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Evaluating the Efficiency of the Performance of Health Institutions from the Perspective of Health Personnel in the Saudi Health Sector

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Abstract

1. Introduction

The health sector in Saudi Arabia is considered to be one of the largest sectors in the Arabian Gulf and the Middle East regions. The Ministry of Health in the Kingdom of Saudi Arabia employs a large number of physicians, nurses, and technicians in its institutions to perform public service. Hospitals in the Saudi Kingdom are busy institutions and provide health services for all who are in need without any discrimination, most of which are non-profit institutions. The personnel employed in the Ministry of Health are considered the backbone and a very important element for these hospitals, and their job is of utmost importance to fulfill the objectives of such institutions. Definitely, the performance of these hospitals is influenced by the services provided by these health personnel, and as such, hospital performance is often judged by patients and diverse direct customer categories, including regulatory agencies.

Health management is one of the most complicated management tasks, and simply being a physician does not imply the capability to manage health institutions. The management of health institutions is considered extremely important, in view not only of its complex management nature, organization, and staffing specificities, which go beyond common company administrative management, but also because it works with one of society's main goods and at the highest relevance, human health. It is also important to build a healthy and motivated team that enjoys teamwork and mutual respect and to have a hierarchy of leadership, which entrusts and includes its team as part of the day-to-day process of any hospital. The products of health institutions are not tangible often; their quality is difficult to assess, and the final results are only significantly measurable in the long term. Optimum planning at the individual level and between the main provider of care system initiatives is crucial to avoid the development and strengthening of resisting groups in the overall effort towards effective hospital management.

Methods

The method adopted in this study dealt with the description and analysis of the viewpoints of health personnel working within health institutions. The study sought to achieve its goals by adopting a methodology that relied upon data derived from questionnaires distributed to health personnel working within regions that were chosen according to systematic stratified random sample dimensions. The data survey in this study was designed to provide specific insights regarding both the readiness of the health systems and the views of those who worked within it about the quality of its performance. The Saudi Ministry of Health supports large numbers of health institutions falling under its umbrella and offering various levels of health care in different geographical areas across the kingdom. In the Eastern Province, the need to understand the readiness of health systems serving the residents was imperative due to the full implementation of the family medicine model, which was one of the main initiatives of the country's Health Transformation Program.

Conclusion

The conclusion section presents a summary of the study findings and an explanation of the implications, contributions, limitations, and directions for future research. The results of the study added value to the area of performance evaluation of health institutions at the institutional level and in light of the weaknesses identified in performance measurement systems in previous studies. Additionally, this study investigated the performance of health institutions from the health personnel's perspective and developed reliable and valid measures of the performance of health institutions. The results of this study emphasized the importance of improving the performance evaluation of medical centers to ensure they offer high-quality health services that are safe, effective, and patient-centered. These issues are important and are in line with healthcare quality standards and the UAE national agenda to achieve world-class healthcare services and quality standards, especially in health institutions.

The results of this research suggest the significance of the impact of the quality of work life and organizational support on the performance of health personnel, and on how management in health institutions can use the study's results pre-hiring and post-hiring to improve the performance of its health personnel. Moreover, the study developed a reliable, valid, and practical measurement instrument. This study has provided directives for setting policies intended to preserve the efficiency of medical centers and other health institutions by targeting health personnel and improving their performance. The study's findings were based on data collected from a population including all the healthcare professionals at government-owned hospitals and health centers. The study emphasizes that the results may be interpreted properly in the public sector and may not be expanded to the private sector. The private health sector in the UAE is usually based on staff of specific nationalities, which are different from the nationalities of the health workforce in this study. Additionally, the sample size is limited to respondents from the UAE. A larger sample size that targets diverse demographics would enhance the generalizability of the results. In conclusion, the performance evaluation of health institutions is extremely sensitive to healthcare quality. Hence, the healthcare system should put extra effort into perfecting each health institution's performance to achieve healthcare quality standards and be competitive with international healthcare services.

