QUALITY OF POST GRADUATE MEDICAL TRAINING IN PUBLIC AND PRIVATE TERTIARY CARE HOSPITALS OF KARACHI

Adeel Ahmed Khan[1], Shiraz Shaikh[2], Zeeshan Ahmed[3], Mubashir Zafar[4], Muhammad Umair Anjum[5], Aysha Tahir[6], Fareed Shaikh[7]

[1,2]Department of Community Health Sciences, Aga Khan University Hospital, Karachi - Pakistan.
[3,4]Department of Community Medicine, Dow University of Health Sciences, Karachi - Pakistan.
[5]Royal Alexandra Hospital, Paisley - Scotland.
[6]Medical Student, Sindh Medical College, Karachi
[7]Department of Surgery, Aga Khan University Hospital, Karachi - Pakistan.
Address for correspondence:
Dr. Adeel Ahmed Khan
Department of Community Health Sciences, Aga Khan University Hospital, Karachi - Pakistan.
E-mail: adeel.khan@aku.edu
Date Received:
July 16, 2013
Date Revised:
December 02, 2013
Date Accepted:
December 14, 2013

ABSTRACT

Objective: To assess the quality of postgraduate fellowship training and to determine the differences in the quality of postgraduate fellowship training in public and private teaching hospitals of Karachi.

Methodology: It was a cross sectional survey conducted in four public and private sector hospitals of Karachi from January to March 2012. A total of 246 postgraduate fellowship trainees were interviewed. A standardized questionnaire adopted from CPSP guidelines on postgraduate training standards was developed. Postgraduate fellowship trainees (PG's) were selected on the basis of convenient non-probability sampling technique. Fisher's exact test and chi-square test were used to find differences in quality of postgraduate training.

Results: The mean duty hours per week was highest in private sector hospitals i.e., 72.1 as compared to government sector hospital which was 58.3 (*P*-value <0.01). Of the respondents, 66.0% of PG's in private hospitals agreed that they have a structured study program as compare to 46.5% in public hospitals (*P*-value <0.001). Only 38.1% of PG's in public hospitals agreed that they spent appropriate amount of time with their family and friends as compare to 1.8% of PG's in private hospitals (*P*-value <0.001). No significant difference was found in quality of supervision in both public sector and private sector hospitals.

Conclusion: The attributes of different aspects of training were different in public and private sector hospitals. So significant room exists for improvement in the quality of postgraduate medical training as indicated by the less than desirable proportion of trainees being satisfied with different aspects of training.

Key words: Post graduate Medical education, Tertiary care hospitals, Karachi.

This article may be cited as: **Khan AA, Shaikh S, Ahmad Z, Zafar M, Anjum MU, Tahir A, Shaikh F. Quality of post graduate medical training in public and private tertiary care hospitals of Karachi. J Postgrad Med Inst 2014; 28(1):13-8.**

INTRODUCTION

Postgraduate training requirements have increased in modern times with focus on vast areas of management, team work, supervision and research[1]. As a result, provision of quality education and training to junior doctors has remained a subject of great debate in the developed world. Besides, educational and environmental aspects, there is also a great debate on quality of life of junior doctors (mental health, social support, working hours)[1].

Postgraduate training programs in the developed world are trying to adhere to a minimum standard of training, work hours and patient load. To ensure that these minimum standards are met, these programs are kept under tight check by a regulatory authority such as National Residency Control Commission (RCC) in UK[2]. The aim is to provide an acceptable standard of active training to its residents (trainees).

Assuring and maintaining quality in clinical education is a complex process involving multiple agencies, institutions and individuals. Policy and practice agendas in education and health emphasize the need for continuous monitoring, review and evaluation of all processes from management systems through to day to day teaching activities[3,4]. Clinical teachers may be involved in a range of data gathering and evaluation activities and play a central role in gathering and using feedback

from learners, peers and others to improve their teaching[5,6,7]. The reflective teacher also uses opportunities for self-reflection and review to improve the quality of learning and teaching.

In Pakistan, certain minimum standards are in places which are mostly concerned with accrediting hospitals as being fit to offer training. Moreover, all supervisors are trained in areas of educational planning and evaluation, assessment of competence, supervisory skills and research. Yet, a proactive supervised evaluation of training standards is not in effect in Pakistan[4]. With a lack of such standardization arises the inevitable difference in the proficiency and excellence of the training programs in different hospitals throughout Pakistan. As a result, the quality of training imparted to FCPS trainees varies greatly from one hospital to the next.

