ADVOCACY INTENTIONS: THE RELATIONSHIP OF SERVICE QUALITY, SATISFACTION AND PERSONALITY WITH A SURGICAL EXPERIENCE

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A Thesis
In
The John Molson School of Business

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Administration at
Concordia University
Montreal, Quebec, Canada

December 2001

ABSTRACT

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The health care industry, characterized by its lack of funding, staff shortages and over-crowded medical rooms faces high pressures to cut costs, often at the expense of patient quality care. In specialized health care services, the context of this study, positive word-of-mouth and referrals are better marketing devices than mass advertising and promotion techniques. Because advocacy intentions are conducive to success in such an industry, they are of prime interest in this study. A patient's willingness to talk to others about their service experience has serious financial outcomes and can serve as a valuable marketing resource to the facility as seen in this study on the Shouldice Hospital.

Much literature agrees that service quality and satisfaction are antecedents to positive behavioural intentions. However, the research goal is to study various independent relationships that affect advocacy intentions specifically. This study attempts to prove that advocacy intentions will be highest when patients' perception of overall service quality, technical (physical signals) and functional (human interaction) quality, and satisfaction are at their highest. In addition, personality is added to the model to suggest that certain personality types are positively related to advocacy intentions over others, an area gone understudied.

Results clearly indicate that patients at the Shouldice Hospital are high advocates of the firm after highly rating the service quality and after being delighted with the service offering. Furthermore, results indicate that certain personality traits exhibit strong positive relationships with advocacy intentions, particularly *Agreeableness* and

Conscientiousness. Such results theoretically contribute to the study of specific individual relationships of marketing variables and psychological variables with advocacy intentions. Managerially, where the hospital's patient base is mostly formed through referrals, it is in their interest to manage and monitor the service delivery process to ensure high overall quality and patient satisfaction which is conducive to favourable advocacy intentions. Furthermore, understanding patient personality types can help care-givers offer specialized and individualized attention to the different needs of each patient.

ACKNOWLEDGEMENTS

Firstly, I thank God for giving me strength, courage and health to pursue all my dreams and I thank my family for their encouragement and support throughout my life. Secondly, I would like to express my gratitude to my Professors Dr. Michèle Paulin and Dr. Ronald Ferguson for their motivation, dedication and support. Thirdly, I would like to extend my appreciation to Daryl Urquhart, Marketing Director at the Shouldice Hospital, for allowing us to use the facility as a sample in this research, for lending his expertise in formulating the questionnaires, and for his time and effort in coordinating the questionnaire administration process. Similarly, I would like to thank the Shouldice Hospital staff for their help and patience throughout the data collection process.

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CHAPTER I

INTRODUCTION

The rapidly changing health care environment characterized by its high level of complexity, uncertainty and dynamic nature, is faced with increased pressures to improve internal efficiency by cutting costs. Where overcrowded medical and hospital buildings, shortages of medical staff and lack of funds are the reality of today's health care system, it is ultimately the patient who suffers the highest cost. These unfortunate realities that govern the health care system make it more difficult for health care managers to provide quality care.

In the case of the Shouldice Hospital, the setting in which this research was conducted, patient acquisition is only the first step in the health care process, the goal is to build strong relationships and create loyal patients. The Shouldice Hospital located in Thornhill Ontario Canada, specializing in hernia repair, is known for its ability to provide the setting patients expect. It strives to create an environment that meets or exceeds the "customers" needs for safety, security, support, competence, physical comfort and psychological comfort. As patient satisfaction surveys were conducted, the health care

industry learned that the environment is an important part of the total health care experience (Fottler et al., 2000).The healthcare environment is important in determining patient satisfaction, in promoting patient healing and wellbeing, in improving employee attitudes and in enhancing competitive advantage (Fottler et al., 2000). It was only ten years ago when health care firms' primary focus was on exclusively meeting the medical needs of patients. In this surgical environment or service experience it is important to recognize that employee attitudes and behaviours influence satisfaction and perceived service quality (Fottler et al., 2000). Shouldice Hospital does their best to offer staff, nurses and surgeons a pleasant work environment, normal working hours, and good compensation packages. This hospital understands that keeping their employees happy will have positive effects on their behaviours and attitudes which will ultimately lead to positive patient perceptions of quality and satisfaction.

Shouldice Hospital has long been known for its success rate and as such it has been used as a benchmark in the medical profession internationally. Shouldice's "model" extends beyond the skill of their surgeons and their ability to perform, their secret lies in their total hospital environment or experience. Some comments on the Shouldice Hospital include: " I've never felt so much at home so far away from home" and "Shouldice Hospital, the house that hernias built, is a converted country estate which gives the hospital's country club appeal"[1]

Shouldice Hospital strives on creating a total service experience for their patients. It is imperative to study the effects of such an environment on patient behaviour, such as the willingness to talk about their experience at the Shouldice Hospital. Studying

[1] Comments quoted from Shouldice Hospital website http:/www.shouldice.com/hospital.htm

advocacy intentions in the health care service industry has theoretical and managerial purposes as discussed below.

1.1 Theoretical Purpose

An abundance of service literature exists on the relationship between satisfaction, quality and behavioural intentions (Bitner, 1990; Dabholkar et al., 2000; Rust et al., 1996; Zeithaml et al., 1996; Oliver et al.,1997; Cronin et al., 2000). Because service literature states that quality and satisfaction are antecedents of behavioural intentions, it is critical for health care organizations to measure the relationship between these two constructs on behavioural intentions such as advocacy. Bates and Gawande (2000) argue that, when consumers make health care choices, they rely more on word-of-mouth (WOM) than on any other quality measure. Although much literature exists on behavioural intentions, the effects of WOM have been highly understudied where repurchase intentions and retention rates dominate the consumer behaviour literature. A cause of this may be the difficulty in quantifying or measuring the effects of WOM. Although word-of-mouth is difficult to quantify, a patient's intention to talk about their service experience serves as a basis for going one step further in studying behavioural intentions in the health care industry. Of further interest in this study, is the addition of a psychological variable to the proven relationship between satisfaction and quality, and behavioural intentions. Because personality influences relationships and behaviours (Hurley, 1998), it is critical to measure whether personality types are related to advocacy behaviour. More specifically, this study investigates the possibility that different personality types may be related to different levels of advocacy intentions. This paper may contribute another dimension to

existing service literature by demonstrating that customer personality type may have an influence on behavioural intentions.

In the case of this research setting, a hospital specializing in hernia operations, repurchase and retention rates are not of concern. The most valuable outcome to this organization, besides the patient's health, is the positive WOM that a satisfied patient and advocate of the hospital can spread. This is how the majority of the Shouldice Hospital's patient base is formed. Given that personality is said to influence behavioural attitudes, it is essential to study the relationship between customers' personality type and their behavioural intentions. The proposed research model is in Figure 1.1.

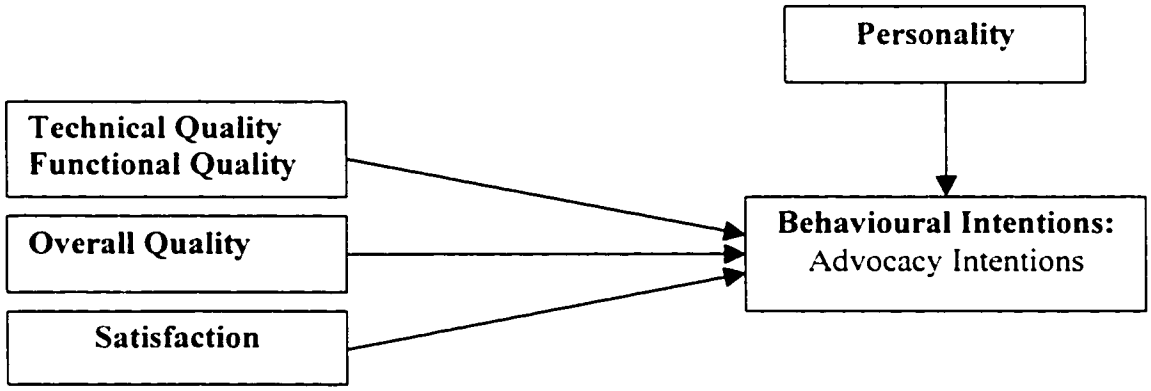

Figure 1.1 - *The Proposed Research Model*

1.2 Managerial Purpose

Quality service and customer satisfaction are said to affect the bottom line. Behavioural intentions, outcomes of quality and satisfaction, may have important financial consequences. Favourable consequences include maintaining ongoing revenue, increased spending, price premiums and referred customers (Zeithaml et al., 1996).

Heskett et al. (1994), in the Service Profit Chain, argue that if customers are satisfied, they will remain loyal to the company, make repeat purchases and refer the firm to others. Loyalty leads to revenue growth and profitability (Heskett et al., 1994). If the service is inferior and the customer behaves negatively, the firm could see decreased spending, lost customers, and increased marketing costs to attract new customers (Zeithaml et al., 1996). Effective patient-provider relationships, characterized by quality, satisfaction, repeat purchase and referrals (Paulin et al., 1997; 1998; 1999; 2000) are a source of competitive advantage.

Furthermore, knowledge about personality traits and the different degrees of advocacy behaviour associated to each trait may give managers and contact personnel insight into which customers are more prone to spread positive WOM. Awareness of consumers' personality types could sensitize the service provider to the needs and expectations of individual customers in order to give them the best patient care. Where the patient-provider relationship is extremely uncertain and involves highly stressful care-giving situations (Peltier et al., 1998), understanding the patient's personality type can give the care-giver extra insight on how to build and improve a strong relationship.

Grönroos (1992 : 2) states: "everyone can produce the goods". What he means is that there is much difficulty in gaining competitive advantage when there is no way to differentiate the offering, except on the basis of price. It is a service strategy that can give a firm a competitive advantage and help it differentiate its offering from other firms (Grönroos, 1992). Health care services are associated with pain, fear, insecurity and anxiety (Gummesson, 2001), hence the need for a relationship marketing approach. A relationship marketing approach leading to a positive service experience can turn regular

patients into vocal advocates for the firm. By promoting the hospital to others, advocates can serve as valuable marketing resources for a hospital (White & Schneider 2000).

CHAPTER II

REVIEW OF LITERATURE

In order to study the relationship among service quality, satisfaction, personality, and advocacy intentions, a thorough review of each concept is essential. A detailed literature review will be conducted on how services differ from goods, on the health care service industry, on service quality and its dimensions, on satisfaction, on behavioural intentions with a focus on advocacy intentions, and on personality.

2.1 Services vs. Goods

"Services are economic activities that create value and provide benefits for customers at specific times and places as a result of bringing about a desired change in – or on behalf of – the recipient of the service" (Lovelock, 2000). Services differ from goods in many ways. Goods are physical objects or devices, whereas services are actions or performances (Lovelock, 2000). For some authors, intangibility, inseparability, variability and perishability are factors that distinguish services from physical products (see Table 2.1) (de Brentani, 1991; Shostack, 1984; Hutton and Richardson, 1995; Berry,

1980; Lovelock, 2000). For others, what really distinguishes services from goods are the interactions that need to take place in order to produce a service and the level of client participation in the delivery processes (Normann, 2000; Gummesson, 1999; Grönroos, 1990). Firstly, services are ***intangible***; they are a performance, an effort, not an object or a thing (Berry, 1980; Lovelock, 2000). Services have no form (Shostack, 1984). "Although services are often associated with certain physical elements (for example, a cargo carrier with airplanes or trucks), for the most part, customers must risk buying an eventual outcome and/or an experience which they cannot fully assess prior to purchase" (de Brentani, 1991). Services are perceived to be riskier than goods due to pre-purchase uncertainty (Hutton and Richardson, 1995). Secondly, customers cannot obtain ownership of services, they are consumed as they are produced (Berry, 1980; Lovelock, 2000); this is the factor of ***inseparability***. Inseparability of production and consumption means that services are produced and delivered in the presence of the customer (de Brentani, 1991). Goods are produced first, then sold, then consumed. Services are sold first, then produced and consumed simultaneously (Berry, 1980). The importance lies in delivering the service in the right way because the service provider is usually present during the consumption (Berry, 1980). Thirdly, service ***variability*** refers to the actual services varying at each purchase occasion (de Brentani, 1991). The fact that services are less standardized and uniform is due to the large human component. People involvement adds to the variability (Berry, 1980; Lovelock, 2000). Finally, ***perishability*** infers that services cannot be produced and stored afterwards (de Brentani, 1991). The production flow or capacity of a firm is wasted unless a customer is there to receive it (Lovelock,

2000) or the service is stored through technological processes (Gummesson, 1999; Lovelock, 2000).

Table 2.1

Ways in Which Services Differ From Goods

Authors	Factors
Berry (1980)	• Intangibility • Simultaneous production and consumption • Less standardized and uniform
Shostack (1984)	• Intangibility • Variability
De Brentani (1991)	• Intangibility • Inseperability • Variability • Perishability
Hutton and Richardson (1995)	• Intangibility • Heterogeneity • Inseperability
Lovelock (2000)	• Customers do not obtain ownership of services • Intangibility • Greater involvement of customers in the production process • Other people may form part of the product • Variability • Many services are difficult for customers to evaluate • Perishability • Time factor is relatively more important • Delivery systems may involve both electronic and physical channels

The distinction between goods and services has major repercussions on how one perceives the service, how one manages the service and how one delivers and produces the service. In the process of standardizing health care services, the approach has been to "productify" the service and treat all marketing and management aspects as if the health

care service was a tangible product. However if we take a closer look, the health care environment is one where the service is not tangible and not a physical object. Health care delivery is inseparable, it is produced and delivered in the presence of the customer. Health care services are perishable, they cannot be stored in inventory. Lastly, the health care delivery system is variable, the presence of employees and other customers makes it difficult to standardize and control the variability of health care delivery. Specifically, if we look at specialized health care services, the service providers and the front-line personnel need to have a very good understanding of their customers and their perceived values and risks.

Having distinguished how services differ from goods, the following section will describe how the health care service industry differs from other service industries.

2.2 Health Services vs. Other Services

According to the NAICS (North American Industrial Classification System) in February 2000, Health and Social services accounted for 9.3% of Canada's service economy (Lovelock, 2000). Health care is a service industry of vital interest, not only to the individual recipients of health care but to the entire country that allocates resources to the soaring costs of medical attention. The outcome of health care quality is often life itself (Hutton and Richardson, 1995). The human factor is extremely high in health care. Intensified competition, cost reductions and pressures to increase internal efficiencies have made it more difficult for health care providers to deliver service quality. It is hard to understand service quality, and its impact on satisfaction and long-term loyalty because health is "a lifelong state of being that requires continuous care-related

interactions over time" (Peltier et al., 1998). Furthermore, satisfaction is a result of multiple service encounters across a variety of exchange partners in the health care facility.

Patient acquisition is only the first step in the health care process; strong relationships can lead to loyal patients. The relationship between patient and provider is highly uncertain involving care-giving situations that are highly stressful, not to mention that the new health care consumer is well informed, technologically savvy and demands choices (Serb, 1999).

An important issue for many health care organizations is patient satisfaction. Improvements in satisfaction are said to lead to positive financial results (Heskett et al., 1994; Zeithaml et al., 1996; Hurley and Estelami, 1998). Unlike the American system, the Canadian health care system is not only concerned with the bottom line. Besides financial results, effective service management such as the focus on healing is important. Although satisfied patients are more likely to be loyal to the organization, satisfied patients are more likely to recommend the service to others. Dissatisfied patients are more likely to spread bad word-of-mouth (WOM). There can be very high marketing costs involved in attracting new patients, introducing them to the service, and familiarizing them with the system (Sarel and Marmorstein, 1999), hence the importance of positive WOM.