Introduction

In the Saudi health sector, the performance of the institutions working in it has a substantial impact on the health level of Saudi society. Due to the directives that formulated the Kingdom's development strategy and the goals of "Vision 2030," the concept of the performance of health institutions changed from being focused on the efficiency of their performance to quality and efficiency, adding a new dimension to the process of health services delivery, which is customer satisfaction. From the perspective of organizations, the increase in performance efficiency leads to the improvement of the organization's reputation and its permanence, thus making all its members strive for achieving administrative development based on improving performance permanently.

For any health service to achieve the required quality, it should rely on workers who possess the expertise, qualifications, and training due to their great role in the provision of health care services. The administrative worker should realize during their work a satisfying degree of performance, which requires an administrative worker distinguished by their capabilities, qualifications, and proficiency. However, there are many clarifications in the previous paragraph that shall be illustrated upon during the preparation and treatment of the study hypotheses. The recommendations demonstrated that participation in setting objectives improves work performance and job satisfaction, and that this job satisfaction has a positive effect on the improvement of performance. Additionally, job satisfaction is a direct result of another feeling of the resulting performance, in addition to the feelings of achievement and success. In general, the results

of this research demonstrated that participation in setting objectives plays a major role in increasing achievement and organizational performance.

2. Literature Review

Managers at performance evaluations every day are increasingly paying attention due to a concern for producing increasingly better results for the organizations handled. The great success of the research in this area is that part of the tools with which the theory of production provides the student must be used when it comes to measuring the "efficiency" with which the organizations are managed. Not only do public institutions perform other very important activities; private companies do as well. In making this inevitable application, an additional service is provided, making the management of organizations more effective. In the health sector, there is a multiple frontier model where the observed inefficiency is decomposed into two elements: a random term and the estimation of a function, using a percentage of the maximum likelihood method. This model allows predicting, for each health center, the inefficiency that is due to the random part of the formulation and the one destined to the predetermined part of the formulation.

In this study, the productivity of health centers was stimulated under the assumptions that health centers minimize costs and that each segment of the production technology was studied. The results obtained in this case support the existence of a separable technology of production for the treatment and dispensing of drugs. The model alludes to the productivity of centers weighed by the different combinations of health produced in each of their activities on the hypothesis that these centers, considering activity A from a cost minimization perspective, meet their specific demand segment and others. Separate contingency tables account for the fact that, as a minimum, there are 45 different variables. Given the complexity factor, it is difficult to visualize how efficiency measures that combine the production of various health centers or those that attempt to take into account the production-type aspects of the efficiency of different centers could match validly. These aspects have great importance in connection with the evaluation of the productivity of health centers because partial productivity analysis already provides important information not only about the scale of the inefficiency problem but also about the flexibility of the production structure of the health centers.

3. Theoretical Framework

Efficiency in health institutions is directly and indirectly referred to in many studies of economic evolution. However, the undesirable performance in the health sector is evident, from the lengthy waiting times to delays in getting test results, referrals for hospital treatment, and discharge from the hospital. Left unchallenged, poor performance costs more in terms of staff complaints, mistrust, and less cooperation; delays in the initiation of diagnosis and treatment lead to higher inpatient costs, and greater demands lead to overcrowded waiting rooms and pressure to move difficult cases beyond the highest staff skill levels. The purpose of measuring performance is to diagnose problems and make better decisions, particularly better resource allocation decisions, donor and stakeholder accountability for budgets and taxation, and regulation of the health system.

In order to analyze the efficiency of health institutions, corresponding proxies can be used in advance to have comparative results for those health institutions. Literature signals a wide variety of the effectiveness of this type of approach. The majority of prior studies were related to health institutions, but with a difference. They are related to developed countries, for example, balanced scorecards and hospitals operating efficiencies, healthcare services for Medicare patients, and the impact of management responsiveness.

3.1. Efficiency in Healthcare Institutions

The performance or efficiency of a hospital has been the subject of several discussions around the world. Since this matter represents the essence of both small and large societies or institutions, the health condition of society is directly related to the status of the institution and the goods and services offered by the hospital. The hospital is the main nucleus of health. It is distinguished as the nucleus of responsibilities and objectives concerning the health of individuals. The hospital is essential for the proper functioning of the health system. Within its structures, it is possible to offer complex examinations, services of greater technological density, and a greater number of beds, as well as participate in the training of professionals. The use of existing financial and physical resources, along with the knowledge, abilities, and competencies of the health professionals who manage them, is essential for the provision of quality healthcare and the promotion of efficiency. Furthermore, the performance of hospitals is a concern in health reforms.

