



**UNIVERSITY
OF TAMPERE**

**THE EFFECT OF PERCEIVED SERVICE QUALITY ON PATIENTS'
BEHAVIORAL INTENTIONS - A CASE STUDY IN PROVINCIAL HOSPITALS
IN HO CHI MINH CITY.**

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Abstract

In recent years, the healthcare services provided public hospitals and patient's satisfaction have been tough controversies in Vietnam. Therefore, this research aims to elaborate the association between perceived service quality and the patient's intention of behaviors via the mediate variable being patient's fulfillment. Besides, the study also estimates the existence of patients' appreciation on the healthy service's components. Finally, the work additionally suggests some management implications for the hospital's managers and state agencies to improve the patients' satisfaction. This aims to reduce the major hospitals' overloading in the recent years. The results of the study illustrates that the patient's satisfaction plays an important role in orienting the sick persons' action in the future. Moreover, the satisfaction derives from healthcare service's quality under the patient's perception. In addition, among the components of perceived service quality, the Technical and Administrative have the most significant. According to the descriptive statistics, it is easy to say that the patients underestimate the quality of healthy services provided by 2-level public hospitals in Ho Chi Minh City.

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CHAPTER 1 – INTRODUCTION

1.1 Research background

Healthcare is one of the essential sectors in service industry of every country. According to PwC report in June 2014, which discusses on the Vietnamese healthcare industry, this industry has been one of among the most dramatic growing and high potential sectors in Vietnam.¹ Furthermore, this report reveals that Vietnamese patients spend much time just for finding their trusted hospitals, which are normally the overcrowded national level hospital such as K hospital (250% occupancy rate in 2009), Cho Ray hospital (139%), Bach Mai hospital (168%), etc. It follows therefore that the patients' perception of service quality in other small provincial hospitals is still questioned. In other words, these hospitals need a significant improvement for decreasing the overloading situation in mentioned bigger hospitals.

According to Gill and White (2009), there is no agreement of the best conceptualization between patients' satisfaction and their perceived healthcare quality. However, they supposed that the researches relating to healthcare service ought to be focused on appreciating technical and functional baronet and not patient fulfillment. Meanwhile, a research conducted by Gotlieb, Grewal, and Brown (1994), there is a divergence between perceived quality and satisfaction and satisfaction is a mediate factor linking the influences of Perceived Service Quality on orientations of future behaviors.

Actually, some authors have shaped alternative conceptions for Service Quality and satisfaction on the world, especially in the healthcare industry. Infirmaries accommodate the identical categories of service but these sorts are differentiated based on the baronet of service. They identified that there is a cavity in marketing literature, which associate to influences of service quality dimensions on fulfillment, repurchase orientations and word-of-mouth in the public healthy area (Chaniotakis & Lymperopoulos, 2009).

In recent decades, there have been plenty of studies conducted to estimate the consumer's perception of service quality as well as a numerous innovated models derived from the gap model of Anantharanthan Parasuraman, Zeithaml, and Berry (1985) and its conveying SERVQUAL (Arun Parasuraman, Zeithaml, & Berry, 1988) to understand and measure perceived service quality. In addition, Gill and White (2009) considered that there have been a variety of researches focused on the service quality in private hospitals but few ones in the public sector.

¹ <https://www.pwc.com/vn/en/advisory/deals/assets/the-vietnamese-healthcare-industry-moving-to-next-level-pwc-vietnam-en.pdf>

In Vietnam, according to Health Strategy and Policy Institute, some researchers stated that there are about 80-94% patients reflect the poor service quality and there are 53% of these attitudes reflect the communication of medical staff (Report of Department of Health of Ho Chi Minh City). However, the administrative agency in public health like Department of Health just offers measurement criteria concern to effects of service quality on patient satisfaction, no one mentions to impacts of the patient's fulfillment on Word-of-Mouth and Repurchase Intention as well as relationship of Word-of-Mouth and Repurchase Intention. The purpose of this work is to elaborate the influences of dimensions of Service Quality on the sick person's fulfillment, identify the cavity of Satisfaction on Word-of-Mouth communication and Repurchase Intention (RI) and research a potential association between Word-of-Mouth and Repurchase Intention in the 2-level public hospitals of Ho Chi Minh City.

All things considered, it is necessary to build as well as test the scale of measurement of perceived healthcare service quality in public hospitals generally and in level 2 public hospitals particularly.

1.2 Research Objectives

The mission of this thesis is finding out the effective solutions to improve patients' satisfaction for service quality of level 2 public hospital at Ho Chi Minh City. To achieve this task, the research objective is determined, as follow.

- Identify the factors that affect perceived service quality of level 2 public hospitals in Ho Chi Minh City.
- Measure perceived service quality's impacts on patients' behavioral intentions.
- Propose the administrative implications for the board of management of level 2 public hospitals to maximize the perceived quality of healthcare services.

1.3 The research's scope

Actually, because of the limitation of time and budget, the work just focuses on surveying the sick persons who consume the healthcare services provisioned by 5 hospitals among the 2-level public ones located in Ho Chi Minh City.

Moreover, the study using the data collecting method named Questionnaire Survey, collected data is, therefore, affected by the phenomenon namely "Social desirability".

1.4 Structure of the research

This research proposal includes 4 chapters. Chapter 1 presents the background, and objectives of this research and structure of the proposal. Chapter 2 presents literature review, hypothesis development and research framework. Chapter 3 describes research methodology such as research procedure, measurement scales, sample, and data collection process and data analysis methods. Chapter 4 is projection of the proposal.

CHAPTER 2 – LITERATURE REVIEW

2.1. Patient's process of emerging attitude

Customers' perspectives are both an unfavorable as well as a favorable to a marketer. Choosing to reduce or take no notice of customers' attentiveness of some specific products or services during deploying a marketing orientation that results an increase of failure probability of operational activities. In contrast, some marketers lift their awareness of customers' attitude to forecast the behavior of customers.

The ABC Model of Attitudes includes three components: Cognitive, Affective, Behavior. This research pattern signalizes the associations among recognizing, affecting, and acting (Solomon, Russell-Bennett, & Previte, 2012). The affective is the sense a person having attentions to an object or event. In the current situation, the affective illustrates the conscious and sense about a product or service. Behavior is the reaction of a person, who uses the product or service, deriving from the affective and the cognition. Cognition is a person's trust or understanding about an object.

The "Standard-Learning hierarchy", also known as the "High-Involvement hierarchy" supposes that the clients will run elaborate investigations, and then initiate beliefs about the attitude object. The clients will later form feelings associated with the attitude object. The senses—or affect—are gone after by the consumer's actions. The "Cognition-Affect-Behavior" pattern is prevailing in buy decisions in which a high level of involvement would be essential.

The "Low-Involvement hierarchy" comprises of a Cognition-Behavior-Affect order of occurrences. A client with attentiveness established through the "Low-Involvement hierarchy" of influences based the buy decision on what they understand as opposed to what they feel. The person using the product or the service establishes conscious about the product or service after the buy. This limited awareness procedure is not relevant for life-changing buys, like for instance, an automobile or new apartment.

The experiential hierarchy of influences is stated by the flow chart beginning from Affect to Behavior, and end at the Cognition. With this pattern, the client is influenced to buy decision based wholly on their conscious associating with a specific product as well as service. The cognitive component follows the buy stage and enforces the first emotion. Affective contagion is common in attitudes formed by the experiential hierarchy of effects (Solomon et al., 2012). Affective contagion, in this context, propounds that the client is influenced by the feeling covered in the advertisement.

In this research, the author uses the first perspective of attitude, which means patients' attitudes emerged with a cognition-affect-behavior processing order.

2.2. Quality and Service quality

Today, the controversy relating to definition of quality as well as the association between prospects, experience and fulfillment is necessary to resolve the difficulties related to the formation of basic definitions.

The research definition of quality as conceptualized in the services literature focuses on quality based on customer's perception namely perceived quality. Perceived quality is defined as the user's estimation about an appreciated objects (A Parasuraman, Zeithaml, & Berry, 2002). It differs from objective one involving an objective aspect or characteristic of the estimate.

Perceived quality may be understood as a kind of attitude, associated with, however, not the familiar to, satisfaction and forming from a comparison of prospect with experiencing process of service delivery as well.

In Olshavsky (1985), this author defines quality as a kind of universal appraisal of a certain thing such as service or commodity. In like manner, Holbrook and Corfman (1985) suppose that quality plays a role as a general value evaluation. Other study worked out by Ananthanarayanan Parasuraman, Zeithaml, and Berry (1994) also advocates the assertion that service quality plays a role being similar to attentiveness.

To control quality of service in general and quality of public administrative service in particular requires full awareness of the distances between users' prospects and perceived values as the part of management, supplying organizations, and clients. According to Rowley (1998), the most significant gap is absolutely that between clients' prospects of service and their perceived value in process of delivering services. Admittedly, user's prospects are affected by their experience or transactions in the past, as well as those of other customers, and even service provider's commitment.

Initial concerns on quality concentrate on the quality of commodities, in other word, visible products. However, only in short period of time, the knowledge of service quality became more and more familiar because of dramatically increasing emergence of service industries. Practically, the quality of these services plays an important role in making company's competitive advantages, and differentiates itself from its rivals.

There have been persuasive proofs which additionally propound that quality may contribute to creating client's repurchase intention as well as potential customers through effects of word-of-mouth. Absolutely, these people are benefits to certain organization. Booms and Bitner (1981) supposed a spreading marketing mix for services that indicated the convergence of the service brand in the marketing of services. These authors argued that apart from the beginning four components of product, price, place and promotion be supplemented physical element (the physical surroundings and all tangible cues), participator consisting of staffs and clients) and procedure (order of processing works). In summary, the work supposed that perceived quality of service needs to be placed in a central location.

Compared with tangible products, measuring service quality probably faces to some real difficulties because of some following points: (1) performances of service delivery can not be virtually appreciated in association with their physical properties. Unsurprisingly, the user is the most important factor determining the service quality through one's experience. (2) With perishable attribute, services apparently have not ability to be banked, or in other word, production and consumption are not inseparable. Therefore, service users are a certain piece of the system of service delivery. (3) Heterogeneity, in spite of using the same services, different customers have distinct feeling or experience. Services are naturally various and inconsistency.

The estimating service quality needs to have participation of both the supplier's and the user's perspectives of quality.

Service and Service quality is a process of interactions between the providers of product and service, and customers. The purpose of this process is fulfilling the customers' demand and desire Zeithaml (2000). For service, the quality sometimes has the invisible meaning and is difficult to identify. In other words, the service quality is determined by the perception of the customers, which is related to their demand. Due to the abstract nature and diversity of the services' quality, there were 19 published models that used to evaluate the services' quality from 1984 to 2003 (Seth, Deshmukh, & Vrat, 2005). The researchers divided these models in 2 schools including the school of Northern Europe- Nordic (Grönroos, 1984) and school of American (Arun Parasuraman et al., 1988). In general, these models were explained the service's quality through customers' perception during their use of service, from the beginning to the end of the process. Many researchers considered that the models need to be adjusted when applying at specific country and specific research (Llosa, Orsingher, Carrillat, Jaramillo, & Mulki, 2007).

Admittedly, public hospitals in Vietnam are nonprofit organizations, so improving their service quality is not to compete with hospitals in private sector. In stead, this aims to reduce major hospitals' overload pressures. Recent years, the tough issue discussed regularly in media is that why there is unsymetric distribution of patients in different infirmaries. According to medical experts, the most significant is patients' unbelief on 2-order hospitals' service quality. Many illnesses can be treated at the district hospitals but patients are still insecure. Therefore, these people want to treat regional hospital, or in other word, central major health centers.

One of four important solution offered by Health Minister to reduce overcrowding in major hospitals are to regulate strictly the transfer of patients from lower level infirmaries to higher level ones. Nevertheless, many health experts believe that the "force" of patients treated in a certain hospital it will be difficult. Up until today, the health sector has a number of rules on transition among hospitals that is written in Medical Treatment Law, hospital regulations; the Circular No. 10 established by the Health Minister directs initial registration of medical examination and treatment in case of having healthy insurance. However, the transit is still very inconsistent. According to some report unofficial, the rate reached at a very high level, valued at from 50% to 80%. The health sector can be technical distribution but can not forbid people treated at higher level hospitals because choosing healthy destinations is patient's right.

It follows therefore that the long-term solution is to improve 2-order hospitals' service quality. Likewise, it is necessary to refine patients' fulfillment and belief. Public Health is trying to change the quality of services and facilities. More than ever, the health sector recognizes that either public or private hospital, musts get the trust of patients to survive and develop. Recently, the society realizes that the health sector has had the extremely positive recognition of the need to change behavior, quality of health care services. In early August, 2015 conference, Health Minister has stressed plans to deploy innovations of attitude of health workers towards the satisfaction of the patients.

In summary, the most necessary is not winner-loser issue between public and private health centers, but the highest goal is to reduce the overload, increase the quality of treatment and care value for people. Therefore, hospitals generally, and 2-order ones particularly have to indentify their responsibilities in this humane goal as well as place the patients' benefit in advance.

2.3. Perceived healthcare service quality

For quite a while, there have been numerous efforts by researchers to explain and calculate service quality.

For instance, according to (Lehtinen & Lehtinen, 1982), two perspectives should be looked upon when it comes to assessing the quality of service; (1) the process of service provider and (2) the outcomes of the service. In addition, Grönroos (1984) additionally proposed that service quality consist of initially technological quality, which is what the clients retain, and secondly functional quality that illustrates the ways in which service is offered. As mentioned by Spreng, MacKenzie, and Olshavsky (1996), before using a service, customers already had a script; an expectation about the service formed in their mindset and the difference in the screenplay of consumers and suppliers will lead to dissatisfaction. Another view recommended by Cronin Jr and Taylor (1992) is that there is a need to analyze consumers contentedness briefly while the attitudes of consumers should be evaluated for longer period of time.

Nevertheless, in the topic of service quality, it is indispensable to acknowledge the important contribution of Arun Parasuraman et al. (1988) who mentioned that the contrast between client's expectation of services and their valuation of the service payoff defines service quality. According to the European Organization for Quality Control, quality is a compatibility of the products to the requirement of the purchaser. Quality would be cited as a combination of the features of an entity that satisfy the normal demand and the latent demand (ISO 8402).

Looking at the definition of service in customer behavior's view, there are 3 concepts that are suggested. They are perceived quality, the quality based on the production techniques and objective quality (Zeithaml, 1988). For instance, perceived quality consists of objective feel, impression or the personal estimation to a product (Zeithaml, 1988). Monroe and Krishnan (1985) and D. Lee (1996) also argued that the perceived quality is the ability to perceive the products that can reveal the relative satisfaction for the available choice.

Perceived quality is the source leading to the reason to buy (Aaker & Equity, 1991) and directly impact the willingness to buy (Dodds, Monroe, & Grewal, 1991).

A healthcare service is a specific term that requires the consumers' high participation in the consumption. Lengnick-Hall (1995) postulated that in order to manage the complicated association between healthcare suppliers and patients, the traditional healthy sector perspectives of technical quality and patient satisfaction were irrelevant. Significantly, effective healthcare essentially requires the cooperative of the patients in delivery process. Many works propounded that the compliance with the suggestion of the medical experts and treatment regimes in closely associated with the perceived quality of the service and

the results (O'Connor, Shewchuk, & Carney, 1993).

Recently, Brady and Cronin Jr (2001) improved the multidimensional hierarchical conceptualization proposed by Dabholkar, Thorpe, and Rentz (1995) by merging with 3-factor research model Rust and Oliver, and created a hierarchically multidimensional pattern of service quality. Relied on the study, Dagger, Sweeney, and Johnson (2007) have argued that the construct of Service Quality seem to a multidimensional, higher order latent variable with four sub variable consisting of “interpersonal”, “technical”, “environment”, “administrative”. And four latent variables additionally comprise of nine sub-dimensions as presented the Figure 2.1:

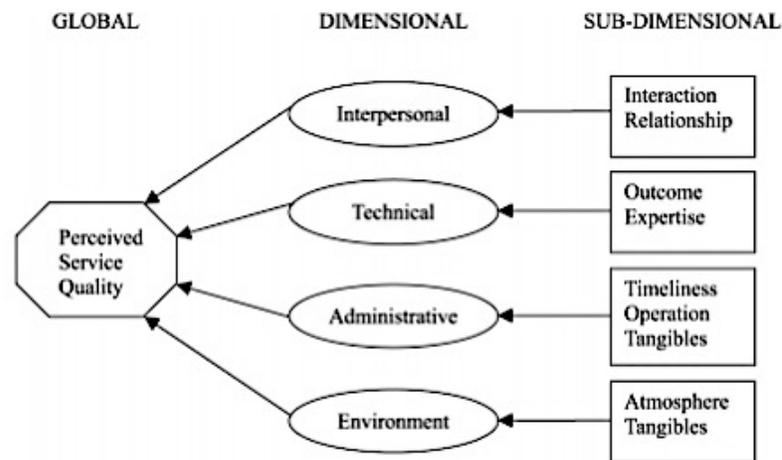


Figure 2.1- The pattern for measuring the “Perceived Service Quality”

Source: Dagger et al. (2007)

They considered that consumers calculate the service quality at a top order, a dimensional order and at sub-dimensional order as well, with each order impacting the customers’ perception at the superior level.

