A Proposed Model for Customer Value Management in Health Organizations "Application on Hospitals in Riyadh"

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Received 5 October 2016, Revised 5 November 2016, Accepted 8 November 2016, Published January 2017

Abstract: This study aimed to find out how marketing knowledge management and interactive marketing affect services marketing, customer value management and health organizations in Riyadh. The study sample consisted of 120 administrators and 180 employees. After overthrowing (11) questionnaires from responses of administrators and (26) questionnaires from responses of staff, thus, the final sample consisted of 109 administrators and 154 employees. To collect data, survey (questionnaire) method was used and the results of the statistical analysis showed the following: (1) There is significant statistically relationship between marketing knowledge management and interactive marketing, (2) There is significant statistically relationship between marketing knowledge management and health services marketing, (3) There is no significant statistically relationship between marketing knowledge management and customer value management in health organizations, (4) There is significant statistically relationship between interactive marketing and health services marketing, (5) There is significant statistically relationship between interactive marketing and customer value management in health organizations, (6) There is significant statistically relationship between health services marketing and customer value management in health organizations.

Keywords: Marketing knowledge management, Health services marketing, Customer value management, Interactive marketing, Health organizations, Customer’s value.

1. INTRODUCTION

The health sector represents a great importance in the life of peoples and individuals in general and its significance stems from the fact that health is really essential to all individuals and peoples. As well as it is one of the most important service sectors and it is one of the pillars of the national economy in many countries, whether developed or developing. This sector witnessed a remarkable development due to enormous technological developments and changes in the needs and desires of individuals, which leads to the need to provide high quality health services that satisfy customers. Therefore, number of private health institutions in the world work hard to develop their services to meet the needs and desires of customers with appropriate quality.

Due to the importance of service quality and customer satisfaction, many organizations focused on the role of marketing in helping the organization in order to create higher value for customers from competitors because customers still have loyalty towards organization that gives them a high value, where the customer’s requirements in recent times are new, multi-variable and different that led majority of companies to focus on maximizing the value provided to customers and transmission from public unified marketing strategy to segmented marketing strategy, which is based on the total market segmentation into several sub-markets based on demographic and psychographic characteristics of customers, and providing appropriate marketing mix that works on maximizing the value of each sub-market separately, measuring the value of these groups, determining the groups of maximized value and identifying possible improvements to be made and that enable different groups to reach to maximized value.

The health sector is considered in any country as an important sector with a special nature, and this consideration is not different, whether the health organization originated to achieve financial profitability, or it is not targeted to achieve a profit such as public hospitals, and thus in health organizations, there are two main parties for the relationship: profitable health organization, But in non-profitable health organizations,
the exchange process is less clear where there is a third party which basically takes care of financing the organization (governmental or donors). And others differentiated between the consumer who actually uses the healthy product (the patient) and the customer; the patient may not have a role in choosing a particular health service or certain health organization, for instance, the patient who is converted from general practitioner to a specialist without the choice of the patient. In health organizations, marketing does not depend in the allocation of resources on the relationship between offer and demand, but rather it depends on the behavior of a number of parties and the statutory rules, whether governmental or self, and on the availability of various information (Borgonovi & Brovetto, 2008).

2. PROBLEM STATEMENT

Many organizations seek to acquire new knowledge as a way for competitive advantage, so organizations now are looking for knowledge and knowledge management as part of their strategic trend. Knowledge helps organizations in developing product and market strategy, which is a way to achieve full excellence and achieve competitive advantage. Cost reduction strategy emphasizes that knowledge could be used to reduce costs and prices and to shorten product life cycle period, while excellence strategy often emphasizes that knowledge adds value to the product by giving it unique characteristics that distinguish it from competition. As well as Customer relationship management (CRM) is related to acquiring market information exploited by organizations in forming and maintaining a portfolio of customer relationships provide the possible highest profitability, and therefore, to achieve a better understanding of customer relationship management, it is just enough to consider a set of organization activities which aim to gain information on the market, but it is necessary to clarify how organizations exploit it in achieving the goal of this process, which is to maximize the profitability of customer relationships. Previous studies indicate that acquiring market information by organizations is done through knowledge management process, then organizations exploit this knowledge to create a portfolio of customer relationships in a way leads to maximize profit through choosing the right customers, determining the preferences of relations with them and managing transactions with them.

Furthermore, organizations can enhance their marketing capabilities through marketing knowledge management, and marketing knowledge efficiency helps in developing marketing capabilities, where strategist managers can gain the desired growth, profitability, customer satisfaction and adaption by developing marketing capabilities for their organizations. So organizations that have a better marketing capacity enjoyed better performance where proper marketing capabilities are accounted for an increase in sales growth, profitability, customer satisfaction and adaptation. Hence, the basic problem of research about variables knowledge that have a positive or negative impact on customer value management through knowing the relationship between marketing knowledge management and interactive marketing and the impact of these variables on each of services marketing and customer value management in health organizations, i.e. a lack of knowledge of the impact of marketing knowledge management and interactive marketing on services marketing and customer value management in health organizations.

This study attempts to answer the following research questions:
First question: Is there a positive correlation between marketing knowledge management and interactive marketing?
Second question: Is there a positive correlation between marketing knowledge management and health services marketing?
Third question: Is there a positive correlation between marketing knowledge management and customer value management in health organizations?
The fourth question: Is there a positive correlation between interactive marketing and health services marketing?
Fifth question: Is there a positive correlation between interactive marketing and of customer value management in health organizations?
Sixth question: Is there a positive correlation between health services marketing and customer value management in health organizations?

3. THE IMPORTANCE OF RESEARCH

In spite of the great importance of knowledge and customer value which are perceived by organizations managers, but few of them are able to express this importance by a strategy to exploit that knowledge or how can organizations turnover to be a learning organization.

This study derives its importance from the research subject where customer value management is one of the important and modern topics in marketing field. And it expresses the interest of the researcher and all researchers in marketing to access and try to apply all modern concepts of marketing because of their positive impact on consumers and organizations at the same time.

The applied field of the study shows how important health services marketing is for several reasons,
including patient right to choose among hospitals, the required health service providers, and the increasing competition between hospitals whether in terms of attracting medical talents or by application of provided medical technology.

Health marketing helps in identifying target market, i.e. current beneficiaries with the possibility of penetration of existing markets or adding new markets or both. Thus, the important role of health marketing is highlighted in light of diversity and increase of forms and types of medical services and it is applied to medical technology as well.

There is no doubt that the effects covered by this study represent enrichment to the Arabic library and try to answer many questions related to the study field which would result in a better understanding for customer value management through knowing the effect of marketing knowledge management and interactive marketing on services marketing and customer value management in health organizations, as well as the returns that health organizations will gain by applying customer value management concept.

4. RESEARCH OBJECTIVES

This study aims at exploring the effect of marketing knowledge management and interactive marketing on both services marketing and customer value management in health organizations in Riyadh, i.e. to know the strength and the direction of the relationship between marketing knowledge management and interactive marketing on the one hand, and marketing services and customer value management in health organizations on the other hand.

This objective is divided into the following sub-objectives:

1) to identify the relationship between marketing knowledge management and interactive marketing.
2) to identify the relationship between marketing knowledge management and health services marketing.
3) to identify the relationship between marketing knowledge management and customer value management in health organizations.
4) to identify the relationship between interactive marketing and health services marketing.
5) to identify the relationship between interactive marketing and customer value management in health organizations.
6) to identify the relationship between health services marketing and customer value management in health organizations.