Firms should measure service quality and customer satisfaction because these are indicators of critical business performance measures such as customer loyalty, profit, market share, and growth (Heskett et al., 1994; Zeithaml et al., 1996; Hurley and Estelami, 1998; Berry and Parasuraman, 1997; Cronin et al., 2000). A closer look at

service quality and satisfaction will help us better understand the relationship with behavioural intentions in the context of a hospital experience.

2.3 Service Quality

Parasuraman et al. (1988) state that perceived quality is the "consumer's judgment about an entity's overall excellence or superiority". The measurement of customer perceptions of service quality is critical to firms because such measurements are indicators of critical business performance measures such as customer loyalty, profit, market share and growth (Hurley and Estelami 1998). There are numerous measures in existing service quality literature and ongoing debates on how service quality should be measured. Some of the measures are presented in Table 2.2 and they range from a two-dimensional approach (Grönroos, 1992; Mels et al., 1997; Lehtinen and Lehtinen, 1985) to a multi-dimensional approach such as the SERVQUAL scale (Parasuraman et al., 1988).

Many researchers disagree with the multi-dimensional approach and describe service quality as a two-dimensional concept (see Figure 2.1): **technical/functional** (Grönroos 1992), **extrinsic/intrinsic** (Mels et al., 1997), and **physical/interactive** (Lehtinen and Lehtinen 1985). Although the authors use different names for each of their dimensions, they all refer to the same aspects and encompass similar definitions (Table 2.3). The two-dimensional service quality concept is best described as the image or perception that customers have of the technical aspect of service quality, the "what" is delivered and the functional aspect of service quality, the "how" the service is delivered (Figure 2.1) (Grönroos 1990).

Table 2.2

Classifications of Service Quality

Authors	Items	Definition
Parasuraman et al. (1988) SERVQUAL	• Reliability	• Ability to perform the promised service dependably and accurately
	• Tangibles	• Physical facilities, equipment, and appearance of personnel
	• Empathy	• Caring, individualized attention the firm provides its customers
	• Assurance	• Knowledge and courtesy of employees and their ability to inspire trust and confidence
	• Responsiveness	• Willingness to help customers and provide prompt service
Grönroos (1992)	• Technical	• Visible or physical tangibles used or experienced by the customer during the service delivery process.
	• Functional	• How the customer experienced the human interactions during the simultaneous production and consumption of the service.
Mels et al., (1997)	• Extrinsic	• Tangible aspect of the service delivery
	• Intrinsic	• Service quality produced by human interaction during the service encounter
Lehtinen & Lehtinen (1985)	• Physical	• What is used during the service delivery process
	• Interactive	• Human interaction during the service encounter
Holmlund and Kock (1995); Holmlund (2001)	• Technical	• Offering at the core in the value creating process
	• Social	• Concerns interpersonal issues and contacts
	• Economic	• Monetary expense and other sacrifices related to the relationship

2.3.1 Technical Quality

Technical quality, also known as ***extrinsic quality*** (Mels et al., 1997) and ***physical quality*** (Lehtinen and lehtinen, 1985), refers to the quality of the outcome or result of the service (Wetzels et al., 1998). It is what the customer is actually receiving from the service. For example, the technical quality of a hospital specializing in hernia

operations is based on the evaluation of the quality of the hernia operation itself. The technical aspects are "the visible or physical tangibles used by the customer during the service delivery process" (Ferguson et al., 1999: 59), it is the "what" is delivered during the service delivery process (Figure 2.1) (Grönroos 1992).

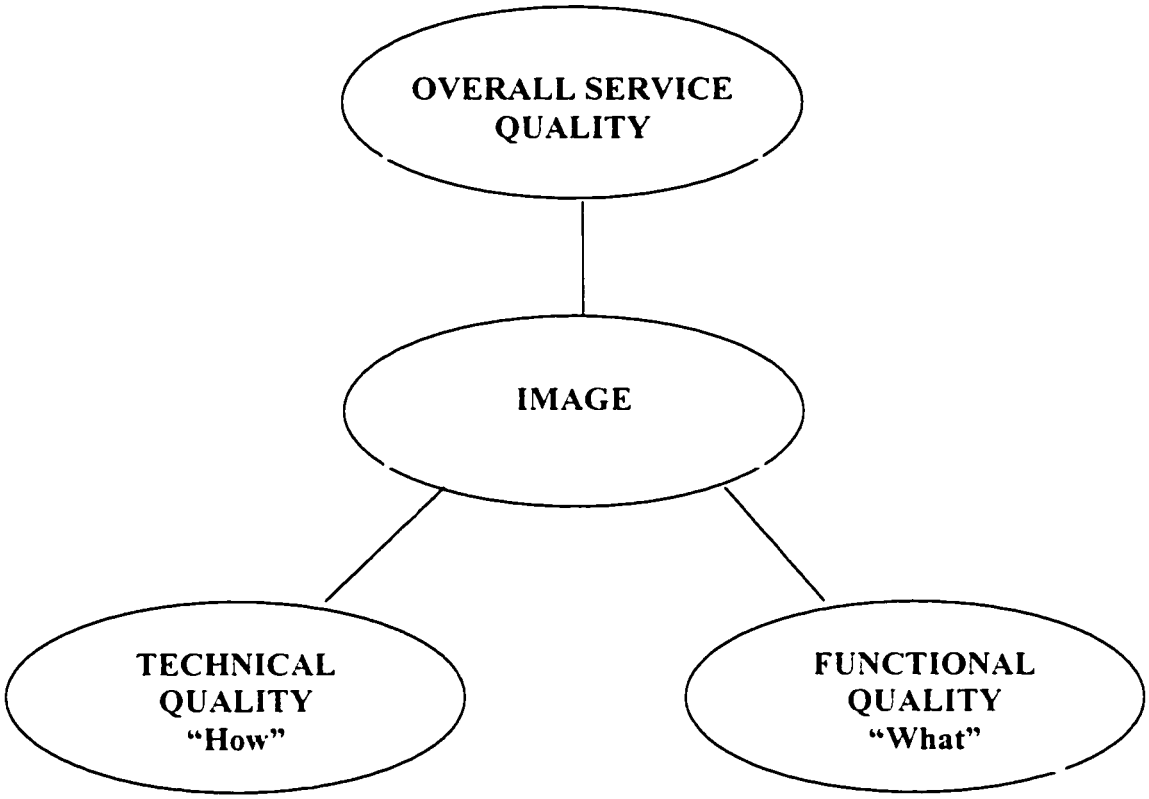

Figure 2.1 – ***Two Service Quality Dimensions (adapted from Grönroos 1990: 38)***

2.3.2 Functional Quality

The technical aspects of a service are the bear minimum that the customer expects to receive and can be easily imitated by competition. Furthermore, there is an absence of human interaction. **Functional quality**, also referred to as **intrinsic quality** (Mels et al.,

1997) and **interactive quality** (Lehtinen and Lehtinen 1985), refers to the manner in which the service is provided or delivered (Wetzels et al., 1998). Functional quality, refers to employees' actions or the human interaction that takes place during the service encounter (Lehtinen and Lehtinen 1985); it is the "how" a service is delivered (Figure 2.1) (Hurley, 1998).

Holmlund (2001) shares Grönroos' (1992) view on service quality classification with the addition of an economic dimension. The ***economic*** dimension includes the monetary expenses and trade-offs that exit when in a relationship (Holmlund, 2001). It is the costs and benefits related to the relationship. But this economic dimension is contextual and is based on a business-to-business type of relationship, which is not appropriate in this study on health care in the consumer sector.

As demonstrated above, several authors have constructed a two-dimensional factor structure for service quality (Grönroos, 1992; Mels et al., 1997; Lehtinen and Lehtinen, 1985) and although the authors use different names for each of their dimensions, they all refer to the same aspects and encompass similar definitions (Table 2.3).

Table 2.3

How Quality Dimensions Come Together

Parasuraman et al. (1988)	Grönroos (1992)	Mels et al. (1997)	Lehtinen et Lehtinen (1985)
• Tangible	• Technical	• Extrinsic	• Physical
• Empathy • Responsiveness • Assurance • Reliability	• Functional	• Intrinsic	• Interactive

2.3.3 SERVQUAL

A popular multi-dimensional approach to service quality measurement, that has resulted in much debate, is the SERVQUAL scale developed by Parasuraman, Zeithaml and Berry (1988) (Table 2.2). This scale has been reduced from ten dimensions of service quality to five generic dimensions: reliability, responsiveness, assurance, empathy and tangibles. In particular, ***reliability*** is the ability to perform the promised service dependably and accurately. ***Responsiveness*** is the willingness to help customers and provide prompt service. ***Assurance*** is the knowledge and courtesy of employees and their ability to inspire trust and confidence. ***Empathy*** is caring and the individualized attention the firm provides its customers. ***Tangibles*** are the appearance of physical facilities, equipment, personnel and communication materials.

The SERVQUAL scale is based on a "Perceptions-minus-Expectations" theory where perceived service quality is measured by the difference between what the customer perceived from the performance of the service and what the customer felt the firm should have offered (Parasuraman et al., 1988) (Figure 2.2). As the gap widens between perceptions and expectations, perceived service quality increases.

$$Q = P - E$$

Where Q = Service Quality

Where P = Perception of performance

Where E = Service quality expectation

Figure 2.2 – *"Perceptions-minus-Expectations" Theory (Parasuraman et al., 1998)*

Much criticism has been brought to SERVQUAL (Cronin and Taylor, 1992; Dabholkar et al., 2000; Paulin and Perrien, 1996). The use of difference scores measured by the algebraic difference between two responses has been highly criticized in past research (Johns, 1981; Peter et al., 1993; Edwards and Cooper, 1990; Kristof, 1996). Issues with the difference scores method include problems of reliability, discriminant and construct validity, spurious correlations, variance restrictions and inadequacy of determining the direction of the differences due to absolute differences (Johns, 1981; Peter et al., 1993; Edwards and Cooper, 1990; Kristof, 1996). Paulin and Perrien (1996) argue that SERVQUAL's measurement error is largely due to contextual factors such as the unit of study, the study observations and the type of study.

Zeithaml et al. (1996) argue that service quality measurement, whether measured through the difference of customers' perceptions and expectations or simply measured by perceptions, depends on the study's purpose. The authors state: "The perceptions-only operationalization is appropriate if the primary purpose of measuring service quality is to attempt to explain the variance in some dependent construct; the perceptions-minus-expectations difference score measure is appropriate if the primary purpose is to diagnose accurately service shortfalls" (Zeithaml et al., 1996: 40). One of the purposes of this study is to measure the relationship of service quality and advocacy intentions, therefore the *perceptions-only* operationalization is used. Further to this ongoing debate on which quality measure is better, *perceptions-only* or *perceptions-minus-expectations*, Dabholkar et al. (2000) performed a study to compare the two methods and results clearly showed that direct measures of overall service quality serve as better predictors of behavioural

intentions than computed measures. In other words, *perceptions-only* measures of service quality were superior to computed *perceptions-minus-expectations* measures.

Further to the measurement problems inherent in the SERVQUAL measure, Mels et al. (1997) studied the factor structure of SERVQUAL and found that the five dimensions really only factor into two dimensions: *extrinsic* and *intrinsic* quality. Results indicate that the first factor, extrinsic quality, addresses SERVQUAL's tangible dimension. The second factor, intrinsic quality, encompasses the reliability, the responsiveness, the assurance and the empathy dimensions of SERVQUAL.

Past research has taken the elements of SERVQUAL such as reliability, empathy, responsiveness, assurance and tangibles to build *perceptions-only* based quality measurement scales. SERVQUAL's items have been proven to be reliable and valid and they have been widely used as a basis and/or modified for much service quality research (Table 2.4).

Table 2.4

Use of SERVQUAL Items

Authors	Industry studied
Dabholkar, Shepherd and Thorpe (2000)	Pictorial directory industry
Dabholkar, Thorpe and Rentz (1996)	Retail Environment
Berry and Parasuraman (1997)	Computer manufacturer, retail chains
Cronin, Brady and Hult (2000)	6 services industries: spectator sports, participation sports, entertainment, health care, long distance carriers, fast food
Hutton and Richardson (1995)	Health care industry
White and Schneider (2000)	3 service areas: financial services, property and casualty division, national automotive retail chain

2.3.4 Using a Two-Dimensional Approach

Due to the measurement problems existent in SERVQUAL, the business-context orientation of Holmlund's (2001) three dimensional measure, and because the primary purpose of measuring service quality is to attempt to explain the variance in some dependent construct, the best measure of service quality in the health care context is the two-dimensional structure. Grönroos' (1992) two-dimensional measure of *technical* and *functional* quality (see Figure 2.1), which is similar to Mels et al.'s, (1997) *extrinsic* and *intrinsic* quality and Lehtinen and Lehtinen's (1985) *physical* and *interactive* quality, is the most appropriate measure. Further to the disadvantages of the other scales, the use of the two dimensional model has several advantages. The two dimensional scale has empirical justification (Mels et al., 1997), it is simple to use and allows the manager readily to construct a measurement tool which is specific to a particular service context.

Technical service quality is difficult for a typical patient to evaluate. Patients cannot easily assess the technical competence of a surgeon or immediate results after the treatment (Hutton and Richardson, 1995), therefore they use physical signals to evaluate service quality such as pain or discomfort. Research has shown that pain affects the actual experience (Cooper and Weaver, 2000). Because the level of discomfort that patients feel is the signal that they use to assess the technical quality of their service experience, level of patient discomfort is the measure of technical quality used in the present study.

Functional quality, which emphasizes the human interaction aspect of the service experience (Grönroos 1992; Mels et al., 1997; Lehtinen and Lehtinen, 1985; Holmlund 2001; Ferguson et al., 1998; Hurley, 1998), will be measured using patient perceptions of

their overall service experience with the service personnel on functional or human interaction aspects such as trust, reassurance, promptness, caring, etc..

Firms should measure service quality and customer satisfaction because these are indicators of critical business performance measures such as customer loyalty, profit, market share and growth (Hurley and Estelami, 1998; Heskett et al., 1994). The evaluation of service quality is based on judgements of specific cues and attributes. Peterson and Wilson (1992) argue that if quality measures are not related to customer behaviour and objective measures such as performance, market share, sales, etc., then they are questionable in terms of construct validity. Hence it is important to relate quality to the behavioural intentions such as the willingness to recommend.

Because literature has always presented service quality and satisfaction as antecedents to behavioural intentions, it is critical to define and explain these two constructs. Given the review on service quality literature above, below is an overview of satisfaction.

2.4 Satisfaction

Satisfaction is "an overall evaluation based on many transient experiences with a good or service over time" (Rust and Oliver, 1994: 245). Hence, satisfaction is a continuous evaluation of the service's ability to deliver the benefits that the customer is seeking. Analyzing customer satisfaction is critical in pinpointing areas where customer satisfaction improvement is needed in order to generate desirable behaviours such as customer retention (Rust et al., 1996).

It is important to separate the effects of satisfaction and delight because customer ***delight*** is said to be key to a more accurate goal of loyalty and loyalty-driven profits (Oliver et al., 1997). Delight is referred to as higher levels of satisfaction and service quality, it is unknown and unexpected to the customer, and it is a mixture of pleasure and surprise (Oliver et al., 1997). Delight occurs when a pleasurable outcome is unanticipated.