2.4. Patient satisfaction

The customer’s satisfaction index was initially launched in Sweden (1989), then was developed and widely applied in the EU countries in the services sector.

The definition of user satisfaction has been broadly researched in a variety of fields and areas of study including marketing, commerce and management. One of the inaugural and highly cited definitions of satisfaction is offered by Locke (1976) in the circumstance of outcomes of works. Satisfaction is defined

as a favorable or positive affective status leading from the appreciation of person's assign (Locke, 1976). Oliver (1981) enlarged this definition in the circumstance of the consumption circumstance as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience". All two definitions express a psychological or emotional state associated with and resulting from an awareness of the expectation outcome distinction "confirmation" (Bhattacharjee, 2001).

The patient's satisfaction index is used by many healthcare centers in developed countries to plan strategies of customer retention, marketing, branding and increase competitive advantages. Factors affecting patient satisfaction include: the relationship between medical staffs and patients, the patient's expectations of products/services quality and patient's perception of services/products quality compared to the cost and the time patients must spend on. In the context of this research, patients' fulfillment is stated as a pleasurable or positive affective state derived from the appreciation of using medical services to achieve the providers' healthcare services.

Healthcare is one of services in the service sector, patient satisfaction, therefore, is the criterion used to measure the response of the medical centers' examination and treatment for the patient's expectations. Patient satisfaction is an important aspect to ensure the quality and outcomes of health services. The results obtained from appreciating patients' satisfaction are absolutely significant in planning programs of treatment and examination, assessing and identifying potential areas, departments needed to improve. In addition, these results also provide information to recognize weaknesses of the process of supplying services. This information is a basis for launching solutions to overcome these weaknesses.

It is equitable to note that patient's satisfaction is an invaluable asset of the healthcare facilities. Admittedly, these facilities probably can not develop and grow if the response of the patient's satisfaction is not placed in association with investment of human resources, facilities and equipments. Health workers in clinics need to be trained carefully in communication skills, behavioral skills, as well as professional skills being appropriate to each patient. By hence, this helps them build a good relationship with the patients. Furthermore, it is essential to appraisal patient's satisfaction regularly to identify issues related to patient's expectations and to fix the problems lacking. Truly, this is a solid background to improve the quality of medical examination and treatment. The overall success of particular hospitals is essentially contributed by patient satisfaction. For example, through providing healthcare service, hospital figure is enhanced and subsequently lead to an increase of service use and market share [Alaloola and Albedaiwi

(2008), Saad Andaleeb (1998)]. In fact, patient satisfaction is more and more important to contribute to the success in operation of private and public hospital. It is unnecessary to look at the right-or-wrong matter of patients. In other words, it is more critical to take notice of the feeling of patients despite the difference in providers' opinion (Peterson, 1988). On the other hand, failure to recognize the importance of patients' gratification probably pushes the hospitals to the possibility of bankruptcy. Expectancy and perceptions need to be equally concerned by healthcare providers.

The trends of patients continue to repurchase the medical service maintain a loyal link with certain healthcare providers and suggest them to others people (word of mouth). This forces hospital to improve the satisfaction of patients (Heskett & Schlesinger, 1994).

Differs from other concepts of management studies, there is no definite agreement in the explanation of concept patient satisfaction although it is a significant and primary subject. There are various ways in which patients' satisfaction is estimated.

In order to describe the unresolved conceptual difficulties with the patients' satisfaction, Oliver (1981) supposed that satisfaction consists of psychological state and encounter specific; the gratification response and experiential construct (Oliver, 1997), etc.

Nevertheless, in this research, the author uses the scale of satisfaction proposed by Oliver (1997) with some adjustments about content and words as well to appropriate to the study context in Vietnam. The reason for this is that the process of hospitals' service delivery leading to outcome is described or estimated in the scale of perceived service quality.

2.5. Patients' Satisfaction and Perceived Service Quality in healthcare

Healthy area scrutinizes into patients' epistemologies of the components of service quality (perceived service quality) has been little (Clemes, Ozanne, & Laurensen, 2001), yet studies seeking to appreciate the constituents of the healthcare services' quality dominantly continue to measure patients' fulfillment (P.-M. Lee et al., 2006).

There has been still no agreement on how to form a concept of the association of patients' gratification and their cognizance of the baronet of the healthcare services. (O'Connor & Shewchuk, 2003) underlined that plenty of the works on patient fulfillment is relied on simple descriptive and relation statistics with no academic background. In addition, these authors supposed that, with relation to healthcare services, the

concentration ought to be on appreciating qualities of technique and function. Likewise, it means that how healthcare services are provided, and not sick person's fulfillment.

The research conducted by (Gotlieb et al., 1994) on sick person's release, healthy center's perceived service quality and fulfillment illustrated some evidences of a significant difference between perceived service quality and sick person's fulfillment. The study resulted that sick person's fulfillment plays a role as mediator linking the influence of perceived service quality on patients' orientation of behaviors, which comprised compliance with treatment plans and following medical experts' advices.

In the work conducted by Cleary and Edgman-Levitan (1997), it illustrated that surveys of patient's fulfillment in the healthcare industry did not appreciate baronet of care as these surveys did not comprise of significant aspects of care indicators including being treated with high opinion and being involved in treatment decisions.

Furthermore, the study conducted Taylor (1994) empathized that confusion continued in the sector regarding the differentiation of service quality from fulfillment and reported that some authors, for example Kleinsorge and Koenig (1991), referred to them as synonymous terms. Nonetheless patients' fulfillment continues to be estimated as a representative for the patients' appreciation of service baronet (Turriss, 2005).

2.6. Patients' behavioral intentions

2.6.1 Repurchase Intention

Managers and academic researchers, who have special interest in defining key variables such as repeat purchase intentions, brand loyalty, and profitability, are paying more attention to the importance of service standard and client's fulfillment. There is an association between customer repurchase pattern and the main focuses of the present study which receive relatively less attention from academic scholars in the field of sport management. In general business, massive attention is channeled to service quality and customer satisfaction for them being the main influences in the initiation of client's buy orientation in service surrounds (Taylor & Baker, 1994). Regarding to Taylor and Baker (1994), the improvement of a better awareness of how service baronet perceptions and client's fulfillment judgments interact and/or influence one another in the establishment of clients' orientation of buy behaviors cause a significant difficulty currently facing the services marketing discipline. With relation to that, repurchase intention is

hence considered to be the most significant constructs. The term repurchase trend has been drawn as a behavioral constituent that illustrates readiness (enthusiasm) to buy or use a product or service (Mittal, Ross, & Baldasare, 1998).

Repurchase can be defined as a repeated buying or purchasing of goods or services from the same providers. In other words, the customer comes back to the organization or is retained. This brings about the term loyalty. Repurchase (or loyalty) contributed greatly to profit and growth of an organization as it leads to an increase in purchasing of goods, willingness to pay higher premiums (thereby increasing profit margin) as well as a fall in advertising cost and decreased vulnerability to present competition [(Anderson, Fornell, & Lehmann, 1994), Heskett and Schlesinger (1994)].

2.6.2 Word of mouth (WOM) communication

The process of exchanging information or opinions related to topic of product or service is called Word-of-Mouth. There are ways through which Word-of-Mouth may be interchange from a certain individual to another one including oral or written communication. As communicators are separated from the market, it is more trustworthy and convincing the conventional media channels (Chen & Berger, 2013).

Word of mouth marketing has ceased to be alien concept to people for a long time. According to the most basic definition offered by Sernovitz, Godin, and Kawasaki (2009), this is a form of marketing, which is done based on the routine exchange, communicated in human language. In the word of mouth marketing, the recipient receives information about the brand, product or service from a non-commercial convey

An outstanding feature of word of mouth marketing is that this marketing method is easy to reach the customer's belief than the other traditional forms. A study conducted by Nielsen in 2007 showed that as many as 78% of respondents answered that they trust other people's estimations about a certain product than what the ads are about his product. Word-of-Mouth marketing brings messages of a product, a brand through customers' reliable sources such as friends, relatives or reputable experts. As a result, this information is quickly believed than any other form of marketing. Therefore, this marketing's effects are absolutely much higher.

One word of mouth marketing campaign being successful can bring organizations benefits both long term and tremendous. Brand awareness gained from this campaign will be a solid basis for other campaigns in

the future. Today, there are many persons who are just on the site to buy a product of a company because of its brand, but not any trial.

Healthcare service is additionally not an exception. According to practice observations, choosing a healthy destination depends on the destination's reputation via oral communication. Especially, in Vietnam, the public hospitals are non-profitable organizations, so these ones seldom use commercial ways of marketing to build their brand, and show their capacity as well. Likewise, word of mouth is probably unique to marketing their brand to patients.

Measuring customer satisfaction and client's perceptions of baronet and worth allows the product or service to be remodeled and developed in raise the repurchase and/ or hearsay (Molinari, L. K. 2004). Affirmative word-of-mouth is a orientation of behaviors comprising of buy again, but deals with intention to recommend (Fornell & Wernerfelt, 1988).

Positive gossips give rise to firm profitability as people share about the good experiences they had with the product and services to their relatives, colleagues, and others influencing other possible consumers to purchase (Fornell & Wernerfelt, 1988).

2.7. Hypothesis development

2.7.1 Relationship between service quality and customer satisfaction

One of the most impactful factors of customer satisfaction is service quality [Cronin Jr and Taylor (1992), Yavas, Bilgin, and Shemwell (1997), Jamal and Naser (2002)]. The providers can make their consumers happy by in the first place, provide a good quality products that meet the requirement of the consumers.

As such, there is the need for providers to improve the service quality in order to boost customer satisfaction. In other words, there is a positive direct relationship between service quality and customer satisfaction. Service quality has been created first upon which customer satisfaction is decided

Causal relationship between the two factors has been made critic issues in most studies of customer satisfaction. In the study of the relationship between these two factors, Spreng et al. (1996) also showed that service quality is the ground of customer satisfaction.

2.7.2 Relationship between customer satisfaction and repurchase intention

There is argument stating that high level of repurchase is dependent on the level of customer satisfaction. Oliver (1997) mentioned that repeat purchasing is fundamental to a continued stream of profitability through achieving higher levels of customer satisfaction. Hence, beside avoid dissatisfaction; management should pay attention to fostering satisfaction (Oliver, 1997). Keeping this idea in mind, many has made customer satisfaction as a corporate goal among academics and business practitioners (Rust & Oliver, 1993).

Consequently, there are gradually more academic publishing made to determine the impact of service quality and customer satisfaction on post-purchase judgment (Spreng et al., 1996). Overall, it is shown that highly satisfied customers are more likely to exhibit high level of repeat purchase intention and positively influence the organization.

The importance of understanding the potential determinants of customer satisfaction is strongly emphasized by Churchill Jr and Surprenant (1982). The researchers acknowledged that satisfaction is a major outcome of marketing activity and serves to link processes culminating in purchase and consumption with post purchase phenomena such as attitude change, repeat purchase, and loyalty.

2.7.3 Relationship between customers' satisfaction and word-of-mouth

WOM has been identified, in some studies, as a primary source of informational influence in consumer repurchase decision-making as well as a channel for customers to express satisfaction or dissatisfaction with a service experience Spreng et al. (1996).

There are always possibilities of good and bad scandal. In the case where customers suggest to other people about service, that is positive WOM. In contrast, if there are complaints from customers to other about the service, that is negative WOM. However, the situation can be different in reality. In Spreng et al. (1996), it is stated that there is no guarantee that satisfied consumer will result in positive WOM about service while dissatisfied consumer has a strong tendency to tell others about his/her unhappiness and even exaggerates the bad experience.

As mentioned by (Frenzen & Nakamoto, 1993), the effect on customer satisfaction by word of mouth is one of the most fundamental bases of positive word of mouth. Gotlieb et al. (1994) confirmed that there is a positive correlation between customer satisfaction and positive word of mouth. In addition, according to Swanson and Charlene Davis (2003), word of mouth communication is perceived to be a very typical and

crucial form of communication for service marketers, and for maintaining a base of long-term customers. Agreeing with these researchers (West, Patterson, Lawthom, & Nickell, 1997) discovered that there is a positive relation between customer satisfaction and positive word of mouth.

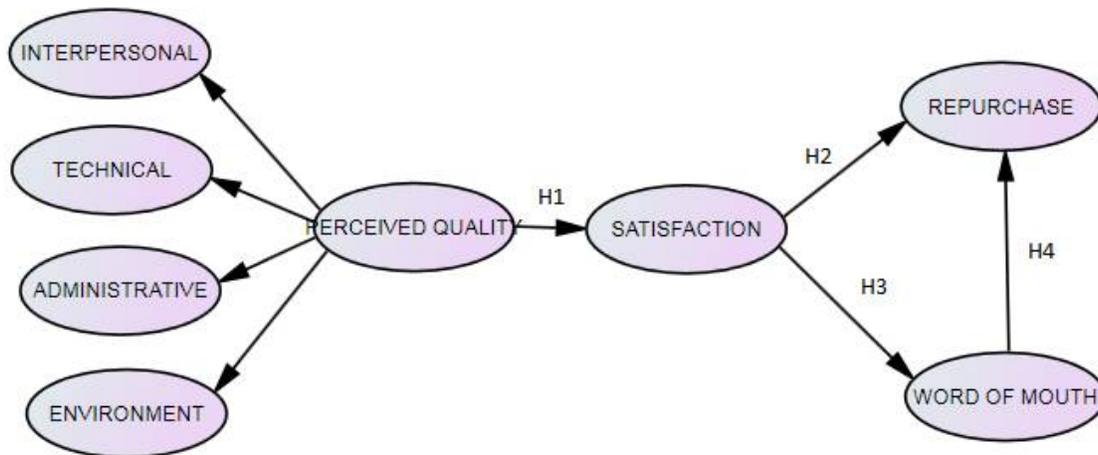
2.7.4 Relationship between repurchase intention and word-of-mouth

According to (Ennew, Banerjee, & Li, 2000), purchases increase with positive WOM from satisfied customers. Moreover, Gremler and Brown (1996) recommend that customers who are willing to offer positive WOM communications are more likely to become loyal customers. Besides, positive WOM is extremely important advertising tool for providers. According to early studies, it is nine times as effective as traditional advertising (Mazzarol, Sweeney, & Soutar, 2007).

The structural equation model hypothesized that there is a positive correlation between repurchase and positive word-of-mouth. Other studies in the marketing literature support this relationship [Zeithaml (2000), Anderson et al. (1994)]

2.8 Research framework

Figure 2: Research model



Hypothesis	Description
H1	Perceived Quality has a positive impact on patients' satisfaction.
H2	Patient satisfaction has a positive impact on repurchase intention.
H3	Patient satisfaction has a positive impact on word-of-mouth.
H4	Word-of-mouth has a positive impact on repurchase intention.

2.9 The summary of chapter 2

The chapter 2 presents the literature reviews and some prior studies related to the study. From these presentations, the author suggests the research model and the hypotheses as well to estimate patients' perceived quality, satisfaction, and intention of behaviors. The patients surveyed are people who used to or are being treated and examined at 2-level public hospitals in Ho Chi Minh City.

The theory model is offered from the results of Dagger (2007).

The chapter 3 is going to illustrate about research methodology, design of the research, building the scales, and testing of the scales for the constructs in the model as well. Finally, some techniques are implemented to confirm the hypotheses suggested.

CHAPTER 3 – METHODOLOGY

This stage introduces the process of the research, some preliminary research using qualitative method, and the procedure of building the scales to collect data as well. In addition, this chapter also presents quantitative techniques as well as statistical parameters' standards that are used for analyzing the collected data.

3.1. Research procedure

The process of the study comprises two conjunctive steps being preliminary research (using qualitative method) and authentic one (using quantitative method). In the preliminary, the writer reviews literatures associating with the study's problems. Latter, some sick persons or convalescents as well as some medical experts in medical field are going to interview by the qualitative questionnaire which is prepared before to determine, modify and supplement some factors or items (observable variables) having influences on users' satisfaction of the one-stop service and making the content of the questionnaire more transparent. Ultimately, the items measuring these latent variables or factors in other word will be built on and perfect.

The authentic research exerts quantitative method to solve the study's objectives, specifically to test the model and the hypotheses (assumptions) as well. In this step, the data used for analysis is collected by the final draft questionnaire created in the preliminary.

Because the work investigates on the patients' gratification of the healthcare supplied by the 2-level public hospitals, the answers are people using or having used the medical services of these clinical destinations within 3 months ago since the questionnaires are dispatched.

The questionnaire will be delivered to the 18-year old and above who used to or are examining and to be under medical treatment at 2-level public hospitals of Ho Chi Minh City.

