THE PERFORMANCE INDEX OF PRIVATE AND PUBLIC SECTOR HOSPITALS OF KARACHI, PAKISTAN

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ABSTRACT

Objective: To compare the performance index of private and public sector hospitals of Karachi, Pakistan.
Study Design: Cross-sectional study.
Place and Duration of Study: In a tertiary care hospitals (one private and one public sector) of Karachi, from Nov 2016 to Nov 2017.
Methodology: A sample size of 153 were enrolled by purposive sampling technique. Performance index of both hospitals was compared by asking questions from the hospitals staff. Data were collected by the researcher using closed ended questionnaire.
Results: Out of 153, 78 (51%) cases were for private hospitals and 75 (49%) cases were for public hospitals. While evaluating the performance index by hospital work area/unit elements, "Enough staff to handle workload" was significantly higher for private hospitals with the *p*-value of <0.05. Performance index by Supervisor/Manager elements showed that "Whenever pressure builds up, the supervisor/manager wants us to work faster, even if it means taking shortcuts" was significantly higher for private hospitals with a *p*-value of <0.05. "Staff are afraid of asking questions when something seems does not right" is the lowest-rated elements on overall with an index score of 41.99 for overall and for public and private hospitals index score is 40.67 and 43.27 respectively. No statistically significant difference was observed on the rest of the elements.
Conclusion: The performance index was higher in private hospital as compared to the public sector hospital in the Karachi city.

Keywords: Doctor, Hospital, Manager, Performance index, Private, Public.

INTRODUCTION

Pakistan is a welfare state and providing health, education, food, clothing and shelter is the duty of the government[1]. According to Alma Ata Declaration in 1978, Pakistan's government established an extended network of primary health facilities to improved accessibility of the population to the basic health care facilities with a chief purpose of providing equitable, effective and accessible health care services at a cost that individuals can afford[2].

Pakistan has a mixed typed, health care delivery system, comprising of private, public and informal health care sector. A family health survey conducted in 1998, reported that use of public sector primary health care facilities is around 21% and almost 79% population use pri-ate sector healthcare facilities including the trained private sector (49%) as well as non-conventional health care (30%) inclusive of traditional faith healers, Hakims, herbal doctors, Unani healers and quacks[3]. There are several reasons for low utilization of public sector health care and dissatisfaction from public sector health facilities, including non-availability doctors and paramedical staff, shortage of life-saving drugs and required equipment[4]. There are a lot of factors responsible for extreme underutilization of public health care facilities including poverty, lack of trust and patient satisfaction, poor sanitation, poor design of building, illiteracy, inaccessibility, lack of health policy, cultural factors, lack of commitment

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Received: 28 May 2020; revised received: 09 Oct 2020; accepted: 12 Oct 2020

and political will[5]. Patient satisfaction is one of the major areas which needs to be explored.

Today, national healthcare systems face numerous challenges on how to improve the delivery of health services to the communities they serve. Patient satisfaction and patient experience are becoming the front and center of healthcare trends, as assumed by the "patient-centered care model." Rapidly evolving health care system means that previous models of hospital performance measurement are no longer valid[6].

Patients treated in high-performance hospitals may have a survival advantage that lasts over time, indicating that variations in the standard of treatment given contribute to early benefits that continue over time[7].

Existing tools for measuring adverse events have demerits and limitations also controversy continues to plague efforts for measuring and comparing performance index between hospitals[8]. Studies usually focus on the factors involved in the adverse events related to morbidity and mortality and it is routinely used by researchers but is very time-consuming and effortful that majority of the hospitals do not measure performance index[9]. This study aims at comparing the performance index of private and public sector hospitals, which can be disseminated to concerned authorities for appropriate policy actions.

METHODOLOGY

It was a cross sectional study carried out in two tertiary care hospitals: The Indus Hospital was the Private sector hospital and public sector hospital was Pakistan Navy Ship Shifa (PNS Shifa) of Karachi. The study duration was one year from November, 2016 till November, 2017. The sample size was calculated to be approximately 153. Consecutive sampling technique was used. The managerial staff was enrolled for data collection. Any person who does not wanted to be interviewed was excluded from the study. Data were collected by the researcher using closed ended questionnaire. Participants were asked about the performance index at different elements. The performance index at each element was calculated by enlarging scale from five-point schema to 100 points schema using below formula: Performance Index= 100x-14: Where x is the mean of questionnaire element(s) under consideration. Ethics committee approval was taken and from every patient informed verbal consent was taken. Data were entered and analyzed using Statistical package for Social Sciences (SPSS) version 20. Qualitative variables like gender, specialties etc are presented in the form of frequencies and percentages. Descriptive statistics was used to calculate mean and standard deviation for quantitative variables like age. The t-test was applied to find association between the performance index of public and private hospital.