The relationship between overall satisfaction and delight on repurchase intentions is depicted by Rust et al. (1996) in Table 2.5. The results clearly show that a delighted customer has a higher repurchase intention (95.2%) compared to a customer who is merely satisfied (84.7%).

Table 2.5

Satisfaction States on Repurchase Intentions

State	Repurchase Intentions
Delighted	95.2%
Merely satisfied	84.7%
Dissatisfied	31.3%

Research has mainly presented satisfaction and quality as two distinct measures (Dabholkar et al., 2000). However, models including satisfaction, quality and behavioural intentions vary widely across different research. For example, some authors present models with satisfaction mediating the relationship between quality and behavioural intentions (Cronin et al., 2000), while others consider that quality mediates the relationship between satisfaction and behavioural intentions (Bitner, 1990). Dabholkar et al. (2000) consider service quality and satisfaction, to have both direct effects on

behavioural intentions. Contrary to the aforementioned models, Oliver et al. (1997) suggest that satisfaction alone leads to intentions, whereas Zeithaml et al. (1996) consider that quality alone leads to intentions. Overall, the differences deal more with the basic premises of behavioural intentions and/or perceptions and attitude literature which comes from each author's previous research background.

From the literature review, it appears that satisfaction and quality are two separate dimensions and they will be treated as two separate constructs that independently affect behavioural intentions. Following is a review of behavioural intentions with an emphasis on the crucial economic value that behavioural intentions have on a firm's profitability.

2.5 Behavioural Intentions

Most service literature dictates that behavioural intentions are the outcomes of quality and/or satisfaction (Bitner, 1990; Dabholkar et al., 2000, Rust et al., 1996; Zeithaml et al., 1996; Oliver et al., 1997; Cronin et al., 2000). Behavioural intentions can be positive or negative, depending on the quality and satisfaction rating that the customer has for the service. Behavioural intentions can be defined as "indicators that signal whether customers will remain with or defect from the company" (Zeithaml et al., 1996: 33). Extensive research has been done on behavioural intentions as a result of service quality and/or satisfaction (Table 2.6).

Favourable behavioural intentions include intentions to use the service again in the future (Dabholkar et al., 2000; Rust et al., 1996; Colgate and Danaher 2000), remaining loyal to the firm (Berry and Parasuraman 1997; Zeithaml et al., 1996; Cronin et al., 2000; Bitner 1990), willingness to recommend the service, saying positive things

about the firm and spreading positive word-of mouth (Dabholkar et al., 2000; Berry and Parasuraman 1997; Zeithaml et al., 1996; Colgate and Danaher, 2000; Bitner, 1990; Cronin et al., 2000), spending more with the company (Berry and Parasuraman, 1997; Zeithaml et al., 1996) and paying price premiums (Zeithaml 1996 et al.; Cronin et al., 2000).

Some unfavourable behavioural intentions include customers saying negative things about the firm or external response complaining to others (Zeithaml et al., 1996; Berry and Parasuraman, 1997), switching to another company (Berry and Parasuraman, 1997; Zeithaml et al., 1996; Bitner, 1990), complaining to external agencies (Zeithaml et al., 1996; Tax et al., 1998), internal response complaining to employees (Berry and Parasuraman, 1997), doing less business with the company (Zeithaml, Berry and Parasuraman, 1996) and exiting the firm completely (Tax et al., 1998).

Customer satisfaction is needed for loyalty but the reverse does not seem to be true (Bowen and Shoemaker, 1998). In fact, satisfied customers do not always become loyal. Some reasons may include customers looking for variety, customers being price sensitive or customers not returning to the initial location of the service (in the case of travel services such as hotels). For these reasons, loyal customers are more valuable than are satisfied customers because a satisfied customer who does not perform activities that a loyal customer would perform such as spreading positive WOM and repurchasing, does not add financial value to the company (Bowen and Shoemaker, 1998).

Table 2.6

Behavioural Intentions as a Result of Service Quality and/or Satisfaction

Authors	Behavioural Intentions
Cronin, Brady and Hult (2000)	• Say positive things • Recommend • Remain loyal • Spend more • Pay price premiums
Colgate and Danaher (2000)	• Word-of-mouth • Likelihood to recommend • Likelihood to stay
Dabholkar, Shepherd and Thorper (2000)	• Intentions to use service in the future • Intentions to recommend the service to others

Tax, Brown and Chandrashekaran (1998)	• Unfavourable:
	  • Exiting
	  • Complaining to the firm
	  • Third-party action

Berry and Parasuraman (1997)	• Loyalty:
	  • Say positive things
	  • Recommend
	  • Encourage friends and family
	  • Your 1st choice
	  • Do more business
	• Willingness to pay more
	• Propensity to switch
	• External response complaining to others
	• Internal response complaining to employees

Rust, Zahorik and Keiningham (1996)	• Customer retention • Repurchase intention

Zeithaml, Berry and Parasuraman (1996)	• Favourable:
	  • Say positive things
	  • Recommend
	  • Remain loyal
	  • Spend more with the firm
	  • Pay price premium
	• Unfavourable:
	  • Say negative things
	  • Switch to another company
	  • Complain to external agencies
	  • Do less business with the company

Bitner (1990)	• Word-of-mouth • Service Switching • Service Loyalty

Favourable behavioural intentions have positive financial and other value for a firm. Loyalty has several economic consequences. For example, Reichheld (1996) suggests that revenues and market share grow as customers re-purchase and make referrals. The author argues that the important economic effects of customer loyalty include acquisition costs, revenue growth, cost savings, referrals and price premiums. The economic consequence of increased loyalty can translate to an increase in profitability for a firm. This argument can also be found in the Service Profit Chain (Heskett et al., 1994). The Service Profit Chain (Figure 2.3) shows that revenue growth and profitability are results of customer loyalty (Heskett et al., 1994). Customer perceived value, generated by meeting target customer needs, will lead to satisfaction. Loyalty is a result of customer satisfaction which generates retention, repeated business and referrals. Customer loyalty entails profitability and revenue growth.

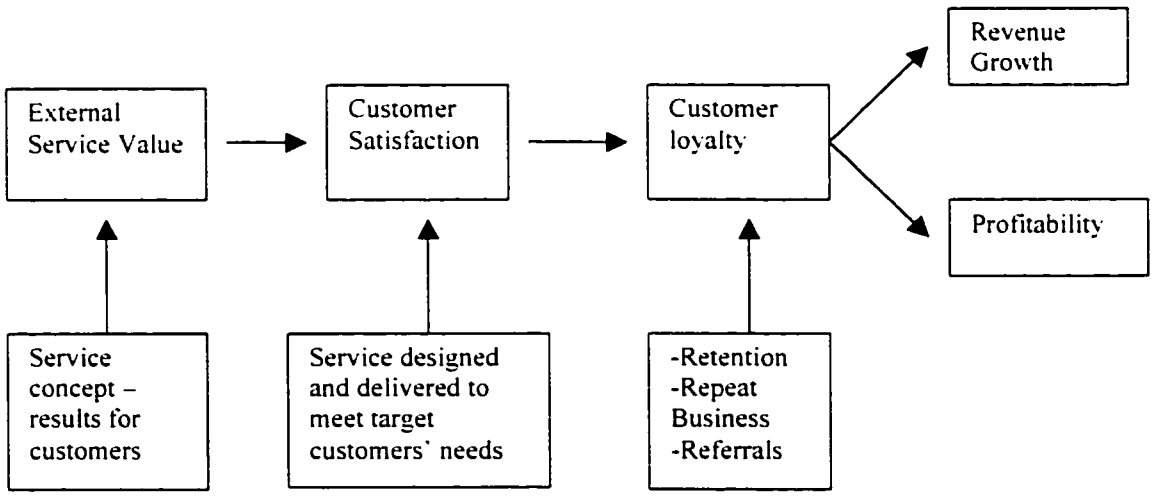

Figure 2.3 - *Service Profit Chain (adapted from Heskett et al., 1994)*

In sum, research indicates that superior service quality will lead to favourable behavioural intentions (i.e. remain with the firm), which in turn leads to positive financial consequences. The financial impact of favourable behavioural intentions from the willingness to remain with the firm includes ongoing revenue, increased spending, price premiums and referred customers (Zeithaml et al., 1996).

On the other hand, inferior service quality leads to unfavourable behavioural intentions (i.e. defecting) which in turn leads to negative financial consequences. Such unfavourable consequences include decreased spending, lost customers and costs to attract new customers (Zeithaml et al., 1996). Furthermore, unfavourable behavioural intentions can include complaining, negative WOM , switching to another company and doing less business with the firm.

The disadvantage with measuring behavioural intentions is that it may not be an accurate indicator of actual behaviour (Zeithaml et al., 1996). However, research states that repurchase intentions have a direct link to customer retention (Rust et al., 1996). Although fewer than 100% of those saying they have a 100% likelihood of returning, historical data has shown that 93.4% of the 100% actually do repurchase (Rust et al., 1996). Where actual behaviour data can not be collected, the use of intentions is the best estimate in predicting behavioural consequences. Furthermore, much research supports the use of behavioural intentions as consequences to service quality and satisfaction evaluations of a service (see Table 2.6) (Dabholkar et al., 2000; Rust et al., 1996; Berry et al., 1997; Zeithaml et al., 1996; Colgate et al., 2000; Bitner, 1990; Cronin et al., 2000).

Behavioural intentions take many forms such as intentions to use the service again or willingness to pay more. Of particular interest to this study on the health care industry, advocacy behaviour remains the primary concern as seen in the next paragraph.

2.6 Advocacy Intentions

Advocates of a firm are "those who actively espouse the virtues of the organization to others; these customers are so happy with the organization that they voluntarily engage in word-of-mouth advertising for the organization" (White and Schneider, 2000: 242). Advocates exhibit partnership-like behaviours. In their study on loyal hotel customers, the researchers found that partnership-like activities included strong WOM, making business referrals, providing references and publicity, and serving on advisory boards (Bowen and Shoemaker, 1998).

Word-of-mouth (WOM) is extremely valuable to service organizations, especially if the channels of communication are informal and the service is complex and difficult to evaluate (Money, Gilly and Graham, 1998). Specialized health care providers are not mass media buyers and do not employ strong advertising techniques. Getting a patient to patronize a specialized hospital for his hernia operation is not like selling a cellular phone. The service at hand involves sensitivity and risk. Furthermore, it is not a common service provided nor a high traffic service facility such as a restaurant or an entertainment center. Examining word-of-mouth (WOM) is important for service organizations in which the channels of communication are informal (no formal advertising or mass media buying) and when the service is complex and difficult to evaluate (Money, Gilly and Graham, 1998).

In building relationships with clients, companies should focus on building loyalty for the benefits of the behavioural outcomes. Loyal customers are said to create new customers through positive WOM (Bowen and Shoemaker, 1998). Referrals are critical profit and growth drivers in many industries such as the auto service industry, the housing industry, life insurance industry and health care industry. Long-term customer retention causes a satisfied customer to recommend the business to others (Reichheld, 1996). The author suggests that customers who patronize a business on the basis of a personal recommendation tend to be of higher quality. They are more profitable and stay with the business longer than customers who patronize a business on the basis of advertising, price promotions or sales pitches. The reason behind this argument rests in the fact that veteran customers are more accurate in describing a firm's strengths and weaknesses than is a promotional add. Furthermore, since people associate with people like themselves, chances are that the referred client will fit well with the firm's product/service offering (Reichheld, 1996).

Although behavioural intentions take many forms (see Table 2.6), the focus of this study will be the customer's willingness to talk about their service experience. There are several reasons why the other factors comprising behavioural intentions are not included. Firstly, given the service context of the Canadian health care system, paying price premiums or willing to pay more do not play a role. The Canadian or Provincial insurance plan covers the medical costs for Canadians (Table 2.7). The sample used in the present study were Canadian patients, therefore respondents did not pay a premium for their service.

Table 2.7

Hospital and Surgical Fees at Shouldice Hospital

Residency	Coverage
Canadian Patients (excluding Ontario)	• Portion on surgical cost covered by Provincial insurance plan • Hospital ward covered by Provincial insurance plan • Semi-private room charge is not covered by Provincial insurance plan
Ontario Patients	• Surgical cost covered by OHIP • Hospital ward covered by OHIP • Semi-private room charge is not covered under OHIP

Secondly, intentions to repurchase, to purchase more or to stay with the provider did not apply to the context being studied. The sample was drawn from patients visiting a hospital specializing in hernias where the probability of them returning was close to zero (unless complications arose or a second operation was needed). The complication and infection rates at the Shouldice Hospital are less than 0.05% and the overall reoccurrence rate is of 1% on more than 270.000 hernia operations[2]. Unlike the food or retail industry, this specialized health facility rarely has people revisiting.

Because advocates of a firm engage in positive word-of-mouth when they are positively satisfied with the organization (White & Schneider, 2000), it is reasonable to assume that, with a positive service experience, advocacy intentions will increase over time. Given that patients are visiting the hospital for a specialized operation, it is

[2] Statistics taken from the Shouldice Hospital website http://www.shouldice.com/admin.htm

reasonable to think that their level of advocacy would be higher after they've actually experienced the service. Hence H_1:

H_1: Advocacy intention changes over time and will increase with a positive service experience.

Because the technical and functional dimensions of service quality are the "what" and "how" of the service delivery, it is important to distinguish between the two in measuring their relationship to the behavioural intention of recommending the service to others. Given that the service literature emphasizes this two-dimensional focus (Grönroos, 1992; Mels et al., 1997; Lehtinen and Lehtinen, 1985; Ferguson et al., 1999), H_2 and H_3 are derived. It is important to note that in a surgical setting, where the competence of a surgeon or results of a treatment are difficult for typical patients to assess, patients use the level of discomfort they feel to assess the technical quality aspect of their service experience.

H_2: Patient perception of technical quality (level of discomfort) is positively related to advocacy intentions.

Because functional quality, the "how" a service is delivered, is based on the human factor in the patient-caregiver relationship, the patient's perception of the experience with the service personnel is used to measure functional service quality.

H_3: Patient perception of functional quality (service experience with personnel) is positively related to advocacy intentions.

Based on the above literature review which suggests that service quality is an antecedent of behavioural intentions and that in the context of the health care industry, willingness to recommend the service is of importance, this research poses the following hypothesis:

H_4: Patient perception of overall service quality is positively related to advocacy intentions.

Like quality, satisfaction has been presented as an antecedent to behavioural intentions (Cronin et al., 2000; Bitner, 1990; Dabholkar et al., 2000; Oliver et al., 1997). Given the importance of advocacy in the health care industry and the relationship of satisfaction and behavioural intentions, the following hypothesis is derived:

H_5: Patient level of satisfaction is positively related to advocacy intentions.

Research has clearly demonstrated that service quality and satisfaction are antecedents to behavioural intentions (Bitner, 1990; Dabholkar et al., 2000, Rust et al., 1996; Zeithaml et al., 1996; Oliver et al., 1997; Cronin et al., 2000). However, the marketing literature has not focused on relationships with psychological variables. Given that personality is said to influence people's behaviour (Judge and Cable, 1997), this psychological variable needs special attention. Below is a review of personality literature and a description of various models used in literature to measure personality type.

2.7 Personality Types

"Personality traits are individuals' stable, even innate mental structures which provide general direction for their choices and behaviour" (Judge and Cable, 1997 : 360). This definition implies that personality traits influence behaviour which leads to the model about the hypothesized relationship of personality and behavioural intentions (see Figure 1.1, p.4). Previous research has concentrated on the relationships between satisfaction, quality and behavioural intentions. What previous research has lacked is the addition of the psychological variable of personality.