This paper presents the quality of postgraduate medical education in private and public hospitals of Karachi. It is believed that better understanding can be summarized by assessing the quality of fellowship training. It will show light on student expectation regarding training and will identify services quality gaps. This will help us to identify areas of performance where improvement is required. This research will also provide a valuable insight into the quality needs of the postgraduate medical education and also a potential conceptual framework for policy makers to use when evaluating their service delivery. The overall aim of the study was to assess the quality of postgraduate fellowship training in public and private teaching hospitals of Karachi, and to determine the differences in the quality of postgraduate fellowship training in public and private teaching hospitals of Karachi.

METHODOLOGY

This cross sectional survey was conducted in January to March 2012, on the postgraduate trainees of four leading public and private sector hospitals of Karachi. Postgraduate trainees meant residents doing FCPS training for part II examination in various disciplines. Trainees who had done their MBBS and were undergoing higher medical education in Medicine & allied and Surgery & allied at four hospitals constituted the study population. We chose four hospitals, two each from public and private sector to have equal representation. The criteria we followed for hospital selection was that the hospital should offer FCPS training to all major specialties. The hospitals that were not offering postgraduate trainings were excluded from our study. We tried to eliminate non-response bias by equally enrolling study participants from public and private hospitals. Of these conveniently selected 246 trainees answered a voluntary, confidential and self-administered questionnaire. Questionnaire was adopted from a nationwide survey conducted by Australian Medical Association (AMA) in all the public hospitals of the country[8]. This questionnaire was pretested on five residents in our local setting. Few modifications were made after pre-testing Fifteen item questionnaire utilized a five-point agreement on likert scale. It covered five key areas: Educational practices (structured study program, effective clinic practice based teaching, quarantined time for education and training, clinical meetings, research skills), Balancing life, service and training (distribution of workload, professional development leave, family time), Resources for clinical practice and medical education (educational and information resources, office space),Teaching opportunities (teaching skills) and Supervision, feedback and assessment (supervision, feedback, supervisor assessments). Residents from Basic Sciences were excluded in the study. Prior permission was taken from authorities of all the hospitals included in the survey (Civil Hospital Karachi, Jinnah Postgraduate Medical Centre, Ziauddin Medical University and Aga Khan University Hospital Karachi). Informed verbal consent was taken from study participants before administering the questionnaire. The statistical package for social sciences (SPSS) version 16 was used for data analysis. In data analysis, Fisher's exact test and chi-square test was used to find differences in quality of postgraduate training among four teaching hospitals of Karachi and Quantitative data on working hours was compared using ANOVA.

RESULTS

Table 1 shows socio-demographic characteristics of postgraduate students of public and private hospitals of Karachi. Mean age of study participants was 28.21$\pm$2.95 years. More than half of participants were male, single and had permanent residence in Karachi. More than half belonged to public hospitals and medicine & allied specialty. Most of the post graduate students were in residency year 1 and 2.

Table 2 shows comparison of postgraduate students from public and private hospitals duty hours per week and average duration of call. Private hospital duty hours were 72.1 hours per week and mean duration of call for postgraduate students were 30.9 hours. The mean duration of duty hours per week of private hospitals was statistically different from public hospitals (*P*-value <0.01).

Table 3 shows comparison of postgraduate student responses regarding training between public and private hospitals. Overall more than half (55.7%) of respondents believed that their hospital have structured study programme but less than half (46.5%) of public sector postgraduate students agreed that the programme was structured. When respondents were asked about environment for effective clinical based teaching, more than half (60.2%) of respondents agreed their hospital did so and same pattern were seen in public and private hos-

Table 1: Characteristics of Post graduate students of public and private teaching hospitals of Karachi (n=246)

Variables		n=246	Percentages (%)
Age years Mean(SD)		28.21 (2.95)	
Gender	Male	140	56.9
	Female	106	43.1
Marital Status	Single	150	61.7
	Married	93	38.3
Permanent Residence	Karachi	162	65.9
	Outside Karachi	84	34.1
Residency Hospital	Public Hospitals	144	57.7
	Private hospitals	106	42.3
Specialty of training	Medicine and allied	148	60.2
	Surgery and allied	98	39.8
Residency year	Year 1	82	33.3
	Year 2	89	36.2
	Year 3	37	15.0
	Year 4	29	11.8
	Year 5	9	3.7