5. LITERATURE REVIEW

Literature review will be divided into four sections:

A: Previous studies related to marketing knowledge management

Recently, organizations focus on the available amount of knowledge, information, and human capacities more than focus on what they have from material and financial assets, so there will be scientific interest in the available intellectual resources in the community of various degrees of advanced development and growing industrially and culturally.

In this regard, of intellectual capital concept was generated and then knowledge management. Despite the fact that many of the writers and researchers assert its importance, but a lot of leaders of the organizations, especially in developing countries do still not have a logical answers about intellectual capital and knowledge management in terms of concept, its important characteristics, and how to develop it... etc., it also must be noted that knowledge management was found within the activity or industry, not within the academies.

Mansour (2012) defined knowledge management as "a term expresses processes, tools and behaviors that beneficiaries participate in their formulation and performance to acquire, store and distribute knowledge to affect business processes to gain best applications to competitors’ and customers’ needs". Walczak (2005) defined knowledge management as "to establish and maintain an organizational culture that encourages the generation, sharing and appropriate use of knowledge belonging to a particular organization". While Danskin, et.al (2005) defined knowledge as a set of experiences, important values, correct information and expert wisdom, which provide organization structure with the added value and integration with new experiences and information. Marquardt (2002) represented a knowledge pyramid or what is called knowledge continuum (shown in figure (1)), as this pyramid starts from the lower base (data) that include images, numerical symbols, words and unexplained phrases (i.e without any consistency thus, without any sense), followed by information which is data that has clear meaning that its format and content can be used in a particular task after being formed, classified and treated.

Thus, knowledge (the third level of the pyramid levels) include information, principles, expertise, decision-making and problem-solving structures, i.e. using information and investing it. People knowledge enables them to find meaning for data, and thus generating information. At this level (III), people can
deal intelligently with available information sources and then they take action steps.

This is followed by Experience Level (Level 4), which is the proper and effective use of knowledge in order to achieve results and improve performance. Finally, Ability (Level 5), which means the organized ability and expertise to generate a product, service or process in a high level of performance, and ability requires integration and cooperation of many individuals, teams and coordination among themselves. The capacity is more than being just a tool, but it is the ability to learn, innovate and generate ideas regarding that numerous studies believe that experience precedes knowledge.

![Knowledge pyramid](image)

**Source:** Marquardt, (2002), p. 23

**Figure 1. Knowledge pyramid**

As well as following knowledge management methodology leads to a radical change in the concepts and criteria that an organization adopts as shown in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Standards of mixing management with knowledge</th>
<th>Standards of pre-knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Making decisions is based on the scientific method.</td>
<td>Making decisions is based on managers’ experience and personal vision.</td>
</tr>
<tr>
<td>2</td>
<td>Planning and managing operations are based on Scientific research and technological development.</td>
<td>Planning and managing operations are based on Trial and Error.</td>
</tr>
<tr>
<td>3</td>
<td>Intellectual capital is the real wealth of the organization.</td>
<td>Real wealth is money and what is buying from material assets</td>
</tr>
<tr>
<td>4</td>
<td>The best investments and most feasible is to invest in developing knowledge abilities (Intangibles)</td>
<td>The best investments and most feasible is to invest in developing material capacities (Tangibles) of the organization.</td>
</tr>
<tr>
<td>5</td>
<td>Individuals' capabilities evaluation is based on knowledge.</td>
<td>Individuals' evaluation is based on practical skills and abilities.</td>
</tr>
<tr>
<td>6</td>
<td>Knowledge accumulation is the main aspect of development and success of the organization.</td>
<td>Capital accumulation is the main aspect of the development and success of the organization</td>
</tr>
</tbody>
</table>

**Table 1. Knowledge Management Standards**


AL Mohammad & Akroush (2010) defined marketing knowledge as the regulator that contributes to realize and analyze needed marketing type and possibility to achieve it which is related to the potential and assets of knowledge, planning and follow-up processes and procedures to develop potential and assets of marketing to serve the achievement of organizational goals. Shaw and Subramaniam (2001) defined marketing knowledge as "structured and organized information related to markets, customers, competitors and trends".

As well as Kohlbacher (2008) defines marketing knowledge as “all knowledge, both declarative as well as procedural, concerning marketing thinking and behavior in a corporation”. while Abu Gheinm (2007) defined marketing knowledge as a process of cognitive operation to the accumulated practices among practitioners of marketing profession.

Shaw and Subramanyam (2001) defined marketing knowledge management as a set of operations to collect, disseminate and preserve customers’ knowledge, preferences, competitors, products, distribution channels and trends, i.e. marketing knowledge management refers to collection, dissemination and preservation of marketing knowledge. The following figure (2) shows the integration of knowledge management in marketing.
It's clear from previous figure that common knowledge in the organization are made with supply chain, such as providers and sellers, and information and Internet technology plays an important role in increasing knowledge sharing. One example of this mutual process is the partnership between Procter & Gamble Co. and Wal-Mart Co. where the two companies used working team to gain quick and mutual data. Beyond that, Wal-Mart has developed a tool that allows it to share data with its partners from main sellers, as well as Procter & Gamble Company provided some its modern systems to other customers continuously.

Knowledge management frameworks include:
1. Gamble’s & Blackwell’s knowledge management framework:
   This framework with its procedures of knowledge management is based on four main phases, First Phase: it represents the process of sensation and it contains listening and comprehension, and it is based on the human element.
   Second Phase: It is the phase of organizing process and it is the divided into categories, and it adds personalization to knowledge, and therefore this phase includes overlap between the role of the human element and organizing factors. Third Phase: it is teamwork phase and it relies on mutual teamwork with respect to knowledge. Fourth Phase: It is the phase of application or implementation, which appears in the creation of new knowledge and a good understanding in the implementation. The following figure shows this model:

   ![Figure 2. Integration of knowledge management in marketing](image)

   Source: Shaw and Subramaniam, 2001, P.132.

Figure 2. Integration of knowledge management in marketing

2. Dean’s knowledge management framework:
   This model is based on four phases: the first phase is to create and produce knowledge, where the organization looks for new ideas and innovative solutions by using reclassifications, integration and the use of experimentation and application in addition to reliance on research and development. Second phase: it is the phase of knowledge credibility that is tested and it includes control, tests and re-identification that agree with facts. As it compels the organization to reconsider continuously until it could support knowledge management and serve administrative, marketing and financial aspects of the organization. Third phase: it includes knowledge where there is interaction between individuals and methods and technology contributing to display knowledge, as it requires interpretation for information and doing the application and the organization which serve patterns of work in the organization. Fourth phase: it is called knowledge dissemination phase, that is based on distributing knowledge to the members of the organization, and dissemination includes distributing knowledge in many locations to regulate and control in different ways and procedures to take advantage of it in addition to storing it in different media. Fifth phase: it is called knowledge implementation and application phase. At this phase the organization focuses on knowledge implementation and application and determining how to use it properly to achieve competitive excellence, and thus it entails identifying necessary resources to implement knowledge and the need to rely on innovation and creativity in the use and implementation of knowledge. The following figure shows a model of knowledge management and its various phases:

   ![Figure 3. Gamble’s & Blackwell’s knowledge management framework](image)

   Source: Gambil & Blackwell, 2003, PP.130:132

Figure 3. Gamble’s & Blackwell’s knowledge management framework:
It is clear that there should be an environment that encourages self-knowledge and constant learning with providing employees enough resources and time for innovation and it emphasizes the need for a balance between identifying the experiences of older workers and their worth and loyalty to them and the modern new workers and their production and what they have as new ideas within the organization. The organization must adopt encourage culture for change and motivate employees to curiosity and a lot of questions to enable them to do risk and encourage them to challenge and to learn from their mistakes. Chang and Cho (2008) found that sharing information and using external information to retain knowledge promote and support ideas.