Personality is said to influence relationships between attributes of people and their behaviour in various situations. There is little to no research investigating relationships between the psychological variable "personality" and marketing variables such as satisfaction, quality and behavioural intentions. Hurley (1998) investigated service-oriented personality types of service-providers. This research was based on the provider's personality type, not the customer's. Other research has focused strictly on defining personality traits and where these types are found in an organization (Alonzo, 2000; 2001). Personality research has also focused on management variables such as the relationship between personality and employment status (de Fruyt and Mervielde, 1999), career success (Judge et al., 1999), and job seekers' organizational culture (Judge and Cable, 1997). Other authors have looked at the relationship of personality with other psychological variables such as communication apprehension (Opt and Loffredo, 2000) and thinking styles (Zhang, 2000).

Different models exist on the different dimensions of personality. Some examples are listed in APPENDIX A and described in APPENDIX B. They include Goldberg's Big

Five, MBTI, RIASEC, Enneagram and Hogan and Hogan's Personality dimensions. The various personality models, each have different personality traits. A table containing each model and its respective traits is in APPENDIX C.

Given the abundance of research on the different models that exist on personality types (APPENDIX A, B, C), the most commonly used however, is Goldberg's Five Factor Model. The dimensions of the Big Five have been proven to be generalizeable across all cultures and rating formats, and remain fairly stable over time (Judge et al., 1999; Judge and Cable, 1997). Much research has used the Five Factor model (see Table 2.8).

Table 2.8

The Big Five and Areas of Study

Study	Sample
Judge and Cable (1997): Dispositional basis of job seekers' organizational culture preferences and how these preferences interact with recruiting organizations' cultures in their relation to organization attraction.	Engineering and industrial relations students seeking positions
Marks and Lutgendorf (1999): Predictors of health behaviour (personality factors) in older adults .	Older adults living in Chicago and small metropolitan and rural areas of Iowa.
Judge et al., (1999): Relationship between Big 5 and general mental ability with career success (intrinsic and extrinsic success)	Data obtained from Intergenerational studies: children from Berkley, California
Saucier (1994): Creation of a briefer marker set of Goldberg's Big Five from 100 items to 40 items	College students

Judge and Cable (1997) argue that personality traits influence individuals' values, as opposed to RIASECs interests. In the present study, the focus is on values and traits,

not interests and preferences. Preferences are situation-specific whereas values are what "an individual regards as conducive to his or her welfare" (Judge and cable 1997: 361).

Goldberg argued that virtually all personality types can be categorized under five factors, hence the Five Factor Model or The Big Five (Judge et al., 1999). The Five Factor Model has been structured through trait adjectives in various languages, factor analysis studies of existing personality dimensions, and existing measures made by experts (Judge et al., 1999). Judge and Cable (1997) state that personality can be measured by the observation of traits. The Five Factors include: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. Below is a brief description of each of the Big Five traits.

Extraversion refers to being sociable, assertive, active and directive (Judge and Cable, 1997). People exhibiting Extraversion like large groups and gatherings, and are bold, forceful and surgent. They exhibit high levels of arousal, which is associated to aggressive behaviour.

Agreeableness suggests likability, cheerfulness, adaptability and cooperativeness (Judge and Cable, 1997). Agreeable individuals are altruistic, warm, generous, trusting and cooperative. Although agreeableness is a dimension of interpersonal behaviour like extraversion, agreeableness is negatively related to aggression and hostility. Agreeableness is positively related to cooperation.

Conscientiousness refers to achievement and dependability (Judge and Cable, 1997). These individuals are ambitious, practical, persistent, scrupulous, careful and neat. They tend to be controlled, rule-bound, cautious and risk averse.

Neuroticism represents the tendency to exhibit poor emotional adjustment and experience negative affects such as fear, anxiety and impulsivity (Judge and Cable, 1997). People exhibiting Neuroticism tend to be rigid, unadaptable and timid. They are insecure, submissive, indecisive and lethargic. Neuroticism is associated with psychological distress in dealing with short and long term life changes and face difficulty in decision-making tasks.

Openness to experience involves being curious, creative, nonconforming and autonomous (Judge and Cable, 1997). These individuals are imaginative, original, unconventional and independent. They have broad interests and are creative.

Hurley's (1998) study of service provider personality served as a basis to the following three hypotheses along with literature's definition of the Big Five and Opt and Loffredo's (2000) study on personality and communication apprehension. Opt and Loffredo's (2000) study indicates that Introversion is related to significantly higher levels of communication apprehension than Extraversion.

Based on Hurley's (1998) hypothesis that Extraversion is highly related to providing better service, and the definition of Extraversion (Judge and Cable, 1997), the following hypothesis is generated:

H_6: Extraversion is positively related to high advocacy intentions.

Judge and Cable (1997) state that Agreeableness, like Extraversion is a dimension of interpersonal behaviour. Based on the definition of Agreeableness (Judge and Cable,

1997) and on Hurley's (1998) hypothesis that Agreeableness is related to providing good customer service, H_7 is derived:

H_7: Agreeableness is positively related to advocacy intentions.

Unlike Hurley's (1998) hypothesis that an Adjustment type of personality is related to better customer service, this personality type (also known as Neuroticism), is known to exhibit poor emotional adjustment, experience negative affects such as fear, anxiety and impulsivity, insecurity, submissiveness, and indecisiveness (Judge and Cable 1997). Given the definition of Neuroticism (Judge and Cable 1997) and contrary to Hurley (1998), H_8 states:

H_8: Neuroticism is not related to advocacy intentions.

Although this study is clearly exploratory in nature, trying to identify independent relationships with different variables and advocacy intentions, exploring a moderating relationship would give further insight as to how these variables come together, if at all. The following model is proposed to see whether personality moderates the relationship of marketing variables such as technical quality, functional quality, overall quality and satisfaction with advocacy intentions (Figure 2.4).

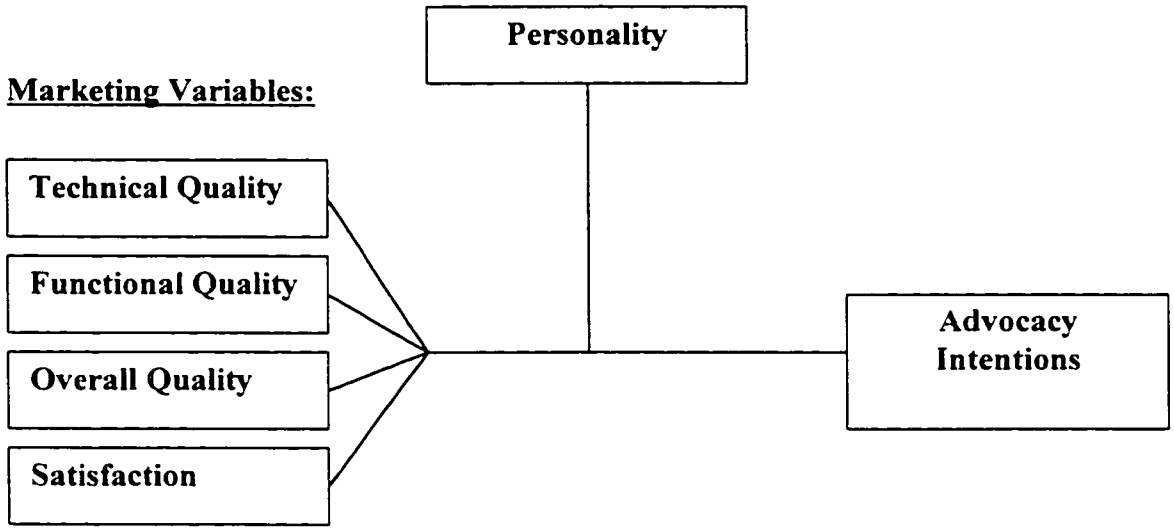

Figure 2.4 - *Personality as a Moderator*

Based on personality literature review in the marketing field, this type of moderating relationship has gone understudied. It is important to note that the intent of the present study is to identify independent relationships with advocacy intentions and that the proposed research model in Figure 1.1 (p.4) does not attempt to identify all variables related to advocacy intentions. Based on the fact that the proposed research model does not contain all variables related to advocacy intentions and based on the lack of research in the area, the suspicion is that the moderating relationship in Figure 2.4 is not significant:

H_9: Personality does not moderate the relationship between the independent marketing variables of technical quality, functional quality, overall quality and satisfaction with advocacy intentions.

With the literature review on the various constructs established and the hypotheses defined, the following section describes the methodology used to set up the research in order to proceed in getting results.

CHAPTER III

METHODOLOGY

Following is a description of the methodological approach taken in this study with a description of the sampling method, the protection of information and confidentiality treatment, the questionnaire administration process, the measures used to operationalize the constructs, and the reliability and validity of the constructs.

3.1 Sample

This study was conducted at the Shouldice Hospital in Thornhill, Ontario. Shouldice is known as the "Center of excellence for the repair of abdominal wall hernias". The respondents that took place in the study were 500 Canadian patients visiting the Shouldice Hospital for primary inguinal hernia surgery from April 2001 to November 2001. Although the patients sampled visited the hospital between April 2001 and November 2001, the questionnaire administration and receipt process will only end in December 2001, making the process last eight months.

The 500 respondents filled out three questionnaires each over a period of time, for a total of 1500 questionnaires. Out of the 500 patients that agreed to participate in the study, only a sample of n=243 was used in this study. This represented the number of patients having completed all three questionnaires as of October 2001. At present, approximately n=400 or 80% of the sample has completed all three questionnaires. Because each patient had to answer three questionnaires, the total number of questionnaires used in this study was n=729.

Looking at the demographics of the sample, 97% of the patients were males, 64% of the patients were working and 58% lived further than 25 miles away from the Shouldice Hospital (Table 3.1).

Table 3.1

Demographic Characteristics

SEX		WORK		RESIDENCY	
Male	236	**Working**	155	**>10 Miles**	45
Female	7	**Semi-Retired**	19	**10-25 Miles**	54
		Retired	68	**>25 Miles**	137
		Student	1		
	n = 243		**n = 243**		**N = 236**

Figure 3.1 depicts the timing of the questionnaire administering process. The first questionnaire was to be filled out by the patient immediately after agreement to participate in the study at (T_0). The second questionnaire was to be filled out 2 days after the patient's operation (T_1), one day before being released. The third questionnaire would be mailed out to the patient's home address 1-month later (T_2).

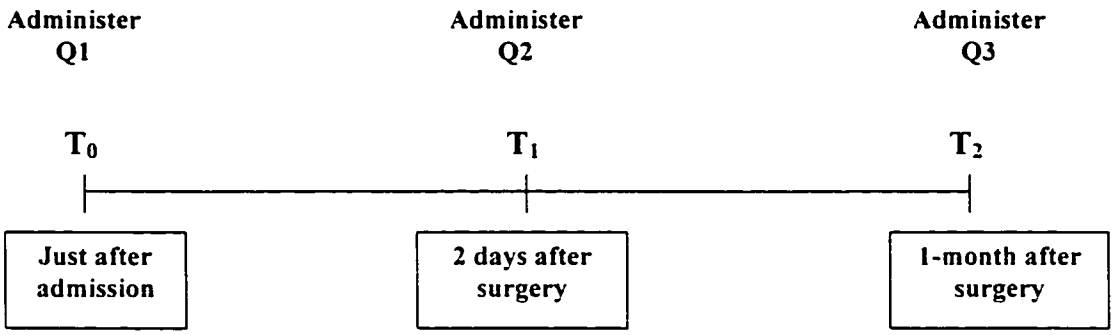

Figure 3.1 - *Questionnaire Administering Process*

3.2 Method

During their admission to the Shouldice Hospital, patients were asked if they were willing to participate in a study conducted by the John Molson School of Business on the health care delivery system. They were told that the study involved them filling out three questionnaires at three different points in time: after admission, 2 days after surgery and 1-month after surgery (Figure 3.1). Because this study is part of a larger study, the questionnaires used in the data collection were composed of multiple questions to measure various constructs. Only the questions and constructs related to this study will be further discussed in the methodology.

The first questionnaire was administered following all the technical procedures of hospital admittance and informed consent for participating in the study. The first questionnaire was three pages long and took 5 minutes of the patient's time to complete. The data of concern taken from Q1 included demographic questions: sex (male or female), working status (working, semi-retired, retired, student), location of Shouldice

(within 10 miles/between 10 and 25 miles/greater than 25 miles from home), residency (province) and age. It also asked how the patient first learned about the Shouldice Hospital and what was the main reason the patient chose Shouldice. Lastly, there was a question on advocacy intention (APPENDIX E).

The second questionnaire, administered 2 days after surgery, took 20-30 minutes of the patient's time. The pertinent data to this study included personality measurement of the Big Five, functional quality questions about personnel, technical quality questions on discomfort levels and a question on advocacy intention (APPENDIX F).

The third questionnaire, mailed out to the patient's address one-month later, was made easy to answer and took 5-10 minutes of the patient's time. The data measured technical quality through discomfort levels, overall satisfaction, overall quality and advocacy intention (APPENDIX G).

3.3 Confidentiality and Protection of Private Information

Once the respondents agreed to participate in the study, they were asked to fill out an "Invitation to Participate in the Study" (APPENDIX D). This form ensured individual responses to the questionnaires would be kept strictly confidential from the Shouldice Hospital and that the University would only be able to identify the patient by the study number and not the patient's personal information. The University would report the overall results to the hospital, not the individual responses. The respondents either agreed to participate, wanted further clarification before participating or did not wish to participate.

3.4 Questionnaire Administration

Patients admitted to the Shouldice Hospital had a 3 to 4 night stay (4 to 5 days). The timeline of a typical patient's stay is depicted in Figure 3.2. On Day 1, at the arrival of the patient to the hospital, the patient was admitted to the hospital. On Day 2, surgery was performed on the patient. On Day 3, the first clips were removed from the patient. On Day 4, the second set of clips were removed from the patient. Patients left the hospital on Day 4 (after the second clipping) or Day 5, depending on their recovery stage.

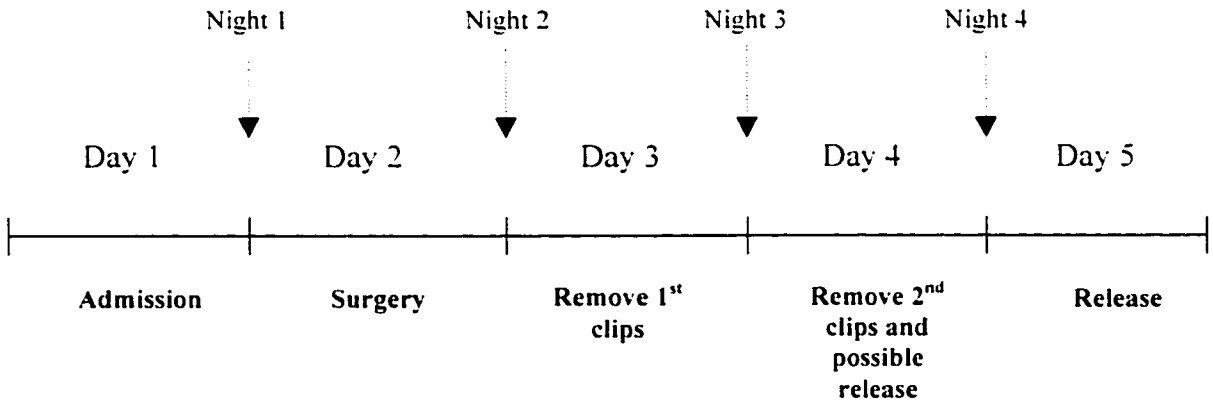

Figure 3.2 - *Typical Patient's Stay at the Shouldice Hospital*

Each patient had to respond to three questionnaires at different points in time (see Figure 3.1). The questionnaires were numbered by patient number and by questionnaire number in order to relate the same patient to the three questionnaires. Patient numbers ranged from 1 to 500 and questionnaire numbers ranged from 1 to 3 (Table 3.2).

