A STUDY OF THE EFFECT OF VARIOUS COMPONENT OF DELAY ON
THE EVALUATION OF SERVICES OFFERED AT THE BANGKOK
BUMRUNGRAD HOSPITAL

By

AMAN DEEP BHOYAL

A Thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Business Administration

Graduate School of Business
Assumption University
Bangkok Thailand

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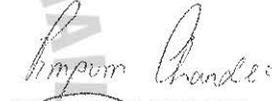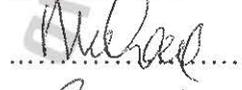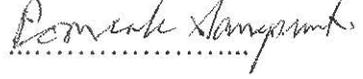
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Abstract

A service delay is a condition where service is not delivered in a prompt and timely manner, causing the customer to wait for the desired service. It is referred to as an obstacle to service. This research study is based on the statement of problem "To study the effects of the various components of delay, on the evaluation of service offered at Bumrungrad Hospital". The three objectives of this research are as follows: To study patients perception about various dimensions of delay at Bumrungrad Hospital, to study patients evaluation of services at Bumrungrad Hospital and to study the relationship between service delay and evaluation of services.

For this research, the data was acquired by self-administered questionnaires with 200 respondents who were patients at Bumrungrad Hospital and encountered a delay while waiting for service, during the month of August 2003. The research instrument used was a semi-structured questionnaire, which had a list of questions that prespecified the set of response alternatives and format. Convenience and judgmental sampling techniques were used. All data were analyzed and summarized by using Statistical Package for Social Science (SPSS). The research used Pearson's correlation coefficient (r), which was originally proposed by Karl Pearson for testing. The data was collected during the period of August 2003, at Bangkok Bumrungrad Hospital.

The results showed that the various dimensions of delay are related to the evaluation of service at Bumrungrad Hospital. The various dimensions of delay are delay in service, stability of the delay cause, service provider control over delay, uncertainty, filled time and indication about progress. All these dimensions have an impact on service evaluation.

Delay in service affects service evaluation positively when a delay is expected, prior to receiving the service. Also when customers perceive the cause of the delay to be stable it increases anger and leads to a negative service evaluation. Similarly, the more the service provider is perceived to have control over the product failure or the delay cause, the angrier the customer will be and it is less likely that the customer will repurchase. This also leads to a negative service evaluation. If the waiting customer is

somewhat certain about the amount of time that he will have to wait for, it will affect service evaluations positively. By filling the waiting customer time, less attention will be paid to the passage of time itself, which leads the customer to evaluate the service positively. Lastly, when indication is provided about progress on the delay, or if feedback is given to the waiting customer regarding his position in the queue, it reduces uncertainty, thus leading to a positive evaluation of service.

Therefore, the recommendations regarding this study were that service providers at the hospital should understand the impact that delay has upon the waiting patients and take measures to minimize them. Steps could be taken to inform the waiting patients approximately about the average amount of time it takes at different points of receiving service in the hospital. Also, hospitals should try to identify the causes of stable delays and why they occur, and the management should come up with measures to eliminate them. In addition, the hospital could to introduce some "fillers" in order to keep the patients distracted.

The results from this study suggested that delays have adverse effects on consumer perceptions of the service and by understanding how consumers react to a delay, service providers can alleviate its negative effects better. However the empirical setting used here, involved only an "active" delay- type of wait. Although it is expected that many types of relationships hypothesized in this study would generate to other types of wait, it is possible that they will not. Further, model development is also needed. Important variables in the wait experience such as waiting costs, one's time orientation and perceived inequalities in the wait should be investigated.

Acknowledgement

The successful completion of this research is not possible by the researcher alone but instead it is completed with the assistance from many contributors. Hence, I would like to take this opportunity to express my gratitude to all those people who showed kindness and in one way or the other assisted me in the completion of this thesis.

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INTRODUCTION

1.1) Introduction of the Chapter

Waiting is an unavoidable part of everyone's life, and it can take a great amount of a person's time. For instance, a typical day might include waiting at several stoplights, waiting for someone to answer the phone, waiting for your meal to be served, and waiting for something to be downloaded from the Internet. Moreover, whether in grocery stores, restaurants, banks, airports, post offices, hairdressers, or in front of the computer, and so forth, waiting time becomes an inseparable constituent of the acquisition of a product or service (Tom and Lucey, 1997; Kostecki, 1996). Yet, paradoxically, everybody hates waiting in line.

The act of waiting has an excessively high impact on customers (Maister, 1985). The amount of time customers must spend waiting can significantly influence their satisfaction (Davis and Vollman, 1990). Furthermore, research has demonstrated that customer satisfaction is affected not only by waiting time but also by customer expectations or attribution of the causes for the waiting (Bitner, Booms, and Tetreault, 1990; Taylor, 1994). Consequently, one of the issues in queue management is not only the actual amount of time the customer was required to wait, but also the perception of that wait (Davis and Heineke, 1994). There are two approaches to increasing customer satisfaction with regard to waiting time: through decreasing waiting time, as well as through enhancing customer's waiting experience (Katz, Larson and Larson, 1991; Davis and Heineke, 1994).

Receiving a high level of service is important to consumers in order for them to have a good perception about the services offered. Service would depend upon the quality of service delivered. However while talking about service quality, it is important to keep in mind three underlying principles:

1. Service quality is more difficult to evaluate for the customer, than the quality of a good, as services cannot be seen prior to purchase.

2. Service quality is based on customer's perception of the outcome of the service and the evaluation of the process by which the service was performed.

3. Service quality perception results from a comparison of what the customer expected prior to the service and the perceived level of service received.

Source: Christopher H. Lovelock, Services Marketing (Fourth Edition), 2001.

In the service industry there are essentially two types of products to be considered: the product service and the product supply. The **product service** can be defined as how service has been provided; the **product supply** is what has been provided. The Product service is provided, usually through a service delivery process. The quality of service delivery depends upon three factors **Accuracy, Promptness and Courtesy**.

Accuracy is the ability to perform the product service dependably, knowledgeably and reliably, and as expected by the customer (Ramalhoto and Syski, 1996). Courtesy is the caring individualized attention provided to the customer, the effort to understand the customer's needs, the ability to convey trust and confidence (Syski, 1996). Promptness is the on time delivery of the desired service. Consumers expect service to be accurate, prompt and courteous. For example while visiting a hospital, the staff should be polite, courteous and should be able to provide the customer with accurate and correct information. Service delivery should be prompt (i.e; on time delivery of

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service) and meet the expectations of the customer. If a delay is experienced in receiving the service desired, it affects the perception of the customer, which leads to negative or lower evaluations of service. Therefore, the evaluation of the service encounter, in which a customer interacts directly with the service provider, also depends on how the service has been delivered to the customer.

The product service is delivered at the moment it is produced. In high competitive service industries, customers will switch brands as a result of just one bad service encounter. To alleviate this time constraints it is important to have a communication mechanism in operation whereby customers know that system managers have heard them and that their relevant opinions really matter. On assessing the effectiveness of product service, quantitative and qualitative aspects of human behavior towards waiting have to be addressed. If customers are pleasantly occupied while waiting: entertainment, social relevant information, job opportunities advertising, education, extra information regarding the wait (announcing delay estimates, guarantee a maximum possible delay of x% off, etc), then the customer's perception of the length of the waiting time and its 'reasonable' time limits may differ substantially.

Waiting can affect expectations of service. If a customer expected to wait for ten minutes but ended up waiting twenty or thirty minutes, he/she will be less tolerant of any service deviations below the desired level. However, if the customer feels that waiting was not the fault of the service firm, then he or she will be more tolerant. Another way waiting for service affects customer expectations is through its impact on mood. If customers feel waiting is unnecessary and could have been prevented or reduced by service firms, they will tend to be in a bad mood. Customer's in a bad

mood are more critical of the service and have a higher adequate service threshold, which reduces the customer zone of tolerance.

Bumrungrad Hospital- Bangkok, Thailand.

The research was conducted at **Bumrungrad Hospital – Bangkok, Thailand.**

Background:

Bumrungrad Hospital (BH) is a public company traded on the Stock Exchange of Thailand. It is principally owned by the Bangkok Bank (Thailand's largest) owned by the Sophonpanich family, one of Thailand's most respected business families. BH opened 200 bed facilities on September 17th 1980, had a new Facility commissioned on January 1st, 1997 and was declared as Asia's first Internationally Accredited Hospital on April 25th, 2002. BH is the largest Private hospital in South East Asia, which has 12 stories plus basement parking facilities, US Hospital (NFPA) Building/ Fire Standards, a fully licensed Medical Heliport etc.

Hospital Facts and Facilities:

[1]BH has about 850,000 patients per year, out of which over 270,000 are International patients from 154 different countries. There are about 2,000 employees in BH; an American led International Management Team and over 600 physicians and dentists on staff, most with international training. In addition there are 554 inpatient beds, 26 adult intensive care, 14 cardiac care Units, 500-medical/ surgical/ OB/ Pediatrics and 57 deluxe rooms, 21 VIP suites and 2 royal suites.

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[1] *information regarding hospital facts and facilities was collected from the hospital staff, and also via the internet*

The outpatient facilities include 24- hr emergency care including emergency cardiac catheterization, ambulance and Mobile Critical Care fleet, 125 clinic examination suites, Outpatient surgery center and Hospital 2000 Information's system.

Bumrungrad Hospital (BH) was chosen as the subject of study for this research because it is the largest International Clinic in Asia, and a large number of people from all over the world come to get themselves treated in this hospital. Catering to the needs of so many patients in a day, it was worthwhile to note the delays that took place in the hospital while providing service to the patients. Also, the researcher was given permission from the hospital authorities to conduct the research in Bumrungrad Hospital.

There are many types of delays that occur in the hospital industry. To begin with, there could be a delay with regard to parking space, which is quite common to all industries and not specific to this kind of an industry and as such does not form the basis of this study.

The more specific delays dealt with registration upon arrival at the hospital, waiting to see the doctor, waiting for any tests that need to be done, waiting for the results of the tests and finally waiting to receive medication and paying for services. Generally waiting for the results of any test performed (urine, blood, X-ray) and a long waiting period for prescribed medication were the most common complaints. This study however dealt with all kinds of delay and waiting, and as such the person sampled specified the kind of delay encountered.

1.2) Statement of Problem:

The following research question was formulated in an attempt to find answers to the research problem:

The Problem Statement of this thesis is **"To study the effect of the various components of delay, on the evaluation of services offered at Bumrungrad Hospital."**

1.3) Research Objectives:

The main objective of this research was to study the various components of delay and how they affect the evaluation of services. The researcher applied the survey instruments to measure how delay affects service evaluations, in Bumrungrad Hospital. Therefore, the research objectives are:

1. To study patients perception about various dimensions of delay at Bumrungrad Hospital.

2. To study patients evaluation of services at Bumrungrad Hospital.

3. To study the relationship between service delay and evaluation of services.

1.4) Scope of the Research:

This research was to find out the effect of delay on the evaluation of service, at Bumrungrad Hospital. The study concentrated on patients, who came to the hospital to be treated for any purpose and experienced a delay in receiving the service. Some patients experienced a number of delays, but this study focused on the most serious delays encountered by the patient.

1.5) Limitations of the Research:

The limitations of this research were as follows:

1. The researcher was not allowed to conduct the research near the Patient Care Units as it may disturb the patients. So most of the questionnaires were distributed in areas nearby, especially at the point where patients paid up for the services at the cashier.

1.6) Significance of the Study:

This study was conducted at Bumrungrad Hospital from the point of view of the patients, to understand if the delays that they experienced at different points of time while receiving service from this hospital, had any affects on the overall service evaluation of the hospital. Hence, this study was to determine if service evaluation of the hospital was affected by the delays experienced by the patients.

The intent of this research was to develop a better understanding of how customers react to waiting for service. Research studies indicate a negative relationship between long waiting time and consumer satisfaction (Chebat and Filiatrault, 1993; Katz et al., 1991). Therefore, this research is useful for the benefits of the management team (service providers) of Bumrungrad Hospital, as it will help them to understand the various dimensions of waiting experience and also the effect that they have on the patients who have to wait or face a delay while receiving services. In this way, by understanding how customers react to a delay, service providers can alleviate its negative effects.

A few ways to avoid delay could be done either by operations management (i.e. adding more employees) or if that proves to be too expensive, then by perception

management (i.e. taking actions to reduce uncertainty, or the perception of waiting time). In addition, this research can provide a better understanding of the service encounter evaluation process as well as to provide managerial guidelines to act on minimizing the negative effects of delay. Researchers and managers should be more concerned with a customer's perception of waiting time than the actual wait duration itself.

1.7) Definition of Terms:

Independent Variables: Waiting experience is classified by Delay in service, Stability of the delay cause, Level of Control, Uncertainty, Filled time and Indication about progress.

Dependent Variable: Evaluation of Services.

1. **Delay in Service** is a condition where service is not delivered in a prompt and timely manner, causing customers to wait for the desired service. It is referred to as an obstacle to services (Taylor, 1994).

2. **Evaluation of Service** to judge or assess the worth of the act of serving customers (Taylor, 1994).

3. **Filled time** the activities performed while waiting for service. Time may be vacant or occupied depending on the activities of the customer. By filling time, the customer's mental or physical activity is increased so less attention is paid to the wait itself (Gilliland, Hofeld and Eckstrand, 1946).

4. **Indication about Progress** receiving regular feedback as to the length of time of the delay. Information increases the predictability of a situation (Averill, 1973).

5. **Service Provider control over delay** refers to the degree to which the cause of the delay was perceived to be controllable or uncontrollable by the service provider. That is, if the cause was under volitional control or choice (Folkes, 1988).

6. **Stability of the delay cause** refers to the degree to which a cause is seen as being relatively stable or permanent, or alternatively temporary and fluctuating (Folkes, 1988).

7. **Uncertainty** States of not being able to accurately know or predict the duration of delay. It is generally associated with feelings of uneasiness and anxiety. The stability of the delay cause could also affect the customers' uncertainty. This is because casual stability affects expectancies; attributions to unstable cause results in uncertainty about future outcomes (Maister, 1985).

CHAPTER II

LITERATURE REVIEW

This research studied the effect of the various components of delay, on the evaluation of service offered at Bumrungrad Hospital. It attempted to measure the various components of delay being: delay in service, stability of the delay cause, service provider control over delay, uncertainty, filled time and indication about progress, and to establish if any relationship exists with the evaluation of services. In this part of the study, the researcher related the theories and models necessary to develop the conceptual framework of the research. In addition, this chapter includes a review of related literatures, which have been taken from different textbooks and journal articles.

The literature review is divided into 7 parts:

1. Theory On Waiting Time.

2. Perceived Service Quality.

3. Waiting time Reduction in Asian experience.

4. Delay and Service Evaluation.

5. Affective reactions to delay.

6. Components of Delay.

7. Previous studies.

2.1)   Theory on Waiting Time

One of the banes of modern society is the constant process of waiting. Waiting

is frustrating, demoralizing, agonizing, aggravating, annoying, time consuming, and

incredibly expensive. For many, time is not just a scarce resource - it is the scarcest

resource. Yet, despite the efforts of business, service delays are common.

Waiting time is a pivotal factor in consumer's evaluation of many services. It is

suggested that delay evokes negative affective reactions. Waits in any situation, have

been described variously as disagreeable, uncertain, frustrating, annoying,

demoralizing, aggravating, stressful and anxiety producing (Dube-Rioux, Schmitt,

aLeClerc 1988; Gardner 1985; Katz, Larson, and Larson, 1991; Maister 1985; Osuna

1985).

Ample evidence indicates that waiting has negative effects on service evaluation. To

reduce these negative effects, service organizations can either provide faster service

by modifying their service delivery system or take actions designed to reduce the

negative effects without changing the real waiting duration. Furthermore, to

understand the waiting experience, it is important to understand what is meant by wait

for service. It refers to the time from which a customer is ready to receive the service

until the time the service commences. It also refers to the state of readiness felt by that

customer during the wait.

Waiting is a particularly significant common problem of many services because one

of the characteristics of services is that they cannot be stored or carried in inventory

(perish ability) and that demand may be unpredictable (Zeithaml, Parasuraman and

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Berry 1985). Even an efficient, courteous and comprehensive service transaction can be overshadowed by the frustration of a long wait (Maister1985). Sometimes this problem may be alleviated by supply side management (e.g. Hiring temporary help) or demand side management (e.g. differential pricing to shift demand) (Maister 1985; Taylor 1994, 1995). However there are limitations to operation management, and thus the problem of waiting often results. Waiting time is a critical factor in a customer's evaluation of many services. The negative effects of waiting on service evaluations have been demonstrated repeatedly (Katz, Larson and Larson 1991; Taylor 1994; Hui and Tse 1996). Prior research in marketing has supported the relationship between perception of waiting time and service satisfaction. Maister (1985), Taylor (1994,1995), have examined how attribution and the degree of filled time are related to the perception of wait time (e.g., Taylor, 1994,1995), and have explored several types of affective responses that influence perception of time (e.g., Hornik 1992, Kellaris and Kent 1992, Taylor 1994).

Customers for service tend to overestimate the time they spend on waiting (Hornik, 1984; Katz, Larson and Larson 1991), and as the perception of waiting time increases, customer satisfaction tends to decrease (Katz et al 1991). Traditionally, firms attempt to minimize waiting by managing the actual wait time through operations management. However many services are inherently prone to peak demand fluctuations, such as theme parks, restaurants and airports. As it may not always be possible to control the actual wait duration, service providers should take actions to reduce the negative effects of waiting without actually changing the real wait duration. Understanding the subjective perceptions that customers have of waiting,

may lead to strategies to minimize the dissatisfaction with waiting, and enhance overall service satisfaction (Taylor 1994).

<u>Types of Waiting.</u>

Customers can wait before, during, or after a transaction; that is pre-process, in-process and post-process wait (Dube-Rioux, Schmitt, and Leclerc 1988). For example, in a restaurant situation, a pre-process wait would occur prior to being seated; an in-process wait would occur during order taking and meal service; and a post-process wait would occur prior to receiving and paying the bill. It is suggested that individuals' emotional responses to waiting may be different at various stages of a service delivery. This is due to the fact that people are goal oriented and are highly concerned with accomplishing their goals. Pre- process waits should be viewed differently from those, which occur during the service (Maister, 1985). They have been shown to be more unpleasant than in- process waits (Dube-Rioux, Schmitt and LeClerc 1988). It has also been suggested that pre-process wait should form the primary focus of marketing management concern (Venkateson and Anderson, 1985).