Based on Circulars No. 23/2005/TT-BYT dated 25th, August, 2005 by Ministry of Health: the Guideline of ranking public medical units, Department of Health of Ho Chi Minh City promulgated Plan No. 5572/KH-SYT dated 04th October 2012: The Plan of re-ranking public healthcare units on Ho Chi Minh City area. According to standard of Ministry of Health at Circulars No. 23/2005/TT-BYT, public hospital system in Ho Chi Minh City consists of three rankings such as public hospitals level 1, level 2, and level 3. The ranking of hospital levels is implemented following principles at Circulars No.

23/2005/TT-BYT. The public hospitals level 2 of Ho Chi Minh City include following units: **An Binh Hospital, Saigon Polyclinic Hospital, Mental Hospital, Hospital for Rehabilitation and Professional Diseases, Traditional Medicine Hospital**. The author chooses to research on public hospitals level 2 because these hospitals have the facilities and service quality relatively better compared to public hospitals level 3, but they are not as good as public hospitals level 1.

In order to meet the research's targets, the author uses the non-probability sampling, specifically the convenient. Reasons for this choosing is ease of accessibility to answerers being willing to response, thenceforth saving time and cost for collecting. The questionnaires are delivered responders directly in paper form.

The sample's size have to response minimum conditions to use the technique Exploratory Factor Analysis (EFA) $N \geq 5x$ with x is indicator or observable variable (Hair, Black, Babin, Anderson, & Tatham, 2006). In the questionnaire used for collecting data, there are 56 observable variables, the author, therefore, intend to collect approximately 300 answer sheets.

In the analytical step of collected data, Exploratory Factor Analysis as well as Test of the scales' reliability initially conducted to determine factors belonging to the research model from items and to test preliminarily reliability of the scales. Later, the technique namely Confirmatory Factor Analysis (CFA) is used to test the scales' validity both convergent validity and discriminate validity, and the factors' appropriateness as well. Meanwhile, the author additionally computed the scales' composite reliability and extracted variance.

Finally, the author uses the method named Structural Equation Model (SEM) to test hypotheses of the research model.

All above techniques are implemented by statistical software namely SPSS 22.0 and AMOS 22.0.

3.2. The scale development

This research uses the closed questions; the author will provide the answers and let the recipients answer. With this way, it is suitable to quantitative research and save time, or in other word, reduces the answerers' discomfort.

Apart from the personal information part, the other questions (items), the author inherits the scale of Dagger et al. (2007). However, to make the indicators become clearer and fit to Vietnamese persons, the qualitative research is conducted to discover more elements being outside the model's elements of the original proposed model. Meanwhile, the author will revise and add the items measuring the concepts in this model and checking the use of words as well.

The items will be estimated by the 5- point Likert Scale with:

1. Totally Disagree
2. Disagree
3. Neutral
4. Agree
5. Totally Agree

As presented in Chapter 2, the *Perceived Service Quality* is the 3-order latent variable comprises four dimensions such as *Interpersonal quality*, *Technical quality*, *Environmental quality*, and *Administrative quality*. Specifically, *Interpersonal quality* includes two sub-dimensions named *Interaction* and *Relationship*, *Technical quality* additionally consists of two sub-dimensions namely *Outcome* and *Expertise*, *Environmental quality* has two sub-components being *Atmosphere* and *Tangibles*, the *Administrative* contains three sub-dimensions being *Timeliness*, *Operation*, *Support*. As a result, the preliminary scales are developed by inheriting the scale of Dagger et al. (2007) and supplementing some items from the qualitative stage.

Nevertheless, there are distinctions from Dagger et al. (2007), in the Dagger's research, that author used Path Regression, and developed some items to measure high order latent variable. It is effortlessly seen that in the model of Dagger et al. (2007), lower order variables impact on higher order ones, but this is not logical.

In this research, the author use method "Structural Equation Model" to settle for high order latent variables. Therefore, in the used scales, there are only items to estimate one-dimension variables. The multidimensional variables are calculated from lower order ones.

The detail scales used for collecting data are presented in Appendix.

3.3. The summary of chapter 3

The chapter shows the detail steps to complete the study including two main parts, namely the preliminary research and the official one.

The process of the preparative stage is done by depth interviews of some experts in the medical field as well as patients to modify the initial model and scales, which are collected from previous studies, especially the Dagger (2007), relating to the research problems. The result of the preliminary offers the theory research model including 56 items (observable variables). These items measure 12 latent variables. Furthermore, the chapter also introduces some quantitative tools of data analysis such as the index named Cronbach's Alpha to test the scale's reliability, Exploratory Factor Analysis, Confirmative Factor Analysis, and Structural Equation Model to test the suggested model as well as hypotheses. Ultimately, the sample technique is presented in this chapter.

The next chapter is going to the result of data analysis including describing the data collected, appreciating and testing the scales' validity and reliability, and the suggested model and hypotheses.

CHAPTER 4 – RESULT OF THE DATA ANALYSIS

This chapter illustrates the retained results such as the tests of scales' reliability and validity through running the techniques namely EFA, CFA and finally the tests of the suggested hypotheses based on the analysis of collected data, and test of the differences among subpopulation's satisfaction.

4.1 Cleaning and recoding the collected data

As represented above, the final draft questionnaires were dispatched to answerers including patients who are using or used the healthcare services of four 2-level hospitals chosen at chapter 3. The data collecting was conducted over a period from February, 2016 to March, 2016. The author used the convenient sampling by sending answer sheets directly to the surveyed people. Practically, there were 311 answer sheets returned among 350 dispatched ones, but there were the most 300 relevant used for the analytical stage. With this number, the sample requires the conditions for analyzing the collected data.

4.2 Descriptive statistic of the sample's features

As illustrated in 4.1. The author dispatched 350 questionnaires to patients who used to or are being treated in 2-level hospitals in Ho Chi Minh City. Later, there were 311 answer sheets collected, but only the most 300 relevant used for data analysis. The characteristics of the sample are showed as follows.

Variable	Status of variable	Frequency	Percentage Frequency
<i>Gender</i>	Male	136	45.3
	Female	164	54.7
<i>Age</i>	From 18 to 35	202	67.3
	From 36 to 45	56	18.7
	From 46 to 55	24	8.0
	Over 55	18	6.0
<i>Occupation</i>	Working full-time	186	62.0
	Working part-time	73	24.3

	Unemployed	21	7.0
	Not in the labor force	17	5.7
	Unable to work (illness)	3	1.0
<i>Income</i>	< 4 millions VND	122	40.7
	4 to 9 millions VND	103	34.3
	9 to 14 millions VND	35	11.7
	> 14 millions	40	13.3
	Total	300	100

Table 4.1: the result of the sample's descriptive statistics

The above frequency distribution shows that the sample collected is quite suitable to the practice (research circumstance). Therefore, the sample selected by convenient method, but having a balance according to the actual rate should be able to expect good representative sample for the study overall.

However, in demographic variables, professional variables have some expressions with too small frequency. Therefore, the analysis of the differences in the level of patient satisfaction in later steps may not be done. This can be seen as a limitation in the design of the study's sample.

4.3 The tests of the scales

As demonstrated in the literature review, that four factors are selected to research on the users' satisfaction and behaviors of the examination and treatment services of the 2-level hospitals are Perceive Quality, Satisfaction, Repurchase, Word of Mouth. Among them, Perceive Quality is a multidimensional variable including four sub dimensions including Interpersonal, Technical, Administrative, and Environment. Furthermore, these sub dimensions also are 2-order constructions that include first-order latent variables illustrated in the figure 2.1 in chapter 2. The items, observable variables in other word, are derived from the previous study worked by Dagger et al. (2007), and the preliminary research as well. As a consequence, testing the scales' reliability and validity is very essential to prove suitable level of the scales in the research context.

Initially, the author is going to compute the Cronbach's Alpha index to estimate preparative reliability and Exploratory Factor Analysis to attract factors from the indicators later. And then, the Confirmative Factor Analysis is going to be run to confirm again the reliability (composite reliability) and the validity.

4.3.1 The scales' reliability and the EFA

The scales' reliability is the sign that illustrates the limitation of random errors in measuring, or in other word, it relates to the results' precision and convergence. The reliability testing method, specifically Cronbach's Alpha index aims to the reliability level of each factor and eliminate some minor items as well. The items having the corrected item-total correlation less than 0.3 are removed. Besides, the factor's reliability have to be more than 0.6 (better if being more than 0.7) (Trọng & Ngọc, 2008).

The Exploratory Factor Analysis bases on the relationships between items, so before this technique is used, it is necessary to scrutinize these association through the matrix of correlation indexes. Admittedly, if the correlations are less than 0.3, using EFA will be probably inconsequential (Hair et al., 2006). The following requirements are usually used to appreciate the relationships of items:

- The Bartlett test: to find out whether the correlation matrix is identity matrix or not. If the test have probability (significance) less than 5%, the null hypothesis (the correlation matrix is the identity one) will be rejected, likewise, the items have relationship with each other.
- The KMO test (Kaiser-Meyer-Olkin measure of sampling adequacy) is the indicator used to compare the correlation coefficient's magnitude between the two variables X_i and X_j with their partial correlation coefficient's magnitude (Norušis, 1994). The larger KMO index is the better it is, because the items' common part is larger. To use EFA, KMO is greater than 0.5. Kaiser (1974) suggested that $KMO \geq 0.9$: very good; $KMO \geq 0.8$: good; $KMO \geq 0.7$: is; $KMO \geq 0.6$: temporary; $KMO \geq 0.5$: bad and $KMO < 0.5$: no unacceptable.
- The sample's size: to use EFA requires the size of the sample having to be large. The determining the suitable proportion is quite complex, customarily based on personal experience. Hair et al. (2006) supposed that to use EFA requires the least sample's size is 50, better if being more than 100 as well as the ratio of a number of observations on a number of items is 5, that means each item requiring at least 5 observations, the best ratio is more than 10.

Conducting Exploratory Factor Analysis is divided into 4 times: The first, all items belonging to latent variables including Interaction, Relationship, Outcome, Expertise, Timeliness, Operation, Tangibles, Atmosphere, and Support are analyzed contemporarily. And the Principal axis factoring method with Promax rotation is used because these factors have impacts on each other. Then, three factors remained are independently analyzed with each other. And the Principal component method with Varimax rotation is launched as three factors are one-dimensional variables.

The result of EFA and Cronbach's Alpha shows that there are 12 factors with 56 items.

- Interaction: including 8 indicators:

INT1: The staff at the clinic always listens to what I have to say.

INT2: I feel the staff at the clinic understand my needs.

INT3: The staff at the clinic is concerned about my happiness.

INT4: I always personalized attention from the staff at the clinic.

INT5: I find it easy to discuss things with the staff at the clinic.

INT6: The staff at the clinic explains things in a way that I can understand.

INT7: The staff at the clinic is willing to answer my questions.

INT8: I believe the staff at the clinic care about me.

- Relationship: including 3 indicators:

REL9: The staff and I sometimes kid around, laugh, or joke with each other like close friends.

REL10: The staff and I talk about the things that are happening in our lives, and not just about my medical condition.

REL11: I have built a close relationship with some of the staff at the clinic.

- Outcome: including 6 indicators:

OUT12: I feel hopeful as a result of having treatment at the clinic.

OUT13: Coming to the clinic has increased my chances of improving my health.

OUT14: I believe my future health will improve as a result of attending the clinic.

OUT15: I believe having treatment at the clinic has been worthwhile.

OUT16: I leave the clinic feeling encouraged about my treatment.

OUT17: Hospital treatment cured me from my illness/ailment.

- Expertise: including 4 indicators:

EXP18: You can rely on the staff at the clinic to be well trained and qualified.

EXP19: The staff at the clinic carries out their tasks competently.

EXP20: I believe the staff at the clinic is highly skilled at their jobs.

EXP21: I feel good about the quality of the care given to me at the clinic.

- Atmosphere: including 5 indicators:

AS22: The atmosphere at the clinic is pleasing.

AS23: I like the "feel" of the atmosphere at the clinic.

AS24: The clinic has an appealing atmosphere.

AS25: The temperature at the clinic is pleasant.

AS26: The clinic smells pleasant.

- Tangibles: including 6 indicators:

TAN27: The furniture at the clinic is comfortable.

TAN28: I like the layout of the clinic.

TAN29: I like the interior decoration (e.g., style of furniture) at the clinic.

TAN30: The color scheme at the clinic is attractive.

TAN31: The color scheme at the clinic is attractive.

TAN32: The design of the clinic is patient friendly.

- Timeliness: including 3 indicators:

TIM33: The clinic keeps waiting time to a minimum.

TIM34: Generally, the staff is in compliance with the timetable.

TIM35: Generally, appointments at the clinic run on time.

- Operation: including 6 indicators:

OPE36: The clinic's records and documentation are error free (e.g., billing).

OPE37: The clinic works well with other service providers.

OPE38: I believe the clinic is well managed.

OPE39: The registration procedures at the clinic are efficient.

OPE40: The discharge procedures at the clinic are efficient.

OPE41: The clinic's opening hours meet my needs.

- Supports: including 3 indicators:

SUP42: The clinic frequently runs support groups and programs for patients.

SUP43: The clinic provides patients with an excellent range of support services.

SUP44: The clinic provides patients with services beyond medical treatment.

- Satisfaction: including 5 indicators:

SAT45: My feelings towards the clinic are very positive.

SAT46: I feel good about coming to this clinic for my treatment.

SAT47: Overall I am satisfied with the clinic and the service it provides.

SAT48: I feel satisfied that the results of my treatment are the best that can be achieved.

SAT49: The extent to which my treatment has produced the best possible outcome is satisfying.

- Repurchase intension: including 5 indicators:

RI50: If I had to start treatment again I would want to come to this clinic.

RI51: I intend to continue having treatment, or any follow-up care I need, at this clinic.

RI52: I have no desire to change clinics.

RI53: I intend to follow the medical advice given to me at the clinic.

RI54: I am glad I have my treatment at this clinic rather than somewhere else.

- Word of mouth: including 2 indicators:

WOM55: I would highly recommend the clinic to other patients.

WOM56: I have said positive things about the clinic to my family and friends.

Structure after running EFA	Items	Resource of scale	Factor loading EFA	Accept or Reject	Cronbach's Alpha			
Perceived Service Quality	Interpersonal	Interaction	The staff at the clinic always listens to what I have to say.	Dagger et al. (2007)	0.717	Accept		
			I feel the staff at the clinic understand my needs.	Dagger et al. (2007)	0.735	Accept		
			The staff at the clinic is concerned about my happiness.	Dagger et al. (2007)	0.785	Accept		
			I always get personalized attention from the staff at the clinic.	Dagger et al. (2007)	0.682	Accept		
			I find it easy to discuss things with the staff at the clinic.	Dagger et al. (2007)	0.690	Accept		
			The staff at the clinic explains things in a way that I can understand.	Dagger et al. (2007)	0.646	Accept		
			The staff at the clinic is willing to answer my questions.	Dagger et al. (2007)	0.650	Accept		
			I believe the staff at the clinic care about me.	Dagger et al. (2007)	0.707	Accept		
			Relationship	Relationship	The staff and I sometimes kid around, laugh, or joke with each other like close friends.	Dagger et al. (2007)	0.618	Accept
					The staff and I talk about the things that are happening in our lives, and not just about my medical condition.	Dagger et al. (2007)	0.814	Accept

		I have built a close relationship with some of the staff at the clinic.	Dagger et al. (2007)	0.723	Accept		
Technical	Outcome	I feel hopeful as a result of having treatment at the clinic.	Dagger et al. (2007)	0.735	Accept	0.864	
		Coming to the clinic has increased my chances of improving my health.	Dagger et al. (2007)	0.768	Accept		
		I believe my future health will improve as a result of attending the clinic.	Dagger et al. (2007)	0.792	Accept		
		I believe having treatment at the clinic has been worthwhile.	Dagger et al. (2007)	0.635	Accept		
		I leave the clinic feeling encouraged about my treatment.	Dagger et al. (2007)	0.625	Accept		
			Hospital treatment cured me from my illness/ailment	Qualitative research	0.671	Accept	
	Expertise		You can rely on the staff at the clinic to be well trained and qualified.	Dagger et al. (2007)	0.687	Accept	0.855
			The staff at the clinic carries out their tasks competently.	Dagger et al. (2007)	0.846	Accept	
			I believe the staff at the clinic is highly skilled at their jobs.	Dagger et al. (2007)	0.829	Accept	
			I feel good about the quality of the care given to me at the clinic.	Dagger et al. (2007)	0.599	Accept	
Environment	Atmosphere	The atmosphere at the clinic is pleasing.	Dagger et al. (2007)	0.711	Accept	0.855	
		I like the “feel” of the atmosphere at the clinic.	Dagger et al. (2007)	0.859	Accept		
		The clinic has an appealing atmosphere.	Dagger et al. (2007)	0.729	Accept		
		The temperature at the clinic is pleasant.	Dagger et al. (2007)	0.596	Accept		
		The clinic smells pleasant.	Dagger et al. (2007)	0.565	Accept		
	Tangibles		The furniture at the clinic is comfortable.	Dagger et al. (2007)	0.647	Accept	0.881
			I like the layout of the clinic.	Dagger et al. (2007)	0.787	Accept	
			I like the interior decoration (e.g., style of furniture) at the clinic.	Dagger et al. (2007)	0.794	Accept	
		The color scheme at the clinic	Dagger et al.	0.681	Accept		

		is attractive.	(2007)			
		The lighting at the clinic is appropriate for this setting.	Dagger et al. (2007)	0.574	Accept	
		The design of the clinic is patient friendly.	Dagger et al. (2007)	0.806	Accept	
Administrative	Timeliness	The clinic keeps waiting time to a minimum.	Dagger et al. (2007)	0.761	Accept	
		Generally, the staff is in compliance with the timetable.	Dagger et al. (2007)	0.787	Accept	0.852
		Generally, appointments at the clinic run on time.	Dagger et al. (2007)	0.746	Accept	
	Operation	The clinic's records and documentation are error free (e.g., billing).	Dagger et al. (2007)	0.654	Accept	
		The clinic works well with other service providers.	Dagger et al. (2007)	0.829	Accept	
		I believe the clinic is well managed.	Dagger et al. (2007)	0.582	Accept	0.875
		The registration procedures at the clinic are efficient	Dagger et al. (2007)	0.628	Accept	
		The discharge procedures at the clinic are efficient.	Dagger et al. (2007)	0.706	Accept	
		The clinic's opening hours meet my needs.	Dagger et al. (2007)	0.559	Accept	
	Support	The clinic frequently runs support groups and programs for patients.	Dagger et al. (2007)	0.777	Accept	
		The clinic provides patients with an excellent range of support services.	Dagger et al. (2007)	0.766	Accept	0.835
		The clinic provides patients with services beyond medical treatment.	Dagger et al. (2007)	0.729	Accept	
	Satisfaction	My feelings towards the clinic are very positive.	Dagger et al. (2007)	0.804	Accept	
		I feel good about coming to this clinic for my treatment.	Dagger et al. (2007)	0.799	Accept	
		Overall I am satisfied with the clinic and the service it provides.	Dagger et al. (2007)	0.825	Accept	0.869
I feel satisfied that the results of my treatment are the best that can be achieved.		Dagger et al. (2007)	0.809	Accept		
The extent to which my treatment has produced the best possible outcome is		Dagger et al. (2007)	0.815	Accept		

satisfying.

