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Assessing top management commitment, workforce management, and quality performance of Malaysian hospitals

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ABSTRACT

The present study investigates top management commitment, workforce management and quality performance in Malaysian hospitals based on demographical information of the respondents. Aim of this study is to identify the difference or conformance on top management commitment, workforce management and quality performance of Malaysian hospitals with demographics such as gender, marital status, types of hospital and position. This study distributed 1007 self-administered survey questionnaires to hospital staff resulting in 438 useful responses with a 43.5% response rate. Research data were analysed based on reliability analysis, exploratory factor analysis (EFA), independent samples *t*-tests, one-way ANOVA and discriminant analysis using SPSS version 23. Findings of this study indicate that there is a significant difference between single and married hospital staff on workforce management of the Malaysian hospitals. Married respondent perceives workforce management more favourably compared to single. The findings also indicate that hospital nurses perceive workforce management and quality performance more favourably compared to other hospital staff (i.e. doctors, pharmacists, medical laboratory technologists). Moreover, this study conducted comparison analysis between public and private hospitals on top management commitment, workforce management, and quality performance. The research findings indicate that private hospitals have better top management commitment and workforce management compared to public hospitals in Malaysia.

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KEYWORDS
Top management commitment; healthcare workforce; quality performance; hospitals; Malaysia

Introduction

Healthcare is a unique service industry which provides better medical care for a better life. In healthcare, errors or mistakes can be devastating to individuals and groups alike as lives and quality of life are at risk. In 1999, the Institute of Medicine published a report 'To Err is Human: Building a Safer Health System' which estimated that up to 98,000 people die annually in the United States due to medical errors [1]. However, a new report published in the *Journal of Patient Safety* reveals that each year 210,000–400,000 patients die because of preventable adverse events (PAEs) in USA hospitals [2]. Those figures would make such medical errors the third leading cause of death in America behind heart disease, which is the first and cancer, which is the second according to the Centre for Disease Control and Prevention [3]. According to Gurses and Carayon [4], healthcare has serious patient safety and quality problems and is in need of fundamental change. Healthcare processes are poorly designed and characterized by unnecessary duplication of services, improper workforce management system, and long waiting times and delays for the patients [5]. Costs are exploding, and waste is one of the reasons for increased expenditures in healthcare services. Due to these problems, hospitals are facing difficulties to meet their patients' desire for quality services.

Recently, studies found that many countries, including developed and high-resource countries, have been suffering from insufficient investment in the hospital workforce management [6]. Current studies show that Malaysia is facing about 50% shortage of nurses due to attractive remuneration offers from Singapore and Saudi Arabia [7]. In addition, Malaysia also has shortage of doctors (1 doctor for 1000 people) compared to the global rate (1:800) and other developed nations such as Japan has one doctor for five hundred people [8]. Similarly, the US has shortage of 125,000 nurses in healthcare services, and this figure will reach one million by the next ten years. Canada estimated that they have a shortage of 195,000 nurses, which is more than the USA, and their nurse shortage will reach 282,000 by the next five years [9]. To minimize the shortage in the hospital workforce, the hospital workforce management needs to establish the financial basis for better retention policies, wage ceilings, contracting arrangements, and use of donor aid to improve the capacity of the hospital workforce

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[10]. In addition, Kabene [11] suggested that the healthcare organization must reform their human resources planning to increase equity and fairness in the hospital workforce management towards quality performance. They also need to ensure effective workforce management system to increase employee retention and prevent early retirement of hospital specialists [12,13].

