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The relative importance of branding on patient choice of private hospital in South Africa

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The relative importance of branding on patient choice of private hospital in South Africa

Claire Ann Sim

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2012

ABSTRACT

The private healthcare group in South Africa is dominated by the three major hospital brands: Netcare, Mediclinic and Life healthcare. It is important therefore to understand the factors that affect patient choice of private hospital, and the relative importance of hospital branding on patient choice

There is limited research on the importance of branding on patient choice of private hospitals in South Africa. As such, the purpose of the research was to identify the factors affecting patient choice of private hospital in the South African private healthcare sector. In addition, the relative importance of branding on patient choice was investigated.

A survey questionnaire was designed and then analysed using quantitative research methodology. One hundred and eighty six respondents completed the questionnaire. Confirmatory factor analysis identified 5 factors affecting patient choice of private hospital. They included hospital branding, physician recommendation, staff attitude, functional decision criteria and quality of service and the available offering.

In addition, hospital branding came out as the factor with the highest eigen value and accounted for the majority of the variance explained by the variables.

Therefore, hospital managers should incorporate these factors into improving the service to their patients and should recognise the importance that branding plays within the private healthcare sector.

DECLARATION

I, *Claire Ann Sim*, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Claire Ann Sim

Signed at ……

On the …….. day of …… 2008

DEDICATION

This report is dedicated to my grandfather, Bobby King, Thank you for giving me a thirst for knowledge that will never end.

ACKNOWLEDGEMENTS

I would like to express my thanks to the following people:

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1 INTRODUCTION

1.1 Purpose of the study

The purpose of this research was to determine the factors that affect patient choice of hospital in the South African private hospital setting. The research wanted to determine the relative importance of hospital branding on patient's choice.

1.2 Context of the study

The South African private hospital sector is dominated by the three largest Private Hospital Groups: Netcare, Life Healthcare and Mediclinic. They control 77% of the private hospital beds in the country (McIntyre, 2010). There are 28,361 private hospital beds in 201 private hospitals in South Africa (McIntyre, 2010); in the public sector there are approximately 119 310 public hospital beds in 400 public hospitals (Henderson, 2008).

The population that is serviced by the private healthcare sector is said to be as high as 10 million (Henderson, 2008).

In South Africa, approximately 15% of the population belong to a medical aid. This portion makes use of the private hospital facilities, and at most another 20% of the population who do not belong to a medical aid will make use of outpatient facilities at private hospitals (McIntyre, 2010). Outpatient facilities include general practitioners, emergency rooms and retail pharmacies. The population that is covered by medical aid are in the richest socio-economic groups in the country. More than half of the richest 20% of the population are

covered, and 13% of the second richest are covered by medical aid (McIntyre, 2010). According to recent data approximately 8 million South Africans are covered by medical aid and these people with make use of the private hospitals (CMS, 2010).

The distribution of private hospitals in South Africa is distinctive. Gauteng has the highest number of hospital beds followed by the Western Cape; the lowest number of hospital beds is located in the Northern Cape (Matsebula and Willie, 2007). The distribution of private hospitals mirrors the distribution of medical aid beneficiaries, with the highest number found in Gauteng followed by the Western Cape (Matsebula and Willie, 2007).

The private hospital groups deliver a return on average capital of 5.7%, this is higher than the return on capital in developed countries of 5.4% (Henderson, 2008). Hospital Association of South Africa (HASA) estimates the annual turnover of private hospitals at R17.5bn (Henderson, 2008). The private health sector spends about R66bn servicing 8 million people; the remaining budget of R59bn is used to cater for the remaining population (Henderson, 2008).

When looking at medical aids and their distribution of expense, there has been an increase in the amount that medical aids are paying out to private hospitals. There has been an increase in the expenditure to private hospitals from 21.8% in 1992 to 35.3% in 2005 (McIntyre, 2010).

Prior research has identified factors that determine a patient's choice of hospital (Lane and Lindquist, 1988); however, when looking at a specific segment of the market and whether the same factors apply this has not been researched.

The private hospital groups have strong corporate branding. This is illustrated by Netcare being recognized as one of the top South African healthcare brands in the healthcare facilities section of Top Brands (Sunday Times/Markinor Annual Top Brands Survey, 2008) and Mediclinic has also recently launched a crisp new brand identity. An analysis of the

relative importance branding has on patient choice provides management with answers as to whether their branding efforts are effective and where they could potentially focus future efforts.

It has been shown that a positive hospital brand image increases a patient's revisit intention and patient loyalty (Wu, 2011). Therefore a positive hospital brand image is important for loyalty and revisit intention, but what makes the patient choose the hospital in the first instance?

The business gap is that private hospital groups have strong corporate brands (i.e. Netcare, Mediclinic and Life Healthcare) which helps the consumers identify the different brands, but does it make a difference when patients are deciding on which hospital to utilise? Would it be better to have patients identify with individual hospitals as centres of excellence or to change the corporate branding strategies to attract stakeholders?

1.3 Problem statement

1.3.1 *Main problem*

To identify the factors that influence a patient's choice of hospital, in the South African private hospital sector, and to analyse the relative importance of hospital branding on patient choice.

1.3.2 *Sub-problems*

The first sub-problem is to identify the factors that influence a patient's choice of private hospital in South Africa.

The second sub-problem is to analyse the relative importance of hospital branding on patient choice.

1.4 Significance of the study

The study fills a gap in that there is currently limited research in South Africa describing the factors that affect a patient's choice of hospital in the private hospital sector. Most of the research either seems to focus on factors influencing a patient's choice of hospital in general (Lane and Lindquist, 1988) or the factors that influence choice between private or public hospitals (Yeung, 2003; Alaba and Koch, 2007; Srivastava and Zhao, 2008). From a previous study, seven factors were identified that affect a patient's choice of hospital, namely care, staff, physical facilities, clientele, experience, convenience and the institution (Lane and Lindquist, 1988).

In South Africa the private hospitals are a concentrated industry and therefore are identified easily by their brands. The study identifies the relative importance the brand has on patient choice of hospital.

The study provides guidance to the managers of the private hospital groups as to the effectiveness of their branding, it also provides insight into what influences the patients'

choice. This will then allow them to focus their efforts on more effective branding that will contribute to the bottom line.

1.5 Delimitations of the study

The study focuses on patients who use private hospitals in South Africa namely Netcare, Mediclinic and Life Healthcare.

The study includes patients with medical aid schemes and those without.

The study includes patients who make use of all facilities available in private hospital settings; this includes emergency rooms and all other facilities.

The study does not include those patients brought into the emergency rooms of a hospital by ambulance.

1.6 Definition of terms

- Medical Schemes – This is a form of healthcare insurance where a monthly fee is paid. If a private hospital is used by the member, part or all of the cost will be paid by the medical scheme to which the person is a member. These include Discovery, Momentum, Liberty, etc

- Emergency Room – A hospital department providing immediate treatment for acute illness and trauma (MedicineNet.com)

- Elective – In medicine, elective means something that is chosen by the patient or the doctor that is not urgent (MedicineNet.com)

- Hospital Association of South Africa (HASA) – This is a regulatory body within South Africa and is the official representative of the private hospital sector within South Africa (Henderson, 2008).

1.7 Assumptions

The following assumptions have been made regarding the study:

1. The total number of respondents were sufficient to gain adequate data.

2. The respondents have used a private hospital facility before, either for emergencies or elective procedures. If they had not made use of a private hospital, their responses would be inaccurate.

3. Respondents' answers were conveyed truthfully and honestly. False data has a detrimental effect on the research study findings.

2 LITERATURE REVIEW

2.1 Introduction

This section contains a literature review on the key themes of relevance to the study. The first area is to identify the factors that influence a patient's choice of private hospital in South Africa. The section starts with an overview of consumer behaviour and what influences consumer purchasing decisions. Factors affecting patient choice of hospital will then be discussed followed by a discussion on branding and, more specifically branding within the South African private healthcare sector. The section concludes with an overview of the key learnings

2.2 Consumer behaviour

Consumer behaviour is defined as "the study of how individuals, groups and organisations select, buy, use, and dispose of goods, services, ideas, or experiences to satisfy their needs and wants" (Kotler and Keller, 2010: 190).

Below is a discussion of theories of consumer purchasing behaviour:

2.2.1 *Cultural, social and personal factors*

According to Kotler and Keller (2010), there are three factors that influence consumer behaviour. These include:

- Cultural Factors
- Social Factors
- Personal Factors

Cultural factors have been identified as having the most influence and are a fundamental determinant of a person's wants and needs (Kotler and Keller, 2009). Cultures are then further subdivided into subcultures including nationalities, religions and racial groups (Kotler and Keller, 2009).

Social factors include reference groups, family, social roles and statuses (Kotler and Keller, 2009). All of these factors affect consumer-buying behaviour.

Personal characteristics influence consumer-buying behaviour. These include factors such as age, occupation, personality, lifestyle and values (Kotler and Keller, 2009).

2.2.2 *Consumer choice factors*

Consumers make choices in various ways which may range from complicated decision-making processes to quick judgements (Hansen, 1969). Two sets of factors are commonly at work when consumers make decisions:

- Values, goals and motives are used to evaluate the alternatives

- Attitudes about the alternatives are evaluated and these then relate back to the consumers' values.

(Hansen, 1969).

When talking about consumers' values it is important to note that in any given situation only a few of these values are important because consumers can only handle a few factors at a time (Hansen, 1969). The values that are found to be important depend on the complexity of the situation and the extent of consumer involvement (Hansen, 1969). It has been shown that given the values that are important, the consumer choice depends on two independent factors (Hansen, 1969). These two factors are 'value importance' and 'perceived instrumentality' (Hansen, 1969). Value importance is the extent to which concepts affect decisions; and perceived instrumentality is the extent to which the alternative favours the consumers' values (Hansen, 1969).

2.2.3 *The stimulus-response model*

Psychological processes are involved in consumer behaviour and their choice of goods or services (Kotler and Keller, 2009). The starting point for understanding this psychological process is the stimulus-response model. This can be explained as marketing and environmental stimuli entering the consumer consciousness, leading to a set of psychological processes that combine with consumer characteristics, resulting in a decision process and purchasing decisions (Kotler and Keller, 2009).

According to Kotler and Keller (2010) there are four psychological processes that influence the purchasing decision:

- Motivation
- Perception
- Learning
- Memory.

Motivation

Consumers have needs that are divided into biological (e.g. thirst and hunger) and psychological needs (e.g. need for recognition, esteem or belonging). Needs become motivations when they reach significant levels that drive consumers to act (Kotler and Keller, 2009). Maslow's hierarchy of needs is an example of a theory of motivation; it demonstrates that human needs are arranged in an order from most to least important (Kotler and Keller, 2009).

Perception

How a motivated consumer then acts depends on how the situation is perceived. Consumers have different perceptions of a situation based on three perceptual processes: selective attention, selective distortion and selective retention (Kotler and Keller, 2009). Selective attention is how consumers allocate attention to some stimuli and screen out others; selective distortion is how consumers distort information so that it fits with their preconceived beliefs and expectations; and selective retention refers to that fact that consumers retain information that supports their beliefs and attitudes (Kotler and Keller, 2009).

Learning and Memory

Learning induces changes in behaviour that are directly linked to consumers past experiences. All of this information and previous experiences end up in long-term memory (Kotler and Keller, 2009). All of these factors then work together to effect consumer behaviour and the purchasing decisions (Kotler and Keller, 2009).

2.2.4 *The five-stage buying model*

The five-stage buying model is one theory of how consumers make purchasing decisions; it uses the psychological processes to identify the steps consumers go through when making a purchase decision (Kotler and Keller, 2009).

According to Kotler and Keller (2010) the consumer passes through 5 stages:

- Problem recognition
- Information search
- Evaluation of alternatives
- Purchase decision
- Post-purchase behaviour.

Consumers do not necessarily pass through these stages in order (Kotler and Keller, 2009).

- **Problem Recognition**

Consumers identify a need that has been triggered either by an internal stimulus, e.g. thirst, hunger, or an external stimulus e.g. friends or family (Kotler and Keller, 2009).

- **Information Search**

This process is where consumers search for information about a product or service. The level of involvement in the search can either be in the form of heightened attention or can involve an active information search (Kotler and Keller, 2009).

- **Evaluation of Alternatives**

The consumer evaluation process involves three concepts. The first concept is the need the consumer is trying to satisfy, the second involves the consumer looking for certain benefits from the product or service, and the last involves the consumer seeing each product or service as having a set of attributes with varying abilities to deliver the benefits to satisfy the underlying need (Kotler and Keller, 2009). Consumers beliefs and attitudes towards products and services influence how they evaluate the alternatives (Kotler and Keller, 2009).

- **Purchase Decision**

The consumer at this stage is now intending to purchase, however, this is influenced by both the attitude of others and unanticipated situational factors and therefore not all purchase intentions will result in a purchase decision (Kotler and Keller, 2009). Perceived risk can also influence whether the product or service is purchased. Perceived risk varies with price, uncertainty and consumer self-confidence (Kotler and Keller, 2009).

- **Post-purchase Behaviour**

This is the point at which the consumer's decision is reinforced either positively or negatively. Post-purchase satisfaction occurs when there is an alignment between expectations and perceived performance. If the consumer is satisfied then the product or service will be purchased in the future (Kotler and Keller, 2009).

2.2.5 *Other theories of consumer-purchasing behaviour*

a. *Level of consumer involvement*

Consumer involvement is the level of engagement and active processing the consumer actively participates in response to a marketing stimulus (Kotler and Keller, 2009).

- Elaboration likelihood model

This refers to the fact that consumers make evaluations in both high and low-involvement situations (Kotler and Keller, 2009)

- Low-involvement marketing strategies

There is normally low-involvement of consumers with low-cost, frequently purchased products (Kotler and Keller, 2009). Strategies to increase the level of consumer involvement in these cases include attaching the product or service to an issue (e.g. cavities), linking the product or service to include a personal issue, design advertising around the product or service that triggers strong emotions or the adding of an important feature to the product or service (Kotler and Keller, 2009)

- Variety seeking buying behaviour

Consumers switch brands as a way of seeking variety, particularly with low involvement products or services. This switch is not due to dissatisfaction with the product or service (Kotler and Keller, 2009).

b. *Decision Heuristics and Biases*

Consumers do not always make decisions in a deliberate or rational manner (Kotler and Keller, 2009).

- The availability heuristics

Consumers make predictions about whether to purchase a product or service based on the ease with which a previous outcome comes to mind (Kotler and Keller, 2009)

- The representativeness heuristic

Consumers make predictions about whether to purchase a product or service based on how representative the outcome is when compared with other examples (Kotler and Keller, 2009)

- The anchoring and adjustment heuristic

Consumers make an initial judgement on a product or service and then adjust their judgement according to additional information they receive (Kotler and Keller, 2009).

c. *Mental Accounting*

Consumers make choices based on estimated financial outcomes that they arrive at by categorising items of value with no apparent logical basis for this categorisation (Kotler and Keller, 2009).

Mental accounting is based on four core principles:

- Consumers segregate gains

This is where the sum of the parts is greater than the whole. The consumer views individual positive characteristics as separate, and therefore evaluates each part seperately (Kotler and Keller, 2009)

- Consumers integrate losses

When purchasing something expensive, consumers tend to view additional expenditures favourably as they integrate the losses (Kotler and Keller, 2009)

- Consumers integrate smaller losses with larger gains

It is more favourable for consumers to pay small monthly sums of money instead of one large lump sum even though the amount over a certain time frame is the same (Kotler and Keller, 2009)

- Consumers segregate small gains from large losses

When purchasing an expensive item, consumers view small discounts with favour (Kotler and Keller, 2009).

2.3 Branding and the South African private healthcare sector

A brand is any factor that distinguishes the goods or services of one company from another, and allows differentiation from competitors (Kotler and Keller, 2009). The added value that the brand endows on goods or services is called brand equity. Some of the advantages that strong brands afford companies are greater loyalty, larger margins and more inelastic consumer responses to price increases (Kotler and Keller, 2009).

The private healthcare sector in South Africa has undergone some radical changes since the 1980's. In the late 1980's, no private hospital groups existed at a national level (Matsebula and Willie, 2007). During the 1990's there was a new trend as the private hospital sector consolidated through mergers and acquisitions. By 1999, the three major hospital groups controlled most of the private hospital beds in South Africa (Matsebula and Willie, 2007). Today the private hospital groups in South Africa control approximately 80% of the private hospital beds (Matsebula and Willie, 2007). This has resulted in a strong identity of the corporate brands (Netcare, Mediclinic and Life Healthcare) in the mind of the consumer.

2.4 Factors affecting patient choice of hospital.

Understanding the reasons why patients make their decisions when choosing hospitals may explain how hospitals can compete for patients, and may increase the service these hospitals are able to provide, allowing for increased profitability (Roh and Lee, 2005).

Lane and Lindquist (1988) identified 14 factors that affect a patient's choice of hospital. These include medical staff quality, emergency care quality, nursing care quality, complete service available, doctor recommendations, modern equipment, courteous employees,

good surroundings, previous use of the hospital, cost, family recommendations, proximity to home, private rooms and friend recommendation (Lane and Lindquist, 1988).

