THE IMPACT OF FACTORS AFFECTING INTERNAL MARKETING ON THE QUALITY OF HEALTH SERVICES PROVIDED BY PUBLIC HOSPITALS IN AMMAN: AN APPLIED STUDY

Mazen Alomari 1, Ali Falah Al-Zoubi 2 and Fakhrieh Majed Darabseh 3

1Assistant Prof of Accounting• Accounting Department
2Associate Prof of Marketing• Marketing Department, Faculty of business, Arab Amman University, Jordan
3Assistant professor of Heritage Tourism, Yarmouk University

ABSTRACT: The present study aims to identify the impact of factors affecting internal marketing on the quality of health services provided by the public hospitals in Amman. The problem of the study represents by the low level of health services provided by public hospitals in Amman compared with the health services provided by private hospitals. The population of the study includes all public hospitals in Amman (6 hospitals). The sample of the study was (360) people who were working in these hospitals. The study tool was a questionnaire. The study carried out several conclusions and recommendations including: There is a low level of internal interaction and teamwork among workers in the hospitals as the arithmetic mean of opinions and trends of the study sample was (2.23) on the five-point Likert Scale. There is a low level of participation in decision making for workers in the hospitals as the arithmetic mean of opinions and trends of the sample was (2.90) on the same scale, There is a need to design and find job descriptions for all employees in different disciplines in a manner that allows them to be filled with the right individuals and a need for clarity of the role required from each individual. Planning, implementation and evaluation of training programs on a continuous basis aim at developing employees’ technical and behavioural skills in public hospitals that increasing the level of reliability and responsiveness to them as well as planning and implementation of the satisfaction of workers, both material and moral, for employees who achieve outstanding performance in providing health services in a suitable manner for patients. There is a need for a two-way communication between employees and hospital management, which allows finding quick solutions for work problems and reflects suggestions of employees.

KEYWORDS: Internal Marketing; Quality; Health Services; Public Hospitals; Jordan.

INTRODUCTION

The marketing services triangle has three groups working together to develop providing a service. They represent the key to success and include the organization, customers and service providers. Within these groups, there are three types of marketing: external marketing, which includes all the organized offers that make necessary promises to customers about a service, its quality and its delivery method. Interactive marketing describes the skills of workers in customer service and refers to the interactive relationship between service recipients and service providers.
Internal marketing focuses on transforming promises made by service providers and their skills into highly efficient work and performance that lead to customer satisfaction. The performance of service workers represents the service product purchased by the external customer and it is one of the main means used by the organization to achieve excellence in the market. Therefore, a modern marketing concept for employees within the organization has emerged called “the Internal Marketing”. This concept emerged in the early 1950s, by Japanese quality managers. It sees workers’ activities as internal products and that the organization should focus on the concerns of workers and try to satisfy them through the activities they perform in order to ensure a highly efficient workforce as well as satisfy the external customer.

Despite the increasing interest of marketing thought in the internal customer concept, the internal marketing concept has not received the same attention. The concept of internal marketing is that each organizational unit or group within the organization markets its capabilities to other units within the same organization.

The interest in the concept of internal marketing increased in those service organizations, which market their produced services to external customers, that each individual and department within the organization has roles as internal agents and suppliers. To ensure the quality of the external marketing, every individual and department has to offer and get the best services, individuals should work together, and in a way, that achieves the organization’s mission, strategy and objectives. This is an important element within the service organizations where there is an interaction between the service provider and its recipients.

The idea of internal marketing is that all individuals within the organization must do their best to increase the efficiency and effectiveness of its external marketing activities. The internal marketing refers to the design of targeted policies and programs to organization’s employees (internal customers) in order to achieve high level of satisfaction, which in turn can improve the quality of services provided to external customers; that the recognition of the importance of workers’ role in marketing of a service requires management to consider them as the first market for the organization and that their tasks represent internal products that must be designed and developed in accordance with their needs and desires and thus increase their satisfaction level.

General Framework of the Study.

Problem of the Study. The problem of the study represents by the low level of health services provided by public hospitals in Amman compared with the health services provided by private hospitals. The evaluation of hospitals, which is conducted annually, is expected to affect the reputation of these hospitals negatively or positively. Therefore, the problem of the study is focused on the following main question: What are the factors affect internal marketing at the level of quality of health service in public hospitals in Amman.

Questions of the Study. Based on the study problem and its main question, the present study will try to answer the following sub-questions:

- What is the impact of workers’ efficiency and skills on the quality of health service in public hospitals in Amman?
- What is the impact of internal training on the quality of health service in public hospitals in Amman?
What is the impact of employees’ satisfaction on the quality of health service in public hospitals in Amman?

What is the impact of the dissemination of marketing information among workers on the quality of health service in public hospitals in Amman?

What is the impact of internal interaction and teamwork on the quality of health service in public hospitals in Amman?

What is the impact of the participation in decision-making on the quality of health service in public hospitals in Amman?