And Alsirin (2000) believes that innovation is a process requires knowledge. Hilal (2010) adds that everyone can be creative if he/she acquires knowledge, skills and attitudes, and develops them himself/herself. It is possible to develop innovative thinking skills and abilities, so we can turn them from knowledge consumers into knowledge producers (Saraya, 2007).

Nayar & Uzuncarsall (2008) added that to take advantage of knowledge possessed by the organization as a practical mean to innovate products and services, and effective decision making and organization adaption with the market due to knowledge management lead the organization for innovation.

B: Previous studies related to interactive marketing:

Interactive marketing is one of the most advanced fields in marketing. It is considered one of the long-term strategies which include changing the business philosophy where customers become partners in the business through constructive dialogue and relations with every customer in the organization. Thus, interactive marketing gives small and medium companies with limited budgets the opportunity to compete with large companies through interactive marketing.

Interactive marketing is defined as “the immediately iterative process by which customer needs and desires are uncovered, met, modified, and satisfied by the providing firm.” (Bezjian, and Others, 1998) and similarly it has been defined by (Haeckel, 1998) Interactive Marketing as: "as an approach that uses customer data captured via 'person-to-person or person-to-technology' contacts to create individualized exchanges designed to effect a change in knowledge or behavior of at least one person. While Abu Qahif et al. (2006) defined interactive marketing as:” the use of Internet and digital technology to achieve marketing objectives of companies and strengthen the new marketing concept ".
Most of the interactive marketing accomplished through the world wide web is enabled by the internet. However, it would be incorrect to consider internet marketing as synonymous with interactive marketing (Deighton, 1996). Based on Sundukovskiy’s (2009) diagram, not all internet marketing is interactive and not all interactive marketing conducted on the World Wide Web or is internet based. For instance display marketing, one of the internet marketing sub-channels, is not interactive in nature.

![Diagram](http://journals.uob.edu.bh)

**Figure 6. The relationship between online marketing and interactive marketing**

Peltier, and Others (2003) identified the difference between traditional marketing communications and interactive marketing communication. they conceptualize four specific areas of change:

1. Role of databases: Importance of databases, Data collection, Type of data and Use of data
2. Communication issues: Media, Scope of communications personalized, Communication flow and Nature of message consistency
3. Relationship dynamics: Specification of relationship and Degree of interaction
4. Interactive Marketing Communication metrics: Return on investment, Acquisition vs. retention and Contact measures

But Abu Qahif et al. (2006) divided interactive marketing features into two points of view:

1. Interactive marketing features from customers’ point of view:
   a. Interactive marketing helps customers to shop for 24 hours.
   b. Reducing the prices of products through reducing fixed costs and administrative costs.
   c. Interactive marketing gives customers the opportunity to make comparisons to the prices of products before buying them.
   d. Interactive marketing helps in overcoming geographical barriers.
   e. Interactive marketing helps the people who do not have sufficient time for marketing, such as working women or business men to reach to what they want from products as fast and easiest way.

2. Interactive marketing features from firms’ point of view:
   a. Integration: it provides marketers the answers on issues related to responsibility, return on investment and the consistency of the message with the customer’s needs.
   b. Building an ownership right to the brand through the quality of services on the Internet.
   c. Person to person relationship: it helps in building relationships with customers in a personal way.
   d. Effectiveness: because it makes customers more attentive and concentrated.

From the previous review, there could be a relationship between marketing knowledge management and interactive marketing.

C: previous studies related to health services marketing.
Marketing researchers’ interests varied in the field of health care organizations. Where some of them addressed marketing in these organizations in terms of the importance of the need to apply marketing principles of and to use strategic marketing to draw and determine service performance image in these organizations in the future. While most of researches focused not only on the importance of customer satisfaction measurement (patients), but also on how to achieve and measure satisfaction of nurses and other groups. As other researchers focused on the importance of using marketing methods, whether traditional or modern, which correspond with the emergence of broad prospects through World Wide Web. Researchers also interested in the equal need to apply marketing in various health organizations, whether they are profitable, or not profitable.

Health marketing is considered one of the terms that took the attention of many researchers as a job of the administrative jobs, which seeks to achieve the hospital’s goals by providing excellent services than others’. Gronroos (2012) defines service as any activity or series of activities with intangible nature. And it is not necessary to occur by interaction between consumer and service providers, financial resources, goods or the regulations that are offered as solutions to problems faced by buyers. But Kotler (2012) defines it as a tool provided by a party to another party, and it is basically an intangible and its production may be related to providing a tangible physical product or maybe not.
Health marketing is defined by Tommy and Qashi (2007) as a contact creation and distribution of health information and use of interactions consumer-centered and its basis is strategic thinking to protect and promote the health of different populations, thus, it is a pattern of exchange and communication aims at increasing health services quality, reaching to patients satisfaction and contributing to improving public health. Yousef (2008) defined health marketing as a process of analyzing integrated and interrelated activities carried out by health organizations to provide the most appropriate services required, proper planning and oversight on its implementation and promotion in order to enhance administrative exchange of benefits (or values) with the target markets to enable them to attain its goals effectively and efficiently.

As Kotler (2012) defined health marketing as “analysis, planning, implementation and oversight of prepared programs accurately towards achieving optional exchange value with target markets in order to attain what health organizations seek, depending on meeting the needs of those target markets and their desires.

Al-Bakri (2005) mentioned that health marketing is characterized by different features as follows:

1. Hospitals are featured by providing public services to public to achieve benefits for them, so hospitals are always required by public to provide various services in line with achieving their satisfaction and needs. Hence, marketing will be demanded for greater interaction and communication with public widely with multiple patterns and situations.

2. Most of the amounts spent by public hospitals have mostly come from a third party (the state, insurance companies, donors, ...) Whether it’s mostly the amount or part of it. Hospitals provide services for gaining revenues.

3. Laws and government legislation affect largely on the choice of hospital for marketing strategies that could be adopted, but they sometimes dictate certain policies in dealing with specific types of health services more than to be free in providing them or not.

4. In most hospitals, the power of decision is divided between two parties, one of them is administration and the second is medical and nursing staff. This distribution would cause kind of conflict or problems in selecting applicable marketing strategies.

5. Economic criteria: it is difficult in many cases to apply purely economic criteria when providing health service, as the focus is mainly on human who has the most expensive value than everything. Hospitals are required to achieve added revenue and not in order to make abstract profits, but for the purposes of reinvestment in the field of health services with high quality and wide to include the largest possible number of beneficiaries.

In addition, the process of providing therapeutic service consists of a set of coordinated parts with each other and complement to each other, and any defect will affect the final result of the provided therapeutic service. Providing therapeutic service is not just a conceptual design shows the duties, specializations and method of work flow, but it is cooperation system between the resources and capabilities of individuals and methods available in hospitals.

Therefore, in the field of hospitals, most of the time we need large amounts of new ideas or think of working in a new way, but there are some obstacles that prevent innovation in hospitals. One of these reasons is the belief that innovation is not required in hospitals but it is required to improve the quality of provided but innovation is required in all fields, innovation is responsibility of every system, team, director and individual in all the places that provide high quality service. In this respect, there are a lot of scientific researches and theses about health care quality and the development of the provided service.