Pre-process waits can further be categorized into three general types: pre- scheduled waits, delays (post- scheduled waits) and queue waits. Pre-scheduled waits include those in which a customer waits because he/she had arrived earlier for an appointment. However, a delay would occur when the customer has to wait, even though he/she arrived at the appointed time. Thus, the distinction between pre-scheduled wait and delays is the timing of the wait with respect to a scheduled commencement time. A queue wait occurs when appointments or scheduled

commencement times are not used i.e. service usually is provided on a first come first serve basis, for which the customer must line up to receive the service.

In addition, waits could also be classified as those in which the customer physically waits at the service setting (e.g.; waiting at the doctor's office) versus waiting elsewhere (e.g. Waiting at home for a delivery), an active wait (waiting a long time) and passive wait (waiting a short time).

Examples of Delay's Experienced.

Waiting is a phenomenon that continues to be common in congested, urbanized and "high tech" societies. It is experienced in cars in traffic jams or at tollbooths, in super markets to check out, in banks and post offices, in lines at the fast food restaurants etc. Customers do not like these waits, and managers of the establishments at which these waits occur also do not like customers to wait but still it occurs. The reason for this wait then is that there is more demand for the service than there is facility for service avaible. This may be due to a number of reasons namely: a shortage of avaible servers; it may be infeasible economically for a business to provide the level of service necessary to prevent waiting or there may be a limit to the amount of service that can be provided.

Internet Delays:

Many people in different settings experience delays. For example, delays encountered while using the Internet. The Internet is considered an important channel between marketers and consumers for both communicating information and selling

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products. However one of the biggest criticisms expressed by many consumers while using the internet is the long time it takes to download material on some web sites.

Due to congestions, delays are also experienced in simply accessing some web sites or in accessing some online services. These delays have motivated some to nickname WWW as 'World Wide Wait', instead of 'World Wide Web'. Through various experiments, it can be said that waiting can negatively affect the evaluation of websites. Based on existing services literature, it has been predicted that the following factors will affect consumer's evaluations of waiting time in an Internet experience:

1. Length of the wait;

2. Whether customer experiences uncertainty about the waiting time;

3. The kind of information that is provided about the wait;

4. Where the waiting occurs within the internet episode; and

5. How long the wait is compared to the customer's expectations.

Airport Delays:

Similarly, delays are often encountered in airport settings as well. Especially after the September 11 terrorist attacks, long lines and security delays have been standard. While some travelers are willing to endure delays for the feeling of 'extra security', frequent business travelers are becoming frustrated with the extra time spent waiting, and many continue to explore alternatives to business travel e.g.; trains and cars are being used by some in lieu of short- haul flights. The airlines have responded by working to reduce the security wait -time at key airports and hubs, by adding extra security staff and stations. Eg; - United Airlines has added estimated security wait times to its web site. Unlike Delta, United only provides estimates for security

waits. Unfortunately, this only provides part of the total time you need to allow for "wait times" at airports.

2.1.1) Perceived Waiting Time:

Every organization, which interacts with its customers, deals with the issue of queues. In their everyday lives, customers wait for service in a number of settings, including manufacturing and service businesses (Nie, 2000), profit and non- for- profit organizations, as well as private and public agencies (Davis and Heineke, 1994). Yet, customers see waits as a 'key source' of customer dissatisfaction (Bitner, Booms, and Tetreault, 1990).

As customers experience greater pressure on their time, short waits seem longer than before (Katz, Larson, and Larson, 1991). As a result, there is increasing pressure on a wide range of businesses to either reduce the actual customer-waiting time (Greenwood, 1991), or better manage customer perceptions of waiting (Nie, 2000). The first approach is accomplished through operations management (Katz, Larson, and Larson, 1991; Kumar, Kalwani, and Dada, 1997) and is usually costly as it requires adding more employees and/or increasing the number of servers (Davis, 1991; Kumar, Kalwani, and Dada, 1997). The latter approach is achieved through perceptions' management. It aims to enhance customers' waiting experiences (Kumar, Kalwani, and Dada, 1997) and is often very inexpensive to apply. Thus, managers must resourcefully use or manage the perception of waiting to their advantage. Consequently, it is very imperative to understand the variables that influence the perception of waiting time and the potential impact of it on perceived service quality and/or customer satisfaction (Taylor, 1994).

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2.2) Perceived Service Quality:

Customer expectations are pretrial beliefs a customer has about the performance of a service that are used as a standard or reference against which the service performance is judged. The ideal service level is defined as the 'wished for' level of service consumers would like. When the desired service is delivered in an appropriate manner, it leads to a high evaluation of service. To understand the relationship between delay and service evaluations it is first important to understand what is meant by service as defined below:

" Service is an activity or series of activities of more or less intangible natures that normally, but not necessarily, take place in interactions between the customer and service employees and/or physical resources of goods and/or systems of the service provider, which are provided as solutions to customer problems" (Gronroos, 1990, p.27)

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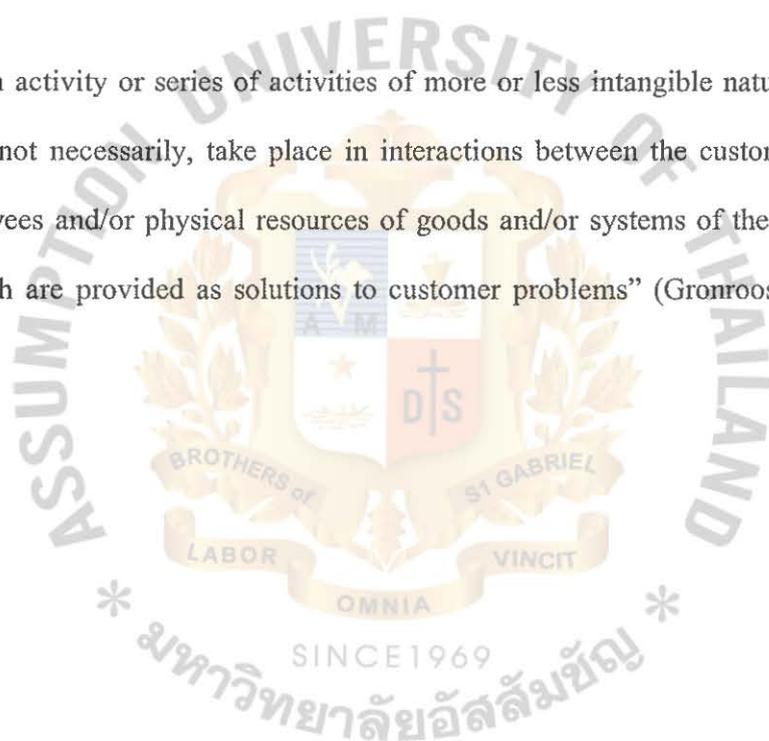
Nature of Service Act:

What is the nature Of the Service Act?	Who or what is the direct recipient of the service?	
	People	**Possessions.**
Tangible actions	**Services directed at People's bodies.**	**Services directed at Physical possessions.**
	Passenger transportation Health care Lodging Beauty salons Physical therapy Fitness centers Restaurants/Bars Refueling Haircutting Funeral services	Freight transportation Repair and maintenance Warehousing/storage Janitorial services. Retail distribution Laundry and Dry-cleaning Landscaping Disposal/recycling
Intangible actions	**Services directed at People's mind**	**Services directed at intangible assets.**
	Advertising/ PR Arts and entertainment Broadcasting Education Insurance Information services Concerts Psychotherapy Religion Voice telephone	Accounting Banking Data Processing Legal services Programming Research Securities investment Software consulting

Table 2.1) Understanding the Nature of Service Act

- For tangible actions to people's bodies, customers need to be physically present throughout service delivery in order to receive the desired benefits of such services, e.g; airline transportation, haircutting and *hospital treatments*.

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- Tangible actions to goods and other physical possessions, the object requiring processing must be present, though the customers need not be, e.g; airfreight, lawn mowing and janitorial services.

- Intangible actions directed at people's minds (Mental stimulus processing), require customers to be present mentally but can be located either in a specific service facility or in a remote location connected by broadcast signals or telecommunications linkages, e.g; broadcasting, education.

- Intangible actions directed at intangible assets (Information processing), e.g; insurance, investment, banking and consulting require no direct involvement with the customer, once the request for service has been initiated.

Tangible actions to people's bodies (People processing e.g.: Hospitals)

When customers are required to be physically present throughout the service delivery, the process must be designed around them from the moment they arrive at the service facility. Customers arriving at the hospital may initially need parking (or other assistance in traveling to and from the entrance). The longer they remain on site, the more they are likely to need other services, including basics such as food, beverages and toilets. Service delivery sites must be designed with their convenience in mind.

Service quality is a global evaluation of all past service experiences. Research indicates that a customer evaluation of service quality has an impact on their levels of satisfaction. Therefore, service quality evaluation is an antecedent to customer satisfaction. Parasuraman, Zeithaml and Berry (1985,1988) defined service quality as

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the overall evaluation of a specific service that results from comparing a firm's performance with the customer's general expectations of how firms in that industry should perform. Service quality is by nature a subjective concept, which means that understanding how the customer thinks about service quality is essential to effective hospital management. Three related concepts are crucial to this understanding. These include customer satisfaction, service quality and customer value (Oliver, 1994).

Parasuraman, et, al., (1990) defined service quality as perceived by customer "as the extent of disperancy between customers" expectations or desires and their perceptions. Customers assess service quality by comparing what they want or expect with what they perceive they are getting. In order to earn a reputation for service quality, companies must consistently perform at levels customers perceive as meeting or surpassing their expectations (Parasuraman, 1991).

Service quality is a comparison between expectations and performance service quality is a measure of how well the service level delivered matches customer expectations. Delivering quality service means conforming to customer expectations on a consistent basis (Lewis and Booms, 1983). When customers have to wait for service, i.e. when the delivery of service is delayed, this leads to a lower or a negative evaluation of service (Scotland, 1991).

In today's world of intense competition and an increasing availability of substitutes, consumers not only are demanding more and faster services, they also expect high levels of quality in the services provided to them (Sheu and Babbar, 1996). Moreover, the quality of a service is not determined only based on its technical quality, or "what

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is delivered," but also based on "how the service is delivered "to the customer (Zeithaml and Bitner, 1996).

An important determinant of service quality and, thereby, customer satisfaction is the **amount of time a customer has to wait in order to obtain service**. In general, the longer customers spend waiting for a service to be delivered to them, the more likely they are to perceive the quality of service as poor (Taylor, 1994) and, thus, become less satisfied with the service (Davis and Vollman, 1990; Kumar, Kalwani, and Dada, 1997). Consequently, understanding the psychological experience of waiting is crucial to avoid, or at least lower, the negative impact of service delays on perceived service quality and customer satisfaction (Dube, Schmitt, and Leclerc, 1991; Katz, Larson, and Larson, 1991). With this in mind, many service industries such as airline and restaurant industries are using the amount of time customers spend waiting as an important measure of service quality (Sheu and Babbar, 1996).

In the 1980's, Parasuraman, Zeithaml, and Berry (1985, 1988) developed a multi-item scale for measuring service quality, referred to as SERVQUAL. Despite the fact that the SERVQUAL scale has been subjected to some criticism (Cronin and Taylor, 1992; 1994; Teas, 1994), it appears to be a valid instrument for measuring service quality in various service industries such as banks, telephone companies, repair and maintenance services, credit card companies, and health care sector (Boerkamp, Ruskamp, Reuyl, and Versluis, 1996). Zeithaml, Berry and Parasuraman (1988) identified the following five dimensions pertaining to service quality:

1. Tangibles: the physical facilities, equipment, and appearance of personnel;

2. Reliability: the ability to perform the desired service dependably, accurately and consistently;

3. Responsiveness: the willingness to provide prompt service and help customers;

4. Assurance: Employee's knowledge, courtesy, and ability to convey trust and confidence;

5. Empathy: the provisions of caring with individualized attention to customers.

In addition, services have a number of unique characteristics which poses as a problem for service marketers and which are not faced by goods marketers (Batson 1977; Berry1980; Lovelock1981; Sasser,et al. 1979). These are described as below:

- Heterogeneity

Heterogeneity in service output stems from customization of the service to each customer's needs and the variability of human performance (Allan 1979, Bitner1990; Bessom and Jackson 1975). The heterogeneity characteristic means that it is difficult to establish standards for output of a medical service organization and even harder to ensure that the standards are met each time the service is delivered.

- Perishability

Another property of services is that they cannot be stored. For example, an hour of the physician's time or a nurse's time when they are not caring for patients or an unoccupied hospital bed cannot be inventoried for later use when the service is demanded by the patients. The combined perishability and wide swings in demand can result, if not properly managed, in either periods of idle capacity or in that of insufficient capacity or both. Idle capacity results in inefficient use of resources and

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insufficient capacity may result in waits for service and will affect adversely the customer's perception of service performance and evaluation.

- Intangibility

Services are basically intangible exchanges where providers perform tasks (diagnosis, consultation, and treatment) for customers and/or provide facilities and equipment for customers to use but not own (Berry 1980;Bessom and Jackson 1975). Health services are performances, which cannot be seen, felt, tasted or touched in the same manner in which goods can be sensed. Since service itself is not tangible, customers rely on cues associated with the service to assess the nature and quality of the service. Customers evaluate what they cannot see (the service itself) by what they can see- contact persons, buildings, equipment and how the service was delivered to them.

- Inseparable and Simultaneous Production and Consumption

In contrast to goods, which are first produced, then sold, and then consumed, services are first purchased, then produced and consumed simultaneously (Berry 1980,1983; Bessom1975; Gronoos 1982; Shostack 1977). Since the customer must be present during the production of health services, inseparability forces the customer into intimate contact with the production process, and it causes the service production to be highly interactive. The simultaneous production and consumption results in the customer being exposed to a major portion of the inputs and the processes of service assembly and delivery, and the health care organization through its members (physicians and staff) is involved in and can influence the purchase, consumption and evaluation of the service.

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2.3) Waiting Time Reduction In Asian Experience

Long waiting time in hospitals causes discontent among patients. Such delays in hospitals can lead to man- hour loss and interfere with production. In most Asian hospitals, patients come to the OPD without prior appointment and wait for long periods of time. However, long waiting time in any service sector is considered to be an indicator of poor quality needing improvement.

Tata Main Hospital- Jamshedpur, India

Crowded out- patient department of the Cardiology section of *Tata Main Hospital, Jamshedpur, India*, shared some commonality with chronic heart failure on account of the volume overload and inefficient disposal. Tata Main Hospital attached to the Tata Iron and Steel Company in Jamshedpur, India, gives free comprehensive medical services to its employees and their families and caters to the patients referred from other industries and society in general.

However, consultations in this hospital are often without prior appointments and associated with long waiting times. Conditions in the existing system leading to long waiting time was identified by brain storming and grouped as **Patient Related Causes** and **Doctor Related Causes**. It was observed that patients used to come early since they were seen in a first come first serve basis. The OPD attendant would collect medical papers, enter names in registers, distribute them among doctors and then call patients. As for the doctors, the practice of ward rounds by all doctors before coming to the OPD had an effect on the waiting time in the OPD. Elective procedures like discharge, case summary, investigations, pacing, pacemaker check up and emergencies during OPD hours also increased the waiting time.

The following principles were applied to solve the problem of long waiting times in the OPD- crowding and long waiting times due to all patients coming in at the same

time was overcome by giving appointment to chronic patients on regular visits. Efficiency was improved by increasing the availability of doctors and introduction of practice guidelines. Scheduling elective procedures after OPD and starting a pacemaker clinic led to better time management. After two months of implementing these measures, the average waiting time for consultation decreased from 58.6 minutes to 7.7 minutes without any additional manpower or resources.

Bumrungrad Hospital- Bangkok, Thailand

Formed in 1980, Bumrungrad Hospital is one of Asia's largest private hospitals, providing care for nearly 700,000 patients a year. The doctors are the primary "product" at Bumrungrad, central to answering core business challenge-improving patient service. Yet, there may be unavoidable delays in service faced at the hospital.

A few causes for the delays may be- doctors coming late, emergency cases, delays due to clinical examinations, delay on part of the ward boy in taking the papers to the doctors etc.

The doctor normally should not be late. Some of the cases may be serious, requiring urgent attention and some patients may have other important engagements. Therefore, they may suffer due to the late arrival of doctors. Also due to multi attachments with other hospitals, doctors have time constraints. Keeping this problem in mind, the management has started employing full time doctors rather than hiring them as consultants. Delay on part of the reception can be tackled by the administration through close monitoring. Delay due to clinical examination has no solution for delay caused due to longer time taken in the clinical examination or attending emergency cases and the patients must wait. However, patients must not have the impression that they are being misinformed. For an affective OPD management, the management must act honestly and transparently.

2.3.1) Service Encounters

Low: Customer presence required during service delivery	Moderate: Customer input required for service creation	High: Customer is mandatory and co-creates the service product
Products are standardized.	Client input customizes service standard.	Active client participation guides the customized service.
Service is provided regardless of any individual purchase.	Provision of service required customer purchase.	Services can not be created apart from customer's active participation.
Payment may be the only required customer input.	Customer inputs are necessary for the outcome.	Customer inputs are mandatory and co-creates outcome.
Example: Hotel stay	Example: Hair cut	Example: Counseling

Table2.2 Levels of customer participation across different services.
Source: Adapted from Hubbert (1995).
Within the levels of participation as shown above, customers can play a variety of

roles. Bitner et al; (1997), suggest there are three types:

I.   The customer as a productive resource;

II.   The customer as a contributor to quality, satisfaction and value;

III.   The customer as a competitor to the service organization.

Important issues focused upon within the service literature review are critical

incidents in service encounters. Critical incidents are service encounters that have

been either very satisfying or very unsatisfying. Their importance stems from the fact

that customers tend to relate more readily to them than with normal encounters,

therefore customers tend to judge a service provider's effectiveness based on the

critical incidents alone.

The identification of negative critical incidents is paramount when endeavoring to improve the quality level of a service. Dissatisfaction may arise at any point in which the core service is not delivered in the expected manner or surpassing that. According to Bitner et al. (1990) dissatisfaction in many cases may arise not from failure in delivering the core service, but by the inability of employees to deal with the problem in an effective way. This is more evident in high-contact services where interaction of customers with personnel is frequent. Failure to take corrective action in dissatisfying situations leads to a high customer turnover. On the other hand, if a critical incident is dealt with in the appropriate way, this leads to high customer loyalty. Identification of positive critical incidents is also helpful since they can be repeated and even included in the core service.

