

DISSERTATION WRITING: AN ANALYSIS OF VARIOUS BARRIERS TO ITS SUCCESS IN PROMOTING RESEARCH CULTURE IN PAKISTAN

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ABSTRACT

Objective: To identify evidence of success or otherwise of measures like dissertation to promote high quality medical research in the students undergoing postgraduate specialty training despite of many efforts, the quality of medical research in the country remains in turmoil and unrest prevails in the medical community as well.

Study Design: Cross-sectional survey.

Place and Duration of Study: Combined Military Hospital Lahore Pakistan, from Jan 2017 to Dec 2018.

Methodology: This study was conducted by using Google forms, interviewing the college's affiliates, which include supervisors, fresh graduates and current trainees using a structured questionnaire, to get an idea of the participants' view regarding magnitude of the problem, its causes and possible solution.

Results: A total of 94 participants responded to the online questionnaire. Among these, 34 (36%) fell in the age group 29-34 years, followed by 19 (20.2%) in the age group 35-40 years. Among the participants, 56 (59.6%) were females. Sixty-six (74%) participants agreed that dissertation writing was not an effective tool in promoting research culture in the country.

Conclusion: The current system of Dissertation-writing is not efficient in promoting research skills of the postgraduate trainees and systemic improvements are urgently needed, which would also brighten the image of medical education in the country.

Keywords: Dissertation writing, Medical education, Professional competence, Research skills.

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INTRODUCTION

Professional competence of doctors is a complex attribute, consisting of various skills like knowledge acquisition, information gathering, data analysis and interpretation and knowledge application for appropriate patient management to name a few.¹ GMC (General Medical Council) UK (United Kingdom) & AAMC (Association of American Medical Colleges) USA (United States of America) emphasize research skills, critical appraisal and inquisitiveness among the important attributes of medical graduates.^{2,3} These attribute and skills of a researcher are crucial to the practice of Evidence Based Medicine (EBM) and central to clinical competence of the medical graduates.^{4,5} Therefore, Ghaffar *et al*, stressed to equip individuals with research capacity, in addition to institutional and other measures, to overcome shortage of high-quality health research in developing countries.^{5,6} This deficiency results mainly from inadequate training, lack of assessments and shortage of funding.

Making research a part of integrated curriculum is among ways to generate student motivation for

scholarly work, influencing attitude towards research and practice of evidence-based medicine (EBM) and an essential step towards creation of physician-investigators.^{5,7}

Among many proposals suggested by Laidlaw *et al*,⁸ to inculcate research skills (like critical thinking, inquisitiveness, creativity, generating research questions, selecting appropriate research methodology, statistical tools & technology, reviewing literature and scholarly writing etc.) in medical students, most emphasized suggestion is actual research itself.

South Asia contributes to only 1.4% of medical research, and contribution by Pakistan is even less.⁵ Under the guidance of Higher Education Commission (HEC) and Pakistan Medical Commission (PMC), steps are being taken at both undergraduate and postgraduate levels to maximize health research in country. Like, undergraduate Medical Students in Pakistan, in their third professional year, undergo course on research methodology, epidemiology and biostatistics, being one of the modules of Community Medicine, of 12 weeks' duration.^{9,10}

This study is aimed to identify evidence of success, and potential causes, if any, of the flaws or failure in such measures to promote high quality research

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in the students undergoing postgraduate specialty training in various disciplines. Additionally, feedback from participants would also be analyzed to suggest tangible solutions to this matter of high concern in present day scenario.

METHODOLOGY

This study was designed as a cross-sectional questionnaire-based study. To conduct the study, approval was sought from Ethical review committee of Combined Military Hospital (CMH) Lahore vide ERC no. 115/2018 dated 31/1/2019. Study was designed through focused group discussion among the authors and a group of trainees at CMH Lahore regarding the process of dissertation, their own perspective about it and their opinion as to what factors act as its barriers.

Inclusion Criteria: All the doctors who have done or are currently undergoing postgraduate specialty training.

Exclusion Criteria: Those doctors who are not registered for postgraduate specialty training.

This survey was conducted by interviewing the postgraduate specialty trainees (PSTs) through a structured pre-designed- questionnaire administered through Google forms questionnaire from January to October 2019; to get an idea of the participants’ view regarding the magnitude of the problem, its causes and possible solutions. Previously no such study regarding effectiveness of dissertation had been conducted in Pakistan. The survey was kept open for 1-year and was repeatedly shared in social media groups to gather maximum voluntary data.

Since this was the first study of its kind in this doctor-group, forms were shared on social media to generate maximum response. Participants also included Supervisors, fresh graduates and current trainees. Strict confidentiality was maintained. Data were analyzed using Google Forms software online version, using frequencies and percentages.