There are new features that attract beneficiaries and characterize the performance of doctors and unit of providing health service than others, such as: an integrated and developed service, a comfortable waiting place, medical record is computerized simply, following up cases by telephone to prevent deadlines conflict, providing some services at home (household follow-up visits) and quality in health care, this is done by promoting ideas and work methods, renovating and inventing new ways to provide the service and doing performance in a distinctive way. This means that service provider provides the proper care to patients on time, patients easily get care on time in accurate way to get full information about the risks to avoid unsafe actions and complete information about the care benefits they receive.

It should be kept in mind the participation of employees at all levels substantially as an essential goal. Thus, their full participation helps to take advantage of their ability to work in favor of providing the service in a new and evolving way and therefore, they should provide the necessary encouragement to create new ideas and to renovate work in a new different way, material and moral reward for outstanding performance of employees, and provide opportunities that will enable them to participate.
their opinions and the existence of opportunities to increase efficiency, knowledge and experience.

From the previous review, there could be imagined the existence of a relationship between marketing knowledge management and health services marketing. It is also possible to imagine from previous review a relationship between interactive marketing and health services marketing.

D: Previous studies related to customer value management.

Sheth and Mittal (2004) confirmed that connecting value process has two dimensions: efficiency and effectiveness. Effectiveness is the product's ability to satisfy customers' needs and desires, and efficiency is the less sacrifice borne by customers to get value, whether it is time, effort or cost. Park and Kim (2003) reached that customer commitment to his relationship with organization is achieved when customer expectations are satisfied and when a customer recognizes fair value with his relationship with the organization which is called "perceived value". And the organization's commitment to its relationship with customer is achieved when organization expectations are satisfied and when organization recognizes the fair value of the relationship with customer, and this value is called "customer value". To achieve success in managing the relationship with customer, information between organization and the customer must be managed properly.

Kotler and Keller (2006) define customer perceived value as follows: "Customer perceived value is the difference between the prospective customer’s evaluation of all the benefits and all the costs of an offering and the perceived alternatives." Total customer value is the perceived monetary value of the bundle of economic, functional, and psychological benefits customers expect from a given marketing offering. Total customer cost is the bundle of costs customers expect to incur in evaluating, obtaining, using, and disposing of the given market offering, including monetary, time, energy, and psychic costs (Kotler and Keller, 2006). It is noted that this definition focuses on the expected profits during the period of customer dealing with the organization. But it is defected by not taking the rest of the benefits that can be achieved by customer, such as recommending the organization to others.

Ammar (2008) indicated that customer value is the benefits that the organization receives from customers as a result of their increased number, retention, increased duration of their dealings and their increased spending and their recommendation for others. Hogan and Rust (2002) defined customer value management as a comprehensive administrative entrance focuses on organization’s efforts to increase the value of its relationship with customers during the period of dealing with because it is one of the main assets.

The concept of value has developed and passed with a set of phases from the interest in provided value to consumer to the interest in relationship value with the customer and I Payne and Holt (2001) explained the evolution of the concept of value as follows:

First phase: consumer value which is obtained by the consumer during consumption.

Second Phase: subsidized product concept: it is all tangible and intangible elements evaluated by consumer in the provided product.

Third Phase: customer satisfaction and quality of service which is the level of actual performance and customer satisfaction and it is customer’s feeling towards the level of provided service comparing the level of the actual performance with the expected level of performance.

Fourth Phase: value chain which includes all activities responsible for delivering value to the customer in the organization.

Fifth phase: creating and delivering the highest value to the customer.

Sixth phase: customer value for the organization which is the amount of funds received by the organization from the customer in turn providing the value.

Seventh phase: customer perceived value is customer’s provision for the benefits and costs of provided product.

Eighth Phase: shareholder value which is a shareholder's share from the profits of the organization.

Ninth phase: customer relationship value: the benefits derived by customer during his dealings with the organization.

MacDonald and Wilson (2002) show the various phases to provide value: First, identifying markets and understanding value. Second, determining proposed value (needs, desires, demands and expectations of the customer and the benefits and characteristics of the product). Third of production, communication and delivering proposed value for customers by using appropriate means. Fourth, following-up value provision. Ammar (2008) that perceived value determinants are: perceived quality which is the perceived performance for product. The perceived price is the monetary sacrifice in order to get the product. Perceived appropriateness: it is the speed and ease of access to the product and its use.
Cretu and Brodie (2007) studied the effect of both the company's reputation and the mental image of the brand on the perceived quality, perceived value and customer loyalty. They reached to the following results: that both the company's reputation and the mental image of the brand influenced each other in a positive way, and company's reputation affects product quality, perceived value and customer loyalty in a positive way, and mental image of the brand affects product quality, perceived value and customer loyalty in a positive way, and the price affects perceived value in a negative way.

Ammar (2008) explained that customer value could be measured through internal databases, surveys, organization reports and permanent samples. In this regard, both Khair Eddeen and Ammar (2009) clarified a customer value determinants model. These determinants are: investment in perceived value construction (perceived quality - perceived price - perceived appropriateness), and investment in commercial value construction (brand awareness - commitment to ethical and social responsibility - the mental image of the organization), Investment in relationships with the customer construction (loyalty programs – distinctive treatment - emotional relations programs). However, Hyun (2009) concluded that customer value determinants are represented in: Brand Equity: it is a customer’s self-evaluation to the brand before using the product which includes both brand awareness and the mental image of the organization. And Value Equity: it is objective customer’s evaluation to brand after using the product and it includes quality, price and appropriateness. Relationship value: it is subjective and objective customer’s evaluation to brand and it includes trust, satisfaction, commitment and conflict.

Brun et al, (2008) indicated that there are three dimensions for customer value management: first, analysis of customer value and it includes customer profitability analysis and expected economic analysis to determine the possibility of increasing the value of each customer and analyzing customer behavior to determine the probabilities of conversion or expansion in the relationship. Second, customer value strategy which includes dividing customers and developing goals and strategies of customer value. Third, of customer value implementation and it includes the marketing mix management, customer sector management and customer contact management. As Blattberg and Deighton (1996) indicated that customer value is determined by accounting the difference between the benefits and sacrifices of attracting customers and retaining them. Customer value can be managed through the investment in lucrative customers, transition from product management to customer management and determining the extent of sales contribution in achieving customer value, reducing the costs of customer attraction and retention, following up the profits and losses of customer value through marketing program, linking the product brand with customer value, the following up the ability to retain customers and developing plans to attract and retain customers.

Berger et al, (2002) reached to how to manage customer value through a series of steps: observing customers’ actions, developing customers database, retailing customers or current market, predicting

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**Figure 7. Cretu and Brodie, 2007 Framework**

Brodie et al, (2009) agreed with them that both the mental image of the brand and mental image of the organization affect the quality of the perceived service that affects the perceived value of the customer. While Hodovic’s, et al, (2011) study entitled as ‘The Relationship between Reputation or Fame of Service Provider and The Perceived Value of the Industrial Buyers”, reached to the existence of significant and positive effect for the fame of expertise provider on the perceived value of the industrial buyer, and vice versa. On the other hand, the fame of service provider increases the perceived benefits such as profitability, creation of barriers to competition, supporting competitive advantage and reducing the perceived costs such as time, effort and the cost of attracting customers and retaining them.