As revealed, there has been considerable research examining the service encounter with most of the reviewed investigating customer satisfaction with service experiences (e.g. Arnold and Price, 1993; Bitner, Booms and Mohr, 1994; Bitner, Booms and Tetreault, 1990; Ostrom and Lacobucci, 1995; and Surpent and Solomon, 1987).

These concepts have best been summarized by Bitner's model of service encounter evaluation (1990) as shown in Figure 2.3, which illustrates the antecedents and outcomes of consumer satisfaction in service encounters.

Examining the model from left to right it is possible to identify three stages.

I.   The first stage suggests that a consumer's pre- attitude will influence expected outcome, this is illustrated to be effected by the organization's

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communication and if the client has used the service previously this inevitably becomes a benchmark.

II.   The second stage – the actual service encounter suggests that the consumer's immediate reaction after consumption depends upon the comparison to aspect of stage one.

III. The final part of the model illustrates the significance of an effective service encounter, in that judgment of encounter affects subsequent consumer behavior towards the service firm. A favorable judgment will probably lead to repeat custom, a relationship (especially in high-contact services) and the customers becoming an advocate of the service/ organization through the powerful (particularly considerable in services communication (Lovelock, 1999)) means of word of mouth. Similarly, the converse is equally true.

According To Bitner (1991), the impact on service evaluations of process components of services marketing mix can be influenced by attribution. According to her model, attribution (which encompasses service provider control) and process components of marketing mix (which encompasses filled time) are capable of influencing service evaluations. Attribution is modeled to mediate the relationship between disconfirmation (the discrepancy between service performance and expectations) and satisfaction.

Model:
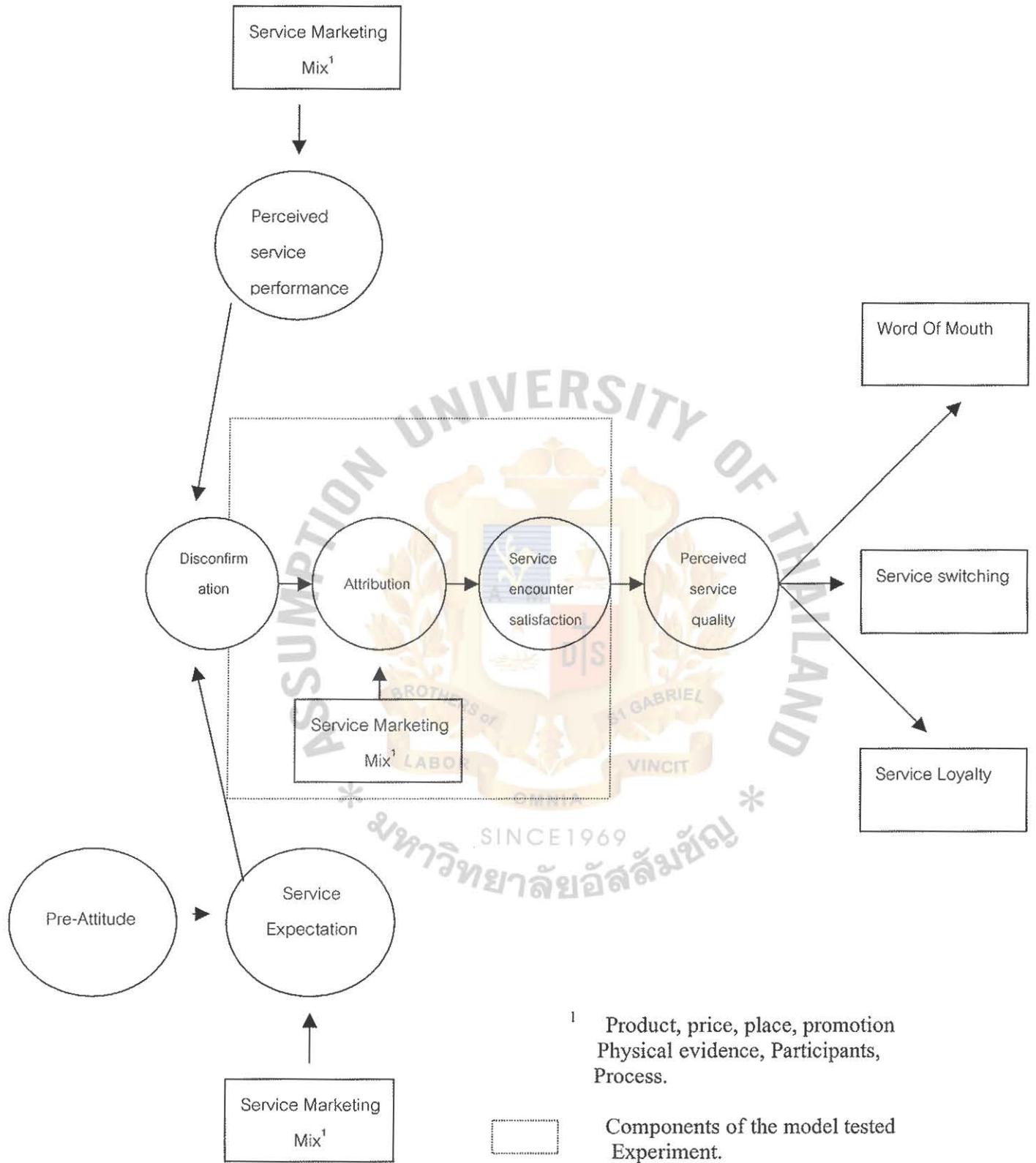
Figure 2.1 Model of Service Encounter Evaluation. Source: Bitner (1990)

This model suggests the effect of service on a customer's evaluation of service. The first part shows that a customer will have a pre-service expectation, which the firm tries to influence with a mix of different techniques such as price, place, promotion, physical evidence (touch) and the process that consists of the delivery process. Customers expect the delivery to be accurate and courteous. What also affects the pre-attitude to service expectation is the prior use of service and most importantly the organization's communication with its clients.

The client then comes into contact with the organization to receive service, and at the same time the organization tries to influence the actual service with a combination of service mix. The difference or comparison of the two stages results in a reaction (disconfirmation) the discrepancy between service, performance and expectation. The early conceptualizations of service quality are based on the disconfirmation paradigm where service quality is conceptualized as the difference between a customer's expectations and perceptions of actual performance. The attribution, which is a part of service mix, can then play an important role in the evaluation of service. Attribution encompasses service provider control and the process part of the Service marketing mix such as, expectation about the delay, filled time etc.

Attribution is a very important mediator between the two processes, which results in the judgment of encounter resulting in satisfactory/unsatisfactory service satisfaction and hence perceived service quality. A favorable encounter will result in repeated customer (service loyalty), a relationship or an advocate of the service of the organization. Alternatively, an unfavorable encounter will result in a loss of customer, service switching or a bad word of mouth.

2.4) Delays and Service evaluations

The relationship between waiting for service and service evaluations is intuitively straightforward; the longer one has to wait, the lower the evaluation of service. Evidence supporting a negative relationship between pre service waiting and service evaluations in a number of settings is growing (Clemmer and Schneider 1989; Davis 1986; Dube-Rioux, Schmidt, and LeClerc 1989; Fisk 1980; Katz, Larson and Larson 1991; Roslow, Nicholls and Tsalikis 1992; Taylor 1994). A recent quasi experiment also found that delayed and non- delayed customers differed in their overall evaluations of service (Taylor and Claxton 1994).

Understanding the evaluation of performance for service encounters is important as it ultimately leads to a customer's overall perception of service quality (Bitner 1990; Bolton and Drew 1991,1993; Cronin and Taylor 1992; Parasuraman, Zeithaml and Berry 1988). Existing models of service evaluations suggest that delay would negatively affect one or more service attributes, which in turn would affect the overall evaluation (Parasuraman, Zeithaml and Berry, 1985)

Research evaluating hedonic experiences has found that the duration of the wait experience has little effect on retrospective evaluations (Kahneman, Kirchner and Selten 1994, K.Walker and Sarin 1997). E.g; Carmon and Kahneman (1993) found that a longer wait was more pleasant at the end (rapid progress at the end) was more appreciated than a shorter less pleasant wait. Hui and Zhou (1996) also found that the role of perceived waiting durations affected consumer's service evaluations to a much lesser extent, than whether the wait was longer or shorter than expected. However, the duration of wait is likely to have an effect on the remembered utility of the wait.

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Theory on the Psychology of Waiting Time:

According to Levitt (1979), "Products are consumed, services are experienced." Accordingly, if managers are to concern themselves with how long their customers or clients wait in line for service (as, indeed, they should), then they must pay attention not only to the readily measurable, objective, reality of waiting times, but also how those waits are experienced. It is a common experience that a two-minute wait can feel like nothing at all, or can feel like 'forever'. We must learn to influence how the customer feels about a given length of waiting time.

David Maister, a Boston consultant, is the first in the field of service operations management that urged managers to pay attention to not only the issue of actual wait time, but also the issue of a customer's perception of waiting time (Katz, Larson, and Larson, 1991; Nie, 2000). Maister (1985) proposed the following eight principles that organizations can use to influence time perception during waiting:
(The Service encounter, John a Czepiel, Michael R. Solomon and Carol Suprenant 1985 by D.C. Heath and Company, Lexington Books)

1. Unoccupied time feels longer than occupied time

The truth of this proposition has been discovered by many service organizations. In various restaurants, it is common practice to hand out menus for customers to peruse while waiting in line. Apart from shortening the perception of time, this practice has the added benefit of shortening the service time, since customers will be ready to order once they are seated, and will not tie up table space making up their minds).

A similar tactic is to turn the waiting area into a bar, which also adds to revenue as well as occupying time. Use can be made of posters, reading material (or even shifting lights, rolling balls and other 'adult toys') to distract the waiter's attention away from

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the passage of time. 'Theme' restaurants (such as Victoria Station), which provide interesting memorabilia to examine, are also applying the lesson of occupying waits as part of the service. In some situations, such as telephone waits, it is difficult to "fill up" time in a constructive way. The familiar 'Music' played by some organizations when their telephone-answering agents are busy is, to many people, an added annoyance rather than a benefit. In large part, this is because the activity (listening to music) is totally unrelated to the service activity to come (whereas, the use of menus and bars cited above successfully integrated the waiting experience into the total service experience). This suggests that the activity provided to 'fill time' should (a) offer benefit in and of itself, and (b) be related, in some way, to the following service encounter.

2. Pre- process and post-process waits feel longer than in- process waits

One's 'anxiety' level is much higher while waiting to be served than it is while being served, even though the latter wait may be longer. There is a fear of 'being forgotten'. Many restaurant owners instruct their service staff to pass by the table as soon as the customers are seated to say "I'll be with you as soon as I can, after I've looked after that table over there". In essence, the signal is being sent: 'We have acknowledged your presence'.

One walk-in medical clinic that was studied decided to introduce a triage system, whereby a nurse who recorded the patient's name and symptoms and decided whether the patient could be treated by a registered nurse practitioner or should be seen by a doctor first met all patients. Even though the addition of this step in the process had no impact on the time it took to see a medical service provider, surveys showed that

patients were pleased with 'reduced waiting times'. The point, of course, was that they felt they had been 'entered into' the system.

3. Anxiety makes waits feel longer

Anxiety about the wait may result from the feeling of being forgotten, and as well may come from other sources. For example, while standing in line at the supermarket or at the airport, there could be anxiety over having chosen the wrong line to stand in. As the anxiety level increases, the wait becomes intolerable. This situation is covered by what is known as Erma Bombeck's Law: " The other line always moves faster". However efforts to deal with customer anxiety can be seen when airlines make on board announcements that connected flights are being held for a delayed flight or when movie theatre managers walk down the line reassuring the patrons they will get in etc.

4. Uncertain waits are longer than known finite waits

The most profound source of anxiety in waiting is how long the wait will be. For example, if a patient in a waiting room is told that the doctor will be delayed thirty minutes, he experiences an initial annoyance but then relaxes into an acceptance of the inevitability of the wait. However, if the patient is told the doctor will be free soon, he spends the whole time in a state of nervous anticipation, unable to settle down, afraid to depart and come back. The patient's expectations are being managed poorly. Likewise, the pilot who repeatedly announces "only a few more minutes", adds insult to injury when the wait goes on and on. Not only are the customers being forced to wait, but also they are not being dealt with honestly.

The "appointment syndrome" provides a good example of the role of uncertainty in the waiting experience. Clients who arrive early for an appointment will sit contentedly until the scheduled time, even if this is a significant amount of time in an absolute sense (say, thirty minutes). However, once the appointment time is passed, even a short wait of, say, ten minutes, grows increasingly annoying. The wait until the appointed time is finite; waiting beyond the point has no knowable limit.

5. Unexplained waits are longer than explained waits

Most serving personnel are repeatedly asked about the circumstances in waiting situations. The lack of an explanation is one of the prime factors adding to a customer's uncertainty about the length of the wait. However, knowing the length of the wait is not the only reason a customer wants an explanation. As the Federal Express advertisement points out, waiting is also demoralizing. Waiting in ignorance creates a feeling of powerlessness, which frequently results in visible irritation and rudeness on the part of customers as they harass serving personnel in an attempt to reclaim their status as paying clients. In turn, this behavior makes it difficult for the serving personnel to maintain their equanimity.

A subtle illustration of this is provided by the practice of many fast food chains that instruct serving personnel to take their rest breaks out of sight of waiting customers. The sight of what seems to be available serving personnel sitting idle while customers wait, is a source of irritation. Even if such personnel are, in fact, occupied (for example, a bank teller who is not serving customers but catching up on paperwork), the sight of serving personnel not actually serving customers is "unexplained." In the customers' eyes, he or she is waiting longer than necessary. The

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explanation that the "idle" personnel are taking a break or performing other tasks is frequently less than acceptable.

6.   Unfair waits are longer than equitable waits

According to Sasser, Olsen, and Wycoff (1979), one of the most frequent irritants mentioned by customers at restaurants is the prior seating of those who have arrived later. They observe: "The feeling that somebody has successfully 'cut in front' of you causes even the most patient customer to become furious. Great care to be equitable is vital" (1979, 89).

As already noted, agitated waits seem longer than relaxed waits. It is for this reason that many service facilities have a system of taking a number, whereby each customer is issued a number and served in strict numerical order. In some facilities, the number currently being served is prominently displayed so that customers can estimate the expected waiting times.

The main point to be stressed here is that the customer's sense of equity is not always obvious, and needs to be explicitly managed. Whatever priority rules apply, the service provider must make vigorous efforts to ensure that these rules match with the customer's sense of equity, either by adjusting the rules or by actively convincing the client that the rules are indeed appropriate.

7.   The more valuable the service, the longer the people will wait

Specialization by task does not necessarily reduce the aggregate amount of waiting in the system; however, it serves well to allocate the waiting among the customer base.

That perceived value affects tolerance of waits can be demonstrated by our common experience in restaurants: we will accept a much longer waiting time at a "haute cuisine" facility than at a "greasy spoon." In universities, there is an old rule of thumb that if the teacher is delayed, "You wait ten minutes for an assistant professor, fifteen minutes for an associate professor, and twenty minutes for a full professor." This illustrates well the principle that tolerance for waits depends upon perceived value of service-perhaps with the emphasis on the perception.

8.   Solo waits seem longer than group waits

One of the remarkable syndromes to observe in waiting lines is to see individuals sitting or standing next to each other without talking or otherwise interacting until an announcement of a delay is made. Then the individuals suddenly turn to each other to express their exasperation, wonder collectively what is happening, and console each other. What this illustrates is that there is some form of comfort ingroup waiting rather than waiting alone.

Whatever service organizations can do to promote the sense of group waiting rather than isolating each individual, will tend to increase the tolerance for waiting time.

2.5) Affective reactions to the delay

Recently attention has been focused on factors that moderate or mediate the impact of waiting on service evaluations. These factors include:

1. Affective reactions to the wait (Folkes, Koletsky and Graham 1987; Katz, Larson and Larson 1991; Larson 1987; Maister 1985; Osuna 1985; Taylor 1994);

2. Perceived inequalities in the wait (Larson 1987; Maister 1985);

3. The timing of the wait (Dube-Rioux, Schmidt and LeClerc 1989; Maister 1958);

4. The degree to which the time is filled during the wait (Haynes 1990; Katz, Larson and Larson 1991; Larson 1987; Maister 1985; Taylor 1994);

5. The perceived level of service provider control over the wait (Folkes, Koletsky and Graham 1987: Taylor 1994).

AFFECTIVE REACTIONS TO THE DELAY

It has been suggested that delays evoke negative affective reactions. Waits have been described as disagreeable, uncertain, frustrating, annoying, demoralizing, stressful and producing anxiety (Dube- Rioux, Schmitt and LeClerc 1998; Gardner 1985; Katz, Larson and Larson 1991; Maister 1985; Osuna 1985). These affective reactions can be divided into two general types: *uncertainty reactions* and associated feelings of uneasiness, unsettledness and anxiety; and *anger reactions* and associated feelings of annoyance, irritation and frustration.

- *Uncertainty*

Customers often do not know how long they will have to wait, and as a result, what the consequences of their waiting time will be. Thus, many customers will experience uncertainty and associated feelings of uneasiness and anxiety (Maister, 1985). As the delay is prolonged, uncertainty about the length of time and personal consequences

increases. A waiting customer could also face uncertainty with respect to the cause of the delay. As the delay duration increases, the possible reasons for the delay increases, compounding the uncertainty. Research in service literature has shown that consumers have an aversive reaction to not knowing how long they will have to wait (Leclere, Schmitt and Dube 1995; Taylor 1994) and this influences the evaluation of the service encounter. Taylor (1994) shows that the process by which uncertainty influences overall service satisfaction is through affect. Her findings indicate that uncertainty about wait time does not influence customer service evaluation directly, but rather influences affective response to the service, which in turn influences customer evaluation.

Hui and Tse (1996) also find negative effects on customer mood, when consumers had no idea about the wait, and thus were uncertain about the length of time that they had to wait for. Findings from Taylor's (1994) study suggest that uncertainty influences service evaluation through consumer's affective response to a wait. Accordingly, the consumer's affective response (being irritated, annoyed, dissatisfied) is posited as a key mediator of the impact of waiting information on service evaluation.