RESULTS

Ninety-four participants responded to the online questionnaire. Among these, 34 (36%) fell in the age group 29-34 years, followed by 19 (20.2%) in the age group 35-40 years. Among the participants, 56 (59.6%) were females. Clinical experience in the field varied from 1.5 to as much as 30 plus years. Eighty four (88%) respondents believed that research work is essential for progress of the country, 2 (2 %) did not believe so, while 9 (10%) of the respondents said may be.

Among the respondents, 5 (5.3%) were professor, 8 (8.5%) were Associate professor, 30 (31.9%) were Assistant professor, 13 (13.8%) were senior registrar, 34 (36.2%) were registrars and rest 4 (4.2%) were independent consultants. Thirty five (37.2%) were trainees and 25 (26.6%) were of supervisory status. Specialty wise distribution is shown in Table-I.

Table-I: Specialty-wise distribution of participants.

Specialty	n (%)
Anesthesia	14 (14.9%)
Dermatology	3 (3.29%)
Gynaecology	30 (31.9%)
General Surgery and Allied	6 (6.4%)
Medicine and Subspecialty (int/family)	5 (5.3%)
Ophthalmology	1 (1.06%)
Pediatrics	5 (5.3%)
Psychiatry	1 (1.06%)
Pathology	2 (2.1%)
Radiology	2 (2.1%)
Not specified	26 (27.7%)

Eighty three (88.3%) of the study participants believe that research work is essential for the prosperity of Health education in Pakistan, 9 (9.6%) participants responded may be and 2 (2.1%) participants disagreed with this statement.

To the question, “Do you believe that Synopsis

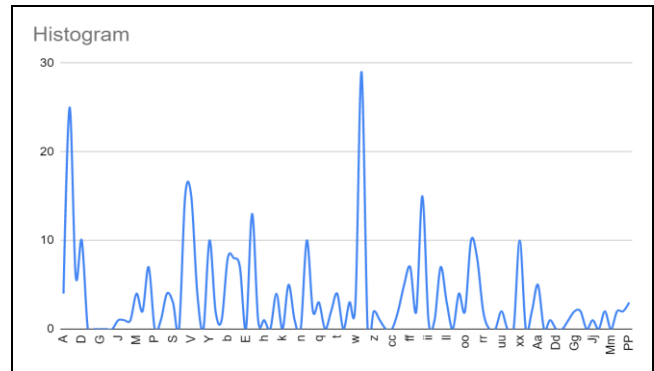


Figure: Number of publications of study participants.

and Dissertation policy has led to plagiarism and writers’ mafia, which are providing these services on profitable basis?” 74 (78.8%) people said yes, 17 (18.1%) said may be and remaining 3 (3.2%) said no.

Only 2 participants believe that 10 out of 10 trainees write synopsis themselves, while majority participants 72% believe that 5 or less out of 10 trainees write synopsis themselves. For dissertation, 30.9% participants believe that only 1 out of 10 trainees write it themselves (option of 0 was not given in the questionnaire designed), and no participant believes that dissertation writing is 100% done by trainees themselves.

Majority of the participants 21 (22.3%) believe that only 1 out of 10 trainees is adequately supported by their supervisors, followed by 20 (21.3%) participants' belief that 2 out of 10 trainees are adequately supported, only 2 participants (2.1%) think that 9 out of 10 trainees are adequately supported by supervisors.

Regarding evaluation process of dissertation, 32 (34%) of the participants believe that it is not properly evaluation upon submission, 29 (31%) believe it to be properly evaluated while 32 (34%) responded "May be".

The questionnaire also included items to identify the barriers to the success of dissertation policy, and following responses were collected. Table-II summarizes the results of questions pertaining to systemic factors acting as barriers to high quality research while Table-III summarizes supervisors related factors acting as barriers, and Table-IV summarizes the trainee related factors hindering high quality research.

DISCUSSION

Study by Jawaid and Iqbal showed that graduates having done MBBS have little interest, knowledge, or skills to pursue research; evidenced by lower number of international publications being contributed by the medical schools of developing countries.^{11,12}

Similarly studies by Khan and Biggs show that even the postgraduate trainees find themselves inadequate in competence, training and support for dissertation completion in a religious way.^{13,14} These findings are supported by the current study.

Our study identifies important barriers to health research in Pakistan, among postgraduate fellows at three levels: systemic, supervisor-level and trainee-level. It mainly studies the institutional measures to promote research, rather than voluntary research. The main barriers identified in our study like lack of constructive alignment (73.4% agree or strongly agree), lack of resources (64.9% agree or strongly agree) and lack of support (74.5% agree or strongly agree) have

Table-II: Systemic Factors acting as barriers to high quality health research.