These 14 factors have been consolidated into seven general factors (Lane and Lindquist, 1988). Referring to Table 1, these factors are care, staff, physical facilities, clientele, experience, convenience and the institution (Lane and Lindquist, 1988). The most important factor identified by patients was care and this included the overall quality, completeness of the service and the cost of the service (Lane and Lindquist, 1988).

Table 1: Factors affecting patient choice of hospital

The factor affecting choice	The composition of each factor
Care	• Quality of care. • The completeness of the service. • Cost.
Staff	• Quality. • Attitudes or courtesy of staff.
Physical facilities	• Equipment and available technology. • Cleanliness. • Surroundings or environment.
Clientele	• Feelings towards hospital staff. • Desire for personal acceptance or attention. • Access to facility, restricted by health insurance.
Experience	• Prior use of facilities. • Recommendations from physician, family or friends.
Convenience	• Convenient location.
Institution	• Reputation of institution • Conservative or modern institution.

(Lane and Lindquist, 1988).

The factors that affect choice of hospital can also depend on the type of service the patients require (Akinci, Esatoğlu, Tengilimoglu and Parsons, 2004). The type of service and the factors that influence choice are listed in Table 2.

Table 2: The type of service and the factors affecting decision-making

Type of service	Factors
General Care services.	• Convenience. • Physician recommendation. • Past experience. • Familiarity with hospital personnel. • Quality of facilities.
Specialised care services.	• Availability of specialists. • Physician recommendation. • Past experience. • Availability of best technology. • Proximity to residence.
Emergency care services.	• Proximity to residence. • Past experience. • Physician recommendation. • Familiarity with personnel. • Availability of facilities.

(Akinci et al., 2004).

Another study divided the patients into ‘in-patient (IPD) departments’, ‘out-patient (OPD) department’ and ‘patients visiting for health check-ups’ and identified the following factors as having an influence on patient choice of hospital (Bhangale, 2011)

- In-patient department patients

The most influencing factor here was found to be multi-speciality, followed by recommendation of doctor and word-of-mouth (Bhangale, 2011). Location was found to be the least influencing factor in these patients (Bhangale, 2011).

- Out-patient department patients

Multi-speciality is the most influencing factor in patients aged 25-65 years, also in the population aged 25-45 years waiting time is an important factor. In the population group aged above 65 years the most influencing factor is cost (Bhangale, 2011).

- Health check-up patients

The most important factor in the population aged 25-45 years is cost, and in those aged above 45 years the most important factor was found to be multi-speciality (Bhangale, 2011).

It was also found that marketing of hospitals to general practitioners was important as the recommendations made by family physicians was found to be an important factor in patients decision-making process (Bhangale, 2011).

Table 3 outlines the factors affecting choice of hospital depending on the service they require, whether it is an in-patient, an out-patient or health check-up patients.

Table 3 Factors affecting choice of hospital depending on service required

Type of service	Factors
In-patient department patients	• Multispecialty • Physician recommendation
Out-patient department patients	• Multispecialty (25-65 years) • Waiting time (25-45 years) • Cost (>65 years)
Health check-up patients	• Cost (25-45 years) • Multispecialty (> 45 years).

(Bhangale, 2011).

The perceived quality of healthcare services has been shown to have a greater influence on patient behaviours (which include satisfaction referral and usage) compared to other factors such as access and cost (Suki, Lian and Suki, 2009). Measuring the quality of medical services has a number of benefits as it allows patients to make informed decisions about provider selection; it also helps the healthcare providers as they can identify areas that need improvement (Suki et al., 2009). Medical care quality indicators include the aesthetics of the environment, staff appearance, relationships and the timeliness of the service (Suki et al., 2009). This is important as profitability is impacted on by improving quality and decreasing the amount of time spent on dealing with complaints (Suki et al., 2009).

A study conducted in Turkey on the factors affecting patient choice of hospital showed that the following factors were important in patient choice: the proximity to the hospital, the technology available and access to health insurance (Akinci et al., 2004).

A study done by Roh and Lee (2005) identified three factors as influencing patient choice of hospital when choosing a facility based on hospital ownership:

Hospital characteristics

The following factors under hospital characteristics were identified as being important:

- Ownership status: This refers to whether the hospital is either for-profit, non-profit or publicly owned

- Hospital size: The number of beds the hospital has positively affects a patient's choice of hospital

- Number of provided healthcare services: This is the number of special units or facilities available at each hospital. This also positively influences patient choice of facility.

- Proximity to patients residence: This was measured in terms of the time and distance it took to get to the facility. It was found that there was a trade-off between distance and time in choice of facility. The perceived benefit of choosing a hospital further away was measured against the time and cost of getting there.

Patient conditions.

The following factors regarding the type of condition the patient had, were found to influence patient choice of facility:

- Severity of the condition with which the patient has been diagnosed

- The length of the hospital stay

- Total cost of the hospital admission.

Individual Characteristics

The following individual characteristics were found to be important in patient choice of facility:

- Age (the older patients tend to use facilities that are closer to their residence).
- Gender
- Race

Table 4 shows a consolidated version of the factors affecting patient choice of hospital from the literature review above.

Table 4 Consolidated table of factors affecting patient choice

Factors	Composition of each from the literature review
Care	• Quality of care • Completeness of service • Cost .
Staff	• Quality • Attitude of staff .
Physical facilities	• Equipment and available technology • Cleanliness • Surroundings and environment.

Clientele	• Feelings towards hospital staff • Desire for acceptance • Access to facility restricted by health insurance.
Experience	• Prior use of facilities • Recommendations from family, friends or physicians • Severity of patient condition • Length of hospital stay.
Convenience	• Convenient location • Proximity to residence.
Institutional	• Reputation of institution • Conservative or modern institution • Ownership status • Hospital size, number of beds • Number of healthcare services available.

(Lane and Lindquist, 1988; Akinci et al., 2004; Roh and Lee, 2005; Bhangale, 2011).

2.5 The marketing of healthcare

There is increasing competition within the healthcare market and this market is therefore undergoing a transition from a service providers dominance to a service seekers dominance (Bhangale, 2011). According to Bhangale 2011, the key elements in the marketing of healthcare are:

- Knowledge management

Consumers want to be served according to their individual needs and therefore companies can no longer make generalised assumptions as to the needs of consumers, but rather have to have a tailored service according to consumers' preferences. It is therefore necessary for companies to gather consumer data, extract the information in this data, and provide a customised service to consumers (Bhangale, 2011).

- Customer relationship management

This is an important element for consumer retention and has the competitive advantage of staying in regular touch with consumers.

- Brand image building

Due to the increasing competition within the healthcare market, hospitals can no longer rely on 'word-of-mouth' promotion to attract consumers. Hospital managers are therefore focusing on creating the brand image of their facilities and increasing the hospitals' visibility (Bhangale, 2011).

- Internal marketing: key element of marketing.

It is important for hospitals to make themselves 'market worthy' before starting to do external marketing. In this way there is an alignment between the service that is promised and the service that is provided, as the hospital staff are on board (Bhangale, 2011).

2.6 Trust and choice of hospital

The patient's perceived experience is influenced by trust (Walker, Brooksby, Mcinerny and Taylor, 1998). Three factors have been identified that result in an increased level of trust and confidence. These include being valued as an individual, feeling informed and feeling at home (Walker et al., 1998). When these three factors are included, the perceived experience is positively influenced by an increase in confidence, faith and trust (Walker et al., 1998).

Past experience is a major factor in the patient's choice of hospital (Leister and Stausberg, 2007). This includes personal experiences and experiences based on observation only (e.g. the consumer was a visitor at the hospital). The perception of the past experience is determined by the difference between expectation and perceived experience (Batchelor, Owens, Read and Bloor, 1994).

2.7 Factors affecting patient satisfaction.

Patient satisfaction is the difference between expectation and the perceived experience (Batchelor et al., 1994). There are difficulties associated with determining the factors that affect patient satisfaction. These difficulties occur due to conceptualisation, as patient satisfaction is multidimensional (Batchelor et al., 1994). Patient satisfaction may be largely determined by six underlying factors, including medical care and information, physical facilities, non-tangible environment, quality of food, nursing care and visiting arrangements (Batchelor et al., 1994). Another important factor affecting patient satisfaction to take into consideration is the outcome. This does not apply to standard principles of consumer satisfaction (Batchelor et al., 1994).

Patient satisfaction is influenced by a few variables, which need to be considered when looking at the factors underlying patient satisfaction. These include past experiences, the lack of knowledge of alternatives and the level of expectation. This is influenced either by a sense of empowerment or a sense of powerlessness (Batchelor et al., 1994).

Prior satisfaction with the healthcare system has a significant impact on patient satisfaction (John, 1992). An important finding is that almost all aspects of a patient's experience are influenced significantly by a patient's prior impression of the hospital (John, 1992). These include both personal experiences with the hospital and vicariously through a friend or visitor of a patient (John, 1992).

Another area that is considered important in patient satisfaction is the physician-patient relationship (Walker, Arnold, Miller-Day and Webb, 2002). This is based on a two-way communication between the patient and physician and has a significant impact on patient perception of care (Walker et al., 2002). The physician-patient relationship is complex as the presenting symptom is normally of a personal nature and must be dealt with in a professional manner. Trust in the physician-patient interaction promotes an increased amount of information exchange, resulting in a greater understanding of the needs of both parties (Walker et al., 2002). A better understanding of patients' needs results in improved outcomes resulting in an increase in patient satisfaction (Walker et al., 2002).

Table 5 is a summary of the factors and influencing variables on patient satisfaction.

Table 5 The factors and influencing variables on patient satisfaction

Factors	Influencing variables
• Medical care and information • Physical facilities • Non-tangible environment • Quality of food	• Past experience • Lack of knowledge of alternatives • Level of expectation (Batchelor et al., 1994) • Prior satisfaction

• Nursing care • Visiting arrangements. (Batchelor et al., 1994).	(John, 1992) • Physician-patient relationship (Walker et al., 2002).

2.8 Branding and the choice of hospital.

A brand is defined as any name, term, sign, symbol, design or slogan that allows consumers to distinguish between organisations' products and services (Kotler and Keller, 2009). Branding endows products or services with the power of the brand (Kotler and Keller, 2009). This allows consumers to organise their knowledge about the product or service, clarifiying their decision-making, providing value to the organisation (Kotler and Keller, 2009). Branding increases value to the firm and results in an increase of profits. It is therefore an area that is considered important in business and marketing.

It has been shown from a previous study that hospitals profit from successful public relations work (Leister and Strausberg 2007). The focus of hospitals' management should be centered around the quality of the hospital experience. This would include the experience of the patient's and visitors. It has been shown that superior quality experiences improve the hospitals' reputation and therefore patient return to that facility (Leister and Strausberg 2007).

Another study showed that image and reputation of the hospital played an important role in choice of hospital facility (Akinci et al., 2004). An area that must be considered when dealing with medical facilities is that while the image is important, this image must be aligned with the ability of the organisation, otherwise the perceived positive image has no effect (Akinci et al., 2004).

There has been limited prior research on the effects of hospital branding on a patient's choice of facility. There is also limited research on the influence branding has on a patient's choice, and the effect branding has on the hospital groups in South Africa.

The three hospital groups Netcare, Mediclinic and Life Healthcare all represent strong corporate brands. The academic literature tends to focus around image and reputation of the hospital being an important choice determinant, but there is no specific reference to branding. An important factor to consider is that the image and reputation of an organisation are actually linked to the organisations branding (Klopper and North, 2011). The components of an organisation's reputation are corporate branding, corporate image and corporate identity. These are all interrelated concepts (Klopper and North, 2011).

2.8.1 *Corporate branding, corporate identity and reputation.*

Corporate branding is a manifestation of the features that allow consumers to distinguish an organisation from its competitors, and provides credibility and trustworthiness to organisations (Klopper and North, 2011). According to Klopper and North, (2011) it is a reflection of the organisations ability to:

- Satisfy consumer needs
- Deliver a consistent level of service
- Provide a certain quality of service at a reasonable price
- Decrease the risk associated with consumer choice.

Corporate branding is beneficial to organisations as it has the ability to decrease costs, give consumers a sense of community, create common ground and to provide a seal of approval that is then attributed to all the products or services provided by the organisation (Klopper and North, 2011). Corporate branding is a source of competitive advantage and companies

with strong corporate brands are able to better withstand anti-branding attacks (Siso, Bick and Abratt, 2009).

According to a study by Siso et al., (2009) there are certain factors that are essential for the successful management of corporate branding; these have been identified as:

- Top management involvement
- An adoption of a multidisciplinary approach to corporate brand management
- Alignment of the organisation's vision, culture and image. All stakeholders must be involved
- Employees must play a central role
- Consumer interaction and involvement in corporate branding
- Building long-term multiple stakeholder relationships
- Constant corporate communications with a consistent and congruent delivery to all stakeholders
- Continuous monitoring of corporate branding for relevance and distinctiveness.

The degree to which the corporate brand is seen as authentic and credible is dependant on employee behaviour as what the corporate brand represents is based on the stakeholder's perception of employee behaviour (Siso et al., 2009).

Corporate identity is the expression of the organisation; it is the communication of core values, philosophy and strategy through the delivery of products or services (Klopper and North, 2011). The values of an organisation are vitally important as they reflect the strategy of an organisation and what the organisation stands for. The values are the glue that holds corporate branding together (Siso et al., 2009). Corporate identity is interpreted by stakeholders and they use this to form an opinion of the organisation's image and reputation (Klopper and North, 2011).

All organisations have a reputation and need to build it as a good reputation attracts stakeholders (Klopper and North, 2011). The difference between corporate image and reputation is defined as follows: corporate image is the immediate impression of an organisation; and reputation is the overall assessment of the organisation's ability to meet a set of predefined criteria (Klopper and North, 2011). An organisation's image is influenced by communication, external stakeholders, environment, trends and competition (Siso et al., 2009). Corporate reputation helps in determining the success of an organisation as a good reputation can result in increased sales and profits for an organisation, this is termed reputational capital (Klopper and North, 2011).

2.8.2 *Branding in the South African private healthcare sector.*

In terms of hospital branding, as stated previously, there is limited research around whether hospital branding has an affect on choice of hospital. The reputation, image and the perceived quality of care (Akinci et al., 2004; Leister and Stausberg, 2007) all play an important role in the choice of hospital. The reputation and image of a hospital can be affected by the perception of the hospital brand.

The three hospital groups have a very strong presence in the healthcare sector in South Africa, specifically the private healthcare sector (Matsebula and Willie, 2007). The three private hospital groups have a strong brand identity in South Africa. Mediclinic recently

launched a new brand identity, and Netcare was recognised in 2008 by the Sunday Times/Markinor annual Top Brands Survey. Life Healthcare showed an increase in revenue of 12.7% in 2011 and has continued to expand its facilities through acquisition (Fin24, 2011).

2.9 Conclusion of literature review

The private healthcare sector in South Africa is consolidated with the three major hospital groups, Netcare, Mediclinic and Life Healthcare, controlling approximately 80% of the private healthcare market. These brands are very familiar to the South African public.

The literature review identifies various factors that affect patient choice of hospital, however, most of the research was conducted in developed countries. The factors that have been identified in the literature include care, staff, physical facilities, clientele, experience, convenience and the institution.

The patient experience is a major factor in determining which hospital facility will be chosen. The difference between the patients experience and their perceived experience determines the level of patient satisfaction. Patient satisfaction is difficult to measure, however, the most important factors that have been identified are past experiences, outcome and physician-patient relationship. Patient satisfaction is influenced by past experience and this can either be as a result of direct experience or as a third party.

Branding is a powerful tool used by many companies; it adds value by increasing loyalty and therefore contributes to the bottom line. Patient choice of hospital is affected by image and reputation; branding has an influence on both of these. The impact that branding has on the healthcare sector has not been established in the South African private healthcare

sector. Whether branding has any impact on patient choice of hospital has not been conclusively resolved in the literature.

This leads to the following **research proposition:**

2.9.1 *Research proposition 1:*

Factors that affect patient choice of private hospital in South Africa include:

- Convenience
- Physician recommendation of the facility
- Reputation and image of facility
- Access to medical aid.
- Past experience

These factors have been identified from the literature review.

Convenience would include the proximity of the facility to place of residence (Lane and Lindquist, 1988).

Physician recommendation has been identified as an important factor as there is a physician-patient relationship with an established level of trust that influences patient choice of facility (Lane and Lindquist, 1988).

Reputation and image of facility could include factors such as available technology and quality of the facility (Akinci et al., 2004; Leister and Stausberg, 2007).

Access to medical aid is cited as an important factor as it may result in limitations on the facilities that patients have access to, therefore their decision making is restricted (Lane and Lindquist, 1988; Akinci et al., 2004; Roh and Lee, 2005).

Past experience is an important factor as it influences patient choice of facility, through its influence on patient satisfaction (Lane and Lindquist, 1988; John, 1992; Batchelor et al., 1994; Leister and Stausberg, 2007). The following factors would be considered as part of past experience: outcome (Walker et al., 2002), staff, care and the available technology (Lane and Lindquist, 1988; Akinci et al., 2004).