What is the impact of service culture on the quality of health service in public hospitals in Amman?

Objectives of the Study. This study aims to achieve the following objectives:

- To know the extent to which public hospitals in Amman have applied the concept of internal marketing.

- To know the extent to which the internal marketing dimensions affect the level of quality of health service provided by the public hospitals in Amman.

- Develop a conceptual and applied model in the field of internal marketing to work according to it in all organizations of different economic sectors.

- Provide and formulate a set of recommendations that may improve the factors affecting internal marketing as well as improve the quality of health service provided by the public hospitals in Amman.

Significance of the Study. The significance of this study stems from the following points:

- Developing concepts, dimensions and mechanisms of internal marketing work and its impact on the performance of services provided by the sample of the study.

- Contribution of the study to give an idea about internal marketing, its dimensions and procedures to enhance the performance of workers in the health sector.

Model and Variables of the Study.

The present study involves two types of variables: the independent variable, the internal marketing with its dimensions, and the dependent variable, the level of quality of health service with its dimensions. The following figure illustrates this.
Dependent Variables:

Factors affecting the internal marketing:
- Workers’ competence and skill
- Employees’ satisfaction
- Dissemination of marketing information among employees
- Internal interaction and teamwork
- Participation in decision-making
- Service culture

Independent Variables:

Quality of health service with its dimensions:
- Concrete
- Response
- Reliability
- Safety
- Sympathy

Source: (Authors, 2017)

**Hypotheses of the Study.**

Based on the problem and objectives of the study, the following hypotheses were formulated:

The main hypothesis: There is no statistically significant effect between the factors affecting the internal marketing and the quality of health service provided by the public hospitals in Amman. Seven sub-hypotheses have emerged from this hypothesis.

- The first sub-hypothesis: There is no statistically significant effect at ($\alpha=0.05$) between workers’ competence and skills and the quality of health service provided by the public hospitals in Amman.

- The second sub-hypothesis: There is no statistically significant effect at ($\alpha=0.05$) between internal training and the quality of health service provided by the public hospitals in Amman.

- The third sub-hypothesis: There is no statistically significant effect at ($\alpha=0.05$) between workers’ satisfaction and the quality of health service provided by the public hospitals in Amman.

- The fourth sub-hypothesis: There is no statistically significant effect at ($\alpha=0.05$) between the process of dissemination of marketing information among workers within the organization and the quality of health service provided by the public hospitals in Amman.

- The fifth sub-hypothesis: There is no statistically significant effect at ($\alpha=0.05$) between internal interaction and teamwork among workers and the quality of health service provided by the public hospitals in Amman.
- THE sixth sub-hypothesis: There is no statistically significant effect at (α =0.05) between the participation in decision-making among workers and the quality of health service provided by the public hospitals in Amman.

- The seventh sub-hypothesis: There is no statistically significant effect at (α =0.05) between the participation of customers in decision-making and the quality of health service provided by the public hospitals in Amman.

METHODOLOGY

Method of the study.

The present study used the descriptive analytical method to collect data related to the dimensions of the study and its independent and dependent variables.

Population of the Study.

The population of the study included all public hospitals in Amman (6 hospitals).

Sample of the Study.

This study included (2000) workers from public hospitals in Amman. The size of sample was determined by using the following equation (Som, 1996):

\[ n = \frac{t^2 P(1 - P)}{d^2} \]

Where: n is the required sample size, t is number of standard units which is +_1.96 for 95% of confidence level, p is the ratio of the number of items in which the subject characteristics are available (50%) and d is the error limit which is 5% for 95% of confidence level.

The sample of the study was distributed according to the number of beds in each hospital. The following table shows this.

**Table 1. The distribution of Sample of the Study**

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Available beds</th>
<th>Sample Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL-Bashir Hospital</td>
<td>215</td>
<td>68</td>
</tr>
<tr>
<td>University of Jordan Hospital</td>
<td>180</td>
<td>59</td>
</tr>
<tr>
<td>Prince Hamza Hospital</td>
<td>310</td>
<td>129</td>
</tr>
<tr>
<td>AL-Karamah Hospital</td>
<td>080</td>
<td>23</td>
</tr>
<tr>
<td>Dr. Jamil Toutanji Hospital</td>
<td>120</td>
<td>57</td>
</tr>
<tr>
<td>National Center for Rehabilitation of Addicts</td>
<td>930</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>1052</td>
<td>360</td>
</tr>
</tbody>
</table>

Source: Jordanian Ministry of Health Annual report, 201624
Study Tool.

A questionnaire was designed to collect data according to the problem of the study and its sub-variables. The questionnaires were distributed to the sample members, 315 of them were collected (84%). Then, the researcher reviewed the survey lists which were collected to exclude incomplete questionnaires and questionnaires completed in a wrong way. The number of valid questionnaires for the sample of workers was 260 (80%), which is sufficient for analysis.

Methods of Statistical Analysis.