In Malaysia, healthcare systems are regulated by the Ministry of Health (MOH). Both public and private healthcare sectors are expanding and bear a high potential for further growth. However, Malaysian private healthcare sector has been rapidly growing over the last few decades. It is playing an important role in the healthcare industry to provide better medical services to the patients such as the development of specialist hospitals for serious illnesses, continuous improvement in healthcare information technology, and private medical insurance for local patients [14,15]. Although the private health sector provides a reasonable level of healthcare service, it needs to ensure the quality of its services is at par with international standards [15]. Butt and de Run [16] conducted a study on service quality of Malaysian private hospitals and found that hospital service quality has a negative influence on reliability and responsiveness due to delayed response to the patients and the attitude problem of hospital staff. They suggested that the private healthcare sector should emphasize on workforce management especially provide training to the staff to improve their skills for reducing response times while they are dealing with patients. On the other hand, Pillay et al. [17] studied patient waiting times of Malaysian public hospitals and found that, on average, patients wait more than two hours to meet with medical personnel for only 15 min due to employee attitudes and delayed work process, heavy workload, management and supervision problems, and inadequate facilities. To overcome these medical problems, hospitals need to have strong top management commitment, better workforce management and continuously improve their quality performance towards patient satisfaction [18,19]. Thus, this study examines difference or conformance on top management commitment, workforce management and quality performance of the hospitals based on demographics such as gender, marital status, types of hospital and position.

Literature review

Top management commitment

Top management commitment refers involvement of highest-level officials in the organization's quality improvement efforts [20]. It is a crucial requirement for the successful implementation of quality improvement in the organization [21–23]. Top management commitment provides a positive direction and resources to the organization for improving quality performance [24,25]. It also provides a cooperative and learning working environment which helps organizations implement the quality management system [26]. To implement the quality management system in the organization, the top management makes a strategic decision to adopt quality management approaches to improve their organizational performance [27]. According to Pheng and Jasmine [28], the degree of support that top management takes in the implementation of a quality environment is critical to the success of the organization with best quality management practices. It is difficult to implement quality management practices within the organization if there is a lack of commitment from top management. The top management helps the organization to build organizational awareness and increase employees' commitment by implementing quality management systems for achieving superior quality goals [29].

To achieve the superior quality goals of the organization, the top management must clearly define the quality goals and treat quality as an important aspect. According to Minjoon et al. [30], top managers should set quality standards as a priority while allocating adequate resources to continuous quality improvement and evaluating employees based on their performances. Due to the lack of top management commitment to delegating authorities and empowering employees, many organizations have failed in implementing quality management systems to improve their quality performance. For the successful implementation of quality management system, the top managers should be committed to empowering the employees for quality performance. Once top management has empowered the employees, the employees will be responsible for their work which will enhance continuous improvement to achieve organizational quality goals [31]. Ahmed et al. [32] conducted a study on top management commitment and quality performance of Malaysian hospitals. The research findings indicated that top management commitment has an insignificant relationship with quality performance of Malaysian hospital. However, it has indirect significant relationship with quality performance through mediating effect of workforce management. To enhance the quality performance of the healthcare organization, the top management should demonstrate empowerment by allowing its project managers to take full responsibility and make decisions to improve the organizational performance [28].

In healthcare organizations, top management commitment provides positive direction and resources to the healthcare organization for improving the quality performance. It also provides a cooperative and learning working environment which helps healthcare organizations to implement the quality management

system towards customer satisfaction [24]. To improve the healthcare quality management system, the top management not only focus on effective service to the patient but also need to target continuous quality improvement to meet long-term goals [33].

Workforce management

Workforce management is a set of processes that an organization uses for improving the productivity of its employees on the individual, departmental, and entity-wide levels. It provides support to the process management by promoting a team problem-solving approach which helps organizations improve their product or service design to better meet their customer needs and wants [34]. It also directly affects quality management practices such as the use of quality information by increasing employees' continuous awareness about quality-related issues and empowering the employees in quality decision making [35]. There are three important elements of workforce management, namely employee commitment, employee training, and employee job satisfaction. The first important element of workforce management is employee commitment which contributes to the organization to obtain competitive advantage towards customer satisfaction [36]. The second important element of workforce management is employee training which improves skills and performance in terms of offering better quality services and achieving organizational goals [36]. The third important element of workforce management is employee job satisfaction. According to Utriainen and Kyngs [37], employee job satisfaction represents the degree of employees' expectations (needs and wants) which satisfy them within the workplace.