2.9.2 *Research proposition 2:*

Hospital branding is an important consideration in patient choice of private hospital.

Branding allows consumers to organise their knowledge about organisations and therefore clarifies their decision-making (Kotler and Keller, 2009). Image and reputation play an important role in hospital choice (Akinci et al., 2004), and superior quality experiences improve hospital reputation and subsequent return to that facility (Leister and Stausberg, 2007). The image and reputation of an organisation are linked to the organisations branding

(Klopper and North, 2011). The three hospital groups have strong organisational branding in the private healthcare sector in South Africa (Matsebula and Willie, 2007).

3 RESEARCH METHODOLOGY

This section outlines the methodology used to conduct this research. The literature around quantitative research is discussed, followed by a review of the research design and research instrument that is used. Issues around data collection and the analysis will be provided, followed by a discussion on validity and reliability of this study.

3.1 Research Methodology

This study used quantitative methodology to give data to provide answers to the research propositions. Definitions of quantitative research will follow as well as a discussion on its appropriateness for this study.

Quantitative research employs empirical methods and empirical statements in order to answer social research questions (Cohen and Manion, 1980). An empirical statement is a descriptive statement about what is actually happening in the world as opposed to what is thought to be happening (Cohen and Manion, 1980).

Another definition is that quantitative research attempts to explain phenomena, by using numerical data that is then analysed using mathematical methods, such as statistics (Creswell, 1994).

A more detailed definition shows how quantitative research applies specifically to this research. Quantitative research is a formal, systematic and objective approach that uses numerical data in order to obtain information about the world (Burns and Grove, 2005). It

can therefore be used to describe variables, examine the relationships between sets of variables and can also determine the cause and effect relationships between variables (Burns and Grove, 2005).

This methodology is appropriate for this research as it is trying to determine factors that patients use to choose a hospital facility. It is trying to describe variables in the decision making process (Burns and Grove, 2005). The research is also attempting to determine whether branding has a significant influence on choice of hospital and therefore tries to determine relationships among variables (Burns and Grove, 2005).

The data was collected through a survey, using a structured questionnaire, and then subsequent to this used a statistical program ,SAS, in order to analyse the data (Cohen and Manion, 1980; Creswell, 1994). A survey can be defined as a set of questions that are used to collect data that will be used to analyse a particular area of interest (Merriam-Webster, 2011).

This research used a set of questions in order to determine the factors affecting patient choice of hospital and thus survey research with a quantitative methodology was the most appropriate.

3.2 Research Design

The research design was in the form of descriptive quantitative research. This type of research involves either the identification of the characteristics of an observed phenomenon or the exploration of the possible correlations amongst two or more phenomena (Leedy and Ormrod, 2010). This type of research is relevant in this study as it identified the factors affecting patient choice of hospital, and involved the identification of the characteristics of an observed phenomenon.

Before the survey was conducted a small qualitative questionnaire was handed out to five respondents who utilised private healthcare, to determine the factors they found important when choosing a facility. This was to assess whether the factors presented in the research proposition were the most relevant.

The type of descriptive quantitative research that was used in this study is survey research. This is defined as the acquisition of information from a group of people by asking them a series of questions and then tabulating their answers (Leedy and Ormrod, 2010). Survey research can be in the form of a face-to-face interview, telephone interview or written questionnaire (Leedy and Ormrod, 2010).

The advantage of survey research is that it captures a single moment in time and then that data is extrapolated over a longer time period, allowing data to be generalised (Leedy and Ormrod, 2010).

The disadvantages of survey research according to Leedy and Ormrod (2010) are:

- Respondents tend to answer what they believe to be true

- Respondents' memories may be distortions of reality. Their memories may be as a result of perception of the reality and therefore not reflect the true reality

- Respondents may not have thought about an issue until the question was proposed by the researcher, therefore their attitudes may be constructed at that point in time

- Some respondents may intentionally misrepresent the facts to gain favour with the researcher.

The advantages and disadvantages of this research were kept in mind while conducting the study.

This study conducted the research in the form of a questionnaire. The advantages of a questionnaire are that the cost is lower and it can be sent to a large number of people who could be a great distance away; this is advantageous as the responses are anonymous and therefore answers may be more truthful (Leedy and Ormrod, 2010).

The disadvantages of questionnaires is that there may be a low return rate, the respondents who return the questionnaire may not be representative of the sample originally selected and it reflects the reading and writing skills of respondents (Leedy and Ormrod, 2010).

The questionnaire that was used in this study used a rating scale. A rating scale is used when researchers want to evaluate a behaviour or an attitude on a continuum (Leedy and Ormrod, 2010). This study is attempting to determine the behaviour of individuals in how they choose a private hospital, and the effect branding has on that behaviour. Therefore this method was appropriate.

3.3 Population and sample

3.3.1 *Population*

The population includes all patients that make use of private hospitals in the Gauteng area.

3.3.2 *Sample and sampling method*

The sample was selected on a convenience basis with a target of 200 respondents. This was determined by taking the number of statements from the questionnaire and multiplying it by four or five. The use of confirmatory factor analysis requires approximately 200 respondents for a standard model (DeCoster, 1998).

3.4 The research instrument

The research instrument that was used was a survey questionnaire, using a set of 20 questions with underlying constructs found in the literature review. It used a set of questions using a Likert scale that were rated 1-5. The Likert scale is used in questionnaires to obtain respondents agreement or disagreement with a set of statements (Bertram, 2007). This was used to determine which factors were important when determining which hospital patient's select.

The advantage of using a Likert scale is they are easy to understand and complete, and they are simple to construct (Bertram, 2007). The disadvantages are that respondents can have a central tendency bias, acquiescence bias and social desirability bias (Bertram, 2007).

3.5 Procedure for data collection

Preceeding the survey a qualitative questionnaire consisting of five respondents and questions around the factors was completed in order to assess whether the factors outlined in proposition 1 were the most relevant.

The survey was handed out using a few general practitioner rooms and emergency rooms throughout Gauteng. Twenty surveys were done per day until the sample size that was required was reached. The respondents were in the waiting rooms of either the GP rooms or the emergency rooms and therefore had time to complete the survey. The respondents were required to have had previously made use of a private hospital in order to be included in the survey. Confidentiality was ensured, as it was not necessary to know the details of the respondents. A total of 186 quesstionaires were completed.

3.6 Data analysis and interpretation

The research design was in the form of factor analysis the statistical program that was used for this factor analysis was SAS. Factor analysis is a collection of methods that examine how underlying constructs influence the responses of a set of measured variables (DeCoster, 1998). The research design specifically used confirmatory factor analysis; the objective of confirmatory factor analysis is to determine the ability of a predefined model to fit with an observed set of data (DeCoster, 1998). In this research study we were trying to determine which factors influence a patient's choice of hospital which would be the measured variable. The effect that branding has on the choice would be determining the influence of this variable on the observed measure.

It was first proposed by Kaiser in 1960 that factors with eigen values of greater than 1 are to be retained as these are the factors that are considered significant (MacDonald, 2005). A graphical representation of eigen values is referred to as a scree test, this was first proposed by Cattell in1966 (MacDonald, 2005). This study used factors that had eigen values of greater than 1, and identified the statements that loaded onto these factors. The data was then analysed and conclusions were drawn.

The advantages of quantitative research as it applies to this research, is that it allows for a broader study as a larger number of subjects were used and this results in the ability to generalise the results (O'Neill, 2008). A quantitative methodology has the advantage that the research can be replicated and therefore the results can be compared with similar studies (Kruger, 2003). This is particularly useful in this research as the results are then compared with developed countries.

The disadvantage of quantitative research is it provides numerical descriptions of data and therefore may be limited in that it does not give an explanatory account of human perception (O'Neill, 2008). In this study, this may have been limiting as the reasons various factors are important to people may be vastly different and this will not be demonstrated. Another disadvantage as it pertains to this research is that a standard set of questions developed by the researcher can cause structural bias and this will result in a false representation where the views are that of the researcher and not the subject (O'Neill, 2008).

3.7 Limitations of the study

The structure of the survey may result in bias due to the Likert scale, as the options may not have been sufficient to reflect the true feelings of some respondents. There may have been a resistance to answer the survey as patient's were ill and therefore not want to

participate. Every effort was made to ensure the survey was as convenient and as unobtrusive as possible.

The lack of qualitative data resulted in no explanation as to why certain factors were chosen and therefore the perception amongst respondents may differ. These findings may be difficult to interpret.

3.8 Validity and reliability

3.8.1 *External validity*

External validity is the confidence one has in generalising the results so that they can be extrapolated to other circumstances (Altermatt, 2010). The external validity needs to apply across people, situation and time (Altermatt, 2010). With regards to this study, the sample size reflected the population that utilised private hospitals using the theory to determine sample size. An area that was addressed was time, as a number of the studies done on factors affecting patient choice were before the technology era, and therefore factors may be different compared to those from an earlier time.

The developing market and the private hospitals will derive value from this research, especially those sectors where private hospitals are consolidated and branding is strong.

3.8.2 *Internal validity*

Internal validity ensures the data collection process is uniform throughout. The internal validity determines whether what is being measured is what is supposed to be measured

(Golafshani, 2003). The data was collected from respondents at specific facilities and the survey consisted of questions that were not easily interpretable.

3.8.3 *Reliability*

Reliability is the degree to which the observed variable measures the true value and therefore will yield the same results over repeated trials (Hair Jr, Black, Babin and Anderson, 2010). Reliability is the idea of a set of results or observations being able to be repeated or replicated (Golafshani, 2003). Comparing it to previous studies conducted in the same area will ensure the reliability. Reliability was guaranteed with the use of an accurate research instrument. This instrument was tested with the use of a trial survey to assess the reliability of the questionnaire.

Figure 1 outlines the research methodology stages:

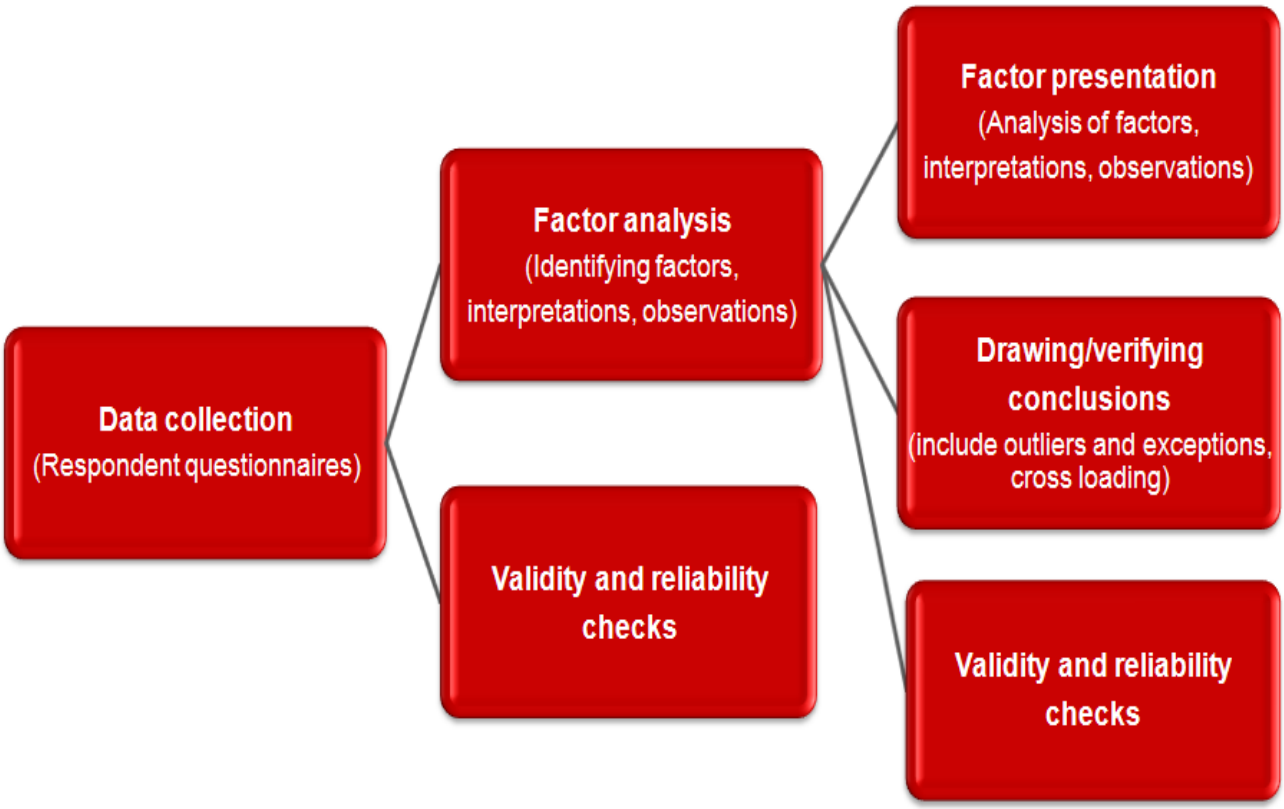


Figure 1 Research methodolgy

4 PRESENTATION OF RESULTS

4.1 Introduction

A summary of the results obtained from the research and the statistical analysis is presented in this chapter. The chapter begins with a discussion of the questionnaires that were distributed among patients presenting to private hospitals, this includes a demographic profile of the respondents. The chapter also includes the factor analysis carried out which relates to proposition 1 and proposition 2.

4.2 Demographic profile of respondents

Appendix A contains the qualitative patient questionnaire handed out to five participants to determine whether the factors presented in proposition 1 were the most relevant. It was determined from this questionnaire that the five factors listed were the most relevant in the research proposition.

In this questionnaire, the access to medical aid, proximity to residence and the reputation of the facility came up as the most important factors and therefore the factors listed in proposition 1 were found to be the most relevant within the South African private healthcare market.

Appendix B contains the patient questionnaire. The questionnaires were distributed among patients at two private hospitals, a total of 200 questionnaires were distributed and 186

were completed. The response rate was 93% which was higher than expected. Since the questionnaires were conducted in the private hospital sector, all respondents were included as they had to have had previous experience with the private hospital sector in South Africa.

All respondents were over the age of 18 years as this was a condition of the questionnaire.

4.2.1 *Gender and Age Distribution of Respondents*

The distribution of male and female respondents was 34.41% of respondents were male and 63.44% of respondents were female with 2.15% of respondents not giving an answer to this question.

Figure 2 shows the gender distribution of the respondents

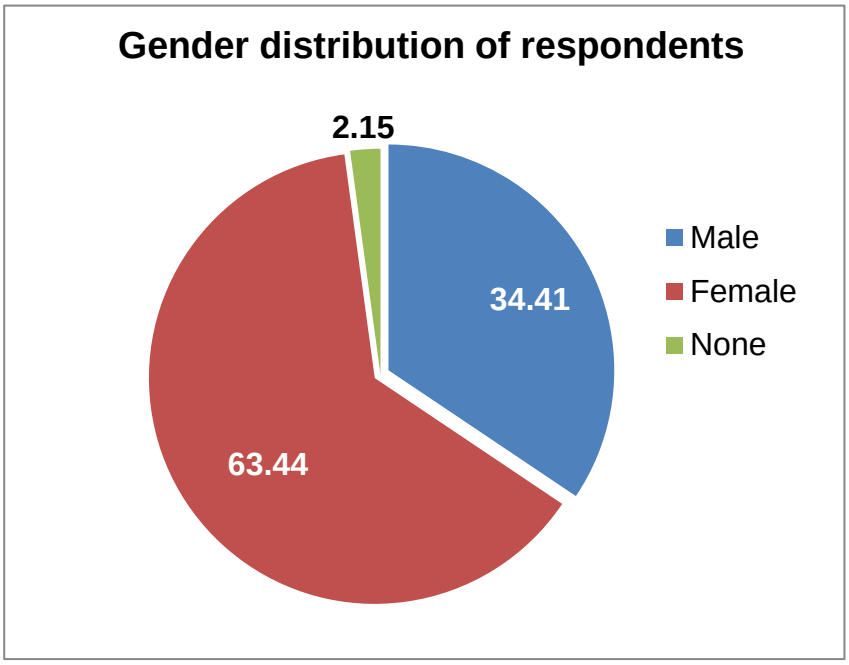


Figure 2 Gender distribution of respondents

The age of respondents was divided into four categories: 18-30, 31-45, 46-65 and the 65+.

By far, the largest group was the 31-45 year age category which accounted for 38.17% of respondents; this was followed by the 18-30 year old group at 29.57%, then 46-65 years at 23.66% and finally the 65+ at 6.99%. Of the 186 respondents 1.61% did not answer this question. As can be seen from the above data, more than half of the respondents are between the ages of 18 to 45 at a total value of 67.74%. Most of the respondents are under the age of 65 accounting for 91.40% of the respondents.

Figure 3 shows the age distribution of respondents.