The researcher analyzed the collected data by using the statistical package SPSS. A number of statistical methods were used to analyze the data contained in the survey lists to test the hypotheses of the study. These methods were as follows:

- Weighted means of variables of the study whether independent or dependent variables.
- Pearson correlation coefficient to determine the correlation between independent and dependent variables.
- Coefficient of Determination to see the percentage interpreted by each independent variable in the dependent variable.
- Multiple regression and correlation to determine the type of relationship between independent and dependent variables, and the proportion of variance that can be interpreted in the dependent variable by independent variables.

Limitations of the Study.

- Place limitations: the study included a number of public hospitals in Amman.
- Time limitations: this study was carried out from 1 April, 2017 to 30 October, 2017.
- Human limitations: the study was limited to workers and beneficiaries of health insurance in public hospitals in Amman.
- Scientific limitations: the study was limited to test and examine the relationship between internal marketing with its various policies as independent variables and the quality of health service as a dependent variable.

LITERATURE REVIEW

Heirsh (2015), ‘The Impact of Internal Marketing on the Quality of Banking service: A case study of a sample of Algerian banks in Medea State’. This study aimed to identify the role of internal marketing and its impact on the quality of banking service in Algerian banks. It provided a theoretical briefing on the concept of internal marketing and its dimensions as well as the quality of banking services. A sample of commercial banks was selected in Medea State and a questionnaire was used as a main tool for data collection at two levels. Some statistical methods were used to test the hypotheses of the study by using SPSS V19. The most important results were: there is a positive impact of the application of internal marketing with its seven dimensions on the quality of banking service and that the most influential dimensions are the clarity of work’s roles and internal communication among workers in banks. The study
recommended the need to pay more attention to internal marketing in all Algerian banks and try to apply it according a precise strategy because it has an essential role in achieving workers’ satisfaction and thus getting a qualified workforce to provide the best services, which means customers’ satisfaction as well. Berry (2011) concluded that internal marketing is an application of marketing philosophy and practices to individuals who serve customers.

Harrel and Fors (2002) believes that internal marketing has so far been seen a popular slogan in the organization, but this does not extend to practical application in terms of perception toward employees as a form of customer; internal marketing simply means the need of management for effective marketing for its products within the organization to meet the expectations of internal customers or what beyond internal customers’ expectations.

Kelly (2000) concluded that the success of any marketing strategy in banking industry depends on achieving customer’s satisfaction. In order to achieve this, banks must develop and disseminate a customer-oriented culture that meets the needs and desires of clients through individual relationships among bank’s employees, especially those in the frontline and customers (berry, L., et al., 2011, pp. 335-364).

Wong and Perry (2011) indicated that if the management’s treatment of staff in the service organization is dry, we cannot expect these workers to be friendly and courteous with customers, and customers often attribute the quality of service provided to the performance of the employees in the organization. Leanard and Spencer (2001) demonstrated, in their field study of commercial banks in the United States, that the friendly and courteous treatment of clients by the employees and the level of their performance are the most important factors influencing customers’ attitudes toward whether the bank offers good service or not.

Richardson and Robinson (2006) found that one of the most effective ways to achieve excellence in banking services is to improve the quality of service as perceived by the end-customer through implementing internal marketing programs at both strategic and tactical levels. In addition, the researchers see that the internal marketing practice at the strategic level aims at creating an internal environment that supports bank employees’ awareness about customers. On the other hand, the internal marketing practice at the tactical level aims at increasing the satisfaction of employees through understanding what they are expected to do, accepting management’s policies and support them, providing effective communication and information and training the employees. Thus, the availability of the basic requirements for the internal marketing application of a bank can lead to the promotion of the concept of customer orientation, especially from the frontline employees who deal with customers more, and thus improve the quality of provided service.

Gronroos (2010) emphasized that there is a difference between the strategic level and the tactical level of internal marketing. At tactical level, internal marketing includes continuous training for all employees to disseminate marketing information among official and non-official employees whereas at the strategic level, internal marketing is concerned with the choice of supportive management systems, individual policies, customer service, training individuals and planning procedures. Ballantyne (2007) reviewed in his study how to develop internal marketing programs and their impact on the satisfaction of employees in the organization. Hagg et al. (2008) explained the impact of internal marketing on the organizational culture by clarifying the objectives, values and performance of the organization and communicating this to the employees in order to encourage them to participate effectively in the organization’s success (David Ballantye, 2007, pp. 343-366). This study also showed
that although there is a comprehensive and general concept among the organization’s employees about the organization’s goals and values, there is resistance on their part to change the prevailing organizational culture. Varey (2004) argues that internal marketing can contribute to managing change in the organization through making the organization more flexible and responsive to environmental changes.