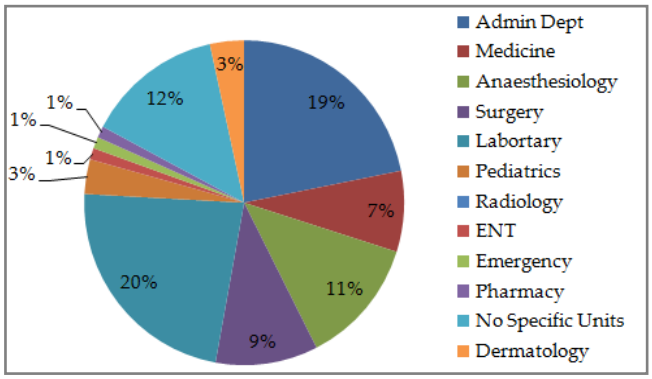

Figure-1: Percentage of Doctors in Different Work Area of Public Hospital.

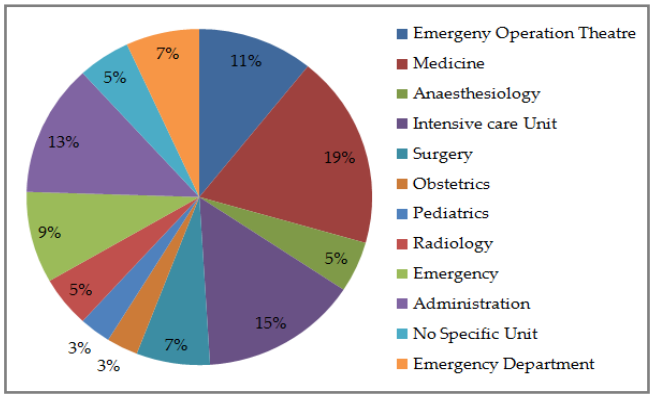

Figure-2: Percentage of Doctors in Different Work Area of Private Hospital.

RESULTS

Data of 153 successful and filled questionnaires were analyzed. Out of 153, 51% (78) cases

were for private hospitals and 49% (75) cases were for public hospitals.

Figure-1 shows the percentage of doctors in the different work area of public hospital while figure-2 indicates the frequency of distribution of doctors in different work areas of private hospital.

Performance index by hospital work area/ unit elements is presented in table-I. "Enough staff to handle workload" was significantly higher for private hospitals with a *p*-value of <0.05. No statistically significant difference was observed on any of the rest of the elements.

Table-I: Performance Index By The Hospital Work Area/Unit Elements.