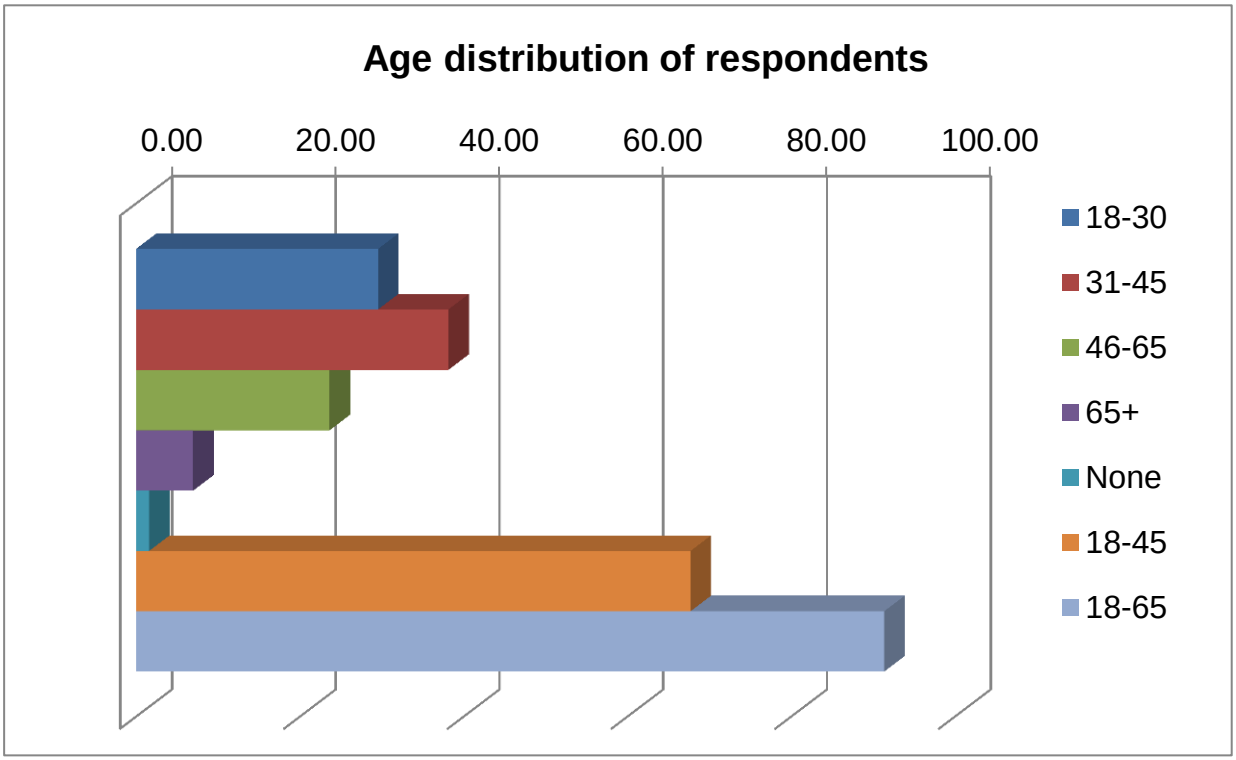


Figure 3 Age distribution of respondents

4.2.2 *Medical aid cover of respondents*

Out of the 186 respondents only one respondent did not answer this question, accounting for 0.54% of the total respondents. The majority of respondents had medical aid cover accounting for 85.48% and the remaining 13.98% did not have any sort of medical aid cover, these respondents still made use of private healthcare facilities but paid cash for their consultations and therefore were included in the research study results.

Figure 4 shows the medical aid distribution of respondents.

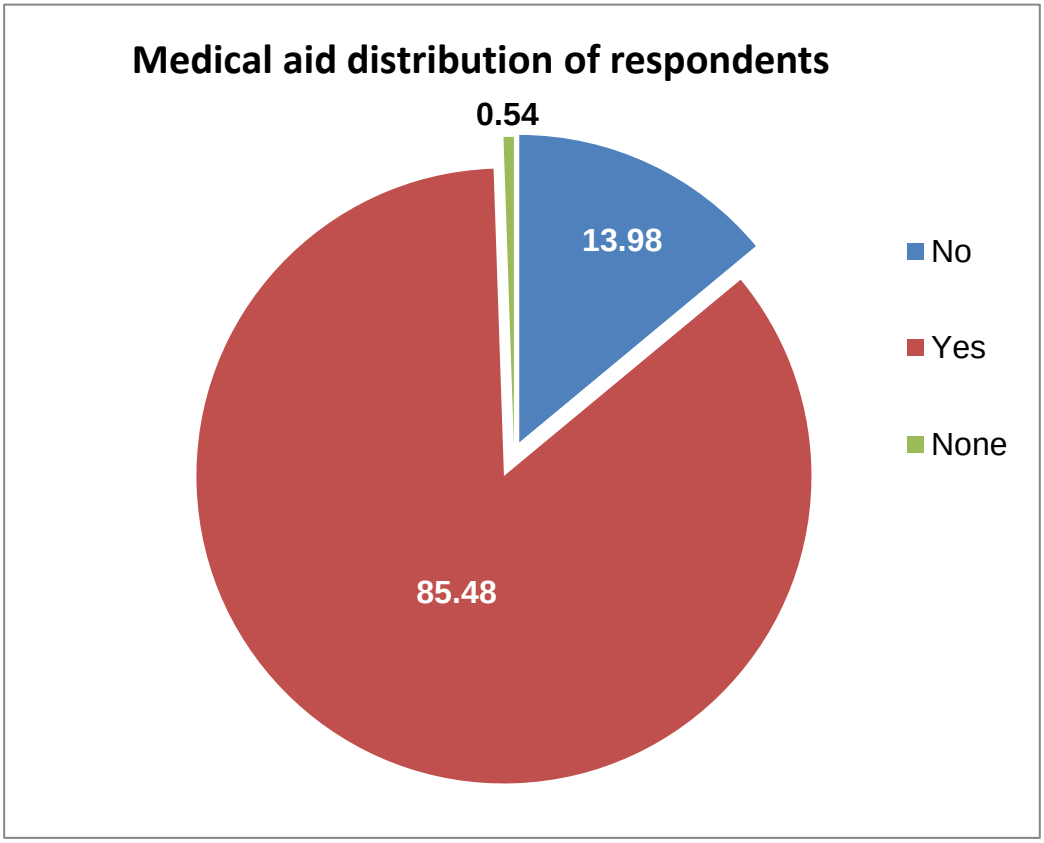


Figure 4 Medical aid distribution of respondents

4.2.3 *Respondents' use of private healthcare in the past.*

The amount of respondents that had made use of a private healthcare facility in the past accounted for 86.02% of the total, 12.37% of the respondents had never made use of private healthcare in the past, and 1.61% of respondents did not answer this question. The respondents that had never made use of private healthcare in the past were included in the study as they were currently making use of a private healthcare facility.

Figure 5 shows the use of private healthcare by respondents in the past.

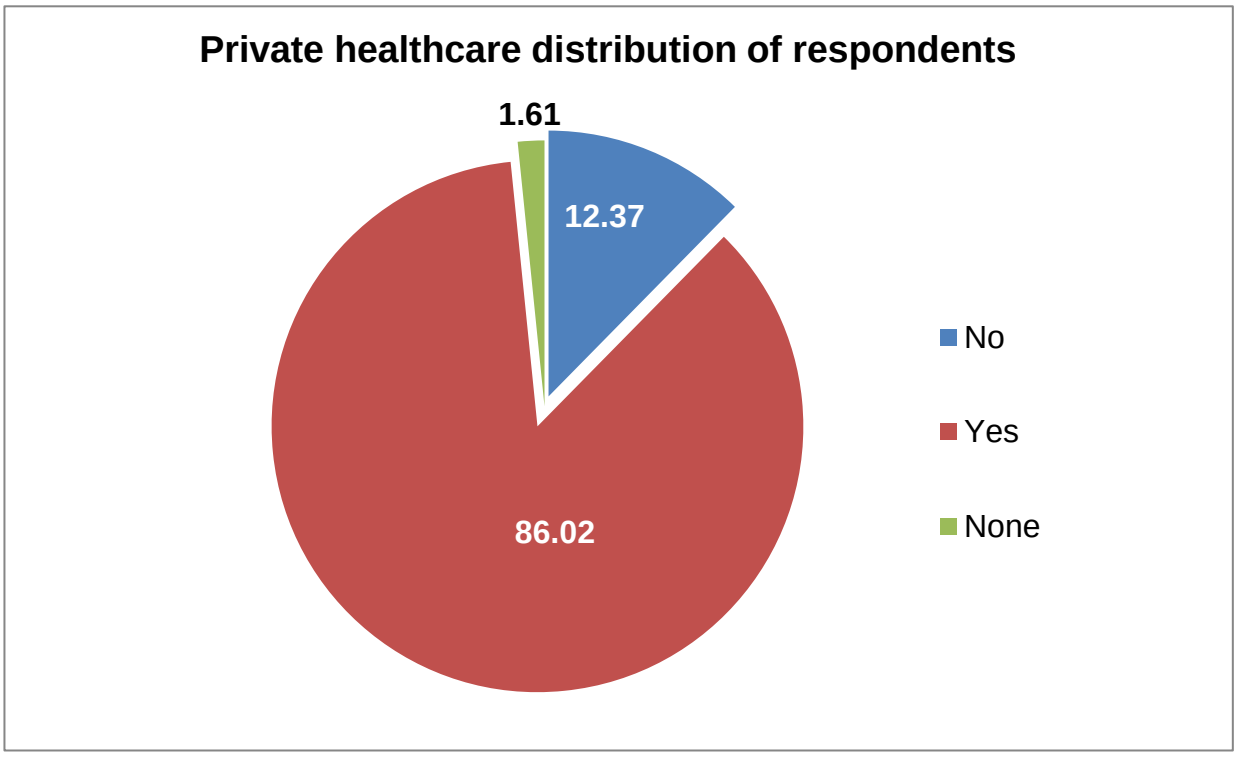


Figure 5 Private healthcare distribution of respondents

4.2.4 *Scheduled or emergency consultation*

The respondents who participated in the questionnaire were either making use of a private healthcare facility as an emergency visit or a scheduled visit. A scheduled visit would include any visit whereby the respondent had made an appointment to make use of the facility.

The amount of respondents who made use of the facility for an emergency or unscheduled visit accounted for 47.31% of respondents, with 35.48% of respondents using the private healthcare facility as a scheduled consultation. The remaining 17.20% of respondents did not answer this question.

Figure 6 shows the distribution of respondents use of the facility for either an emergency or elective procedure.

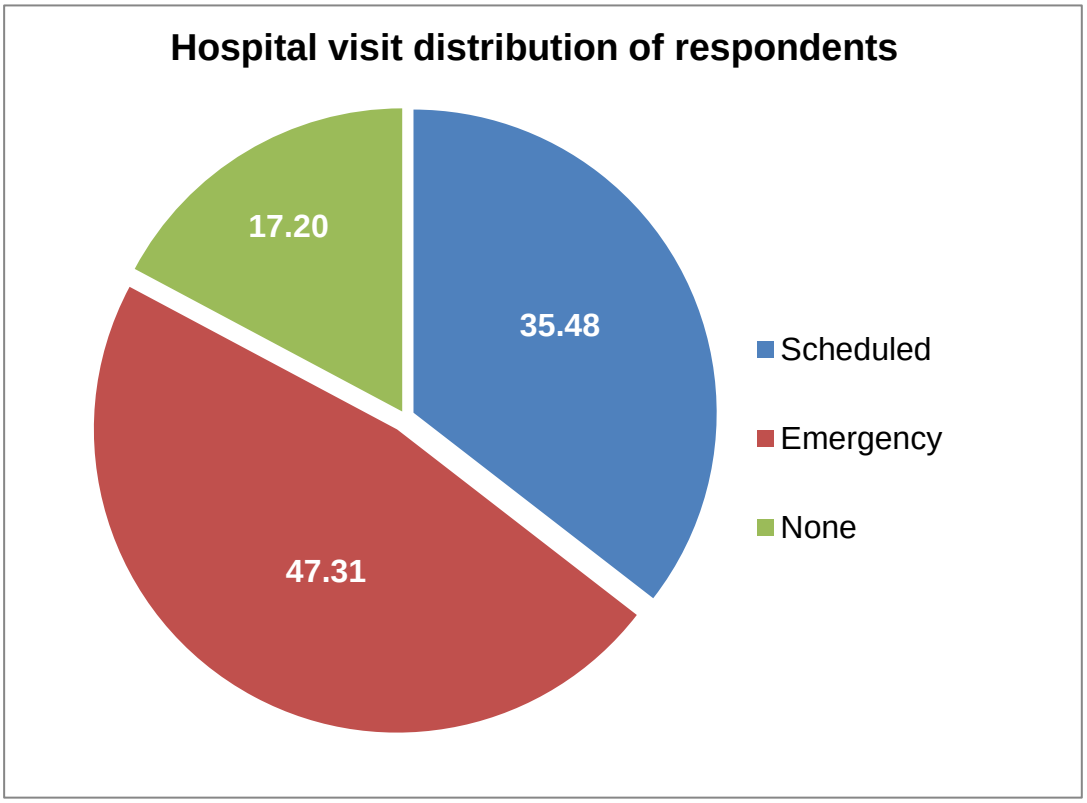


Figure 6 Hospital visit distribution of respondents

4.3 Results pertaining to proposition 1:

The factors that affect patient choice of private hospital in South Africa were identified using factor analysis. The complete factor analysis report is attached in Appendix D.

Proposition 1: Factors that affect patient choice of private hospital in South Africa include:

- Convenience
- Physician recommendation of the facility
- Reputation and image of facility
- Access to medical aid
- Past experience.

Factor Analysis requires that certain assumptions are made before the analysis can continue. One of these assumptions is that there must be a Measure of Sampling Adequacy (MSA) of greater than 0.5 (Hair Jr et al., 2010), in the factor analysis conducted a MSA of 0.73 was obtained and therefore the factor analysis can continue.

The eigen values were used to determine the number of factors. Table 6 shows the eigen values. Eigen values of greater than 1 are said to be significant and therefore these were taken, and this resulted in the identification of five factors. In addition the percentage of variance was used to support the decision these five factors accounted for 98.25% of the variation in the variables and this is considered significant.

Table 6 Eigen values and cumulative and variable percentages

Factors	Eigen values	Individual	Cumulative
1	6.1769	51.71%	51.71%
2	2.1159	17.71%	69.42%

3	1.3645	11.42%	80.84%
4	1.0786	9.03%	89.87%
5	1.0001	8.37%	98.25%
6	0.6794	5.69%	103.93%
7	0.6459	5.41%	109.34%
8	0.2202	1.84%	111.18%
9	0.0725	0.61%	111.79%
10	0.0316	0.26%	112.05%

Table 7 shows the factor loadings. A high factor loading indicates that a high correlation exists between the factor and the variable (Hair Jr et al., 2010). The factor loadings were after a Harris-Kaiser Rotation. The variables with factor loadings of greater than 0.4 were chosen to name the factor (Hair Jr et al., 2010).

Table 7 Factor loadings after Harris-Kaiser rotation

Factor loadings after Harris-Kaiser rotation					
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**
Q. 16	0.7866	0.0337	0.0515	0.0638	-0.1447
Q. 13	0.6715	-0.1146	0.0315	-0.1054	-0.0050

Q. 19	0.5102	-0.0557	-0.1109	-0.0228	0.2683
Q. 4	0.4323	-0.1311	0.1853	0.0379	0.1538
Q. 20	0.4170	0.1154	-0.0718	-0.0055	0.2638
Q. 10	-0.0815	0.8696	0.0495	-0.0097	0.0333
Q. 8	0.0691	0.6093	-0.1824	-0.0017	-0.0341
Q. 9	0.1089	0.4445	0.1202	0.0781	-0.0184
Q. 3	0.0923	-0.1139	0.6485	0.0073	0.1310
Q. 7	0.0435	0.2792	0.5795	0.0506	-0.0457
Q. 11	0.2302	0.1815	-0.4317	0.1323	0.0744
Q. 6	-0.0140	0.0646	-0.0446	0.7348	0.0218
Q. 14	0.0498	-0.1965	0.1101	0.5324	-0.0092
Q. 5	-0.0381	0.0565	0.0811	0.3640	0.0347
Q. 15	-0.1661	-0.0138	0.1290	0.0574	0.6069
Q. 17	0.0880	0.0657	-0.0315	-0.0767	0.4903
Q. 18	0.1955	0.0166	-0.1876	0.1346	0.3400

Factor 1: Hospital brand

The eigen Value for Factor 1 is 6.18 and accounts for 51.71% of the variance of the variables.