As well as creating and delivering value to the customer is part of the organization's mission and goals and it is the key to success in the long term. Providing a higher value than competitors helps to create a competitive advantage for the organization. Thus, to achieve continuous revenue and earnings for the organization, it is necessary to maintain on the level of customer perceived value. Rust et al, (2001) believe that perceived value can be increased by increasing the perceived benefit to the customer (quality - appropriateness) and reducing the perceived sacrifice for the customer (Price- time- effort- search costs).
customers value during their dealings with the organization, distributing organization's resources to achieve the highest value to customers and doing the necessary marketing activities. Additionally, Bell et al (2002) suggested steps to manage customer value: evaluation of an organization’s customers value, evaluation of customers retention and attraction and following up the results of behaviors and attitudes of customers. Yoo and Hanssen (2007) believe that customers’ cash flows could be increased by: retaining existing customers and developing relationships with existing customers to increase purchases of existing products, start buying new products and attract new customers.

Liang (2010) suggested that customer value could be maximized by following these steps:

- Collecting customer data such as geographical area, age, gender, education, occupation, income, the status of utilization, the rate of use, benefits of use and appropriateness of use, the rate of loyalty, purchase motives and perception phase.

- Analyzing customer value and dividing customers into high, medium and low-value or profitability sectors.

- Analyzing the characteristics of each market sector.

- Developing appropriate strategies for each market sector to acquire and retain lucrative customers to maximize customer value.

It is clear from the above that the researchers for a long time acknowledged customer value as a source of knowledge. Thus, effective knowledge management may significantly improve the organization’s competitive advantage through providing the organization with the appropriate design for new products and services, through the early and proven competitive intelligence and through constructing customer loyalty and commitment and forming mutual cooperation between the customer and the organization. Afiraqi (2008), quoting from Gibbert, et.al, (2002), defined customer knowledge management as a "strategic approach whereby companies can form a dividing framework to avoid their customers receiving inappropriate products and thus it contributes to turning them as partners in knowledge building". Customer knowledge management contributes to improving mutual success for organizations and customers, and it integrates customer knowledge management and CRM concepts but they are moving strongly to maximize mutual value performance between the customer and the organization. Moreover, the idea of customer knowledge management contributes to the literature of knowledge management by providing us with a wide point of view about the (organizational knowledge). In other words, the customer is included as a contributor to knowledge activities building.

- There is significant statistically relationship between marketing knowledge management and customer value management in health organizations.
- From the previous review, it could be imagined that there is a relationship between interactive marketing and customer value management in health organizations
- It is also possible to imagine from previous revision that there is a relationship between health services marketing and customer value management in health organizations.

6. THE PROPOSED MODEL

After reviewing a lot of previous studies related to the subject of the study, the researcher concluded the following form:

![Proposed Study Model](http://journals.uob.edu.bh)

Source: prepared by the researcher

**Figure 8. Proposed Study Model**

The proposed framework of this study is characterized by combining marketing knowledge management; interactive marketing, marketing services and customer value management with each other in one model, so that it shows the relationship between marketing knowledge management and interactive marketing appears on each of the marketing services and customer value management in health organizations.

7. RESEARCH HYPOTHESES

After identifying problem of the study and reviewing previous studies, the researcher worked on gathering information to solve this problem by placing study hypotheses that make up the possible solutions to that problem by placing a major hypothesis for the study, which is the existence of a positive relationship between marketing knowledge management and interactive marketing and the impact of each on services marketing and customer value management in health organizations. This main hypothesis can be divided into the following sub-hypotheses:
The first sub-hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and interactive marketing.

The second sub-hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and health services marketing.

The third sub-hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and customer value management in health organizations.

The fourth sub-hypothesis: There is a fundamental relationship of statistical significance between interactive marketing and health services marketing.

The fifth sub-hypothesis: There is a fundamental relationship of statistical significance between interactive marketing and customer value management in health organizations.

The sixth sub-hypothesis: There is a fundamental relationship of statistical significance between health services marketing and customer value management in health organizations.

8. Practical Framework and Hypotheses Testing

The theoretical part was covered through research and investigation in administrative literature represented in books and studies related to marketing knowledge management, interactive marketing, services marketing and customer value management. In the field part, a questionnaire was designed and it depends on the approved scientific standards in many studies. The questionnaire was divided into four sections: knowledge management, interactive marketing, services marketing and customer value management. This study was based on an approach derived from reality and it is inductive entrance which is based on an extrapolation of reality about a certain phenomenon. This approach was chosen based on the nature of the subject. Additionally, the researcher believes that it is an appropriate approach to test the study hypotheses by making sure the connections among the different variables and data which is allowed to be collected, and then accessing to valuable scientific results and indications.

1. The Population and Sample of the Study:

The research population consists of the staff and administrators of private hospitals in Riyadh, Saudi Arabia. The following is the list of private hospitals in Riyadh.

<table>
<thead>
<tr>
<th>#</th>
<th>Hospital Name</th>
<th>Hospital Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Al Hammadi Hospital</td>
<td>Dar Al Shifa Hospital</td>
</tr>
<tr>
<td>2</td>
<td>Green Crescent Hospital</td>
<td>Al Mishari Hospital – Riyadh</td>
</tr>
<tr>
<td>3</td>
<td>Kingdom Hospital</td>
<td>Saudi British Hospital</td>
</tr>
<tr>
<td>4</td>
<td>Specialized Medical Center Hospital</td>
<td>Rabiah Hospital</td>
</tr>
<tr>
<td>5</td>
<td>Al Azhar Hospital</td>
<td>Arryan Hospital - Riyadh (Sulaiman Al Habib Med. Group)</td>
</tr>
<tr>
<td>6</td>
<td>Al Jafel International Hospital</td>
<td>Al Jazeera Hospital – Riyadh</td>
</tr>
<tr>
<td>7</td>
<td>Al Falah International Hospital</td>
<td>Dr. S. Al Habib Hos. Takhasosi</td>
</tr>
<tr>
<td>8</td>
<td>Najd Consulting Hospital - Riyadh</td>
<td>Magrabi Hospital – Riyadh</td>
</tr>
<tr>
<td>9</td>
<td>Saudi German Hospital</td>
<td>Alazharhospital</td>
</tr>
<tr>
<td>10</td>
<td>Riyadh Care Hospital</td>
<td>Alorashospital</td>
</tr>
<tr>
<td>11</td>
<td>Riyadh National Hospital</td>
<td>Mouwasat hospital</td>
</tr>
<tr>
<td>12</td>
<td>Obeid Specialist Hospital</td>
<td>al Ghouri eye hospital</td>
</tr>
<tr>
<td>13</td>
<td>Dallah Hospital</td>
<td>al-nobarak-hospital-riyadh</td>
</tr>
</tbody>
</table>

By using random sample procedures, the sample size is distributed on the study population which consists of all the administrators and staff of private hospitals in Riyadh, Saudi Arabia, during Shawwal and Dhu al-Qa‘adah, 1437 H. Since the percentage of items which have the desired characteristics for study equal 50% (ie, = 0.5) and with a confidence level of 95% (where Z standard corresponding = 1.96), and by determining acceptable error rate ± 5, the research sample was selected which consisted of (120) administrators and (180) employees, and after overthrowing (11) questionnaires from responses of administrators and (26) questionnaires from responses of staff, thus, the final sample consisted of 109 administrators and 154 employees.

2. Tool Validity:

The study validity tool (questionnaire) and its items that are distributed on the study have been verified through showing its initial draft on the arbitrators in order to judge the appropriate item degree in terms of suitability for the domain that fall under it and in terms of accuracy and integrity of the language. After recoursing by the opinions of arbitrators, some of the items have been deleted, modified and reformulated. A consensus of (80%) of the arbitrators is enough to edit, delete or add a new item.