Ryan (2015), in a study included a sample of doctors in some hospitals, emphasized that there are differences between doctors in terms of their understanding of the nature of the relationship between doctors and the hospital according to a variety of factors, including the type, department he\she works for, owning a private clinic or not and working in a private hospital or one of hospital’s departments or not. Idris (2016) revealed that there is a significant relationship between the internal marketing practice in Kuwaiti banks and the level of job satisfaction of employees. The review of previous studies shows the absence of any study investigates the impact of factors affecting the internal marketing on the level of quality of provided service. Thus, the present study will fill this gap.

THEORETICAL FRAMEWORK

Internal Marketing

Internal Marketing Definition

Internal marketing has been defined as “a major activity aims at developing the knowledge of both internal and external customers and removing financial constrains to increase organizational effectiveness”. It has also been defined as “efforts aim at identifying the needs and desires of employees and ensuring their satisfaction with the performance of their functions and activities”. According to this definition, employees are considered as internal customers and their functions are internal products. Therefore, internal products should be showed in a way that satisfies the internal needs and desires of customers; this leads to achieving the organizational objectives. Internal marketing has also been defined as a form of marketing within the organization that focuses on attracting employees’ attention to performing internal activities that need to be changed to improve external marketing performance (Ballantye, 2007).

The idea of internal marketing is that, in the area of producing goods and providing services, there are two types of customers; 1) internal customers (employees within the organization); each individual is considered to be an agent for another group of individuals with different transactions, so each individual is considered a user and a producer of the service at the same time and each of whom is involved in the relationship between the customer and the service provider; 2) external customers. In order to reach external customers, we must pay attention to internal customers who are our means of reaching out to external customers (William, R. George, 2010, pp 63-70).

The Importance and Objectives of Internal Marketing.

The internal marketing strategy derives its important from the importance of the interaction between organization’s employees and the customers, especially in services field that the production and consumption processes coincide, the human element controls the process of
service delivery and both the organization’s employees and customer participate in the production of the same service.

The internal marketing strategy aims at attracting and retaining the best employees and motivating them to perform their functions as best as possible through applying both philosophy and methods of external marketing to the internal market of employees. The internal marketing strategy also aims to develop the knowledge of both the internal customer and external customer and to remove the functional obstacles that hinder organizational effectiveness (William Boulding, et al., 2013, pp. 71-77).

**Internal Marketing Characteristics.**

Internal marketing is characterized by several characteristics, including:

1- Internal marketing is a social process: it is applied within the organization to manage the exchange and interaction between the organization and its employees. The workers’ needs are not limited to material needs only, but there are social needs such as security, belonging and friendship that they want to satisfy, and this is achieved through the internal marketing (Stephen W. Brown, 2015, pp. 25-39).

2- Internal marketing is an administrative process that integrates the various functions within the organization by ensuring that all employees have sufficient knowledge and experience about the activities they perform, these activities serve to satisfy external customers’ needs and that all employees were prepared and motivated to perform their work efficiently (Varey, 2005).

**Internal Marketing in Hospital.**

Hospitals can adopt the concept of internal marketing because they can better reach patients (external customers) through internal clients by improving their working environment and their relationships with their employees. The following figure show that internal marketing serve as an outlet for both the hospital’s plans to provide patients with health services and the external marketing mixture, and it serve as an inlet for both of them at the same time. According to this concept, the elements of this mixture are presented to the patients in light of the plans developed by the hospital to provide health services. As a result, the agreement on the elements of marketing mixture that constitutes the service provided to patients is emerged. These plans are modified in light of the results of the application or practicing these elements. Also, elements of internal marketing mixture are reviewed to align with hospital planning process and external marketing elements (Brown, 2005). The internal marketing concept in the hospital can be implemented through the elements of marketing mixture as follows:

a- **The product**: it means here the provided health services. It is noted that the final product of health services does not show up unless at the end of these services; after providing all different treatment and nursing services, because the final product of health services is patient’s condition after providing health care to him/her; that this patient’s condition represents the outputs of health care. Therefore, the various services performed by doctors and nurses are considered intermediate products because they are included in the composition of the final product which is the condition of the patient upon discharge from the hospital (Jack Cooper and John J. Cronin, 2010, pp. 117-181).
b- **Price**: regarding the price, the health services provided by the public hospitals in Amman for health insurance are semi-free services (a small amount of fee is collected from the patients) (Gibert, D Harrel and Mathew F., 2012, pp. 299-306).

c- **Marketing communications (promotion)**: communications are the tangible element of internal marketing. It is used in the hospital to inform and persuade employees and to identify their trends and attitudes, particularly those who can be relied upon to promote health services provided by the hospitals. The result of these contacts is that employees are fully aware of the hospital’s plans to provide health care, and problems that face the providing of health services and their impact on their work (Richard J. Varey, 2015, pp 41-54).

d- **Distribution**: the services provided by the hospital to patients through the workers; therefore, the workers are the distribution channel in which the services of the hospital go through to the patients in an integrated manner to provide the appropriate service for them. If the employees represent the marketing agents of the hospital, the hospital is required to provide some services and assistance to these agents (Derick, P. Pasternake and Goseph, A. Berry, 2013, p. 88). The concept of internal marketing in a hospital can be applied as follows:

**Figure 2. The internal marketing of hospital’s services**

![Image of Figure 2](source)

**The Quality of Health Service**

**The concept of quality of health service.**

There is a heated debate on the meaning of quality among researchers. While Japanese philosophy defines quality as the production of a product free of defects or the production of a
product in a correct way from the first time, Smith believes that quality is a management’s commitment to satisfy customer’s needs and desires (Adrin Payne, 2003, p. 167) (Peter Smith, 2006, p. 22) (Anne, M Smith, 2005, pp. 257-276). Berry et al. Indicates that quality is the degree of conformity with specifications from customer’s point of view not from management’s view of the organization. The quality of health service was defined by The Joint Commission on Accreditation of Hospitals (JCAH) as “the degree of adherence to generally recognized contemporary standards of good practice and expected results for a specific service, a diagnosis or a medical problem” (Wong S. and Perry C., 2011, pp. 11-16). Pasternak and Berry (1993, p.88) has defined it as “everything related to customers’ affairs and the commitment to the quality of the product offered to them through continuous study and selection of the best ways to satisfy their needs and desires”.

Measuring the quality of health service.

In terms of health service field, the quality of health service is measured by the availability of the five dimensions defined by Berry et al. in health service provided by the hospital, which were adopted in the present study (Richard, B. In addition, Robinson, C. 2006, pp. 3):

a- The concrete aspects include the following variables: the attractiveness of buildings and physical facilities, design and internal organization of buildings, modern equipment and medical devices and the appearance of doctors and staff.

b- Reliability includes the following variables: meeting the providing of health service on time, accuracy, no errors in examination, diagnosis or treatment, availability of different specialities, confidence in doctors and specialists, care to solve patient’s problems and maintain records and accurate files.

c- Response includes the following variables: the speed in providing the required health service, immediate response to patient’s needs regardless the level of busy time, constant readiness of staff to cooperate with the patient, immediate response to inquiries and complains and informing the patient exactly when the service will be provided.

d- Safety includes the following variables: the sense of security in the treatment, knowledge and specialized skill of doctors, good behaviour of staff, continuity of follow-up the patient’s status, confidentiality of patient’s information and management’s support to staffs to perform their functions efficiently (Steven, A. Taylor, 2014, pp. 221-173).

e- Sympathy includes the following variables: understanding patient’s needs, giving management and staff the priority to patient’s interests, appropriateness of work hours and time allocated to provided service, personal care for each patient, good dealing with patient’s conditions and sympathy with spirit of humour and friendship in dealing with the patient (Idris, 2016).

In a subsequent study, Berry et al. (2008) has managed to integrate these ten dimensions into only five dimensions: concrete physical aspects of service, reliability, response, safety and sympathy. These dimensions also included twenty-two expressions that interpret the quality of service aspects for each of these dimensions. It is noteworthy that these five dimensions are from researchers’ point of view general dimensions that the customer depends on to measure the quality of service regardless the type of service. This method of service quality measurement is called the gap scale or SERVQUAL Scale. These gaps occur if there is a
difference between client’s expectations and management understands of these expectations (Smith, 2015) and consist of five gaps.

In terms of the second method of measuring the quality of service, it is called the actual performance scale or SERVPERF Scale. It is a modified method of the first method, and it is based on the direct evaluation of the methods and processes associated with the service; this means that it is based on measuring the quality of service as a form of trends and attitudes toward the actual performance of quality; which is represented by the five dimensions: concrete physical aspects of service, reliability, response, safety and empathy. These dimensions also include 22 expressions that interpret the quality of service aspects according to these dimensions. In addition, Taylor (2012, 2014) believes that this scale is simpler and easier to use than the previous scale, as well as it is more reliable. However, this method has been criticized and most of critics focus mostly on the methodology of measurement and statistical methods used to verify its stability and credibility. The debate over the effectiveness of these two scales of quality of service continues. The researchers divided into two groups of supporters and opponents of each of these scales (Teas, 2004, Boulding, 2003).

RESULTS ANALYSIS

Statistical Analysis of study hypotheses.

In order to test the hypotheses of the study, the researcher has reviewed the results of the statistical analysis of the data collected through the questionnaires represented in tables (3), (4) and (5).

Table 3. Arithmetic means, standard deviations and correlation coefficients of study variables.