Table 2: Comparison between public and private teaching hospital's Duty hours per week and average duration of call in Karachi

Characteristic	Private hospitals	Public hospitals	p-value
Duty hours per week Mean hours	72.1	58.3	< 0.01
Average duration of the call Mean hours	30.9	30.8	0.10

Table 3: Percentage of agreement and comparative comparison regarding educational practices among public and private teaching hospitals of Karachi

Educational practices	Overall % n=246	Public hospitals% n=142	Private Hospitals % n=104	p-value
Structured programme	55.7% (137)	46.5% (67)	66.0% (70)	<0.001
Environment for effective clinical-based teaching	60.1% (148)	57.6% (83)	61.3% (65)	0.101
Sufficient time for education and training	39.0% (96)	43.0% (62)	32.0% (34)	0.005
Unit based meeting on regular basis	69.9% (172)	68.0% (98)	69.8% (74)	0.105
Train and guide to medical research skills	40.6% (100)	36.1% (52)	45.2% (48)	<0.001
Easy access to educational and informational resources	47.9% (118)	36.1% (52)	62.2% (66)	<0.001
Appropriate time to family and friends	23.1% (57)	38.1% (55)	1.8% (2)	<0.000
Equitable distribution of work load	37.3% (92)	44.4% (64)	26.4% (28)	<0.001
Easy access to professional development leave	37.8% (93)	47.9% (69)	22.6% (24)	<0.001
Prompt response from supervisor	70.7% (174)	83.0% (118)	53.8% (56)	<0.001
Mechanism for regular individual meetings with supervisor	38.6% (95)	45.7% (65)	28.8% (30)	0.032
Processes for supervisor assessments	0.4% (1)	0.7% (1)	0	0.180

pitals. Less than half (39%) of respondents believed that their hospital did not give sufficient time for education and training on regular basis and same trend were seen in public and private hospitals.

More than half (69.9%) of residents agreed that they received useful unit based meeting on a regular basis in their hospitals and similar trends in public and private hospitals. Less than half (44.7%) and (40.6%) of postgraduate students agreed that sufficient training is given to deliver scientific session and medical research skills, if we compare difference among public and private hospitals students no differences were found. Nearly half (48%) of respondent believed that their hospitals provided them easy access to information and educational resources but in private hospitals more than half (62.2%) of students agreed and in public hospitals less than half (36.1%) of students have easy access to these resources.

Less than half (23%) of respondents believed that their hospital did support part time or flexible hours to meet with family and friends particularly in private hospitals situation was more intense as only (2%) believe that sufficient time was given to meet with family and friends. More than one third (38%) of students believed that their hospital provided timely and easy access to professional development leave but nearly half (48%) of public sector student agreed to avail these leaves.

Nearly two third (70.7%) of students agreed that supervisor of their hospital gave them prompt response when needed but in private hospitals only (54%) agreed with prompt response from supervisors. More than one third (38.6%) of respondents agreed that there were mechanisms for regular meeting with their supervisor to discuss important issues but in private hospitals only (29%) were having regular meeting with their supervisor. More than one quarter (37%) of respondents agreed that their hospital had a mechanism for consultation with feedback from junior doctors regarding their work and training but in public hospitals nearly half (43%) of students agreed with this mechanism. Only 1% of respondents believed that their hospitals had any processes for supervisor's assessments.

DISCUSSION

Pakistan public and private hospitals will continue to be central to education and training of doctors. Our study adopted a standardized questionnaire from Australian Medical Association study on assessing the quality of postgraduate medical education. The questionnaire has been validated and pretested in different studies in Australia[8]. The findings of the survey have confirmed that around half of the postgraduate students were satisfied with their training of postgraduation in medical profession.

In this study, we found that only 56% of students agreed that their hospital had structured programme, this finding was consistent with other study which was conducted in Australia in which 65% agreed with structured programme at their teaching hospital[9]. Finding from this result indicates that more work needs to be done by hospitals in partnership with College of Physicians and Surgeons of Pakistan (CPSP) to develop appropriate structured study programmes for their trainees.

In this study we found that 50-70% of students agreed that their hospitals had effective clinical based teaching which is consistent with other study. findings in which 58% were had clinical based teaching[10]. Significant number felt that their workplace did not support sound clinical based teaching. To improve clinical practice-based teaching, education needs to be integrated with the delivery of patient care. These two cannot be separated and both must be resourced adequately.