In hospital, workforce management is measured based on employee competencies or training needs. Competencies provide a quantitative supplement to qualitative data on training needs. They are increasingly prevalent throughout healthcare systems due to quality healthcare management requirements, the need for cost-effectiveness in the healthcare operation management systems, and consumer needs. The US Department of Education described employee competencies as 'a combination of skills, abilities, and knowledge requirement to perform a particular task in the workplace' [38]. According to Alejosa et al. [38], 93% of respondents agreed that employee competency increased through motivation of training in the hospital. Their research also found that 88.3% of respondents agreed the personal satisfaction is driven by the motivation of training. However, their research findings show that family commitment declined in the workplace due to the lack of training. Nasurdin et al. [39] conducted a research on psychological capital dimensions (self-efficacy, hope, optimism) and its relationship with nurses' job performance. Based on the research findings it was observed that self-efficacy, hope, and optimism have positive and significant influence on nurses' job performance in hospital.

Quality performance

Many authors define quality performance in different ways. Storey and Sisson [40] defined quality performance as an interconnecting set of policies and practices which focus on enhanced achievement of organizational goals through individual performance. Fowler [41] defined quality performance as organizational work to achieve the best possible outcomes through continuous improvement. The author also mentioned that quality performance is a system or technique, and is the totality of organizational activities of managers and employees to conform to customer wants and desires. Quality performance is an interconnecting set of policies and practices that enhance workforce management to achieve organizational goals through individual performance [40]. According to Fletcher [42], quality performance is a system which creates a vision of the organization to understand and help each employee of the organization and recognize their contribution to enhance the quality performance to conform customer wants and desires. To measure quality performance in the healthcare sector, the managers need to clearly define the performance outcomes of a healthcare system that can be judged and quantified against quality improvement [43].

Many researchers have been conducted on quality performance in hospital. Abdallah [44] conducted a study on the implementation of quality approaches towards quality performance in the healthcare system and found that quality approaches are significantly related to quality performance of the healthcare system. Moreover, his study also found that leadership and employees' commitment are significantly related to quality performance of the hospitals. Gowen III et al. [45] conducted an empirical study on the quality performance of United States hospitals and observed that the hospital quality performance is significantly related to quality practices, employee commitment, and employee control. Another empirical study conducted by Duggirala, Rajendran and Anantharaman [46] on external quality performance (i.e. patient perception of service quality) of the hospitals in India observed that the external quality performance of the hospitals is significantly influenced by seven factors, namely infrastructure, personnel quality, processes of clinical care, administrative processes, safety indicators, overall experience of medical care and social responsibility. In Malaysia, AuYong et al. [47] conducted a study on healthcare perceived motivation, safety procedure, and safety management on quality care in Malaysian hospitals. Based on their research

findings it was observed that perceived motivation, safety procedure, and safety management have positive and significant relation with quality care of the hospitals. Another study conducted by Ahmed et al. [48] to distinguish between private and public hospital in Malaysia on quality performance. Their research findings indicated that private hospital staffs believe that their hospital's quality performance has been improved over the past years compared to public hospital.

Methodology

The present study measured top management commitment, workforce management and quality performance of Malaysian hospitals with demographical variables such as gender, marital status, types of hospital and position. This study used self-administered questionnaire to measure top management commitment, workforce management and quality performance of the hospitals based on 24 items. There were four parts in the survey questionnaire. First part pertained to the respondents' demographics (i.e. types of hospital, gender, marital status, and position). Part two and part three measured top management commitment and workforce management with eight items respectively. Part four measured quality performance of hospitals with eight items.

In this study, stratified random sampling method was used to collect data from 16 selected hospitals in Peninsular Malaysia. The sampling was designed according to the four regions in Peninsular Malaysia: Central, Northern, Southern, and East Coast. Currently, there are 354 hospitals (137 public hospitals and 217 private hospitals) and are serving in Malaysia. Out of these 354, 157 hospitals (86 public hospitals and 71 private hospitals) are located in Peninsular Malaysia which has more than 50 beds in all hospitals. From these 157, 57 hospitals are located in the Central region (36.31%), 49 hospitals are located in the Northern region (31.21%), 25 hospitals are located in the Southern region (15.92%) and 26 hospitals are located in the East Coast region (16.56%). The present study selected 16 hospitals based on 10% of 157 hospitals ($157 \times 0.10 \approx 15.7$ 16 hospitals). These 16 hospitals were selected based on simple random sampling by using Microsoft Excel spreadsheet. According to the ratio of the sampling selection, six hospitals ($16 \times 0.363 = 5.81 \approx 6$) are selected from Central region, five hospitals ($16 \times 0.312 = 4.99 \approx 5$) from Northern region, two hospitals ($16 \times 0.159 = 2.54 \approx 2$) from Southern region and three hospitals ($16 \times 0.165 = 2.65 \approx 3$) from East Coast region. By doing this procedure, it ensured that the selection of the hospitals for four regions was done by chance or randomly.