Repurchase Intention	If I had to start treatment again I would want to come to this clinic.	Dagger et al. (2007)	0.850	Accept	0.863
	I intend to continue having treatment, or any follow-up care I need, at this clinic.	Dagger et al. (2007)	0.850	Accept	
	I have no desire to change clinics.	Dagger et al. (2007)	0.759	Accept	
	I intend to follow the medical advice given to me at the clinic.	Dagger et al. (2007)	0.779	Accept	
	I am glad I have my treatment at this clinic rather than somewhere else.	Dagger et al. (2007)	0.785	Accept	
Word of mouth	I would highly recommend the clinic to other patients.	Dagger et al. (2007)	0.927	Accept	0.837
	I have said positive things about the clinic to my family and friends.	Dagger et al. (2007)	0.927	Accept	

Table 4.2: The results of the EFA and Cronbach's Alpha

As presented in the above table, all items putted into running Cronbach's alpha and Exploratory Factor Analysis have factor loading being more than 0.5 as well as Cronbach's Alpha index being more than 0.7. As a result, all indicators are accepted to continue analyzing following stages.

4.3.2 The Confirmative Factor Analysis

The observable variables accepted after running EFA and Cronbach's Alpha in above stage are used for running CFA to confirm the compatibility of the study's factors.

The results of CFA, computing factors' composite reliability and extracted variance are represented in the table 4.2.

Structure after running CFA	Items	Standardized Regression Weight	Composite reliability	Extracted Variance
Perceived Service Quality Interpersonal Interaction	The staff at the clinic always listens to what I have to say.	0.677	0.890	0.505
	I feel the staff at the clinic understand	0.657		

		my needs.			
		The staff at the clinic is concerned about my happiness.	0.734		
		I always get personalized attention from the staff at the clinic.	0.726		
		I find it easy to discuss things with the staff at the clinic.	0.771		
		The staff at the clinic explains things in a way that I can understand.	0.651		
		The staff at the clinic is willing to answer my questions.	0.675		
		I believe the staff at the clinic care about me.	0.781		
	Relationship	The staff and I sometimes kid around, laugh, or joke with each other like close friends.	0.758		
		The staff and I talk about the things that are happening in our lives, and not just about my medical condition.	0.830	0.813	0.810
		I have built a close relationship with some of the staff at the clinic.	0.717		
Technical	Outcome	I feel hopeful as a result of having treatment at the clinic.	0.716		
		Coming to the clinic has increased my chances of improving my health.	0.761		
		I believe my future health will improve as a result of attending the clinic.	0.777	0.865	0.517
		I believe having treatment at the clinic has been worthwhile.	0.708		
		I leave the clinic feeling encouraged about my treatment.	0.673		
		Hospital treatment cured me from my illness/ailment	0.674		
	Expertise	You can rely on the staff at the clinic to be well trained and qualified.	0.716		
		The staff at the clinic carries out their tasks competently.	0.793	0.858	0.602
		I believe the staff at the clinic is highly skilled at their jobs.	0.819		
		I feel good about the quality of the care given to me at the clinic.	0.771		
Environment		The atmosphere at the clinic is pleasing.	0.664	0.844	0.521

		I like the “feel” of the atmosphere at the clinic.	0.802		
		The clinic has an appealing atmosphere.	0.749		
		The temperature at the clinic is pleasant.	0.655		
		The clinic smells pleasant.	0.729		
	Tangibles	The furniture at the clinic is comfortable.	0.760		
		I like the layout of the clinic.	0.778		
		I like the interior decoration (e.g., style of furniture) at the clinic.	0.760		
		The color scheme at the clinic is attractive.	0.705	0.881	0.554
		The lighting at the clinic is appropriate for this setting.	0.677		
		The design of the clinic is patient friendly.	0.780		
		Timeliness	The clinic keeps waiting time to a minimum.	0.774	
	Generally, the staff is in compliance with the timetable.		0.842	0.854	0.661
	Generally, appointments at the clinic run on time.		0.821		
Administrative	Operation	The clinic’s records and documentation are error free (e.g., billing).	0.751		
		The clinic works well with other service providers.	0.802		
		I believe the clinic is well managed.	0.726	0.876	0.542
		The registration procedures at the clinic are efficient	0.765		
		The discharge procedures at the clinic are efficient.	0.713		
		The clinic’s opening hours meet my needs.	0.653		
		Support	The clinic frequently runs support groups and programs for patients.	0.778	
The clinic provides patients with an excellent range of support services.	0.832		0.836	0.629	
The clinic provides patients with services beyond medical treatment.	0.768				
Satisfaction		My feelings towards the clinic are very positive.	0.768	0.869	0.571

	I feel good about coming to this clinic for my treatment.	0.734		
	Overall I am satisfied with the clinic and the service it provides.	0.775		
	I feel satisfied that the results of my treatment are the best that can be achieved.	0.739		
	The extent to which my treatment has produced the best possible outcome is satisfying.	0.760		
Repurchase Intention	If I had to start treatment again I would want to come to this clinic.	0.775		
	I intend to continue having treatment, or any follow-up care I need, at this clinic.	0.717		
	I have no desire to change clinics.	0.688	0.853	0.538
	I intend to follow the medical advice given to me at the clinic.	0.722		
	I am glad I have my treatment at this clinic rather than somewhere else.	0.761		
Word of mouth	I would highly recommend the clinic to other patients.	0.849		
	I have said positive things about the clinic to my family and friends.	0.848	0.837	0.720

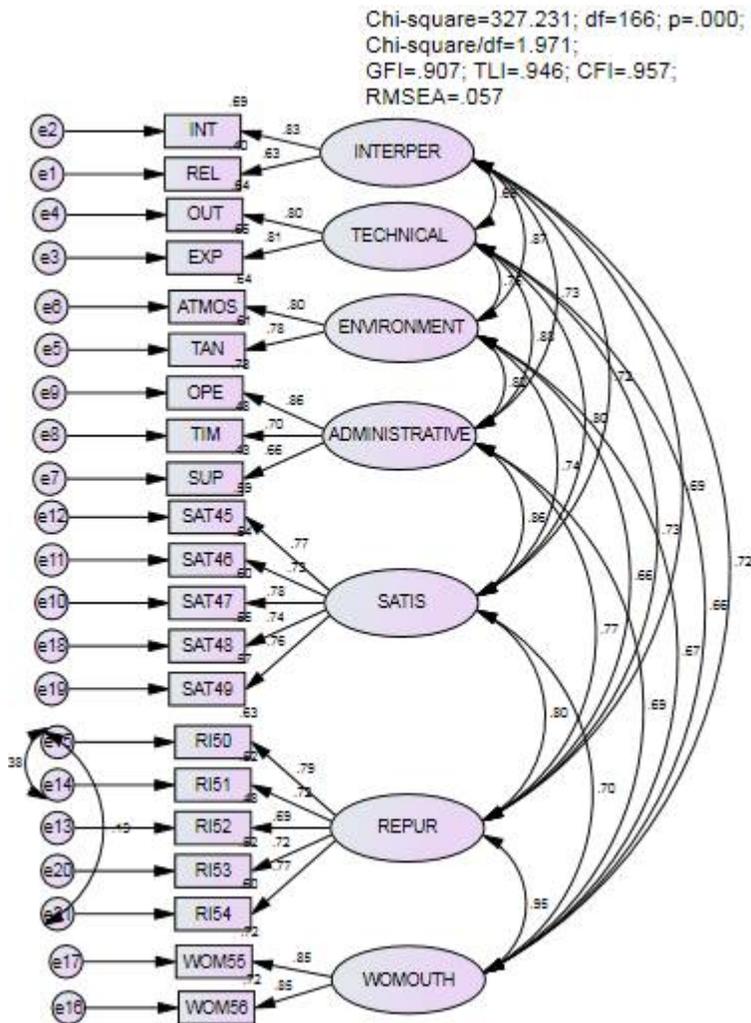
Notation: All factor loadings in above table have the statistical significance with the level of confidence at 99%. Chi-square/df=1.744; TLI=0.886; CFI=0.895; RMSEA=0.050

Table 4.3: the results of CFA, computing factors' composite reliability and extracted variance

With the performances in the table, the scales are probably expected to meet requirements about the scales' reliability and validity. As can be seen, all composite reliabilities are from 0.813 to 0.890 (more than 0.7), and Extracted Variances are all over 0.5. In addition, all indicators have value fluctuating from 0.651 to 0.849 (more than 0.5). Therefore, all observable variables are relevant to analyze.

However, looking at the general indexes which inflect suitable level of the model to practice, it can be seen that TLI and CFI < 0.9. In order to resolve this problem, the author drew covariance paths between some pairs of errors having MI high (more than 10), but the TLI and CFI are also lower than 0.9. Truly, this is an understandable result of the very complicated model.

Lastly, to make the model becoming relevant to the practice, the author decides to simply the model by extracting items into higher-order variable through EFA, and seeing it to be an observable variable. Then, CFA is used again to the new model with the result illustrated in the following figure.



The figure 4.1: the result of CFA for the scales after extracting

As presented in the figure 4.1, some indexes including TLI, CFI, GFI (>0.9), CMIN/df <2, and RMSEA<0.06. Therefore, the scales are relevant to practice data.

4.4 Testing the research's model and the hypotheses

4.4.1 Correlation analysis and the patients' appreciation on the collected factors

Before running the regression technique through the technique namely Structural Equation Model (SEM), it is essential to check in the correlation among the factors. This is to assure the regression's solicitations as well as to suggest some competitive models. Besides, the descriptive statistic aims to know the patients' appreciation to factors' existent situation.

The results of the factors' means, standard deviation, and correlation indexes are represented in the following table named 4.3.

Order	Concepts	Mean	SD	Correlation													
				1	2	3	4	5	6	7	8	9	10	11	12		
1	Interaction	3.066	0.666	1.000													
2	Relationship	2.589	0.825	0.572	1.000												
3	Outcome	3.419	0.638	0.476	0.328	1.000											
4	Expertise	3.441	0.692	0.429	0.322	0.625	1.000										
5	Atmosphere	3.101	0.679	0.627	0.452	0.471	0.488	1.000									
6	Tangibles	3.067	0.655	0.539	0.401	0.470	0.410	0.635	1.000								
7	Timeliness	3.087	0.849	0.485	0.484	0.479	0.559	0.562	0.431	1.000							
8	Operation	3.283	0.665	0.494	0.302	0.646	0.593	0.515	0.623	0.551	1.000						
9	Support	3.150	0.754	0.393	0.288	0.364	0.418	0.341	0.433	0.454	0.631	1.000					
10	Satisfaction	3.272	0.663	0.641	0.369	0.622	0.663	0.617	0.581	0.572	0.770	0.585	1.000				
11	Repurchase intention	3.267	0.712	0.567	0.489	0.560	0.640	0.512	0.538	0.636	0.625	0.591	0.810	1.000			
12	Word of mouth	3.283	0.841	0.576	0.558	0.435	0.619	0.536	0.539	0.572	0.541	0.546	0.701	0.960	1.000		

Notation: All correlation indexes in the table have statistical significance with the level of confidence at 99%

Table 4.4: the means, standard deviation and the correlations between the factors

As represented in the above table, the independent factors and dependent ones have the correlation being enough (>0.3) to conduct the Regression Technique.

Looking at the column named Mean, it is effortlessly seen that the patients underestimate the relationship between medical workers and them, interaction between medical workers and them, hospital' facilities, and compliance of time, with valued at 2.589, 3.066, 3.067, 3.087, respectively. The other factors have higher estimations, but also are still quite low (less than 3.5). Among all aspects surveyed, the Outcome and Expertise have the most valuation with approximately 3.4 point per 5-point scale.

Admittedly, all above results are quite suitable to practice situation in Vietnam. According to some medical reports published in recent years, public hospitals are often appraisal higher than private hospitals about medical experts and outcome of treatment and examination; however, the interaction and relationship between medical staffs and patients, timeliness as well as facilities in public infirmaries are usually tough controversies.

It follows therefore that the patients' satisfaction, therefore, is quite low, valued at 3.272. This causes patients' intention of behaviors in the future including repurchase and word of mouth also low, with 3.267 and 3.383 respectively.

4.4.2 Testing the research's model and hypotheses

The author uses AMOS 20 to run the Structural Equation Model and has the following outcome (showed in the figure 4.2 and the table 4.4).

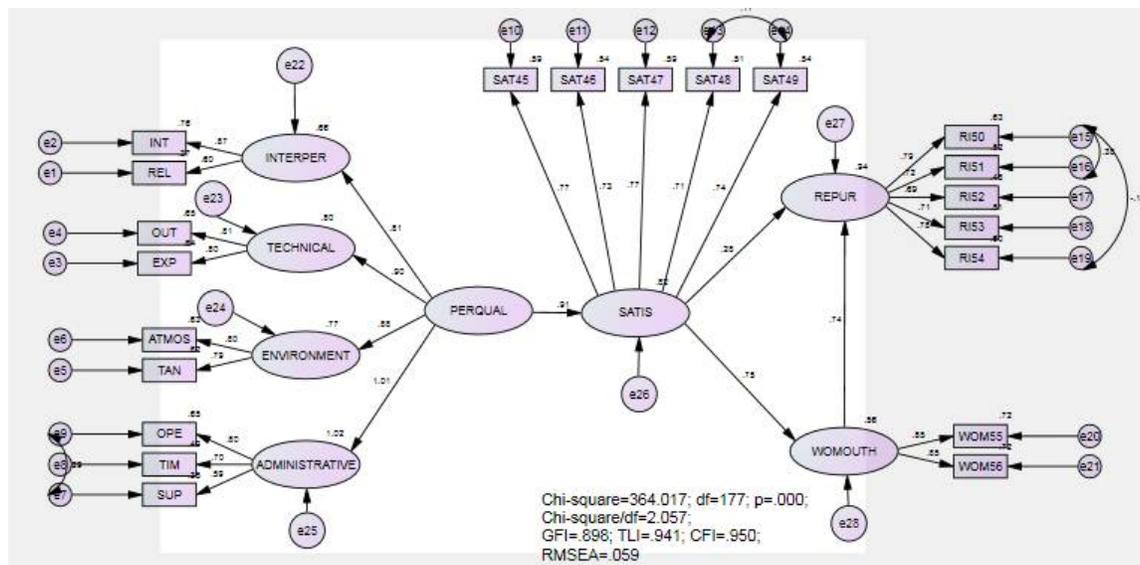


Figure 4.2: The completed research model

			Standardized coefficient	P-value
Satisfaction	<---	Perceived Quality	0.908	***
Word of mouth	<---	Satisfaction	0.750	***
Repurchase	<---	Satisfaction	0.284	***

			Standardized coefficient	P-value
Repurchase	<---	Word of mouth	0.737	***
Interpersonal	<---	Perceived Quality	0.810	***
Technical	<---	Perceived Quality	0.896	***
Environment	<---	Perceived Quality	0.878	***
Administrative	<---	Perceived Quality	1.008	***

Table 4.5: the outcome of SEM

The above table illustrates that among sub dimension of Perceived Service Quality, the “Administrative” has the most important role with standardized coefficient being 1.008. In contract, the “Interpersonal” has the least effect with standardized coefficient being 0.810. Furthermore, the performance also shows that patients’ satisfaction has significant impact on their intention of repurchase with standardized total effect about 0.836 including the standardized direct of 0.284, and the standardized indirect of 0.605. For word of mouth, patients’ fulfillment additionally has important role in increasing positive spread out of the hospital’s prestige. It is effortlessly understandable that public medical organizations in Vietnam virtually use Word of Mouth marketing, and patients almost believe some certain infirmaries’ treatments and examinations through their relatives’ introductions.