3. Reliability of study tool:

To verify the reliability of study tool (questionnaire), Cronbach’s Alfa Reliability Coefficient was used to measure the reliability of the answers contained in the questionnaire where Cronbach’s Alfa Coefficient reached (0.843) for questions related to
marketing knowledge management, (0.815) for questions related to interactive marketing, (0.881) for questions related to services marketing and (0.911) for questions related to customer value management. These numbers are considered appropriate values for the purposes of the study where they exeed the reference coefficient in statistical tables than (0.70), which indicates a high degree of reliability of the answers contained in questionnaire, as shown in the following table:

Table 3. Cronbach's alpha Coefficient for the Questionnaire Items

<table>
<thead>
<tr>
<th>Topic</th>
<th>Items Number</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Knowledge Management</td>
<td>27</td>
<td>.843</td>
</tr>
<tr>
<td>Interactive Marketing</td>
<td>11</td>
<td>.815</td>
</tr>
<tr>
<td>Services Marketing</td>
<td>12</td>
<td>.881</td>
</tr>
<tr>
<td>Customer Value Management</td>
<td>11</td>
<td>.911</td>
</tr>
</tbody>
</table>

4. Descriptive analysis

The demographic characteristics of the study sample according to their different characteristics are as follows:

Table 4. The study sample distribution by sex

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>70.3%</td>
</tr>
<tr>
<td>Female</td>
<td>29.7%</td>
</tr>
</tbody>
</table>

Table 5. The study sample distribution by education

<table>
<thead>
<tr>
<th>Education Degree</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>12.4%</td>
</tr>
<tr>
<td>Diploma</td>
<td>28.7%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>49.1%</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Table 6. The study sample distribution by age

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25 year</td>
<td>35.7%</td>
</tr>
<tr>
<td>From 25 to less than 35 year</td>
<td>45.9%</td>
</tr>
<tr>
<td>From 35 to less than 45 year</td>
<td>13.8%</td>
</tr>
<tr>
<td>45 year and over</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Table 7. The study sample distribution by years of experience

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than one year to 5 years</td>
<td>55.6%</td>
</tr>
<tr>
<td>From 6 years to less than 10 years</td>
<td>21.2%</td>
</tr>
<tr>
<td>From 10 years to less than 15 years</td>
<td>13.1%</td>
</tr>
<tr>
<td>15 years and over</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

Table 8. The study sample distribution by personal income

<table>
<thead>
<tr>
<th>Personal Income</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5,000 SAR per month</td>
<td>13.1%</td>
</tr>
<tr>
<td>From 5000 to less than 10,000 SAR per month</td>
<td>59.3%</td>
</tr>
<tr>
<td>From 10,000 to less than 20,000 SAR per month</td>
<td>17.6%</td>
</tr>
<tr>
<td>20,000 SAR a month or more</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

Arithmetic means and variances of the estimates of the study sample individuals were extracted for the topic and dimensions of the questionnaire as well as calculating the relative weight of each in order to arrange the items of the questionnaire in the following table:

Table 9. Responses of the Study Sample to the Questionnaire Items

<table>
<thead>
<tr>
<th>Phrases</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Arithmetic means</th>
<th>Relative weight</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The hospital makes market research</td>
<td>8.8%</td>
<td>14.1%</td>
<td>19.7%</td>
<td>37.0%</td>
<td>20.0%</td>
<td>3.4</td>
<td>0.8</td>
<td>23</td>
</tr>
<tr>
<td>2. The hospital is working on development and research</td>
<td>11.9%</td>
<td>21.3%</td>
<td>17.5%</td>
<td>33.4%</td>
<td>15.9%</td>
<td>3.2</td>
<td>1.3</td>
<td>42</td>
</tr>
<tr>
<td>3. The hospital practices market orientation.</td>
<td>16.6%</td>
<td>18.1%</td>
<td>19.4%</td>
<td>25.3%</td>
<td>20.6%</td>
<td>3.1</td>
<td>5.3</td>
<td>44</td>
</tr>
<tr>
<td>4. The hospital leadership monitors changes that are occurring in the market</td>
<td>14.1%</td>
<td>24.4%</td>
<td>19.7%</td>
<td>29.4%</td>
<td>12.5%</td>
<td>3.0</td>
<td>6.4</td>
<td>48</td>
</tr>
<tr>
<td>5. The hospital makes use good experiences</td>
<td>7.2%</td>
<td>13.8%</td>
<td>24.7%</td>
<td>37.8%</td>
<td>16.6%</td>
<td>3.4</td>
<td>7.3</td>
<td>25</td>
</tr>
<tr>
<td>6. We have a database of all areas in the hospital rules</td>
<td>14.7%</td>
<td>16.3%</td>
<td>20.6%</td>
<td>26.9%</td>
<td>21.6%</td>
<td>3.2</td>
<td>4.0</td>
<td>40</td>
</tr>
<tr>
<td>7. Any individual can easily access the archive</td>
<td>11.9%</td>
<td>18.8%</td>
<td>19.4%</td>
<td>28.4%</td>
<td>21.3%</td>
<td>3.2</td>
<td>9.3</td>
<td>35</td>
</tr>
<tr>
<td>8. The dissemination of information is easy inside the hospital</td>
<td>10.9%</td>
<td>14.4%</td>
<td>24.7%</td>
<td>30.3%</td>
<td>19.1%</td>
<td>3.3</td>
<td>7.1</td>
<td>31</td>
</tr>
<tr>
<td>9. There is a dissemination of knowledge at work</td>
<td>10.6%</td>
<td>18.1%</td>
<td>21.3%</td>
<td>31.3%</td>
<td>18.4%</td>
<td>3.2</td>
<td>6.9</td>
<td>36</td>
</tr>
<tr>
<td>10. The hospital supports culture of debate</td>
<td>14.1%</td>
<td>16.3%</td>
<td>18.8%</td>
<td>31.3%</td>
<td>19.4%</td>
<td>3.2</td>
<td>6.5</td>
<td>38</td>
</tr>
<tr>
<td>11. The hospital regulates meetings among its members after work</td>
<td>17.2%</td>
<td>17.2%</td>
<td>19.1%</td>
<td>27.8%</td>
<td>18.8%</td>
<td>3.1</td>
<td>4.5</td>
<td>45</td>
</tr>
<tr>
<td>12. We communicate in the hospital through an electronic network of</td>
<td>8.4%</td>
<td>13.1%</td>
<td>21.3%</td>
<td>36.9%</td>
<td>20.5%</td>
<td>3.4</td>
<td>8.2</td>
<td>21</td>
</tr>
<tr>
<td>13. Hospital takes procedures to respond to competitors' technology</td>
<td>8.4%</td>
<td>16.9%</td>
<td>27.8%</td>
<td>31.9%</td>
<td>15.0%</td>
<td>3.2</td>
<td>8.0</td>
<td>37</td>
</tr>
</tbody>
</table>
14. the hospital applies the best technology compared to other hospitals.

15. we support the marketing knowledge processes.

16. we share knowledge in marketing operations.

17. it is easy to use marketing operations. Marketing

18. It is necessary to adopt marketing knowledge processes.

19. it is easy to develop marketing knowledge processes.

20. Marketing knowledge the operations gives a better chance for practical implementation.

21. marketing knowledge processes offers the best service for a large number of patients.