After randomly selected these 16 hospitals for this study, we observed that these 16 hospitals are located in eight different states in Peninsular Malaysia, namely Selangor, WP Kuala Lumpur, Kedah, Penang, Perak, Johor Baru, Melaka, and Pahang. In this study, the sampling frame was developed based on the proportion of the medical staffs (i.e. doctors, nurses, pharmacists, and medical laboratory technologists) in the selected states with targeted sample size. Currently, approximately 100,700 medical staffs (i.e. doctors, nurses, pharmacists, and medical laboratory technologists) are serving in the eight states in Peninsular Malaysia and out of these 100,700 medical staffs, 32.53% (i.e. 32,760 staffs) are doctors, 56.60% (i.e. 56,993 staffs) are nurses, 7.25% (i.e. 7297 staffs) are pharmacists, and 3.62% (i.e. 3650 staffs) are medical laboratory technologists [8]. Before collect data, the researchers contacted with all selected hospitals' director/chief executive officer through email to get approval to conduct survey in their hospital. After got the approval from the hospital top authorities, the hardcopy survey questionnaires were mailed to the hospital Director/Chief Executive Officer (CEO)/Quality Manager along with covering letter and information sheet (see Appendix III). The distributions of the survey questionnaire and data collection were carried out by an official who was assigned by the hospital's director/chief executive officer. Although the survey questionnaires were distributed from the Director/CEO office of the hospital, the element of bias was controlled since the respondents were selected from the sampling frame by the researchers, not by the Director/CEO or any other officers. In order to avoid other forms of bias such as inaccurate disclosure information by the respondents, assurance on the confidentiality of the responses highlighted in the covering letter to the respondents. In this study, 1007 survey questionnaires (1% of the population) mailed to 16 hospitals and 438 completed questionnaires were returned. This represented 43.5% response rate which was regarded as satisfactory [49].

After conducted survey, SPSS 23 version used to examine reliability and validity of the research instruments using reliability analysis and exploratory factor analysis (EFA). Once research instruments were found valid and reliable, the independent samples *t*-test, one-way ANOVA and discriminant analysis were undertaken to identify the difference and conformance among research variables.

Findings

Respondents' demographic profile

The descriptive analysis revealed that the majority of the respondents 251 (57.3%) participated from private hospitals, and 187 (42.7%) respondents participated from different public hospitals in Malaysia. In this study, female respondents were 355 (81.1%), whereas

male respondents only 83 (18.9%). Married respondents were 315 (71.92%), and single respondents were 123 (28.08%). Concerning the position of the respondents, half of the survey respondents were nurses 221 (50.4%), whereas 120 (27.4%), 48 (10.96%), and 49 (11.18%) respondents were doctors, pharmacists, and medical laboratory technologists respectively (see Table 1).

Reliability and validity

There are four common methods to examine the reliability of the research variable, namely test–retest method, split-half method, alternative form method, and internal consistency method known as Cronbach's alpha. Out of these four methods, internal consistency is the most popular method for testing the reliability of the research questionnaire [50,51]. According to Cooper and Schindler [51, p. 436], 'internal consistency is the degree of different items that are homogeneous in measuring the same underlying construct'. This method was introduced by Kuder and Richardson in 1937 to measure the internal consistency of the research items by using Cronbach alpha. The present study used Cronbach's alpha to measure the internal consistency of 24 items for top management commitment, workforce management, and quality performance. Cronbach's alpha score ranges from 0 to 1, with values close to 1 indicating high consistency. When the value of Cronbach's alpha is greater than 0.7, then the item scales are regarded as reliable [50]. Table 2 illustrates the Cronbach's alpha for three dimensions of the research variables. The alpha values ranged from 0.901 to 0.912, exceeding the minimum requirement of 0.70, the overall instruments were deemed reliable for this study.