Elements **Figures = mean ± SD**	**Overall**	**Public Hospital**	**Private Hospital**	**t-test**
	(n=153)	**(n=75)**	**(n=78)**	***p*-value**
Q1_1-People are supportive of each other in our unit	79.9 ± 15.46	80 ± 14.82	79.81 ± 16.15	0.939
Q1_2-Our unit has enough staff for handling workload	43.14 ± 31.71	29.33 ± 29.74	56.41 ± 27.75	<0.001*
Q1_3-When workload increases and need to be done urgently, the staff of our unit work as a team to accomplish the task	79.58 ± 15.29	79.67 ± 13.44	79.49 ± 16.97	0.942
Q1_4-In our unit mutual respect is a precedence	74.51 ± 19.97	77.33 ± 18.91	71.79 ± 20.69	0.086
Q1_5- Staff of this unit have longer working hours than required for safe care	72.55 ± 22.35	73.33 ± 24.43	71.79 ± 20.29	0.672
Q1_6-Staff of our unit work efficiently for improving patient safety	78.92 ± 17.71	79 ± 19.3	78.85 ± 16.16	0.957
Q1_7- We have more temporary staff than required for safe care	52.78 ± 25.09	54.67 ± 27.48	50.96 ± 22.59	0.363
Q1_8- Staff feel that errors made by them are held against them	55.39 ± 22.2	52.33 ± 23.31	58.33 ± 20.81	0.095
Q1_9-Errors have resulted in a positive change in our unit	69.93 ± 19.1	69 ± 19.64	70.83 ± 18.65	0.555
Q1_10- It is just due to chance that major errors don't occur in our department	53.92 ± 26.61	56 ± 26.9	51.92 ± 26.35	0.345
Q1_11-When one area is having more workload in our unit, others are there to help	66.01 ± 23.41	64.33 ± 24.38	67.63 ± 22.47	0.386
Q1_12- In an event report, more focus is given to the person instead of the problem	58.01 ± 25.43	56.33 ± 24.69	59.62 ± 26.18	0.427
Q1_13-When changes are incorporated in a system for improving patient safety effectiveness is evaluated subsequently	70.26 ± 21.79	67.67 ± 24.92	72.76 ± 18.1	0.149
Q1_14- We work in stressful/burdened environment, doing so much, so quickly	67.97 ± 26.2	71.33 ± 27.48	64.74 ± 24.65	0.120
Q1_15-Safe patient care is never compromised to get more work done	66.18 ± 25.24	66.33 ± 25.17	66.03 ± 25.47	0.940
Q1_16-Staff worry that errors made by them are kept in their record files	64.38 ± 22.16	64 ± 22.97	64.74 ± 21.49	0.836
Q1_17- There are patient safety problems in our unit	47.39 ± 26.15	46.33 ± 26.85	48.4 ± 25.59	0.627
Q1_18-Our methods and actions help prevent errors from the occurrence	65.36 ± 22.96	65.33 ± 27.23	65.38 ± 18.12	0.989

**Statistically significant at 5% level of significance*

Performance index by Supervisor/Manager elements is presented in table-II. "Whenever pre-

ssure builds up, the supervisor/manager wants us to work faster, even if it means taking shortcuts" was significantly higher for private hospitals with a *p*-value of <0.005. No statistically significant difference was observed on the rest of the three elements.

"My supervisor/manager says good words when he/she sees a job done according to established patient safety procedures" is rated high on overall and for both public and private hospitals, with an index score of 77.61 for overall and for public and private hospitals index score is 79.33 and 75.96 respectively. "My supervisor/manager overlooks patient safety problems that happen over and over" is the lowest-rated elements on overall with an index score of 45.26 for overall and for public and private hospitals index score is 40.67 and 49.68 respectively.

Performance index by Communications elements are presented in table-III. No statistically significant difference was observed on all of the communication elements.

"We are informed about errors that happen in this unit" is rated high on overall and for both public and private hospitals, with an index score of 70.26 for overall and for public and private hospitals index score is 68.33 and 72.12 respectively. "Staff are afraid of asking questions when something seems does not right" is the lowest-rated elements on overall with an index score of 41.99 for overall and for public and private hospitals index score is 40.67 and 43.27 respectively.

Table-II: Performance index by supervisor/manager elements.

Elements	Overall	Public Hospital	Private Hospital	t-test
Figures = mean ± SD	**(n=153)**	**(n=75)**	**(n=78)**	***p*-value**
Q2_1-My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures	77.61 ± 18.4	79.33 ± 16.11	75.96 ± 20.32	0.258
Q2_2-My supervisor/manager seriously considers staff suggestions for improving patient safety	74.35 ± 19.23	72.67 ± 20.62	75.96 ± 17.77	0.291
Q2_3-Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts	47.71 ± 25.22	42.33 ± 23.96	52.88 ± 25.48	0.009*
Q2_4-My supervisor/manager overlooks patient safety problems that happen over and over	45.26 ± 30.32	40.67 ± 29.57	49.68 ± 30.55	0.066

**Statistically significant at 5% level of significance*

Table-III: Performance index by communication element.