22. marketing knowledge operations gives an opportunity to communicate and transfer expertise in the hospital.

23. I intend to participate in marketing knowledge processes.

24. I intend to use marketing knowledge operations.

25. I accomplish through my marketing knowledge operations.

26. I intend to interact with colleagues through marketing knowledge operations.

27. we support our electronic site information with latest communication technology.

28. We continuously update the contents of our website.

29. The design of our website is highly professional to facilitate browsing of Health Service asyllum.

30. we publish all our instructions to maintain the privacy of Health Service asyllum.

31. we care about attraction factors in the design of our sites.

32. The website provides all the procedures that ensure the privacy of its clients.

33. we care about providing adequate price offers for most slides.

34. our website provides a way for full payment electronically.

35. we care about updating the methods of promotional services for our website.

36. we provide across our website all immediate online reply.

37. We use the latest information technology to pressure time through loading on the site.

38. rising health service price as a result of rising costs.

39. Using a competitive price to increase or reduce some services.

40. Beneficiaries perceive the price versus quality.

41. public relations are integrated with other marketing activities.

42. The use of advertising in appropriate ways to advertise services.

43. Services are provided in their geographic places hospital / clinic / home (.....)

44. we perform services on time and consistent with the needs of patients.

45. Quality is the quality of health care.

46. quality lies in the availability of modern equipment.

47. There is an easiness in the flow of the service at regular and planned times.

48. the patient satisfaction lies in the acceptance of the provided services.

49. The patient is a key element in the marketing service.

50. we pay attention to the problems of patients on an ongoing basis.

51. we offer for patients quick solutions to the problems in the provided service.

http://journals.uob.edu.bh
The above table shows through the results, arithmetic mean calculating and the relative weight that the overall average for the questionnaire is (3.17). Some of the items that got the first three ranks among the items of the questionnaire which can be mentioned according to the rank in accordance with the degree of the relative weight as follows:

- Item: “quality is the quality of health care”, comes in the first place after arranging questionnaire items according to the relative weight as an average (3.99).

- Item: “we are interested in attraction factors designing our sites” comes in rank No. 59 of questionnaire items, consisting of 60 items, after arranging questionnaire items according to the relative weight as an average (1.87).

- Item : “we are interested in providing price offers adequate for most slides that may deal with” comes in rank No. 60 and which is the last item of the questionnaire after arranging the questionnaire items according to the relative weight as an average (1.86).

5. Test the study hypotheses:

The first hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and interactive marketing. To test the first hypothesis as well as to achieve the first objective, the relationship and its strength between Interactive Marketing (dependent variable) and marketing knowledge management (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with the coefficient of determination R², as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in table No. (10).

<table>
<thead>
<tr>
<th>Regression technique to study the relationship and its strength between marketing knowledge management and interactive marketing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residuum</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Correlation coefficient = 0.733
Coefficient of determination = 0.538
Edited coefficient of determination = 0.531
Regression coefficient = 0.472
Fixed amount = 2.920
Value of (T) = 3.053

Source: statistical analysis outputs SPSS Ver 21

It is clear from the above table as follows:

1. Model quality because of analysis of variance significance (level of significance 0.003)

2. Coefficient of determination R² value equals 0.538, i.e marketing knowledge management explains approximately 0.54 of a change in the dependent variable (interactive marketing).

3. Positive correlation (correlation coefficient 0.733) the researcher concludes from result of the previous statistical analysis that marketing knowledge management has an impact on interactive marketing. It is obvious from the above acceptance of the first
hypothesis which states that there is substantial statistically significant relationship between marketing knowledge management and interactive marketing with declining to impose a nothingness which indicates the validity of the first hypothesis. Thus, the relationship model is Interactive Marketing $= 2.920 + 0.472$ (marketing knowledge management).

By interpreting the previous model, it is clear that measuring marketing knowledge management can predict interactive marketing, i.e., every increase of one unit of marketing knowledge management increases interactive marketing value by 0.472.

The second hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and health services marketing. To test the second hypothesis as well as to achieve the second objective, the relationship and its strength between health services marketing (dependent variable) and marketing knowledge management (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with the coefficient of determination $R^2$, as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in table No. (11).

Table 11. Regression technique to study the relationship and its strength between marketing knowledge management and health services marketing

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>&quot;F&quot;</th>
<th>Intangibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2,408</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residuum</td>
<td>265.185</td>
<td>3.728</td>
<td>0.016</td>
</tr>
<tr>
<td>Total</td>
<td>267.593</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation coefficient $R = 0.094$
Coefficient of determination $R^2 = 0.009$
Value of $(T) = 1.472$

Source: statistical analysis outputs SPSS Ver 21

It is clear from the previous table as follows:

1. Model quality because of analysis of variance significance (level of significance 0.017)
2. Coefficient of determination $R^2$ value equals 0.361, i.e., marketing knowledge management explains approximately 0.36 of a change in the dependent variable (health services marketing).
3. Positive correlation (correlation coefficient 0.601) the researcher concludes from result of the previous statistical analysis that marketing knowledge management has an impact on health services marketing.

It is obvious from the above acceptance of the second hypothesis which states that there is substantial statistically significant relationship between marketing knowledge management and health services marketing with declining to impose a nothingness which indicates the validity of the second hypothesis. Thus, the relationship model is Health Services Marketing $= 6.681 + 0.296$ (marketing knowledge management).

By interpreting the previous model, it is clear that measuring marketing knowledge management can predict health services marketing, i.e., every increase of one unit of marketing knowledge management increases health services marketing value by 0.296.

The third hypothesis: There is a fundamental relationship of statistical significance between marketing knowledge management and customer value management in health organizations.

To test the third hypothesis as well as to achieve the third objective, the relationship and its strength between customer value management in health organizations (dependent variable) and marketing knowledge management (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with the coefficient of determination $R^2$, as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in table No. (12).

Table 12. Regression technique to study the relationship and its strength between marketing knowledge management and customer value management in health organizations

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>&quot;F&quot;</th>
<th>Intangibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>96.601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residuum</td>
<td>170.992</td>
<td>54.364</td>
<td>0.017</td>
</tr>
<tr>
<td>Total</td>
<td>267.593</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation coefficient $R = 0.601$
Coefficient of determination $R^2 = 0.353$
Edited coefficient of determination $= 0.353$
Regression coefficient $= 0.296$
Fixed amount $= 6.681$
Value of $(T) = 6.681$

Source: statistical analysis outputs SPSS Ver 21

It is clear from the previous table that there is no model quality because significance is more than 0.05. The researcher concludes from result of the previous statistical analysis that marketing knowledge management does not have an impact on customer value management in health organizations. It is obvious from the above refusal of the third hypothesis which states that there is substantial statistically significant relationship between marketing knowledge management and customer value management in health organizations with accepting to impose a nothingness which means...
that there is no substantial statistically significant relationship between marketing knowledge management and customer value management in health organizations.

The fourth hypothesis: There is a fundamental relationship of statistical significance between interactive marketing and health services marketing.

To test the fourth hypothesis as well as to achieve the fourth objective, the relationship and its strength between health services marketing (dependent variable) and interactive marketing (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with The coefficient of determination R2, as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in table No. (13).

Table 13. Regression technique to study the relationship and its strength between interactive marketing and health services marketing.