Nevertheless, the above result illustrates that the satisfaction derives from the patients’ perceived service quality. Likewise, the perceived service quality impacts significantly on the patient’s fulfillment, with the standardized effect of 0.908.

Briefly, the results of testing the research model and hypotheses are illustrated in the following table:

Hypothesis	Causal relationship	Standardized coefficients	Sig	Results (Level of confident at 95%)
H1	PERCEIVED QUALITY → SATISFACTION	0.908	***	Accepted
H2	SATISFACTION → REPURCHASE	0.284	***	Accepted
H3	SATISFACTION → WORD OF MOUTH	0.750	***	Accepted
H4	WORD OF MOUTH → REPURCHASE	0.737	***	Accepted

Table 4.6: The summary of estimated result of the theory model**4.5 Test of difference of sub populations' satisfaction**

To test the differences of satisfaction level among groups of patients are classified by demographic aspects. Initially, the author uses Levene Test to test whether the groups' variances are equivalent or not. Then, using Independent samples T-Test if the demographic variable has two expressions, or using One-way Anova if the demographic has more than two expressions. To be more specific, Post Hoc technique can be used additionally to know detail which group differs from a certain other group.

4.5.1. The patients' satisfaction and behavioral intention on the 2-level public hospitals' service quality

Look at the table 4.4, it is can be seen that 300 surveyed patients have the low degree of satisfaction; this causes the negative (unexpected) behavioral intentions. To be more specific, the *Repurchase* and *Word of mouth* have not high marks. However, this is the result of the sample, the question needed to answer that how much the research population's satisfaction as well as future intention is. In order to answer the question, the author uses the test named One-sample T-Test.

95% Confidence Interval of the Difference						
	N	Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Satisfaction	300	3.2720	.66253	.03825	3.1967	3.3473
Repurchase	300	3.2673	.71177	.04109	3.1865	3.3482
Word of mouth	300	3.2833	.84088	.04855	3.1878	3.3789

Table 4.7 Estimation for the population's satisfaction and behavioral intentions

As illustrated in the above table, the Satisfaction of population has value from 3.197 to 3.347 with confidence of 95%. Meanwhile, those numbers of Repurchase, Word of mouth are from 3.187 to 3.348; and from 3.188 to 3.379 respectively.

Generally, the patients underestimate the quality of healthcare services provided by the 2-level public hospitals in Ho Chi Minh City. Admittedly, this is suitable to the practice situation; in other word, this is one of reasons causing the large hospitals' overloading in recent years.

4.5.2. Testing the distinction of satisfaction basing on the patient's gender

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	136	3.3721	.60329	.05173
Female	164	3.1890	.69890	.05458

Table 4.8: The sample statistics of the patients' satisfaction based on gender

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
SATISFACTION	Equal variances assumed	.782	.377	2.401	298	.017	.18303	.07623	.03301	.33306
	Equal variances not assumed			2.434	297.508	.016	.18303	.07520	.03505	.33102

Table 4.9: Independent Samples Test for the difference of satisfaction based on gender

As showed in table 4.8, there is the difference of level of patients' satisfaction by gender in the survey. Specifically, compared with the female patients, the male have higher satisfaction of healthcare services.

Looking at table 4.9, the result of Levene Test shows that the variance of the two groups were similar, and the result of Independent Samples Test illustrates that the difference in satisfaction levels on the medical service quality can deduce the population with the confidence of 95%, proved by Sig = 0.017 < 0.05.

4.5.3. Testing the distinction of satisfaction based on the patient's age

For some variables in which there are more two expressions, methods One-way ANOVA was used to examine the differences among the average of expressions. Thus, in order to examine the differences in the level of satisfaction of patients under the age variable, the author uses One-way ANOVA method. The analytical results are presented in the following table.

ANOVA

SATISFACTION

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.771	3	.590	1.350	.258
Within Groups	129.473	296	.437		
Total	131.245	299			

Table 4.10: One-way ANOVA Test for the difference of satisfaction based on patient's age

As showed in table 4.10, there is no evidence to prove the difference of level of patients' satisfaction by the age in the survey. Specifically, it is elucidated by Sig value of 0.258, more than 0.05.

4.5.4. Testing the distinction of satisfaction based on the patient's income

The income variable also has more than two expressions. Thus, in order to examine the differences in the level of satisfaction of patients under the income variable, the author continue to use One-way ANOVA method. The analytical results are presented in the following table.

ANOVA

SATISFACTION

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.824	3	.275	.624	.600
Within Groups	130.421	296	.441		
Total	131.245	299			

Table 4.11: One-way ANOVA Test for the difference of satisfaction based on patient's income

As showed in table 4.11, there is no evidence to prove the difference of level of patients' satisfaction by the income in the survey. Specifically, it is elucidated by Sig value of 0.6, more than 0.05.

4.6. The summary of chapter 4

This chapter presents the results of testing the scale (by assessing the preparative reliability namely Cronbach's alpha, and Exploratory Factor Analysis, and Confirmative Factor Analysis). Besides, the techniques to test the fit of the theory model as well as the assumptions theory are deployed through a linear structural model SEM.

The results showed that all scales for measuring the constructs reach the reliability and the validity as expectation. The theoretical model suggested in chapter 2 for the research proposals is relevant to the survey data. The analysis result of Structural Equation Model showed that the Perceived Quality of hospital's services has significant impact on the patient's satisfaction. In addition, the Satisfaction

factor greatly affects the patient's word of mouth. As the result of statistics, the word of mouth can affect the patient's intention of continuing to use, or in other word repurchasing the services provided by the hospital. All hypotheses proposed in chapter 2 are accepted with the confidence of 95%.

Finally, the statistical results also showed differences of the patient's satisfaction by gender characteristics. This is also an issue that the policy makers should consider.

Chapter 5 is going to present some practical significances of the study, propose a number of recommendations drawn from the research's performances, the limitations of the research, and the research directions in the future as well.

CHAPTER 5 – CONCLUSIONS AND DISCUSSIONS

This chapter summarizes the main results of the research, makes recommendations drawn from the study, and expresses some the research's limitations and the next research direction in the future as well.

5.1 Conclusions

The summary of the research's content and process

This study's main purpose is to evaluate the impact of perceived quality value of healthcare services provided by the 2-level public hospitals on the patient's satisfaction. Then, the satisfaction's impacts on the patients' behavioral intention including continuing to use the hospital's services, the sick persons' word of mouth are appreciated. The research subject in the article is the quality of medical services supplied by 2-level public hospitals in Ho Chi Minh City.

Research methodology used to test the theoretical model and the assumptions (discussed in chapter 3) consists of two main steps: (1) the preliminary study, and (2) the official study.

The preliminary research is conducted through qualitative research methods including literature reviews of the previous studies and theories. Besides, the group interview method is used to explore, adapt and build scales for the research;

The official research (using quantitative research method) is conducted through the survey with questionnaires dispatched to the patients, who used to or are using healthcare services provided 2-level public hospitals in Ho Chi Minh City, with sample size $n = 300$. In analytical stage, the scales are assessed preparative both of validity and reliability through Cronbach's alpha coefficient and Exploratory Factor Analysis. Then, retest methods via Confirmative Factor Analysis (CFA). Finally, the theoretical model is tested through the tool named Structural Equation Model (SEM), and analyzes the difference of satisfaction among sub populations classified by demographic variables (the results are presented in chapter 4).

The summary of the study's performances

The result of Confirmative Factor Analysis (CFA) for theoretical model shows that the scales used in the model is consistent with the actual data (the index TLI, CFI, CMIN/df, and RMSEA all achieve essential standards)

Furthermore, the outcome of Correlation Analysis illustrates that: Among the independent factors independent and dependent ones have sufficiently large correlation (> 0.3) to satisfy the conditions in the regression analysis (causal analysis), the correlation coefficients all have statistical significance at the 5% significance.

The consequence of Structural Equation Model analysis additionally showed that the compatibility of the theoretical model with market data (the index TLI, CFI, CMIN/df, and RMSEA all achieve required standards).

The result of testing the research's hypotheses shows that all assumptions are accepted. In particular, the patients' perceived quality of health services has effect on their satisfaction; the patient's satisfaction has a direct impact on the re-use of medical services provided by the hospitals, and has indirect impact on the re-use of medical services provided by the hospitals through the patient's word of mouth.

The additional tests are conducted to examine the differences of the level of the patients' satisfaction under demographic variables such as gender, age, and income. The results show that there is only difference of the satisfaction between the two groups of male and female patients. There is no difference of the satisfaction among income and age groups.

5.2 Suggestions

This part provides some necessary and feasible solutions for maintaining and improving the satisfaction of the people who use healthcare services provided by 2-level public hospitals. Those solutions can be practiced in short- term or long- term period of time and always needs the careful consideration from not only the leaders but also the staffs working in these hospitals. The below suggestions are expected to be applied in order to gain the better satisfaction from the patients who use the services.

Improving the relationships between doctors and patients

The market developed under the market economy system with a socialism orientation makes the medical model become unprecedented. The transition from the command economy to the market one leads many problems being addressed. While the command economic model is no longer unsuitable, the market economy is also exposed many contradictions, especially poverty-wealth gap being more and more transparent; The medical structure is distorted by chasing profit, doctors must survive, diverse interests. It follows therefore that the harassment situation becomes more and more serious. The

doctor does not concern the interests of the patient. Especially, this is clearer in the public hospitals in Vietnam. As a consequence, it is necessary to educate more and more medical ethics today, incorporate ethics education and improvement of professional knowledge in medicine.

In addition, it is important to note that the state bodies have to convey thoroughly the legal documents, legislations, and ordinances of medical area to employees, staffs who are working in hospitals generally and public hospitals particularly. It is also important to focus on the fields of the medical examination that the patients use the medical health insurance to pay the services' fee.

Raising awareness of the each medical staffs' responsibilities in the process of treatment and examination follows the slogan "All for the patient and for the development of the facilities". Furthermore, deploying "hotline" effectively aims to identify and eliminate medical staffs who do not deserve to be a physician. The leaders have to penalize seriously the collective and the individuals who do not compliance rules as well as encourage, motivate, and reward persons, who complete works, timely.

Moreover, physicians need to have a reasonable level of income ensuring their life. Besides, increasing the price of medical services and calculating the doctors' salary based on the performance. Likewise, this helps doctors look at patients as customers. Thus, this may improve the attitude of doctors to patients.

Improving the hospitals' facilities

As the result of the research, the patients underestimate the 2-level public hospitals, and the facilities contribute an important value into the patients' perceived quality. Therefore, reforming the hospitals' facilities is one main solution to improve the patient's satisfaction. Honestly, in order to do this, some following insights may be considered:

Firstly, it is essential to increase the society's awareness of the healthcare system, especially the public healthcare system. Thence by, the state is easier to mobilize social capital to build as well as reform public health facilities.

Secondly, growing fees for the medical services to form funds, budgets for the construction, repairing hospitals, and buying modern medical equipments. However, it is important to note that increasing the

fees must go parallel with development of service quality. Otherwise, it may cause negative reactions from patients.

Thirdly, the management of medical equipment needs to be focused, regular inspection and supervision over the use of medical equipment to ensure proper use, economical and efficient.

Last but not least, the management and control of medical equipments need to be concerned, tested and observed regularly to ensure that the apparatuses are use rightly, effectively.

Reforming administrative procedures and increasing of support services

According to the research's performance, the administrative procedures have the most important effect on the patients' perceived quality, and this issue is being underestimated by the patients. Therefore, reforming the administrative rules can be seen as an emergency solution. The author suggests some implications as follows:

First up, the cashless payments ought to be deployed immediately and online registration of treatment and examination for the patients. Recently, the Vietnam Industrial Bank (VIETINBANK) has studied and launched a non-cash payment service and online registration of treatment and examination for the patient. In particular, patients can choose the payment methods such as using mobile phones, Kiosk Banking to pay the healthcare services' fee immediately after the doctor's prescriptions offered. With these kinds of payment, the sick persons no longer waste their time as they used to. The patients' relatives can pay bills for patients through the hospital's website. In addition, the patients can use E-Partner, an international credit card (Premium Visa, MasterCard ...) or Kiosk Banking to proactively register appointments of examination.

However, implement the modern technologies in above processes requires the skill-trained staffs. Therefore, it is significant to raise the staffs' administrative skills up.

Secondly, the application of information technology in the management and conduction of the hospitals' processes of treatment and examination are accelerated. Practically, the innovation and the good organization of clinical process probably ensure the patients' conveniences, reduce waiting time, and improve patients' fulfillment. The hospital's leaders should enhance the service quality right from the reception. It is especially important to note that improving the service quality in the case of examination and treatment by healthy insurance. Truly, the central hospitals' overloading is caused by

the lack of 2-level hospitals' attention to the patients, especially in the case of examination and treatment by healthy insurance. Thence, the patients feel worry about the quality, this makes them go to the larger or higher level hospitals to treat their disease. Briefly, reforming administrative procedures is right orientation of the hospitals.

Technical solutions: improving professional qualification and treatment outcomes

Leaders need to overcome the difficulties and limitations of expertise and facilities to actively implement the technical services with better quality in every healthcare facility. It is important to focus on the development of basic techniques, select strong and advance techniques, high technology being suitable to the actual situation to orient development strategies.

In addition, hospitals should also constantly learn new knowledge to deploy the application of new techniques in medical examination and treatment; accelerating implementation of the project No. 1816 is to develop medical technologies and the hospital's facilities.

To build and improve the patient's satisfaction and confidence on local hospitals should focus on improving the quality of services in these hospitals, with the slogan "Put the patient into center". This can be considered as one of the practical measures to reduce overcrowding in major hospitals.

Hospitals should also regularly open training courses to improve professional skills, make chances for physicians to learn and develop professional knowledge as well. It is necessary to train doctors carefully, ensure medical staffs understanding fully about the conduction of medical machines before launching the machines.

Focus from undergraduate education, regularly updated training programs; build standards to give qualification for persons qualified as doctors.

The regime of the attraction of the talents should put on top priority in the process of recruitment at the hospital.

The hospitals and clinics have to determine that the quality improvement is one key task, and runs regularly, continuously throughout their operation and development. It is essential to build plans, programs to improve the service quality following the set of hospital's quality criteria issued by Department of Health; have measures to ensure the safety of patients and healthcare workers; solve

medical problems relevantly; identify priority of quality improvement in line with the reality of each hospital, health care facility, etc.

5.3 The research's limitations and future directions

This study does not additionally avoid of some certain drawbacks. Firstly, the surveyed sample is collected by convenient sampling method so the results inferring to the population's parameters is not entirely in compliance with inference statistic's strict regulations.

The second, this study still explores the difference of sub-populations divided by demographic features.

In the future, the author wants to conduct a research which focuses on the satisfaction of the users in specific purposes (i.e. registration of examination and treatment) in order to determine the pros and cons of each department involved in the process and suggest the more advanced procedure. Besides, the satisfaction of specific class of patients will be considered to do a research.

As stated above, the future intentions of researches ought to focus on downsides to develop and embrace full awareness of quality of service.

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APPENDIX

Appendix A- Health service quality: Respondents rated the clinic's performance on each scale item using a 5-point scale (1: *strongly disagree*, 5: *strongly agree*).