Table 3.2

Patient and Questionnaire Numbering

Patient #	Questionnaire #
1.1	Patient 1, Questionnaire 1
1.2	Patient 1, Questionnaire 2
1.3	Patient 1, Questionnaire 3
2.1	Patient 2, Questionnaire 1
2.2	Patient 2, Questionnaire 2
2.3	Patient 2, Questionnaire 3
...	...
500.1	Patient 500, Questionnaire 1
500.2	Patient 500, Questionnaire 2
500.3	Patient 500, Questionnaire 3

Each questionnaire and each envelope was numbered (Table 3.2). The hospital was able to tie the patient number on the envelope with the patient's name (but not the questionnaire that was sealed inside the envelope). The University was able to tie the number of the questionnaire inside the sealed envelope with the patient number (but not the patient's name). This insured that the patient's personal information was kept confidential from the University and that the patient's individual responses to the questionnaires were kept confidential from the hospital.

3.4.1 Questionnaire #1

At admission, patients were handed an invitation to participate in the study. This form explained that the research was conducted by the John Molson School of Business to better understand the Health Care delivery system and emphasized confidentiality. The respondents had to initial next to three choices on the Invitation to Participate in The Study: Yes, No and Would like more info.

After initialing the Yes choice, respondents were assigned a patient number where the admissions clerk would write down the patient's name, address, phone number and date one-month later to each patient number. The Shouldice Hospital personnel used a grid in order to assign patient numbers and follow-up on the questionnaire administering process (Table 3.3). This allowed the administration of Q2 and Q3 to the same patient with an identical patient number. After this information was taken, respondents were handed Q1 and asked to fill it out right away and drop it in the box outside of the admissions office indicated: "Questionnaire drop-off – please place sealed envelop in this box – Thank you for your cooperation".

3.4.2 Questionnaire #2

On Day 4 of the patient's stay (2 days after the patient's surgery), the Q2 questionnaire with corresponding patient number was sent to the patient's room on condition that the patient had filled out Q1. The grid in Table 3.3 was prepared to track the aforementioned.

Table 3.3

Follow-up Grid Used by Shouldice Hospital

Patient #	Name	Address	Phone #	Give Q1	Return Q1	Give Q2	Return Q2	Give Q3	Return Q3	Date 1-month
1										
2										
3										
...										
500										

The respondent was asked to fill Q2 and take it to admissions and drop it in the box indicated "Questionnaire drop-off".

3.4.3 Questionnaire #3

Q3 was administered one-month after the patient's admission to the hospital. Q3 was mailed out by the hospital to the patient's home address with the record the hospital had when the patient's name, address and phone number was taken at admissions. The envelope that was mailed out contained Q3 and a pre-postage paid return envelope. On the pre-postage paid return envelope, there was another confidentiality clause stating: "this envelope is to be opened by the University only".

Q3 was then mailed back by the patient to the hospital in the pre-paid postage stamped return envelope provided. The hospital would gather the sealed Q3's and send them to the University for opening and data entry. Once again, the hospital was not able to see the patient's response due to the sealed envelope. Furthermore, the University was not able to tie the response to any patient names because the University did not hold any patient name record. The University was only able to tie the responses to the patient number assigned at the beginning by the hospital.

3.5 Data Entry

The hospital was sending the completed and sealed questionnaires to the University in batches of 200 in order to facilitate data entry. Each question on every questionnaire was coded and entered into a database.

3.6 Measures Used to Operationalize the Constructs

Below is a description of how each construct was operationalized to measure the relationship between the independent variables (service quality, satisfaction and personality) and the dependent variable (advocacy intentions).

3.6.1 Service Quality

The service quality measure was operationalized using Grönroos' (1992) two-dimensional approach (technical and functional) which is similar to Mels et al.'s (1997) extrinsic/intrinsic quality or Lehtinen and Lehtinen's (1985) physical/interactive quality. Service quality was measured through a technical dimension, a functional dimension and as an overall concept (Table 3.4).

Table 3.4

Operationalization of Service Quality

Service Quality Dimensions (Grönroos 1992)	**Measure**	**# of Items**	**Type of items**
Technical	Level of patient discomfort	4	• Discomfort during surgery (APPENDIX F) • Discomfort 1 day after surgery (APPENDIX F) • Discomfort two-days after surgery (APPENDIX F) • Discomfort one-month after surgery (APPENDIX G)
Functional	Experience at the hospital with personnel	18	• See Questionnaire 2 (APPENDIX F)
Overall	Overall quality	1	• Evaluate overall quality of the services at the Shouldice Hospital (APPENDIX G)

Technical Quality

The "what" (technical) of service quality is difficult to evaluate in a hospital setting involving surgery because the technical competence or immediate results after the treatment are difficult if not impossible for the patients to evaluate (Hutton and Richardson, 1995). It is difficult for a typical patient to assess or evaluate a physician's competence, therefore the patient uses physical signals to evaluate service quality. An example of a physical signal is pain or discomfort. Research has shown that pain affects the actual experience (Cooper and Weaver, 2000), hence pain or discomfort could be used to operationalize the technical aspect of perceived service quality.

The technical dimension was operationalized by asking patients about their discomfort levels at four points in time:

- What was the level of discomfort during the operation.
- What was the level of discomfort on the first day after the operation.
- What was the level of discomfort on the second day after the operation
- What, if any, is the level of discomfort remaining after the hernia operation, one-month later.

The first three measurements were assessed in Questionnaire #2 (APPENDIX F, Section B2), 2 days after the operation. The last assessment was done one-month after the operation in Questionnaire #3 (APPENDIX G, Section A1). The scale was a 10-point Likert scale, ranging from "*A great deal of discomfort*" to "*Very little discomfort*". The time period to assess the discomfort level was evaluated with Shouldice management that had more than 20 years experience with how fast patients can recuperate.

Looking at the correlation matrix in APPENDIX H, all four discomfort measurements assessing technical quality correlate with advocacy intentions. Furthermore, all four measurements correlate with overall service quality.

Functional Quality

Patients often use the attributes associated with the "how" (functional) of health care delivery (Hutton and Richardson, 1995) because of this lack of ability to assess technical quality. Functional quality was operationalized by measuring the patient's experience at the hospital with the personnel (Table 3.4). Functional quality was measured in Questionnaire #2 through 18 items scored on a 10-point Likert scale ranging from *"Dissatisfied"* to *"Delighted"* (APPENDIX F, Section B1). Peltier et al., (1998) showed that physician performance, nurse performance and support staff are all critical to form patient perceptions, providing insight into key determinants of service quality and customer satisfaction. Furthermore, in a study of the top performing hotels, customers identified the following important attributes on personnel quality. They were friendliness, attentiveness, consistency, efficiency, professionalism, a neat appearance and a distinctive personality (Dubé and Renaghan 1999). The 18 items reflect various aspects of functional quality such as trust, comfort, understanding, reassurance, personalized attention, efficiency and promptness. A 10-point Likert scale was used to make sure that higher variability could be obtained. Because the level of satisfaction was judged to be relatively high, a 5 or 7-point scale would probably skew the results. This was decided following consultation with experts from the milieu.

In order to make sure that all aspects of the service were taken into account when developing the quality scale, a service blueprint was designed. Blueprinting allows a firm to visualize all the issues inherent in managing a service (Shostack, 1984). Essentially, the goal is to map the processes that constitute the service. In order for the blueprint to represent the hospital's service offering mapping correctly, the use of an expert was needed. With the help of Daryl Urquhart, Marketing Director at the Shouldice Hospital, a blueprint was designed to measure quality of service at every point as in Figure 3.3. Using the blueprint, quality aspects about the different points were measured at each level.

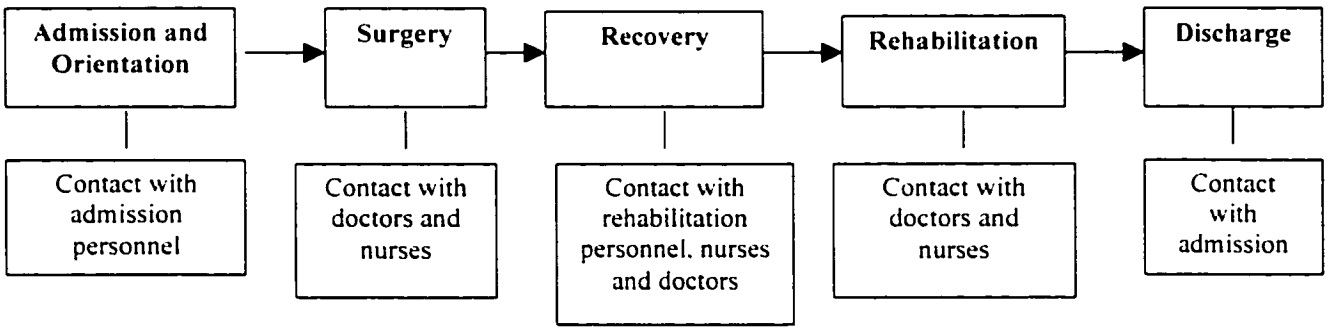

Figure 3.3 - *Blueprinting of Service Delivery Points*

Functional quality of service personnel was the item that was composed of the most questions, adding up to 18 items. Rust and Oliver (1994) state that consumers' number one answer, when asked about what quality in service means to them, is the employee contact skills such as courtesy, attitude and helpfulness. The important relationship between service quality and contact personnel is supported by the empathy,

reliability, responsiveness and assurance variables of the SERVQUAL measurement (Parasumaran, et al., 1988). Interpersonal contact quality is vital in service encounters.

A factor analysis was done on the 18 items to make sure that they were all assessing functional quality. As results showed, all 18 items factor loaded into one component. Factor analysis "uses the pattern of correlations among the items on a scale to determine the number of factors or separate constructs" (Whitley 1996 : 148). If factor analysis results into one factor, this means that the items represent one construct. Such is the case with the 18 items that all measure functional quality. Because all loadings are positive, this indicates positive correlations with the functional quality factor. The functional quality measure showed very high reliability with a Cronbach alpha of 0.98. Furthermore, the correlation matrix in APPENDIX H shows that functional quality highly correlates with both overall service quality and advocacy intentions.

Overall Service Quality

Overall service quality was measured in Questionnaire #3, one-month later. The patients were asked to evaluate the overall quality of the services at the Shouldice Hospital on a 10-point Likert scale ranging from "*Average Quality*" to "*Extremely High Quality*" (APPENDIX G, Section B2).

3.6.2 Satisfaction

Patients were asked how satisfied they were with their overall experience at the Shouldice Hospital one-month later in Questionnaire #3. A single-item measure was used on a 10-point Likert scale with "*Not Satisfied*" and "*Delighted*" as extremes of each

pole and "Satisfied" in the middle (APPENDIX G, Section B1). Although single-item measures are said to be unreliable, satisfaction and overall service quality have been measured in much literature as a single-items (Table 3.5) (Colgate and Danaher, 2000; Hurley and Estelami, 1998; Peltier et al., 1998; Oliver et al., 1997). Multi-item measures of satisfaction have the same skewness and positive bias as single-item measures. Rust et al. (1996) suggest separating satisfaction and delight to understand the true effect of overall satisfaction.. The correlation matrix indicates that satisfaction is correlated with advocacy intentions (APPENDIX H).

Table 3.5

Use of Single Item Measures for Overall Satisfaction

Authors	Industry	Measure	Scale
Colgate and Danaher (2000)	Banking	Single-item measure for overall satisfaction	• 5-point scale • extremely dissatisfied – extremely satisfied
Hurley and Estelami (1998)	Retail	Single-item measure for overall satisfaction	• 5-point scale • very satisfied –very dissatisfied
Peltier, Boyt and Schibrowsky (1998)	Health care	Single-item measure for overall satisfaction	• 5-point scale • very satisfied –very dissatisfied
Oliver, Rust and Varki (1997)	Recreation and Entertainment	Single-item measure for satisfaction with decision to visit	• 5-point scale • strongly disagree – strongly agree

3.6.3 Advocacy Intentions

The dependent variable in this study was advocacy intention based on how patients intended to talk to relatives, friends and colleagues about their experience at the

Shouldice Hospital. Level of advocacy was measured by the respondent circling one of the following five options:

a) I definitely will not talk to them

b) I probably will not make a point of telling them

c) If asked I would tell them

d) I will make a point of telling them

e) I will urge them to tell others

The same question on Advocacy Intention was measured at three points in time: during admission (Questionnaire #1), 2 days after surgery (Questionnaire #2) and one-month later (Questionnaire #3). In this study, the five statements on advocacy intention were adapted from White and Schneider's (2000) Ladder of Commitment. White and Schneider's (2000) ladder placement scale had eight choices measuring the customer's willingness to return to the firm, the customer's passive advocacy and the customer's active advocacy. The items referring to returning or repurchasing were dropped because this wasn't the case for the Shouldice patient. This study concentrated on strictly measuring advocacy intentions.

Advocacy intention was measured at three points in time in order to prove or disprove H_1 where the hypothesized relationship stipulates that advocacy intentions change over time and increase with a positive service experience. However, only advocacy intention measured in Questionnaire #3, one-month later, was used as the dependent variable when verifying its relationship with the independent variables of

overall service quality (H_4), quality dimensions (H_2 and H_3), satisfaction (H_5) and personality (H_6, H_7, H_8 and H_9).

The data showed that all 243 respondents circled one of the last three choices. The first two choices (*I will definitely not talk to them* and *I probably will not make a point of telling them)* were not chosen at all. In other words, where five groups with different advocacy intention levels were expected, the data exhibited only three groups. Therefore, these three levels of advocacy were classified as follows:

If asked I would tell them	**Average**
I will make a point of telling them	**Good**
I will urge them to tell others	**Excellent**

3.6.4 Personality

Personality was measured using Goldberg's Big Five: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. A mini-marker version was used as developed by Saucier (1994). This briefer version of Goldberg's Five Factor Model, uses 40 adjectives, instead of 100. Patients were asked to rate themselves on each adjective that best describes them where 1 is *Very Inaccurate* and where 5 is *Very Accurate* (APPENDIX F, Section A1). Taking a look at the correlation matrix in APPENDIX H, Agreeableness is the only personality trait that slightly correlates with advocacy intentions.

3.7 Reliability

Reliability of a measure is its degree of consistency, in other words, the measure shows little change over time with the assumption that the traits being measured are stable (Whitley, 1996). A measure is reliable "to the extent that independent but comparable measures of the same trait or construct of a given object agree" (Churchill, 1979 : 65). If a measure is perfectly reliable, than the chance of random error is 0. When assessing the reliability of the functional quality measure comprising of 18 items, results indicated extremely high reliability with a Cronbach alpha of 0.98.

It is important to note that a valid measure may be reliable but the reverse is not true (Cruchilll, 1979; Whitley, 1996). High reliability doesn't always guarantee high validity because of the presence of systematic error (Churchill, 1979; Whitley, 1996).

3.8 Validity

The validity of a measure is its degree of accuracy. In other words, it assesses the trait it is suppose to assess, assesses all aspects of the trait and assesses only that trait (Whitley, 1996). A measure is valid when the "differences in observed scores reflect true differences on the characteristic one is attempting to measure and nothing else" (Churchill 1979 : 65). According to Churchill (1979), a valid measure is one where the observed score equals the true score, where systematic and random error are minimal.
Of the various forms of validity, of interest in this study is content validity and construct validity.