Factors	1. Strongly Disagree	2. Disagree	3. Neither disagree nor Agree	4. Agree	5. Strongly Agree
Lack of constructive alignment	5 (5.3%)	5 (5.3%)	15 (16%)	20 (21.4%)	49 (52%)
No research incentives or grants (30% respondents strongly agree)	3 (3.2%)	4 (4.3%)	13 (14%)	21 (22.3%)	53 (56.4%)
Failure in raising image of dissertation writing as a reward and not a barrier.	10 (10.6%)	12 (12.8%)	19 (20.2%)	16 (17%)	37 (39.4%)
Poorly spelled out timelines	5 (5.3%)	16 (17%)	24 (25.5%)	20 (21.3%)	29 (30.9%)
No research incentives or grants being awarded by any government institution contribute to lack of non-seriousness for research among scholars	3 (3.2%)	4 (4.3%)	13 (13.8%)	21 (22.3%)	53 (56.4%)

Table-III: Supervisor related factors acting as barriers to high quality health research.

Factor	1. Strongly Disagree	2. Disagree	3. Neither disagree nor Agree	4. Agree	5. Strongly Agree
Lack of interest in Trainees' dissertation: (Supervisors think of dissertation as trainees' own job; thereby contributing to research failure)	4 (4.3%)	6 (6.4%)	19 (20.2%)	22 (23.4%)	43 (45.7%)
Lack of personal interest (I have no advantage)	1 (1.1%)	6 (6.4%)	20 (21.3%)	30 (31.9%)	37 (39.4%)
Lack of competence among supervisors	6 (6.4%)	8 (8.5%)	25 (26.6%)	21 (22.3%)	34 (36.2%)
Lack of commitment on part of supervisors (College has not made it my job)	12 (12.8%)	12 (12.8%)	22 (23.4%)	30 (31.9%)	18 (19.1%)

Table-IV: Trainees-related factors acting as barriers to high quality health research.

Factor	1. Strongly Disagree	2. Disagree	3. Neither disagree nor Agree	4. Agree	5. Strongly Agree
Lack of guidance and support	5 (5.3%)	4 (4.3%)	15 (16%)	26 (27.7%)	44 (46.8%)
Lack of confidence among trainees lead to research failure	2 (2.1%)	8 (8.5%)	27 (28.7%)	34 (36.3%)	23 (24.5%)
Lack of resources for research	3 (3.2%)	8 (8.5%)	22 (23.4%)	31 (33%)	30 (31.9%)
Lack of extrinsic motivation (motivation from institution or supervisor)	3 (3.2%)	11 (11.7%)	10 (10.6%)	55 (58.5%)	15 (16%)
Lack of intrinsic motivation (motivation from within) among trainees leads to research failure	2 (2.1%)	8 (8.5%)	17 (18.1%)	39 (41.5%)	28 (29.8%)

also been identified in a study by Bilal *et al.*¹⁵ yet the strictest barrier in their study was a lack of funding (87.5%). Their study identifies lack of skill and knowledge (77.5%) as an important contributor, which in our study was measured as lack of self-confidence among researchers to possess adequate skills (60.8%). The study demonstrates that dissertation is not believed by majority of the participants as an important contributor to elevate the research standards in the country. Further, it is believed to lead to writer's mafia for research writing, who write articles for monetary benefits. There is a significant gap in practice of dissertation writing as measure to improve research and development and such a gap has been mentioned in leading newspapers of the country.¹⁶⁻²⁰ The participants were asked open-ended questions to solve this dilemma and mixed responses were achieved. About 68 responses were achieved, out of whom, 10 suggested to replace dissertation writing with research articles instead,¹² of the participants suggested removing the component of research from professional competence programs like FCPS, MD etc. Most of the respondents suggested making supervisors more responsible by enhancing weightage of the trainees' dissertation for supervisors and also by more of refresher courses.

In authors' opinion adding weightage to dissertation in career progression of supervisors will lead to more ownership on part of supervisors of the research work by the trainees.

RECOMMENDATION

Based on the results of this study, authors recommend following alternatives to dissertation writing to improve upon the prevailing medical research conditions in the country: Alternating dissertation with 2 research articles OR enhancing its value by introducing thesis defense and later degree equivalence to PHD.

Including a station of dissertation defense in OSCEs, the pros of which would be cost effectiveness and con would be that it might result in lesser number of essential clinical skills stations. Submission of synopsis should be made more user friendly and mandatory within first 6 months of training, and supervisors should be held accountable for it.

Considering the current lack of efficacy of dissertation system, those who have suffered should be granted a waiver to appear in the exams if they have sufficient number of publications.

CONCLUSION

The current system of dissertation-writing is not efficient in promoting research skills of its Postgraduate medical students and systemic improvements are urgently needed, which would also brighten the image of medical education in the country.

Conflict of Interest: None.

Authors' Contribution

QN: Study conception, design, questionnaire design, literature review, data analysis, HT: Data acquisition and results interpretation, SB: Discussion and Final review

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