Items	No.	Content	Source
INTERACTION			
INT1	1	The staff at the clinic always listens to what I have to say.	Dagger et al. (2007)
INT2	2	I feel the staff at the clinic understand my needs.	Dagger et al. (2007)
INT3	3	The staff at the clinic is concerned about my happiness.	Dagger et al. (2007)
INT4	4	I always get personalized attention from the staff at the clinic.	Dagger et al. (2007)
INT5	5	I find it easy to discuss things with the staff at the clinic.	Dagger et al. (2007)
INT6	6	The staff at the clinic explains things in a way that I can understand.	Dagger et al. (2007)
INT7	7	The staff at the clinic is willing to answer my questions.	Dagger et al. (2007)
INT8	8	I believe the staff at the clinic care about me.	Dagger et al. (2007)
RELATIONSHIP			
REL9	9	The staff and I sometimes kid around, laugh, or joke with each other like close	Dagger et al. (2007)

		friends.	
REL10	10	The staff and I talk about the things that are happening in our lives, and not just about my medical condition.	Dagger et al. (2007)
REL11	11	I have built a close relationship with some of the staff at the clinic.	Dagger et al. (2007)
OUTCOME			
OUT12	12	I feel hopeful as a result of having treatment at the clinic.	Dagger et al. (2007)
OUT13	13	Coming to the clinic has increased my chances of improving my health.	Dagger et al. (2007)
OUT14	14	I believe my future health will improve as a result of attending the clinic.	Dagger et al. (2007)
OUT15	15	I believe having treatment at the clinic has been worthwhile.	Dagger et al. (2007)
OUT16	16	I leave the clinic feeling encouraged about my treatment.	Dagger et al. (2007)
OUT17	17	Hospital treatment cured me from my illness/ailment	Qualitative Research
EXPERTISE			
EXP18	18	You can rely on the staff at the clinic to be well trained and qualified.	Dagger et al. (2007)
EXP19	19	The staff at the clinic carries out their tasks competently.	Dagger et al. (2007)

EXP20	20	I believe the staff at the clinic is highly skilled at their jobs.	Dagger et al. (2007)
EXP21	21	I feel good about the quality of the care given to me at the clinic.	Dagger et al. (2007)
ATMOSPHERE			
AS22	22	The atmosphere at the clinic is pleasing.	Dagger et al. (2007)
AS23	23	I like the “feel” of the atmosphere at the clinic.	Dagger et al. (2007)
AS24	24	The clinic has an appealing atmosphere.	Dagger et al. (2007)
AS25	25	The temperature at the clinic is pleasant.	Dagger et al. (2007)
AS26	26	The clinic smells pleasant.	Dagger et al. (2007)
TANGIBLES			
TAN27	27	The furniture at the clinic is comfortable.	Dagger et al. (2007)
TAN28	28	I like the layout of the clinic.	Dagger et al. (2007)
TAN29	29	I like the interior decoration (e.g., style of furniture) at the clinic.	Dagger et al. (2007)
TAN30	30	The color scheme at the clinic is attractive.	Dagger et al. (2007)
TAN31	31	The lighting at the clinic is appropriate for this setting.	Dagger et al. (2007)
TAN32	32	The design of the clinic is patient friendly.	Dagger et al. (2007)

TIMELINESS			
TIM33	33	The clinic keeps waiting time to a minimum.	Dagger et al. (2007)
TIM34	34	Generally, the staff is in compliance with the timetable.	Qualitative Research
TIM35	35	Generally, appointments at the clinic run on time.	Dagger et al. (2007)
OPERATION			
OPE36	36	The clinic's records and documentation are error free (e.g., billing).	Dagger et al. (2007)
OPE37	37	The clinic works well with other service providers.	Dagger et al. (2007)
OPE38	38	I believe the clinic is well managed.	Dagger et al. (2007)
OPE39	39	The registration procedures at the clinic are efficient	Dagger et al. (2007)
OPE40	40	The discharge procedures at the clinic are efficient.	Dagger et al. (2007)
OPE41	41	The clinic's opening hours meet my needs.	Dagger et al. (2007)
SUPPORT			
SUP42	42	The clinic frequently runs support groups and programs for patients.	Dagger et al. (2007)
SUP43	43	The clinic provides patients with an excellent range of support services.	Dagger et al. (2007)

SUP44	44	The clinic provides patients with services beyond medical treatment.	Dagger et al. (2007)
SATISFACTION			
SAT45	45	My feelings towards the clinic are very positive.	Dagger et al. (2007)
SAT46	46	I feel good about coming to this clinic for my treatment.	Dagger et al. (2007)
SAT47	47	Overall I am satisfied with the clinic and the service it provides.	Dagger et al. (2007)
SAT48	48	I feel satisfied that the results of my treatment are the best that can be achieved.	Dagger et al. (2007)
SAT49	49	The extent to which my treatment has produced the best possible outcome is satisfying.	Dagger et al. (2007)
INTENTION			
RI50	50	If I had to start treatment again I would want to come to this clinic.	Dagger et al. (2007)
RI51	51	I intend to continue having treatment, or any follow-up care I need, at this clinic.	Dagger et al. (2007)
RI52	52	I have no desire to change clinics.	Dagger et al. (2007)
RI53	53	I intend to follow the medical advice given to me at the clinic.	Dagger et al. (2007)
RI54	54	I am glad I have my treatment at this	Dagger et al. (2007)

		clinic rather than somewhere else.	
WOM55	55	I would highly recommend the clinic to other patients.	Dagger et al. (2007)
WOM56	56	I have said positive things about the clinic to my family and friends.	Dagger et al. (2007)

Appendix B- The questionnaire used for collecting data**QUESTIONNAIRE**

Dear Sir/ Madam,

I am conducting a research related to the public services' quality at the public hospitals in Ho Chi Minh City. The research's results would provide necessary information for the board of management in order to improve the quality and better serve the patients.

Please spend some time to fill this form. In this form, your viewpoint is neither right nor wrong; all of the information is useful for my research. Your answers are carefully secure with us.

Thank you very much.

Recent times, which hospital you come to examine or have a treatment?

- An Binh Hospital
- Saigon Polyclinic Hospital
- Mental Hospital
- Hospital for Rehabilitation and Professional Diseases
- Traditional Medicine Hospital
- Other:

If you choose the answer "Other", please do not answer the questions below.

I. PERSONAL INFORMATION

1. **Gender:** Male Female

2. **Age**

From 18 to 35 years old From 36 to 45 years old From 46 to 55 years old

From 56 to 65 years old From 66 to 75 years old Above 75 tuổi.

3. **Employment status**

- Working full-time Working part-time Unemployed
 Not in the labor force Unable to work (illness)

4. Monthly income

- < 4 millions VND 4 to 9 millions VND
 9 to 14 millions VND > 14 millions.

II. CONTENT OF SURVEY

Please give us your ideas about the hospital that you chosen at the beginning of this survey.

Do you agree with the statements below?			Totally disagree	Disagree	Neutral	Agree	Totally Agree
Please mark (X) in order to choose (from 1 to 5).							
1: Totally disagree;							
2: Disagree							
3: Neutral							
4: Agree							
5: Totally agree							
Items	No.	Content					
INTERACTION							
INT1	1	The staff at the clinic always listens to what I have to say.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT2	2	I feel the staff at the clinic understand my needs.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

INT3	3	The staff at the clinic is concerned about my happiness.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT4	4	I always get personalized attention from the staff at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT5	5	I find it easy to discuss things with the staff at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT6	6	The staff at the clinic explains things in a way that I can understand.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT7	7	The staff at the clinic is willing to answer my questions.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INT8	8	I believe the staff at the clinic care about me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
RELATIONSHIP							
REL9	9	The staff and I sometimes kid around, laugh, or joke with each other like close friends.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
REL10	10	The staff and I talk about the things that are happening in our lives, and not just about my medical condition.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
REL11	11	I have built a close relationship with some of the staff at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OUTCOME							
OUT12	12	I feel hopeful as a result of having treatment at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OUT13	13	Coming to the clinic has increased my chances of improving my health.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

OUT14	14	I believe my future health will improve as a result of attending the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OUT15	15	I believe having treatment at the clinic has been worthwhile.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OUT16	16	I leave the clinic feeling encouraged about my treatment.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OUT17	17	Hospital treatment cured me from my illness/ailment	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
EXPERTISE							
EXP18	18	You can rely on the staff at the clinic to be well trained and qualified.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
EXP19	19	The staff at the clinic carries out their tasks competently.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
EXP20	20	I believe the staff at the clinic is highly skilled at their jobs.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
EXP21	21	I feel good about the quality of the care given to me at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
ATMOSPHERE							
AS22	22	The atmosphere at the clinic is pleasing.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
AS23	23	I like the “feel” of the atmosphere at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
AS24	24	The clinic has an appealing atmosphere.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
AS25	25	The temperature at the clinic is pleasant.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
AS26	26	The clinic smells pleasant.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

TANGIBLES

TAN27	27	The furniture at the clinic is comfortable.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TAN28	28	I like the layout of the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TAN29	29	I like the interior decoration (e.g., style of furniture) at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TAN30	30	The color scheme at the clinic is attractive.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TAN31	31	The lighting at the clinic is appropriate for this setting.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TAN32	32	The design of the clinic is patient friendly.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

TIMELINESS

TIM33	33	The clinic keeps waiting time to a minimum.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TIM34	34	Generally, the staff is in compliance with the timetable.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
TIM35	35	Generally, appointments at the clinic run on time.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

OPERATION

OPE36	36	The clinic's records and documentation are error free (e.g., billing).	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OPE37	37	The clinic works well with other service providers.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OPE38	38	I believe the clinic is well managed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OPE39	39	The registration procedures at the clinic are efficient	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
OPE40	40	The discharge procedures at the clinic are efficient.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

OPE41	41	The clinic's opening hours meet my needs.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SUPPORT							
SUP42	42	The clinic frequently runs support groups and programs for patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SUP43	43	The clinic provides patients with an excellent range of support services.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SUP44	44	The clinic provides patients with services beyond medical treatment.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SATISFACTION							
SAT45	45	My feelings towards the clinic are very positive.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SAT46	46	I feel good about coming to this clinic for my treatment.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SAT47	47	Overall I am satisfied with the clinic and the service it provides.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SAT48	48	I feel satisfied that the results of my treatment are the best that can be achieved.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
SAT49	49	The extent to which my treatment has produced the best possible outcome is satisfying.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
INTENTION							
RI50	50	If I had to start treatment again I would want to come to this clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
RI51	51	I intend to continue having treatment, or any follow-up care I need, at this clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

RI52	52	I have no desire to change clinics.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
RI53	53	I intend to follow the medical advice given to me at the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
RI54	54	I am glad I have my treatment at this clinic rather than somewhere else.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
WOM55	55	I would highly recommend the clinic to other patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
WOM56	56	I have said positive things about the clinic to my family and friends.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Thank you very much.

Appendix C- The results of testing the scales' reliability through Cronbach's Alpha Index

Reliability Statistics

Cronbach's Alpha	N of Items
.895	8

Item Statistics

	Mean	Std. Deviation	N
INT1	3.0933	.89103	300
INT2	3.0267	.84558	300
INT3	2.9867	.85768	300
INT4	3.0300	.86695	300
INT5	3.0867	.87657	300
INT6	3.1667	.83739	300
INT7	3.1900	.93639	300
INT8	2.9467	.90178	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

INT1	21.4333	22.106	.654	.884
INT2	21.5000	22.431	.653	.884
INT3	21.5400	21.988	.703	.879
INT4	21.4967	22.164	.669	.882
INT5	21.4400	21.819	.707	.879
INT6	21.3600	22.646	.631	.886
INT7	21.3367	21.749	.658	.883
INT8	21.5800	21.515	.723	.877

Reliability Statistics

Cronbach's Alpha	N of Items
.810	3

Item Statistics

	Mean	Std. Deviation	N
REL9	2.5500	.98865	300
REL10	2.5800	.94512	300
REL11	2.6367	.97356	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
REL9	5.2167	2.960	.644	.756
REL10	5.1867	2.942	.707	.691
REL11	5.1300	3.043	.629	.771

Reliability Statistics

Cronbach's Alpha	N of Items
.864	6

Item Statistics

	Mean	Std. Deviation	N
OUT12	3.5000	.79925	300
OUT13	3.5300	.79868	300
OUT14	3.4767	.83573	300
OUT15	3.3367	.83204	300
OUT16	3.2667	.86296	300

OUT17	3.4033	.83445	300
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Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
OUT12	17.0133	10.609	.658	.841
OUT13	16.9833	10.458	.692	.835
OUT14	17.0367	10.203	.706	.832
OUT15	17.1767	10.507	.644	.844
OUT16	17.2467	10.461	.621	.848
OUT17	17.1100	10.560	.630	.846

Reliability Statistics

Cronbach's Alpha	N of Items
.855	4

Item Statistics

	Mean	Std. Deviation	N
EXP18	3.4233	.86407	300
EXP19	3.4467	.80580	300
EXP20	3.4300	.82505	300
EXP21	3.4633	.81908	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
EXP18	10.3400	4.526	.651	.837
EXP19	10.3167	4.505	.734	.801
EXP20	10.3333	4.417	.741	.798
EXP21	10.3000	4.632	.670	.828

Reliability Statistics

Cronbach's Alpha	N of Items
.855	5

Item Statistics

	Mean	Std. Deviation	N
AS22	3.1000	.85973	300
AS23	3.0167	.87880	300
AS24	3.1367	.82882	300
AS25	3.1700	.80203	300
AS26	3.0833	.89390	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
AS22	12.4067	7.707	.644	.831
AS23	12.4900	7.187	.756	.801
AS24	12.3700	7.746	.670	.825
AS25	12.3367	8.070	.616	.838
AS26	12.4233	7.496	.659	.828

Reliability Statistics

Cronbach's Alpha	N of Items
.881	6

Item Statistics

	Mean	Std. Deviation	N
TAN27	3.0900	.80668	300
TAN28	3.0267	.81742	300
TAN29	2.9667	.85713	300
TAN30	3.0767	.81219	300
TAN31	3.2067	.80796	300
TAN32	3.0367	.85894	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
TAN27	15.3133	11.079	.688	.860
TAN28	15.3767	10.844	.727	.854
TAN29	15.4367	10.722	.707	.857
TAN30	15.3267	11.184	.659	.865
TAN31	15.1967	11.369	.625	.871

TAN32	15.3667	10.608	.729	.853
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Reliability Statistics

Cronbach's Alpha	N of Items
.852	3

Item Statistics

	Mean	Std. Deviation	N
TIM33	2.8896	1.00562	299
TIM34	3.1706	.94886	299
TIM35	3.2074	.94326	299

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TIM33	6.3779	3.035	.696	.820
TIM34	6.0970	3.088	.749	.769
TIM35	6.0602	3.164	.725	.792

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
9.2676	6.485	2.54661	3

Reliability Statistics

Cronbach's Alpha	N of Items
.875	6

Item Statistics

	Mean	Std. Deviation	N
OPE36	3.3200	.90572	300
OPE37	3.3300	.83472	300
OPE38	3.2733	.84913	300
OPE39	3.2200	.82495	300
OPE40	3.2967	.83925	300
OPE41	3.2600	.83350	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
OPE36	16.3800	10.959	.693	.851
OPE37	16.3700	11.063	.752	.841
OPE38	16.4267	11.416	.662	.856
OPE39	16.4800	11.374	.698	.850
OPE40	16.4033	11.439	.668	.855
OPE41	16.4400	11.812	.599	.867

Reliability Statistics

Cronbach's Alpha	N of Items
.835	3

Item Statistics

	Mean	Std. Deviation	N
SUP42	3.0967	.90372	300
SUP43	3.1567	.85316	300
SUP44	3.1967	.84876	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
SUP42	6.3533	2.343	.705	.764
SUP43	6.2933	2.469	.714	.755
SUP44	6.2533	2.564	.672	.795

Reliability Statistics

Cronbach's Alpha	N of Items
.869	5

Item Statistics

	Mean	Std. Deviation	N
SAT45	3.1600	.84663	300
SAT46	3.2533	.79872	300
SAT47	3.2767	.79302	300
SAT48	3.3167	.79488	300

SAT49	3.3533	.85494	300
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Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
SAT45	13.2000	7.157	.684	.843
SAT46	13.1067	7.387	.679	.844
SAT47	13.0833	7.294	.712	.837
SAT48	13.0433	7.359	.692	.842
SAT49	13.0067	7.070	.698	.840

Reliability Statistics

Cronbach's Alpha	N of Items
.863	5

Item Statistics

	Mean	Std. Deviation	N
RI50	3.2400	.89726	300
RI51	3.3400	.88714	300
RI52	3.1500	.97159	300
RI53	3.4167	.82380	300
RI54	3.1900	.84238	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
RI50	13.0967	8.081	.741	.819
RI51	12.9967	8.130	.741	.819
RI52	13.1867	8.219	.629	.850
RI53	12.9200	8.823	.646	.843
RI54	13.1467	8.667	.663	.839

Reliability Statistics

Cronbach's Alpha	N of Items
.837	2

Item Statistics

	Mean	Std. Deviation	N
--	------	----------------	---

WOM55	3.2933	.88878	300
WOM56	3.2733	.92456	300

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
WOM55	3.2733	.855	.720	.
WOM56	3.2933	.790	.720	.