We also found out that around 70% of students agreed that their hospitals conducted clinical meeting which is consistent with result of other study in which 60% of students said that regular meetings were held in their hospitals[11]. This is an encouraging finding and suggests that team-based care, clinical audit activities and evidenced-based practice have been adopted widely.

Around 56% of postgraduates were given adequate and appropriate supervision which is consistent with the finding of other study in which 53% of trainees were supervised appropriately[12]. A high proportion of students felt that they were inadequately supervised and did not have access to the requisite amount of direction from the faculty.

Around 39% of students believed that their hospital provides sufficient time for education and training which is lower than other studies findings in which 48% of students agreed that hospitals provided time for education and training was sufficient[13,14]. Appropriate time for learning is essential for postgraduate students, who often face substantial clinical pressures; learning opportunities are inevitable in the context of service delivery requirements. Education time needs to be protected from the competing pressures of immediate clinical service delivery to ensure that the quality and effectiveness of learning are not compromised.

We identified that 40% of students who agreed to acquire research skills which is concordant of other study finding which showed 36% of students attained research skills[15]. We also found that 37% students agreed that fair distribution of workload was there which is consistent with other study finding in which 36% of students agreed on equitable distribution of workload[16]. It is probably indicative of the increasing pressures on the hospital system.

We also found out that only 38% of students avail professional development leave which was consistent

with other study in which 37% of students avail this opportunity[17]. The response to this question aligns with anecdotal evidence that trainees face hurdles in securing professional development leave.

In this study we found that 48% of students had access to educational and informational resources which is contraindicating other study findings in which 83% of students avail this opportunity[18]. It is recommended that hospitals should invest in providing educational and technological resources.

In this survey we found that only 24% of students acquired teaching skills which is contrast to other study in which more than half of students had these skills[19]. We also found that less than 1% of students believed that their hospitals had mechanism regarding supervisor assessment which much lower than other study in which more than 50% of hospitals had supervisor assessment process[20,21]. The role of supervisors is an essential element in supporting postgraduate students to meet their learning goals. It is also critical in ensuring the development of a skilled and capable national workforce. It is now well recognized that individuals with specific responsibilities for education and training must have opportunities to develop additional specialized skills to serve as role models for their mentees. A wide range of face-to-face and distance learning courses are now available to meet these essential requirements. They should be able to go beyond the improvement of specific teaching skills, adopt diverse educational formats, use staff development programmes and activities to promote organizational change.

Biggs JSG[22], an Australian educationist also recently conducted a survey of Pakistani doctors and found certain deficiencies in their postgraduate training. Lack of guidance regarding career paths, almost nonexistence of training in family medicine and poor working condition of the hospitals were identified. The concept of appraisal and mentoring for trainees was found to be largely missing in their training. Another postgraduate education satisfaction survey from Pakistan reported that 70.54% of trainees were dissatisfied with their training with the majority (52.27% of total subjects) offering lack of structured training as the reason[23].

We observed significant amount of differences in the different domains of quality in public and private hospitals. The post graduate students were much satisfied with the quality of training in private hospitals as compare to public sector hospitals whereas in the domain of balance in training and life, postgraduate students at public sector hospitals were spending more time with family and friends and were not overburdened as compare to private hospitals. There is a dire need to standardize all aspects of training in both public and private sector hospital.

The strengths of the study were that it was the first of its kind to assess the quality of post graduate medical training in different hospitals of Karachi. Proportionate sample was taken from both public and private sector hospitals, however limitations of the study were that it did not do sub-specialty analysis particularly for Paediatrics and Gynaecology & Obstetrics due to limited number of participants of these specialty. Also it also did not include the postgraduate students of basic sciences because of their different working environment and training from clinical specialties. The study also did not include all the CPSP training institutes of the city, but included four major public and private hospitals and we can generalize our findings to other post graduate medical training institutes as well. Also, the questionnaire we used was not validated in our setting, it can have impact on the assessment of quality of these institutes.

CONCLUSION

Significant room exists for improvement in the quality of postgraduate medical training as indicated by the less than desirable proportion of trainees being satisfied with different aspects of training. There is need to standardize the postgraduate fellowship training in Pakistan as the attributes of different aspects of training like burden of work (patient load/work hours) and quality of training (Technical/Environmental/Supervisory) were different in public and private sector hospitals. There is also a need to ensure compliance and adherence to the standards. Faculty members who constitute the cornerstone of educational process are pivotal to effect the desired improvements.