Content validity cannot be measured through correlation tests, it is a judgement of the plan and of the manner in which it was carried out (Nunnally, 1978). Nunnally

(1978) suggests the use of a blueprint in order to have a representative collection of items. A blueprint was designed to measure functional quality as depicted in Figure 3.3. A part of content validity is face validity which concerns "judgements about an instrument after it is constructed (Nunnally, 1978 : 99). Looking at the items used to measure the constructs, face validity is assessed because the plan has been adequately transformed into a measurement instrument.

Construct validity is achieved if a measure assesses the construct it is supposed to assess (Peter, 1981). Construct validity is achieved intuitively (Nunnally, 1978). The importance in construct validity is if the construct is adequately represented through theory. Construct validity can only be inferred, it cannot be assessed directly (Peter, 1981). All measures used to operationalize the constructs exhibit construct validity as they are substantiated by theory and validated through past research.

In sum, the study took place at the Shouldice Hospital with a sample size of 243 patients participating in this particular study, each answering three questionnaires at different points in time. The first questionnaire was administered during admission to the hospital, the second was administered the day after surgery, and the third was mailed to the patient's home address one-month later. Patient information was kept confidential from the university and patient responses to the questionnaires were kept confidential from the hospital. Service quality and its dimension, satisfaction, personality and advocacy were operationalized by using measures substantiated by literature review, by using blueprinting methods and through the use of an expert. The measures exhibited reliability and validity. Once the methodology was completed, the questionnaires

administered and returned to the university, the data was coded and entered into a database, ready for the analysis to take place in order to generate results that would prove or disprove the hypotheses.

CHAPTER IV

RESULTS & ANALYSIS

The following section discusses the statistical treatment of the data. The results are presented below by analyzing the statistical output of each hypothesized relationship. Using Statistica Software, one-way variance analysis was performed on the different combinations of each of the independent variables and advocacy intentions, the dependent variable. F-tests and p-values were computed for each combination using a significance level of $\alpha = 0.05$. Furthermore, EQS structural modeling was used to test the moderating relationship of personality on marketing variables with advocacy intentions.

4.1 Advocacy Intentions Over Time

Advocacy intention levels were measured at three points in time to investigate whether or not the level of advocacy changes with the service experience. An identical question on advocacy was asked on all three of the questionnaires. The results are presented in Table 4.1

Table 4.1

Advocacy Intentions Over Time (ANOVA)

Advocacy Intentions (n = 243)	**Q1**	**Q2**	**Q3**	**F**	**p**
	3.8 (0.8)	4.1 (0.8)	4.0 (0.7)	25.3	0.0001
		p < 0.0001			
		p < 0.0001			
			p < 0.01		

Notes: 1) Values are means and standard deviations based on scores from a 5-point Likert scale
2) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

Advocacy intention level increases with a positive experience. From admission time (Q1) and 2 days after the surgery (Q2), there is a significant increase in advocacy intentions (3.8 and 4.1 respectively). Also, from a scale of 1 to 5, no respondents (n=243) gave a low rate of 1 "*I definitely will not talk to them*" or 2 "*I probably will not make a point of telling them*". This means that advocacy levels are extremely high. Furthermore, the overall advocacy over time is highly significant ($F = 25.3$, $p < 0.0001$) and there are significant differences between the levels of advocacy at each point in time. Interestingly, there is a small decrease in intentions 1-month after the surgery (Q3) with a mean of 4.0. Overall, the respondents with no exception would talk about their positive experience at Shouldice Hospital. H_1 is supported where advocacy intention changes over time and will increase with a positive service experience.

Similar to advocacy intentions, patient discomfort levels (a measure of technical quality) over time were assessed (Table 4.2). Firstly, the results indicate that differences in discomfort levels over time are highly significant. Secondly, the levels of discomfort at all four points in time are fairly low with all means ranging from 1.9 to 4.1 on a 10-point

level of discomfort scale. Thirdly, the highest level of discomfort that patients experienced was the day after surgery with a mean of 4.1. Patients felt the least discomfort 1-month after surgery with a mean of 1.9.

Table 4.2

Discomfort Over Time (ANOVA)

Discomfort Levels (n = 232)					
During Surgery	**1-Day after Surgery**	**2-Days after Surgery**	**1-Month after Surgery**	**F**	**p**
2.8 (2.5)	4.1 (2.5)	3.0 (2.1)	1.9 (1.7)	67.0	0.0001

$p < 0.0001$
$p < 0.00001$
$p < 0.00001$
$p < 0.00001$
$p < 0.0001$

Notes: 1) Values are means and standard deviations based on scores from a 10-point Likert scale.
2) Values were re-evaluated as the reciprocal of the score on a 10-point Likert scale where 1 was *a great deal of discomfort* and 10 was *very little discomfort*.
3) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

Interestingly, when looking at advocacy intentions (Table 4.1) and discomfort levels over time (Table 4.2), the trend indicates that as advocacy levels increase, discomfort decreases.

4.2 Advocacy Intentions and Technical Quality

Further to the analysis of advocacy intentions over time (Table 4.1) and discomfort levels over time (Table 4.2), results on the relationship of discomfort and advocacy intentions indicate three important facts (Table 4.3).

Table 4.3

Advocacy Intentions & Technical Quality (ANOVA)

Discomfort	Advocacy Intention Levels: Average (n = 61)	Good (n = 119)	Excellent (n = 59)	F	p
During Surgery	3.3 (2.0)	2.9 (2.4)	1.8 (2.2)	6.3	0.002
		p < 0.001	p < 0.01		
1-Day after Surgery	4.8 (2.4)	4.2 (2.4)	3 2 (2.2)	6.9	0.001
		p < 0.001	p < 0.01		
2-Days after Surgery	3.4 (1.9)	3.1 (2.1)	2.2 (2.0)	6.6	0.002
		p < 0.001	p < 0.005		
1-Month after Surgery	2.2 (1.9)	1.7 (1.6)	1.6 (1.6)	2.0	0.14
		p = 0.05			

Notes: 1) Values are means and standard deviations based on scores from a 10-point Likert scale.
2) Values were re-evaluated as the reciprocal of the score on a 10-point Likert scale where 1 was *a great deal of discomfort* and 10 was *very little discomfort.*
3) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

H_2 was mostly supported with results indicating that technical quality, operationalized through discomfort during surgery, discomfort one day after surgery, and discomfort two days after surgery, is positively related to advocacy intentions. The relationship of advocacy intention and discomfort is highly significant in those three cases ($p < .002$, .001 and .002). Discomfort levels are low, with the highest level being one day after surgery and the lowest level being one-month later. Advocacy behaviour is very high with all respondents ranging from average to excellent advocacy intention levels. ANOVA indicates that in three out of four measurements of discomfort, the difference among the groups of advocacy intentions levels is extremely significant

(during surgery, 1-day after and 2-days after). One month later, ANOVA shows that there is no overall significance between advocacy intention and discomfort but post hoc testing shows a small difference between average and excellent levels of advocacy. Discomfort one-month after surgery was significant only between the means for average and excellent advocacy. This could be explained by the fact that one-month later, patients did not feel much discomfort. In fact, one-month later, patients were at their lowest level of discomfort with a mean of 1.9 where the lowest possible score is 1.

4.3 Advocacy Intention and Functional Quality

ANOVA on functional quality and advocacy intentions clearly indicates that the relationship between these two variables is highly significant ($p < 0.0001$) (Table 4.4). Furthermore, there are significant differences between the means of each advocacy level group. There is a strong indication that the higher the functional quality rating, the higher the advocacy intention with functional quality means increasing from 8.3, 8.9 and 9.4 for average, good and excellent advocacy intentions, respectively. In support of H_3, patient perception of functional quality is positively related to advocacy intentions.

Table 4.4

Advocacy Intentions & Functional Quality (ANOVA)

	Advocacy Intention Levels				
1 Factor	**Average** (n = 58)	**Good** (n = 113)	**Excellent** (n = 54)	**F**	**p**
Functional Quality	8.3 (1.4)	8.9 (1.2)	9.4 (0.8)	11.7	0.0001
		$p < 0.0001$	$p < 0.05$		
		$p < 0.005$			

Notes: 1) Values are means and standard deviations based on scores from a 10-point Likert scale.
2) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

4.4 Advocacy Intention, and Overall Service Quality and Satisfaction

For each of the three levels of advocacy intentions the means, ranging from 8.7 to 9.7 (Table 4.5), indicate that patients feel that the Shouldice Hospital delivers extremely high quality services of which they are delighted. Even within these high levels of patient perceived service quality and satisfaction there is a significant gradation in the level of advocacy intentions. ANOVA demonstrated significant positive differences among the groups of advocacy intention levels and overall service quality and satisfaction (Table 4.5). Therefore, H_4 and H_5 are highly supported where patient perception of overall service quality and patient levels of satisfaction are highly and positively related to advocacy intentions.

Table 4.5

Advocacy Intentions, and Overall Quality and Satisfaction (ANOVA)

Dependent Variable	Advocacy Intention Levels: Average (n = 61)	Good (n = 121)	Excellent (n = 57)	F	p
Overall Service Quality	8.8 (1.1)	9.2 (1.0)	9.7 (0.5)	16.3	0.0001
		$p < 0.005$			
			$p < 0.005$		
			$p < 0.005$		
Overall Satisfaction	8.7 (1.1)	9.2 (1.1)	9.7 (0.6)	13.0	0.0001
		$p < 0.005$			
			$p < 0.0001$		
			$p < 0.0001$		

Notes: 1) Values are means and standard deviations based on scores from a 10-point Likert scale.
2) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

4.5 Advocacy Intentions and Personality

Two of the five personality types exhibit a strong relationship with advocacy intention (Table 4.6): Agreeableness and Conscientiousness. Patients with traits of Agreeableness and Conscientiousness tend to advocate more than patients with other personality types. Furthermore, in both of those cases, significant differences exist between the means of the different advocacy level groups, specifically between average and good, and average and excellent advocacy intention groups.

Table 4.6

Advocacy Intentions & Personality (ANOVA)

	Advocacy Intention Levels				
Personality	**Average** (n = 61)	**Good** (n = 121)	**Excellent** (n = 59)	**F**	**p**
Conscientiousness	31.2 (5.1)	33.3 (4.1)	32.9 (3.9)	5.0	0.007
		$p < 0.005$			
			$p < 0.005$		
Agreeableness	29.3 (3.4)	30.8 (3.4)	31.4 (3.5)	6.4	0.002
		$p < 0.005$			
			$p < 0.01$		
Extraversion	26.2 (6.0)	26.7 (4.9)	27.9 (5.3)	1.3	NS
		$p = 0.07$			
Openness to Experience	30.1 (5.3)	30.3 (4.4)	30.5 (4.5)	0.1	NS
Neuroticism	28.8 (4.8)	28.5 (5.7)	29.8 (4.9)	1.6	NS

Notes: 1) Values are means and standard deviations based on scores from Saucier's (1994) personality measurement scale of Goldberg's Big 5.
2) Probabilities are indicated for Duncan multiple range post hoc comparison for ordered means.

A debatable relationship exists for a third personality type, that of Extraversion. Although the F-test (1.29) and p-value reflect a non-significant relationship, post hoc tests show a relationship between those who have average and excellent intention levels (p-value = 0.07). In reference to H_6, there is no significant relationship between Extraversion and advocacy intentions.

Patients who exhibit Extraversion, Openness to Experience and Neuroticism have no significant relationship with advocacy intentions (Table 4.6).

To summarize, H_7 is fully supported where Agreeableness is positively related to advocacy intention. A result that was found and that was not hypothesized was that Conscientiousness, in contrast to other personality types, exhibits the highest level of advocacy intentions with respective mean scores of 31.18, 33.32 and 32.91 for the three different levels of advocacy intentions. Contrary to what was hypothesized, H_6, was not fully supported. Extraversion did not show a significant relationship with advocacy intentions. Post hoc testing though, did show a debatable result. In support of H_8, there was no relationship between advocacy intentions and Neuroticism.

4.6 Personality as a Moderator

The proposed hypothesis (H_9) stated that personality moderates the relationship of technical quality, functional quality, overall quality, and satisfaction with advocacy intentions. Results are presented in Figure 4.1.

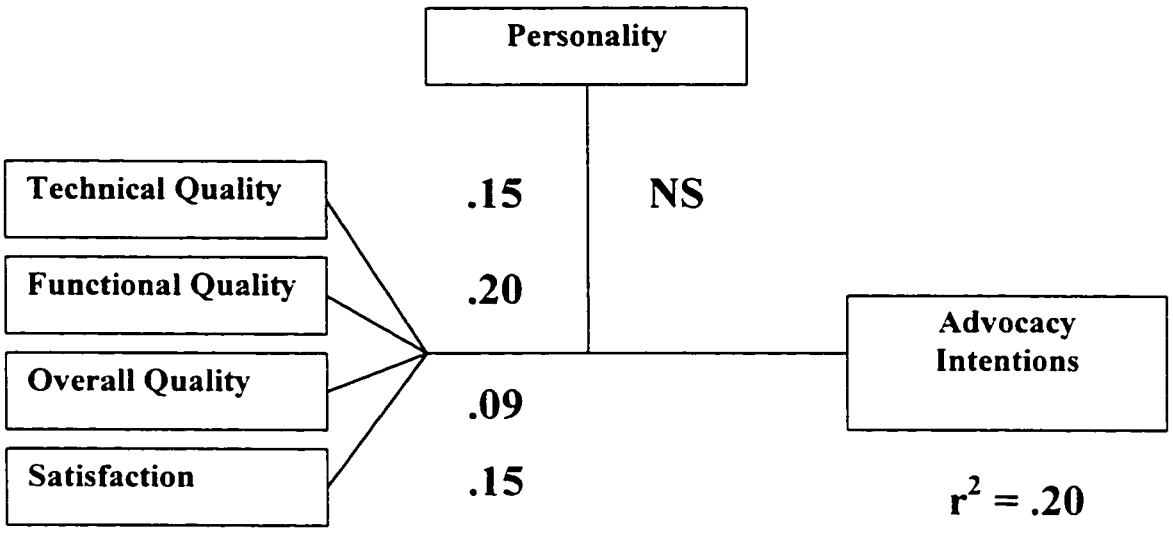

Figure 4.1 – *EQS Results From Structural Modeling*

EQS structural modeling clearly indicates that there is a non-significant relationship of personality as a moderating variable in the relationship of technical quality functional quality, overall quality and satisfaction with advocacy intentions; thus supporting H_9. The results from EQS are supported by the correlation matrix (APPENDIX H) where, with the exception of Agreeableness, the different personality traits have extremely low correlations with advocacy intentions (Extraversion = .05, Agreeableness = .22, Conscientiousness = .08, Neurotic = .03, Openness to Experience = .04). Furthermore, the square of the correlation coefficient ($r^2 = .20$) indicates that the differences in all the variables represents only 20% of the variance in advocacy intentions.

Statistical analysis of the data allowed the transformation of patient responses into meaningful results that contributed to proving entirely almost all hypothesized

relationships. The next section discusses the results and how they relate to theoretical and managerial concepts.

CHAPTER V

DISCUSSION AND CONCLUSION

5.1 Discussion

Important conclusions on advocacy intentions are drawn in this study. With significant findings using the marketing variables of service quality and satisfaction, and the psychological variable of personality, a significant contribution to the study of behavioural intentions has been made.