Appendix D- The results of testing the scales' validity through Exploratory Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	7776.906
	df	946
	Sig.	.000

Communalities

	Initial
INT1	.619
INT2	.612
INT3	.645
INT4	.556
INT5	.635
INT6	.578
INT7	.605
INT8	.631
REL9	.605
REL10	.618
REL11	.515
OUT12	.565
OUT13	.582
OUT14	.614
OUT15	.555
OUT16	.594
OUT17	.579
EXP18	.579
EXP19	.638

EXP20	.624
EXP21	.648
AS22	.592
AS23	.710
AS24	.601
AS25	.551
AS26	.601
TAN27	.619
TAN28	.640
TAN29	.628
TAN30	.519
TAN31	.551
TAN32	.618
TIM33	.617
TIM34	.694
TIM35	.669
OPE36	.655
OPE37	.652
OPE38	.567
OPE39	.625
OPE40	.547
OPE41	.527
SUP42	.604
SUP43	.637
SUP44	.639

Extraction Method:

Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total
1	14.275	32.444	32.444	9.148
2	3.212	7.301	39.745	8.626
3	2.430	5.523	45.268	8.366
4	2.072	4.709	49.977	9.249
5	1.842	4.187	54.164	8.309
6	1.696	3.854	58.018	7.408

7	1.367	3.107	61.126	5.415
8	1.234	2.805	63.931	5.150
9	1.153	2.621	66.552	6.994
10	.923	2.097	68.649	
11	.803	1.826	70.475	
12	.768	1.746	72.221	
13	.756	1.718	73.939	
14	.686	1.559	75.497	
15	.634	1.441	76.938	
16	.615	1.398	78.336	
17	.607	1.379	79.715	
18	.582	1.322	81.037	
19	.543	1.235	82.272	
20	.514	1.168	83.440	
21	.499	1.133	84.573	
22	.485	1.101	85.674	
23	.458	1.042	86.716	
24	.444	1.010	87.726	
25	.422	.960	88.686	
26	.404	.918	89.603	
27	.396	.901	90.504	
28	.382	.867	91.372	
29	.349	.794	92.165	
30	.335	.760	92.926	
31	.316	.719	93.644	
32	.299	.679	94.323	
33	.287	.653	94.976	
34	.262	.596	95.571	
35	.249	.567	96.138	
36	.229	.520	96.658	
37	.228	.518	97.176	
38	.210	.478	97.654	
39	.207	.470	98.123	
40	.194	.441	98.565	
41	.183	.417	98.982	
42	.168	.383	99.364	
43	.149	.339	99.703	
44	.131	.297	100.000	

Extraction Method: Principal Axis Factoring.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Factor Matrix^a

a. 9 factors
extracted. 9
iterations required.

Pattern Matrix^a

	Factor								
	1	2	3	4	5	6	7	8	9
INT3	.785								
INT2	.735								
INT1	.717								
INT8	.707								
INT5	.690								
INT4	.682								
INT7	.650								
INT6	.646								
TAN32		.806							
TAN29		.794							
TAN28		.787							
TAN30		.681							
TAN27		.647							
TAN31		.574							
OUT14			.792						
OUT13			.768						
OUT12			.735						
OUT17			.671						
OUT15			.635						
OUT16			.625						
OPE37				.829					
OPE40				.706					
OPE36				.654					
OPE39				.628					

OPE38				.582					
OPE41				.559					
AS23					.859				
AS24					.729				
AS22					.711				
AS25					.596				
AS26					.565				
EXP19						.846			
EXP20						.829			
EXP18						.687			
EXP21						.599			
SUP42							.777		
SUP43							.766		
SUP44							.729		
REL10								.814	
REL11								.723	
REL9								.618	
TIM34									.787
TIM33									.761
TIM35									.746

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.^a

a. Rotation converged in 7 iterations.

Structure Matrix

	Factor								
	1	2	3	4	5	6	7	8	9
INT8	.772				.431			.473	
INT3	.759	.452							
INT5	.753	.418		.438	.451			.420	
INT4	.710	.415							
INT1	.710				.470				
INT2	.708				.405				
INT7	.694							.401	
INT6	.655							.416	
TAN32		.793		.469	.423				
TAN28		.783		.409	.482				

TAN29		.777		.420				
TAN27	.499	.747	.474	.451	.496	.404		
TAN30		.703		.412	.416			
TAN31		.664		.506	.400			
OUT14			.784	.508		.426		
OUT13			.761	.491		.405		
OUT12			.717	.420		.424		
OUT16		.441	.692		.403	.422		
OUT15			.692	.431		.413		
OUT17			.688			.454		
OPE37		.430	.459	.817		.402	.484	
OPE36	.407		.482	.744		.424	.447	.479
OPE39		.496	.479	.743	.418	.462	.430	
OPE40		.433	.474	.723				
OPE38		.512	.452	.708		.430	.414	
OPE41		.408		.657			.418	
AS23	.429	.488			.847			.421
AS24	.425	.448			.752			
AS22	.420				.717			
AS26	.514	.488			.706			.409
AS25	.443	.404		.407	.671			
EXP20			.471	.442		.822		
EXP19			.438	.407		.817		.432
EXP21			.585	.440	.461	.746		
EXP18			.440	.426		.725		
SUP43				.494			.818	
SUP44				.523			.787	
SUP42							.776	
REL10	.435						.833	
REL11							.733	
REL9	.419						.704	.433
TIM34					.424	.469		.832
TIM35	.427			.484	.425	.408		.809
TIM33				.411	.433	.417		.791

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

Factor Correlation Matrix

Factor	1	2	3	4	5	6	7	8
1	1.000	.498	.439	.450	.546	.402	.349	.466
2	.498	1.000	.440	.559	.565	.382	.361	.378
3	.439	.440	1.000	.583	.442	.579	.316	.321
4	.450	.559	.583	1.000	.460	.514	.536	.271
5	.546	.565	.442	.460	1.000	.454	.275	.394
6	.402	.382	.579	.514	.454	1.000	.387	.253
7	.349	.361	.316	.536	.275	.387	1.000	.216
8	.466	.378	.321	.271	.394	.253	.216	1.000
9	.463	.381	.420	.486	.480	.495	.392	.368

Factor Correlation Matrix

Factor	9
1	.463
2	.381
3	.420
4	.486
5	.480
6	.495
7	.392
8	.368
9	1.000

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

Factor Analysis

Correlation Matrix

	SAT45	SAT46	SAT47	SAT48	SAT49
Correlation SAT45	1.000	.598	.571	.551	.541
SAT46	.598	1.000	.565	.537	.544
SAT47	.571	.565	1.000	.587	.610
SAT48	.551	.537	.587	1.000	.603
SAT49	.541	.544	.610	.603	1.000

Communalities

	Initial	Extraction
SAT45	1.000	.646

SAT46	1.000	.638
SAT47	1.000	.680
SAT48	1.000	.655
SAT49	1.000	.664

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.283	65.661	65.661	3.283	65.661	65.661
2	.520	10.395	76.056			
3	.414	8.281	84.337			
4	.402	8.049	92.386			
5	.381	7.614	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
SAT45	.804
SAT46	.799
SAT47	.825
SAT48	.809
SAT49	.815

Extraction Method:
Principal Component
Analysis.^a

a. 1 components extracted.

Factor Analysis

Correlation Matrix

		RI50	RI51	RI52	RI53	RI54
Correlation	RI50	1.000	.737	.534	.588	.532
	RI51	.737	1.000	.538	.579	.535
	RI52	.534	.538	1.000	.440	.574

RI53	.588	.579	.440	1.000	.536
RI54	.532	.535	.574	.536	1.000

Communalities

	Initial	Extraction
RI50	1.000	.723
RI51	1.000	.722
RI52	1.000	.577
RI53	1.000	.606
RI54	1.000	.616

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.244	64.877	64.877	3.244	64.877	64.877
2	.606	12.127	77.004			
3	.505	10.097	87.101			
4	.383	7.653	94.754			
5	.262	5.246	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
RI50	.850
RI51	.850
RI52	.759
RI53	.779
RI54	.785

Extraction Method:
Principal Component
Analysis.^a

a. 1 components extracted.

Factor Analysis

Correlation Matrix

		WOM55	WOM56
Correlation	WOM55	1.000	.720
	WOM56	.720	1.000

Communalities

	Initial	Extraction
WOM55	1.000	.860
WOM56	1.000	.860

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.720	86.009	86.009	1.720	86.009	86.009
2	.280	13.991	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
WOM55	.927
WOM56	.927

Extraction Method: Principal Component Analysis.^a

a. 1 components extracted.

Appendix E- The results of the descriptive statistic of factors**Descriptive****Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
INTERACTION	300	1.00	5.00	3.0658	.66588
RELATIONSHIP	300	1.00	4.67	2.5889	.82502
OUTCOME	300	1.00	5.00	3.4189	.63840
EXPERTISE	300	1.00	5.00	3.4408	.69220
ATMOSPHERE	300	1.00	5.00	3.1013	.67887
TANGIBLES	300	1.00	5.00	3.0672	.65459
TIMELINESS	300	1.00	5.00	3.0867	.84857
OPERATION	300	1.00	5.00	3.2833	.66534
SUPPORT	300	1.00	5.00	3.1500	.75360
SATISFACTION	300	1.00	5.00	3.2720	.66253
REPURCHASE	300	1.00	5.00	3.2673	.71177
WOM	300	1.00	5.00	3.2833	.84088
Valid N (listwise)	300				

Appendix E- The results of Confirmative Factor Analysis**Model Fit Summary****CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	65	327.231	166	.000	1.971
Saturated model	231	.000	0		
Independence model	21	3972.589	210	.000	18.917

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.032	.907	.870	.652
Saturated model	.000	1.000		
Independence model	.360	.182	.101	.166

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.918	.896	.958	.946	.957

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.790	.725	.757
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	161.231	113.672	216.582
Saturated model	.000	.000	.000
Independence model	3762.589	3561.574	3970.900

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.094	.539	.380	.724
Saturated model	.000	.000	.000	.000
Independence model	13.286	12.584	11.912	13.281

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.057	.048	.066	.101
Independence model	.245	.238	.251	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	457.231	467.556	697.977	762.977
Saturated model	462.000	498.693	1317.574	1548.574
Independence model	4014.589	4017.925	4092.368	4113.368

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.529	1.370	1.714	1.564
Saturated model	1.545	1.545	1.545	1.668
Independence model	13.427	12.754	14.123	13.438

HOELTER

Model	HOELTER	HOELTER
	.05	.01
Default model	181	194
Independence model	19	20

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
REL	<---	INTERPER	1.000				
INT	<---	INTERPER	1.365	.131	10.410	***	par_1
EXP	<---	TECHNICAL	1.000				
OUT	<---	TECHNICAL	.999	.071	14.066	***	par_2
TAN	<---	ENVIRONMENT	1.000				
ATMOS	<---	ENVIRONMENT	1.013	.074	13.603	***	par_3
SUP	<---	ADMINISTRATIVE	1.000				
TIM	<---	ADMINISTRATIVE	1.070	.102	10.453	***	par_4
OPE	<---	ADMINISTRATIVE	1.340	.109	12.269	***	par_5
SAT47	<---	SATIS	1.000				
SAT46	<---	SATIS	.954	.073	13.145	***	par_6
SAT45	<---	SATIS	1.056	.076	13.836	***	par_7
RI52	<---	REPUR	1.000				
RI51	<---	REPUR	.957	.083	11.550	***	par_8
RI50	<---	REPUR	1.060	.085	12.526	***	par_9
WOM56	<---	WOMOUTH	1.000				
WOM55	<---	WOMOUTH	.960	.054	17.619	***	par_10
SAT48	<---	SATIS	.954	.072	13.222	***	par_11
SAT49	<---	SATIS	1.053	.077	13.633	***	par_12
RI53	<---	REPUR	.884	.077	11.550	***	par_13
RI54	<---	REPUR	.973	.079	12.298	***	par_14

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
REL	<---	INTERPER	.634
INT	<---	INTERPER	.831
EXP	<---	TECHNICAL	.806
OUT	<---	TECHNICAL	.802

		Estimate
TAN	<--- ENVIRONMENT	.783
ATMOS	<--- ENVIRONMENT	.800
SUP	<--- ADMINISTRATIVE	.656
TIM	<--- ADMINISTRATIVE	.695
OPE	<--- ADMINISTRATIVE	.857
SAT47	<--- SATIS	.776
SAT46	<--- SATIS	.735
SAT45	<--- SATIS	.768
RI52	<--- REPUR	.690
RI51	<--- REPUR	.723
RI50	<--- REPUR	.793
WOM56	<--- WOMOUTH	.849
WOM55	<--- WOMOUTH	.848
SAT48	<--- SATIS	.739
SAT49	<--- SATIS	.758
RI53	<--- REPUR	.719
RI54	<--- REPUR	.774

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
INTERPER	<--> TECHNICAL	.302	.045	6.730	***	par_15
INTERPER	<--> ENVIRONMENT	.377	.050	7.468	***	par_16
INTERPER	<--> ADMINISTRATIVE	.256	.039	6.537	***	par_17
INTERPER	<--> SATIS	.257	.037	6.949	***	par_18
INTERPER	<--> REPUR	.268	.041	6.561	***	par_19
INTERPER	<--> WOMOUTH	.328	.046	7.079	***	par_20
TECHNICAL	<--> ENVIRONMENT	.422	.053	7.942	***	par_21
TECHNICAL	<--> ADMINISTRATIVE	.402	.050	8.017	***	par_22
TECHNICAL	<--> SATIS	.370	.044	8.384	***	par_23
TECHNICAL	<--> REPUR	.371	.049	7.612	***	par_24
TECHNICAL	<--> WOMOUTH	.390	.051	7.642	***	par_25
ENVIRONMENT	<--> ADMINISTRATIVE	.366	.048	7.653	***	par_26
ENVIRONMENT	<--> SATIS	.340	.043	7.953	***	par_27
ENVIRONMENT	<--> REPUR	.328	.046	7.085	***	par_28
ENVIRONMENT	<--> WOMOUTH	.392	.051	7.652	***	par_29
ADMINISTRATIVE	<--> SATIS	.319	.040	7.918	***	par_30
ADMINISTRATIVE	<--> REPUR	.310	.043	7.215	***	par_31
ADMINISTRATIVE	<--> WOMOUTH	.327	.045	7.315	***	par_32
SATIS	<--> REPUR	.331	.041	7.977	***	par_33
SATIS	<--> WOMOUTH	.338	.042	8.047	***	par_34
REPUR	<--> WOMOUTH	.498	.056	8.847	***	par_35

			Estimate	S.E.	C.R.	P	Label
e14	<-->	e15	.127	.026	4.877	***	par_36
e15	<-->	e21	-.055	.018	-2.952	.003	par_37

Correlations: (Group number 1 - Default model)

			Estimate
INTERPER	<-->	TECHNICAL	.689
INTERPER	<-->	ENVIRONMENT	.875
INTERPER	<-->	ADMINISTRATIVE	.730
INTERPER	<-->	SATIS	.721
INTERPER	<-->	REPUR	.691
INTERPER	<-->	WOMOUTH	.720
TECHNICAL	<-->	ENVIRONMENT	.752
TECHNICAL	<-->	ADMINISTRATIVE	.881
TECHNICAL	<-->	SATIS	.798
TECHNICAL	<-->	REPUR	.734
TECHNICAL	<-->	WOMOUTH	.658
ENVIRONMENT	<-->	ADMINISTRATIVE	.817
ENVIRONMENT	<-->	SATIS	.745
ENVIRONMENT	<-->	REPUR	.660
ENVIRONMENT	<-->	WOMOUTH	.673
ADMINISTRATIVE	<-->	SATIS	.860
ADMINISTRATIVE	<-->	REPUR	.767
ADMINISTRATIVE	<-->	WOMOUTH	.690
SATIS	<-->	REPUR	.804
SATIS	<-->	WOMOUTH	.701
REPUR	<-->	WOMOUTH	.950
e14	<-->	e15	.382
e15	<-->	e21	-.188

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
INTERPER	.337	.060	5.626	***	par_38
TECHNICAL	.571	.073	7.835	***	par_39
ENVIRONMENT	.551	.073	7.515	***	par_40
ADMINISTRATIVE	.365	.060	6.104	***	par_41
SATIS	.377	.049	7.724	***	par_42
REPUR	.448	.068	6.609	***	par_43
WOMOUTH	.615	.070	8.776	***	par_44
e1	.501	.047	10.580	***	par_45
e2	.281	.050	5.628	***	par_46
e3	.307	.038	8.178	***	par_47

	Estimate	S.E.	C.R.	P	Label
e4	.317	.038	8.315	***	par_48
e5	.347	.040	8.684	***	par_49
e6	.319	.039	8.200	***	par_50
e7	.482	.043	11.102	***	par_51
e8	.447	.041	10.823	***	par_52
e9	.238	.032	7.452	***	par_53
e10	.249	.024	10.250	***	par_54
e11	.292	.027	10.701	***	par_55
e12	.293	.028	10.355	***	par_56
e13	.493	.044	11.255	***	par_57
e14	.374	.035	10.818	***	par_58
e15	.297	.031	9.641	***	par_59
e16	.237	.028	8.378	***	par_60
e17	.221	.026	8.430	***	par_61
e18	.286	.027	10.667	***	par_62
e19	.310	.030	10.466	***	par_63
e20	.326	.029	11.071	***	par_64
e21	.283	.028	10.244	***	par_65