- *Anger*

Anger and its associated feelings of annoyance, irritation and frustration are often inevitable results of delay (Sawrey and Telford, 1971). Delays are obstacles to service and when an obstacle blocks satisfaction of a need, frustration and anger result (Lawson, 1965). Reasons for anger are numerous. Much of the anger evoked by a delay could be attributable to the uncertainty involved in waiting (Maister 1985;

Osuna 1985). Maister (1985) maintains that uncertainty creates the most profound source of anxiety in waiting.

Conversely, Larson (1987) contends that customers will feel better when they are provided information that enables them to estimate their waiting time, thus reducing uncertainty. It is demoralizing for the customer because uncertainty does not permit the customer the power to deal with the delay (Maister, 1985; Schwartz 1995). As uncertainty increases so does the ability to plan and the associated perceived loss of power. The result is increasing feelings of anger. Customers may experience anger simply because the service provider has failed to deliver on an implicit promise- that is, service delivery at a specified time. There could also be financial costs or inconvenience associated with the delay (Becker 1965; Maister 1985).

Though these affective reactions are believed to be important mediators of the relationship between delay duration and service evaluations, they are also believed to mediate the relationship between other delay related variables and service evaluations.

Attribution Theory

In cases of service failure such as a cancelled or delayed flight, the level of customer dissatisfaction will be determined by how and where customers attribute the causes of the failure or poor service. The process of deciding the cause of a service failure is called attribution theory. For example: if the airline traveler feels the cancelled or delayed flight was due to conditions beyond the control of the airline, then the level of dissatisfaction will be low. If, however the airline passenger feels the delay or cancelled flight was due to controllable factors that could have been prevented, then they will experience a high level of dissatisfaction.

Causal attributions are made because of a need for prediction and control of a person's environment (Harvey and Weary 1984; Ross and Fletcher 1985;Weiner 1980, 1985, 1986; Wrightsman and Deaux 1981). Controllable and uncontrollable factors are situational in nature and will vary from one consumer to the other.
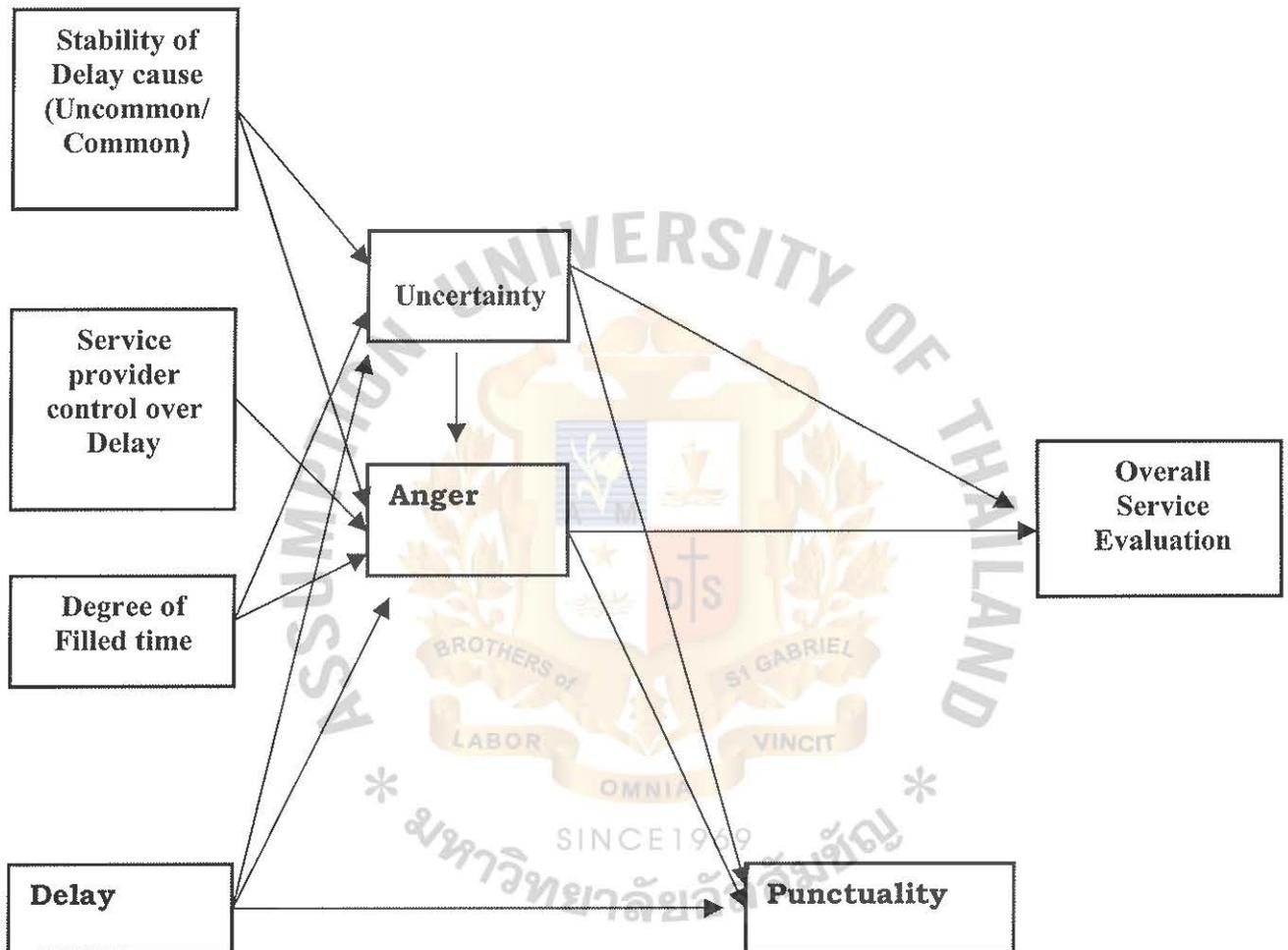
Figure 2.2 The wait experience model.
Source: *Waiting for Service, Journal of Marketing, Vol.58, April 1994, 56-59*

In the above model of customer's waiting experience, it is proposed that two negative affective reactions, uncertainty and anger mediate the relationship between a delay

and service evaluations. These affective reactions also act as important mediators in the relationships between other delay related variables and service evaluations. The attribution for the delay and the degree to which the customer's time is filled during the delay influence these affective reactions and ultimately one's service evaluations.

According to the wait experience model, a delay is expected to affect the overall evaluation of service through its impact on punctuality, anger and uncertainty. Other important delay related variables also indirectly affect the overall evaluation of service. Attribution for the delay influences the affective consequences for the delay. Specifically, the degree of service provider control over the delay affects customer anger, and the stability of the cause of delay affects both anger and uncertainty felt by the customer. The degree to which the time is filled during the delay also influences the anger and uncertainty felt by the customer.

The wait experience model details the nature of a delay's impact on service evaluations. It emphasizes the importance of the customer's experience of the wait by including not only the affective reactions to the delay duration, but also the reactions to the perceived cause of the delay and the customer's activities during the delay. This model provides useful theoretical and managerial insights into wait experience.

2.6) Dimensions Of delay:

Stability:

Stability refers to the degree to which the cause is seen as relatively permanent and stable, or alternatively, temporary and fluctuating (Folkes, 1988). Causes that are relatively permanent are stable; in contrast, causes that are temporary or fluctuating

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are unstable. The stability of the delay cause is expected to affect customer's affective reactions to the delay. According to Weiner's (1985) attribution-affect-model, stability of the cause increases anger, which has been supported empirically. Weiner, Graham and Chandler (1982) found higher levels of anger with stable causes rather than temporary ones.

Folkes, Koletsky and Graham (1987) found that the stability of the delay cause was correlated significantly with customer anger; that is the more common the delay cause was perceived to be, the more angrier the customers became. The stability of the cause could also affect customer's uncertainty. This is because casual stability affects expectancies; attributions to unstable causes result in uncertainty about future outcomes. (Folkes 1984; Weiner 1980). A stable cause may reduce uncertainty, because the customer is likely to have some expectations about the length of delay and thus, its consequences.

Controllability:

Controllability refers to the degree to which the cause was under volitional control or choice. Folkes (1984) and Bitner (1990) found that higher levels of perceived control over product and service failures led to a lower evaluation of services. This also corroborates the co relational results of Folkes, Koletsky, and Graham (1987) and Taylor (1994) who found perceived service provider control over a delay to have a negative impact on service evaluations. Evaluations of reliability, responsiveness and assurance were lower for those who felt the service provider had a high degree of control over the delay. These results follow logically from how these dimensions are defined; the more control the service provider has over the delay, the more the

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customer will perceive that the service is not being performed reliably or promptly and the less trust the customer will have in the service provider. Research has found that when a negative event is attributable to a controllable cause, then anger is the dominant emotional reaction (Meyer and Mulherin, 1980; Reisenzein, 1986; Weiner 1980,1986). A barrier to service, such as a delay is more likely to cause anger if the delay is perceived to be as controllable. The anger will be even greater if the customer perceives that the locus of that control belongs to the service provider. Customers were most angry when they believed that it was the service provider that has control over product failure; anger did not differ between customer controlled and customer uncontrolled product failure. According to Folkes, Koletsay and Graham (1987) found that service provider control over a delay correlated significantly with customer anger.

Uncertainty:

One of the variables that has been generally accepted to affect customer's psychological reactions to waiting for services is whether customer's have advance information regarding the waiting duration (Maister, 1985; Hui and Zhou, 1996; Dellaert and Kahn, 1999). Research in service operation literature has shown that customers have an averse response to not knowing how long they will have to wait and/or the reason for waiting (Taylor, 1994; Leclerc, Dube, and Schmitt, 1995).

When no waiting duration information or explanation is provided, customer dissatisfaction appears to increase (Davis and Heineke, 1994; Dellaert and Kahn, 1999). In many cases when customers are not given the reasons why they have to wait, they try to draw their own explanations and conclusions, which might be incorrect. In a study regarding flight delays, 77% of the attributions made by passengers were incorrect (Taylor, 1994). An explanation is expected to correct

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customers' inaccurate attributions and make them feel less angry. This is especially true when the reason for a long wait is understandable and beyond the service provider's control. However, even if the delay is the service provider's responsibility, customers merit an explanation.

Waits of unknown duration are perceived as longer than waits of known finite time and this relates partly, to a customer's anxiety with waiting (Maister, 1985; Davis and Heineke, 1994). It is commonly accepted that after having to wait for a certain amount of time, one's anxiety and stress begin to increase due to uncertainty involved in a waiting situation (Osuna, 1985). Therefore, informing the customer about the expected duration of the wait or providing them with an explanation helps reduce the psychological stress and anxiety associated with waiting.

Filled time:

Time has become a major aspect of competitiveness. The way in which the leading business firms manage time represents a powerful source of competitive advantage (Stalk, 1988). Yet, customers frequently have to wait for the delivery of products and services. Waiting is acknowledged as a negative experience (Dellaert and Kahn, 1999) since, while waiting, customers use up the most limited resource, time (Kumar, Kalwani, and Dada, 1997). This is the main reason why people dislike empty or unfilled time. Research has shown that time appears to pass more quickly or 'fly' when people occupy their time and even have fun (McGrath and Kelly, 1986; Larson, 1987;Davis and Heineke, 1994; Nie, 2000). Therefore, the challenge to service organizations is to fill time in a helpful way and make people feel relaxed and more comfortable.As a result, business firms frequently undertake substantial efforts to fill customer's waiting time (Kostecki, 1996). Filling-waiting time during a delay may

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counteract the delay's negative impact by increasing the customer's cognitive activity during the wait because this distracts them from focusing on the wait itself (Kellaris and Kent 1992). The filling of time during the waiting process is said to make the customer less angry and uncertain. When the waiting customer does pay attention to the duration of the wait, may affect the reaction to the delay. By filling time, the customer's mental or physical activity is increased so that less attention is paid to the wait itself (Gilliland, Hofeld and Eckstrand, 1946). Filling pre-service waiting time is a common practice. A long tradition of time perception research in psychophysics finds that by filling time (i.e.; by increasing people's mental activity), less attention can be paid to the passage of time (Allan 1979;Gilliland, Hofeld and Eckstrand 1946; Hicks, Miller and Kinsbourne 1976). With less attention being paid to the passage of time, the wait seems shorter. In addition, the customer's attention is focused on other activities so the wait is less salient. As a result, the wait's impact on service evaluations is lessened. For example, Katz, Larson and Larson (1991), found that increasing amount of distractions avaible to queuing bank customers resulted in increased customer satisfaction. Taylor (1994) found that when passengers reported that their time was filled during a delay, they were less angry and consequently gave higher service evaluations than delayed airline passengers who did not fill their time.

According to Larson (1987) and Maister (1985), the presence of 'empty' or unfilled time during a wait can affect the waiting experience negatively, because idleness can lead to boredom. Boredom is usually thought to arise when an individual ' does not get enough interesting information' (Klapp 1986). The fewer stimuli in the consumer's environment for him or her to interact with, or focus attention on, the more bored he or she will become. Boredom has many associated feelings, which can

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result in an unpleasant wait. The monotony and tedium characteristic of boredom may result in a sense of restlessness and tension for the individual (Klapp, 1986), which in itself produces anxiety (Levitt, 1980).

Filling time can reduce the anger and uncertainty felt by the waiting customer by reducing boredom, tension and its resulting anxiety. By filling the customer's time, it enables them to pay less attention to the delay itself, resulting in less attention being paid to factors creating uncertainty and anger. Ultimately they devote their time worrying about the consequences of the delay.

Service providers should first focus on how to modify the operation in ways that will minimize delays. When delays appear unavoidable, researchers recommend that firms focus on managing the perceptual experience of the consumer. In particular, a firm can seek to minimize the apparent length of the wait and the extent to which it is perceived as the firm's fault. These factors greatly impact the customer's overall impression of the problem. In fact, when a firm appears to handle a difficult situation well, it may actually result in greater customer satisfaction and loyalty.

Maister (1985) and Haynes (1990) argue that service providers should attempt to integrate the waiting experience into the total service experience by relating the "filler" to the service itself. For example, this would mean that waiting medical patients should be provided health magazines as opposed to unrelated magazines. Maister (1985) argued that related fillers act to enhance the service and that unrelated fillers may be annoying to customers simply because they are unrelated to the service. Related fillers not only distract the waiting customer, but they also give the illusion that the service has already begun, thus making the delay seem shorter or non-existent.

According to Fraisse (1991) as a subject is increasingly distracted from time cues, he or she will make poorer assessments of elapsed time. Additionally, as those items that distract the subject become increasingly difficult to process, the accuracy of the subject's assessment of elapsed time diminishes. That is, by filling the waiting time, less attention is focused on the actual passage of time.

Filling Strategies Reduce Dissatisfaction

Two types of filling strategies dominate the literature. The first is the introduction of environmental distractions to the delay situation. For example, pleasant music increases cognitive activity, diverts the consumer's attention away from the delay, and tends to reduce consumer dissatisfaction. Many restaurants fill time by providing waiting customers with menus or inviting them to the bar while they wait to be seated. Medical offices often supply patients with reading materials to fill their time while they wait to see a doctor (lovelock,1991),and music is often piped across telephone lines when customers are put on hold.

Similarily the use of scents in a waiting area is another filling technique. The use of neutral to positive scenting by retailers has been shown to result in customers perceiving that they had spent less time in a store than shoppers in an unscented store perceived that they had spent. In addition, the use of reading materials of interest to customers in a waiting area can reduce the perceived length of a delay.

The second type of filling strategy involves the introduction of information into the delay situation. Within this filling strategy, research has identified the relevance of the

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information, the type of information, and the length of the delay as key issues. Some believe that filler information should be related to the delay and suggest that unrelated filler would only increase the consumer's level of aggravation and subsequent level of dissatisfaction. Customers in one study who were informed of the expected length of delay reported a shorter perceived length of delay than those who did not receive any information. Furthermore, the use of relevant information can shorten the perceived length of the delay through three additional avenues.

1. Uncertain waits are considered to be longer than certain waits. By supplying information that is relevant, a provider reduces uncertainty.

2. Explained waits are perceived to be shorter than unexplained waits. By explaining the reason for the wait, a provider is able to shorten the perceived length of the wait.

Anxiety makes waits seem longer. By anticipating the issues that may cause anxiety in the consumer, and providing information to allay those fears, a provider can cause the wait to be perceived as shorter. One way to reduce uncertainty about the wait is to provide information.

There are two kinds of information that are considered: duration information, provided at the beginning of the wait and countdown information which is provided at regular intervals, and may or may not include an indication of how long the waiting time is. Hui and Tse (1996) found that the absence/ presence of waiting information affected the consumer's service evaluations. They observed that the role of waiting information was minimal for waits that were shorter than expected, duration

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information was helpful for medium and long waits and countdown information was particularly welcome for long waits (Taylor, Claxton, 1994).

Indication About Progress

Indication about progress: Information increases the predictability of a situation (Averill 1973). When given any information about the wait, consumers perceive the wait as more predictable and controllable and, as a result, exhibit affective responses to the wait that are more positive than those when no information is provided. Information also facilitates consumer's reinterpretation of the wait, that is, cognitive reappraisal effect. According to Folkman (1984), cognitive reappraisal is an effective coping strategy when there is no good physical means to change or escape from the situation. Research shows that when line management at Disney world provided waiting patrons with information regarding the durations of their waits, it reduced wait uncertainty (Leerhsen 1989). Signs were posted at intervals in the queue, stating the expected time until services commenced. However, though this intervention seemed to work for Disney, it did not affect anxiety reported in an experimental study conducted by Katz, Larson and Larson (1991). Their findings indicated that the stress levels of queue waiters with access to wait time indicators did not differ from those with no access to these indicators. The authors suggested that because some customer's waits ended up being longer than what the sign had indicated, it lessened any positive effects of the prenotification. Therefore, if service providers do notify customers of a delay duration in advance of the delay, care must be taken not to underestimate the delay duration. Similarly an experimental study in Canada looked at how students responded to waits while conducting transactions by computer- a situation in which there are no visual clues to the probable wait time. The study

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examined dissatisfaction with waits of 5, 10, or 15 minutes under three conditions: 1) the student subjects were told nothing 2) they were told how long the wait was likely, 3) they were told what their place in line was. The results suggested that for a 5 minute wait; it was not necessary to provide information to improve satisfaction. For waits of 10-15 minutes, offering information appeared to improve customer's evaluation of service. However, for longer waits researchers suggested it may be more positive to let people know their place in line, rather than to tell them how much time remains before they will be served. Maister (1985) recommends overestimating the duration, suggesting that by setting a 'long wait' expectation and then serving them earlier than the expected time, leads to the customers being more happier and satisfied. However, Katz, Larson and Larson (1991), hold the view that setting an initial expectation of a long wait may resulting customer balking- leaving the service because the estimated wait time is too long.