<table>
<thead>
<tr>
<th>variables</th>
<th>Arithmetic Means</th>
<th>Standard deviation</th>
<th>Correlation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of quality of health service</td>
<td>3.17</td>
<td>0.122</td>
<td>1.00</td>
</tr>
<tr>
<td>Workers’ efficiency and skill</td>
<td>3.46</td>
<td>0.28</td>
<td>0.61 1.00</td>
</tr>
<tr>
<td>Internal training</td>
<td>3.24</td>
<td>0.38</td>
<td>0.05 0.12 1.00</td>
</tr>
<tr>
<td>Workers’ satisfaction</td>
<td>2.74</td>
<td>0.37</td>
<td>0.67 0.0 0.15 1.00</td>
</tr>
<tr>
<td>Dissemination of marketing information among workers within the organization</td>
<td>2.82</td>
<td>0.35</td>
<td>0.53 0.20 *0.15 0.20 1.00</td>
</tr>
<tr>
<td>Internal interaction and teamwork</td>
<td>2.38</td>
<td>0.18</td>
<td>0.56 0.17 *0.10 0.11 0.13 1.00</td>
</tr>
<tr>
<td>Participation in decision-making</td>
<td>2.90</td>
<td>0.28</td>
<td>0.59 0.17 **0.18 0.13 0.17 0.19 1.00</td>
</tr>
<tr>
<td>Service culture</td>
<td>3.38</td>
<td>0.39</td>
<td>0.63 0.19 *0.10 0.10 0.22 0.15 0.10 0.10 ** 1.00</td>
</tr>
</tbody>
</table>
Table (3) shows that the level of health service quality was moderate (3.17) in all dimensions of the health service; which include concrete physical aspects, reliability, response, safety and empathy. It also shows that workers’ efficiency and skill were moderate (3.46); and this indicates that hospital staff have a full clarity of their work roles. In addition, the above table shows that workers’ internal training was (3.24); which means that workers were subjected to training programs that develop their skills and abilities to perform the tasks assigned to them. It also shows that workers’ satisfaction (2.74) was of medium level and this leads to an unfavourable and unsuitable work environment to perform tasks in the hospital. It also explains that the dissemination of marketing information among employees within the organization (2.82) has been low and this leads to workers’ dissatisfaction for their work as they are exerting great efforts while performing their tasks and do not receive the appropriate financial and moral corresponding to those efforts. The participation of workers in decision-making was in low level (2.90), and this due to many negative factors in work, including the lack of meetings and ineffectiveness of dissemination of marketing information among hospital staff. In addition, the internal interaction and teamwork between employees and customers was in low-moderate level (2.38); this is due, as already mentioned, to many negative factors in the work, which lead to workers’ lack of interest in beneficiaries and meeting their needs. It is also clear that the service culture was at medium level (3.38). This is probably refers to providing of an appropriate and suitable climate to consolidate the service culture by the organization, the use of decentralization of work and the application of clear and positive ethical and behavioural rules.

**Table 4.** Multiple regression results of the relationship between independent and dependent variables

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Independent Variables</th>
<th>Regression coefficient $\beta$</th>
<th>t value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of health service quality</td>
<td>Workers’ efficiency and skill</td>
<td>0.39</td>
<td>3.18</td>
<td>0.015</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Workers’ internal training</td>
<td>0.34</td>
<td>3.50</td>
<td>0.009</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Workers’ satisfaction</td>
<td>0.43</td>
<td>3.90</td>
<td>0.008</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Dissemination of marketing information among workers</td>
<td>0.34</td>
<td>3.70</td>
<td>0.007</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Participation in decision-making</td>
<td>0.27</td>
<td>5.90</td>
<td>0.008</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Internal interaction and teamwork</td>
<td>0.30</td>
<td>4.60</td>
<td>0.005</td>
</tr>
<tr>
<td>Level of health service quality</td>
<td>Service culture</td>
<td>0.45</td>
<td>4.30</td>
<td>0.004</td>
</tr>
</tbody>
</table>
Table 5. Variance ratios interpreted by independent variables for dependent variables.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>R²</th>
<th>R² \ Each Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers’ efficiency and skill</td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill and internal training</td>
<td>35%</td>
<td>15%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill, internal training and workers’ satisfaction</td>
<td>45%</td>
<td>10%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill, internal training, workers’ satisfaction and dissemination of marketing information among workers</td>
<td>59%</td>
<td>14%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill, internal training, workers’ satisfaction, dissemination of marketing information among workers, internal interaction and teamwork.</td>
<td>70%</td>
<td>11%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill, internal training, workers’ satisfaction, dissemination of marketing information among workers, internal interaction, teamwork and participation in decision-making.</td>
<td>76%</td>
<td>6%</td>
</tr>
<tr>
<td>Workers’ efficiency and skill, internal training, workers’ satisfaction, dissemination of marketing information among workers, internal interaction, teamwork, participation in decision-making and service culture</td>
<td>84%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Hypothesis Analysis.

First sub-hypothesis test: The hypothesis states that there is no statistically significant relationship at (α=0.05) between workers’ efficiency and skill and the level of quality of the health service, i.e. the greater the efficiency and skill of workers are, the higher the quality of the health service is. The findings indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient β1 = 0.39, which means the following:

   a- The positive regression coefficient indicates that the relationship between workers’ efficiency and skill and the level of quality of health service is a positive one, in the sense that increasing the workers’ efficiency and skill leads to an increase in the quality of health service.

   b- The value of regression coefficient β1 = 0.39 means that increasing the workers’ satisfaction with the value of one unit leads to a change in the level of quality of health service by 0.39 unit.

