

Does outsourcing paramedical departments of teaching hospitals affect educational status of the students?

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Abstract

Background: There is an increasing trend of outsourcing public departments. Teaching hospitals also outsourced some of their departments to private sectors. The aim of this study was to investigate and compare the educational status of students in public and outsourced departments of teaching hospitals affiliated to Iran University of Medical Sciences.

Methods: This study was conducted in six teaching hospitals of Iran University of Medical Sciences, which had public and outsourced teaching departments in 2015. One hundred fifty students from the departments of radiology, physiotherapy and laboratory participated in this study and their perceptions about their educational status were assessed. A valid and reliable questionnaire was used; participation in the study was voluntary. Descriptive statistics such as mean (SD), t-test and Kolmogorov-Smirnov were used.

Results: No difference was detected between the educational status of students in public and outsourced departments of radiology, physiotherapy and laboratory ($p>0.05$).

Conclusion: Based on the students' perception, the private sectors could maintain the educational level of the teaching departments similar to the public departments. It is recommended to involve all the stakeholders such as hospital administrators, academic staff and students in the decision-making process when changes in teaching environments are being considered.

Keywords: Outsourcing, Public Private Partnership, Education, Teaching Hospitals.

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Introduction

The rising expenditures of the hospitals cause cost crisis and create challenges on resource allocation and budgeting (1-3). To control and decrease the costs and increase the quality of services, governments use outsourcing methods (4,5). The reasons hospitals' administrators choose to outsource healthcare services is to decrease operating costs (6,7), improve quality (8,9), encourage investments in medical equipment and

new technologies, increase patients' satisfaction (9,10) and employ effective staff (4,5).

Hospital administrators may outsource clinic, para clinic and support services and departments to the private sector through different methods. Public- Private Partnership (PPP) is one of the outsourcing methods widely used in hospitals (7). PPP is an agreement between a public and a private sector (5), in which the public sector as-

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signs the specific services or operations to the private sector (7,11) in return for a benefit (5). Recently, many radiology, laboratories, physiotherapy, dialysis and pharmacies have been outsourced (9,12).

Teaching hospitals may also use outsourcing methods to increase the quality of care and decrease the costs (3). Teaching hospitals are affiliated to medical sciences universities and have the mission of distributing medical knowledge to medical and paramedical students in addition to health care delivery. Thus, these hospitals may face more challenges caused by outsourcing the services or departments to a private sector (3,13).

Teaching hospitals should make available educational environments for the students while they are outsourcing some services and departments (14-16). Assessing the educational environment comprehensively shows what is happening (17,18) within the class, department, faculty or hospital (14-16,19). There are many studies assessing the students' perceptions of their educational environment (18,20-23), as many medical universities and teaching hospitals believe that the students are the main stakeholders in their own education (18,24).

To our knowledge, the literature has not discussed the differences between educational status in public and outsourced departments.

Iran University of Medical Sciences, like other medical universities, outsourced some services and departments in hospitals. The aim of this study was to study and compare the educational status of students in public and outsourced departments of radiology, physiotherapy and laboratory in Iran University of Medical Sciences.

Methods

In this study, students studying in public radiology, physiotherapy and laboratory were compared to those working in outsourced departments. Iran University of Medical Sciences had outsourced some teaching departments of its teaching hospi-

tals to increase the quality of services and decrease the costs. This study was conducted to examine whether or not this outsourcing affects the quality of educational status of the students. Educational status is defined as the level of education or skill obtained in a profession.

This study was conducted in six teaching hospitals of Iran University of Medical Sciences, which had public and outsourced teaching departments in 2015. One hundred fifty students participated in this study and their perceptions of their educational status were assessed. The students studying in the departments of radiology, physiotherapy and laboratory at six teaching hospitals in the second semester of 2014-2015 were included in the study.

The inclusion criterion for selecting hospitals was as follows: Hospitals, which had students in teaching departments of radiology, physiotherapy and the laboratory. The hospitals that did not have the mentioned departments, or did not have students in these three departments were excluded.

The authors used a five-point Likert type scale questionnaire, whose validity and reliability have been confirmed. The validity and reliability were measured by experts. The content validity of this instrument was 83.5 and Cronbach's alpha was 0.86.

The demographic questions were also used to collect data on age, sex and level of education. Involvement in the study was voluntary and participants could decide not to participate at any time.

Data entry and analysis were done using the Statistical Program for Social Sciences (SPSS) Version 19.0. Descriptive statistics such as mean (SD), t-test and Kolmogorov-Smirnov (for testing the normality) were used in this study. A $p < 0.05$ was considered as statistically significant.

Results

About 39.4% (n=59) of the participants were male and 60.6% (n=91) were female. About 63.3% (n=95) of the students were studying in outsourced departments while 36.7% (n=55) were studying in public de-

Table 1. The Association between Students' Educational Status in Public and Outsourced Departments of Physiotherapy, Radiology and Laboratory

Department	Status	Mean	SD	p
Physiotherapy	Outsourced	4	0.63	0.575
	Public	4.09	0.33	
Radiology	Outsourced	3.31	0.72	0.696
	Public	3.41	0.52	
Laboratory	Outsourced	3.25	0.56	0.399
	Public	3.41	0.53	

partments. About 26.7% (n=40) of the students were in physiology, 37.3% (n=56) in radiology and 36% (n=54) in laboratory department.