2.7)   Previous studies on Delay

1.   The relationship between waiting time delays and customer satisfaction in supermarkets was studied by Gail Tom and Scott Lucey in 1995.Customers report a great dislike for waiting in grocery checkout lines (Caballero et al; 1985). Some consumers' dislike waiting in line so much that they hire people to wait for them instead (Geist, 1984; Guirl, 1986). Research studies indicating a negative relationship between long waiting time and consumer satisfaction (Chebat and Filiatrault, 1993;Katz el el., 1991) demanded that management be ever alert to strategies to decrease waiting time in line. Operational techniques such as providing more checkout personnel and more equipment to decrease customer waiting time in line could be instituted by the management, However, there may be certain limitations to

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this technique in terms of lack of physical space. An alternative to operations management is perception management (Dube-Rioux et al., 1988;Katz et al., 1991), which attempted to reduce the customer perception of the length of the waiting time in line without actually affecting the customer's actual waiting in line (Larson, 1987).

Purpose :

The purpose of the study was to determine whether customer's perception of the causes for longer than expected or shorter than expected waits affected their satisfaction with the store personnel and the store. The causes for the shorter or longer than expected waits could be under the store's control. In addition, the causes for the waiting times could be stable events or unstable, unpredictable occurrences. Therefore, the cause of the study was to determine the extent to which customer satisfaction was affected by their perception of the cause and stability of their longer or shorter than expected waits.

Concepts:

Consumer attributions for lengths of their waiting times in line may be numerous and varies and they have common underlying dimensions (Weiner, 1985). Causes of the wait can be perceived as being under the store's control or as being due to factors beyond the store's control (Folkes, 1984; Folkes et al., 1987; Taylor, 1994, 1995). Causes differ, not only by the degree of control, but also by an orthogonal dimension, the degree of stability (Folkes, 1984; Folkes et al., 1987; Taylor, 1994). Causes, which are relatively permanent, are stable; in contrast, causes, which are temporary or fluctuating, are unstable.

Customer perception of time may differ from the objective, measured time (Hirsch et al., 1950; Hornik, 1984; Barnett and Saponaro, 1985). There may be situations in which the wait seems to be much longer or shorter than it actually is. Customer's

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perception of the waiting time may also be affected by their expectation for the length of wait. Research on waiting time indicates that numerous factors affect perceived time and cause consumers to experience it as longer or shorter than objective time (Davis and Vollman, 1990; Haynes, 1990). Moreover, perceived time, more than objective time seems to form the basis of the reality for consumer experience and behavior (Barnett and Saponaro, 1985).

Methodology:

Questions designed for the research were addressed using experimental design. A laboratory experiment was conducted rather than one in a field setting because of the difficulty in manipulating the three independent variables: shorter than expected versus longer than expected waits; store versus non- store variables and stable versus unstable events, in a field setting. Participants were presented with one of the eight written scenarios in a supermarket setting and an accompanying video, which depicted the written scenario. The decision to test the hypothesis in a supermarket setting was based on the belief that majority of the consumers visit the supermarket periodically.

Procedure:

A total of eight groups of approximately 30 each were presented with a written scenario and accompanying video, representing one of the eight conditions. The participants were asked to answer a five- item questionnaire. The first three questions were manipulation checks to measure the effectiveness of the disconfirmation, control and stability manipulations, and the last two questions were designed to measure satisfaction with the service and with the store.

Findings:

The findings from the study showed that the respondents were more satisfied with the situations where the wait was shorter than expected than in situations where the wait was longer than expected. The results of the study revealed the significance of consumer attribution where consumers became dissatisfied in situations where the wait was longer than expected, only when they could lay blame on constantly occurring store controlled factors.

2.   Taylor (1994) studied the relationship between delays, evaluation of punctuality and overall service evaluation, in respect to delayed airline passengers.

Purpose:

Her research focused on the Affective consequences of a pre- service delay and how the affective consequences mediate the relationship waiting time and service evaluation.

Concepts:

Airline flights frequently are delayed, often for reasons beyond the control of the airline. In the United States in 1991, flights averaged a 34- minute delay prior to boarding; and over 300 flights a day were delayed (Air Transport Association 1992). Many factors, such as the overload of traffic in the hub cities, combined with numerous other problems, such a poor weather conditions and mechanical difficulties, contributed to this large number of delays.

Methodology:

For the following research, data was collected from passengers on delayed flights originating out of a large Western city over a three-month period. Selection of flights within this set was based on the occurrence of pre- boarding delays on a particular day and with the intention of sampling both long and short flights across all times of the

day. Flights were sampled only if the preboarding delay was at least 30 minutes in duration and flights were not delayed subsequent to boarding.

Procedure:

The respondents (Passengers of 16 years of age or older) were given two sets of questionnaires- the pre boarding questionnaire dealing with the wait experience and the service evaluation questionnaire, and they were told that the questionnaire involved two parts. Care was taken to ensure that subjects were sampled from all sections of the waiting area, with equal numbers approached in each area. They were asked to complete the first questionnaire, while they were waiting to board the flight and the second questionnaire to take and fill with them on board, which would be filled by them in the plane just before descending to their destination. The flight attendants would collect the completed questionnaires and hand them over to the airline's marketing research division by mail, from where it would be picked up by the researcher. Data was collected from 287 delayed passengers from 18 different flights. A path analysis using LISREL VII (Joreskog and Sorbom 1989) was used, and a covariance matrix was used in testing the model.

Findings:

Results indicated that delays do affect evaluation of service. Delay's significantly affected feelings of anger and uncertainty as hypothesized. In addition, it was found that the delay's impact on both punctuality and overall evaluation was mediated by negative affective reactions to the wait. These affective reactions in turn negatively affect the service evaluations. It was also found that delay had only an indirect relationship with punctuality, which was mediated by anger. The degree to which service provider is perceived to have control and the degree to which the delayed customers time is filled will also indirectly affect service evaluations.

3. Taylor (1995) studied the effects of Filled waiting time and service provider control over delay on evaluations of service. The possibility for service provider control and filled time to interact in their impact on service evaluations follows Bitner (1991), who suggested that the impact on service evaluations of process components of the service marketing mix can be influenced by attribution. In this case, whether or not the waiting customers time is filled could be considered an element of the process component of the extended services marketing mix. It was expected that service evaluations would be lowest when the service provider is perceived to have control over the delay and the delayed customer's time is not filled while waiting.

Purpose:

To study the effects of Filled waiting time and service provider control over delay on evaluations of service.

Concepts:

The fact that customers' attributions affect evaluations of a service encounter is well recognized (Bitner, 1990). The focus of this article is on only one loci of attribution, the service provider and on varying levels of controllability. A service provider locus was selected because consumers have a strong tendency to blame the seller for product or service failures (Folkes, 1988; Folkes and Kotsos 1986; Richins 1895). In related researches, customers have been found to be more angry and less inclined to repurchase when they perceived the service provider had control over a product failure (Folkes, 1984). Similarily, how time is filled during the wait may affect service evaluations. Unfilled time allowed the waiting customer to focus on the delay and its impact on evaluations and it allows the customer to think about how much control the service provider has over the delay. By filling time, the customer's attention is focused on other activities so the wait is less salient. As a result, the wait's impact on

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service evaluations is lessened. Katz, Larson and Larson (1991) found that increasing the amount of distractions to queuing bank customers resulted in increased customer satisfaction. The possibility for service provider control and filled time to interact follows Bitner (1991), who suggested that the impact on service evaluation of process components of services marketing mix can be influenced by attribution. In this case, whether or not the waiting customers time is filled could be considered an element of the process component of the extended services marketing mix. It is expected that service evaluations will be lowest when the service provider is perceived to have a high degree of control over the delay and delayed customer's time is not filled while waiting. Similarly, service evaluations are expected to be highest when customer's waiting time is filled and the service provider is perceived to have low control over the delay.

Methodology

For this research, the respondents selected were customers of a student career counseling group called "career path". They were randomly assigned to one of the experimental or control conditions, in which they were delayed for 10 minutes, the reason for delay differing depending on the assigned service provider control treatment condition. After the delay, each subject worked on an interactive computerized career-counseling program called ' Career match'. After each subject finished working with the program, they met with the counselor to discuss the program output and completed a self-administered questionnaire evaluating 'Career Path' service.

Overall measures and performance measures of SERVQUAL (Zeithaml, Parasuraman and Berry 1990) were used to assess service performance evaluations. In addition, a number of single item measures were used as manipulation checks. In addition, a two

by three ANOVA was used to assess whether or not the manipulations had any impact on the negative affect reported by the subjects.

Findings:

The results determined that delays lower customers overall evaluations of service and of tangible and reliability attributes of the service in particular. When delayed, performance evaluations were affected by whether the service provider was perceived to have control over waiting time and whether the customer's time was filled. Overall, performance evaluations and performance evaluations of tangibility, and responsiveness were highest when perceived service provider control was low and the waiting customers time was filled. These evaluations were lowest when perceived service provider control was high and waiting time was not filled.

4. 'What to tell Consumers in waits of different lengths: An integrative model of service evaluation', was studied by Michael K. Hui and David K. Tse in April 1996.

Purpose

The authors conducted an experimental study to examine the impact of two types of waiting information- Waiting- duration –information and Queuing information on consumers' reaction to waits of different lengths. They tested a model that included three different constructs – perceived waiting duration, acceptability to the wait, and affective response to a wait – as mediators between waiting information and service evaluation.

Concepts

Waiting is a pivotal factor in consumer's evaluation of many services. To reduce the negative effects of waiting, service organizations can either provide faster service by modifying their service delivery system, or can take actions to reduce the negative

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effects without actually changing the real waiting duration. Among other strategies, providing *waiting duration information*, that is information about the expected length of the delay, or *queuing information*, that is, a consumer's position in the queue with continuous updates, have been used widely to reduce customer dissatisfaction with waiting (Larson 1987). Three critical issues pertaining to the impact of *waiting duration information* and *queuing information* on consumer's reactions to waiting are addressed:

1. The identification of underlying behavioral mechanisms through which the two types of waiting information affect service evaluation

2. Assessing the effectiveness of the two types of waiting information in waits of different lengths.

3. Constructs that are implied by the three behavioral mechanisms as being key mediators between the two types of waiting information and service evaluations.

Procedure

The respondents consisted of 135 students who were recruited at a Canadian university; the sample was distributed equally between women, and men. The subjects were told that they would be participating in a study testing ' a new computerized course registration service' that the university was planning on using in the future. Each subject was required to register for four different courses and was provided a standard keyboard and a monochrome monitor that was connected to an IBM personal computer. The course was user friendly and the respondents did not have difficulty following instructions given by the computer. Once the course registration was completed, the subject was asked to fill out a questionnaire requesting their opinion on the new service.

Methodology

The questionnaire consisted of two different measures being EVAL 1(asking respondents to express the extent of their preference for the new service) and EVAL2 (asking respondents their attitude towards the new service). Two measures were concerned with the subject's affective response to the wit. The first measure required the respondent to use an eight-point scale to express how much the wait had made him irritated or angry, while the second measure consisted of four semantic differential items extracted from Mehrabian and Russell's (1974) scale of pleasure. The questionnaire also included two measures concerning the acceptability of the wait to the respondent and the extent to which the respondent agreed or disagreed that the reported waiting time was too long.

Findings

Results showed that though acceptability of the wait and affective responses to the wait had a significant mediating impact on the relationship between waiting information and service evaluation, perceived waiting duration did not. Moreover, neither type of information had significant impact in the short- wait condition, where as waiting duration information had a greater impact than queuing information in the intermediate wait condition and a smaller impact in the long- wait condition.

5. Clemmer and Schneider (1989) and Katz; Larson and Larson (1991) empirically investigated customer's evaluation of service after queuing for service in a bank. Consistent with their findings, both studies found a negative relationship between time spent waiting and service quality evaluations.

CHAPTER III

RESEARCH FRAMEWORK

Before proceeding in this chapter, it would be worthwhile to recall that the objective of this research is to study the effect of the various components of delay, on the evaluation of service offered at Bumrungrad Hospital. The research was conducted at Bumrungrad Hospital, in which the various components of wait experience were measured to determine if there exists any relationship between delays and overall evaluation of service. Distributing questionnaires, to patients who visited the hospital and experienced a delay while receiving services, did this.

3.1) Conceptual Framework

Presented in Figure 3.1, is the conceptual framework, which identifies the Independent and the Dependent variables. Included in the Independent variables are the various components of wait experience: delay in service, stability of the delay cause, service provider control over delay, uncertainty, filled time and indication about progress on the delay. The dependent variable includes the Evaluation of services. The model as shown, indicates the relationship and comparison of this research.

INDEPENDENT VARIABLES

DEPENDENT VARIABLE
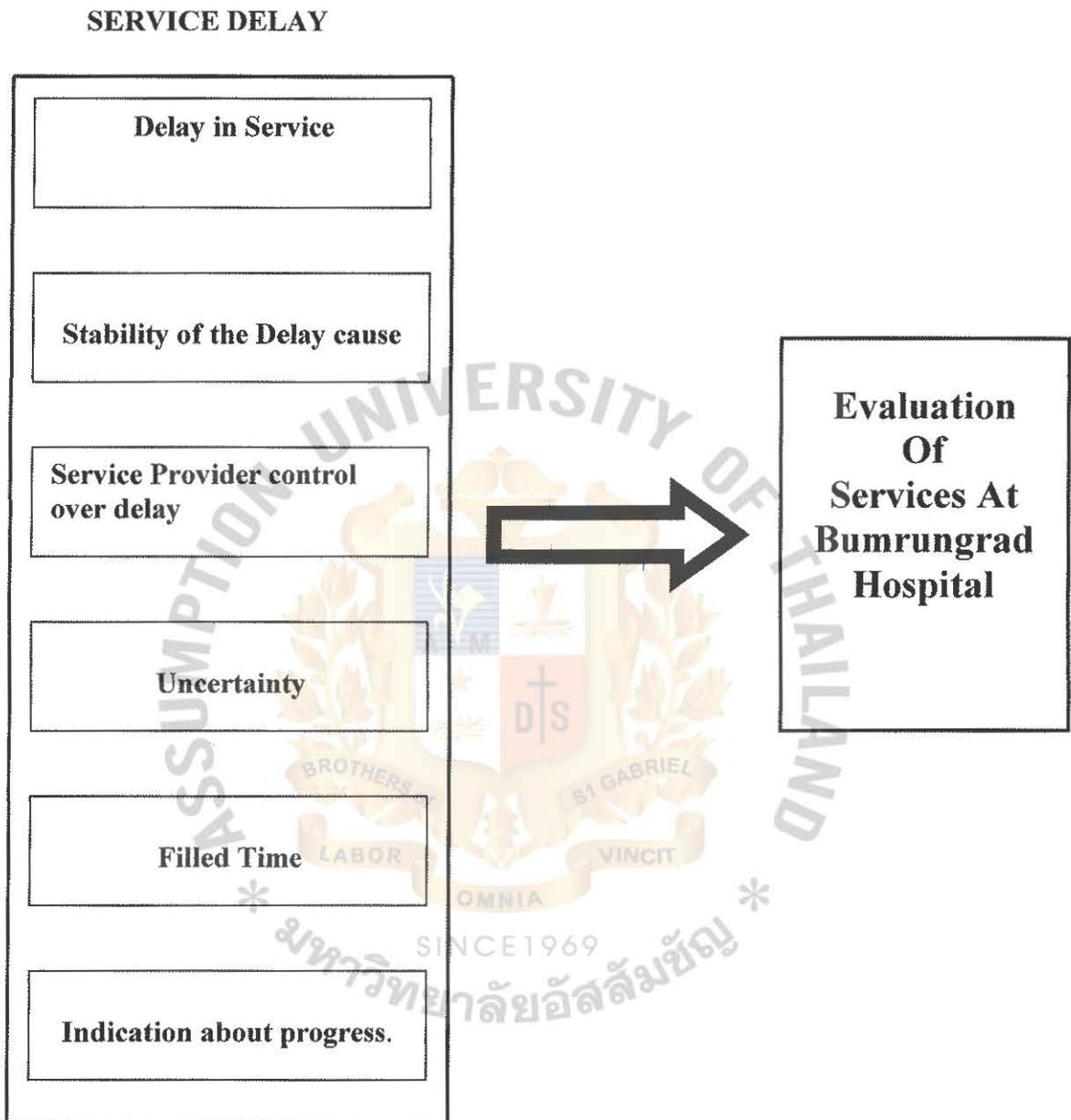
SERVICE DELAY

Figure 3.1 *Conceptual Frameworks.*

Source: Waiting for service: Relationship between delays and Evaluations of Service, Journal of Marketing Volume. 58 (April 1994), 56-69.

3.2) Definitions of the Variables:

Delay in service: It is a condition where service is not delivered in a prompt and timely manner, causing customers to wait for the desired service. It is referred to as an obstacle to services (Taylor, 1994).

Evaluation of services: To judge or assess the worth of serving customers. In this research, the researcher will investigate whether there is any relationship between the various components of delay and overall evaluation of services (Taylor, 1994).

Filled time: The activities performed while waiting for service. Time may be vacant or occupied depending on the activities of the customer. By filling time, the customer's mental or physical activity is increased so less attention is paid to the wait itself (Gilliland, Hofeld and Eckstrand 1946).

Indication about progress: Receiving regular feedback as to the length of time of the delay. Information increases the predictability of a situation (Averill 1973).

Stability of the delay cause: The degree to which a cause of the delay is seen as being relatively permanent and stable, or alternatively, temporary and fluctuating (Folkes, 1988).

Service provider control over delay: The degree to which the cause of the delay was under volitional control or choice. It is believed that customers will be angry

when they believe that the service provider had control over product failure (Weiner, 1986).

Uncertainty: A state of not being able to accurately predict or know, generally associated with feelings of uneasiness and anxiety. The stability of the delay cause could also affect the customers' uncertainty. This is because causal stability affects expectancies; attributions to unstable cause results in uncertainty about future outcomes (Folkes 1984; Weiner 1980).