REFERENCES

1. Hebert RS, Levine RB, Smith CG, Wright SM. A systematic review of resident research curricula. Acad Med 2003;78:61-8.
2. Sadana R, D'Souza C, Hyder AA, Chowdhury AM. Importance of health research in South Asia. BMJ 2004;328:826-30.
3. Aslam F, Qayyum MA. Catastrophic failures of public health. Lancet 2004;363:1553.
4. Rehan N. Medical research in Pakistan. J Coll Physicians Surg Pak 2003;13:617.
5. Page J, Heller RF, Kinlay S, Lim LL, Qian W, Suping Z, et al. Attitudes of developing world physicians to where medical research is performed and reported. BMC Public Health 2003;3:6.
6. Chaturvedi S, Aggarwal OP. Training interns in population-based research: learners' feedback from 13 consecutive batches from a medical school in India. Med Educ 2001;35:585-9.

7. Segal S, Lloyd T, Houts PS, Stillman PL, Jungas RL, Greer RB. The association between students' research involvement in medical school and their postgraduate medical activities. Acad Med 1990;65:530-3.

8. Australian Medical Association. AMA junior doctor training, education and supervision survey report of findings [Online]. 2009 [cited on 2012 Aug 12th]. Available from URL: https://ama.com.au/system/files/node/5202/AMA%20TES%20Report_1.pdf

9. Gill S, Levin A, Djurdjev O, Yoshida EM. Obstacles to residents' conducting research and predictors of publication. Acad Med 2001;76:477.

10. Alguire PC, Anderson WA, Albrecht RR, Poland GA. Resident research in internal medicine training programs. Ann Intern Med 1996;124:321-8.

11. Gaba DM, Howard SK. Patient safety: fatigue among clinicians and the safety of patients. N Engl J Med 2002;347:1249-55.

12. Flinn F, Armstrong C. Junior doctors' extended work hours and the effects on their performance: the Irish case. Int J Qual Health Care 2011;23:210-7.

13. Britten N. Qualitative research and the take-up of evidence-based practice. J Res Nurs 2010;15:537-44.

14. Miller A, Archer J. Impact of workplace based assessment on doctors' education and performance: a systematic review. Br Med J 2010;341:c5064.

15. Sheehan DA. Integrating high school career and technical education: a change process case study [Dissertation]. San Diego: San Diego State University; 2012.

16. Thangaratinam S, Yanamandra SR, Deb S, Coomarasamy A. Specialist training in obstetrics and gynaecology: a survey on work-life balance and stress among trainees in UK. J Obstet Gynaecol 2006;26:302-4.

17. Barer ML, Stoddart GL. Toward integrated medical resource policies for Canada: 9. Postgraduate training and specialty certification. CMAJ 1992;147:999-1005.

18. Scheele F, Teunissen P, Van Luijk S, Heineman E, Fluit L, Mulder H, et al. Introducing competency-based postgraduate medical education in the Netherlands. Med Teach 2008;30:248-53.

19. Moonesinghe SR, Lowery J, Shahi N, Millen A, Beard JD. Impact of reduction in working hours for doctors in training on postgraduate medical education and patients' outcomes: systematic review. BMJ 2011;342:d1580.

20. Swanwick T. Informal learning in postgraduate medical education: from cognitivism to 'culturism'. Med Educ 2005;39:859-65.

21. Saaiq M, Khaleeq-uz-Zaman. Postgraduate medical education: residents rating the quality of their training. J Coll Phys Surg Pak 2013;23:72-6.

22. Biggs JSG. Postgraduate medical training in Pakistan: observations and recommendations. J Coll Physicians Surg Pak 2008;18:58-63.

23. Tajammul A, Arif A, Parveen T. Postgraduate training in Pakistan: the trainees perspective. Pak Paed J 2002;26:119-24.

CONTRIBUTORS

AAK and SS conceived the idea and designed the study in collaboration with ZA, MZ and UA. UA, AT and FS implemented the field study. ZA and MZ coded the data and all authors contributed in the subsequent analysis. AK, SS, ZA and MZ participated in the design, data analysis and revising the manuscript. All authors read and approved the final manuscript.