2. The correlation coefficient = 0.61; this also means that the relationship between workers’ efficiency and skill and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.61, which is significant at a level less than 0.05.

3. The value of (t) test = 3.18 is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical
significance between workers’ efficiency and skill and the level of quality of health service.

4. The workers’ efficiency and skill $R^2 (18\%)$ is interpreted from the dependent variable, the quality of health service.

**Second Sub-hypothesis test:** The hypothesis states that there is no statistically significant relationship at $(\alpha=0.05)$ between internal training of workers and the level of quality of the health service, i.e. the greater the internal training is, the higher the quality of the health service is. The findings indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_2 = 0.34$, which means the following:
   a- The positive regression coefficient indicates that the relationship between workers’ internal training and the level of quality of health service is a positive one, in the sense that increasing the workers’ internal training leads to an increase in the quality of health service.
   b- The value of regression coefficient $\beta_2 = 0.34$ means that increasing workers’ internal training with the value of one unit leads to a change in the level of quality of health service by 0.34 unit.

2. The correlation coefficient $= 0.52$; this means that the relationship between workers’ internal training and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.52, which is significant at a level less than 0.05.

3. The value of $(t)$ test $= 3.50$ is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between workers’ internal training and the level of quality of health service.

4. The workers’ internal training $R^2 (15\%)$ is interpreted from the dependent variable, the quality of health service.

**Third sub-hypothesis test:** The hypothesis states that there is no statistically significant relationship at $(\alpha=0.05)$ between workers’ satisfaction and the level of quality of the health service, i.e. the greater the workers’ satisfaction is, the higher the quality of the health service is. The findings indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_3 = 0.43$, which means the following:
   a- The positive regression coefficient indicates that the relationship between workers’ satisfaction and the level of quality of health service is a positive one, in the sense that increasing the workers’ satisfaction leads to an increase in the quality of health service.
   b- The value of regression coefficient $\beta_3 = 0.43$ means that increasing workers’ satisfaction with the value of one unit leads to a change in the level of quality of health service by 0.43 unit.
2. The correlation coefficient $= 0.67$; this means that the relationship between workers’ satisfaction and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.67, which is significant at a level less than 0.05.

3. The value of $(t)$ test $= 3.9$ is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between workers’ satisfaction and the level of quality of health service.

4. The workers’ satisfaction $R^2 (10\%)$ is interpreted from the dependent variable, the quality of health service.

Fourth sub-hypothesis test: The hypothesis states that there is no statistically significant relationship at $(\alpha=0.05)$ between the dissemination of marketing information among workers and the level of quality of the health service, i.e. the greater the dissemination of marketing information among workers is, the higher the quality of the health service is. The findings indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_4 = 0.34$, which means the following:
   a- The positive regression coefficient indicates that the relationship between the dissemination of marketing information among workers and the level of quality of health service is a positive one, in the sense that increasing the dissemination of marketing information among workers leads to an increase in the quality of health service.
   b- The value regression coefficient $\beta_4 = 0.34$ means that increasing the dissemination of marketing information among workers with the value of one unit leads to a change in the quality of health service by 0.34 unit.

2. The correlation coefficient $= 0.53$; this also means that the relationship between the dissemination of marketing information among workers and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.53, which is significant at a level less than 0.05.

3. The value of $(t)$ test $= 3.7$ is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between the dissemination of marketing information among workers and the level of quality of health service.

4. The dissemination of marketing information among workers $R^2 (14\%)$ is interpreted from the dependent variable, the quality of health service.

Fifth sub-hypothesis test: It states that there is no statistically significant relationship at the level of $(\alpha=0.05)$ between workers’ participation in decision-making and the level of quality of health service, in the sense that the more workers participate in decision-making, the higher the quality of health service is. The results indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_5 = 0.27$, which means the following:
   a- The positive regression coefficient indicates that the relationship between workers’ participation in decision-making and the level of quality of health service is a positive
one, in the sense that increasing the workers’ participation in decision-making leads to an increase in the quality of health service.

b- The value of regression coefficient $\beta_5=0.27$ means that increasing workers’ participation in decision-making with the value of one unit leads to a positive change in the level of quality of health service by 0.27 unit.

2. The correlation coefficient $= 0.59$; this means that the relationship between workers’ participation in decision-making and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.59, which is significant at a level less than 0.05.

3. The value of (t) test $= 5.9$ is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between workers’ participation in decision-making and the level of quality of health service.

4. The workers’ participation in decision-making $R^2$ (11%) is interpreted from the dependent variable, the quality of health service.