3.3) Research hypothesis:

A hypothesis is a statement either about the value of a single population characteristic or about the value of several population characteristics. Hypothesis testing is a method for using sample data to describe between two competing claims (hypothesis) about a population characteristic (Devore, 1997). The hypothesis statements as shown below are explanation for certain behaviors that will occur in this research.

In this research there are six hypotheses, which attempt to answer, if there exists any relationship, between the various components of delay and evaluation of services.

Ho_1: There is no relationship between *delay in service* and evaluation of services.
Ha_1: There is a relationship between *delay in service* and evaluation of services.

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Ho₂: There is no relationship between *Stability of the delay cause* and evaluation of services.

Ha₂: There is a relationship between *Stability of the delay cause* and evaluation of services.

Ho₃: There is no relationship between *Service provider control over delay* and evaluation of services.

Ha₃: There is a relationship between *Service provider control over delay* and evaluation of services.

Ho₄: There is no relationship between *Uncertainty* and evaluation of services.

Ha₄: There is a relationship between *Uncertainty* and evaluation of services.

Ho₅: There is no relationship between *Filled time* and evaluation of services.

Ha₅ : There is a relationship between *Filled time* and evaluation of services.

Ho₆: There is no relationship between *Indication about progress* and evaluation of services.

Ha₆: There is a relationship between *Indication about progress* and evaluation of services.

3.3.1) Expected Outcomes

1. Regarding the first hypothesis it is expected that we will reject Ho and accept Ha. That is, there is a relationship between Expected/Unexpected delay and evaluation of services. Previous studies indicate a negative relationship

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between delays and overall evaluation (Parasuraman, Zeithaml and Berry 1985). Therefore, it can be said that there would be a relationship between expectation of delay and evaluation of service.

2. For the second hypothesis too, we expect to reject Ho and accept Ha, indicating there is a relationship between stability of the delay cause and evaluation of services. According to Weiner's model of attribution affect (1985), stability of the cause should increase anger. This has been empirically supported by Weiner, Graham and Chandler (1982) who found higher levels of anger with stable causes than with temporary causes.

3. Empirical research also indicates that a perceived service provider control over the delay resulted in greater anger, a finding consistent with Folke's (1984) study of attributions and product failure. That is, the more control the service provider was perceived to have over the delay, the more anger the delayed customer felt. In a related research, customers were found to be more angry and less inclined to repurchase when they perceived the service provider had control over the failed product (Folkes 1984). Bitner (1990) found that perceived control over service failures resulted in lower evaluations of service. Therefore, it can be expected that for the third hypothesis we will reject Ho and accept Ha. This means that there is a relationship between service provider control over the delay and evaluation of service.

4. Maister (1985) suggested that uncertainty involved in waiting could be unpleasant. Previous research in service literature has also shown that

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consumers have an aversive reaction to not knowing how long they will have to wait (Leclare, Schmitt and Dube 1995; Taylor, 1994) and this aversive reaction influences the evaluation of service encounter. From empirical evidence, it was quite clear that respondents were not comfortable with uncertainty. From this, it can be said that for the fourth hypothesis too, we expect to reject Ho and accept Ha, which indicates that there is a relationship between uncertainty and Evaluation of service.

5. Research suggests that filled waiting time is more pleasant than unfilled time (e.g. Katz, Larson and Larson 1991; Larson 1987; Maister 1985). Assessing the impact of filled time on service evaluation is important because this variable can be easily manipulated and controlled by service providers. For example, Taylor (1994) found that when passengers reported that their time was filled during a delay, they were less angry and consequently gave a higher service evaluation than delayed airline passengers who did not fill their time. Therefore, it is safe to say that for the fifth hypothesis we expect to reject Ho and accept Ha, which indicates that there is a relationship between filled time and evaluation of service.

6. Larson (1987) contended that customers feel better when they are provided with some feedback or information, that enables them to estimate their waiting time, which in turn also reduces uncertainty. If no information is provided, it becomes demoralizing for the customer, because uncertainty does not allow the customer the power to deal with the delay (Maister 1985; Schwartz 1975). Research shows that when information regarding the duration of the waits was

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provided at Disney world to the waiting patrons, it reduced wait uncertainty (Leerhsen 1989), and led to higher service evaluations. In this way, it can be said that for the sixth hypothesis, we again expect to accept Ha and reject Ho, indicating that there is a relationship between Indication about progress and Evaluation of service.

3.4) Operational Definitions and Measurement Techniques

Variables	Operational Definition	Operationalisation	Measurement Scale.
Evaluation Of Service	To judge or assess worth of the act of serving customers.	Good Bad	Interval scale
Delay in service	It refers to the fact the delay was expected or unexpected, prior to receiving services.	Expected Unexpected	Interval Scale
Stability of the delay cause	It refers to the degree to which the cause of the delay is seen as being relatively permanent and stable, or alternatively, temporary and fluctuating.	Stable Unstable	Interval Scale
Service provider control over delay	It refers to the degree to which the cause of the delay was perceived to be controllable or uncontrollable.	Controllable Uncontrollable	Interval Scale
Uncertainty	A state of not being able to accurately know or predict.	Certain Uncertain	Interval Scale
Filled time	It refers to the activities performed while waiting for service.	Filled time Vacant time	Interval Scale
Indication about progress	Receiving regular feedback as to the length of time of the delay.	Receive feedback. No feedback.	Interval Scale

CHAPTER IV

RESEARCH METHODOLOGY.

Introduction

The research design is the plan and structure of the investigation, which is conceived in order to obtain answers to research questions. It is the overall scheme of the research. The research design constitutes the blueprint for the collection, measurement and analysis of data.

Study for this research was conducted to find the effects of a service delay on the evaluation of services provided at Bumrungrad Hospital. In addition, it also described the various dimensions of waiting experience due to delayed service. Descriptive research was used to describe characteristics of a population or phenomenon in a quantitative aspect.

4.1) Research Design: Sample Survey.

This research was to find the effect of a service delay on the overall evaluation of services provided at Bumrungrad hospital. The researcher used the survey method as a means to collect data from respondents. This is defined as a method of primary data collection in which information is gathered by communicating with a representative sample of people (Zikhmund, 1997). A structured questionnaire was used as a research instrument for this research. There are six dimensions of wait experience that were studied being: delay in service; nature of the delay, degree of controllability; uncertainty; filled time; and indication about progress on the delay.

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4.2) Respondents and Sampling Procedure.

4.2.1) Target Population

Target population is the specific, complete group relevant to the research project (Zikmund, 1997). It is the collection of elements/ objects that possess the information the researcher seeks and about which the researcher will make inferences. The target population in this study were the patients who visited and experienced a delay in receiving services at Bumrungrad Hospital; during the month of August, 2003. There are approximately 9,500 patients per month.

4.2.2) Sampling Element.

Sampling element is an object that possesses the information sought by the researcher and about which inferences are to be made. In survey research, the element is usually the respondents (Zikmund, 1997). In this research, the sampling elements were the patients, who visited and experienced a delay in receiving services, during the research period for the month of August 2003, at Bumrungrad Hospital.

4.2.3) Sampling Unit.

Sampling unit is a place where sample element is subject to selection in the sample (Zikmund, 1997). It is the basic unit containing the elements of the population to be sampled. In this research, the sampling unit is Bumrungrad Hospital, Bangkok.

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4.2.4) Sampling Size.

Sample size refers to the number of elements to be included in this study. Prior studies can serve as a guide for estimation sample sizes. In marketing research studies, the minimum sizes are used as shown in table 4.1. These sample sizes have been determined based on experience and can serve as rough guidelines, particularly when non-probability sampling techniques are used (Malhotra, 2002).

According to theory of Malhotra, the researcher subjectively determined sample sizes as 200 samples. This figure is appropriate for the time and budget affordable for the study.

For this research, the sample size used is 200 samples.

Table 4.1: *Sample sizes used in marketing research studies with large populations.*

Type of study	Minimum Size	Typical Range
Problem identification research (e.g., market potential)	500	1,000-2,500
Problem solving research (e.g., pricing)	200	300-500
Product tests	200	300-500
Test marketing studies	200	300-500

Source: Naresh K. Malhotra (2002). Basic Marketing Research, p. 350-351

4.2.5) Sampling Method- Non- Probability Sampling.

For this research, the sample design is Non- probability sampling. Non- probability sampling is defined as a sampling technique in which units of the sample are selected based on personal judgment or convenience; the probability of any particular member of the population being chosen is unknown (Zikmund, 1997). The population does not have any probabilities attached to their being chosen as sample subjects in that samples

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Non-probability sampling relies on the personal judgment of the researcher rather than chance in selecting sample elements. The researcher may select the sample arbitrarily or based on convenience, or make a conscious decision about which elements to include in the sample.

Convenience sampling and Judgmental sampling are the non-probability sampling designs that are being used in this research. As the name implies, convenience sampling involves collecting information (Sekaran, 1992). It is defined as the sampling procedure of obtaining those people or units that are most conveniently avaible (Zikmund, 1997). It involves getting anyone who you can to take part in your study. In a convenience sample the researcher simply requests volunteers from a group of available people who meet the general requirements of the study. Judgemental sampling is a form of convenience sampling in which the population elements are selected based on the researchers judgement. The researcher chose those sampling elements that he thought was best representative of the population of interest.

4.3) Research Instrument

4.3.1) Research Instrument – Semi- Structured Questionnaire.

The researcher used questionnaire as an instrument of this research. It is a semi structured sequence of questions designed to draw out facts and opinions and which provides a vehicle for recording data (Hague; Jackson, 1996). It is a list of questions that pre specified the set of response alternatives and the response format, except for the question asking the respondents to briefly describe the most serious delay encountered by them. The main advantage of this kind of a questionnaire is that the results were collected in a complete form within a short period. This approach is easy to be

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interpreted by the computer (Zikmund, 2000). Due to the limited time in distributing the questionnaires, this type of a questionnaire is required.

4.3.2) Pre-test (Pilot Testing).

The researcher had pre- tested data collection tool by distributing questionnaires to 30 patients who came to receive services from Bumrungrad Hospital, and who experienced a delay while receiving these services. The respondents were approached after they had got themselves treated and were ready to leave. The respondents were able to understand the questionnaire without any difficulty and mark their appropriate responses. Pearson's correlation coefficient was used to test each of the hypotheses.

4.3.3) Data Collection Method:

Data was collected from Bumrungrad Hospital during the period of August 2003.The researcher used semi-structured questionnaires to measure the dimensions of delay and service evaluations. The respondents comprised of all the patients who were visiting the hospital and experienced a delay while receiving services. The researcher went to collect data every day of the week, except on weekends, as there were fewer patients on weekends. This was done until the desired number of samples (200 samples) was collected.

4.4) Statistical Treatment of Data.

Once the necessary data was collected, the data were analysed and summarised in a readable and easily interpretable form. The SPSS (Statistical Package for Social sciences) was utilized to summarize the data where needed. After collecting the data form of the questionnaire, the data were coded into the symbolic form that is used in the

SPSS software. The researcher used the SPSS software for windows for data presentation. The form of data presentation from these procedures was also presented in an easily interpretable form.

The research used Descriptive analysis, which refers to the transformation of raw data into a form that made them easy to understand and interpret. Calculation of averages, frequency distributions and percentage distributions are the most common ways to summarize data (Aaker; Kumar; Day, 1998).

Statistical treatment of data applied in the analysis include Pearson's correlation coefficient (r), which was originally proposed by Karl Pearson. It is the most widely used statistic that summarizes the strength and direction of association between two metric (interval or ratio scaled) variables, say X and Y. It is an index used to determine whether a linear or straight-line relationship exists between X and Y. It indicates the degree to which the variation in one variable, X, is related to the variation in another variable, Y. For a sample of n observations, X and Y, the product moment correlation, r, can be calculated as follows:

$$r = \frac{\sum_{i=1}^{n}(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \bar{X})\sum_{i=1}^{n}(Y_i - \bar{Y})^2}}$$

Pearson's r-values can range between −1.00 to +1.00. A correlation coefficient of +1.00 signifies a perfect positive relationship, while −1.00 shows a perfect negative relationship. The smallest correlation is zero. There are procedures, based on r for making inferences about the population correlation coefficient.

CHAPTER 5

DATA ANALYSIS

This chapter is proposed to focus on the data analysis of this research study, which includes Descriptive statistics and Pearson's correlation coefficient to test the hypothesis between dependent and independent variables.

5.1) Descriptive Statistics

Descriptive statistics was used to describe or summarize information about a population or sample (Zikmund, 1997). It is a branch of statistics that provides researchers with summary for data in their samples. The objective of descriptive statistics was to provide summary measures of data contained in all elements of a sample. The measure of central tendency and measures of description are usually concerned (Kinnear, 1991).

Major types of descriptive statistics are measures of central tendency, measures of variability, measures of relationship and measures of relative position. Measures of central tendency are used to determine the typical or average score of group of figures; measures of variability indicate how spread a group of figures are; measures of relationship indicate to what degree two sets of figures are related; and measures of relative position describe a subject's performance compared to the performance of all other subjects (Gay and Diehl, 1996).

In this research study descriptive statistics was used to summarize the components of delay being: delay in service, stability of the delay cause, service provider control over delay, uncertainty, filled time and indication about progress on the delay.

1 Delay in Service

DELAY_SER

N	Valid	200
	Missing	7
Mode		5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly unexpected delay	20	9.7	10.0	10.0
	Unexpected	43	20.8	21.5	31.5
	Somewhat unexpected	28	13.5	14.0	45.5
	Neutral	42	20.3	21.0	66.5
	Somewhat expected	46	22.2	23.0	89.5
	Expected	13	6.3	6.5	96.0
	Strongly expected delay	8	3.9	4.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.1 Descriptive Statistics: Delay in service.

From Table 5.1, it was found that 10.0% of the respondents strongly unexpected a delay, 21.5% unexpected a delay, 14.0% of the respondents somewhat unexpected a delay. 21.0% of the respondents were however neutral towards any expectation about the delay, while 23.0% somewhat expected a delay, 6.5% expected a delay and 4.0% of the respondents strongly expected a delay.

The most common response was that of 23.0% or 46 respondents, who somewhat expected a delay.

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2. Stability of the Delay Cause

Statistics

DELAY_CO

N	Valid	200
	Missing	7
Mode		6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly unstable	7	3.4	3.5	3.5
	Unstable	22	10.6	11.0	14.5
	Somewhat unstable	15	7.2	7.5	22.0
	Neutral	14	6.8	7.0	29.0
	Somewhat stable	61	29.5	30.5	59.5
	Stable	62	30.0	31.0	90.5
	Strongly stable	19	9.2	9.5	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.2 Descriptive Statistics: Stability of the delay cause.

From Table 5.2, the majority of the respondents who perceived the delay to be stable were 31.0% or 62 respondents, which was also the most commonly occurring response.

In addition, 3.5% of the respondents perceived the delay as strongly unstable, 11.0% perceived it to be unstable, 7.55 thought the delay to be somewhat unstable, 7.0% were neutral, 30.5% perceived the delay to be somewhat stable and 9.5% thought that the delay experienced was strongly a stable delay.

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3. Service Provider Control over delay

Statistics

DELAY_CN

N	Valid	200
	Missing	7
Mode		6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly could not have controlled	4	1.9	2.0	2.0
	Could not have controlled	12	5.8	6.0	8.0
	Somewhat could not have controlled	24	11.6	12.0	20.0
	Neutral	35	16.9	17.5	37.5
	Somewhat could have controlled	34	16.4	17.0	54.5
	Could have controlled	63	30.4	31.5	86.0
	Strongly could have controlled	28	13.5	14.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.3 Descriptive Statistics: Service provider control over delay.

From table 5.3, 2.0% of the respondents felt strongly that the delay could not have been controlled, 6.0% felt that the delay could not have been controlled, 12% felt that somewhat the delay could not have been controlled. 17.5% of the respondents were neutral, while 17.0%felt that somewhat the delay could have been controlled, 31.5% felt that the delay could have been controlled, while 14.0% of the respondents felt strongly that the delay could have been controlled.

The most commonly occurring response was of 31.5% or 63 respondents who felt that the delay could have been controlled.

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4. Uncertainty

Statistics

DELAY_DU

N	Valid	200
	Missing	7
Mode		6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly uncertain	31	15.0	15.5	15.5
	Uncertain	30	14.5	15.0	30.5
	Somewhat uncertain	36	17.4	18.0	48.5
	Neutral	24	11.6	12.0	60.5
	Somewhat certain	35	16.9	17.5	78.0
	Certain	40	19.3	20.0	98.0
	Strongly certain	4	1.9	2.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.4 Descriptive Statistics: Uncertainty.

From Table 5.4, 20.0% of the respondents were certain about the amount of time they would have to wait for, 18.0% were somewhat uncertain, 17.5% were somewhat certain regarding the length of the delay and 15.5% of the respondents felt strongly uncertain. In addition, 15.0% of the respondents were uncertain about the length of the delay while 12.0% were neutral. Also only 2.0% of the respondents felt strongly certain about the length of the wait.

The most commonly occurring response was of 40 or 20.0% of the respondents who felt certain about the amount of time they had to wait for.

5. Filled Time

DELAY_FT

N	Valid	200
	Missing	7
Mode		5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly unoccupied	10	4.8	5.0	5.0
	Unoccupied	19	9.2	9.5	14.5
	Somewhat unoccupied	36	17.4	18.0	32.5
	Neutral	37	17.9	18.5	51.0
	Somewhat occupied	47	22.7	23.5	74.5
	Occupied	45	21.7	22.5	97.0
	Strongly occupied	6	2.9	3.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.5 Descriptive Statistics: Filled time.

From Table 5.5, the largest number was 23.5% or 47 respondents who felt somewhat occupied during the duration of their wait, followed by 22.5% who were occupied, 18.5% who were neutral and 18.0% who felt somewhat unoccupied during the wait. In addition, 9.5% of the respondents felt unoccupied, 5.0% felt strongly unoccupied and 3.0% of the respondents felt strongly occupied.

6. Indication about progress

Statistics

DELAY_PR

N	Valid	200
	Missing	7
Mode		4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly receive no feedback	10	4.8	5.0	5.0
	No feedback	30	14.5	15.0	20.0
	Somewhat no feedback	53	25.6	26.5	46.5
	Neutral	57	27.5	28.5	75.0
	Somewhat did receive feedback	39	18.8	19.5	94.5
	Received feedback	9	4.3	4.5	99.0
	Strongly received feedback	2	1.0	1.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.6 Descriptive Statistics: Indication about progress.