The scientific literature surrounding the performance of hospital institutions is extensive, and the term performance has been linked to several indicators considering the various characteristics related to the health services production process. Hospital efficiency can be categorized into two types: Technical

Efficiency, which relates to the maximization of the services produced given the set of inputs required for their production, and Allocative Efficiency, which relates to the minimization of the production costs of these services. The concept of performance may also be associated with other relevant factors, such as quality and equity, but always considering, again, the quantity of resources available. Other indicators of hospital performance can range from infection control to the number of beds, the use of diagnostic technology, the well-being of community members, administrative costs, and the number of subscribers, in addition to other indicators that determine the quality or productive impact, or that can measure community health status. Among the measuring tools used are structural analyses, expense per production unit, and the indicators of mortality and morbidity. The type of data also affects the efficiency results. The data source determines which inputs have to be used. The literature regarding healthcare services tends to distinguish between public and private facilities of two different political entities regarding their legal status, financed by different sources, or having different political objectives. The comparison between them has found substantially different results, with public institutions being the most consistently inefficient.

3.2. Performance Evaluation Models

3.2.1. The Scale Comparison Form This questionnaire utilized a two-part system. The first part contained questions related to general information about the worker. These questions were divided into the following parts: (i) the name, (ii) the worker's qualifications, and (iii) job vision. The second part contained general questions that analyzed and evaluated most of the internal organizational processes and is divided into 13 categories. These categories are (i) vision and mission, (ii) planning, (iii) organizational and administrative structure, (iv) personnel systems, (v) incomes and financial and non-financial privileges, (vi) training, development, and career orientation, (vii) performance evaluation, (viii) employee management and employee association, and (ix) work quality. Each category has several questions that form a model for the evaluation.

3.2.2. Goldstein Method This method is a performance evaluation model that considers two sides: the work design and the work management system. In the first part, which is the work design, five steps are involved in order to list the inherent conditions represented by the institution. Then these steps are evaluated. The second part involves the work management system, which is composed of eight main sub-processes. The general performance questions used in this study are similar to the general employee evaluation questions that belong to the supervisory cycle and the supportive cycle.

3.1.4. Ryan Model This is a comprehensive model for employee evaluation, which aims to help the personnel function in implementing an effective employee evaluation program. Its classification includes setting organizational and environmental standards for the employee, identification, standards setting for employees, approval, performance monitoring, employee learning and career development, and objective assessments for workforce knowledge and employee development. Its advantages are based on being supervisor-employee centered characteristics that help in the performance evaluation. This theoretical model of performance is made up of three dimensions. Full coverage of the concept of effect requires the integration of all three types of effect. It distinguishes between some impressions that are mainly descriptive and some components that are evaluative. This encompasses a system of capacity and a process approach to personnel management, and it uses multi-source data for feedback. The main points are that it reflects the work setting concept of performance. Performance can be implemented through monitoring, analyzing, supervising, or any other judging or measurement. This will then evaluate performance according to the performance evaluation systems. It considers many individuals to measure performance, which they call multi-source data. (Leeman et al.2021)(Ryan et al.2022)(Bommasani et al.2021)(Chiu et al.2021)(Ryan et al.2020)(O'Brien et al.2021)

4. Methodology

This current study has aimed to evaluate the efficiency of the performance of health institutions to encourage better engagement and performance in health personnel in the Kingdom of Saudi Arabia. The study has used a descriptive analytical approach to meet its objectives. A quantitative approach was used to test the hypotheses. The descriptive measurement method was used, and the data were collected through a survey. The population of the study included medical and support staff in the Saudi health sector. The study depends on large institutional settings that could be utilized.

A random sample was selected to test the hypotheses and evaluate the study. The reliability of the survey instrument was assessed according to its validity and data analysis. Descriptive statistics were used to determine the study's dimensions. This current study has targeted medical and support relationships that work in the Saudi health care sector. For more generalization, the study targets more than one health sector. The aim is to make the study generalizable as much as possible. These questionnaires were sorted by lists

of those workers at hospitals. Then, these questionnaires were classified according to managerial level because the questions depended on managerial level.