Elements	Overall	Public Hospital	Private Hospital	t-test
Figures = mean ± SD	**(n=153)**	**(n=75)**	**(n=78)**	***p*-value**
Q3_1-We are given feedback about changes put into place based on the error report	62.25 ± 24.18	63.33 ± 26.42	61.22 ± 21.94	0.590
Q3_2-Staff will freely speak up if they see something that may negatively affect patient care	69.28 ± 26.67	71.67 ± 24.77	66.99 ± 28.35	0.279
Q3_3-We are informed about errors that happen in this unit	70.26 ± 22.53	68.33 ± 23.01	72.12 ± 22.06	0.301
Q3_4-Staff feel free to question the decision or action of those with more authority	52.29 ± 27.56	49 ± 26.46	55.45 ± 28.39	0.149
Q3_5-In this unit we discuss ways to prevent errors from happening again	76.8 ± 23.84	77 ± 23.52	76.6 ± 24.29	0.918
Q3_6-Staff are afraid to ask questions when something seems does not right	41.99 ± 30.44	40.67 ± 30.14	43.27 ± 30.86	0.599

**Statistically significant at 5% level of significance*

The performance index of "Hospital units do not coordinate well with each other" was significantly higher in a private hospital as compared to a public hospital with an overall index score of 47.55 and 43.33 and 51.60 for public and private hospital respectively. The performance index of "Important patient care information is often lost during shift Changes" was significantly higher in private hospital compared to a public hospital with an overall index score of 41.34 and 32.33 and 50.00 for public and private hospital respectively. The performance index of "It is often unpleasant to work with staff from other hospital units" was significantly higher in a private hospital as compared to a public hospital with an overall index score of 43.63 and 35.67 and 51.28 for public and private hospital respectively. The performance index of "Problems often occur in the exchange of information across Hospital units" was significantly higher in a private hospital as compared to a public hospital with an overall index score of 52.94 and 44.00 and 61.54 for public and private hospital respectively. The performance index of "Hospital management seems interested in patient safety only after an adverse event happens" was significantly higher in a private hospital as compared to a public hospital with an overall index score of 50.98 and 45.67 and 56.09 for public and private hospital respectively. The performance index of "Shift changes are problematic for patients in this hospital" was also significantly higher in a private hospital as compared to a public hospital with an overall index score of 46.24 and 37.00 and 55.13 for public and private hospital respectively. No statistically significant difference was observed on of rest of the elements.

DISCUSSION

Main findings of the quantitative phase showed that "Enough staff to handle workload" was significantly higher for private hospitals[10]. "People support one another in this unit", "When a lot of work needs to be done quickly, we work together as a team to get the work done" and "We are actively doing things to improve patient safety" were rated high on overall and for both public and private hospitals. "We have enough staff to handle workload", "We have patient safety problems in this unit" and "We use more agency/temporary staff than is best for patient care" were the lowest-rated elements on overall and for both hospitals[11].

Event reports filled out and submission frequency was relatively high for a private hospital, but insignificant with *p*-value <0.05. Overall event reporting frequency was 42.48% while, 50% and 43.67% for a private and public hospital. Overall on an average 2.19 event reports filled and submitted in the last 12 months, while, for the private and public hospital it was 2.63 events and 1.73 events respectively. In a study conducted in Riyadh, it was reported that all types of errors were reported more frequently in private hospitals than in public hospitals[12]. In the past 12 months, most respondents reported "no events". The percentage of no event during the past 12 months was higher in private hospitals compared to public hospitals. The high per cent of "no event" reports may represent under-reporting in all hospitals[13]. In another study, Badr *et al*, about half of the participants reported no events in the last 12 months, while 31.4% reported 1-2 events[14].

In a Pakistani study, respondents were less positive about disclosure in error reporting confidence domain but still fairly positive about medical errors reporting to their seniors[15]. Results of another qualitative study revealed a positive attitude of respondents towards the improvement of quality by analyzing adverse events and were willing for reporting adverse events locally as well as regionally, provided that there is no harm to them from risk exposure to public contempt or to sanctions[16]. A study conducted elsewhere reported even less mean score (3.79 ± 1.25) in the domain of error disclosure[17]. Two other studies reported that doctors fear that medical errors made mistakenly by them may be mentioned in their personal files[18,19]. A research study conducted in Iran emphasized the problem of lack of information on the occurrence and frequency of medical errors[20]. Knowledge gaps also exist on what to be considered as reportable patient safety event[21]. Discussing medical errors with senior

colleagues and supervisors had a positive attitude. Similarly, results by other researches also revealed that disclosure of medical errors may help physicians to learn[22].

CONCLUSION

The performance index was higher in private hospital as compared to the public sector hospital in the Karachi city. The hospital performance is one of the important measure contributing towards patient care and safety and shall be given importance while devising hospital evaluation plan.

CONFLICT OF INTEREST

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

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