**Sixth sub-hypothesis test:** It states that there is no statistically significant relationship at the level of ($\alpha=0.05$) between internal interaction and teamwork within the organization and the level of quality of health service, in the sense that the greater the internal interaction and teamwork within the organization is, the higher the quality of health service is. The results indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_6=0.30$, which means the following:

   a- The positive regression coefficient indicates that the relationship between internal interaction and teamwork within the organization and the level of quality of health service is a positive one, in the sense that increasing internal interaction and teamwork within the organization leads to an increase in the quality of health service.

   b- The value of regression coefficient $\beta_6=0.30$ means that increasing workers’ participation in decision-making with the value of one unit leads to a positive change in the level of quality of health service by 0.30 unit.

2. The correlation coefficient $= 0.56$; this means that the relationship between internal interaction and teamwork within the organization and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.56, which is significant at a level less than 0.05.

3. The value of (t) test $= 4.6$ is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between internal interaction and teamwork within the organization and the level of quality of health service.

4. The internal interaction and teamwork within the organization $R^2$ (11%) is interpreted from the dependent variable, the quality of health service.
Seventh sub-hypothesis test: It states that there is no statistically significant relationship at the level of (α=0.05) between service culture and the level of quality of health service, in the sense that the greater the service culture is, the higher the quality of health service is. The results indicate the validity of this hypothesis, as evidenced by the results in tables (3), (4) and (5) as follows:

1. The regression coefficient $\beta_7 = 0.45$, which means the following:
   a. The positive regression coefficient indicates that the relationship between service culture and the level of quality of health service is a positive one, in the sense that increasing service culture leads to an increase in the quality of health service.
   b. The value of regression coefficient $\beta_7 = 0.45$ means that increasing service culture with the value of one unit leads to a positive change in the level of quality of health service by 0.45 unit.

2. The correlation coefficient = 0.63; this means that the relationship between service culture and the level of quality of health service is a positive relationship, and that the strength of this relationship is 0.63, which is significant at a level less than 0.05.

3. The value of (t) test = 4.3 is significant at a level below 0.05. This confirms and supports the validity of this hypothesis, that is, there is a positive correlation of statistical significance between service culture and the level of quality of health service.

4. The service culture $R^2$ (8%) is interpreted from the dependent variable, the quality of health service.

RESULTS AND RECOMMENDATIONS

Results of the study

The findings of the study are the following:

- The level of quality of health service provided by the hospitals was medium that the weighted mean of workers’ opinions and attitudes was (3.17) on Likert’s five scale.

- There is a medium degree of workers’ efficiency and skill in the hospitals that the weighted mean of workers’ opinions and attitudes was (3.46) on Likert’s five scale.

- There is a medium degree of workers’ internal training in the hospitals that the weighted mean of workers’ opinions and attitudes was (3.24) on Likert’s five scale.

- There is a low degree of workers’ satisfaction in the hospitals that the weighted mean of workers’ opinions and attitudes was (2.82) on Likert’s five scale.

- There is a low degree of dissemination of marketing information among workers in the hospitals that the weighted mean of workers’ opinions and attitudes was (2.74) on Likert’s five scale.

- There is a low degree of internal interaction and teamwork in the hospitals that the weighted mean of workers’ opinions and attitudes was (2.23) on Likert’s five scale.
- There is a low degree of workers’ participation in decision-making in the hospitals that the weighted mean of workers’ opinions and attitudes was (2.23) on Likert’s five scale.

- There is a medium degree of service culture in the hospitals that the weighted mean of workers’ opinions and attitudes was (3.38) on Likert’s five scale.

- There is no significant relationship between internal marketing with its seven dimensions (workers’ efficiency and skill, internal training, workers’ satisfaction, the dissemination of marketing information among workers, internal interaction and teamwork, participating in decision-making and service culture) and the quality of health service provided.

**Recommendations**

The researcher recommends the following:

1- The health service providers from different specialities represent the first target market, which the management should seek to achieve high levels of job satisfaction for them. Therefore, the management of public hospitals must adopt the concept of internal marketing through knowledge about the factors affecting it.

2- There is a need to develop job descriptions for all workers in different specialities in a manner that allows positions to be filled with appropriate personnel and to clarify the role required for each individual.

3- There is a need to develop operational plans for training programs periodically and to develop employees’ technical and behavioural skills in public hospitals in order to increase their level of reliability and response.

4- There is a need to work on the planning and implementation of workers’ satisfaction whether their moral or physical satisfaction for those who achieve an outstanding performance in providing health service in an appropriate manner to patients.

5- There is a need to find a two-way communication between staff and hospital’s management that allows solving work problems quickly and reflects workers’ suggestions.

6- There is a need to increase interaction process between workers and customers during the provision of health service, and a need for employees to feel how importance their roles are.

7- There is a need to conduct a continuous assessment for the quality of health service provided to users in all dimensions in order to ensure their satisfaction.

8- There is a need to conduct further studies on the concept of internal marketing and its consequences. These studies include the factors influencing internal marketing at the level of quality of service provided by other service organizations such as banking, tourism, transport and education sectors and the factors influencing internal marketing at the level of career’s satisfaction and performance of service organizations.
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