From Table 5.6, 5.0 % of the respondents, strongly received no feedback regarding the progress of the delay, 15.0% received no feedback, 26.5% somewhat received no feedback while 28.5% were neutral. In addition, 19.5% of the respondents felt that somewhat they received some feedback, 4.5% received feedback while only 1.0 % of the respondents felt strongly that they received feedback on the progress of the delay. 28.5% or 57 respondents were neutral towards any indication about progress of the delay that they received, which was the most commonly occurring response.

7. Evaluation Of Service

EVALU_SE

N	Valid	200
	Missing	7
Mode		5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bad	9	4.3	4.5	4.5
	Somewhat bad	17	8.2	8.5	13.0
	Neutral	59	28.5	29.5	42.5
	Somewhat good	66	31.9	33.0	75.5
	Good	45	21.7	22.5	98.0
	Very good	4	1.9	2.0	100.0
	Total	200	96.6	100.0	
Missing	System	7	3.4		
Total		207	100.0		

Table 5.7 Descriptive Statistics: Service evaluation.

From Table 5.7, 4.5% of the respondents evaluate the service as bad, 8.5% thought it was somewhat bad, 29.5% were Neutral, 33.0% thought the service to be somewhat good. In addition, 22.5% of the respondents thought the service to be good, while only 2.0% of the respondents thought that the service was very good.

The most commonly occurring response was that of 66 or 33.0% of the respondents who evaluated the overall service provided at the hospital as somewhat good.

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5.2) Hypothesis Testing

Bivariate correlation test

Bivariate correlation is used to measure the strength of the association between numerical variables (Berenson and Levine, 1996). A correlation coefficient is a quantitative assessment of the strength of the relationship between the x and the y value in a set of (x, y) pairs (Devore, 1997).

The Pearson correlation coefficient is appropriate for variable measured at the interval level (Norusis, 1997).

The Pearson correlation coefficient is defined as follows:

$$r = \frac{\sum_{i=1}^{n}(X_i - \overline{X})(Y_i - \overline{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \overline{X})\sum_{i=1}^{n}(Y_i - \overline{Y})^2}}$$

Interpretation of correlation coefficient

In general, correlation coefficient ranges from r = +1.0 to r = -1.0. If all the points on a data set are on a straight line having positive slope, the value of the sample correlation coefficient is +1; that is a perfect positive relationship. On the other hand, if the points in a data set are on a straight line having negative slope, the value of the sample correlation coefficient is –1; that is a perfect negative relationship. When the value of the same correlation coefficient is equal to zero, it indicates no linear relationship between x and y and the values of x and y near zero indicates a weak linear relationship (Anderson, Sweeney and Williams, 1996).

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The Bivariate correlation test between each independent and the dependent variable

- Hypothesis test

Ho: p = 0

Ha: p ≠ 0

Ha: p ≠ 0, at 95% level of significance

- Pearson's Correlation Coefficient:

$$r = \frac{\sum_{i=1}^{n}(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \bar{X})\sum_{i=1}^{n}(Y_i - \bar{Y})^2}}$$

- Decision rule: Ho will be rejected if

  a) The significance level (P value) is less than 0.05 and

  b) The value of the correlation coefficient P is not equal to zero (0).
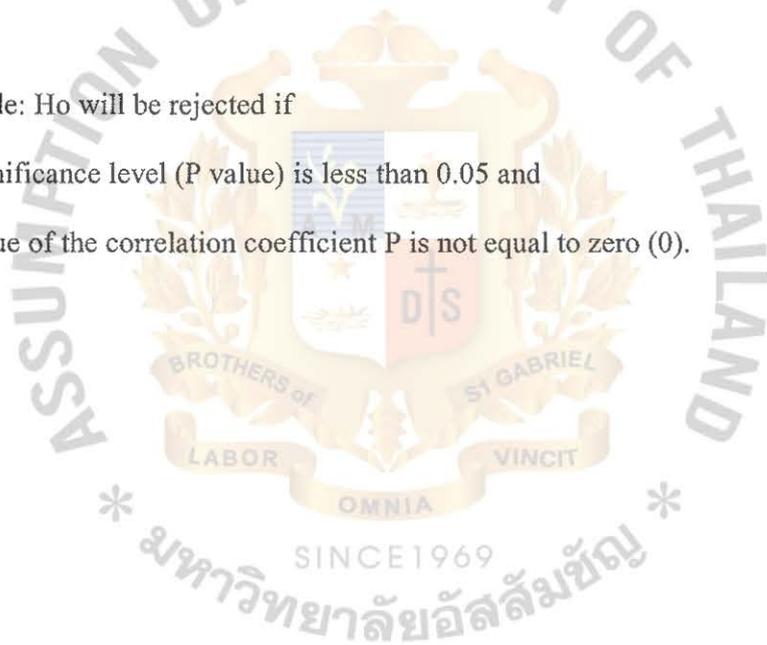
Hypothesis testing.

1. Delay in service and Evaluation of Service

The first hypothesis is conjectured to test the relationship of delay in service with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The result is portrayed in Table 5.8

Correlations

		EVALU_SE	DELAY_EX
EVALU_SE	Pearson Correlation	1	.449(**)
	Sig. (2-tailed)	.	.000
	N	200	200
DELAY_EX	Pearson Correlation	.449(**)	1
	Sig. (2-tailed)	.000	.
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 5.8 Nonparametic Correlation between delay in service and evaluation of service.

H1$_O$: There is no relationship between delay in service and evaluation of service.

H1a: Evaluation of service is associated with delay in service.

Alternatively, it can be stated in statistical terms as:

H1$_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

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a) The significance value (P value) is less than 0.025 (2-tailed test) and

b) The value of the correlation coefficient (p) is not equal to zero (0).

Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.000, which is less than 0.025, which means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to **0.449**, which means there is a **positive** relationship between delay in service and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

2. Stability of the Delay Cause and Evaluation of Service

The second hypothesis is conjectured to test the relationship of stability of the delay cause with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The result is portrayed in Table 5.9

Correlations

		EVALU_SE	DELAY_CO
EVALU_SE	Pearson Correlation	1	-.527(**)
	Sig. (2-tailed)	.	.000
	N	200	200
DELAY_CO	Pearson Correlation	-.527(**)	1
	Sig. (2-tailed)	.000	.
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 5.9: Nonparametic Correlation between stability of the delay cause and evaluation of service

H1$_O$: There is no relationship between stability of delay cause and evaluation of service.

H1a: Evaluation of service is associated with stability of the delay cause.

Alternatively, it can be stated in statistical terms as:

H1$_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

a)   The significance value (P value) is less than 0.025 (2-tailed test) and

b)   The value of the correlation coefficient (p) is not equal to zero (0).

Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.000, which is less than 0.025, it means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to – **0.527,** which means there is a **negative** relationship between stability of the delay cause and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

3. Service Provider Control over delay and Evaluation of Service

The third hypothesis is conjectured to test the relationship of service provider control over delay with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The result is portrayed in Table 5.10

Correlations

		EVALU_SE	DELAY_CN
EVALU_SE	Pearson Correlation	1	-.474(**)
	Sig. (2-tailed)	.	.000
	N	200	200
DELAY_CN	Pearson Correlation	-.474(**)	1
	Sig. (2-tailed)	.000	.
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 5.10: Nonparametic Correlation between service provider control over delay and evaluation of service.

H1$_O$: There is no relationship between service provider control over delay and evaluation of service.

H1a: Evaluation of service is associated with service provider control over delay.

Alternatively, it can be stated in statistical terms as:

H1$_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

a) The significance value (P value) is less than 0.025 (2-tailed test) and

b) The value of the correlation coefficient (p) is not equal to zero (0).

Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.000, which is less than 0.025, it means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to **–0.474**, which means there is a **negative** relationship between service provider control over delay and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

4. Uncertainty and Evaluation of Service

The fourth hypothesis is conjectured to test the relationship of uncertainty with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The result is portrayed in Table 5.11

Correlations

		DELAY_DU	EVALU_SE
DELAY_DU	Pearson Correlation	1	.284(**)
	Sig. (2-tailed)	.	.000
	N	200	200
EVALU_SE	Pearson Correlation	.284(**)	1
	Sig. (2-tailed)	.000	.
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 5.11: Nonparametric Correlation between uncertainty and evaluation of service.

H1$_O$: There is no relationship between uncertainty and evaluation of service.

H1a: Evaluation of service is associated with uncertainty.

Alternatively, it can be stated in statistical terms as:

H1$_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

a) The significance value (P value) is less than 0.025 (2-tailed test) and

b) The value of the correlation coefficient (p) is not equal to zero (0).

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Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.000, which is less than 0.025, it means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to **0.284**, which means there is a **positive** relationship between uncertainty and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

5. Filled time and Evaluation of Service

The fifth hypothesis is conjectured to test the relationship of filled time with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The result is portrayed in Table 5.12

Correlations

		EVALU_SE	DELAY_FT
EVALU_SE	Pearson Correlation	1	.285(**)
	Sig. (2-tailed)	.	.000
	N	200	200
DELAY_FT	Pearson Correlation	.285(**)	1
	Sig. (2-tailed)	.000	.
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Table 5.12: Nonparametic Correlation between filled time and evaluation of service.

H1$_O$: There is no relationship between filled time and evaluation of service.

H1a: Evaluation of service is associated with filled time.

Alternatively, it can be stated in statistical terms as:

H1$_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

a) The significance value (P value) is less than 0.025 (2-tailed test) and

b) The value of the correlation coefficient (p) is not equal to zero (0).

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Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.000, which is less than 0.025, it means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to **0.285,** which means there is a **positive** relationship between filled time and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

6. Indication about Progress and Evaluation of Service

The sixth hypothesis is conjectured to test the relationship of indication about progress with evaluation of service. With this hypothesis, the bivariate test is applied to test the association between two variables. The results is portrayed in the table 5.13

Correlations

		EVALU_SE	DELAY_PR
EVALU_SE	Pearson Correlation	1	.167(*)
	Sig. (2-tailed)	.	.018
	N	200	200
DELAY_PR	Pearson Correlation	.167(*)	1
	Sig. (2-tailed)	.018	.
	N	200	200

* Correlation is significant at the 0.05 level (2-tailed).

Table 5.13: Nonparametic Correlation between indication about progress and evaluation of service.

$H1_0$: There is no relationship between indication about progress and evaluation of service.

H1a: Evaluation of service is associated with indication about progress.

Alternatively, it can be stated in statistical terms as:

$H1_0$: p = 0

H1a: p $\neq$ 0, 95% level of significance (alpha = 0.05)

Ho will be rejected if:

a) The significance value (P value) is less than 0.025 (2-tailed test) and

b) The value of the correlation coefficient (p) is not equal to zero (0).

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Significance Level (2-tailed test)

The Bivariate shows the significance value of 0.018, which is less than 0.025, it means the null H1o will be rejected and the alternative H1a accepted.

Correlation coefficient (p) from the test, the value of the correlation coefficient is equal to **0.167**, which means there is a **positive** relationship between indication about progress and evaluation of service. It shows that the correlation is significant at the 99% confident level under 2- tailed test.

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CHAPTER 6

SUMMARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides the summary findings, conclusion of the research result for the study and recommendation and is summarized into three main sections. Section one includes the summary of the result from hypothesis testing. Section two will be the conclusions drawn from the research problem.

Section three includes recommendations and further research.

6.1) Summary findings of the results from hypothesis testing

Hypothesis	Statistics Test	Correlation Coefficient	Result
H1a: Delay in service is associated with evaluation of service	Bivariate Correlation	0.449 Positive relationship	Reject Ho
H2a: Stability of the delay cause is associated with evaluation of service	Bivariate Correlation	-0.527 Negative relationship	Reject Ho
H3a: Service provider control over delay is associated with evaluation of service	Bivariate Correlation	-0.474 Negative relationship	Reject Ho
H4a: Uncertainty is associated with evaluation of service	Bivariate Correlation	0.284 Positive relationship	Reject Ho
H5a: Filled Time is associated with evaluation of service	Bivariate Correlation	0.285 Positive relationship	Reject Ho
H6a: Indication about progress is associated with evaluation of service	Bivariate Correlation	0.167 Positive relationship	Reject Ho

Table 6.1 Summary of result from hypothesis testing

The result from bivariate test between each independent group and evaluation of service showed that each of the six hypotheses rejects Ho. So it can be concluded that Delay in service, Stability of the delay cause, Service provider control over delay, Uncertainty, Filled time and Indication about progress are associated with evaluation of service.

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6.2) Conclusions drawn from the research problem and objectives

This research study focused on studying the effect of the various components of delay on the evaluation of service offered at Bumrungrad Hospital. Therefore, this research attempted to find out what is the patient's (who visit the Bumrungrad Hospital) perception about the various components of delay, and in addition to that how they evaluated the services at the hospital. Lastly, an attempt had been made to study the components of delay and how they effect the evaluation of service at Bumrungrad Hospital.

From the analysis part, it can be concluded that the components of delay that will effect service evaluations are as follows:

- Delay in service;

- Stability of the delay cause;

- Service provider control over delay;

- Uncertainty;

- Filled time;

- Indication About Progress.

The main objectives of this research are as follows:

- To study patient's perception about various dimensions of delay at Bumrungrad Hospital.

- To study patient's evaluation of services at Bumrungrad Hospital.

- To study the relationship between service delay and evaluation of services.

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Conclusion

- Delay in service

Delay in service in relation to this research meant whether a delay in service was expected or unexpected prior to receiving services. That is, whether the patients expected that there would be a delay before they arrived at the hospital to get treatment for whatever cause or not. The results from the research showed that 23.0% of the respondents somewhat expected a delay prior to receiving services. Because a larger number of respondents expected to encounter a delay, therefore their level of anger would not be so much as those who came totally unprepared and encountered a delay.

The results also indicated a positive relationship between expectation of delay and evaluation of service at Bumrungrad hospital. This could be attributed to the fact that in some cases the delay was not for very long periods of time.

- Stability of the delay cause

Stability refers to the degree to which the cause is seen as relatively permanent and stable, or alternatively, temporary and fluctuating (Folkes, 1988). Causes that are relatively permanent are stable; in contrast, causes that are temporary or fluctuating are unstable. Folkes, Koletsky and Graham (1987) found that the stability of the delay cause was correlated significantly with customer anger; that is, the more common the delay cause was perceived to be, the angrier the customers became. Results from research indicate that 31.0% of the respondents perceived the cause of the delay to be as stable. This led to a negative relationship between the stability of the delay cause and evaluation of service at Bumrungrad Hospital.

- Service provider control over delay

Controllability refers to the degree to which the cause was under volitional control or choice. Folkes (1984) and Bitner (1990) found that higher levels of perceived control over product and service failures led to a lower evaluation of services. This also corroborates the correlational results of Folkes, Koletsky, and Graham (1987) and Taylor (1994) who found perceived service provider control over a delay to have a negative impact on service evaluations. These results follow logically from how these dimensions are defined: The more control the service provider has over the delay, the more the customer will perceive that the service is not being performed reliably or promptly, and the less trust the customer will have in the service provider. Customers were most angry when they believed that it was the service provider that has control over product failure; anger did not differ between customer controlled and customer uncontrolled product failure. The results of the research indicate that 31.5% of the respondents felt that the service provider could have controlled the delay. This led to a negative relationship between service provider control over delay and evaluation of service at Bumrungrad hospital.

- Uncertainty

Customers often do not know how long they will have to wait, and as a result, what the consequences of their wait will be. Thus, many customers will experience uncertainty and associated feelings of uneasiness and anxiety (Maister, 1985). As the delay is prolonged, uncertainty about the length of the wait and the personal consequences, increases. The waiting customer could also face uncertainty with respect to the cause of the delay. As the delay duration increases, the set of possible reasons for the delay increases, compounding the uncertainty.

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This is especially true when the reason for a long wait is understandable and beyond the service provider's control. When customers feel certain about the wait, it decreases the level of anger they feel. The results of the research indicate that 20.0% of the respondents were certain regarding the amount of time they had to wait. As a result, there exists a positive relationship between uncertainty and Evaluation of service at Bumrungrad hospital.

- Filled time

Filled time refers to the activities performed while waiting for service. Waiting is acknowledged as a negative experience (Dellaert and Kahn, 1999) since, while waiting, customers use up the most limited resource, time (Kumar, Kalwani, and Dada, 1997). Research has shown that time appears to pass more quickly or 'fly' when people occupy their time and even have fun (McGrath and Kelly, 1986; Larson, 1987; Davis and Heineke, 1994; Nie, 2000). Filling-waiting time during a delay may counteract the delay's negative impact by increasing the customer's cognitive activity during the wait because this distracts them from focusing on the wait itself (Kellaris and Kent 1992). The filling of time during the waiting process is said to make the customer less angry and uncertain. When the waiting customer does pay attention to the duration of the wait, may affect the reaction to the delay. By filling time, the customer's mental or physical activity is increased so that less attention is paid to the wait itself (Gilliland, Hofeld and Eckstrand, 1946). According to Larson (1987) and Maister (1985), the presence of 'empty' or unfilled time during a wait can affect the waiting experience negatively, because idleness can lead to boredom.

The results of the research indicate that 23.5% of the respondents were somewhat occupied followed by 22.5% of the respondents who were occupied during the

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waiting period. They passed their time by engaging in conversations, reading magazines etc. This led to a positive relationship between filled time and evaluation of service at Bumrungrad Hospital.

- Indication about Progress

Information increases the predictability of a situation (Averill 1973). When given any information about the wait, consumers perceive the wait as more predictable and controllable. Maister (1985) recommends overestimating the duration, suggesting that by setting a 'long wait' expectation and then serving them earlier than the expected time, leads to the customers being happier and more satisfied. However, Katz, Larson and Larson (1991), hold the view that setting an initial expectation of a long wait may result in customer balking- leaving the service because the estimated wait time is too long. The results of the research indicate that 19.5% of the respondents felt that they had somewhat received feedback regarding the progress on the delay, which led to a positive relationship between indication about progress and evaluation of service at Bumrungrad Hospital. However, in cases where the wait was not longer than 10 minutes, not much feedback was given.