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
RI54	.599
RI53	.517
SAT49	.575
SAT48	.546
WOM55	.719
WOM56	.721
RI50	.629
RI51	.523
RI52	.476
SAT45	.589
SAT46	.540
SAT47	.602
OPE	.734
TIM	.483
SUP	.431
ATMOS	.639
TAN	.614
OUT	.643
EXP	.650
INT	.691

	Estimate
REL	.402

Appendix G- The results of Structural Equation Model

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	75	364.017	177	.000	2.057
Saturated model	252	.000	0		
Independence model	42	3972.589	210	.000	18.917

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.908	.891	.951	.941	.950
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.843	.766	.801
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	187.017	136.254	245.548
Saturated model	.000	.000	.000
Independence model	3762.589	3561.574	3970.900

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.217	.625	.456	.821
Saturated model	.000	.000	.000	.000
Independence model	13.286	12.584	11.912	13.281

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.059	.051	.068	.038

Model	RMSEA	LO 90	HI 90	PCLOSE
Independence model	.245	.238	.251	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	514.017	525.930		
Saturated model	504.000	544.029		
Independence model	4056.589	4063.260		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.719	1.549	1.915	1.759
Saturated model	1.686	1.686	1.686	1.819
Independence model	13.567	12.895	14.264	13.589

HOELTER

Model	HOELTER	HOELTER
	.05	.01
Default model	172	184
Independence model	19	20

Estimates (Group number 1 - Default model)***Scalar Estimates (Group number 1 - Default model)******Maximum Likelihood Estimates******Regression Weights: (Group number 1 - Default model)***

			Estimate	S.E.	C.R.	P	Label
SATIS	<---	PERQUAL	1.312	.164	8.027	***	par_18
WOMOUTH	<---	SATIS	.873	.077	11.374	***	par_16
REPUR	<---	SATIS	.311	.075	4.125	***	par_15
REPUR	<---	WOMOUTH	.692	.075	9.197	***	par_17
INTERPER	<---	PERQUAL	1.000				
TECHNICAL	<---	PERQUAL	1.505	.187	8.061	***	par_19
ENVIRONMENT	<---	PERQUAL	1.459	.185	7.906	***	par_20
ADMINISTRATIVE	<---	PERQUAL	1.220	.168	7.274	***	par_21
REL	<---	INTERPER	1.000				
INT	<---	INTERPER	1.499	.162	9.268	***	par_1
EXP	<---	TECHNICAL	1.000				
OUT	<---	TECHNICAL	1.008	.072	14.001	***	par_2

			Estimate	S.E.	C.R.	P	Label
TAN	<---	ENVIRONMENT	1.000				
ATMOS	<---	ENVIRONMENT	1.005	.076	13.149	***	par_3
SUP	<---	ADMINISTRATIVE	1.000				
TIM	<---	ADMINISTRATIVE	1.200	.125	9.567	***	par_4
OPE	<---	ADMINISTRATIVE	1.399	.116	12.079	***	par_5
SAT45	<---	SATIS	1.000				
SAT46	<---	SATIS	.903	.069	13.004	***	par_6
SAT47	<---	SATIS	.937	.068	13.690	***	par_7
SAT48	<---	SATIS	.871	.070	12.493	***	par_8
SAT49	<---	SATIS	.971	.075	13.030	***	par_9
RI50	<---	REPUR	1.000				
RI51	<---	REPUR	.904	.054	16.805	***	par_10
RI52	<---	REPUR	.947	.075	12.558	***	par_11
RI53	<---	REPUR	.828	.064	13.021	***	par_12
RI54	<---	REPUR	.922	.069	13.343	***	par_13
WOM55	<---	WOMOUTH	1.000				
WOM56	<---	WOMOUTH	1.035	.060	17.380	***	par_14

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
SATIS	<---	PERQUAL	.908
WOMOUTH	<---	SATIS	.750
REPUR	<---	SATIS	.284
REPUR	<---	WOMOUTH	.737
INTERPER	<---	PERQUAL	.810
TECHNICAL	<---	PERQUAL	.896
ENVIRONMENT	<---	PERQUAL	.878
ADMINISTRATIVE	<---	PERQUAL	1.008
REL	<---	INTERPER	.605
INT	<---	INTERPER	.871
EXP	<---	TECHNICAL	.803
OUT	<---	TECHNICAL	.805
TAN	<---	ENVIRONMENT	.787
ATMOS	<---	ENVIRONMENT	.796
SUP	<---	ADMINISTRATIVE	.590
TIM	<---	ADMINISTRATIVE	.700
OPE	<---	ADMINISTRATIVE	.803
SAT45	<---	SATIS	.766
SAT46	<---	SATIS	.733
SAT47	<---	SATIS	.767
SAT48	<---	SATIS	.711

			Estimate
SAT49	<---	SATIS	.737
RI50	<---	REPUR	.793
RI51	<---	REPUR	.724
RI52	<---	REPUR	.692
RI53	<---	REPUR	.714
RI54	<---	REPUR	.778
WOM55	<---	WOMOUTH	.851
WOM56	<---	WOMOUTH	.846

Intercepts: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
REL	.000	.053	.000	1.000	par_26
INT	.000	.055	.000	1.000	par_27
EXP	.000	.054	.000	1.000	par_28
OUT	.000	.054	.000	1.000	par_29
TAN	.000	.055	.000	1.000	par_30
ATMOS	.000	.054	.000	1.000	par_31
SUP	.000	.053	.000	1.000	par_32
TIM	.000	.054	.000	1.000	par_33
OPE	.000	.055	.000	1.000	par_34
SAT45	3.160	.049	64.648	***	par_35
SAT46	3.253	.046	70.550	***	par_36
SAT47	3.277	.046	71.566	***	par_37
SAT48	3.317	.046	72.271	***	par_38
SAT49	3.353	.049	67.936	***	par_39
RI50	3.240	.052	62.653	***	par_40
RI51	3.340	.051	65.210	***	par_41
RI52	3.150	.056	56.155	***	par_42
RI53	3.417	.048	71.836	***	par_43
RI54	3.190	.049	65.591	***	par_44
WOM55	3.293	.051	64.181	***	par_45
WOM56	3.273	.053	61.322	***	par_46

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
e15	<--> e16	.126	.026	4.819	***	par_22
e15	<--> e19	-.056	.019	-3.011	.003	par_23
e7	<--> e9	.121	.033	3.615	***	par_24
e13	<--> e14	.053	.022	2.431	.015	par_25

Correlations: (Group number 1 - Default model)

	Estimate
e15 <--> e16	.379
e15 <--> e19	-.193
e7 <--> e9	.288
e13 <--> e14	.166

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
PERQUAL	.201	.047	4.304	***	par_47
e26	.073	.016	4.487	***	par_48
e28	.250	.037	6.806	***	par_49
e22	.106	.025	4.145	***	par_50
e23	.111	.030	3.667	***	par_51
e24	.128	.033	3.901	***	par_52
e25	-.004	.015	-.294	.769	par_53
e27	.031	.016	1.920	.055	par_54
e1	.532	.050	10.604	***	par_55
e2	.219	.059	3.722	***	par_56
e3	.312	.038	8.240	***	par_57
e4	.312	.038	8.165	***	par_58
e5	.342	.041	8.289	***	par_59
e6	.323	.040	7.989	***	par_60
e7	.552	.049	11.198	***	par_61
e8	.441	.042	10.565	***	par_62
e9	.317	.039	8.176	***	par_63
e10	.295	.028	10.480	***	par_64
e11	.294	.027	10.804	***	par_65
e12	.258	.025	10.475	***	par_66
e13	.312	.029	10.859	***	par_67
e14	.333	.031	10.660	***	par_68
e15	.297	.031	9.584	***	par_69
e16	.373	.035	10.785	***	par_70
e17	.490	.044	11.226	***	par_71
e18	.332	.030	11.094	***	par_72
e19	.279	.028	10.161	***	par_73
e20	.217	.027	8.153	***	par_74
e21	.241	.029	8.316	***	par_75

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
SATIS	.825
WOMOUTH	.562

	Estimate
REPUR	.938
ADMINISTRATIVE	1.015
ENVIRONMENT	.770
TECHNICAL	.803
INTERPER	.655
WOM56	.717
WOM55	.724
RI54	.605
RI53	.509
RI52	.479
RI51	.524
RI50	.629
SAT49	.543
SAT48	.505
SAT47	.588
SAT46	.538
SAT45	.587
OPE	.645
TIM	.490
SUP	.348
ATMOS	.634
TAN	.619
OUT	.648
EXP	.645
INT	.759
REL	.366

Total Effects (Group number 1 - Default model)

	PERQU	SATI	WOMOU	REPU	ADMINISTRATI	ENVIRONME	TECHNIC	INTERP
	AL	S	TH	R	VE	NT	AL	ER
SATIS	1.312	.000	.000	.000	.000	.000	.000	.000
WOMOUTH	1.146	.873	.000	.000	.000	.000	.000	.000
REPUR	1.202	.916	.692	.000	.000	.000	.000	.000
ADMINISTRATI	1.220	.000	.000	.000	.000	.000	.000	.000
VE								
ENVIRONMEN	1.459	.000	.000	.000	.000	.000	.000	.000
T								
TECHNICAL	1.505	.000	.000	.000	.000	.000	.000	.000
INTERPER	1.000	.000	.000	.000	.000	.000	.000	.000
WOM56	1.187	.904	1.035	.000	.000	.000	.000	.000
WOM55	1.146	.873	1.000	.000	.000	.000	.000	.000
RI54	1.108	.844	.639	.922	.000	.000	.000	.000
RI53	.994	.758	.573	.828	.000	.000	.000	.000
RI52	1.138	.867	.656	.947	.000	.000	.000	.000
RI51	1.087	.828	.626	.904	.000	.000	.000	.000

	PERQU AL	SATI S	WOMOU TH	REPU R	ADMINISTRATI VE	ENVIRONME NT	TECHNIC AL	INTERP ER
RI50	1.202	.916	.692	1.000	.000	.000	.000	.000
SAT49	1.274	.971	.000	.000	.000	.000	.000	.000
SAT48	1.143	.871	.000	.000	.000	.000	.000	.000
SAT47	1.230	.937	.000	.000	.000	.000	.000	.000
SAT46	1.185	.903	.000	.000	.000	.000	.000	.000
SAT45	1.312	1.000	.000	.000	.000	.000	.000	.000
OPE	1.706	.000	.000	.000	1.399	.000	.000	.000
TIM	1.464	.000	.000	.000	1.200	.000	.000	.000
SUP	1.220	.000	.000	.000	1.000	.000	.000	.000
ATMOS	1.466	.000	.000	.000	.000	1.005	.000	.000
TAN	1.459	.000	.000	.000	.000	1.000	.000	.000
OUT	1.517	.000	.000	.000	.000	.000	1.008	.000
EXP	1.505	.000	.000	.000	.000	.000	1.000	.000
INT	1.499	.000	.000	.000	.000	.000	.000	1.499
REL	1.000	.000	.000	.000	.000	.000	.000	1.000

Standardized Total Effects (Group number 1 - Default model)

	PERQU AL	SATI S	WOMOU TH	REPU R	ADMINISTRATI VE	ENVIRONME NT	TECHNIC AL	INTERP ER
SATIS	.908	.000	.000	.000	.000	.000	.000	.000
WOMOUTH	.681	.750	.000	.000	.000	.000	.000	.000
REPUR	.760	.836	.737	.000	.000	.000	.000	.000
ADMINISTRATI VE	1.008	.000	.000	.000	.000	.000	.000	.000
ENVIRONMEN T	.878	.000	.000	.000	.000	.000	.000	.000
TECHNICAL	.896	.000	.000	.000	.000	.000	.000	.000
INTERPER	.810	.000	.000	.000	.000	.000	.000	.000
WOM56	.576	.634	.846	.000	.000	.000	.000	.000
WOM55	.579	.638	.851	.000	.000	.000	.000	.000
RI54	.591	.650	.573	.778	.000	.000	.000	.000
RI53	.542	.597	.526	.714	.000	.000	.000	.000
RI52	.526	.579	.510	.692	.000	.000	.000	.000
RI51	.550	.606	.534	.724	.000	.000	.000	.000
RI50	.602	.663	.585	.793	.000	.000	.000	.000
SAT49	.669	.737	.000	.000	.000	.000	.000	.000
SAT48	.646	.711	.000	.000	.000	.000	.000	.000
SAT47	.697	.767	.000	.000	.000	.000	.000	.000
SAT46	.666	.733	.000	.000	.000	.000	.000	.000
SAT45	.696	.766	.000	.000	.000	.000	.000	.000
OPE	.809	.000	.000	.000	.803	.000	.000	.000
TIM	.706	.000	.000	.000	.700	.000	.000	.000
SUP	.594	.000	.000	.000	.590	.000	.000	.000
ATMOS	.699	.000	.000	.000	.000	.796	.000	.000
TAN	.690	.000	.000	.000	.000	.787	.000	.000
OUT	.722	.000	.000	.000	.000	.000	.805	.000
EXP	.720	.000	.000	.000	.000	.000	.803	.000
INT	.705	.000	.000	.000	.000	.000	.000	.871
REL	.490	.000	.000	.000	.000	.000	.000	.605

Direct Effects (Group number 1 - Default model)

	PERQU AL	SATI S	WOMOU TH	REPU R	ADMINISTRATI VE	ENVIRONME NT	TECHNIC AL	INTERP ER
SATIS	1.312	.000	.000	.000	.000	.000	.000	.000
WOMOUTH	.000	.873	.000	.000	.000	.000	.000	.000
REPUR	.000	.311	.692	.000	.000	.000	.000	.000
ADMINISTRATI VE	1.220	.000	.000	.000	.000	.000	.000	.000
ENVIRONMEN T	1.459	.000	.000	.000	.000	.000	.000	.000
TECHNICAL	1.505	.000	.000	.000	.000	.000	.000	.000
INTERPER	1.000	.000	.000	.000	.000	.000	.000	.000
WOM56	.000	.000	1.035	.000	.000	.000	.000	.000
WOM55	.000	.000	1.000	.000	.000	.000	.000	.000
RI54	.000	.000	.000	.922	.000	.000	.000	.000
RI53	.000	.000	.000	.828	.000	.000	.000	.000
RI52	.000	.000	.000	.947	.000	.000	.000	.000
RI51	.000	.000	.000	.904	.000	.000	.000	.000
RI50	.000	.000	.000	1.000	.000	.000	.000	.000
SAT49	.000	.971	.000	.000	.000	.000	.000	.000
SAT48	.000	.871	.000	.000	.000	.000	.000	.000
SAT47	.000	.937	.000	.000	.000	.000	.000	.000
SAT46	.000	.903	.000	.000	.000	.000	.000	.000
SAT45	.000	1.000	.000	.000	.000	.000	.000	.000
OPE	.000	.000	.000	.000	1.399	.000	.000	.000
TIM	.000	.000	.000	.000	1.200	.000	.000	.000
SUP	.000	.000	.000	.000	1.000	.000	.000	.000
ATMOS	.000	.000	.000	.000	.000	1.005	.000	.000
TAN	.000	.000	.000	.000	.000	1.000	.000	.000
OUT	.000	.000	.000	.000	.000	.000	1.008	.000
EXP	.000	.000	.000	.000	.000	.000	1.000	.000
INT	.000	.000	.000	.000	.000	.000	.000	1.499
REL	.000	.000	.000	.000	.000	.000	.000	1.000

Standardized Direct Effects (Group number 1 - Default model)

	PERQU AL	SATI S	WOMOU TH	REPU R	ADMINISTRATI VE	ENVIRONME NT	TECHNIC AL	INTERP ER
SATIS	.908	.000	.000	.000	.000	.000	.000	.000
WOMOUTH	.000	.750	.000	.000	.000	.000	.000	.000
REPUR	.000	.284	.737	.000	.000	.000	.000	.000
ADMINISTRATI VE	1.008	.000	.000	.000	.000	.000	.000	.000
ENVIRONMEN T	.878	.000	.000	.000	.000	.000	.000	.000
TECHNICAL	.896	.000	.000	.000	.000	.000	.000	.000
INTERPER	.810	.000	.000	.000	.000	.000	.000	.000
WOM56	.000	.000	.846	.000	.000	.000	.000	.000
WOM55	.000	.000	.851	.000	.000	.000	.000	.000
RI54	.000	.000	.000	.778	.000	.000	.000	.000
RI53	.000	.000	.000	.714	.000	.000	.000	.000
RI52	.000	.000	.000	.692	.000	.000	.000	.000
RI51	.000	.000	.000	.724	.000	.000	.000	.000
RI50	.000	.000	.000	.793	.000	.000	.000	.000
SAT49	.000	.737	.000	.000	.000	.000	.000	.000
SAT48	.000	.711	.000	.000	.000	.000	.000	.000