In addition, this study used 438 usable responses to perform the exploratory factor analysis (EFA) of the research variables. Based on the EFA test it was observed that Kaiser–Meyer–Olkin (KMO) value was 0.943, indicating that research data were suitable for principal component analysis (see Table 2). According to Hair et al. [50], factor analysis can be performed when the results of KMO and Bartlett's Test of Sphericity are significant. The results of KMO and Bartlett's Test of Sphericity of the present study also indicated the appropriateness of factor analysis.

After confirming the appropriateness of the research constructs, Principal Component Analysis (PCA) and the varimax rotation method were used to extract the factors for all 24 items of the research variables. According to Hair et al. [50] and Sharma [52], factor

Table 1. Demographic profile of the respondents.

Description	Frequency	Percentage
Type of hospital		
Public	187	42.7
Private	251	57.3
Gender		
Male	83	18.9
Female	355	81.1
Marital status		
Single	123	28.08
Married	315	71.92
Position		
Doctor	120	27.40
Nurse	221	50.46
Pharmacist	48	10.96
Medical laboratory Technologist	49	11.18

Table 2. Reliability and validity of the research variables.

Code	Variables	Factor loading	Cronbach's alpha
Top management commitment			0.906
TM1	Department head assumes responsibility for quality performance	0.545	
TM2	Department head provides supportive leadership for quality improvement	0.765	
TM3	Department heads within our hospital participate in the quality improvement processes	0.777	
TM4	Quality issues are reviewed in our department management meetings	0.782	
TM5	Top management has objectives for quality performance	0.633	
TM6	Top management appreciates individual staff contribution to improving healthcare service	0.612	
TM7	Top management works closely with employees to improve quality performance of our hospital	0.648	
TM8	Top management decides what to do when a patient complains about service received	0.648	
Workforce management			0.901
WM1	Hospital forms teams to solve problems	0.610	
WM2	Hospital gives feedback to employees to improve hospital services	0.667	
WM3	Hospital employees are recognized for superior quality performance	0.701	
WM4	Superiors make me feel like an important team member	0.711	
WM5	Hospital regularly provides quality-related training to improve our skills	0.744	
WM6	Hospital puts a high value on employee job satisfaction	0.629	
WM7	Committed to participate in quality improvement processes in our hospital	0.640	
WM8	Clearly understand the ultimate objectives of my hospital	0.544	
Quality performance			0.912
QP1	Hospital's quality management process has been improved over the past years	0.503	
QP2	Cost of medical services have been reduced over the past years	0.749	
QP3	Severity errors of medical services have been reduced over the past years	0.766	
QP4	Patient waiting time has been reduced over the past years	0.752	
QP5	Waste in processes have been reduced over the past years	0.782	
QP6	The number of patient complaints has decreased over the past years	0.814	
QP7	Employee job satisfaction of our hospital has been increased over the past years	0.743	
QP8	Patient satisfaction with the quality of our hospital services has been increased over the past years	0.784	

Note: KMO (Kaiser–Meyer–Olkin) = 0.943, Cumulative variance = 62.48%.

loading of each item must be more than 0.5 and above 0.6 are considered highly significant for the research construct. Based on the results of the EFA, only 24 items were constructed into three variables (i.e. top management commitment, workforce management, and quality performance) with 62.48% of the total variance explained. EFA results also indicated that the minimum of the factor loading of this present study was 0.503, which meets the requirement acceptable for further analysis.

Besides reliability analysis and exploratory factor analysis, the present study calculated correlations of the latent variables to detect the multicollinearity problems via Pearson Correlation test. Based on the results it was observed that bivariate correlations ranged from 0.381 to 0.810. This indicates that multicollinearity is not a likely problem among the constructs since correlations are below 0.9 [50].