6.3) Recommendation and Further Research

Recommendations

Service providers should be concerned about delays in service. It is clear from this study that delays have an effect on consumer evaluation of service. The realization that delay can affect service evaluations in a negative fashion should suggest to service providers at Bumrungrad hospital, that they should attempt to either shorten or eliminate delays for service (by operations management), or try to change the

customer wait experience (by perception's management) so that it results in less uncertainty and anger. Recognising that customer's feel uncertainty in delays is important for service providers. Taking action to reduce the uncertainty should affect how customers evaluate the service.

The following recommendations would be appropriate:

1. Delay in service

Delay in service in this research means whether the patients had expected that there would be a delay at the hospital, before they arrived or not (a delay in service was expected or unexpected prior to receiving services). Results from the research indicated that **23.0%** of the respondents **somewhat expected a delay** prior to receiving services at Bumrungrad Hospital, and this led to a **positive relationship between expected/unexpected delay and evaluation of service**. When the patients came prepared to encounter a delay they did not evaluate the service negatively, as they would have done if they had not expected any kind of a delay. Customers were happier in situations where the wait was shorter than expected than in situations where the delay was not expected. Therefore, hospitals should try to minimize delays as much as possible. Steps could also be taken to inform waiting patients approximately about the average amount of time it takes at different points of receiving service in the hospital, for example; signs could be posted at the cashier point etc stating that it generally takes about 10 minutes before receiving medicines, and so on.

2.   Stability of the delay Cause

In this research, stability refers to the fact whether the delay which occurred is a very common, frequent, likely or a stable occurrence or alternatively, it is an uncommon, rare, unlikely to occur again and again and a unstable type of a delay. Results indicated that **31%** of the respondents perceived the cause of the delay to be **as stable**, which led to a **negative relationship between stability of the delay cause and evaluation of service**. Patients will evaluate the service negatively, if the feel that the delay is a very commonly occurring phenomenon as opposed to any delays which is perceived to be as occurring once in a while or rarely.

Sometimes delays cannot be avoided no matter what. But the management team should try to identify the cause of stable delays (the delays that occur very commonly) and why they occur and should come up with measures to eliminate them.

3.   Service provider control over delay

Service provider control over delay refers to the fact whether the patients felt that the staff or the doctors could do anything to control the delay. Customers will feel most angry when they believe that the service provider could do something to control the delay. The results of the research indicate that **31.5%** of the respondents felt that the service provider **could have controlled** the delay, which led to **a negative relationship between service provider control over delay and evaluation of service**. The results follow logically from how these dimensions are defined; the more control the service provider has over the delay, the more the customer will feel that the service is not being performed reliably or promptly and the less trust the customer will have in the service provider. In order to overcome this, the hospital should either

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hire more staff to manage the patients or they could update their information systems to provide better and faster service.

4.   Uncertainty

When waiting customers are not given any indication about the progress on the delay, and are not provided with any reasons, they try to draw their own conclusions and explanations, which might be incorrect. An explanation should be provided to the waiting customers, especially when the wait is long. Consumers have an aversive reaction to not knowing how long they will have to wait for and this aversive reaction influences the evaluation of the service encounter. On the other hand, if they are provided with some information while waiting, it helps to reduce the uncertainty felt during the wait. The results of this research indicated that **20.0%** of the respondents were **certain about the length** of the wait, which led to a **positive relationship between uncertainty and evaluation of service at Bumrungrad Hospital**. The hospital staff should make an effort to update the waiting patients about the progress on the wait, regarding their position in the queue. Also in cases where the wait is longer than expected, say a 15-20 minutes wait; the patients should be updated about the cause of the long delay.

5.   Filled Time

Filled time refers to the activities performed while waiting for services. Research indicates that time appears to pass more quickly when people occupy their time and even have fun. The filling of time is said to make customers less angry and uncertain. The results of this research indicate that **23.5%** of the respondents felt **somewhat occupied** during the period of waiting which led to a **positive relationship between**

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filled time and evaluation of service. As the people's time was filled, less attention was paid to the passing of time itself. Therefore, the hospital should try to introduce some "fillers" in order to keep patients distracted. This could be done by playing light relaxing music, introducing pleasant smells where the waiting occurs, providing the waiting patients with magazines and newspapers, offering refreshments such as water or juice, so that less attention is paid to the period of waiting.

6.   Indication about Progress

When waiting customers are provided with some information about the wait, they perceive the wait to be as more predictable. When no waiting duration information or explanation is provided, customer dissatisfaction appears to increase. Results of this research indicate that **28.5%** of the respondents **felt neutral** towards any feedback that they might have received on the progress of the delay, but it still led to **a positive relationship between indication about progress and evaluation of service.** This may be because in some cases the wait was not very long.

However, the staff should inform the waiting patients about how much longer they would be required to wait and in cases where the delay is long, the reasons of the wait.

Further Research

The results from this study suggest that delays can have adverse effects on consumer perceptions of the service and by understanding how consumers react to a delay, service providers can alleviate its negative effects better. However the empirical setting used here, involved only an "active" delay- type of wait. Although it is expected that many types of relationships hypothesized in this study would generate

to other types of wait, it is possible that they will not. For example: a pre-scheduled wait may be less unpleasant to a customer than either a delay or a queue wait because the pre scheduled wait is self imposed or the amount of uncertainty that the customer feels about the length of delay may be less.

Further, model development is also needed. Important variables in the wait experience such as waiting costs, one's time orientation and perceived inequalities in the wait should be investigated.

Despite these limitations, the results of this research further our insight into the impact of delays on evaluation of services. The result of this experiment not only provide replication of prior field research studies, but also extends our knowledge of the interactive effects of the components of wait experience on service performance evaluations. They provide a better understanding of the service encounter evaluation process (e.g. Bitner 1990,1991) as well as useful managerial guidelines in minimizing the negative effects of delay.
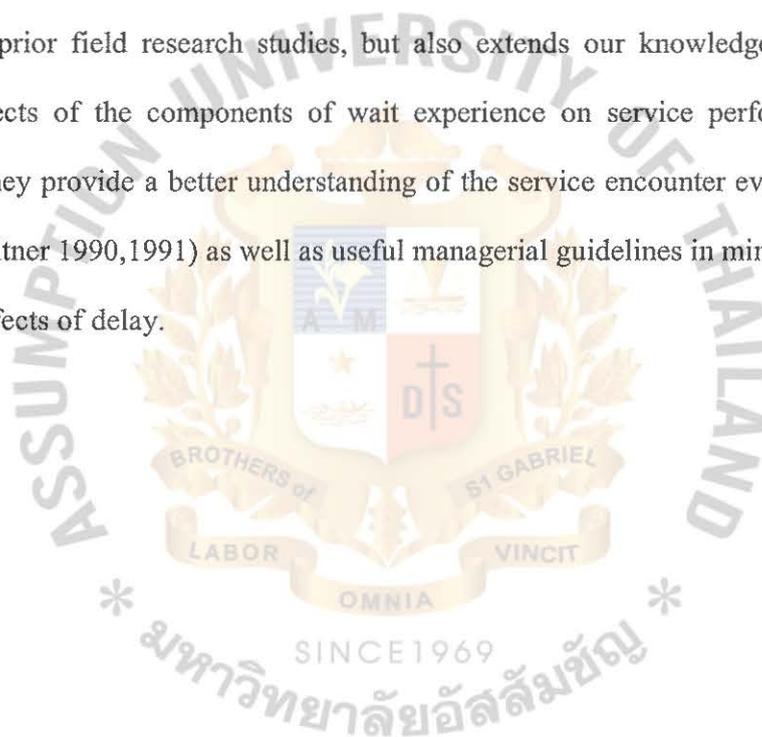
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APPENDICES
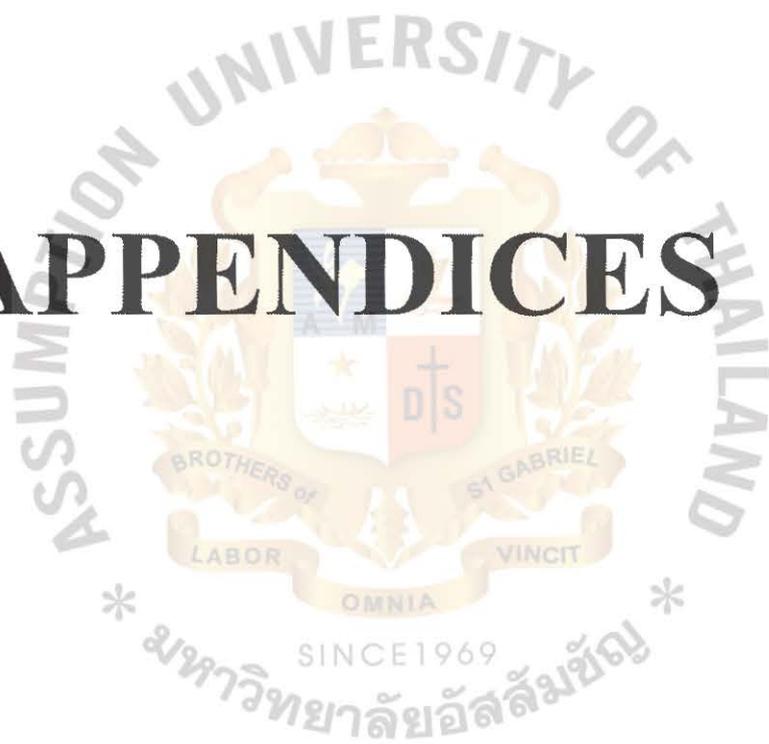
**THE QUESTIONNAIRE TO MEASURE THE RELATIONSHIP
BETWEEN DELAYS AND SERVICE EVALUATION.**

This questionnaire is an instrument to research study of Master degree of
Business Management which, has been designed to collect data for the research
on the relationship between Delays and service evaluations.

All of the questions consist of two parts, which are as follows,

Part I: Service Evaluation.

Part II: Measurement of components of delay.

Part I: Service Evaluation

Please circle the appropriate response:

1. What is your perception about the service provided by Bumrungrad hospital?

Very Good.   Very Bad.

7   6   5   4   3   2   1
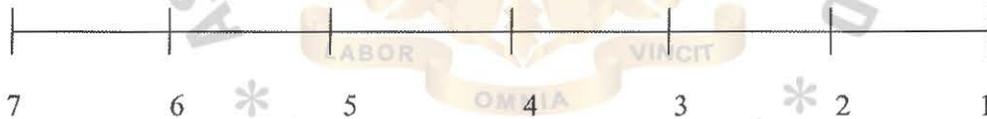
Part II: Measurement of Effect of Delays

Please fill in the appropriate answers:

    1. Did you encounter a delay while receiving services in Bumrungrad Hospital?

☐ Yes   ☐ No

2. If yes, briefly describe the most serious delay you encountered?

....
....
....
....
....

Please Indicate your opinion, which best describes your feelings about the following statements, on the given scale.

1. Did you expect any delay before receiving the services?

Expected Delay |—7—|—6—|—5—|—4—|—3—|—2—|—1—| Unexpected Delay

2. Did it seem to you that the delay was stable?

Stable |—7—|—6—|—5—|—4—|—3—|—2—|—1—| Unstable
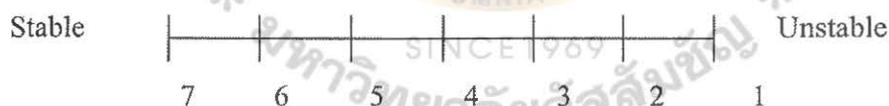
3. Did it seem that the hospital staff or doctors could do anything to control the delay? (Service provider)

Could have been Controlled |—7—|—6—|—5—|—4—|—3—|—2—|—1—| Could not have been controlled

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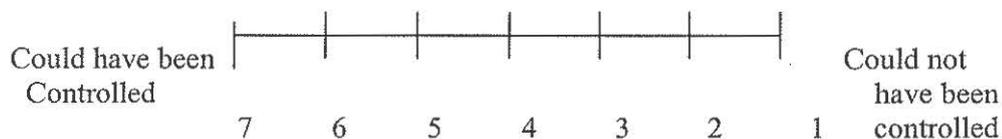
4. Was there any certainty about the duration or the length of the delay you had to wait for?

Length of
Delay was
Certain.
|——|——|——|——|——|——|——|
7   6   5   4   3   2   1
Length of
Delay was
Uncertain.
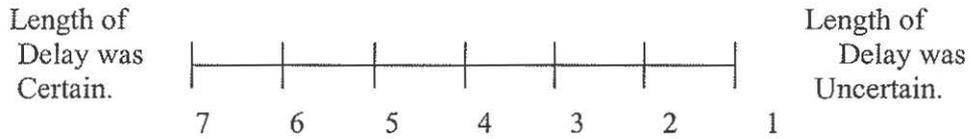
5. Were you occupied and your time was filled during the waiting period?

Occupied.
Time.
|——|——|——|——|——|——|——|
7   6   5   4   3   2   1
Vacant
Time.
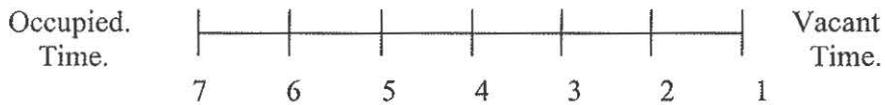
6. Did you receive regular feedback about the amount of time you had to wait?

Continuous
feedback
About delay.
|——|——|——|——|——|——|——|
7   6   5   4   3   2   1
No feedback
about delay

119
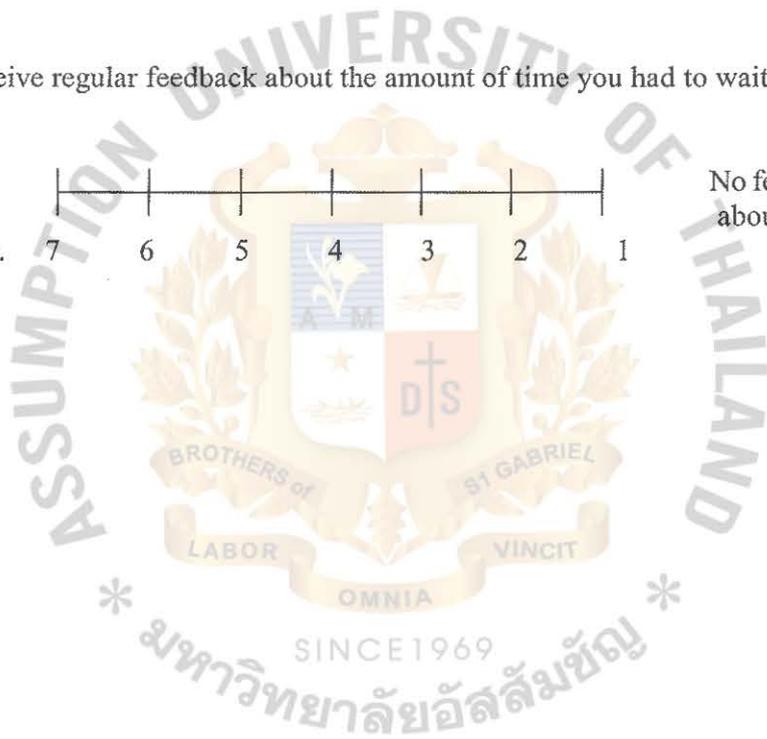
แบบสอบถาม

แบบสอบถามนี้เป็นเครื่องมือใช้ในการวิจัยเพื่อการศึกษาระดับปริญญาโทสาขาวิชา
การบริหารการจัดการซึ่งได้รับการออกแบบเพื่อการรวบรวมข้อมูลสำหรับการวิจัยเพื่อวัดระดับความสัมพันธ์ระห
ว่างความล่าช้าและการประเมินผลของการบริการเพื่อวัดระดับความสัมพันธ์ระหว่างความล่าช้าและการประเมิน
ผลของการบริการ

แบบสอบถามนี้แบ่งเป็น 2 ส่วน

ส่วนที่ 1: การประเมินผลของการบริการ
ส่วนที่ 2: การวัดผลกระทบที่เกิดจากความล่าช้า

ส่วนที่ 1: การประเมินผลของการบริการ

1. ท่านมีความคิดเห็นว่าการบริการของโรงพยาบาลเป็นอย่างไร?

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ดีมาก |------------|------------|------------|------------|------------|------------|------------| แย่มาก
         7            6            5            4            3            2            1
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ส่วนที่ 2: การวัดผลกระทบที่เกิดจากความล่าช้า

กรุณาขีดเครื่องหมาย (/) ข้อที่ท่านเห็นว่าเหมาะสม

1. ท่านเคยประสบปัญหาความล่าช้าในการบริการจากทางโรงพยาบาลหรือไม่?

☐ เคย   ☐ ไม่เคย

2. กรุณาระบุความล่าช้าในการบริการที่ท่านประสบ
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กรุณาเขียนวงกลมในคำตอบที่ท่านเห็นว่าเหมาะสม

1. ก่อนการเข้ารับการบริการท่านคาดหวังว่าความล่าช้าจะเกิดขึ้น
   คาดหวังจะได้ |---------|---------|---------|---------|---------|---------| คาดหวังจะไม่ได้
   รับความล่าช้า 7   6   5   4   3   2   1 รับความล่าช้า

2. ความล่าช้าในการบริการเป็นเรื่องปรกติสำหรับ

   ปรกติ |---------|---------|---------|---------|---------|---------| ไม่ปรกติ
                7   6   5   4   3   2   1

3. ท่านคิดว่าเจ้าหน้าที่โรงพยาบาลหรือแพทย์สามารถที่จะควบคุมการล่าช้าได้

สามารถควบคุมได้ |---------|---------|---------|---------|---------|---------|ไม่สามารถควบคุมได้
                 7   6   5   4   3   2   1

4. ระยะเวลาของความล่าช้า

ช่วงล่าช้าที่ไม่แน่นอน |------------|------------|------------|------------|------------|------------| ช่วงล่าช้าแน่นอน
                        7   6   5   4   3   2   1

5. ท่านต้องเสียเวลาทั้งหมดไปกับการรอรับบริการ

ต้องทำงาน |------------|------------|------------|------------|------------|------------| มีเวลาว่าง
             7   6   5   4   3   2   1

6. ท่านได้รับทราบถึงระยะเวลาที่ต้องรอคอย

ทราบความล่าช้า
เป็นช่วง |------------|------------|------------|------------|------------|------------| ไม่มีการบอ
             7   6   5   4   3   2   1 กให้ทราบ

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