This study takes behavioural intentions one step further by measuring advocacy intentions in the health care industry. Where patients of specialized medical services such as hernia surgery mostly rely on word-of-mouth than on advertising when seeking medical services, the study of the willingness to recommend a medical institution is key in luring more patients. In fact, 126 patients out of 239 said they first learned about the Shouldice Hospital through former patients, representing 53% of the sample (Figure 5.1).

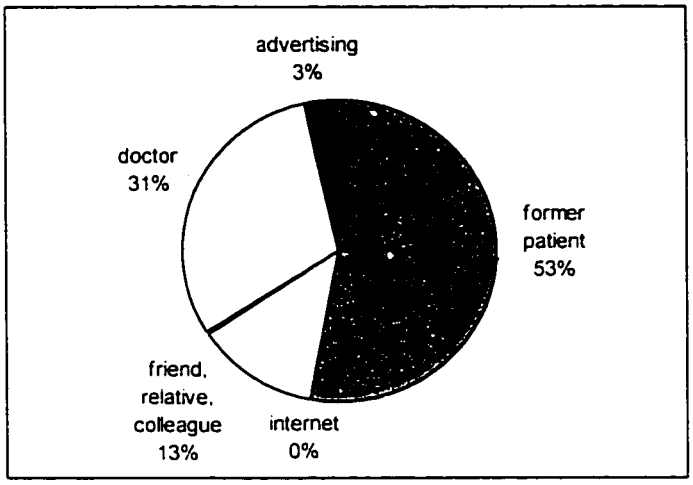

Figure 5.1 – *How Patients First Learned About the Shouldice Hospital*

Furthermore, out of 233 patients, 79 said the main reason they chose the Shouldice Hospital was because of its positive word-of-mouth or reputation, representing 34% of the sample (Figure 5.2). Several conclusions can be drawn from this study.

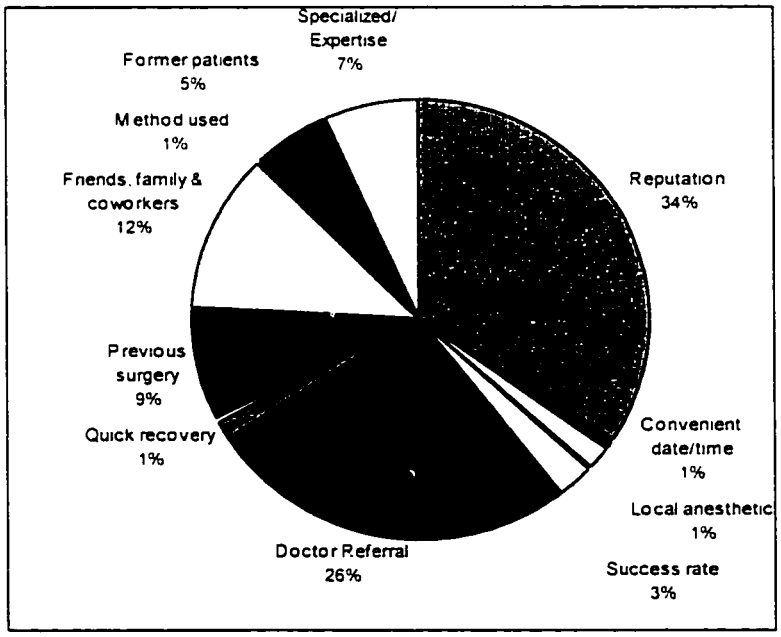

Figure 5.2 - *Main Reason for Choosing Shouldice Hospital*

5.1.1 Advocacy Intentions

Firstly, the Shouldice Hospital is successful in having patients become advocates of its services. Patients rated extremely high on advocacy intention levels: average, good and excellent advocacy intention levels. Not one of the 243 patients surveyed said they would not talk about their experience. This has important consequences for this health care facility who relies on patient word-of-mouth as its marketing resource. These results are also consistent with Heskett et al. (1997)'s claim that the Shouldice Hospital is judged to be the best in the world and how the authors have yet to find a dissatisfied patient.

Secondly, advocacy level increases with a positive service experience. Consistent with the "perceptions-minus-expectations" gap theory expressed by Parasuraman et al. (1988), patients are more willing to advocate after their surgery then during their admission to the hospital. This means that the service experience, judged by patients perception of service quality and satisfaction, have a positive effect on patients' willingness to talk about their service experience. Patients' perceptions of the service experience exceeded their expectations after the actual experience, leaving them delighted. Interestingly though, one-month later, patients were less willing to talk about their experience then immediately after their surgery. Two possible explanations can be drawn from these results. Firstly, *memory effects* could have come into play in the instance where one month later, patients may have forgotten how highly they rated the service on quality and satisfaction during their stay at the hospital. Secondly, patients may have experienced a *later satisfaction attitude* where over-time, they may have reflected on and re-evaluated their service experience (Bendall & Powers 1995).

Regardless of the slight decrease in advocacy level, one-month later, patients were still willing to make a point in telling their relatives, friends and colleagues about their experience at the Shouldice Hospital. In such a case, the facility doesn't only benefit from patients advocating immediately after surgery, it benefits from long-term advocacy behaviour.

5.1.2 Technical Quality – Discomfort Level

To investigate changes in advocacy intentions over time, discomfort levels were assessed over time. Overall, patients did not feel that much discomfort. Not surprisingly, patients felt the highest discomfort level the day after surgery and the least one-month later. One would expect discomfort to be at its worst during surgery but Shouldice uses a local anesthetic. It is reasonable to expect that discomfort is at its lowest one-month later given the patient has that much time to recover. The low levels of discomfort experienced by the patients could be directly attributable to the recovery techniques that Shouldice employs. Part of their philosophy involves a 3 to 4 night stay, invites patients to walk to their rooms immediately after their operation, and encourages outdoor exercise. Also, Shouldice carefully selects its surgeons for their skills and ability to perform the established technique. They also offer surgeons a good compensation program and regular work schedules which makes their job pleasant and satisfying (Heskett et al., 1997). These are just some of the methods used by Shouldice to get the patient back to work twice as fast than patients from other institutions (Heskett et al., 1997).

Patients that felt the least discomfort during their operation where more likely to want to talk about their experience at the Shouldice Hospital than patients who felt more

discomfort. The relationship between discomfort and advocacy intention demonstrates that patients are using pain or discomfort as a perception of technical quality which is directly attributable to their willingness to talk about their experience.

5.1.3 Functional Quality – Experience With Service Personnel

Patients who rated their experience with the service personnel the highest where amongst those who would urge their relatives, friends and colleagues to tell others about their experience at the Shouldice Hospital. Because functional quality involves human interaction and is based on the relationship of front-line personnel and the patient, it is obvious that functional quality plays an integral role in the patient's willingness to recommend the hospital. The high rating in functional quality is attributable to Shouldice's personnel selection process where nurses and housekeepers are selected for their ability to relate to the patients, to provide counseling (Heskett et al., 1997), and to express care and concern (Heskett et al., 1990). Furthermore, customer-service oriented firms like Shouldice Hospital recognize that their contact personnel delivers the functional aspects of service quality that are the most visible aspect of the service offering (Ferguson et al., 1997).

5.1.4 Overall Quality and Satisfaction

Patients have extremely high perceptions of overall service quality and are delighted with their service experience. The study shows that such high service quality perceptions and high levels of satisfaction cause the patient to be a higher advocate of the Shouldice Hospital. This is consistent with previous marketing literature that claims

overall service quality and satisfaction are antecedents to behavioural intentions (Dabholkar et al., 2000; Cronin et al., 2000; Bitner, 1990; Oliver et al., 1997; Zeithaml et al., 1996). Results clearly show that a high overall service quality rating and a high satisfaction rating means that patients have a higher intention to talk about their service experience at the Shouldice Hospital.

5.1.5 Personality – Goldberg's Big Five

The exploration of the psychological variable of personality on advocacy intentions, led to conclusive results. Patient who exhibited *Conscientiousness* and *Agreeableness* showed the highest intentions of talking about their service experience where patients who exhibited *Extroversion*, *Openness to Experience* and *Neuroticism* showed no relationship. Agreeableness is a dimension of interpersonal behaviour and these types exhibit cheerfulness and cooperativeness (Judge and Cable, 1997). Furthermore, it was found that service providers exhibiting Agreeableness demonstrated higher customer service skills. Given the characteristics of Agreeableness and past research, it is no doubt that in this study, Agreeableness is positively related to high advocacy intention levels. Where no hypothesized relationship was made on Conscientiousness, patients with this trait exhibited the highest willingness to talk about their experience. Conscientiousness is characterized by order, meticulousness, and detail-orientation (Judge and Cable, 1997). Perhaps it is their ability to perceive the details of high functional and technical service quality that led patients exhibiting Conscientiousness to be the highest advocates. Neuroticism, characterized by anxiety, timidness and poor emotional adjustment (Judge and Cable, 1997), is not related to

advocacy intentions. Interestingly, patients exhibiting Extraversion had a questionable relationship to advocacy. The results were unexpected given that Extraversion was characterized by sociability, aggressiveness, and liking of large groups and gatherings (Judge and Cable, 1997). Furthermore, Extraversion was associated with extremely low levels of communication apprehension (Opt and Loffredo, 2000). But given the results, Extraversion is not related to advocacy intentions. Knowing the patient's personality type can allow service personnel to cater the service offering to suit each patient type. Personality distinction can also help service providers to focus on certain activities that encourage a patient to become a better advocate. Perhaps patients exhibiting Neuroticism, that are more timid, could benefit from a more attentive staff, thus leading to more ease in communicating their experience.

5.1.6 Personality as a Moderator

It is not surprising that personality did not moderate the relationship of technical quality, functional quality, overall quality and satisfaction with advocacy intentions, mainly because the correlation coefficients of each personality trait was extremely low with advocacy intentions. Furthermore, it was clearly indicated that the proposed research model in the present study intended to explore independent relationships among different marketing and psychological variables, with advocacy intentions. The purpose was not to propose a model demonstrating how much variance in advocacy intention was explained by the all the variables.

5.2 Conclusion

In sum, there is much to learn about the Shouldice Hospital's total service experience philosophy that goes beyond the expertise of its surgeons and staff. As this study shows, Shouldice goes beyond just providing medical services. The health care industry is one which is very delicate, that deals with human life and that requires tact, special care and attention. Results indicate that Shouldice Hospital understands these issues and delivers service far beyond patient expectations. The relationship marketing environment that this facility creates serves as a perfect example for other health care facilities that are strictly focused on providing medical services or other service industries that lack customer focus. This study is a perfect example of how a service organization can benefit from its patrons' positive word-of-mouth by delivering high overall service quality and ensuring customer satisfaction to the point of delight. A more human and service-oriented approach could lead to positive word-of-mouth behaviour and improve the overall rating of the health care system. This can only hold true if the whole service delivery system and process focuses on the clients (patients) and employees. The exemplary results found in this study will be presented to all employees at the Shouldice Hospital, including the surgeons, the nurses and the staff. Knowing that their actions have positive benefits can encourage them to continue delivering the best service possible. Furthermore, knowing that their actions have gone noticed and appreciated by the patients can boost their moral, and motivate them to continue to deliver patient-care excellence.

CHAPTER VI

LIMITATIONS AND FUTURE RESEARCH

6.1 Generalizeability

Because the context of the study is the health care service industry, one may argue that this study is not generalizeable and is not applicable to other industries. The intent of this research was to single out one particular behavioural intention, that of word-of-mouth which is clearly understudied. It is in the health care industry where such a behaviour can be singled out. The health care industry is one where patients do not return frequently or even at all, leaving repurchase intentions or loyalty behaviour out of the equation. Furthermore, it is an industry that relies upon positive word-of mouth and reputation and does not depend on mass advertising to promote its services. Although this study may not be generalizeable to all service industries, the results in this study are highly conclusive of the health care industry. In response to this limitation, a future research suggestion may lie in trying to replicate this study in other contexts such as the educational, communication, and food and beverage industries . Furthermore, it would be

interesting to look at the relationship with other behavioural intentions in these contexts such as paying price premiums and complaint behaviour.

6.2 Demographics

A second limitation to this study is based on demographic issues inherent in the sample. A gender bias may exists where 236 patients, out of a sample of 243, are male. In trying to single out specialized health care services, where loyalty and intentions to return to the facility are not behavioural intentions of interest in this study, often the specialization means that the focus is one particular group of people. In this case, occurrence of hernias is much higher for men than it is for women (1 out of 25 patients is a female at the Shouldice Hospital), hence the mostly male sample. Similarly, had the sample been drawn from a specialized breast cancer treatment center, the sample may have suffered from a female gender bias. This limitation calls for future research direction in studying gender bias in advocacy intention in a context that is gender bias-free like the banking industry or the retail industry. Similar to the gender bias, the sample was drawn from Canadian patients. Cultural differences may exist in patients and their willingness to talk about their service experience. It would be interesting to do a cross-cultural comparison among two very different cultures such as the differences existent in behavioural intentions between the Japanese and Canadians.

6.3 Methodology

6.3.1 Self-Reported Measures

In the context of this study, patients were asked to report their level of advocacy intention. This is not to be confounded with actual behaviour. Self-reported measures have advantages and disadvantages. The biggest disadvantage of self-reported measures is the ability of the respondent to accurately make a self-report (Whitley, 1996). On the other hand, self-reported measures are often the most direct way to obtain some kind of information, are easy to collect and can be administered by people who require little training as opposed to observers in behavioural research (Whitley, 1996).

This research exemplifies that with a positive service experience, patients are stronger advocates of the facility than before their experience. Furthermore one-month later, although advocacy level decreases slightly, it still remains high. If a patient is willing to make a point of telling others about their experience one-month later, than it would be interesting to see what the level of advocacy is one-year later. This potential longitudinal study would have important marketing and financial consequences for the hospital who can benefit from long-term advocates in addition to the advocacy of their new patients.

6.3.2 Single Source Bias

Because the same respondent was answering all three questionnaires, one may argue that a single-source bias exists causing inflated relationships. Relationships were expected to be high before carrying out this research due to the hospital being known as the best in the world (Heskett et al., 1997) and because its patient base was mostly

formed through referrals. Future research could remove this bias, by replicating the study using three different groups of patients responding to the different questionnaires.

6.3.3 Scale Formation

One would argue that using a 10-point Likert scale, as opposed to a 5 or 7-point scale, to measure service quality would "artificially" increase variability. However, in this particular study, high ratings were expected due to the reputation of the hospital and it being known as the best hospital in the world (Heskett et al., 1997). In fact ratings of overall service quality ranged from 8.8 to 9.7. Such high ratings are indicative of needing a larger scale to capture some variability among the three groups of advocates.