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>&quot;F&quot;</th>
<th>Intangible eness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>123.588</td>
<td>73.528</td>
<td>0.011</td>
</tr>
<tr>
<td>Residuum</td>
<td>191.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>315.276</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation coefficient R = 0.626</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient of determination R2 = 0.392</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression coefficient = 0.417</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed amount = 4.519</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of (T) = 3.233</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: statistical analysis outputs SPSS Ver 21

It is clear from the above table as follows:
1. Model quality because of analysis of variance significance (level of significance 0.011)
2. Coefficient of determination R2 value equals 0.392, i.e interactive marketing explains approximately 0.39 of a change in the dependent variable (health services marketing).
3. Positive correlation (correlation coefficient 0.626)
   the researcher concludes from result of the previous statistical analysis that interactive marketing has an impact on health services marketing. It is obvious from the above acceptance of the fourth hypothesis which states that there is substantial statistically significant relationship between interactive marketing and health services marketing with declining to impose a nothingness which indicates the validity of the fourth hypothesis. Thus, the relationship model is

Health Services Marketing = 4.519+ 0.417 (interactive marketing)

By interpreting the previous model, it is clear that measuring interactive marketing can predict health services marketing, i.e. every increase of one unit of interactive marketing increases health services marketing value by 0.417.

The fifth hypothesis: There is a fundamental relationship of statistical significance between interactive marketing and customer value management in health organizations.

To test the fifth hypothesis as well as to achieve the fifth objective, the relationship and its strength between customer value management in health organizations (dependent variable) and interactive marketing (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with The coefficient of determination R2, as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in table No. (14).

Table 14. Regression technique to study the relationship and its strength between interactive marketing and customer value management in health organizations marketing.

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>&quot;F&quot;</th>
<th>Intangible eness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>150.387</td>
<td>73.639</td>
<td>0.003</td>
</tr>
<tr>
<td>Residuum</td>
<td>164.889</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>315.276</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation coefficient R = 0.691</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient of determination R2 = 0.477</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression coefficient = 0.452</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed amount = 4.121</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of (T) = 3.857</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: statistical analysis outputs SPSS Ver 21

It is clear from the above table as follows:
1. Model quality because of analysis of variance significance (level of significance 0.003)
2. Coefficient of determination R2 value equals 0.477, i.e interactive marketing explains approximately 0.48 of a change in the dependent variable (customer value management in health organizations).
3. Positive correlation (correlation coefficient 0.691)
   the researcher concludes from result of the previous statistical analysis that interactive marketing has an impact on customer value management in health organizations. It is obvious from the above acceptance of the fifth hypothesis which states that there is substantial statistically significant relationship between interactive marketing and customer value management in health organizations with declining to impose a nothingness which indicates the validity of the fifth hypothesis. Thus, the relationship model is

Customer value management in health organizations = 4.121+ 0.452 (interactive marketing)
By interpreting the previous model, it is clear that measuring interactive marketing can predict customer value management in health organizations, i.e., every increase of one unit of interactive marketing increases customer value management in health organizations by 0.452.

The sixth hypothesis: There is a fundamental relationship of statistical significance between health services marketing and customer value management in health organizations.

To test the sixth hypothesis as well as to achieve the sixth objective, the relationship and its strength between customer value management in health organizations (dependent variable) and health services marketing (independent variable) must be examined by using simple regression analysis to determine the extent of the independent variable ability to interpret the dependent variable with the coefficient of determination R2, as well as to identify the nature of the relationship and its strength by using the correlation coefficient, which is shown in Table No. (15).

Table 15. Regression technique to study the relationship and its strength between health services marketing and customer value management in health organizations

<table>
<thead>
<tr>
<th>Analysis of Variance</th>
<th>Sum of Squares</th>
<th>“F”</th>
<th>Intangibleness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>203.023</td>
<td>105.782</td>
<td>0.000</td>
</tr>
<tr>
<td>Residuum</td>
<td>85.362</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>288.385</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Correlation coefficient R = 0.839
Coefficient of determination R2 = 0.704
Edited coefficient of determination = 0.692
Regression coefficient = 0.829
Fixed amount = 0.931
Value of (F) = 7.372

Source: Statistical analysis outputs SPSS Ver 21

It is clear from the previous table as follows:

1. Model quality because of analysis of variance significance (level of significance 0.000)
2. Coefficient of determination R2 value equals 0.704, i.e., health services marketing explains more than 0.70 of a change in the dependent variable (customer value management in health organizations).
3. Positive correlation (correlation coefficient 0.839) the researcher concludes from result of the previous statistical analysis that health services marketing has an impact on customer value management in health organizations. It is obvious from the above acceptance of the sixth hypothesis which states that there is substantial statistically significant relationship between health services marketing and customer value management in health organizations with declining to impose a nothingness which indicates the validity of the sixth hypothesis. Thus, the relationship model is:

Customer value management in health organizations = 0.829 + 0.931 (health services marketing)

By interpreting the previous model, it is clear that measuring health services marketing can predict customer value management in health organizations, i.e., every increase of one unit of interactive marketing increases customer value management in health organizations by 0.931.

Recommendations

The researcher found a set of results based on statistical analysis of the questionnaire. Thus, the researcher reviews some of the recommendations for these results:

A. There is a fundamental relationship of statistical significance between marketing knowledge management and interactive marketing, leading hospitals to pay more attention to the collection, dissemination and preservation of patients’ knowledge and their preferences, competitors, services and future trends because of their impact on interactive marketing. Furthermore, the researcher urges to take advantage of the knowledge possessed by the organization as a process and a way to innovate services, take effective decisions and hospital adaption with the surrounding environment.

B. There is a fundamental relationship of statistical significance between marketing knowledge management and health services marketing, i.e., the increase of marketing knowledge management leads to increased health services marketing. This correlation between knowledge and marketing refers to that marketing is based on renewable knowledge and new ideas innovation, so, not surprisingly, all processes that lead to gain the best applications to compete for long-term period must be paid attention, as well as knowing all competitors and patients’ needs and try to achieve the best.

C. There is no fundamental relationship of statistical significance between marketing knowledge management and customer value management in health organizations, i.e., marketing knowledge management does not have an impact on and customer value management in health organizations. This refers to the differences between marketing knowledge management and customer value management in terms of factors, changes and purpose.

D. There is a fundamental relationship of statistical significance between interactive marketing and health services marketing, i.e, interactive marketing has an impact on health services marketing. This leads to pay more attention on communication process with patients directly to know their needs and achieve them leading
to market health services easily. The impact of interactive marketing on service quality marketing refers to the reason that most of the tools used in interactive marketing are part of health services marketing tools.

E- There is a fundamental relationship of statistical significance between interactive marketing and customer value management in health organizations, i.e. the increase of interactive marketing increases customer value management in health organizations, so hospitals must pay attention to all communication processes with patients directly because of their effect on the benefits received by the hospital from patients as a result of increasing number of patients, retaining them, increasing the duration of their dealings, increasing their spending and recommending other patients. Furthermore, participation of hospital staff should be kept in mind, because their participation helps to take advantage of their ability to work and providing the service in a new and evolving way because of their direct communication with patients.

F- There is a fundamental relationship of statistical significance between health services marketing and customer value management in health organizations, i.e. health services marketing has an impact on customer value management in health organizations, so it is necessary to increase the quality of health services and gain patient satisfaction, and thus it contributes to the improvement of health on the national and world level. Creating and delivering value to patients is part of the message and goals of the hospital, where providing higher value than competitors helps to create a competitive advantage for the hospital and to achieve revenue and earnings in the long term. After reviewing the previous results, the study model became as follows:

![Figure 9: The Study Model after Results Analyzing](image)

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