The five variables highlighted in table 7 were used in the naming of this factor. The statements loading onto this factor included statements that related to the brand or reputation of the hospital and the importance when deciding on which facility should be used. Table 8 shows the factor loadings of the statements and questions associated with each, it recognised that:

Table 8 Factor loadings and questions associated with factor 1

Question number	Factor loading	Question	Factor concept
Q. 16	0.7866	The reputation of the hospital brand (Netcare, Mediclinic) is more important than the proximity of the hospital to my house.	Branding
Q. 13	0.6715	I feel more comfortable using a hospital if it is part of a hospital brand/group (e.g. Netcare, Mediclinic or Life Healthcare).	Branding
Q. 19	0.5102	I know to which hospital group the hospital I visit most frequently belongs.	Branding

Q. 4	0.4323	The availability of a 24hr pharmacy at the hospital is more important than the proximity of the hospital to my house.	Branding
Q. 20	0.4170	Out of the three hospital brands (Netcare, Mediclinic or Life Healthcare) I would choose one as I feel they have a better quality of service.	Branding

- **Question 4**: The availability of a 24hr pharmacy at the hospital is more important than the proximity of the hospital to my house.

- **Question 13**: I feel more comfortable using a hospital if it is part of a hospital brand/group (e.g. Netcare, Mediclinic or Life Healthcare).

- **Question 16**: The reputation of the hospital brand (Netcare, Mediclinic) is more important than the proximity of the hospital to my house.

- **Question 19**: I know to which hospital group the hospital I visit most frequently belongs.

- **Question 20**: Out of the three hospital brands (Netcare, Mediclinic or Life Healthcare) I would choose one as I feel they have a better quality of service.

This highest loading factors were **Question 16** (0.787) and **Question 13** (0.672). These statements dealt specifically with hospital branding and hospital reputation and therefore the first factor was named ‘Hospital brand’.

Factor 2: Physician recommendation

The Eigen value for Factor 2 is 2.12. The statements that load onto this factor are statements involving Physician Recommendation. Table 9 shows the factor loadings of the statements and questions associated with each, it recognised that:

Table 9 Factor loadings and question associated with factor 2

Question number	Factor loading	Question	Factor concept
Q. 10	0.8696	The hospital recommended by my family doctor is more important than my medical aid cover.	Referral
Q. 8	0.6093	A recommendation from my family doctor is more important than the proximity of the hospital to my house.	Referral
Q. 9	0.4445	How technologically advanced the hospital is, is more important than my medical aid cover.	Referral

- **Question 8**: A recommendation from my family doctor is more important than the proximity of the hospital to my house.

- **Question 9**: How technologically advanced the hospital is, is more important than my medical aid cover.

- **Question 10**: The hospital recommended by my family doctor is more important than my medical aid over.

The highest loading factors were **Question 10** (0.870) and **Question 8** (0.609). These both concerned Physician Recommendation and therefore this factor was named 'Physician recommendation'.

Factor 3: Staff attitude

The Eigen value for Factor 3 is 1.36. The statements that load onto this factor are concerned with the staff attitude. Table 10 shows the factor loadings of the statements and questions associated with each, it recognised that:

Table 10 Factor loadings and questions associated with factor 3

Question number	Factor loading	Question	Factor concept
Q. 3	0.6485	The attitude of staff is more important than the quality of care received at the hospital.	Behaviour

Q. 7	0.5795	The reputation of the hospital is more important than my medical aid cover.	Behaviour
Q. 11	-0.4317	The quality of the hospital service is more important than the attitudes of staff.	Behaviour

- **Question 3**: The attitude of staff is more important than the quality of care received at the hospital.

- **Question 7**: The reputation of the hospital is more important than my medical aid cover.

- **Question 11**: The quality of the hospital service is more important than the attitudes of the staff.

The highest loading factors are **Question 3** (0.648) and **Question 7** (0.579). What is important to note is that **Question 11** has a negative loading and therefore fits in with the naming of this factor as ‘Staff attitude’.

Factor 4: Functional decision criteria

The Eigen value for Factor 4 is 1.08. The statements that load onto this factor are concerned with functional decision criteria. Table 11 shows the factor loadings of the statements and questions associated with each, it recognised that:

Table 11 Factor loadings and questions associated with factor 4

Question number	Factor loading	Question	Factor concept
Q. 6	0.7348	When I have an emergency, the hospital that I choose is different to the hospital I choose for elective procedures (i.e. booked appointments).	Logic
Q. 14	0.5324	My choice of hospital would be different if my medical aid cover allowed me to choose any hospital.	Logic
Q. 5	0.3640	The proximity of the hospital to my house is more important than the attitude of hospital staff.	Logic

- **Question 5**: The proximity of the hospital to my house is more important than the attitude of hospital staff.

- **Question 6**: When I have an emergency the hospital that I choose is different to the hospital I choose for elective procedures (i.e. booked appointments).

- **Question 14**: My choice of hospital would be different if my medical aid cover allowed me to choose any hospital.

The highest loading factors are **Question 6** (0.735) and **Question 14** (0.532). Both of these statements are concerned with functional decisions and whether the choice of hospital will differ depending on a situation, namely whether it is an emergency visit or elective visit and whether the patient has a medical aid or is without one, therefore this factor is named 'Functional decision criteria'.

Factor 5: Quality of service and the available offering.

The eigen value for Factor 5 is 1.00. The statements that load onto this factor are concerned with the quality of the service and the offerings available. Table 12 shows the factor loadings of the statements and questions associated with each, it recognised that:

Table 12 Factor loadings and questions associated with factor 5

Question number	Factor loading	Question	Factor concept
Q. 15	0.6069	The quality of the service is more important than the reputation of the hospital.	Service
Q. 17	0.4903	The availability of a 24hr Emergency Room is more important than past experience.	Service

Q. 18	0.3400	The quality of the service at a hospital is more important than whether the hospital belongs to a hospital brand/group (e.g. Life Bedford Gardens Hospital or Netcare Linksfield Hospital).	Service

- **Question 15**: The quality of the service is more important than the reputation of the hospital.

- **Question 17**: The availability of a 24hr Emergency Room is more important than past experience.

- **Question 18**: The quality of the service at a hospital is more important than whether the hospital belongs to a hospital brand or group (e.g. Life Bedford Gardens Hospital or Netcare Linksfield Hospital).

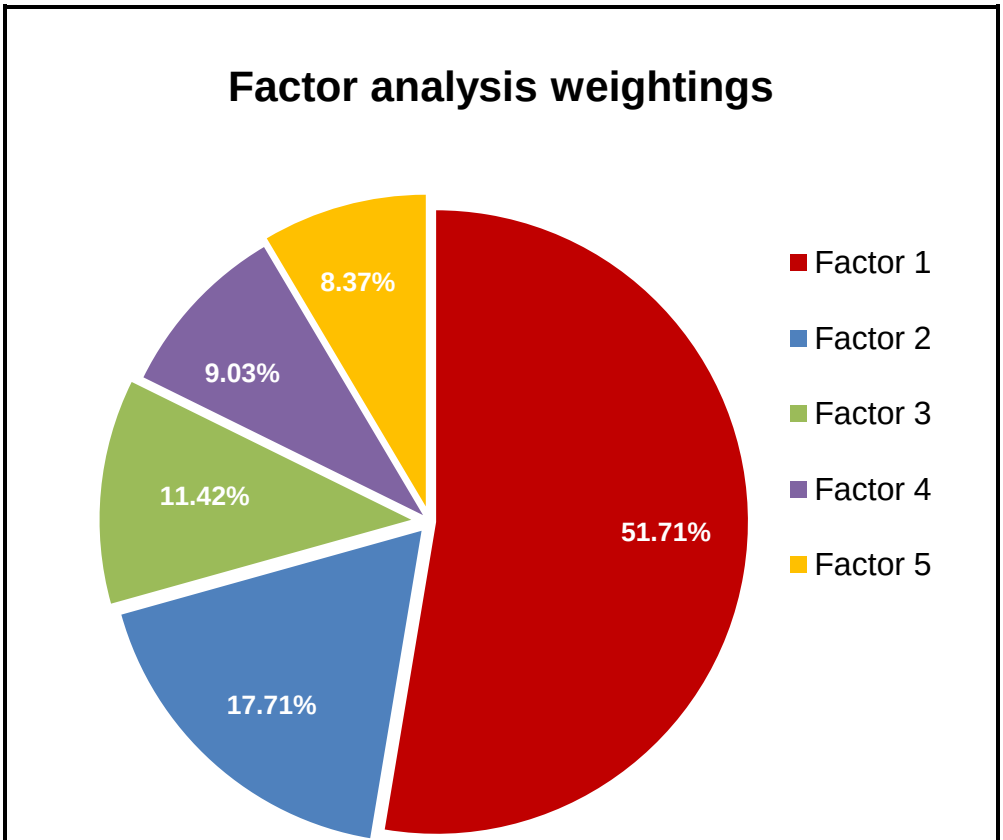
The highest loading factors are **Question 15** (0.607) and **Question 17** (0.490) these statements are concerned with the quality of the service and the offering that is available at the different hospitals. This factor has therefore been named 'Quality of service and the available offering'.

4.4 Results pertaining to Proposition 2

Proposition 2: Hospital branding is an important consideration in patient choice of private hospital.

Factor 1 is the factor concerned with hospital branding, and when conducting the factor analysis it was the first factor with the highest eigen value at 6.18 and accounted for 51.71% of the variance in the variables.

Figure 7 shows the factor analysis weightings and eigen values associated with each factor.



Eigen values

1	2	3	4	5
6.1769	2.1159	1.3645	1.0786	1.0001

Figure 7 Factor analysis weightings and eigen values

This is the highest amount of variance accounted for by any of the factors. There are five statements that load onto this factor and the first three statements have factor loadings of greater than 0.5, this means that they are statistically significant based on the sample size of 186 (Hair Jr et al., 2010). Table 13 shows the factor loadings of the statements and questions associated with each for factor 1, it recognised that:

Table 13 Factor loadings and questions associated with proposition 2

Question number	Q. 16	Q. 13	Q. 19	Q. 4	Q. 20
Factor loading	0.78658	0.67154	0.51023	0.43232	0.41702
Questions	The reputation of the hospital brand (Netcare, Mediclinic) is more important than the proximity of the hospital to my house.	I feel more comfortable using a hospital if it is part of a hospital brand/group (e.g. Netcare, Mediclinic or Life Healthcare).	I know to which hospital group the hospital I visit most frequently belongs.	The availability of a 24hr pharmacy at the hospital is more important than the proximity of the hospital to my house.	Out of the 3 hospital brands (Netcare, Mediclinic or Life Healthcare) I would choose one as I feel they have a better quality of service.

All of these statements are concerned with the hospital brand or group and therefore the hospital brand is an important consideration when choosing a facility.

4.5 Summary of the results

Five factors of patient choice were identified using factor analysis: ‘hospital brand’, ‘physician recommendation’, ‘staff attitude’, ‘functional decision criteria’ and ‘quality of service and the available offering’. On examination of the factor analysis, it was shown that the first factor termed ‘hospital branding’ explained the largest percentage of variance in the variables and three of the statements had factor loadings above 0.5 and this shows significance. Hospital branding is therefore an important factor in patient choice of facility.

The following chapter (Chapter 5) provides greater detail about the results

5 DISCUSSION OF THE RESULTS

5.1 Introduction

Chapter 5 begins with an interpretation of the five identified factors influencing patient choice of private hospital in South Africa. It then shows how these factors compare with the factors identified by means of the literature review. A discussion then follows with regards to the relative importance of hospital branding as a choice factor.

5.2 Discussion pertaining to Proposition 1

5.2.1 *Introduction*

The current studies' objective was to identify the main factors influencing patient choice of private hospital, such an objective benefits private hospitals as they can use the factors identified to increase the amount of consumers choosing to use their facility, as opposed to using another facility.

The literature review suggested that there are several factors influencing patient choice namely: care; staff; physical facilities; clientele; experience; convenience and institutional factors. The literature identified that the most important factor was care and this included

the overall quality, completeness of service and cost associated with the service (Lane and Lindquist, 1988).

The literature did not contain much information regarding branding within the private healthcare market in South Africa, as research in this field is limited.

Table 14 outlines the differences between the literature review and the research.

Table 14 Comparison between research findings and literature review

Literature review factors	Research findings
Convenience	Functional decision criteria
Physician Recommendation	Physician recommendation
Reputation and image of facility	Hospital branding
Access to medical aid	Functional decision criteria
Past experience	**Not found**
Not found	Staff attitude
Not found	Quality of service and the available offering

5.2.2 *The hospital brand factor*

The 'hospital brand' factor is made up of four statements, these statements are concerned with hospital reputation, brand awareness and whether one brand was favoured when choosing a facility. The literature did not contain much information regarding hospital brand awareness and importance of hospital branding as a choice factor, however hospital reputation is identified as a factor, and the hospital reputation is linked to the hospital brand.

Link to the literature

Lane and Lindquist (1988) stated that there are seven different factors influencing a patients' choice of facility. One of these factors was named institution and included in this factor was the reputation of the institution and whether the institution was seen as conservative or modern. It has been shown that superior quality experiences improve the reputation of a hospital and therefore increase the likelihood of a return to the facility (Leister and Stausberg, 2007). Another study also showed that the image and reputation of a hospital played an important role in the choice of hospital (Akinci et al., 2004).

What is important to note from the literature review is that the image and reputation of an organisation are linked to the organisation's brand (Klopper and North, 2011). An organisations reputation is made up of three elements: corporate branding, corporate image and corporate identity. All of these concepts are interrelated and cannot be treated as separate from one another (Klopper and North, 2011). As is shown, reputation and branding are directly related to one another and although the literature did not specifically mention hospital branding as a factor, it identified reputation as a factor.

Regarding such a finding, the evidence from the literature supports the factor 'hospital branding' as it suggests a relationship exists between hospital reputation and hospital brand. Therefore hospital branding plays a role in patient choice of facility.

5.2.3 *The physician recommendation factor*

The physician recommendation factor is made up of three statements. These statements are concerned with recommendation by a physician, specifically around recommendation by a family physician. There is a physician-patient relationship and therefore trust in physician's recommendations. The literature identifies physician recommendation as a factor when patients chose which facility to use.

Link to the literature

The physician-patient relationship is complex and is of a personal nature and must be dealt with in a professional manner. Trust is an important factor and promotes an increased amount of information exchange, resulting in a greater understanding of the needs of the patient (Walker et al., 2002).

Lane and Lindquist (1988) identified experience as a factor that patients find important when choosing a facility. The factor listed as experience is made up of prior use of facilities and recommendations by physician, friends or family (Lane and Lindquist, 1988). The factors are also influenced by the type of service the patient requires (Akinci et al., 2004). Physician recommendation was identified as a factor that patients used regardless of the type of service they required, whether that service was general, specialised or emergency care (Akinci et al., 2004).

Regarding such a finding, the evidence from the literature supports the factor 'physician recommendation'. Therefore physician recommendation is a factor in patient choice of facility.

5.2.4 *The staff attitude factor*

The staff attitude factor is made up of three statements; these statements are concerned with staff attitude. One of these statements is a reverse of the others and in the data came up as a negative loading thus it fits in with the factor of staff attitude. The literature identifies staff attitude as a factor in patient choice of hospital.

Link to the literature

There are two factors that have been identified by Lane and Lindquist (1988) that correspond to staff attitude; these are named ‘staff’ and ‘clientele’. Staff, as a factor, includes the following elements; namely quality and the attitudes of staff; and clientele includes feelings towards hospital staff, desire for personal acceptance or attention and access to facility restricted by health insurance (Lane and Lindquist, 1988). From the data presented above we have incorporated staff and clientele into one factor namely staff attitude.

It has also been shown in the literature that staff appearance and relationships with staff are medical care quality indicators (Suki et al., 2009). The focus of hospitals should be around the quality of the hospital experience, as a superior quality experience has been shown to increase return to that facility (Leister and Stausberg, 2007). Therefore, staff attitude as a medical care quality indicator should be considered an important factor.

The literature also identified that employee behaviour affects stakeholders’ perception of the corporate brand and what it represents (Siso et al., 2009).

Patient satisfaction is the difference between patient expectation and the perceived experience (Batchelor et al., 1994). It has been shown in the literature that nursing care is a factor in determining patient satisfaction with the institution (Batchelor et al., 1994).

Regarding such a finding the evidence from literature supports the factor ‘staff attitude’, therefore staff attitude is included as a factor in patient choice of facility.

5.2.5 *The functional decision criteria factor*

The functional decision criteria factor is made up of three statements; these statements are concerned with choice based on either access to medical aid or what type of service the patient requires (i.e. emergency or elective service) and proximity of their residence to the facility. This factor is termed ‘functional decision criteria’ as it involves a rational thought process when choosing a facility. The literature identifies cost as a factor in patient choice and also outlines different factors involved depending on the type of service the patient requires.

Link to the literature

Consumer behaviour is defined as “the study of how individuals, groups and organisation select, buy, use, and dispose of goods, services, ideas, or experiences to satisfy their needs and wants” (Kotler and Keller, 2009). There are three factors that influence consumer behaviour namely, cultural, social and personal factors (Kotler and Keller, 2009).

There are four psychological factors that then influence the purchasing decision consumers make, namely motivation, perception, learning and memory (Kotler and Keller, 2009). When looking at perception it has been shown that how a motivated consumer acts depends on how the situation is perceived (Kotler and Keller, 2009).