Determining the level of top management commitment, workforce management and quality performance of hospitals

This study analysed three research variables, namely top management commitment, workforce management and quality performance based on independent samples *t*-test, one-way ANOVA and discriminant analysis (see Tables 3–6).

The present study used independent samples *t*-test to determine the significant difference between the means in two unrelated groups such as male and female; single and married respondents. The independent samples *t*-test identifies the significant difference or conformance between female, single and married respondents on top management commitment, workforce management and quality performance of the hospital (Tables 3 and 4). The results of the independent sample *t*-tests indicate that there is no significant difference between male and female respondents on these three variables (Table 3). However, Table 4 illustrates that there are significant differences between single and married respondents. Married respondents have better perception of workforce management ($\mu = 4.0036$, $df = 432$, t-value $= 2.383$, $P = 0.035$) compared single respondents. The reason is that marriage imposes more commitment and responsibilities that may make a steady job more valuable and important for married employee [53].

After analysing the independent sample *t*-tests, we used one-way ANOVA to investigate the significant differences among the hospital staff based on job position such as a doctor, nurse, pharmacist and medical laboratory technologist. According to the results of ANOVA tests, it was observed that there are significant differences among the different job positions on workforce management (df = 437, $F = 2.503$, $P = 0.042$) and quality performance (df = 437, $F = 4.619$, $P = 0.001$). The results indicate that nurses have a better perception of workforce management ($\mu = 4.0260$) compared to other hospital staff (i.e. doctors, pharmacists,

Table 3. Independent samples *t*-test on gender.

Variables	Gender	*N*	Mean	*t*-value	*P*-value
Top management commitment	Male	83	4.0181	0.257	0.797
	Female	355	4.0000		
Workforce management	Male	83	3.9864	0.342	0.733
	Female	355	3.9634		
Quality performance	Male	83	3.7651	0.764	0.445
	Female	355	3.7046		

Table 4. Independent samples *t*-test on marital status.

Variables	Gender	*N*	Mean	*t*-value	*P*-value
Top management commitment	Single	123	3.9800	0.506	0.613
	Married	315	4.0115		
Workforce management	Single	123	3.8624	2.383	0.018
	Married	315	4.0036		
Quality performance	Single	123	3.6828	0.676	0.499
	Married	315	3.7302		

Table 5. One-way ANOVA tests on position.

Variables	Groups	*N*	Mean	*F*-value	*P*-value
Top management commitment	Doctor	120	3.9323	1.895	0.110
	Nurse	221	4.0475		
	Pharmacist	48	4.0052		
	Medical Laboratory Technologist	49	3.8100		
Workforce management	Doctor	120	3.8990	2.503	0.042
	Nurse	221	4.0260		
	Pharmacist	48	3.8568		
	Medical Laboratory Technologist	49	3.8350		
Quality performance	Doctor	120	3.6844	4.619	0.001
	Nurse	221	3.7472		
	Pharmacist	48	3.5286		
	Medical Laboratory Technologist	49	3.5300		

Table 6. Discriminant analysis between public and private hospitals.

	Dependent variable group means I		Group means equality test*		
Independent variables	Group = 0 Public Hospitals ($n = 187$)	Group = 1 Private Hospitals ($n = 251$)	Wilks' Lambda	F-value	*P*-value
Top management commitment	3.9017	4.0792	0.977	10.388	0.001
Workforce management	3.8904	4.0254	0.985	6.460	0.011
Quality performance	3.6778	3.7445	0.997	1.132	0.288

*Wilks' lambda (U-statistics) and Univariate F ratio with 1 and 436 degrees of freedom.

medical laboratory technologists). They also have a better perception of the quality performance of the hospital ($\mu = 3.7472$) compared to other staff (Table 5).