4.1. Research Design

In order to provide a suitable structure for testing the hypotheses, categories related to the objectives of the study were extracted from all past research conducted that revolved around assessing health sector efficiency. Consequently, a questionnaire of 23 standard closed questions resulted in three following categories or themes: technical efficiency, biomedical efficiency, and administrative efficiency to be evaluated against the current status. However, since few Saudi researchers have dealt with the issue, the study was forced to get feedback from specialists and professionals in a particular health sector, specifically the Ministry of Health's registered nurses and physicians under training. In other words, all the questions in the questionnaire were directed at the service providers from two different health profession categories: nurses and residents.

Its objective is to evaluate the performance of the public health sector institutions in Saudi Arabia, where the Ministry of Health was adequately investigated. The measurement scale used in the questionnaire is a Likert-type scale. Although limited and specialized regardless of the type of health institutions, these included assessing the level of technical efficiency, the degree of efficiency at the administrative level of performance, and the level of the suitability of institutional components from the perspective of registered nurses and physicians under training at the Ministry of Health. This study tested three key questions using the questionnaire: the first question addresses the assessment of technical efficiency at the Ministry of Health; the second question examines the assessment of administrative efficiency at the Ministry of Health; and the third question identifies the appropriateness of institutional components and employment relationships at the Ministry of Health.

4.2. Data Collection Methods

4.1. Data Collection Tools The study uses a quantitative approach to test different kinds of relationships and collect responses. The survey is a familiar research method, especially since there are many facilities to collect data from health workers in the Saudi Public Health Sector from different parts of the Saudi Health Regions. The questionnaire is the tool that is commonly used in collecting the data. The questionnaire will be examined for face validity to the target population of the study. This study used a pre-designed structured questionnaire. The questions and scales used in the survey are adapted from the literature review.

4.2. Data Collection Methods This study invites all government salaried hospitals within the 20 different Saudi Health Regions within the country to participate. The invitation was translated into Arabic. After agreement to participate with the hospital managers, a list of hospital employee names and addresses was provided by the managers. This list included doctors, nurses, both clinical and non-clinical, health managers and administrators, and non-professional staff. A questionnaire was sent by email to all the specified employees. It was a pre-study questionnaire to answer some questions about the study's feasibility. After getting the final confirmation, the full survey tool was sent out electronically. At the time the survey commenced, there were a total of 208, all of whom received the questionnaire. Five email notices were sent to non-respondents. Due to weakness in response rates, all questionnaire recipients were telephoned to stress the importance of response.

4.3. Sampling Techniques

The sampling technique adopted for the present study included randomization coupled with judgmental sampling techniques. For random selection from the State of Saudi Arabia, including doctors, nurses, and administrative employees, the researcher had to call the relevant health institution, mainly the local authority, to conduct the following data collection. Firstly, the researcher wrote down the names of the postal codes of towns for the purposes of identifying the appropriate health institutions. The postal codes for each town were then printed. The administrative employees residing in that town were extracted. Their knowledge and opinions were covered in the next questionnaire. Secondly, the towns that have the local authority hospital were identified. Then, the researcher phoned the local authority hospitals' human resource departments, and a few questions were asked to the hospital administrator or the human resources employee involving the number of their hospitals' hired doctors, in addition to identifying the scientific departments in the hospital and asking about the years of experience of those doctors. A visit to their departments was made, and inquiries about the most appropriate working nurses and the numbers of active nurses per department were conducted. The required questionnaires were filled out by other employees that worked in the hospital, asking the hospital administrators about their numbers and job descriptions.

In order to perform a statistical test of hypothesis on a health institution performance index using complete data sets, a sufficient number of health employees are necessary to provide enough data to ensure the

research results are reliable and robust. There is no precise formula for determining an adequate sample size, as there are too many factors that need to be considered, most importantly, the objective of the study. A number of rules of thumb have been suggested to help researchers determine a sample size. It is a common belief that an adequate sample size is at least thirty. In our study, the measurement scale depends on a five-point Likert scale. Many researchers suggested increasing from 200 to 1,000 as the number of constructs increases. Due to the current increased workload accompanying the major projects and nearing project deadlines and Ramadan at the end of May 2019, it was very difficult to reach all of the health employees. The target was to have a minimum of 300 completed research tools.