Another important model that consumers use to make purchasing decisions is the five-stage buying model. It incorporates the psychological processes consumers go through when making a purchasing decision (Kotler and Keller, 2009).

Figure 8 shows the five-stage buying model with specific reference to steps three and four.

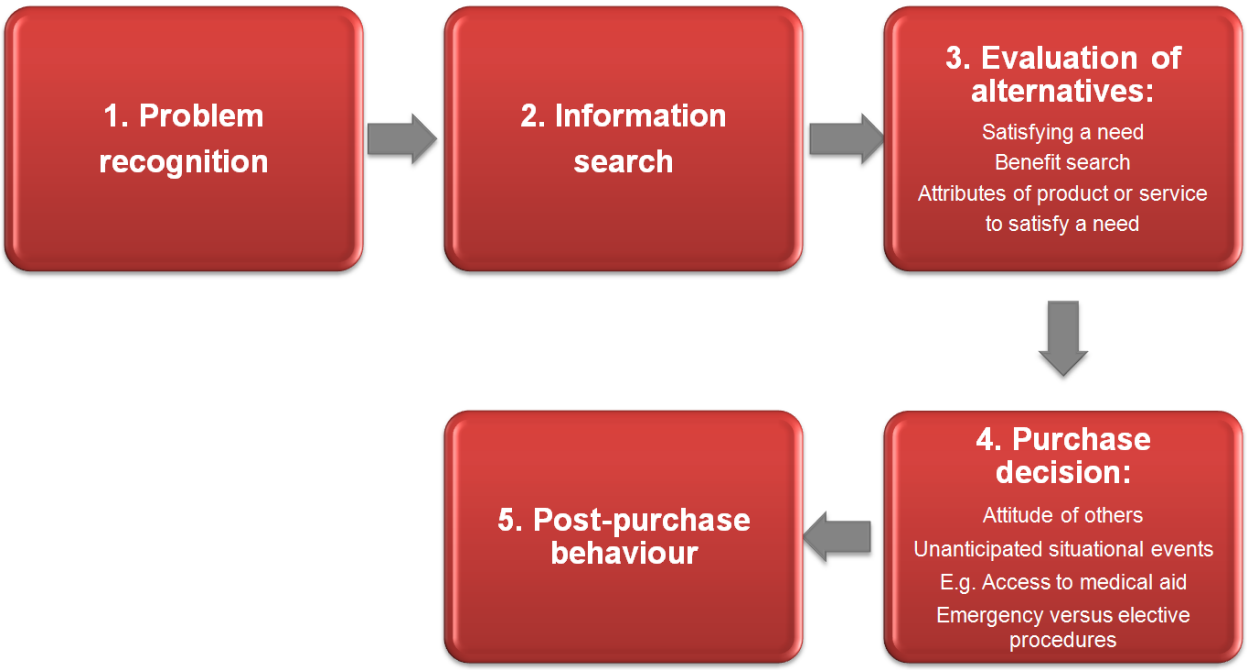


Figure 8 The five stage buying model

(Kotler and Keller, 2009).

The five stages are problem recognition, information search, evaluation of alternatives, purchase decision and post purchase behaviour (Kotler and Keller, 2009). With regards to functional decision criteria the evaluation of alternatives and purchase decision is discussed in greater detail. The consumer evaluation process involves three concepts:

- Satisfying a need

- Search for benefits from the product or service

- Each product or service has a set of attributes with varying abilities to satisfy the desired need.

(Kotler and Keller, 2009).

Consumers attitudes towards the service influence how they evaluate the alternatives available to them (Kotler and Keller, 2009).

The purchase decision that is then made by consumers is influenced by the attitude of others and unanticipated situational factors (Kotler and Keller, 2009). An unanticipated situational factor would include whether the consumer has access to medical aid or whether the service they are seeking is either an emergency or elective procedure. Therefore their choice of hospital may differ depending on these unanticipated situational events.

Lane and Lindquist (1988) identified two factors that can be linked to the factor functional decision criteria. These factors are care and clientele. The concepts included in these factors are cost and access to facility may potentially be restricted by health insurance (Lane and Lindquist, 1988).

In another study, it was shown that the factors affecting the choice of hospital can also depend on the type of service that is required (Akinci et al., 2004). The type of services that are outlined in this study included general care, specialised care and emergency care services. One of the factors that came up both in the literature and the research study was proximity to the residence (Akinci et al., 2004). This was shown to be an important factor when using a facility for either emergency care or specialised care services. Another important factor, noted in emergency care services, was the availability of facilities (Akinci et al., 2004).

The decisions that consumers make regarding the choice of facility does not only involve the emotional decisions involved in the choice, but functional criteria also play a part in the

consumers' choice. These functional criteria would include whether the patient has access to medical aid, the type of service that is required (elective or emergency) and the proximity of the facility to their residence. The evidence from the literature supports this factor, indicating the importance of cost and proximity, as well as indicating that factors differ depending on what type of service is required. Therefore functional decision criteria is included as a factor in consumer choice of facility.

5.2.6 *The quality of service and the available offering factor*

The quality of service and the available offering factor is made up of three statements which are concerned with choice based on the quality of the service and the offering available at the facility. The available offering includes whether the facility has a 24hr pharmacy or a 24hr emergency room available. The literature identifies quality of service and the physical facilities as a factor that is discussed in more detail below.

Link to the literature

In total, Lane and Lindquist (1988) identified 14 factors affecting patient choice of facility; this was then condensed into seven factors. When looking at the 14 factors, four of these factors link with the quality of service and available offering factor. These four factors are medical staff quality, emergency care quality, nursing care quality and complete service available (Lane and Lindquist, 1988).

Lane and Lindquist (1988) identify three factors that link to this factor; these factors are care, staff and physical facilities. The concepts included in these factors are as follows:

Care

- Quality of care
- The completeness of the service
- Cost.

Staff

- Quality of staff
- Attitudes or courtesy of staff.

Physical facilities

- Equipment and available technology
- Cleanliness
- Surroundings or environment.

(Lane and Lindquist, 1988).

As is demonstrated by the factors above, quality is identified in two of the factors identified by Lane and Lindquist (1988). In terms of the physical facility, 'equipment and available technology' is listed as a concept in the factor physical facility. This combination describes the factor quality of service and the available offering as a factor on its own.

The most important factor identified by consumers is care, including the quality of the care, the completeness of the service and the cost (Lane and Lindquist, 1988). Therefore quality would be considered an important factor to include in consumer choice.

The literature also shows that the perceived quality of healthcare services has a greater influence on patient behaviours, including satisfaction, referral and usage, compared with the other factors such as access and cost (Suki et al., 2009). Quality indicators of medical care include aesthetics of the environment, staff appearance, relationships and the promptness of the service (Suki et al., 2009). Measuring the quality of medical services has been shown to have a number of benefits as it allows patients to make informed decisions about choice of facility, it also assists the healthcare providers as they can identify the areas where the quality is lacking (Suki et al., 2009).

The literature supports the factor quality of care and it is identified as an important determinant in the patient choice of facility. The offering that is available to consumers has been shown to be a factor supported by the literature and therefore quality of the service and the available offering is included as a factor in patient choice of facility.

5.2.7 *Conclusion*

Proposition 1: Factors that affect patient choice of private hospital in South Africa include:

- Convenience
- Physician recommendation of the facility
- Reputation and image of facility
- Access to medical aid
- Past experience.

Partially Accepted

The factor analysis identified five factors which influence choice of private hospital in South Africa. The literature review identified five factors influencing patient choice. Most of the factors identified in the literature review are identified within the current research with the exception of past experience and staff attitude. **Proposition 1 is, therefore, partially accepted**.

The South African private healthcare market is different to healthcare markets around the world as this market is dominated by the three major hospital groups, Netcare, Mediclinic and Life Healthcare. These three hospital groups control approximately 80% of private hospital beds (Matsebula and Willie, 2007). In the current research Hospital Branding was identified as the first factor and accounted for 51.71% of the variance of the variables. This

is possibly due to the fact that there is such a strong brand presence within the private hospital sector.

5.3 Discussion pertaining to Proposition 2

5.3.1 *Introduction*

The current study intended to investigate whether hospital branding was an important consideration when patients made their choice on which hospital to use. Such an investigation is important as the private hospital market in South Africa is strongly divided between the three hospital brands which dominate the private hospital market (Matsebula and Willie, 2007).

5.3.2 *Hospital Branding*

Hospital branding was identified as the first factor in the current research. It also had the highest eigen value at 6.18 and accounted for 51.71% of the variance in the variables. This identifies it as a significant factor in the current research.

5.3.3 *Conclusion*

Proposition 2: Hospital branding is an important consideration in patient choice of private hospital.

Accepted

Hospital branding is identified as an important consideration in patient choice of private hospital, therefore, **Proposition 2 is accepted**.

The finding is important as it confirms that hospital branding is significant when patients are making their choice on which facility to use. Hospital brands must therefore brand themselves in such a way as to make patients want to use their facility as opposed to one of the competing brands. It shows the three major hospital groups that the public opinion of their brand is important in determining the use of their facility by these consumers.

5.4 Conclusion

Elements of the five factors identified in the literature review can be identified in the five factors extracted by means of the current research, Proposition 1 is accepted, in part. The five factor solution derived from the present research is considered the most current and adequate representation of the factors of patient choice of private hospital in the South African healthcare market.

Hospital branding was identified as the first factor with the highest eigen value and accounted for the most variance in the variables. Hospital branding was therefore found to be an important consideration in patient choice of private hospital. Thus proposition 2 is accepted.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The objective of the study was to identify the factors that influence patient choice of private hospital in South Africa. Such an identification was required in order to determine the main elements that hospital groups could use when marketing their hospitals in order to increase the loyalty of patients to a specific hospital group. The research also aimed to identify whether branding was an important consideration when patients chose a hospital facility.

The main findings and conclusions of the study are presented in Chapter 6. The recommendations aimed at the managers of the hospitals groups are discussed and the chapter concludes with suggestions for future research.

6.2 Conclusions of the study

6.2.1 *Proposition 1*

Proposition 1: Factors that affect patient choice of private hospital in South Africa include:

- Convenience
- Physician recommendation of the facility
- Reputation and image of facility
- Access to medical aid.
- Past experience

Table 15 oulines the factors that were found in the literature review and the research, and how these differ from each other.

Table 15 Comparison between literature review and research findings

Literature review factors	Research findings
Convenience	Functional decision criteria
Physician Recommendation	Physician recommendation
Reputation and image of facility	Hospital branding
Access to medical aid	Functional decision criteria
Past experience	**Not found**
Not found	Staff attitude
Not found	Quality of service and the available offering

The results from the current research indicate that the five factors influencing patient choice of private hospital in South Africa are ‘hospital brand’, ‘physician recommendation’, ‘staff attitude’, ‘functional decision criteria’, and ‘quality of service and the available offering’. Such factors are the main elements that the managers of hospital groups should look at when trying to increase patient loyalty to a specific hospital group.

The five factors extracted in the current study combine elements of the five factors extracted in the literature review. The research confirmed the factors convenience, physician recommendation, reputation and image of the facility and access to medical aid.

Elements attributed to these factors were identified in the research factors: ‘hospital brand’, ‘physician recommendation’ and ’functional decision criteria’. The factor past experience identified in the literature was not identified in the current research. The factors ‘staff attitude’ and ‘quality of service and available offering’ identified in the current research were not identified in the literature review. **Proposition 1 is therefore partially accepted.** Figure 9 illustrates the comparison of the determinants identified by means of the study and the factors identified in the literature review.

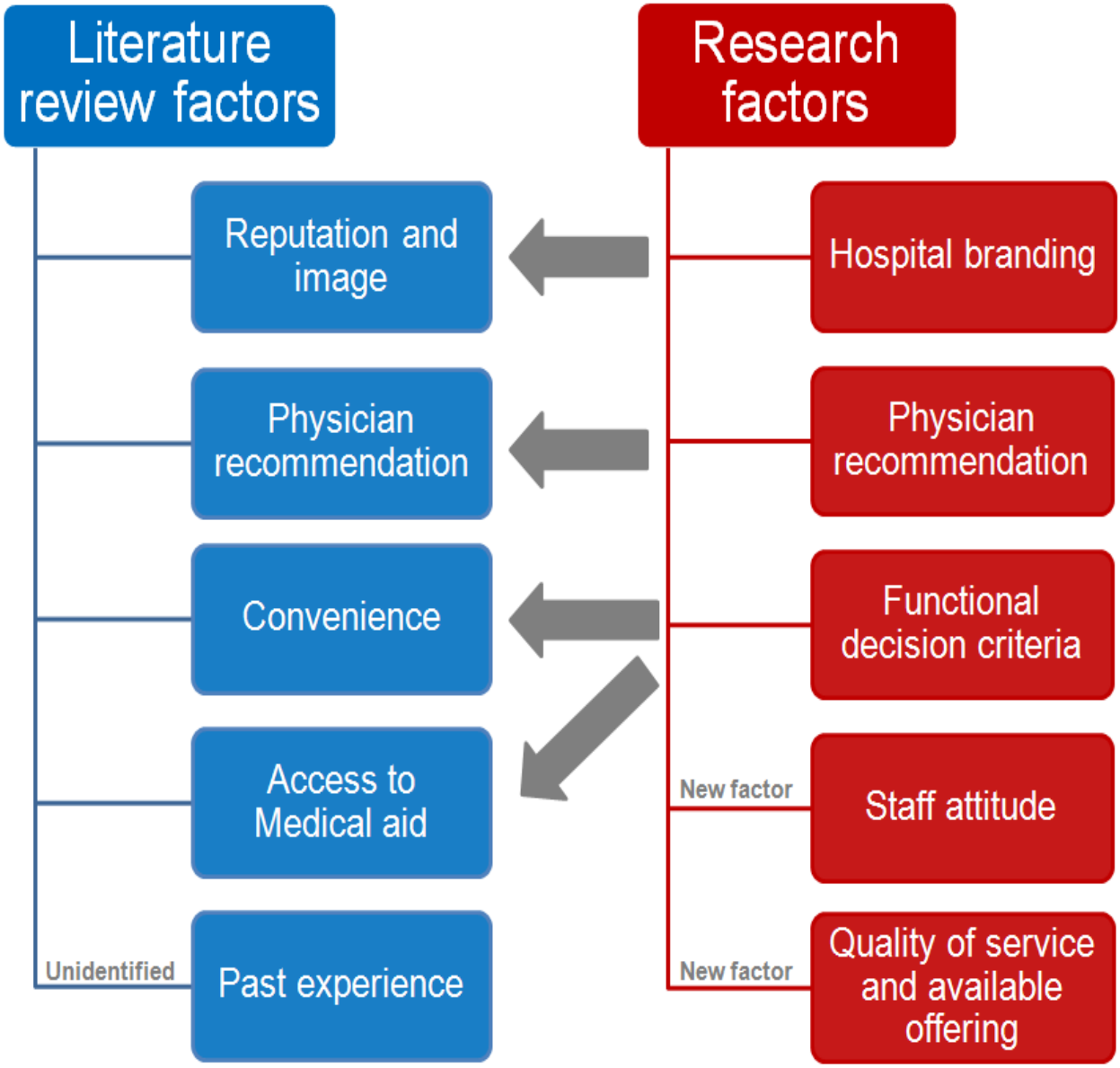


Figure 9 Comparison between literature and research factors

Proposition 1 was therefore partially accepted as 2 new factors were identified in the research and one factor found in the literature review was not found in the research conducted.

6.2.2 *Proposition 2*

Proposition 2: Hospital branding is an important consideration in patient choice of private hospital.

It was found in the current research that hospital branding is a factor that patients use when choosing a hospital facility. It also came up in the current research as the first factor with the highest eigen value and accounted for 51.17% in the variance of the variables. The above finding reveals that hospital branding is an important consideration when patients chose a private hospital. **Thus Proposition 2 is accepted.**

6.3 Recommendations

The purpose of the current research was to identify the factors affecting patient choice of private hospital in South Africa which would assist the managers of the private hospital groups in determining the direction in which they should be focusing their marketing effort. It also provides an insight into the patients and the factors they use when choosing a hospital facility. This assists the hospital management as it identifies the factors patients find important, which may differ from the factors the management deemed as important.

Branding is important to organisations as it has the ability to decrease costs, give consumers a sense of community, create common ground and serves as a source of competitive advantage (Klopper and North, 2011) this research is significant to the managers of hospital groups, showing that hospital branding is indeed a factor that patients use to choose a facility. Therefore more effort should be exerted in establishing a brand that patients feel a specific affinity towards.

In order for the South African private hospital groups to increase the loyalty of patients to their brand, the factors below need to be taken into consideration:

Hospital branding

The hospital groups need to realise that branding their facilities in the appropriate way is an important element when formulating their marketing strategy. It is an element that allows patients to establish a level of trust with the brand, and trust is an important element in the healthcare environment. The branding needs to be consistent throughout all of the facilities associated with one hospital group. The message that is delivered by a specific hospital brand will blanket all the facilities associated with that brand, and so requires consistency in the message and an integrity that is established within the community.