Last but not least, this study used discriminant analysis to identify the significant difference between public and private hospital staff on top management commitment, workforce management, and quality performance. According to Hair et al. [50], discriminant analysis is an appropriate statistical technique where the dependent variable is categorical (e.g. male versus female, married versus single and high versus low) and the independent variables are metric (e.g. 5-point Likert scales or six and seven points rating scales). Discriminant analysis can handle either two or more groups. Our two-group public hospital (0) and private hospital (1) discriminant analysis explored three dimensions. The present study found significant difference between public and private hospitals regarding top management commitment (Wilks' $\lambda = 0.977$, $F = 10.388$, $P = 0.001$) and workforce management (Wilks' $\lambda = 0.985$, $F = 6.460$, $P = 0.011$). The results of the discriminant analysis indicate that private hospital staff perceive top management commitment ($\mu = 4.0792$) and workforce management ($\mu = 4.0254$) to be better compared to public hospital staff (Table 6). This is because the private hospitals are focusing on patient satisfaction with continuous quality improvement in healthcare services. To continuous improve the medical services; the private hospitals are giving better support and motivation to their employees than public hospitals [14].

Discussion and conclusion

The objective of the present study is to identify the difference or conformance on top management commitment, workforce management and quality performance of Malaysian hospitals with demographics. The findings of the present study show that there is a significant difference between single and married hospital staff on workforce management. Married staff perceive workforce management more favourably compared to single staff. The present study findings also indicate that hospital nurses perceive workforce management and quality performance more favourably compared to other hospital staff (i.e. doctors, pharmacists, medical laboratory technologists). To improve the perception of doctors, pharmacists, medical laboratory technologists on workforce management and quality performance, the hospital must reform their human resources planning to increase equity and fairness in the hospital workforce management [54]. In addition, the research findings also indicate that private hospitals have better top management commitment and workforce management compared to public hospitals in Malaysia. The reason is that Malaysian public hospitals are overworked and face difficulty ensuring appropriate appointments between patients and doctors [55]. According to Graya et al. [56], health workforce requires improvement in skills at all levels of hospital service sectors such as nurses caring, physicians caring, patient satisfaction, and patient registration accuracy among others. They also mentioned that effective workforce management system helps hospital to improve quality performance towards patient satisfaction and loyalty.

However, a hospital workforce management system could be affected due to a number of specific problems such as duplication services by hospital staff, lack of continuity between the various service providers, relatively poor salaries for hospital staff, excessive working hours, the undersupply of nursing staff, and shortage of doctors in the emergency room and surgical operation areas, and doctors move overseas for higher specialty training [57].

There are several strategies that can improve workforce management and quality performance of the hospital such as identifying employee needs and measuring employee satisfaction through engagement surveys, offering training programmes, providing continuing education, providing leadership development programmes, enabling job enrichment, conducting periodic employee reviews, offering employee suggestion programmes, soliciting employee feedback, and other methods of managing employee relations and engagement [58,59].

Practical implications

This research provides empirical contributions to improve top management commitment, workforce management and quality performance in healthcare sector. The research findings are expected to provide guidelines to enhance the level of top management commitment, workforce management and quality performance in Malaysian hospitals as well as other countries.

The present research findings indicate that Malaysia hospital nurses perceive workforce management and quality performance more favourably compared to doctors, pharmacists and medical laboratory technologists. The research findings also indicate that Malaysian private hospitals have superior top management support and workforce management compared to public hospitals. To overcome these problems in the public hospital, the policy makers need to consider five essential aspects to improve the overall performance such as developing and clarifying an understanding of the healthcare problems, fostering and sustaining a culture of change and patient safety, continuous monitoring of performance and reporting of findings to sustain the change, testing change strategies for better performance, and involving key stakeholders of the healthcare organization [43]. They also need to select the best

employees to work with a team and find the employees who are dedicated and motivated to improve the quality of hospital services [60,61].

limitations and future research

This study focused solely on the Malaysian health sector and thus the results might not be applicable to other countries. This study only covered four types of respondents, namely doctors, nurses, pharmacists, and medical laboratory technologists. Future research is suggested to include other types of the respondents such as medical assistants, radiologists, environmental health officers, community nurses and administrative staffs to measure top management commitment, workforce management and quality performance of the hospitals in different countries, different cultures, different demographic groups, using probability sampling techniques to ensure generalizability of results.

Disclosure statement

No potential conflict of interest was reported by the authors.

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