The Kolmogorov-Smirnov test was used to assess the normality of the data (Table 1). Data followed the normal distribution ($p > 0.05$).

No association was detected between students' educational status in public physiotherapy departments and outsourced ones ($p > 0.05$). This means that there were no meaningful differences between the educational statuses of students in public or outsourced physiotherapy departments (Table 1). Furthermore, no association was found between the educational status of students in public and outsourced radiology and laboratory departments (Table 1).

Discussion

The results of this study revealed no difference between the educational status of students in public and outsourced departments.

Nowadays, there is an increasing trend of outsourcing public departments (9,25); and many hospital departments have been outsourced during the years (9,12). However, there is a little knowledge about how students in public and outsourced educational departments of hospitals differ from each other (25-27).

Many surveys had been done on the educational status and environments in different countries, but they did not compare the scores nor assessed the relations between the public and outsourced departments (18, 28-35). To the authors' knowledge, this study was the first of its kind in Iran, which aimed to assess and compare the educational status of the students in public and out-

sourced teaching departments of hospitals.

The results of this study are in line with Diwan and et al. (25) survey, which assessed the Indian medical students in public and private sectors of medical schools in 2013. The authors found no differences between the students in public and private medical schools.

Sarfraz Khan and et al. in 2009 (36) found a difference in the medical education between the private and public sectors. On the other hand, another study showed some differences between public and private departments and found that the private education departments had a higher success rate and greater prestige when compared to their public sector in Pakistan (36,37). The authors argued that it could be due to their financial resources.

The limitations of this study include its relatively small sample size; also, participants were only from three departments of physiotherapy, radiology and laboratory of Iran University of Medical Sciences. It is not clear whether the results of this study reflect the opinion of the entire Iranian students in all public and outsourced departments. The authors believe that nationwide surveys are needed.

Conclusion

This study found no difference in the educational status of students in public and outsourced paramedical departments of teaching hospitals at Iran University of Medical Sciences. Although this means that private sectors could maintain the educational level of the teaching departments like the public departments, more studies are needed.

While the public sector could not afford to purchase the new technologies, it is criti-

cal for public teaching hospitals to benefit from the private sector investments in medical equipments and new technologies to develop the educational status of the students.

It is recommended to assess the educational status of the students before outsourcing a teaching department to help the decision makers have a comparison before and after outsourcing a unique department. Moreover, this is useful to define the same educational packages for students in public and outsourced departments of teaching hospitals. Sharing the same teaching methodologies, curriculum and examination could help the researchers to assess the educational status of the students with less bias.

The results of this study are important for academia, healthcare managers, decision makers and the managers of departments in teaching hospitals. It is recommended to involve all the stakeholders such as hospital administrators, academic staff and students in the decision-making process when changes in teaching environments are being considered.

References

1. Lobo MS, Lins MP, Silva AC, Fiszman R. Assessment of Teaching Healthcare Integration and Performance in University Hospitals. *Rev Saúde Pública* 2010;44(4):581-90.
2. Guardazi R, Pourreza A, Shokoohi, Askari R, Mahdavi M, Moghri J. Technical efficiency of teaching hospitals in Iran; The use of stochastic frontier analysis, 1999-2011. *International Journal of Health Policy Management* 2014;3(2):91-97.
3. Bwana KM, Raphael G. Technical Efficiency of Tanzania Teaching Hospitals: The Case of Private not for-profit Hospitals. *Business Management and Strategy* 2015;6(1).
4. Nikolic IA, Maikisch H. Public-Private Partnerships and Collaboration in the Health Sector An Overview with Case Studies from Recent European Experience. HNP Discussion Paper 2006 Oct. Available from: miha.ef.uni-lj.si/_dokumenti3plus2/192328/JZP-2011-LIT-6.pdf
5. Etemadian M, Shadpour P, Soleimani MJ, Biglar M, Radfar MH, Jarrahi M. An Iranian-Islamic Model of Public-Private Partnership in Hospital Management: Introducing Moheb Hospital Model. *International Journal of Hospital Research* 2013;2(2):95-98.
6. Sunseri R. Outsourcing on the Outs. *Hospitals & Health Networks* 1999;73(10):46-2.
7. Roberts JG, Henderson JG, Olive LA, Obaka D. A Review of Outsourcing of Services in Health Care Organizations. *Journal of Outsourcing & Organizational Information Management* 2013;2013 (2013).
8. Yigit V, Tengilimoglu D, Kisa A, Zeedan YM. Outsourcing and Its Implications for Hospital Organizations in Turkey. *J Health Care Finance* 2007; 33:86.
9. Karimi S, Agharahimi Z, yaghoubi M. Impacts of outsourcing in educational hospitals in Iran: A study on Isfahan University of Medical Sciences-2010. *J Edu Health Promot* 2012;1:25.
10. Macinati MS. Outsourcing in the Italian National Health Service: Findings from a national survey. *Health Plan Manage* 2008;23:21-36.
11. Carr LP, Nanni AJ. *Delivering Results: Managing What Matters*, New York, NY: Springer Science+Business Media, LLC 2009.
12. Daniel J, Altman MD, Richard B, Gunderman. Outsourcing: A Primer for Radiologists. *J Am Coll Radiol* 2008;5:893-9.
13. Mauro M, Cardamone E, Cavallaro GA, Giovanna T, Trotta A. Performance evaluation in the Italian Teaching hospitals. A case Study. *World Review of Business research* 2012;2(6):183-199.
14. Nahar N, Talukder HK, Khan TH, Mohammad S, Tahmina N. Students' perception of educational environment of medical colleges in Bangladesh. *BSMMU J* 2010;3(2):97-102.
15. Roff S, McAleer S. What is educational climate? *Medical Teacher* 2001;23(4):333-334.
16. Naik PR, Nirgude AS. Medical Students' Perceptions about Their Educational Environment in Community Medicine. *Indian Journal of Applied Research* 2014;4(11).
17. Roff S, McAleer S, Ifere OS, Bhattacharya S. A global diagnostic tool for measuring educational environment: comparing Nigeria and Nepal. *Med Teach*. Jul 2001;23(4):378-382.
18. Bakhshi H, Bakhshialiabad MH, Hassanshahi Gh. Students' perceptions of the educational environment in an Iranian Medical School, as measured by The Dundee Ready Education Environment Measure. *Bangladesh Med Res Counc Bull* 2014; 40:36-41.
19. Genn JM. AMEE Medical Education Guide No-23 (Part 1): Curriculum, environment, climate, quality and change in medical education- a unifying perspective. *Medical Teacher* 2001;23:337-44.
20. Whittle S, Whelan B, Murdoch-Eaton DG. DREEM and beyond; studies of the educational environment as a means for its enhancement Education or Health: Change in Learning and Practice 2007;2:1-9.
21. Hutchinson L. The ABC of learning and teaching: Educational environment. *BMJ* 2003;