Figure 10 is a model of the actions management should take in order to establish an effective corporate brand.



Figure 10 Corporate brand management model

(Klopper and North, 2011).

Table 16 gives advice to hospital management on actions they can take with regards to factor 1.

Table 16 Factor 1 recommendations

Factor	Detail	Action Required
Hospital Brand	Patients found themselves more likely to align with the specific hospital brand that they trusted.	Hospital managers need to ensure that the brand message is consistent throughout all of their facilities, and recognise that branding forms a key element of the marketing strategy.

Physician recommendation

Patients have already established trust with their physicians that they see on a regular basis. The advice given by these physicians on which facility to use is therefore of great importance as patients will take these recommendations and tend to use the facilities these physicians recommend.

The managers of the three major hospital groups should recognise the importantance of patients' family physicians and provide them with appropriate information as to why their facilities should be used. There should be a joint effort with physicians and hospital groups in determining the best facilities for patients with varying diseases.

Also hospital brands can obtain a lot of information from family physicians as to why they refer their patients to certain facilities and not to others. This will identify concerns that the physicians have with regards to certain facilities and the hospital groups can then focus efforts on restoring trust with these physicians and correcting possible problems that have arisen in their hospitals.

Table 17 gives advice to hospital management on actions they can take with regards to factor 2.

Table 17 Factor 2 recommendations

Factor	Detail	Action Required
Physician recommendation	Patients have an established level of trust with their physicians, and as a result will trust their judgement as to which facility they should use.	Family physicians should be provided with information as to why certain facilities are better suited for certain diseases. Hospital managers should also utilize the family physicians regarding why they would not use certain facilities.

Staff attitude

Top management must realise that their staff plays a crucial role in the attitude patients have towards their facilities. The staff are not only the brand ambassadors of the various hospital groups, but also have an influence on the level of comfort and trust the patients feel, which will influence the general feeling patients have towards the entire brand.

Top management should motivate staff by making them feel like they are a part of the brand, and with some internal brand management, establish a sense of community within the company. Happy staff results in happy patients, and allows an environment where patients will feel more comfortable, especially in a situation where they feel out of control and uncertain as to the outcome.

Top management must also realise that the staff is dealing with patients on a daily basis and often there is an underlying element of hostility due to the nature of the environment. Making the staff feel appreciated and comfortable, and understanding the difficulties they have to deal with, will allow the staff to feel more comfortable and supported by their managers. This will improve staff morale, and their attitude in general, allowing them to treat patients with a sense of family.

Table 18 gives advice to hospital management on actions they can take with regards to factor 3.

Table 18 Factor 3 recommendations

Factor	Detail	Action required
Staff attitude	Patients' satisfaction with a facility was influenced by the attitude of the staff towards to the patients.	Staff must be made to feel like brand ambassadors and therefore internal marketing needs to be a focus to create a sense of family.

Functional decision criteria

It is important for hospital management to realise that there are also other factors where patients chose facilities based on functional as opposed to emotional decision criteria. Whether patients have access to medical aid, the proximity of the hospital to their residence and the availability of a 24 hour pharmacy and accident and emergency room are all factors that come into play when patients choose a specific facility.

Hospital management can increase patients' use of their facilities by having access to these 24 hour facilities. However, they must also look at the extra costs that will be incurred by having these facilities available, and whether this is financially viable. It is not financially viable to have 24 hour pharmacy at every facility, however, locating those in appropriate areas may increase the number of patients that use that specific facility and possible return in future.

In terms of the access to medical aid and proximity to the patients residence there is a limited amount top management can do to influence these elements. Locating facilities in appropriate locations should be something taken into consideration when building or acquiring new hospitals.

Table 19 gives advice to hospital management on actions they can take with regards to factor 4.

Table 19 Factor 4 recommendations

Factor	Detail	Action required
Functional decision criteria	Patients' make decisions based on emotional and rational decision making processes. This factor is part of rational decision making.	Hospital groups can locate their facilities at appropriate distances from patients' residences. Assess whether a 24 hour pharmacy or emergency room would be financially beneficial for the hospitals that do not currently have this facility in place.

The quality of service and the available offering factor

The current study has shown that the quality of the service and the available offering is a factor that affects patient choice of facility. Hospital managers need to be aware of the factors affecting how patients rate the quality of service and what affects this rating. From previous research the perceived quality of healthcare has been shown to have a greater influence on patient behaviours, these behaviours include satisfaction, referral and usage (Suki et al., 2009). Medical care quality indicators include aesthetics of the environment, staff appearance, relationships and the timeliness of the service (Suki et al., 2009).

Procedures should be put in place to measure the perceived quality that patients experience at the various facilities and where management can improve the overall patient experience. This would be done in the form of patient satisfaction questionnaires and hospital management walking around their facilities asking patients open ended questions relating to their experience in the facilities.

The offering that is available to patients also plays a part in their choice of facility. If they can get an “all-in-one” service so to speak, they would be more inclined to use this facility in the future. Hospital management needs to look at the feasibility of providing 24 hour emergency rooms and pharmacies at the various facilities. It is not cost effective for every hospital to have these facilities available and therefore an investigation needs to be conducted into the benefit of making these additional services available to patients.

Table 20 gives advice to hospital management on actions they can take with regards to factor 5.

Table 20 Factor 5 recommendations

Factor	Detail	Action required
Quality of service and available offering.	The quality of the service and the available offering affects the satisfaction patients have with the facility. The completeness of the service that is provided affects the outcome.	Providing an “all-in-one” service, if it is found to be cost effective. Quality control measures should be put into place in order to monitor the patient satisfaction levels.

6.4 Suggestions for further research

Factors relating to patient choice of private hospital are dynamic, and due to this nature, change over time. Thus the present research should be constantly reviewed in order to keep up with market. Some suggestions for further research:

- Development of a patient quality calculator: The calculator would need to consist of a set of accessing criteria that are relevant to what patients consider important as

quality indicators. This would allow hospital managers to compare various hospitals and allow the development of a hospital quality rating system

- Each factor identified in the current study requires individual analysis in order to develop a deeper understanding of the influence of each factor on the market

- Further study should be conducted on the possibility of interrelationships between the five factors identified in the study. The strength of these relationships can be investigated

- Further investigation into the relative importance of all the factors should be investigated, to determine which of these factors are most relevant within the market

- Further study should be conducted into the public healthcare sector. This would give a good indication as to the differences in factors influencing choice between the private and public healthcare sector. It could also result in an improvement in service as it could demonstrate the true deficiencies within this market.

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APPENDIX A

Qualitative patient questionnaire

Factors affecting choice of hospital

1. Which factors do you consider when choosing which hospital to use?

-

-

2. Rate these factors in the order of importance when choosing a hospital facility. One being the most important and 8 the least.

Past experience

Proximity to residence

Availability of a 24 hour pharmacy

Availability of an emergency room

Reputation of the facility

Familiarity with the staff

Equipment and the available technology

Access to Medical Aid

APPENDIX B

Patient Questionnaire

Gender	Male	Female
Age	18 – 30	
	31 – 45	
	46 – 65	
	65+	
Do you have medical aid cover?	Yes	No
Have you used a private hospital in the past?	Yes	No
Is this hospital visit scheduled or unscheduled i.e. emergency or elective visit?	Emergency visit	Elective visit

By using the following 5-point scale, please indicate the level of agreement to the statements below:

Strongly disagree	1	2	3	4	5	**Strongly agree**

- A rating of 1 will indicate that you strongly disagree with the statement.
- A rating of 5 will indicate that you strongly agree with the statement.

No.	Question	Rating				
		Strongly Disagree				Strongly Agree
1.	The quality of the service at the hospital is more important than the proximity of the hospital to my house.	1	2	3	4	5
2.	My choice of hospital depends on my previous experiences.	1	2	3	4	5
3.	The attitude of staff is more important than the quality of care received at the hospital.	1	2	3	4	5
4.	The availability of a 24hr pharmacy at the hospital is more important than the proximity of the hospital to my house.	1	2	3	4	5
5.	The proximity of the hospital to my house is more important than the attitude of hospital staff.	1	2	3	4	5
6.	When I have an emergency, the hospital that I choose is different to the hospital I choose for elective procedures (i.e. booked appointments).	1	2	3	4	5
7.	The reputation of the hospital is more important than my medical aid cover.	1	2	3	4	5
8.	A recommendation from my family doctor is more important than the proximity of the hospital to my house.	1	2	3	4	5
9.	How technologically advanced the hospital is, is more important than my medical aid cover.	1	2	3	4	5
10.	The hospital recommended by my family doctor is more important than my medical aid cover.	1	2	3	4	5
11.	The quality of the hospital service is more important than the attitudes of staff.	1	2	3	4	5
12.	I generally use the same hospital for emergencies and for elective reasons (i.e. specialist appointments, physiotherapy).	1	2	3	4	5
13.	I feel more comfortable using a hospital if it is part of a hospital brand/group (e.g. Netcare, Mediclinic or Life Healthcare).	1	2	3	4	5
14.	My choice of hospital would be different if my medical aid cover allowed me to choose any hospital.	1	2	3	4	5
15.	The quality of the service is more important than the reputation of the hospital.	1	2	3	4	5
16.	The reputation of the hospital brand (Netcare, Mediclinic) is more important than the proximity	1	2	3	4	5

	of the hospital to my house.	
17.	The availability of a 24hr Emergency Room is more important than past experience.	1 2 3 4 5
18.	The quality of the service at a hospital is more important than whether the hospital belongs to a hospital brand/group (e.g. Life Bedford Gardens Hospital or Netcare Linksfield Hospital).	1 2 3 4 5
19.	I know to which hospital group the hospital I visit most frequently belongs	1 2 3 4 5
20.	Out of the 3 hospital brands (Netcare, Mediclinic or Life Healthcare) I would choose one as I feel they have a better quality of service.	1 2 3 4 5

Dear Respondent

My name is Claire Sim and I am currently studying a Masters in Business Administration (MBA) through the University of the Witwatersrand. In order to meet the MBA requirements, a research report in an area of interest must be completed.

The purpose of the research is to identify the factors influencing choice of hospital, and to determine the relative importance of hospital brand on choice. This is from the patients' perspective, and only includes those patients who have previously made use of private hospital facilities.

Your responses, in line with your hospital experience to the following questionnaire items will elicit the necessary information required in this research. Should you be interested in the results of the research, a summary of the outcomes can be sent to you at your request.

The questionnaire is voluntary and you are able to withdraw at any stage. Your co-operation would be greatly appreciated.

Please feel free to contact me if you have any queries.

Thank you for your support,

Claire Sim.

082-444-0241

APPENDIX C
Consistency matrix

Table 21: Consistency matrix

The relative importance of branding on patient choice of private hospitals in South Africa					
Sub-problem	**Literature Review**	**Research Propositions**	**Source of data**	**Type of data**	**Analysis**
The first sub-problem is to identify the factors that influence patient choice of private hospital in South Africa.	(Hansen, 1969; Lane and Lindquist, 1988; John, 1992; Batchelor et al., 1994; Walker et al., 2002; Akinci et al., 2004; Roh and Lee, 2005; Leister and Stausberg, 2007; Kotler and Keller, 2009; Suki et al., 2009; Bhangale, 2011).	Factors that affect patient choice of private hospital in South Africa include: • Convenience. • Physician recommendation of the facility. • Reputation and image of the facility • Access to medical aid. • Past experience.	Question numbers 1-12.	Ordinal data.	Factor Analysis.
The second sub-problem is to analyse the relative importance of hospital branding on patient choice.	(Akinci et al., 2004; Roh and Lee, 2005; Leister and Stausberg, 2007; Matsebula and Willie, 2007; Kotler and Keller, 2009; Siso et al., 2009; Fin24, 2011; Klopper and North, 2011).	Hospital branding is an important consideration in patient choice of private hospital.	Question numbers 13-20.	Ordinal data.	Factor Analysis.

APPENDIX D

Factor analysis results

Factor Analysis Results

Input Data Type	Raw Data
Number of Records Read	186
Number of Records Used	186
N for Significance Tests	186

Generated by SAS on 01 February 2012

The Factor Procedure

Initial Factor Method: Maximum Likelihood

Partial Correlations Controlling all other Variables

	Q. 3	Q. 4	Q. 5	Q. 6	Q. 7	Q. 8	Q. 9	Q. 10	Q. 11	Q. 13	Q. 14	Q. 15	Q. 16	Q. 17	Q. 18	Q. 19	Q. 20
Q. 3	1.0000	0.1525	0.1163	-0.0210	0.3058	-0.0224	-0.0482	0.0310	-0.2355	0.1171	0.0366	0.0790	0.0234	0.0404	0.0321	0.0333	-0.0164
Q. 4	0.1525	1.0000	-0.0087	-0.0173	0.0070	-0.1418	0.2888	-0.1014	0.0209	0.0011	0.0624	0.0059	0.1615	0.0660	-0.0002	0.1767	0.1326
Q. 5	0.1163	-0.0087	1.0000	0.1978	0.0650	0.0173	0.0084	0.0239	0.2165	0.0481	0.1831	-0.0492	-0.0294	0.2107	-0.1166	-0.1359	0.0040
Q. 6	-0.0210	-0.0173	0.1978	1.0000	0.0068	-0.0041	0.0903	0.0892	0.0458	-0.1552	0.2708	0.0703	0.1629	-0.0783	0.1321	0.0112	0.0515
Q. 7	0.3058	0.0070	0.0650	0.0068	1.0000	-0.0519	0.1477	0.3251	-0.1177	-0.0266	0.0110	0.1869	0.2399	-0.1533	-0.0565	-0.0090	-0.0535
Q. 8	-0.0224	-0.1418	0.0173	-0.0041	-0.0519	1.0000	0.1215	0.3334	0.0330	-0.0844	-0.0278	-0.0089	0.1556	-0.0320	0.0901	-0.0131	0.1001
Q. 9	-0.0482	0.2888	0.0084	0.0903	0.1477	0.1215	1.0000	0.2908	-0.0601	0.0180	0.0191	-0.1267	-0.0280	0.0480	0.0400	-0.0887	0.1082
Q. 10	0.0310	-0.1014	0.0239	0.0892	0.3251	0.3334	0.2908	1.0000	0.1395	-0.0307	-0.0671	0.0339	-0.0357	0.0945	-0.0280	0.0470	0.0328
Q. 11	-0.2355	0.0209	0.2165	0.0458	-0.1177	0.0330	-0.0601	0.1395	1.0000	0.1572	-0.0323	0.0674	0.0524	-0.0628	0.1070	0.0781	-0.0035
Q. 13	0.1171	0.0011	0.0481	-0.1552	-0.0266	-0.0844	0.0180	-0.0307	0.1572	1.0000	0.0558	0.0120	0.3891	0.0260	-0.0693	0.1245	0.0888
Q. 14	0.0366	0.0624	0.1831	0.2708	0.0110	-0.0278	0.0191	-0.0671	-0.0323	0.0558	1.0000	0.0444	0.0175	-0.1109	0.0383	0.0258	-0.0053
Q. 15	0.0790	0.0059	-0.0492	0.0703	0.1869	-0.0089	-0.1267	0.0339	0.0674	0.0120	0.0444	1.0000	-0.2054	0.2779	0.1461	0.0351	0.1073
Q. 16	0.0234	0.1615	-0.0294	0.1629	0.2399	0.1556	-0.0280	-0.0357	0.0524	0.3891	0.0175	-0.2054	1.0000	0.0372	0.0644	0.1173	0.1415
Q. 17	0.0404	0.0660	0.2107	-0.0783	-0.1533	-0.0320	0.0480	0.0945	-0.0628	0.0260	-0.1109	0.2779	0.0372	1.0000	0.1025	-0.0099	0.1716
Q. 18	0.0321	-0.0002	-0.1166	0.1321	-0.0565	0.0901	0.0400	-0.0280	0.1070	-0.0693	0.0383	0.1461	0.0644	0.1025	1.0000	0.2807	-0.0569
Q. 19	0.0333	0.1767	-0.1359	0.0112	-0.0090	-0.0131	-0.0887	0.0470	0.0781	0.1245	0.0258	0.0351	0.1173	-0.0099	0.2807	1.0000	0.1485
Q. 20	-0.0164	0.1326	0.0040	0.0515	-0.0535	0.1001	0.1082	0.0328	-0.0035	0.0888	-0.0053	0.1073	0.1415	0.1716	-0.0569	0.1485	1.0000

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.73338460																	
Q. 3	**Q. 4**	**Q. 5**	**Q. 6**	**Q. 7**	**Q. 8**	**Q. 9**	**Q. 10**	**Q. 11**	**Q. 13**	**Q. 14**	**Q. 15**	**Q. 16**	**Q. 17**	**Q. 18**	**Q. 19**	**Q. 20**
0.74767	0.77878	0.64715	0.74674	0.72674	0.7263	0.77844	0.73951	0.56719	0.71432	0.70829	0.58206	0.7606	0.63695	0.69699	0.77969	0.8576
Prior Communality Estimates: ASMC																
Q. 3	**Q. 4**	**Q. 5**	**Q. 6**	**Q. 7**	**Q. 8**	**Q. 9**	**Q. 10**	**Q. 11**	**Q. 13**	**Q. 14**	**Q. 15**	**Q. 16**	**Q. 17**	**Q. 18**	**Q. 19**	**Q. 20**
0.39053	0.41108	0.30486	0.36316	0.56261	0.35972	0.47985	0.59086	0.25986	0.42005	0.23919	0.28443	0.59992	0.30178	0.28824	0.39729	0.37506