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APPENDIX A

DIFFERENT PERSONALITY MODELS AND AREAS OF STUDY

Different Personality Models and Areas of Study

Model	Study	Sample
Big Five	*Judge and Cable (1997):* Dispositional basis of job seekers' organizational culture preferences and how these preferences interact with recruiting organizations' cultures in their relation to organization attraction.	Engineering and industrial relations students seeking positions
	Marks and Lutgendorf (1999): Predictors of health behaviour (personality factors) in older adults .	Older adults living in Chicago and small metropolitan and rural areas of Iowa.
	Judge et al., (1999): Relationship between Big 5 and general mental ability with career success (intrinsic and extrinsic success)	Data obtained from Intergenerational studies: children from Berkley, California
	Saucier (1994): Creation of a briefer marker set of Goldberg's Big Five from 100 items to 40 items	College students
RIASEC vs Big Five	*De Fruyt and Mervielde (1999):* Validity of RIASEC and Big Five in predicting employment status and nature of employment	Graduating college seniors as they entered the job market
RIASEC	*Zhang (2000):* Relationship between thinking styles and personality types	University students from Hong Kong
MBTI	*Opt and Loffredo (2000):* Relationship between MBTI and communication apprehension	University students from Houston, Victoria
	Bringhurst (2001): MBTI: what it measures, how the test might benefit the employer, the practice and the clients	Practical implications (no sample studied): geared towards financial planners
Enneagram	*Alonzo (2000):* What the traits are, where to find these types in an organization, how to motivate them	Practical implications (no sample studied)
	Alonzo (2001): What the traits are, how to motivate each type	Practical implications (no sample studied): geared towards sales people

APPENDIX B

BRIEF DESCRIPTION OF OTHER PERSONALITY MODELS

Myers-Briggs Type Indicator (MBTI)

The MBTI was created in 1940 and identifies 16 personality types that are a combination of four traits (Bringhurst, 2001; Opt and Loffredo, 2000). The traits include Extraversion or Introversion, Sensing or Intuition, Thinking or Feeling, and Judging or Perceiving. The Myers-Briggs test takes about 30-45 minutes to complete. Therefore, this scale does not fit with the present research setup.

RIASEC

Holland's (1973) theory of personality is known as his theory of vocational interests because an individual's vocational interests reflect personality (Zhang, 2000). Holland has six personality types corresponding to six occupational environments: Realistic, Investigative, Artistic, Social, Enterprising and Conventional. The RIASEC model is more employee-driven, being better at predicting employment (de Fruyt and Mervielde, 1999). This is in sync with the theory that states that "people search for environments resembling their vocational personality profiles" (de Fruyt and Mervielde, 1999 : 702). RIASEC focuses on interests, whereas the Five factor Model focuses on traits. RIASEC is the recommended model for assessing personal and organizational characteristics. But the goal of this research is to study consumer behaviour intentions not an employer-employee setting.

Enneagram

The Enneagram is based on an ancient mystical philosophic approach to human development based on nine different patterns (Alonzo, 2000; 2001). These include the

Perfectionist, the Helper, the Achiever, the Individualist, the Observer, the Teamplayer, the Enthusiast, the Leader and the Peacemaker. There has been no academic research or testing of this tool and it has not been proven to be methodologically reliable or valid. It is mostly used in non-academic literature.

Hogan and Hogan (1992) Personality dimensions

Hogan and Hogan (1992) have three personality traits that relate to service orientation and they are Extraversion, Agreeableness and Adjustment. These dimensions mirror Goldberg's Big Five, where Adjustment is termed as Neurotic under Goldberg's dimensions. Hogan and Hogan's dimensions, like Goldberg's, are also based on traits and the underlying belief is that personality dimensions are abstractions of behaviour or dispositional forces that are related to various behaviours" (Hurley 1998 : 118).

APPENDIX C

COMPONENTS OF PERSONALITY MODELS

Components of Personality Models

Model	Personality Traits	Authors Use
Goldberg's (1990) Five Factor Model "Big Five"	-Extraversion -Agreeableness -Conscientiousness -Neuroticism -Openness to Experience	Judge and Cable (1997) Judge et al., (1999) de Fruyt and Mervielde (1999) Marks and Lutgendorf (1999) Saucier (1994)
Holland's RIASEC	-Realistic -Investigative -Artistic -Social -Enterprising -Conventional	de Fruyt and Mervielde (1999) Zhang (2000)
Myers-Briggs Type Indicator (MBTI)	-Extraversion/Introversion -Sensing/Intuition -Thinking/Feeling -Judging/Perceiving	Opt and Loffredo (2000) Bringhurst (2001)
Enneagram	-Perfectionist -Helper -Achiever -Individualist -Observer -Team player -Enthusiast -Leader -Peacemaker	Alonzo (2001) Alonzo (2000)
Hogan and Hogan (1992)	-Extraversion -Agreeableness -Adjustment	Hurley (1998)

APPENDIX D

INVITATION TO PARTICIPATE IN THE STUDY

INVITATION TO PARTICIPATE IN STUDY

We are professors at the **John Molson School of Business** and we are responsible for training and developing future managers. The **Shouldice Hospital** is considered to be one of the best managed institutions in the world. We think that it is important to know **how you the patient view your experience** at the Shouldice Hospital. Therefore, we would greatly appreciate your participation in this study.

Your individual information would be kept strictly confidential. It would not be made available to the Shouldice Hospital or to any other individual or groups. Your answers would only be known to us, the professors. However, **your privacy would be assured** since we, the professors, would only be able to identify your responses by your study number and not by your name. We will, of course, report the overall results of the study to the Shouldice Hospital.

Your **participation is entirely voluntary** and you are **free not to participate or to withdraw at any moment.**

If you agree to participate you will be asked to complete **three questionnaires**:

1. Now (5-10 minutes)
2. The day before going home (30 minutes)
3. One month later (15 minutes)

You would place each questionnaire in a sealed envelope that the Shouldice Hospital would forward directly to us, the professors.

Yours truly,

Ronald J. Ferguson, Ph.D.
Michele Paulin, Ph.D.
John Molson School of Business,
Concordia University
Montreal (Que.) Canada

Please, check one of the following and give this sheet to Admission.

_____ Yes, I would gladly participate in this study.

_____ Before accepting to participate, I wish to have further clarification.

_____ No, I do not wish to participate in this study.

APPENDIX E

QUESTIONNAIRE #1

QUESTIONNAIRE 1

Confidential

SECTION A

Please fill in the following information.

1. Male____ Female____

2. Working ____ Semi-Retired____ Retired____

3. a) For Ontario residents

   What is the approximate distance from your home to the Shouldice Hospital?

   Within 10 miles____ Between 10 and 25 miles____ Greater than 25 miles____

   b) For other Canadian residents

   In which province do you reside? _____

What was the main reason why you chose to have your hernia operation done at the Shouldice Hospital?

_____

SECTION B

1. How did you first learn about the Shouldice Hospital?

   Please circle the letter opposite the most appropriate answer.

   a) From a former patient of the Shouldice Hospital.

   b) From a friend, relative or colleague who was not a former patient of the Shouldice Hospital.

   c) From a doctor, nurse or other health professional.

   d) From the internet or the Shouldice Hospital website.

   e) From an article in a newspaper, magazine or journal.

SECTION C

1. Which one of the following statements best reflects how you intend to talk to relatives, friends and colleagues about your experience at the Shouldice Hospital?

   Please circle the letter opposite the most appropriate answer.

   a) **I definitely will not talk to them** about my experience at the Shouldice Hospital.

   b) **I probably will not make a point of telling them** about my experience at the Shouldice Hospital.

   c) **If asked I would tell them** about my experience at the Shouldice Hospital.

   d) **I will make a point of telling them** about my experience at the Shouldice Hospital.

   e) **I will urge them to tell others** about my experience at the Shouldice Hospital.

APPENDIX F

QUESTIONNAIRE #2

QUESTIONAIRE 2

Confidential

SECTION A - About Yourself

1. How would you describe yourself?

i) Describe yourself using the following list of words. Describe yourself as you are at the present time, not as you wish to be in the future! Also, describe yourself as you are generally and typically, as compared with other persons you know of the same sex and roughly the same age.

ii) Before each word in the list below, please write a number (from 1 to 5) indicating how accurately that word describes you.

(1) Very Inaccurate	(2) Moderately Inaccurate	(3) Neither Accurate nor Inaccurate	(4) Moderately Accurate	(5) Very Accurate

For example:
_5_ Hernia patient (yes, this would be very accurate)

___ Bashful	___ Energetic	___ Moody	___ Systematic
___ Bold	___ Envious	___ Organized	___ Talkative
___ Careless	___ Extraverted	___ Philosophical	___ Temperamental
___ Cold	___ Fretful	___ Practical	___ Touchy
___ Complex	___ Harsh	___ Quiet	___ Uncreative
___ Cooperative	___ Imaginative	___ Relaxed	___ Unenvious
___ Creative	___ Inefficient	___ Rude	___ Unintellectual
___ Deep	___ Intellectual	___ Shy	___ Unsympathetic
___ Disorganized	___ Jealous	___ Sloppy	___ Warm
___ Efficient	___ Kind	___ Sympathetic	___ Withdrawn

SECTION B - About Your Experience at the Shouldice Hospital

1. *The personnel* ***(all the employees at the hospital, regardless of their position (staff, managers, doctors, nurses etc.)***

Please **compare** your experience at the Shouldice Hospital **with the best experience you have ever had** elsewhere as a customer, client or patient.

Please circle the appropriate number:

☹ A lower number would indicate areas where the hospital personnel should strive to make improvements.

☺ A higher number would indicate that the hospital personnel succeeded in delighting you much more than did any other service experience you have ever had.

	I FEEL THAT THE PERSONNEL:	**Dissatisfied** ☹			**Satisfied**					**Delighted** ☺
a)	always acted with my best interests at heart	1	2	3	4	5	6	7	8	9	10
b)	treated me with personalized and special attention	1	2	3	4	5	6	7	8	9	10
c)	were prompt and efficient in serving me	1	2	3	4	5	6	7	8	9	10
d)	developed a sense of togetherness among patients and staff	1	2	3	4	5	6	7	8	9	10
e)	could solve problems to my utmost satisfaction	1	2	3	4	5	6	7	8	9	10
f)	would keep me informed of changes which might cause me discomfort or inconvenience	1	2	3	4	5	6	7	8	9	10
g)	were effective in helping me to achieve the purpose of my stay	1	2	3	4	5	6	7	8	9	10
h)	helped create extremely pleasurable experiences	1	2	3	4	5	6	7	8	9	10
i)	would take care of me with understanding and reassurance if anything went wrong	1	2	3	4	5	6	7	8	9	10
j)	were especially good at anticipating my needs and requests	1	2	3	4	5	6	7	8	9	10
k)	helped me to be able to return rapidly to my normal activities	1	2	3	4	5	6	7	8	9	10
l)	contributed greatly to my comfort and freedom from anxiety	1	2	3	4	5	6	7	8	9	10
m)	could be trusted completely	1	2	3	4	5	6	7	8	9	10
n)	would certainly be appreciated by my close friends and most esteemed colleagues	1	2	3	4	5	6	7	8	9	10
o)	contributed to the efficient use of my time	1	2	3	4	5	6	7	8	9	10
p)	contributed greatly to my relaxation, rest and recuperation	1	2	3	4	5	6	7	8	9	10
q)	treated me fairly at all times	1	2	3	4	5	6	7	8	9	10
r)	used just the right degree of taste and discretion	1	2	3	4	5	6	7	8	9	10

2. Your hernia operation?

1. **What was your level of discomfort during your operation?**

A great deal discomfort  **Very little discomfort** 

1 2 3 4 5 6 7 8 9 10

2. **What was your level of discomfort on the first day after operation?**

A great deal discomfort  **Very little discomfort** 

1 2 3 4 5 6 7 8 9 10

3. **What was your level of discomfort on the second day after operation?**

A great deal discomfort  **Very little discomfort** 

1 2 3 4 5 6 7 8 9 10

SECTION C

1. Which one of the following statements best reflects how you intend to talk to relatives, friends and colleagues about your experience at the Shouldice Hospital?

Please circle the letter opposite the most appropriate answer.

a) **I definitely will not talk to them** about my experience at the Shouldice Hospital.

b) **I probably will not make a point of telling them** about my experience at the Shouldice Hospital.

c) **If asked I would tell them** about my experience at the Shouldice Hospital.

d) **I will make a point of telling them** about my experience at the Shouldice Hospital.

e) **I will urge them to tell others** about my experience at the Shouldice Hospital.

APPENDIX G

QUESTIONNAIRE #3

QUESTIONAIRE 3

Confidential

SECTION A

1. What, if any, is your level of discomfort remaining after your hernia operation?

A great deal discomfort — **Very little discomfort**


1 2 3 4 5 6 7 8 9 10

NB: If you are now experiencing unusual discomfort, have you notified the hospital?

YES___ NO____

If NO, PLEASE NOTIFY THE SHOULDICE HOSPITAL (1-800-291-7750)

SECTION B

1. How satisfied are you with your overall experience at the Shouldice Hospital?

Not Satisfied — **Satisfied** — **Delighted**


1 2 3 4 5 6 7 8 9 10

2. How would you evaluate the overall quality of the services at the Shouldice Hospital?

Average Quality — **Good Quality** — **Extremely High Quality**


1 2 3 4 5 6 7 8 9 10

SECTION C

1. Which one of the following statements best reflects how you intend to talk to relatives, friends and colleagues about your experience at the Shouldice Hospital?

Please circle the letter opposite the most appropriate answer.

a) **I definitely will not talk to them** about my experience at the Shouldice Hospital.

b) **I probably will not make a point of telling them** about my experience at the Shouldice Hospital.

c) **If asked I would tell them** about my experience at the Shouldice Hospital.

d) **I will make a point of telling them** about my experience at the Shouldice Hospital.

e) **I will urge them to tell others** about my experience at the Shouldice Hospital.

APPENDIX H

CORRELATION MATRIX

CORRELATION MATRIX

	DISCSURG	DISC1DAY	DIS2DAY	DISC1MTH	SATISF	OVERQUAL	ADVOCA	EXTRO	AGREE	CONSCI	NEURO	OPENEXP	FUNCT
DISCSURG	1.00												
DISC1DAY	0.44	1.00											
DISC2DAY	0.42	0.71	1.00										
DISC1MTH	0.18	0.19	0.15	1.00									
SATISF	0.29	0.17	0.28	0.28	1.00								
OVERQUAL	0.30	0.17	0.28	0.28	0.79	1.00							
ADVOCA	0.19	0.27	0.26	0.12	0.33	0.35	1.00						
EXTRO	0.13	0.04	0.02	-0.06	-0.06	-0.11	0.05	1.00					
AGREE	0.10	0.07	0.08	0.09	0.19	0.15	0.22	0.20	1.00				
CONSCI	0.06	0.00	-0.03	0.10	0.07	0.03	0.08	0.12	0.15	1.00			
NEURO	0.19	0.14	0.10	0.16	0.12	0.15	0.03	0.05	0.22	0.06	1.00		
OPENEXP	-0.11	-0.06	0.00	-0.01	0.01	0.01	0.04	0.37	0.22	0.14	-0.04	1.00	
FUNQUAL	0.29	0.28	0.31	0.09	0.48	0.51	0.34	-0.10	0.25	0.11	0.21	0.04	1.00

LEGEND

Variable	Construct	Operationalization
DISCSURG	Technical quality	Discomfort levels during surgery
DISC1DAY	Technical quality	Discomfort levels 1 day after surgery
DISC2DAY	Technical quality	Discomfort levels 2 days after surgery
DISC1MTH	Technical quality	Discomfort levels 1 month after surgery
SATISF	Overall satisfaction	Satisfaction with the overall experience at the Shouldice Hospital
OVERQUAL	Overall quality	Overall quality of the services at the Shouldice Hospital
ADVOCA	Advocacy intentions	Intention to talk to relatives, friends and colleagues about the experience at the Shouldice Hospital
EXTRO	Extraversion	Five Factor Model of personality types
AGREE	Agreeableness	Five Factor Model of personality types
CONSCI	Conscientiousness	Five Factor Model of personality types
EMSTAB	Neuroticism	Five Factor Model of personality types
INTELO	Openness to experience	Five Factor Model of personality types
FUNQUAL	Functional quality	Service experience with personnel