses in the early years of medical school has more positive impact on post graduates research involvement[19].

Interestingly, despite the fact that 90.3% of our study participants admitted that research practices are keys to excel in their future carriers and 55.2% have also participated in various research activities conducted at their institutions, only minority of them (18.4%) had published their article in various medical journals. Marital status has no negative influence on research activities as 18 out of 21(85.7%) publications were made my married PGMTs. These results are comparable to the results of a study conducted in Saudi Arabia[12].

When evaluated, lack of professional supervisors and poor research training came out to be most significant barriers to practice the research in 90.3% and 86% of participants respectively. A Sri-lankan study also revealed that 45.3 % of their study participant could not undertake the research because of lack of research training during their fellowship[20]. Because of lack of formal research training, PGMT finds themselves stranded in the middle of nowhere, ending up in quitting research with disparity. Studies have shown that lack of formal training in research and biostatistics has detrimental effects on research activities. In our part of the world not only the mentors are deficient in number, instead those who are available are not able to give adequate time to guide their trainee in research activities because of their clinical, academic and administrative commitments[21,22]. Mills et al in his study pointed out that quality research develops upon the availability of quality mentors[23]. Training in research methodology, manuscript writing and acquiring analytic skills have now become the need of time to keep pace with challenging and complex research

Although palisade towards research identified in our study were similar to those published in previous studies[9,10,14,20], however in contrast to our study results where workload leading to lack of time was the fourth in ranking, time constrains was cited as the most significant barrier in studies conducted in and Sirilanka(80%)[20], Saudia Arabia (72.3%)[12] and Canada (69%)[24]. When response towards research activity is so listless, lack of research resources and funding act as a nail in coffin for research activity. In our study 67.4% PGMT cited lack of research resources as the factors responsible for reduce research activities.

PGMT are our future physicians. A better understanding of their perceptions and finding ways to overcome the obstacles to conduct research will not only motivate them but can also result in high quality research practices and will groom them into a better clinician with clinical acumen then a mere prescription writer.

Limitations

Our study included only final year PGMT who have nearly completed their fellowship requirements including participating in research methodology workshop. Trends towards research would have been more different if junior PGMT were also involved, hence our study could not be generalized to entire PGMT population.

CONCLUSION

Our study portrayed good perspicacity toward research amongst PGMT. However, due to lack of mentors and deficient research training, their practices toward medical research are erratic and direction less.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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