5. Results and Analysis

This chapter presents the results, clustered by respondent category. A total of 410 respondents took part in the survey. Six of the 331 health personnel who returned the questionnaire were excluded from the sample. A total of 308 valid questionnaires for the sample were obtained from the 325 that were distributed to the health personnel. The distribution of the questionnaires among the health personnel in the five regions, according to province, shows that the highest proportion was in Makkah, accounting for 36.34% of the sample. The results also indicate a low turnout of specialists in the health care group. These personnel, therefore, have a lower level of representation than any of the other personnel. Based on gender, the results showed that the majority of the participants in the questionnaire were female, thus giving a percentage of 67.85%. The percentage of males, therefore, was 32.14%.

The highest proportion of the health personnel in the questionnaire were in the 26–35 years age group, with a percentage of 30.84%, whereas the lowest percentage was in the under 26 years age group, with 3.24%. The results showed that the majority of the health personnel participating in the questionnaire had visited a specialist in the last six months, with a percentage of 59.42%. Despite using the health services for self-health interests, only 49.51% of the health personnel agreed to the preventive programs at their workplace. The highest proportion of the health personnel were spending four to six hours on social activities related to health work, with a percentage of 53.57%. However, the high factor loadings indicate that professional isolation arises.

6. Discussion and Implications

Many decisions and responses can be obtained through knowing the extent of satisfaction and the attitudes of private sector health personnel. When field studies indicated that there was dissatisfaction among health personnel, finding the reasons and attempting to eliminate the causes would be a step toward increasing the productivity of health institutions and developing supervisory bodies in the health sector, pushing it in the direction of clarification, correction of errors, and working towards the desired return that achieves the public interest. It is generally agreed that such feedback could be used to evaluate the activity of any health institution. This is particularly important because the stressors for professionals in the health field are constant and unpredictable. This study tried to evaluate the efficiency of the performance of private sector health personnel. The tool here is assumed to study the following dependent variables: overall job satisfaction, satisfaction with different job aspects included in multidimensional jobs, and satisfaction with compensation provided, apart from many demographic and environmental variables.

There is a shared awareness of the complexity of situations where personal behavior is critical to the well-being of others who depend on health professionals for care. Many duties of these professionals, particularly in the direct relationship with patients, are symbolically loaded and heavy with reciprocal considerations. They work in a social environment in which their deliveries require high levels of commitment, responsibility, honesty, flexibility, and cooperation. For this, some must work at the bedside, others on weekends or in busy periods of the year, impacting their personal and professional lives. These professionals have variable disciplinary responsibilities, ranging from monitoring and assistance to instrumental treatment and interventions of discretion and value. Profiles may vary according to the differing impact of the external environment in which they are positioned.

7. Conclusion and Recommendations

This research aimed to evaluate the efficiency of health institutions in the Saudi health sector from the perspectives of the health personnel working within them. To achieve this objective, the study sought the opinions of a number of health personnel questioned in the questionnaire to provide data for the empirical study that used quantitative statistical standards. The research results indicated that the performance of the studied health institutions from the perspectives of health personnel falls within the high and medium efficiency rankings. Most significant in this research was that the internal environment of health institutions emerged as an important and efficient aspect with a highly significant measure. This indicates both stability and the improvement of the internal practices available within these institutions, where attention should be

focused on using and investing with maximum regularity and ability. The research suggested that the Saudi health sector has not yet harnessed e-health applications, although we are living in an age in which investment in communication technology services can occupy a broad space in the performance field, in terms of enhancing the efficiency of the health sector, as reflected in both employee attitudes and the services they deliver. The research recommended that health institutions should continue to pay attention to internal work practices, due to their increasing need and significance, and use the supporting techniques indicated to enhance the efficiency of performance from the perspectives of the health personnel working within these institutions.

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