Preliminary Eigen values: Total = 11.9456771

Average = 0.70268689

	Eigen value	Difference	Proportion	Cumulative
1	6.17685	4.06092	0.5171	0.5171
2	2.115933	0.75145	0.1771	0.6942
3	1.36448	0.28584	0.1142	0.8084
4	1.078644	0.0785	0.0903	0.8987
5	1.000147	0.32075	0.0837	0.9825
6	0.679396	0.03347	0.0569	1.0393
7	0.645923	0.4257	0.0541	1.0934
8	0.220223	0.14769	0.0184	1.1118
9	0.072536	0.04096	0.0061	1.1179
10	0.031576	0.05948	0.0026	1.1205
11	-0.027901	0.0672	-0.0023	1.1182
12	-0.095101	0.06664	-0.008	1.1103
13	-0.161737	0.0136	-0.0135	1.0967
14	-0.175336	0.08177	-0.0147	1.082
15	-0.257111	0.08358	-0.0215	1.0605
16	-0.340687	0.04147	-0.0285	1.032
17	-0.382158		-0.032	1

5 factors will be retained by the NFACTOR criterion

Iteration	Criterion	Ridge	Change	Communalities												
1	0.52208	0	0.1317	0.46881	0.31041	0.25566	0.40582	0.55772	0.36315	0.34819	0.71372	0.2428	0.35962	0.31563	0.37543	0.6595
2	0.516827	0	0.0513	0.46956	0.30741	0.21602	0.45713	0.57097	0.34184	0.34793	0.74026	0.23281	0.37058	0.32984	0.3844	0.66561
3	0.515486	0	0.0365	0.46848	0.30511	0.19515	0.49361	0.57423	0.33957	0.34703	0.7457	0.22683	0.37654	0.31936	0.38579	0.66711
4	0.515029	0	0.0237	0.46756	0.30445	0.18484	0.5173	0.57632	0.33887	0.34661	0.74759	0.22324	0.38067	0.30802	0.38564	0.66769
5	0.514855	0	0.0158	0.46701	0.3041	0.17883	0.53314	0.57758	0.33848	0.3463	0.74884	0.2211	0.38318	0.2999	0.3851	0.66812
6	0.514785	0	0.0106	0.46669	0.30391	0.17514	0.54371	0.57833	0.33819	0.34608	0.74973	0.21978	0.38477	0.29436	0.38456	0.66844
7	0.514757	0	0.007	0.46651	0.3038	0.17282	0.55074	0.57876	0.33797	0.34592	0.75035	0.21897	0.38578	0.29066	0.38414	0.66867
8	0.514745	0	0.0046	0.46641	0.30373	0.17134	0.55538	0.57901	0.33783	0.34582	0.75077	0.21846	0.38643	0.28822	0.38386	0.66882
9	0.51474	0	0.003	0.46635	0.30369	0.17039	0.55842	0.57916	0.33772	0.34575	0.75105	0.21814	0.38685	0.28661	0.38367	0.66892
10	0.514738	0	0.002	0.46631	0.30366	0.16978	0.5604	0.57925	0.33766	0.3457	0.75124	0.21793	0.38711	0.28557	0.38355	0.66898
11	0.514737	0	0.0013	0.46629	0.30364	0.16939	0.56169	0.5793	0.33761	0.34568	0.75136	0.2178	0.38729	0.28489	0.38347	0.66902
12	0.514737	0	0.0008	0.46628	0.30363	0.16914	0.56252	0.57933	0.33758	0.34566	0.75144	0.21772	0.3874	0.28445	0.38343	0.66905

Convergence criterion satisfied

Significance Tests Based on 186 Observations

Test	DF	Chi-Square	Pr > ChiSq
H0: No common factors	136	658.33	<.0001
HA: At least one common factor			
H0: 5 Factors are sufficient	61	90.1647	0.009
HA: More factors are needed			

Chi-Square without Bartlett's Correction	95.2263
Akaike's Information Criterion	-26.7737
Schwarz's Bayesian Criterion	-223.5442
Tucker and Lewis's Reliability Coefficient	0.87551

Squared Canonical Correlations				
Factor1	Factor2	Factor3	Factor4	Factor5
0.87698754	0.724525	0.60165	0.57526	0.5499

Eigen values of the Weighted Reduced Correlation Matrix: Total = 13.8457921 Average = 0.81445836

	Eigen value	Difference	Proportion	Cumulative
1	7.129258	4.49916	0.5149	0.5149
2	2.630098	1.11975	0.19	0.7049
3	1.510346	0.15599	0.1091	0.8139
4	1.354361	0.13263	0.0978	0.9118
5	1.22173	0.67298	0.0882	1
6	0.548745	0.06066	0.0396	1.0396
7	0.488082	0.2541	0.0353	1.0749
8	0.233984	0.10972	0.0169	1.0918
9	0.124262	0.09022	0.009	1.1008
10	0.034041	0.03436	0.0025	1.1032
11	-0.000315	0.06586	0	1.1032
12	-0.066178	0.06542	-0.0048	1.0984
13	-0.131598	0.05407	-0.0095	1.0889
14	-0.185668	0.08613	-0.0134	1.0755
15	-0.271795	0.1131	-0.0196	1.0559
16	-0.384892	0.00378	-0.0278	1.0281
17	-0.38867		-0.0281	1

Factor Pattern

	Factor1	Factor2	Factor3	Factor4	Factor5
Q. 10	0.6988	-0.48884	0.03158	0.15208	0.00565
Q. 16	0.63037	0.45071	-0.0149	0.15795	-0.2083
Q. 7	0.62662	-0.13328	-0.3694	-0.164	-0.0747
Q. 9	0.56129	-0.15951	-0.0139	0.03353	-0.0621
Q. 20	0.47087	0.21654	0.10284	0.11563	0.19873
Q. 6	0.44334	0.00333	0.39877	-0.4252	-0.1619
Q. 8	0.43275	-0.26348	0.17072	0.22066	-0.0551
Q. 4	0.41369	0.33666	-0.0933	-0.0381	0.09483
Q. 19	0.36726	0.3602	0.11069	0.12488	0.20643
Q. 5	0.28881	-0.03098	0.12983	-0.2537	-0.0589
Q. 18	0.26204	0.14957	0.25445	-0.0131	0.25466
Q. 13	0.36858	0.45776	-0.0748	0.18886	-0.0281
Q. 11	0.16804	0.07408	0.39794	0.15936	0.01446
Q. 3	0.42585	0.10417	-0.4418	-0.2616	0.1021
Q. 14	0.24063	0.15553	0.1665	-0.3947	-0.1372
Q. 15	0.22043	-0.04787	0.02728	-0.2123	0.53548
Q. 17	0.25705	0.05434	0.06653	0.02257	0.4443

Variance Explained by Each Factor

Factor	Weighted	Un-weighted
Factor1	7.129258	3.17504
Factor2	2.630098	1.12338
Factor3	1.510346	0.83123
Factor4	1.354361	0.73131
Factor5	1.22173	0.7559

Final Communality Estimates and

Variable Weights		
Total Communality:		
Weighted = 13.845793	**Un-weighted = 6.616864**	
Variable	**Communality**	**Weight**
Q. 3	0.466276	1.87363
Q. 4	0.303629	1.43602
Q. 5	0.169051	1.20357
Q. 6	0.562556	2.28582
Q. 7	0.579341	2.37718
Q. 8	0.337577	1.50962
Q. 9	0.345656	1.52825
Q. 10	0.751442	4.02316
Q. 11	0.217691	1.27831
Q. 13	0.387454	1.63239
Q. 14	0.284398	1.39753
Q. 15	0.383423	1.62187
Q. 16	0.669051	3.02157
Q. 17	0.271369	1.37237
Q. 18	0.220804	1.28338
Q. 19	0.335088	1.50403
Q. 20	0.332056	1.49711

Rotation Method: Harris-Kaiser (hkpower = 0)

Oblique Transformation Matrix

	1	2	3	4	5
1	0.400995	0.50483	0.21294	0.18256	0.11085
2	0.910646	-0.86899	-0.0304	0.05109	0.05923
3	0.025782	0.17929	-0.9467	0.59842	0.16081
4	0.549804	0.5716	-0.5534	-0.8502	-0.1716
5	-0.177182	-0.09382	-0.0206	-0.3308	1.01688

Inter-Factor Correlations

	Factor1	Factor2	Factor3	Factor4	Factor5
Factor1	1	0.37551	0.34484	0.34404	0.24975
Factor2	0.37551	1	0.38676	0.35896	0.24617
Factor3	0.34484	0.38676	1	0.22399	0.17515
Factor4	0.34404	0.35896	0.22399	1	0.1813
Factor5	0.24975	0.24617	0.17515	0.1813	1

Rotated Factor Pattern (Standardized Regression Coefficients)

	Factor1	Factor2	Factor3	Factor4	Factor5
Q. 16	0.78658	0.03373	0.05147	0.06384	-0.1447
Q. 13	0.67154	-0.11455	0.03148	-0.1054	-0.005
Q. 19	0.51023	-0.05574	-0.1109	-0.0228	0.26834
Q. 4	0.43232	-0.1311	0.18532	0.03789	0.15376
Q. 20	0.41702	0.11543	-0.0718	-0.0055	0.26381
Q. 10	-0.08152	0.86963	0.04948	-0.0097	0.03325
Q. 8	0.06908	0.60934	-0.1824	-0.0017	-0.0341
Q. 9	0.1089	0.44446	0.12023	0.07805	-0.0184
Q. 3	0.09232	-0.11387	0.64846	0.00729	0.13103
Q. 7	0.04346	0.27921	0.57946	0.05063	-0.0457
Q. 11	0.23016	0.18154	-0.4317	0.13233	0.07438
Q. 6	-0.01399	0.06457	-0.0446	0.73477	0.02179
Q. 14	0.04976	-0.19653	0.11012	0.53244	-0.0092
Q. 5	-0.03811	0.0565	0.08114	0.36399	0.03474
Q. 15	-0.16607	-0.0138	0.12902	0.05742	0.60693
Q. 17	0.08796	0.0657	-0.0315	-0.0767	0.49034
Q. 18	0.19551	0.01655	-0.1876	0.13464	0.34003

Reference Axis Correlations

	Factor1	Factor2	Factor3	Factor4	Factor5
Factor1	1	-0.18759	-0.2078	-0.2147	-0.1421
Factor2	-0.18759	1	-0.267	-0.2307	-0.1298
Factor3	-0.20781	-0.26698	1	-0.0419	-0.048
Factor4	-0.21472	-0.23071	-0.0419	1	-0.0611
Factor5	-0.14214	-0.12979	-0.048	-0.0611	1

Reference Structure (Semi-partial Correlations)

	Factor1	Factor2	Factor3	Factor4	Factor5
Q. 16	0.68348	0.02874	0.04606	0.05765	-0.1376
Q. 13	0.58352	-0.09759	0.02817	-0.0952	-0.0048
Q. 19	0.44335	-0.04749	-0.0992	-0.0206	0.25525
Q. 4	0.37566	-0.11169	0.16581	0.03421	0.14626
Q. 20	0.36237	0.09834	-0.0642	-0.005	0.25095
Q. 10	-0.07084	0.74091	0.04427	-0.0087	0.03163
Q. 8	0.06003	0.51915	-0.1632	-0.0015	-0.0324
Q. 9	0.09462	0.37867	0.10758	0.07048	-0.0175
Q. 3	0.08022	-0.09701	0.5802	0.00658	0.12464
Q. 7	0.03777	0.23788	0.51847	0.04572	-0.0434
Q. 11	0.19999	0.15467	-0.3862	0.1195	0.07075
Q. 6	-0.01216	0.05501	-0.0399	0.66352	0.02073
Q. 14	0.04324	-0.16744	0.09853	0.48081	-0.0088
Q. 5	-0.03312	0.04814	0.0726	0.3287	0.03304
Q. 15	-0.14431	-0.01176	0.11544	0.05185	0.57733
Q. 17	0.07644	0.05597	-0.0282	-0.0692	0.46643
Q. 18	0.16989	0.0141	-0.1679	0.12158	0.32345

Variance Explained by Each Factor

Eliminating Other Factors		
Factor	**Weighted**	**Un-weighted**
Factor1	2.851222	1.40072
Factor2	3.124714	1.12337
Factor3	1.676796	0.89804
Factor4	1.547738	0.83719
Factor5	1.302176	0.85037

Factor Structure (Correlations)

	Factor1	Factor2	Factor3	Factor4	Factor5
Q. 16	0.80282	0.3363	0.32472	0.33186	0.08065
Q. 13	0.60188	0.11074	0.19427	0.09068	0.12093
Q. 19	0.51024	0.15084	0.0854	0.15657	0.35849
Q. 4	0.49843	0.15437	0.31912	0.20895	0.26878
Q. 20	0.49963	0.30725	0.16168	0.21118	0.38282
Q. 10	0.26707	0.86287	0.36136	0.29155	0.23387
Q. 8	0.2259	0.55573	0.07071	0.19379	0.1009
Q. 9	0.33953	0.55536	0.34396	0.29866	0.15347
Q. 3	0.3084	0.20647	0.66084	0.16718	0.24096
Q. 7	0.35415	0.52658	0.70578	0.28733	0.14461
Q. 11	0.21357	0.16682	-0.2394	0.19347	0.12493
Q. 6	0.25312	0.31119	0.14397	0.7471	0.1596
Q. 14	0.19482	0.0536	0.16892	0.50201	0.07067
Q. 5	0.14499	0.21278	0.17747	0.39564	0.11933
Q. 15	0.04457	0.14375	0.18558	0.13426	0.59506
Q. 17	0.19785	0.17972	0.09292	0.05901	0.50906
Q. 18	0.26828	0.14944	-0.0241	0.22747	0.38449

Variance Explained by Each Factor

Ignoring Other Factors		
Factor	**Weighted**	**Un-weighted**
Factor1	5.109767	2.50511
Factor2	5.665503	2.19619
Factor3	3.559511	1.64891
Factor4	3.260827	1.63076
Factor5	2.211838	1.35723

Final Communality Estimates and

Variable Weights		
Total Communality:		
Weighted = 13.845793	**Un-weighted = 6.616864**	
Variable	**Communality**	**Weight**
Q. 3	0.466276	1.87363
Q. 4	0.303629	1.43602
Q. 5	0.169051	1.20357
Q. 6	0.562556	2.28582
Q. 7	0.579341	2.37718
Q. 8	0.337577	1.50962
Q. 9	0.345656	1.52825
Q. 10	0.751442	4.02316
Q. 11	0.217691	1.27831
Q. 13	0.387454	1.63239
Q. 14	0.284398	1.39753
Q. 15	0.383423	1.62187
Q. 16	0.669051	3.02157
Q. 17	0.271369	1.37237
Q. 18	0.220804	1.28338
Q. 19	0.335088	1.50403
Q. 20	0.332056	1.49711

Rotation Method: Harris-Kaiser (hkpower = 0)

Scoring Coefficients Estimated by Regression

Squared Multiple Correlations of the Variables with Each Factor				
Factor1	**Factor2**	**Factor3**	**Factor4**	**Factor5**
0.80172018	0.821732	0.69965	0.67837	0.60651

Standardized Scoring Coefficients

	Factor1	**Factor2**	**Factor3**	**Factor4**	**Factor5**
Q. 16	0.47476	0.05777	0.07363	0.09162	-0.1592
Q. 13	0.21285	-0.01729	0.0257	-0.045	0.00111
Q. 19	0.1505	-0.00179	-0.0411	-0.0036	0.1615
Q. 4	0.1248	-0.01808	0.08554	0.02217	0.0893
Q. 20	0.12724	0.04259	-0.022	0.00658	0.15949
Q. 10	-0.00576	0.62113	0.09616	0.02987	0.07803
Q. 8	0.0322	0.16213	-0.0713	0.01254	-0.0136
Q. 9	0.04737	0.12724	0.06474	0.04938	-0.0046
Q. 3	0.04602	-0.0194	0.36522	0.00378	0.09952
Q. 7	0.04779	0.13641	0.42215	0.04923	-0.0331
Q. 11	0.05828	0.04284	-0.1594	0.06066	0.0388
Q. 6	0.0148	0.04723	-0.0286	0.54168	0.0188
Q. 14	0.01972	-0.03634	0.0441	0.23656	-0.007
Q. 5	-0.00155	0.0186	0.02985	0.14126	0.01666
Q. 15	-0.04543	0.00267	0.06255	0.02573	0.38638
Q. 17	0.02701	0.02123	-0.0086	-0.0318	0.26603
Q. 18	0.05154	0.0107	-0.0678	0.05834	0.17224