326(7393):810-812.

22. Aghamolaei T, Fazel I. Medical students' perceptions of the educational environment at an Iranian Medical Sciences University. *BMC Med Educ* 2010;10:87.

23. Brown T, Williams B, Lynch M. The Australian DREEM: evaluating student perceptions of academic learning environments within eight health science courses. *Int J Med Educ* 2011;2:94-101.

24. Davenport ES, Sindi Barts AM. Dental Students Perception of Their Educational Environment. http://iadr.confex.com/iadr/2008Toronto/techprogram/abstract_106929.htm

25. Diwan V, Minj C, Chhari N, De Costa A. Indian medical students in public and private sector medical schools: are motivations and career aspirations different? – Studies from Madhya Pradesh. *India BMC Medical Education* 2013;13:127.

26. Huntington I, Shrestha S, Reich NG, Hagopian A. Career intentions of medical students in the setting of Nepal's rapidly expanding private medical education system. *Health Policy Plan* 2012; 27(5):417-428.

27. Privatization of Medical Education in Nepal and South Asia: An Important Area for Future Research. http://www.webmedcentral.com/article_view/2471.

28. Al-Ayed IH, Sheik SA. Assessment of the educational environment at the college of medicine of King Saud University. *Riyadh. East Mediterr Health J* 2008;14(4):953-959.

29. Mayya SS, Roff S. Students' perceptions of the educational environment: A comparison of academic achievers and under-achievers at Kasturba Medical College. *India. Educ Health* 2004;17(3):

280-291.

30. Shehnaz SI, Sreedharn J. Students perception of educational environment transition in United Arab Emirates. *Med Teach* 2011;33:e37-e42.

31. Till H. Identifying the perceived weaknesses of a new curriculum by means of the Dundee Ready Education Environment Measure (DREEM) Inventory. *Med Teach* 2003;26:39-45.

32. Bassaw B, Roff S, McAller S, Roopnarinesingh S, Lisle JD, Teelucksingh S, et al. Students' perspectives on educational environment, Faculty of Medical Sciences, Trinidad. *Med Teach* 2003;25:522-526.

33. Said NM, Jaafar R, Arzuman H. A Study of Learning Environments in the Kulliyah (Faculty) of Nursing, International Islamic University Malaysia. *Malaysian Journal of Medical Sciences* 2009; 16(4):15-24.

34. Lai N, Nalliah S, Jutti RC, Hla Y, Lim VK. The educational environment and self-perceived clinical competence of senior medical students in a Malaysian medical school. *Educ Health* 2009; 22(2):148.

35. Jiffry MTT, McAleer S, Fernando S, Marasinghe RB. Using the DREEM questionnaire to gather baseline information on an evolving medical school in Sri Lanka. *Med Teach* 2005;27:348-52.

36. Sarfraz Khan J, Tabasum S, Khalil Yousafzai U. Determination of medical education environment in Punjab private and public medical colleges affiliated with university of health sciences. *J Ayub Med Coll Abbottabad* 2009;21(4):162-170.

37. Hansen MN. Private education and academic performance among medical students. *Tidsskr Nor Laegeforen* 2005;25:2216-8.